



# missiles and rockets

MAGAZINE OF WORLD ASTRONAUTICS

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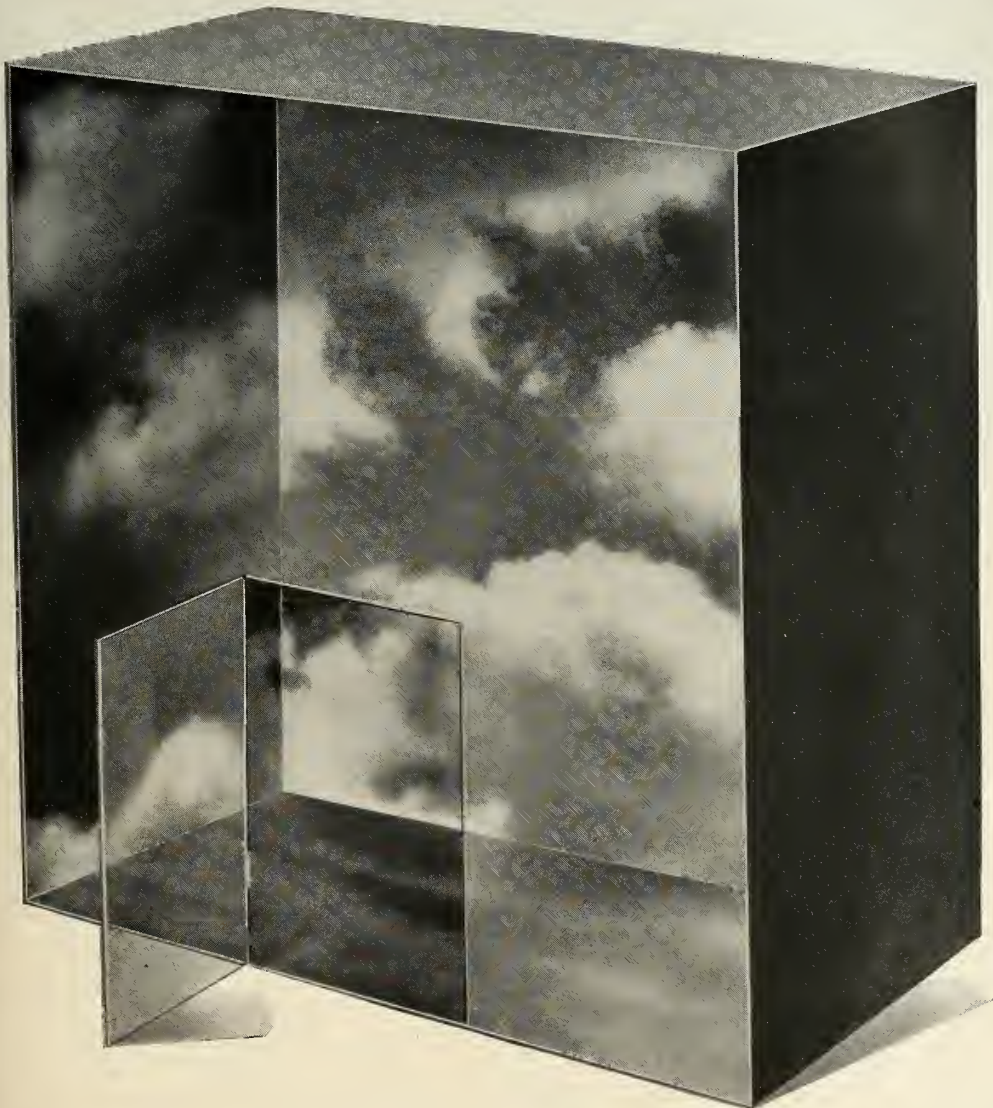
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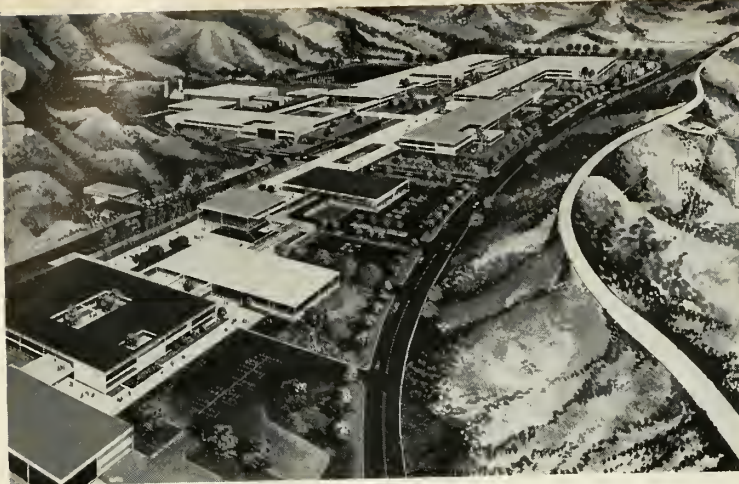
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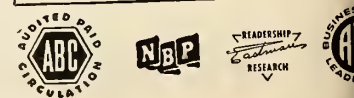
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missiles and rockets, June 1, 1959

# missiles and rockets

MAGAZINE OF WORLD ASTRONAUTICS



**COVER:** Scott Crossfield checks out X-15 prior to first drop with engine ignition.

## JUNE 1 HEADLINES

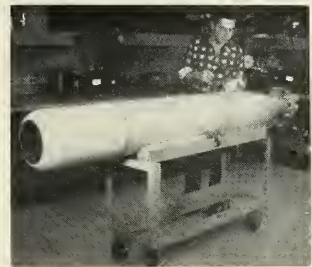
**Red Missile Threat in Antarctica**  
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GE'S MK 44 acoustic homing torpedo is latest entry in Navy's arsenal. It can be surface-launched or air-dropped in the vicinity of its submerged target.

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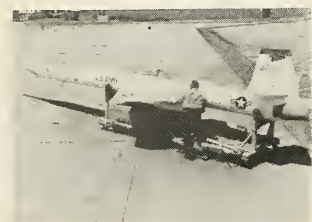
ANOTHER GE development is this Gun and Guided Missile Director MK 73 which controls the Navy's Tartar Surface-to-air missile. Director has gearless power drive.

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GE also has developed silicone sealant for Lockheed's Kingfisher which improves recovery chances and cuts manufacturing costs \$1600 per missile.

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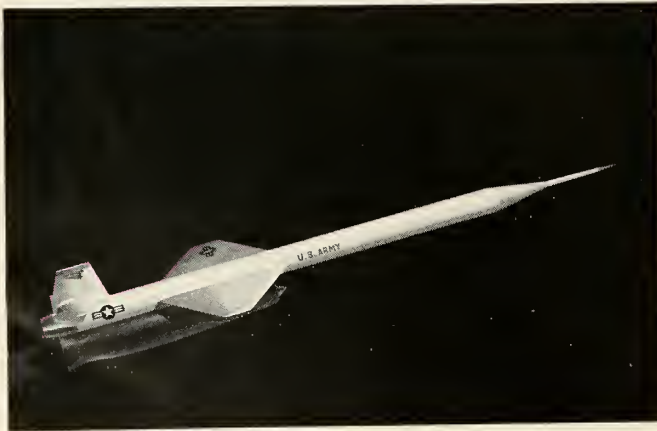
# What Lockheed is doing today to develop Tomorrow's missiles and spacecraft

**The world's first polar-orbiting satellites...**...the world's fastest ramjet target drone...a "fuel cell" that produces auxiliary power for spacecraft in a radically different way...a TV camera-transmitter—the world's smallest—that gives engineers and scientists on the ground a televised report of what takes place in test missiles during flight. These are just a few of the many activities and achievements of Lockheed's Missiles and Space Division.

Lockheed is System Manager and Prime Contractor of the ARPA DISCOVERER satellite series—and the U. S. Navy's POLARIS missile. Both are highest priority programs of the U. S. Government. And both are ahead of schedule.

A Lockheed MSD work-force of over 16,000—including 3,500 scientists and engineers—is engaged in all phases of missile and space technology: satellite systems development; space communications; electronics; ionic, nuclear, and solar propulsion; magnetohydrodynamics; computer research and development; flight sciences; materials and processes; human engineering; electromagnetic wave propagation and radiation—and many other advanced fields.

From these efforts at Lockheed will come many significant breakthroughs and scientific "firsts"—to speed the development of tomorrow's missiles and spacecraft.



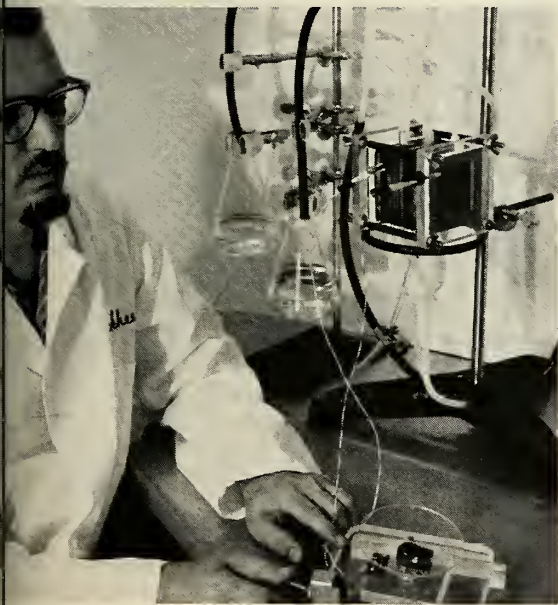
**Ramjet-powered supersonic target, Lockheed Q-5 KINGFISHER** electronically simulates enemy attackers—is being used by U. S. Army to evaluate and sharpen our nation's missile marksmanship, increase our defense capabilities.



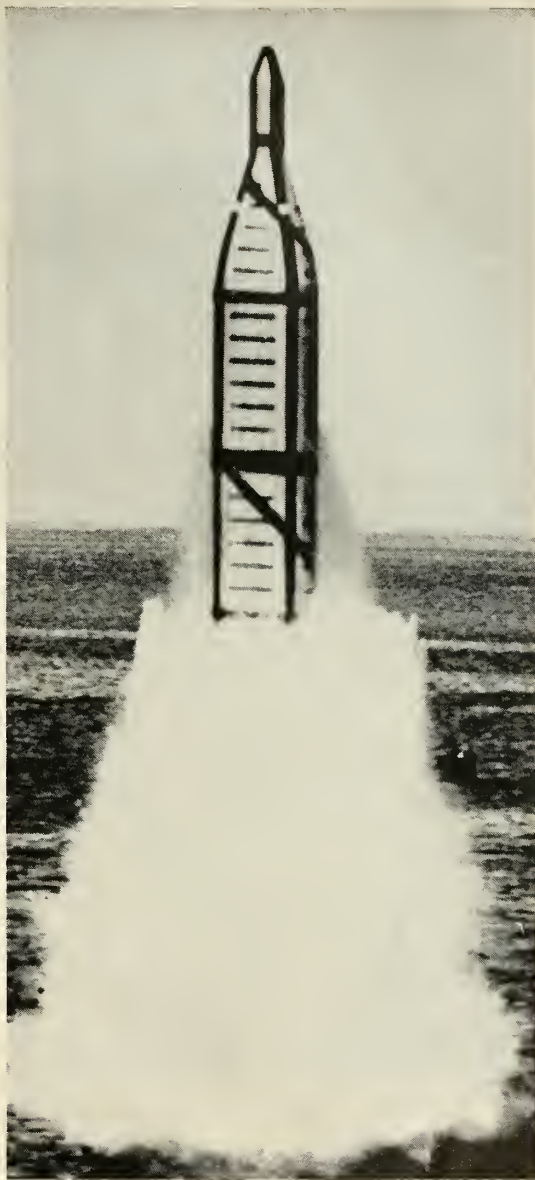
**First polar-orbiting satellites, the Lockheed DISCOVERER I and II** were orbited in two successful launches. Lockheed is System Manager for this advanced scientific research program.



Transmitting performance data from missiles and test vehicles, direct to ground stations, Lockheed-developed TV camera-transmitter and PAM-FM telemetry systems are acknowledged to be the world's smallest, world's best.



Revolutionary "fuel cell," under development at Lockheed, converts chemical energy directly into electrical power—for auxiliary power requirements of miniaturized spacecraft instrumentation and space communications systems.



Erupting from beneath the sea, a full-scale POLARIS test vehicle demonstrates how operational missile will be launched from submerged U.S. Navy subs. Ultimate range of the POLARIS will be 1500 nautical miles.

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# Proposed—A Unified Strategic Command

The Joint Chiefs of Staff are considering the creation by mid-1960 of a single unified command for the strategic warfare forces of this country—a command to include those components from the Air Force and the Navy which have strategic weapon systems. It would probably be called simply the U.S. Strategic Command.

The commander would report directly to the Joint Chiefs and not to his own service and he would have operational control of the combat units assigned to him, regardless of service, both in the cold war and in a hot war should it develop.

The commander would most likely be Air Force due to its preponderance of strength in the field, with the deputy a Navy man and the staff combined USAF and USN.

The formal papers proposing such a move were presented to the Joint Chiefs several days ago and have circulated widely through the higher echelons of all services of the Pentagon. The proposal recommends implementation of such a command arrangement to become effective by the time the first *Polaris*-equipped vessel is ready for operation employment (mid-1960). It also recommends that concurrently with the activation of such a command the present SAC go out of existence as a specified command, i.e., one which reports directly to the JCS as SAC now does, and remain simply as an Air Force component command.

The proposal was put forward by General Thomas White, chief of staff of the Air Force (and a member of the JCS, of course) and is known to be favored by many high officers of both the Air and Sea services.

Several cogent reasons have been advanced as to why the big bombers and long-range missiles of the Strategic Air Command and the intermediate range missiles of the Navy should be unified under one commander:

- Formation in peacetime of a strategic force which would operate effectively in the event of a war.
- Prevention of overlapping and duplicating roles.
- A firm and effective assignment of strategic targets.
- Assurance of instant response to higher command, instant reaction and instant application of full strength.

In his proposal to the Joint Chiefs, General White recommended that the Joint Staff, in conjunction with the Air Force and the Navy, join to define the mission, responsibilities and organizational establishment of the new U.S. Strategic Command. In the services, such a task would probably fall to General Thomas Power, SAC commander,

and possibly to Rear Admiral L. R. Despit, Director of the Undersea Warfare Division, Office Chief of Naval Operations, since the Navy has no strategic division as such.

This combine probably would also develop organization arrangements, manning and the phasing of implementing action by timetable.

\* \* \*

This proposal by the Air Force Chief of Staff to take a very intractable bull by the horns and wrestle it into submission is quite in keeping, both for the man and for the present trend to reorganize the services by missions rather than by color of uniform.

For one thing, General White has more than once made it known that he favors unification of the services. For another, his proposal is fully in accord with both the intent and the spirit of the Reorganization Act of 1958, other parts of which have already been implemented.

The North American Air Defense Command at Colorado Springs not only unifies the U.S. Services but includes the Canadians as well. The Alaskan Command has long been unified, as have the service units in Europe and the Far East. Before the Reorganization Act these unified commanders could give orders to other service units only through their parent organizations—usually in Washington. Now the commander has direct control and reports to the JCS, as would the new Strategic Commander proposed by General White.

When the soldiers, sailors, airmen and marines all climb into one uniform and become identified by their mission instead of their service, is a matter of conjecture, although it certainly seems inevitable. But to group the strategic forces of the country—with their overwhelmingly important task of deterrence through the threat of massive retaliation—under one unified command seems to make a great deal of sense in an imperative situation.

One of the weakest links in the American strategic position has been that the Navy and the Air Force have never been able to coordinate strategic targets. With a considerable capability in the strategic field, the Navy would never make a firm individual target commitment because of a wish to remain completely mobile. And SAC would never accept anything less than a firm specific commitment. In the event of war, the delay of decision in just this one area could be disastrous.

And . . . if this proposal is the first step toward a unified Tactical Command, a unified Training Command, a unified Materiel Command and so on—so much the better.

Clarke Newlon



### ...NEWS IS HAPPENING AT NORTHROP

Now being produced and delivered to the U.S. Army Signal Corps, the Radioplane SD-1 gives greater battlefield surveillance flexibility to combat units than ever before. (This photo of terrain was actually taken from an SD-1 at 1,000 feet.)

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aircraft. Within minutes after the SD-1 returns from its mission, photographs are delivered to the requesting unit.

Other specialized sensory equipment may be carried by the SD-1 depending on particular mission requirements.

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## washington countdown

### IN THE PENTAGON

ARPA is pushing ahead seriously with its program aimed at developing a space platform weighing several thousand tons. The platform would be launched into space with nuclear-bomb propelled rockets. ARPA describes the team working on the program as made up of "some of the best men in the country."

The Pentagon is reportedly near a decision whether to develop a storable propellant for the Convair *Atlas*. A storable propellant for the nation's first liquid ICBM would give it two extra pluses: Faster reaction time and mobility.

A possible new interservice squabble may be in the making over who will operate the "satellite fence" developed across southern United States. ARPA directed development. Both the Army and the Air Force played a part. Now ARPA is ready to turn it over to one of the services.

The Air Force is planning to spend about \$23 million in FY 1960 on development of a new secret missile—the anti-radar missile. The ARM apparently would be air-launched from attacking bombers. It most likely would foul enemy radar by dropping chaff and/or by carrying electronic jamming equipment.

The Army's *Davy Crockett* missile has blossomed into a family of weapons. The secret missile—tipped with a nuclear warhead—is understood to be small enough to be fired by an infantryman from a bazooka-type weapon.

A couple of notes on the Missile Gap calendar:

The Martin *Titan* timescale is about two years behind the Convair *Atlas*—not one as believed in many quarters, according to Congressional testimony by the late Donald Quarles.

Some six months could be shaved from the Boeing *Minuteman* program. Cost would be about \$100 to \$300 million depending on who in the Pentagon is doing the estimating.

The Navy wants to cut back R&D funds for two new anti-submarine missiles and boost R&D funds for two others. The cuts are slated for Minneapolis-Honeywell's *Asroc* and Westinghouse's *Astor*—understood to be an anti-submarine torpedo rocket. Boosts are

slated for Goodyear's *Subroc* and *Little Lulu*—believed to be a surface-to-surface missile.

### ON CAPITOL HILL

A leading Congressional figure close to the nation's space program says the Russians have made a number of space shots since *Lunik* in January. He says he received the information from "good authority." He says the Russians apparently are withholding any announcements until they have something sensational to disclose.

Some Congressmen are predicting that the Senate and House may settle their dispute over the Boeing *Bomarc* and the Western Electric *Nike-Hercules* with a compromise involving *Atlas*. The possible deal: The Senate would go along with a House desire for more funds for *Atlas*. At the same time, the House would put back some of the funds asked for *Nike-Hercules*.

Despite opposition from the Administration and some influential Congressmen, Congress appears certain to keep a double hold on NASA. The House already has voted to make NASA secure Congressional authorization for all programs before securing any appropriations in the next five years. Many powerful senators want to make the arrangement permanent. Outlook: The least NASA can expect is the House's five-year clause.

### AT NASA

The schedule for Project *Mercury* includes more than two dozen launchings before any attempt will be made to put a man into orbit. One of the last before the big one will be the firing of a manned space capsule down the Atlantic Missile Range with a *Redstone* booster.

### AROUND TOWN

Plans are moving ahead rapidly to make Raytheon *Hawks* the first American-type missile to be produced cooperatively by NATO countries. The second probably will be Philco *Sidewinders*. The U.S. military aid program is helping get the programs under way. The NATO countries involved are reported ready to pay \$400 million for the NATO-made *Hawks*.



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## industry countdown

### STRUCTURES

*Thor*—intercontinental version of Douglas *Thor* IRBM—is being evaluated by Air Force as means of accelerating nation's ICBM readiness. Question is whether *Thor* should be advanced on "crash" basis to back up *Atlas*. Configuration would be adaptation of liquid two-stage *Thor-Able* test vehicle which has hurled experimental nose cones 5000 miles down Atlantic Missile Range.

Cincinnati Testing Labs will receive contract to produce nose cones for Martin-Orlando's *Pershing*—800-mile MRBM solid-fueled successor to *Redstone*.

Steel gantry 305 feet high—tall as a 28-story building and the largest in U.S.—will be constructed at Redstone soon to erect and service *Saturn* space vehicle. Hugh mobile tower is indicative of the size of ABMA-ARPA's giant rocket, which will have a cluster of eight H-1 Rocketdyne engines as its booster and three other stages. Fire and lightning protection, heating and air conditioning will be incorporated in the structure along with three elevators, bridge crane, "on-board" diesel electric generator and six service platforms. AOMC and Army Corps of Engineers developed the gantry design in conjunction with Maurice H. Connell & Associates, Miami A&E.

In midst of heated DOD and Congressional sniping at the interceptor missile program, Air Force last week launched first Boeing "super" *Bomarc-B*. Despite charges it will be ineffective against ICBM's, many Capitol observers say 400-mile *Bomarc-B* probably will be phased in when ready as "best available"—with cut in *Nike-Hercules* program.

A \$20 million tag is attached to the Air Launched Ballistic Missile program in the 1960 defense budget. This will pay for six-month design-cost study getting under way by Douglas and early prototype development.

Russian "mole" missile? Rocket tunnel digger which spouts compressed air and liquid fuel-fed flame to eat through rock and earth is being used by Soviets, according to Hungarian magazine *Magyar Nemzet*. (Translation available in Scientific Information Report issued by U.S. Commerce Department Office of Technical Services.)

### PROPULSION

Watch for first static firing of Pratt & Whitney liquid hydrogen rocket motor about mid-fall. Test will be conducted near Lake Okeechobee.

Little progress is reported in merger talks being conducted by Thiokol Chemical and Marquardt Corp. Thiokol expects sales to hit \$150 million in 1959—against \$89 million last year—with a slight upward movement in earnings.

### ELECTRONICS

Small Business Administration is licensing Electronics Capital Corp., San Diego., as closed-end non-diversified management investment company. It will be the first to concentrate in one field—small business electronics. ECC plans through 1.8 million stock issue to acquire \$16 million for investment in small business securities. No government funds are involved.

Air Force contract for prototype development of transistorized SAGE computer is being awarded to IBM. For underground installation, computer will be 1/9 size present models and reportedly will have computation capability increased sevenfold.

### ASTROPHYSICS

Capture of micrometeorites 150 miles in space and bringing them back to earth will be attempted in September by ARDC and Cambridge Research Center. Scientists will use Aerojet-General *Aerobee* rocket with snap-open nose cone. Micrometeorites will imbed in strip of sticky film. Recovery will be with a parachute. If successful project would yield first real data on composition of debris encountered by missiles and space vehicles.

### SPACE MEDICINE

Full-pressure space suit being unveiled June 2 by Navy and B. F. Goodrich is designed to allow man to walk on moon. Wearers can withstand 19 g's in first 40 inches of ejection test and dunking in brine solution at -60°F. Navy says pilot wearing suit would survive as long as one hour after ditching in Arctic waters.



## PIONEERING IN SOLID PROPULSION SYSTEMS

From the first American jet-assisted airplane takeoff to the first of our second generation guided ballistic missile systems, the Jet Propulsion Laboratory continues to be an active pioneer

In August 1941, America's first jet-assisted airplane takeoff was accomplished with an Ercoupe monoplane, using JPL developed solid propellant rockets. Scientists at JPL shortly discovered that a powdered perchlorate oxidizer, mixed with a liquefied plastic fuel binder, could be cast directly in plastic-lined light-weight motor cases. Thus a safe and cheap method was now available for preparing large internal-burning

composite propellant charges. This basic process became the foundation for the modern solid propellant industry.

In 1954, U. S. Army Ordnance requested JPL to develop a compact, rugged long-range guided missile weapon system that could be transported, aimed and fired as simply as a cannon. Within five years, JPL perfected the Sergeant, the first of America's second-generation guided ballistic missiles. In

January 1958, clusters of small Sergeants helped launch America's first earth satellite, the JPL built Explorer 1, which provided vital space environmental information.

Now under the direction of the National Aeronautics and Space Administration, the experienced JPL research and development team continues to apply solid propellant vehicles for space exploration.



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## Red Threat From Antarctica

**U.S. and other nations are worried about Russian bases build-up and submarine missile launching potential**

by James Baar

WASHINGTON—At the frozen bottom of the earth Russia is moving to a position from which its missile submarines could outflank the Free World.

Half of Antarctica—that empty, unpopulated continent twice the size of the United States—is rapidly turning from a red to a white continent.

Meantime, the United States at the present is accepting second place to Russia in the comparative development of its Antarctic operations.

Proposals to equip American bases with portable nuclear reactors and to build a year-round jet landing field at McMurdo Sound are presently stalled for lack of funds.

Another proposal to build a satellite tracking station at the South Pole has been at least temporarily shelved.

Many knowledgeable officials in the United States, Australia, South America, New Zealand and Africa are looking toward the South with increasing concern.

**Southern exposure**—From the icy Antarctic coasts and plateaus Russia is in a position to have the entire Southern Hemisphere within its missile range. Moreover, big Russian ICBM's could strike the United States from Antarctica without notice. The multi-billion dollar BMEWS program—designed to give SAC a fifteen minute warning of ICBM's striking across the North Pole—would be silent.

Naval patrols watching for missile-launching submarines on the U.S. East and West Coasts would find nothing. A nuclear death would come from the unguarded and undefended South.

The earliest Antarctic threat in-

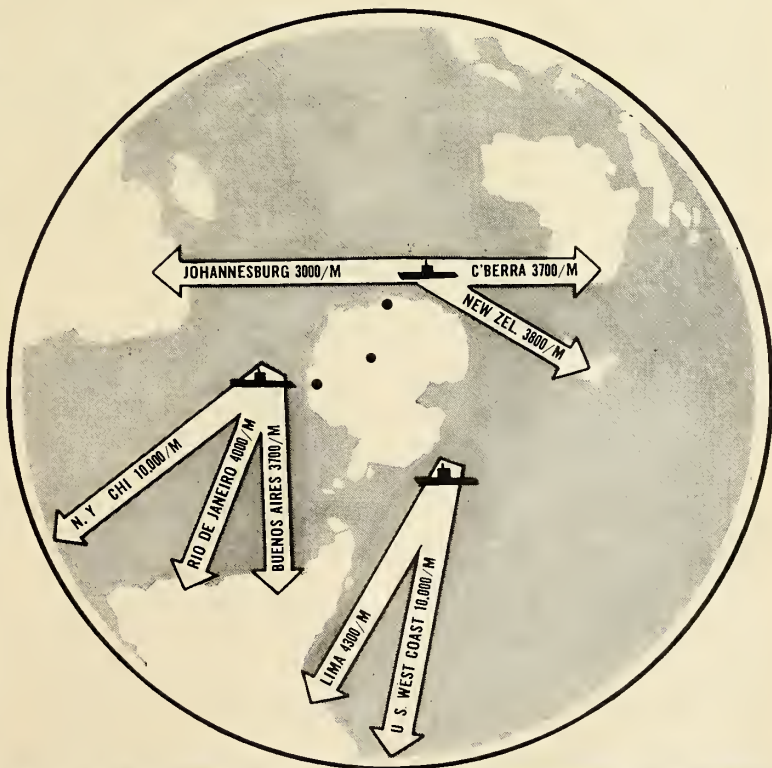
volves the use of missile-launching conventional submarines operating out of the Soviet Union's increasing number of Antarctic bases.

Missile-armed submarine packs drawn from the Soviet Union's huge fleet of some 450 submarines could be sent into the South Polar seas at any time. There they could hide along the thousands of miles of empty Antarctic coast, waiting for the signal to strike.

Johannesburg . . . Canberra . . . Lima . . . Buenos Aires . . . Rio de Janeiro . . . Melbourne . . . Wellington . . . all are within a maximum of some 4000 miles of the White Continent.

**Bases by hundreds?**—But using submarines is only the first and easiest step. The Soviets can put their ICBM's on Antarctica itself.

Missile sites—soft, or hardened—



SOVIET SUBS working from Antarctic could strike many targets without detection.

## No U.S. Plans for Missile Site . . .

can be built inside the Antarctic glacier, in the opinion of U.S. experts. The Russians could build hundreds of them both near the Soviet-occupied coasts of East Antarctica and on the great plateaus in the interior.

New York . . . Washington . . . Chicago . . . Denver . . . Seattle . . . Los Angeles . . . all of the United States lying within a huge 10,000-mile arc would be reachable.

The effect on the cold war would be tremendous.

Not only would U.S. warning systems and defenses be outflanked, but three powerful new factors would be introduced into the East-West conflict:

- The U.S. heartland for the first time since the American Revolution would be menaced simultaneously on two broad fronts. Russia would have found a counter to U.S. overseas bases.

- Much U.S. ICBM power would have to be turned toward the unpopulated Antarctic wastes, thereby lessening the value of the ICBM squadrons as a deterrent of terror.

- South America and Africa would become much more sensitive to Soviet pressure as the shadow of Soviet missile might spread across both continents.

U.S. experts see nothing insurmountable in the way of establishing Soviet ICBM bases in Antarctica. As for firing missiles under Antarctic conditions, they note the United States already has fired missiles under generally similar conditions at Fort Churchill, Canada.

As for building Antarctic missile sites, they note that the United States already is building research living quarters in the Arctic glacier near Thule, Greenland.

The research building near Thule is being constructed mostly out of insulating materials put together inside a hole dug out of the glacier with a specially-designed Peters snow plow. Walls of the hole support the building.

One expert said under-glacier installations could be hardened merely by putting them deeper into the glacier.

He said that so far the United States has no plans for building such a missile site itself. However, he said it had been given a considerable amount of thought by engineers.

Officials closest to U.S. Antarctic expeditions say they have seen no evidence so far that the Russians are about to build South Polar missile sites.

- **Red carpets**—However, they say there is no question that the Russians

are in Antarctica to stay and that they are expanding their operations. And these operations—still scientific—are laying a basis that could rapidly take on a military character whenever Moscow so decreed.

At present, the Russians occupy Antarctic sites at Mirny and Lazarev on the East Antarctic Coast and Komсомол'skaya and Vostok in the interior. The Poles have been given the Soviet interior base called Oasis. The Mirny base has carpets on the floor and wallpaper on the walls.

The Soviets are planning overland exploratory trips from Mirny to Lazarev via the Pole of Inaccessibility and possibly one far west into Marie Byrd Land and the Bellinghausen Coast where much U.S. exploration has been concentrated.

Also, the Soviet Slava whaling flotilla recently circumnavigated Antarctica for the first time and was last reported headed toward the Bellinghausen Sea off Marie Byrd Land.

So far, Soviet rocket activity in Antarctica has been confined to the firing of some two dozen sounding rockets from the Soviet vessel 'Ob off the Antarctic coasts. Soviet scientists previously have said Russia was considering launching satellites from Antarctica.

- **U.S. de-emphasis**—As Soviet operations in Antarctica have increased, U.S. operations have decreased somewhat since the end of the International Geophysical Year in 1958.

The United States during IGY operated seven bases: McMurdo, Byrd, Ellsworth, Hallett, Wilkes, Little America and Scott-Amundsen at the South Pole.

At present, the United States is continuing to operate McMurdo, Byrd and Scott-Amundsen. It is operating Hallett jointly with New Zealand, Wilkes with Australia and Ellsworth with Argentina. Argentina and Australia have taken custody of Wilkes and Ellsworth.

Little America, considered the most important American base scientifically, has been closed because of lack of money.

- **Some planning**—The National Science Foundation has asked for \$4 million dollars for FY 1960 for Antarctic research. The Navy has asked for nearly \$16 million to provide logistical support.

No money is included for the nuclear reactors, the McMurdo landing field or a tracking station.

The reactors, which could be transported by plane, are estimated to cost \$3 million each.

Cost of building a 7800-foot field on the ground at McMurdo is estimated at about \$85 million. Estimated cost of a 10,000-foot airfield capable of accommodating any jet is about \$100 million.

The reactors would provide power for McMurdo, Byrd and Scott-Amundsen bases, reducing the amount of shipping to Antarctica by about half. The airfield would open the Southern Hemisphere Great Circle route over the South Pole.

The polar tracking station would enable U.S. technicians to track 100 satellites on every pass around the earth. It also would serve as a checkpoint for detecting unannounced silent polar satellites launched by Russia.

Supporters of the tracking station proposal contend it would be only the first step in the assumption of an important role for Antarctica in the Space Age.

They say Antarctica is the obvious gateway to space because of the deadly Van Allen Radiation Belt over the polar regions.

For this reason as well as scientific and overriding strategic reasons, they are urging increases in the U.S. Arctic effort.

Meantime, tractors bearing flags are moving through the Antarctic snows in increasing numbers. The missile submarines, then the missile ships could come at any time.

## Connector Reliability Improvement Is Urged

BALTIMORE—Electrical connectors are an important part of any missile system. Many are in critical locations where their failure could cause failure of a whole system. Consequently, even though they are small and uncomplained, more attention must be given to improving their reliability.

L. L. Resser and M. J. Smith, engineers for The Martin Co., presented a paper at the AIEE meeting here this month, outlining several parameters that should be considered in connector design.

Some possible solutions suggested include:

- Double seals at the mating surface of the connectors.

- Seals at the ends of the connectors.

- Potting or single-piece construction of the insert proper.

- Snap-in contacts for cable-shielded connections, with bonded follow-up grommets.



# NASA Patents Rights Debated

**Question is how much proprietary interest should space agency retain over inventions performed under contract**

WASHINGTON—How much of a proprietary interest should NASA recover inventions conceived during performance of a NASA contract? This question recently has been the subject of strong debate at patent meetings across the country, at waiver-of-patent hearings held in Washington.

NASA held the hearings to give the aircraft and rocket industry patent holders a chance to voice their criticism of the present interim regulations before NASA drafts permanent regulations.

After the hearing, NASA General Counsel John A. Johnson stated that the regulations would be modified after his staff had an opportunity to respond to the criticisms voiced by the industry lawyers.

NASA's present regulations come under fire from companies used to doing business with the Department of Defense because they are stricter than the patent regulations. Conversely, aircraft companies used to contracting under the very strict Atomic Energy Commission patent rules find NASA's regulations very agreeable.

The missile and rocket industry point is that NASA regulations do not retain too many patents for the government. NASA lawyers believe that the present regulations are not as harsh as industry lawyers think, and that it is in the interest of the United States for NASA to retain proprietary interests in some patents.

The effect of present NASA regulations and the definition of the term "in the interest of the United States" are points much in dispute.

**Here are complaints**—Basic complaints lodged by industry patent lawyers:

1. The regulations discourage industry from entering into NASA contracts because the decision as to who gets the rights to inventions is not decided until after the contract is signed;

2. NASA keeps too many of the patents. All they really need is a non-

exclusive royalty-free license to use the invention;

3. It is unfair to take an invention of one company and give the exclusive license for the production of that invention to another company;

4. The burden of proof is on the company to show why it should retain rights to its own inventions;

5. The regulations are not "in the interest of the United States" because in many cases the most competent contractor will refuse to accept a NASA contract under the current regulations.

• **Answers**—The NASA legal staff's answers to the above objections are:

If NASA's Administrator allowed the contracting officer to waive possible future patents in the contract, the Administrator would be surrendering his discretionary power, would put him in an untenable position under the law. Industry interest in NASA contracts has been high, indicating that the patent regulations do not discourage bids.

Because of the restrictions as to what type of patents NASA can retain, and because of NASA's pre-stated intention to administer the regulations liberally, fewer patents will be retained than many industry lawyers think. If NASA only retained a non-exclusive license on some inventions, it could not get risk capital to produce the invention.

In many cases a contractor does not want to, or by law cannot acquire rights to an invention. NASA needs the power to give an exclusive license of one company's invention to another in order that the invention can be fully developed and produced in the interest of the United States.

The burden of proof on the contractor to show why he should retain rights to his own invention is very limited, and is necessary to carry out the provisions of the law.

The regulations, though in need of modification, are in the interests of the United States in that they allow the fullest development and use of important inventions in the area of space

development.

• **Contrary policies**—NASA lawyers point out that the agency's patent provisions are stricter than DOD's because Congress made them stricter.

They point to the statement made recently by Administrator T. Keith Glennan in which he stated that: "Two such contrary patent policies followed by Government agencies working in closely related fields of research and development, can be detrimental to the kind of cooperation that we must have from industry, if our joint effort is to go forward with effectiveness and dispatch. We are well aware of the attitude of industry toward this question. On the other hand, it must be recognized that these rules are written into the law, and we cannot ignore them. The Administrator of NASA has authority to waive these patent rights, but only if his judgment tells him that such an action is clearly in the public interest."

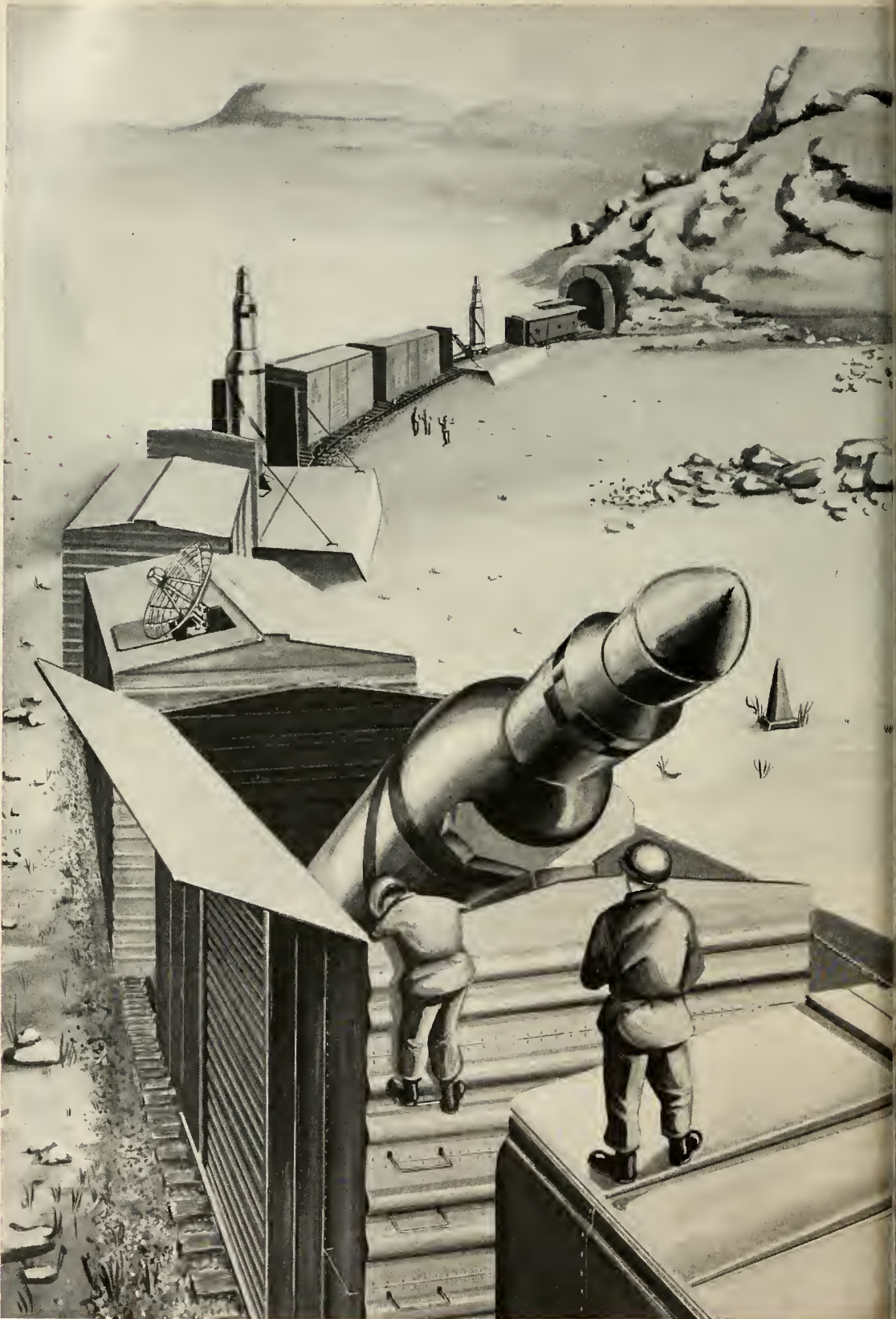
• **Revision?**—Many industry and NASA patent lawyers think that Congress may revise the two organizations' patent regulations in order to reconcile them.

But NASA lawyers do not intend to ask Congress to do so. They feel that the provisions of the law are broad enough to allow them to work out regulations acceptable to industry.

Under the law, the Administrator has the power to waive patents, and the major dispute between industry and NASA is where to draw the line.

Industry would like inventions to be indexed into classes, with the waiver of patent rights by NASA on certain classes of inventions to be automatic. NASA counters that such a system would be infeasible in that an invention in any devised class or category could be so vital to the national interest that the government should retain proprietary rights.

The consensus is that the revisions NASA is presently making of its waiver-of-patent regulations will meet some, but not all of industry's objections.



# Minuteman Rail Concept Pushed

200 missile trains appear possible which should open up a whole new field of missile support equipment running into multi-million dollar program

by William E. Howard

WASHINGTON—*Minuteman* is in the process of being married to a boxcar. Embracing the theory that mobility makes the nation's ICBM deterrent a knock-out proof, U.S. strategists have well-advanced plans to mount the fuelled Boeing *Minuteman* on rails camouflaged as ordinary freight trains, M/R has learned.

Continually shunted around the country on secret schedules, missile trains would be invulnerable to all but a lucky hit. The enemy would never know for sure where they were. In time they could hide out in tunnels and mine entrances.

The cars would be specially constructed, perhaps "hardened" to 5 or 10 psi, and air-conditioned to protect the crew from radioactive fallout. The trains would speed in time of attack to a pre-determined firing point along the track, or possibly a siding, and nuclear-tipped missiles would be launched in moments directly from the cars.

This concept of mobile task forces is being pushed hard by the Air Force. The time *Minuteman* is operational in 1963, its wedding to a train is expected to carve out a whole new field of missile support running into hundreds of millions of dollars.

It is possible that as many as 200 mobile trains may be mobilized, requiring special railroad cars and other mobile handling and support equipment.

On war game "sandtables" elusive mobile trains add up to one of the most unstoppable weapon systems yet devised in the chill sweat to find an "ultimate" deterrent to Russia. For in addition to will-o'-the-wisp deployment, they have the key tactical advantage of being able to fire from their own reference points. All targeting

data would be "pre-cut" to benchmarks or mile posts strung beside the railroad track.

Thus, a boxcar-launched *Minuteman* would have all the accuracy, but not the vulnerability, of one in an underground silo, which can be zeroed in like a "sitting duck" by an enemy missile.

"Mobility and hardness are the two basic parameters," a high Defense Department planner told M/R. "The higher the degree of each in combination, the more difficult it'll be for the other fellow to knock you out. That's what is so important about this missile train concept.

"This is how it can be done—and should be done."

• *Titan* mobility—In the quickening drift toward mobility, M/R has been told, plans also are being developed by the Air Force Ballistic Missile Division to use barges, oil tankers and special truck task forces as ICBM launching platforms.

Moreover, considerable study is being given to adapting the liquid-fueled *Thor* IRBM and *Atlas* and *Titan* to one or more of these moveable platforms. Size and fuel handling are problems with the 90-foot *Titan* and 75-foot *Atlas*. However, a decision reportedly is in the mill at the Pentagon whether to go ahead with development of a storable liquid propellant for *Atlas*.

If one is devised, it could be a major step toward making both *Atlas* and *Titan* mobile. This could be a factor, too, in plans to build several billion dollars worth of underground ICBM bases, in addition to those under construction.

Asked recently by a House Appropriations Subcommittee member if missile mobility is a "countermeasure" to the Navy's submarine-launched *Polaris*, former BMD commander Maj. Gen. Bernard A. Schriever replied:

"No. We are just getting tired of being accused of having our feet set in concrete."

Production of *Minuteman* presently is programmed at 2600 units and consideration is being given to making half of them mobile. If one train could handle six missiles, it would take 200 trains to mobilize 1200 *Minutemen*.

• *Cost factor*—Air Force authorities estimate that it will cost \$1.5 million to put one *Minuteman* in a silo—including the missile, which is expected to come off the production line at about \$750,000 apiece. Chief advantage of the fixed launching site is in lower maintenance cost. *Minuteman* was conceived as a second generation ICBM which, because of its solid fuel, can be deployed in squadrons of 60 in remote areas in tamper-proof silos under "black-box" surveillance—removing the requirement of crews to check on the condition of fuel, launch and guidance systems.

By utilizing existing rolling stock, the cost of putting *Minuteman* on rails would be comparable to a fixed system. But the cost of operating a train with a crew of 30 to 40 men would boost the overall annual outlay.

Research and analysis of the feasibility of mobile platforms, M/R has learned, was part of the proposal when Boeing was awarded the *Minuteman* contract last fall. To generate some broad parameters on performance and economics, a study was initiated and is still underway. Contributing, among others, are the Association of American Railroads and American Car & Foundry, one of the nation's largest railroad car manufacturers.

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## Fourth of a Series on Missile Support

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• **Two designs**—Studies thus far have produced at least two distinct designs, both centering around the launching car. In one detailed to some degree by the BMD, the missile car would be 110 feet long and capable of accommodating two 55-foot *Minutemen*. It would have a rounded, hinged cover under which the missiles would ride horizontally, protected by special cushioning gear.

For launching, the cover would be thrown back and the missiles raised to a vertical position on a ring stand. The car would be protected for possible re-use by a special blast deflector.

Remainder of the train would be made up of standard equipment.

The second, more elaborate concept calls for complete concealment in standard-appearing boxcars—so the train would be indistinguishable from another freight. This would make it that much harder for enemy agents to keep track of the train's whereabouts.

Since the standard boxcar averages 43 feet, the missile car would have to be specially tailored to fit the 55-foot length of *Minuteman*. This limitation probably would restrict the car to carrying one missile. To launch, the hinged sides and top of the car would fold out to the ground. As with the oversized double missile car, *Minuteman* would be raised on a ring stand with an electrically powered hydraulic lifting arm.

Extra shock absorbing effects are required in both designs to prevent damage to the missile while in transit. And the missile car decks and end panels probably would be fabricated of high-temperature resistant steel alloys to withstand takeoff blast.

More engineering and expense would be required to convert available rolling stock for a camouflaged missile train into cars to accommodate communication, telemetry and data processing, personnel and dining.

To harden the cars to withstand bomb blast over pressures of even 5 psi, some experts say, would run up the cost of the trains to an exorbitant figure. Moreover, they point out that hardening could not be very effective anyway, since it is more than likely a nuclear bomb blast at any proximity would knock a railroad car off its tracks. They contend it would be much more feasible therefore to run the trains into tunnels and mines during an alert.

• **15-car train**—A typical missile train of the camouflaged variety is conceived as being comprised of about 15 cars. They would include, in addition to six missile launchers, one car each for communications and telemetry-data processing, one for equipment, two for

spare missiles, two personnel cars, a diner and—to make it look real—a caboose.

While no firm estimates have been made available, AAR figures indicate a fully-equipped missile car for a camouflaged train would cost in the neighborhood of \$100,000—exclusive of the missile. A 110-foot car might be \$150,000 or more. Cost of outfitting cars for personnel—\$50,000 each. And the other cars also would have to be specially fitted and air-conditioned at about the same price. Thus a 15-car missile train would come to about \$1 million. The diesel electric engine, if not leased from a railroad, would add another \$250,000 for a total of \$1,250,000.

In comparison, a luxury streamliner consisting of a two-unit diesel locomotive and 13 cars would cost \$2.7 million.

Equipping the missile train communications and targeting cars along with other support equipment, however, might entail expenditure of another \$1 million, bringing the total for one train ready for deployment with missiles to approximately \$6.7 million.

This appears relatively cheap compared to a hardened *Titan* base, which costs about \$40 million just for the brick and mortar to house personnel and silos for nine missiles.

• **Blocked tracks?**—One obvious drawback of a rail launching system is its inflexibility. In time of emergency, missile trains might be prevented from moving to their target control points by rail traffic, bomb damage or even sabotage to the tracks. This is one reason why some experts are in favor of a missile truck convoy which would prowl the nation's super-highways in continual readiness to respond to an attack.

Railroad authorities believe that through efficient planning and careful routing the drawback may be minimized. They point out that there is ample room on the sprawling rail network covering some 386,000 miles to "lose" a couple of hundred trains. Each day approximately 30,000 trains—half of them freight—are on the move over the country. This is approximately 50% of the trains operating in 1930 during the railroad heyday.

A prototype rail launching car for *Minuteman* is under development. Schriever says the Air Force is "going down the line simultaneously" on both the fixed and mobile operational concepts.

First firing of *Minuteman* from a silo could come late next year—either at Cape Canaveral or at Edwards AFB. Facilities are being built at both. And the first shot from a boxcar may be scheduled at the same time.

## New Transducer Uses Seen in Space Medicine

PHILADELPHIA—Space medicine have issued a transducer challenge to the electronics industry. At a Philadelphia's Franklin Institute symposium medicine experts pointed out that and better transducers are needed to provide the answers that medicine must have to know if man can survive space. And they are looking to electronics to provide the means to sense and transmit the many physiological parameters they must measure.

The one-day Space Medicine Electronics Symposium brought together representatives of medicine and electronics in industry, the armed forces and government agencies.

To date, communications between electronics and medicine has been little to produce any significant results. The Philadelphia meeting was an effort to bring about better communications and acquaint electronics with space medicine problems.

Theodore Kaslow, vice president in charge of the Decker Corporation defined the ideal transducer and pointed out three parameters that are especially important to medicine and are, to date, beyond the state of the art:

1. An objective measure of threshold and level;
2. An objective measure of stress, or awareness; and
3. A measure of cerebral circulation.

Some work has been done by the Decker Corporation on the cerebral circulation problem. Preliminary studies using an ophthalmic artery pulse plethysmograph indicate that techniques and transducers can be developed to provide the answers needed.

Present medical methods of obtaining physiological data—skin and body temperatures, pulse and respiration rate, blood pressure, skin resistance, skin action, etc.—are too crude and difficult to be used on a man in a space environment. The subject's comfort, automatic pickup and recording/transmission capability, volume and weight considerations, and other requirements all date entirely different techniques and equipment from those used in the laboratory.

Gordon Vaeth of ARPA said "we cannot prove today that man can survive and perform in space." He pointed out that in spite of the feeling by some that man is an obsolete and expensive load in a space vehicle, he feels that man has a function to perform that cannot be accomplished by machines.

He pointed out that man is the complete and flexible computer available today and can serve as an efficient data filter or discriminator

missiles and rockets, June 1,

# How Is DOD Moving on Reliability?

Some observers say it is in all directions but Air Force has come up with a new reliability monitoring system which should give better standards

by Betty Oswald

WASHINGTON—Reliability is rapidly becoming the most important headache faced both by the Defense Department and the National Aeronautics and Space Administration. The old slogan "99.44% pure just isn't good enough" for the thousands of pieces and subsystems which make up advanced weapons and space systems.

But how do you achieve reliability? The Defense Department, according to some observers is moving in all directions at one time. However, efforts are made for the most part at design level rather than at the level of materials which make reliability of design components themselves feasible. Whether this is good enough is furiously debated among research people, particularly those who are concerned with the failure to develop a firm materials research program looking ahead to a new generation of requirements.

Latest DOD effort deals with engineering drawings and associated lists (M-D-70327) which spell out in some 25 pages exactly what shall be on the engineering drawings, and how materials, parts and components are to be identified. And to "insure quality" in design activity (either military or manufacturer) is required to establish and maintain an adequate procedure for checking, review and maintenance of drawings, associated lists, and documents prepared or furnished under this specification.

• **New monitoring**—And the Air Force has developed a reliability monitoring program designed to correct as quickly as possible situations such as the recent development of "bugs" affecting the *Atlas*, which resulted in several faulty firings in a row.

The policy statement is contained in AFM 84-1. It is predicated on the assumption that "reliability is a parameter that can be quantitatively specified, estimated, assessed or measured at designated steps or monitoring points of a weapon system's life cycle." It recognizes, however, that increased funding will be required, in some cases, to obtain higher confidence levels in the demonstration testing phase.

AF's program is supplemental. It does not replace contractor's normal reliability monitoring as well as surveillance by AF contracting agencies. It is based on an expression of quantitative contractor reliability (i.e. 50% at a certain date, 95-100% by another date).

Reliability monitoring points established by the AF are: (1) Detailed design study, which includes studies of both system and subsystem reliability covering the entire design and including prediction of reliability wherever feasible; (2) Pre-prototype, involving design engineering inspection or a release of nearly all of the engineering; (3) Prototype, at which time laboratory testing has established compatibility of weapon systems and subsystems and special test vehicles have been used to obtain data for improvement of design, etc.; (4) Pre-production demonstration. Here sufficient reliability must be shown to warrant a production go-ahead; (5) Service evaluation. Here the question is whether the system is

capable of being produced in quantity without significant loss of reliability or performance; (6) Full-scale production, during which the effort is to assure that the level of reliability designed into the system is maintained; and, (7) Product improvement, during which AF hopes to move close to the perfect.

• **Reliability specified**—At each of these points, the degree of reliability required will be specified in the contract. At each of these points the status of reliability is to be reviewed and, on the answers found, a determination will be made whether to move to the next step in the life cycle of the weapon.

However, it's uncertain whether this latest program is good enough. Indications are that there will be more emphasis on the bits and pieces which go to make up the missile system, and perhaps somewhat less emphasis on the complete weapon system. This means more technical development work as recommended by the Stever Committee which recently reviewed the status of the Air Force research effort.

## Thor Plastered



TECHNICIANS coat nose cone of *Thor-Able* re-entry vehicle with plaster to make cast of its surface. Vehicle is first to be recovered after successful flight over 5000-mile ICBM distance. Avco's Research and Advanced Development Division developed ablating heat shield material which protected cone from extreme temperatures encountered during re-entry into earth's atmosphere. (Dark substance behind cone is ablative material which flowed back over main body during re-entry heating.)



# Swiss Firm Turns Out Most Missiles in Italy

*Contraves AG developing into big supplier with its RSD-58 and RSC-57 missiles*

by Anthony Vandyk

ZURICH—Contraves AG, which is developing into one of Europe's most respected missile manufacturers, is a Swiss firm which turns out most of its products in Italy.

The head office and plant of Contraves, a component of Switzerland's Oerlikon-Buehler industrial empire, are located in a suburb of this great manufacturing city. But production is mainly handled by an Italian subsidiary company, Contraves Italiana.

This unusual arrangement is a result of Switzerland's traditional neutrality. Swiss policy does not encourage the export of armaments—and the market within the country is extremely limited. Furthermore, since Switzerland is outside NATO, prospects for a Swiss company trying to sell its products to NATO member countries—the main European military market—obviously are not good.

• **No Red business**—These factors were behind the decision of Contraves to set up Contraves Italiana in Rome. Using the design of prototype facilities of the Swiss organization, Contraves Italiana as an Italian company is in an excellent position to obtain orders from NATO countries. The Contraves organization also takes orders from countries outside NATO but has a policy of not doing business with Iron Curtain countries.

To date, most of Contraves' missile business has come from the Italian and Swiss governments, but there have been token orders from the U.S., Japan, and Germany. Contracts are being negotiated with other countries.

The U.S. Air Force was Contraves' American customer. It evaluated the Swiss anti-aircraft missile at the Holloman Air Development Center in 1953.

Because Contraves missiles are developed without government financing,

the company's salesmen are not hampered by security in their efforts to sell their products on the world market. There are no aspects of the RSD-58 and RSC-57 SAM's or the *Mosquito* SSM which cannot be freely discussed with potential customers.

Contraves makes no attempt to avoid talking prices. The tactical RSD-58 version of the anti-aircraft missile is priced at between \$15,000 and \$18,000 per round, while the training RSC-57 version costs roughly twice as much. The anti-tank *Mosquito* is tagged at \$900 in both its training and tactical versions.

• **"Against birds"**—Now able to offer two highly competitive types of missiles on the world market, Contraves has come a long way since its foundation in 1936 as a modest anti-aircraft research organization (Contraves means "against birds"! ). The first products that stemmed from its work were tracking systems; from the original pre-war models were developed complex theodolites, which form the basis of the Contraves EOTS (Electronic Optical Tracking System), standard equipment at the leading missile ranges of the Western World. More than 100 sets of EOTS equipment have been sold by Contraves.

Another Contraves specialty is fire control equipment. The *Fledermaus* probably represents the ultimate in this type of equipment for anti-aircraft guns. Experience in this field obviously has aided in perfecting fire control systems for Contraves missiles.

The Japanese Self-Defense Force expects to fire its first Contraves anti-aircraft training missile this summer. The Swiss company has concluded a licensing and agency agreement with Mitsubishi Electric Manufacturing Company of Tokyo. Prospects are good that the Self-Defense Force will place

a production order with this conce. Under the terms of the agreement Mitsubishi can sell Japanese-built missiles to any neighboring countries except those in the Communist bloc.

• **Heavy subcontracting**—Contraves policy favors maximum subcontract and most of its anti-aircraft missile system is manufactured by subcontract. Much of the radar comes from Altkwerke, a Zurich electronic company that was one of Contraves' early buyers. The beam guidance radar contains a HF transmitter made by another Swiss company, Brown Boveri. Foreign companies also figure in the Contraves program. For example, Belgian MBL company is responsible for the target-tracking radar.

Although the basic Contraves SA is not new, constant improvements are being made. Operating radius has been increased to over 20 miles and a so



CONTAINER with two missiles weighs only 23 lbs. and is strapped on back  
missiles and rockets, June 1, 1953

propellant is being substituted for the currently-used liquid-fuel rocket motor. The present motor develops about 200 lbs. thrust and combustion lasts about 45 seconds, sufficient to move the missile up to Mach 2.5.

A particular selling point made by Contraves officials is that since neither the SAM nor the little *Mosquito* SSM boosters they can be deployed close to inhabited locations and troop concentrations.

One of the main features of the Contraves SAM system is its mobility, claimed to be at least as great as that of a normal heavy-caliber anti-aircraft artillery battery. The heaviest of the missile battery's units weighs only 12,000 pounds. Nonetheless, the *RSD-58* tactical missile can attain Mach 2.5 and has an operating radius of over 200 miles and a ceiling of 30 miles.

The minimum distance at which the missile can be used is from 8000 to 16,500 feet, according to the speed of the target. Launching weight is about 900 lbs. The warhead contains about 90 lbs. of high explosive. Behind it is an electronic equipment also weighing about 90 lbs.

• **Fast firing**—The beam guidance system permits several missiles to be fired simultaneously from the same battery. Up to twelve missiles a minute may be launched. This high rate of fire requires fast loading on the double launching ramps; this is largely achieved through automation.

The training version of the *RSD-58*, the *RSC-57*, is fitted with a parachute instead of a warhead and thus is not expendable. The recovery system includes two parachutes and special ejection mechanism. After the end of combustion, the missile is split into two parts,

the nose and the main body returning to earth separately. As many as ten recoveries have been made with individual missiles tested at the Italian Air Force's range on the Mediterranean island of Sardinia.

• **Anti-tank**—Contraves is working very closely with the German firm of Bolkow in connection with its program for the little *Mosquito* anti-tank missile. This wire-guided SSM competes in a market so far dominated by France's Nord *SS-10* and *SS-11* missiles.

The Swiss-designed SSM is considerably smaller than the French weapon and weighs only about 23 lbs. A container with two missiles including warhead that can be strapped on to a soldier's back (see photos) weighs only 54 lbs. Guidance equipment weighs 8 lbs. Despite its modest size (3 feet long and 2 feet in wing span) the *Mosquito* has a remarkable performance. It travels at 16,500 ft. per minute and has an operating radius of about 6000 ft.

Although the missiles of its own design are tops in their category, there is little doubt that Contraves would be extremely interested in acquiring the license to build advanced birds of foreign design. Notably missing from the company's catalog is an AAM in the *Sidewinder* category.

It could well be that by the time the Swiss Air Force is ready to make its choice of a supersonic fighter, probably this fall, Contraves will have a proposal regarding the weapon system. In all events, it seems that the company's success with its past projects guarantees it a permanent place among the leaders of the European missile industry.

## S. K. Hoffman Receives M/R's Goddard Trophy

WASHINGTON—Samuel K. Hoffman, vice president and general manager of the Rocketdyne Division of North American Aviation Inc., last week was awarded the Dr. Robert H. Goddard Memorial Trophy—an annual presentation by Missiles and Rockets.

The award was made at the end of a three-day National Missile Industry Conference sponsored by the National Rocket Club. Hoffman was honored for leadership in producing the *Jupiter C* liquid rocket engines which launched the first U.S. earth satellite *Explorer 1*, on Jan. 31, 1958, and engines for the first successful flight of a long-range ballistic missile, an *Atlas*.

An industry award presented by Borg-Warner Corp. also cited Rocketdyne for outstanding achievement with liquid-propellant engines.

Dr. William H. Pickering of Jet Propulsion Laboratory received the Daniel, Mann, Johnson & Mendenhall Space Flight Achievement Award.

Space Industries Small Business awards were presented to: Cooper Development Corp., Monrovia, Calif., for design and fabrication of the three final *Jupiter C* stages used in the *Explorer* series; and Cincinnati Testing Laboratory for developing the first successful IRBM re-entry nose cone.

**Other Highlights**—During one of the work sessions, Dr. Herbert F. York, the DOD's director of R&E, reported that the ARPA-Army cluster of eight *Jupiters* for *Saturn's* space booster will be effective if only seven of its motors ignite. York also forecast a need for more research money for NASA and DOD as the astronautics program diverges more from the missile program.

"Off-again-on-again" Pentagon plans for a nuclear-powered plane (CAMAL) were criticized by Sen. Henry M. Jackson (D-Wash.), a member of the Armed Services Committee and long-time supporter of the project. Jackson challenged whether development of the plane would take five years, as estimated in recently released Congressional testimony by Lt. Gen. Roscoe C. Wilson, Air Force deputy chief of staff for development. The Senator thinks it could be done sooner, and that the first one should be a sea-plane.

And William S. Palmer, vice president of Templeton, Dobbrow and Vance, Inc., mutual fund managers, cautioned that prices of missile stocks have reached "unrealistic" heights because of "wild speculation."



CONTRAVES *Mosquito* SSM uses boosters that can be deployed close to inhabited locations and troop concentrations.

# U.S. May Seek Pact to Silence Outworn Satellites

Delegation at Geneva meeting will also propose radio frequencies to be reserved for space use only

by Paul Means

WASHINGTON—Future U.S. satellites containing permanent power sources will house destruct mechanisms allowing their transmitters to be turned off when their usefulness is over.

An attempt to obtain an international regulation to this effect may be made this August at the Radio Conference of the International Telegraphic Union at Geneva, which will also take up the problem of the allocation of frequencies for space use.

The problem of permanent power sources in satellites first arose when the Navy launched *Vanguard I*. The satellite's batteries were charged by solar cells, allowing it to send signals back to earth ad infinitum.

Because of its almost perfect orbit, *Vanguard I* still provides useful information to the nation's scientists. But when the value of its information is

ended, there will be no way to turn *Vanguard I's* transmitter off.

And a great many satellites in space with permanent power sources would clutter up valuable frequency bands for many years to come.

The next two satellites with solar cell-charged batteries that the U.S. intends to orbit are *Thor-Able III* (the paddle wheel satellite) and *Explorer VI*.

A destruct mechanism in *Thor-Able III* will not be necessary because its orbit (30,000-mile apogee, 150-mile perigee) will be short-lived. But *Explorer VI*, a long-life radiation experiment satellite, will contain either a destruct mechanism which will turn the transmitter off, or a device allowing the transmitter to be turned off and on as information is needed. Its power will be supplied by solar cells charging nickel cadmium batteries.

A satellite transmitter's signal can be terminated by: (1) a circuit breaker;

(2) by applying too much voltage to a transistor, allowing the oscillator to burn it out, or (3) by using a time fuze.

Because some satellites in stationary orbits will give useful information for time to time in years to come, NAAS and ARPA scientists are also perfecting a device that would allow the transmitter to be turned on and off as information is to be required.

• **Space bands**—Another problem created by the Space Age is the fixing of frequency bands for space use in a radio spectrum already burdened by military and commercial communications.

The U.S. proposal before the International Telegraphic Union will be that 25.600 to 25.650 mc., reserved for the exclusive use of space transmissions. This band would be used for earth-space transmission of fixed service transmissions (radio and television network satellites), mobile service transmissions and space-to-space transmissions.

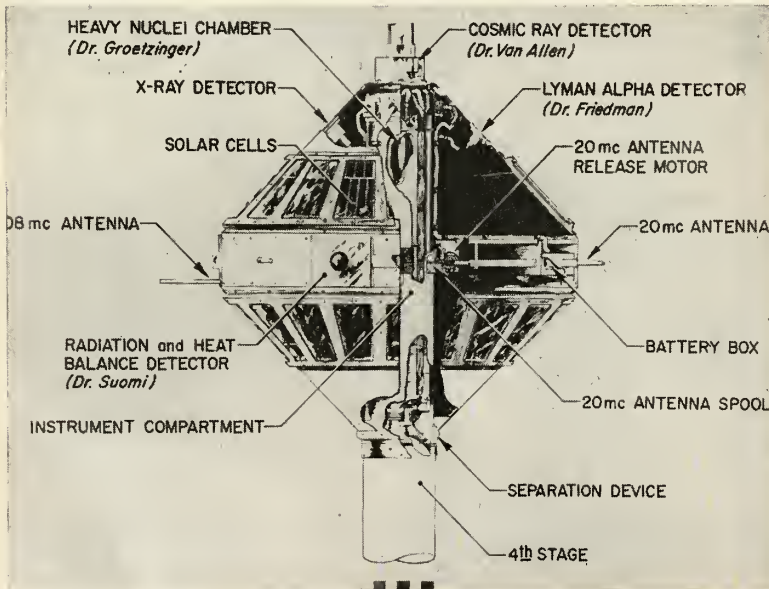
Recognizing that space operation will demand more frequency bands in the future, the U.S. proposal will also request that the following bands also be set aside for space use: 1700-1750 mc.; 1825 to 1850 mc.; 2275 to 2300 mc.; 8300 to 8400 mc.; 15,150 to 15,250 mc.; and 31,500 to 31,800 mc.

The U.S. proposal requests that the latter frequencies be used primarily for ground-to-space station, and space-to-space transmissions. The proposal would not exclude fixed and mobile service uses of these frequencies provided this would not hamper space vehicles and stations in communication with each other and the ground.

• **Hopeful outlook**—Since the Soviet Union is the only other space power, what are the possibilities of effecting an international agreement allocating frequencies for space?

U.S. officials think chances are pretty good.

They point out that international agreements become difficult to effect



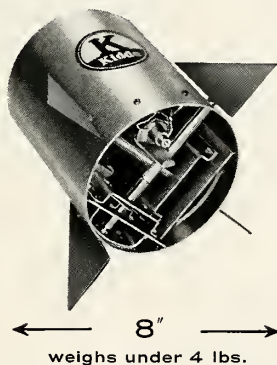
PAYLOAD of *Explorer VI* will contain a transmitter powered by solar cells. Plans call for a device to either shut off or control output of the transmitter at will.



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Kidde hot and cold gas servo systems can be tailored to fit a wide range of applications. Illustrated above, rocket guidance control. They are low in cost, light in weight. Kidde gas servo systems have low current and gas consumption, have few moving parts, and are extremely reliable. They operate at temperatures exceeding 1600° F. Kidde's hot and cold gas servo system components have been developed, tested and are now on the shelf. If you have a problem involving servo valve systems, write for complete information to Kidde today. Chances are we already have the answer.

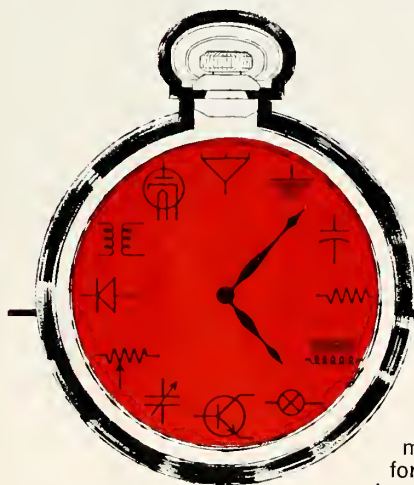
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only when nations have proprietary interests involved. At this point, no nation has much of a vested interest in space.

In 1946 at Atlantic City, the ITU had little difficulty in bringing about an international agreement for frequency allocations. Both the Soviet and U.S. delegations signed the agreement and it has been kept. The coming of the Space Age is the major reason for modifying the 1946 agreement.

The pact reached by the ITU comes as a multilateral treaty after ratification by the governments of the member nations. And the treaty is binding on those nations signing the agreement.

Another point encouraging ITU officials is that the Radio Conference to be held in August—the same month that the Summit Conference is expected to be held. The Russians are expected to be on their best behavior—should sign agreements as non-conversational as the allocation of frequencies for space.

### Details of Atlas Construction Disclosed

WASHINGTON—Details of some of the materials and manufacturing methods involved in production of Atlas have been revealed by J. R. Dempsey, vice president of Convair's Astronautics Division, which makes the big tank.

In a recent talk here, Dempsey said that thin-gauge tank walls of the missile form the complete frame. He added that the tank, about 60 feet in length and 10 feet in diameter, has no internal framework and hence must be kept under pressure, like a football, even when it is unfueled.

The material used is a special cold-rolled austenitic steel (AISI grade 304) produced by Washington Steel Company in Washington, Pa., Dempsey disclosed. It is delivered in coils consisting of long flexible bands about one inch wide. The tank is welded together along its thinnest wall section meets a specification for minimum tensile strength of about 200,000 psi.

The bulkhead separates two propellant storage tanks. A domed stainless steel bulkhead forms the forward end of the tank and a third bulkhead of conical shape makes up the aft section.

After welding is completed, the tank is pressurized by gas to take out wrinkles out of its skin. Pressures less than 10 pounds per square inch are required in the tanks.

Advantage of the tank construction, Dempsey said, is that it can be converted to other missions with any change in the basic design or wiring equipment. He denied that the pressurization made the missile vulnerable to damage or destruction.

missiles and rockets, June 1, 1960

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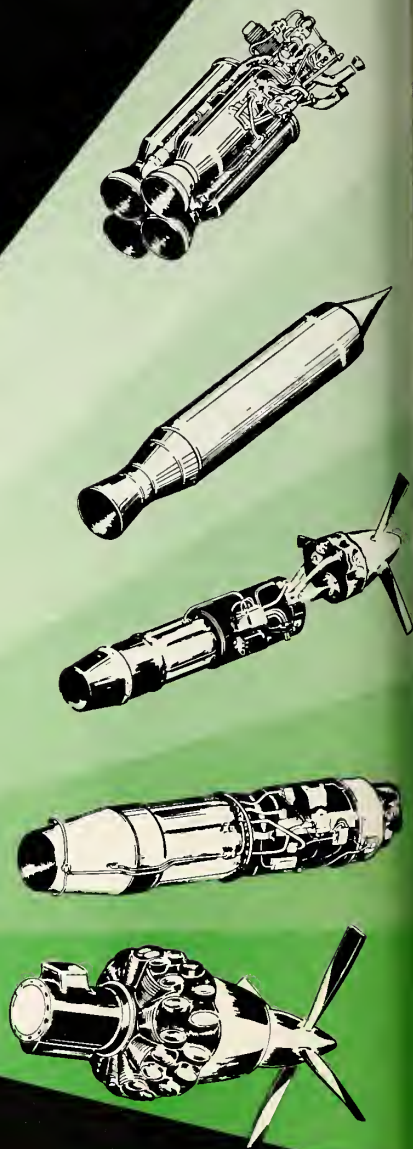
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enate is expected shortly to approve the House-passed four-year extension of the Renegotiation Act, which expires June 30. The bill omits industry-backed proposals to broaden options and allow higher profit margins.

At Cape Canaveral, 1500 workers joining a carpenters' strike against contractors returned to work in the interests of national defense," although still supporting the strike. So no missile firings have been scheduled by the walkout.

A sharp attack on both the Army's *Hercules* and Air Force *Bomarc* interceptors has been made by Vice Admiral J. T. Hayward, deputy chief of Naval Operations. The \$25 billion defense network is a soon-to-be defeated Maginot Line, Hayward says, because of the 15-minute ballistic miswarning time. His recommendation is to stop pouring money into a fixed intercepting and defense system.

An Army scientist Dr. Ernst Stuhlinger believes in the 1965-70 period nuclear-powered unmanned ferry may be developed to haul building material, equipment, food, water and oxygen to a base on the moon. Total weight of space ferry would be 84 tons with a payload capacity of 50 tons, which would be a detachable landing vehicle propelled by hydrogen and X engines.

The Air Force is acting as executive agent for ARPA on *Midax* (missile nose alarm satellite). Order was placed in November, 1958. ARPA has budgeted \$18 million in FY 1960 for the project—an increase of \$6 million in the current fiscal year.

Texaco Inc. is moving into the high-pressure fuel R&D field with the acquisition of Experiment Incorporated, Richmond, Va. . . . On the West Coast, Reduction Pacific Co. is building a \$8 million LOX, liquid nitrogen and hydrogen plant at Richmond, Calif., with a daily 30-ton capacity. . . . Linde's new 165-ton-a-day LOX and liquid nitrogen plant at Pittsburg, Calif., began deliveries May 14—two months ahead of schedule. The company says the advanced production has "relieved what could have become a critical shortage." . . . NASA has selected Callery Chemical a \$175,000 contract to evaluate a new rocket pro-

pellant with liquid and solid applications which—if practicable—will permit substantial increases in payload weights.

Improvement of vapor phase deposition of chromium, molybdenum and tungsten is reported by Alloy Research Corp., Watertown, Mass. Possible electronic industry applications include component coating with high-purity, high-density tungsten to prevent contaminants in base materials from adversely affecting electronic emission characteristics. Thicker "coatings" raises possibility of fabricating thin electronic parts of refractory metals. Heavy coating of tungsten on graphite also may be feasible for improving heat characteristics of rocket nozzles.

Space balloon to probe atmospheric density at 300 miles will be launched soon by Air Force Cambridge Research Center. Boosted by *Arobee* and *Sparrow* rockets, balloon will be ejected in 18-pound package, which will unfold into 9-foot mylar plastic sphere reinforced by dacron threads. Inflation will be accomplished by evaporation of ethyl alcohol followed by capsule discharge of freon gas into plastic struts inside the balloon. System was designed by Arthur D. Little Co.

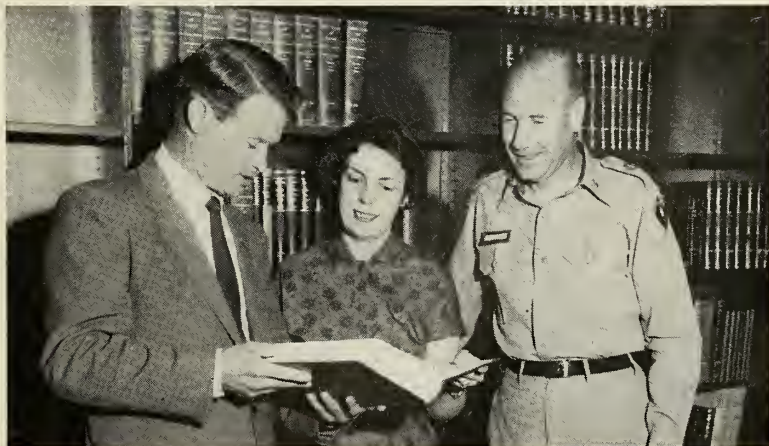
Prime contract has been awarded Marquardt Corp. by Air Force to expand its effort on project *Pluto*—joint AF and AEC feasibility study of nuclear ramjet engines.

Fast tax write-off certification has been granted by the OCDM to Bendix Aviation for missile R&D—60% of \$1 million; Hughes Aircraft for electronic systems R&D—65% of \$400,000; Lear Inc. for R&D and production of missile components—60% of \$1.9 million.

Mergers & Expansions—Royal Industries has acquired Pacific Electronic Controls Corp., Monrovia, Calif., potentiometer maker . . . Machlett Laboratories Inc. stockholders and those of Raytheon Inc. have approved merger conditions . . . Hewlett-Packard Co. has initiated \$1.9 million in building construction for a planned \$2.7 million expansion at Stanford Industrial Park, Palo Alto, Calif. . . . 28% more plant space will be added by Sperry Electronic Tube Division of Sperry Rand at Gainesville, Fla., to expand production of microwave tubes. Employment will be boosted by 30% to more than 800 by mid-1960, the company says . . . Electronic Communications Inc. is building a 150,000-square-foot manufacturing plant at St. Petersburg, Fla.

Russia, says National Bureau of Standards Director Allen V. Astin, is leading the "entire world" in high-temperature development. And equally important in the Missile Gap, Astin says the U.S. is behind the Soviets in industry-wide verification of industrial and scientific instrument calibration. He says Russians have established a network of calibration centers for the mandatory interchange of data about technological components.

### Magazines for 'Space Academy'



FIRST MISSILE library, at Army Ordnance Guided Missile School, Redstone Arsenal, gets bound copies of M/R. Executive Editor Clarke Newlon makes the presentation.

# SCOUTING THE FRINGE OF SPACE



## 5 manned research vehicle rehearses for first flight



by Erica M. Karr

If all goes according to plan, the *X-15* will have made its first powered flight before the next two months are up. The hybrid rocket-plane, offspring of a nationwide project involving over 300 companies—large and small—recently completed its fourth captive flight test and is expected to undergo a glide-flight landing test within the next two weeks. First space-fringe flight to 100 miles is due "sometime next year," according to prime contractor North American Aviation, Inc.

Primary role of the *X-15* is to get data on actual flight conditions beyond the atmosphere and the effects on man and machine during exit and re-entry. To do the job the vehicle will carry over 1300 pounds of instrumentation involving approximately 600 temperature pickups and 140 pressure pickups.

Minor bugs have been worked out of the system during an extensive ground testing program and the captive flights have proven out all systems except the engine. During these trial runs, the *X-15*, locked under the wing of a B-52, has been under continual surveillance by two television cameras in the mother plane which has taken the manned space bird to 42,000 feet at Mach .8.

The mated combination has been checked out for aerodynamic characteristics while North American's design engineer and test pilot, Scott Crossfield, checked out the control and communications systems from the cockpit during simulated launch.

Although Crossfield will take the 50-foot ship through final flight test phases,

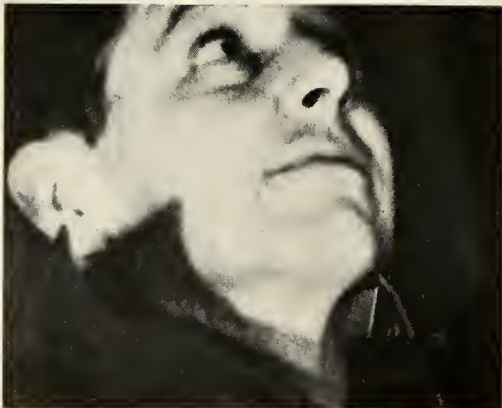
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**NEEDLENOSED *X-15***, being readied for captive flight test under B-52 wing, is fed helium gas which is chilled by passage through liquid nitrogen of minus 320°. Nitrogen, which boils at this temperature, causes ground fog. Chilling gas increases fuel load.

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**Another Exclusive  
Cornell Capa Picture Story**

## ... two faces of one man



Air Force Maj. Bob White will probably be the man who will nose the *X-15* in and out of the atmosphere on its first full flight.

In this unusual account, the camera of Photographer Cornell Capa has caught behind-the-scenes highlights before, during and after a recent captive flight, culmination of the over 3½ years' work to date in bringing the *X-15* to the threshold of proven reliability.

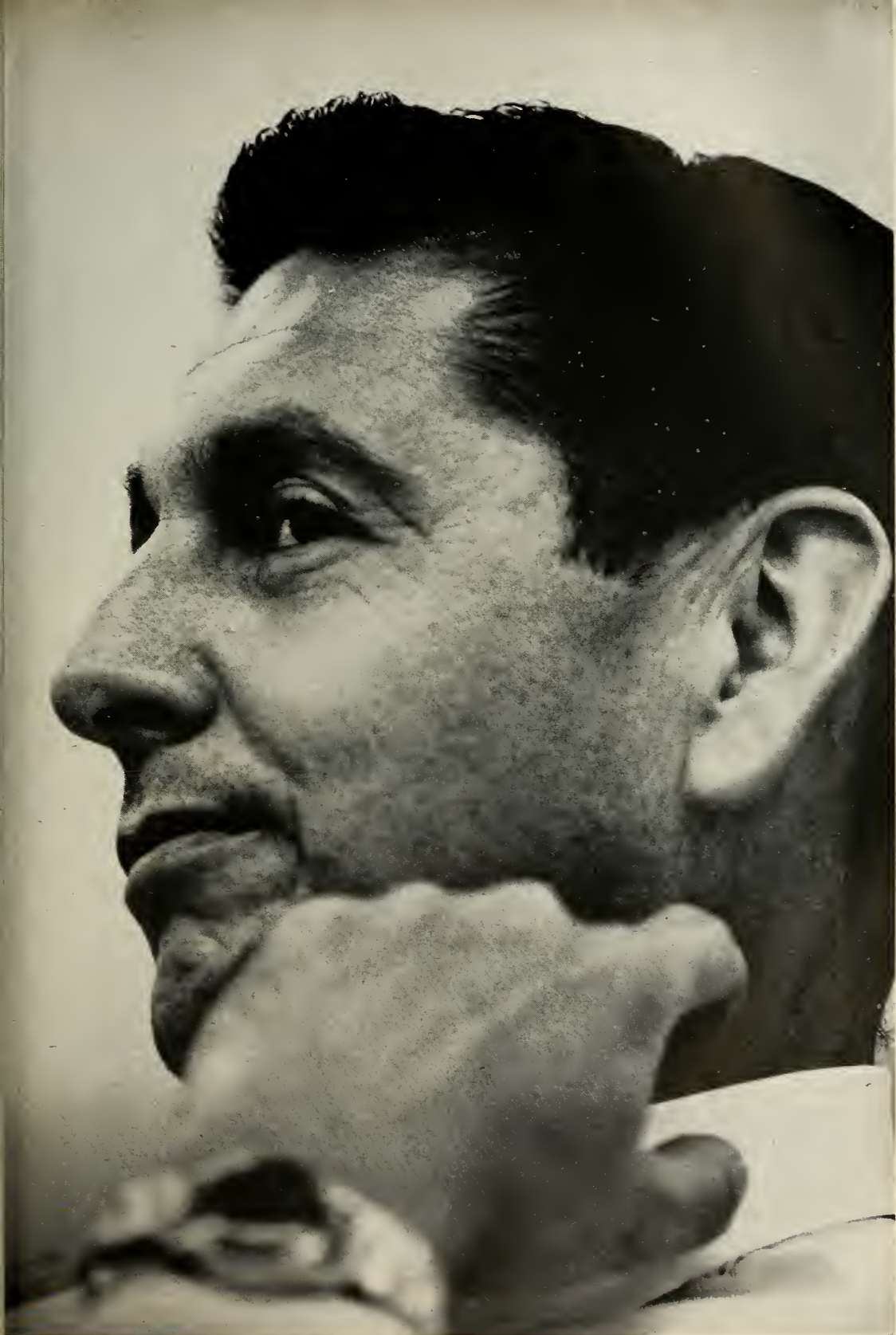
Crossfield, who has lived with the program since its inception, often putting in 100-hour weeks toward its realization, and the *X-15* both will undergo their stiffest test to date in the glide-landing run. Falling vertically with an initial speed of 100 mph, and moving with a ground speed over 400 mph, Crossfield will have about two minutes to test control responses before he tackles the tricky problem of landing.

Among major contributors to the program which is expected to cost over \$120 million through the third vehicle: Reaction Motors Division of Thiokol Corp. supplies the liquid propellant powerplant which will boost the *X-15* to 4000 mph. Auxiliary power units come from General Electric's Accessory Engine Division. Garrett Corp. makes the liquid nitrogen cooling and pressurization system. Pressurization suit, tested by Crossfield in the captive tests, was developed by a brassiere and girdle manufacturer, the David Clark Co. The nickel alloy—Inconel X—from International Nickel Co. will bring the *X-15* through the high temperatures of re-entry.

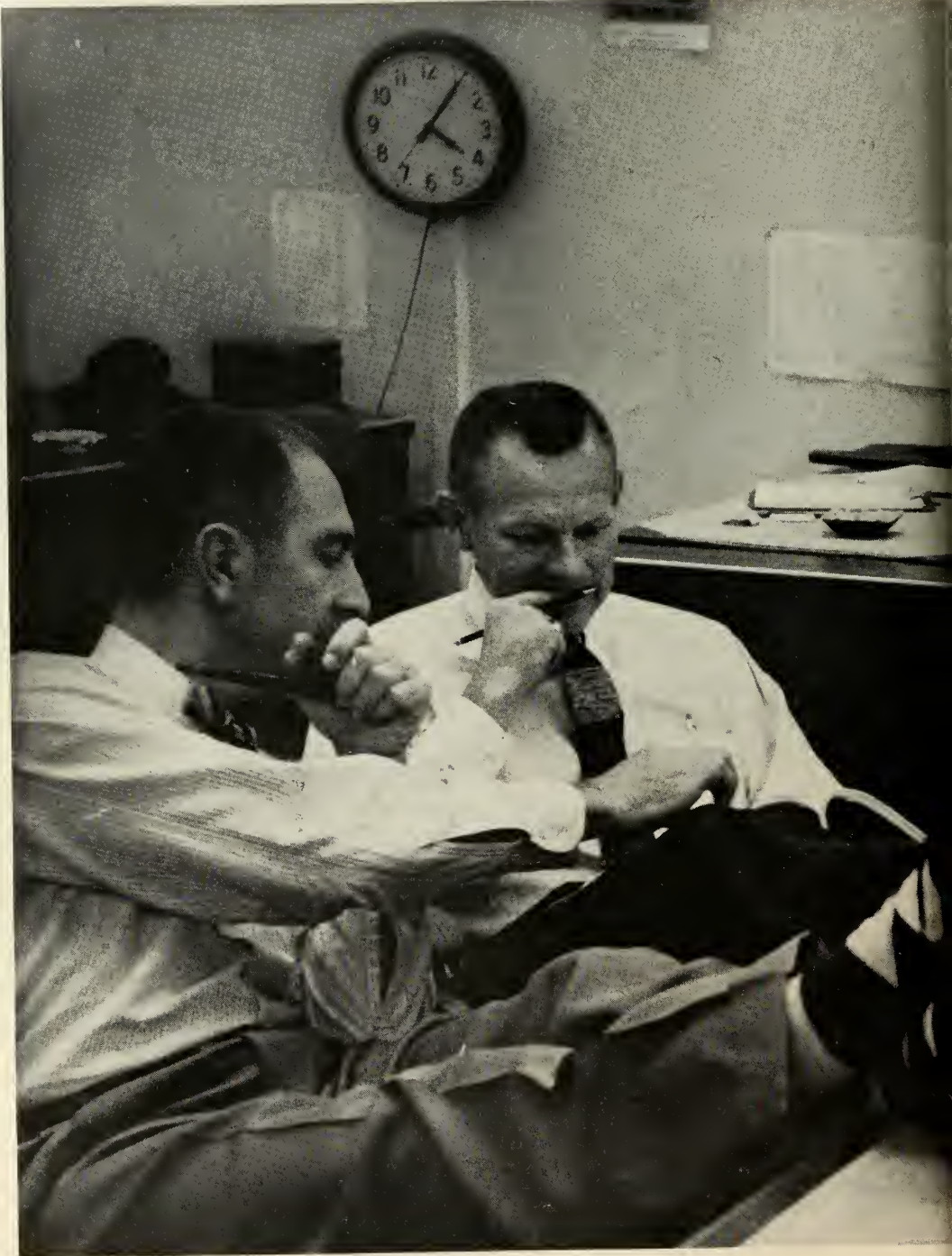
Ballistic rockets for out-of-the-atmosphere control come from Bell Aircraft, while Sperry Gyroscope developed the in-flight electronic indicator system to transmit altitude, speed and angle of attack to the pilot and recording apparatus. Instrumentation, much of it produced by Lear and NASA, will have a temperature environment provided by a system developed at AiResearch Mfg. Co.

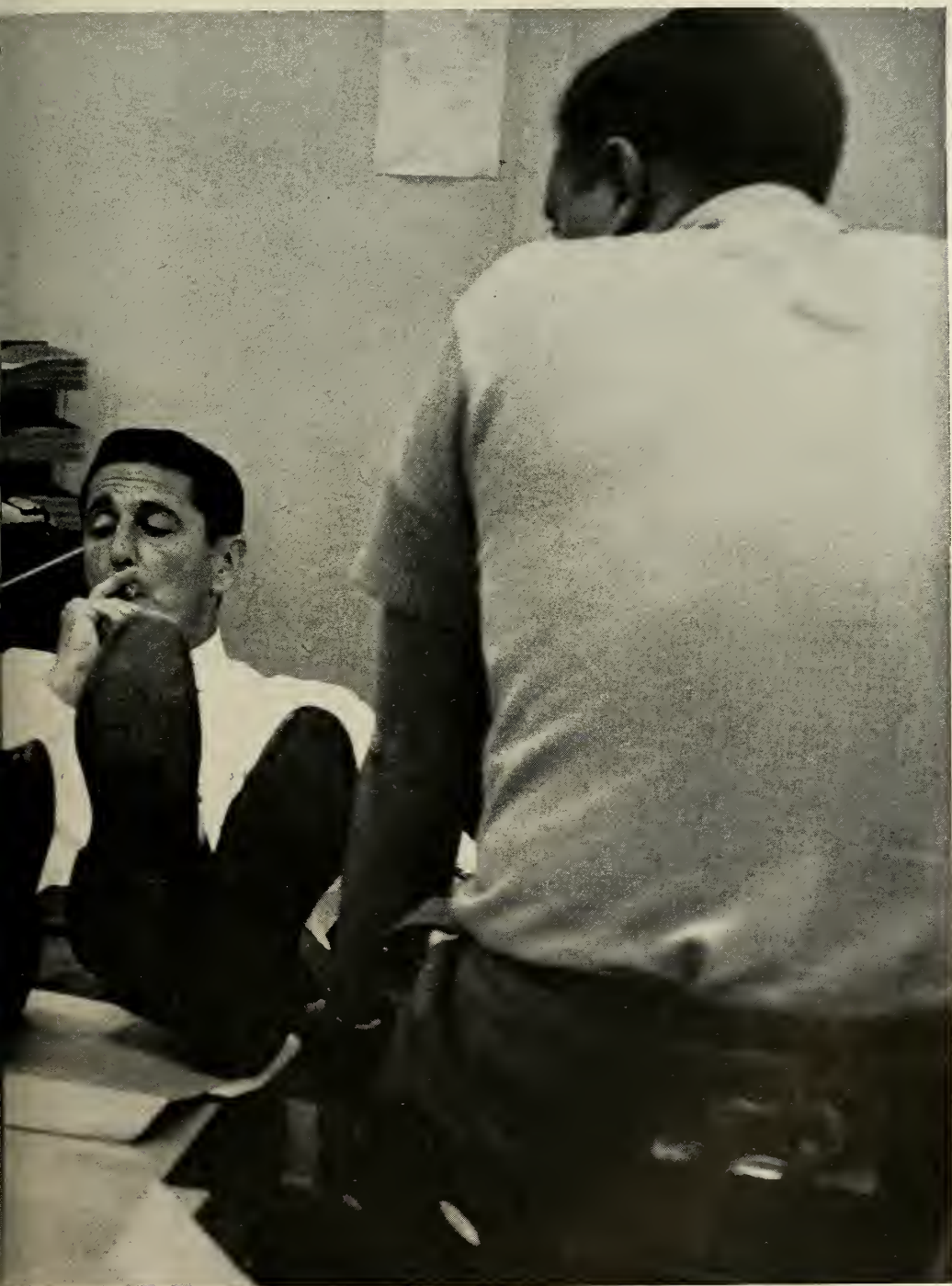
**DISTORTED FACE** of test pilot Scott Crossfield reflects terrific pull of 4 g's forward and 7.33 g's down in *X-15* re-entry simulation. Right: The normal Crossfield face.





*... Relaxed conference with vital implications*



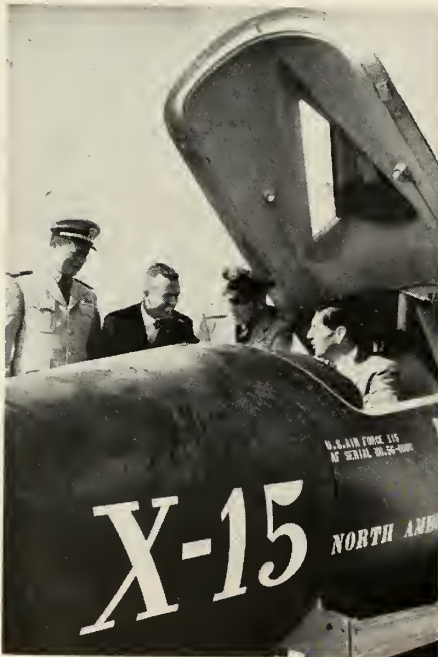


**FEET ON DESK**, North American's Sam Richter, flight test engineer; Q. C. Harvey, test operations supervisor; Crossfield and Bill Berkowitz, launch panel operator, discuss countdown procedure for new X-15 test.

*. . . rehearsal for tomorrow . . . flight*



**TOWER WATCH.** Assistant project engineers Raun Robinson and Bud Benner watch captive flight while tuned in on radio with control unit.



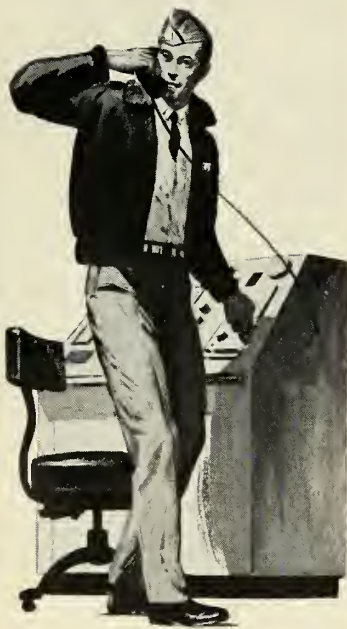
**X-15 PILOTS,** present and future, Joe Walker, NASA; AF Capt. Bob White, LCDR Petersen and Scott.



**NASA,** Air Force and Navy pilots will put *X-15* through paces where NAA's Scott Crossfield leaves off.



*Final checkout on suit and machine, ready for takeoff . . .*



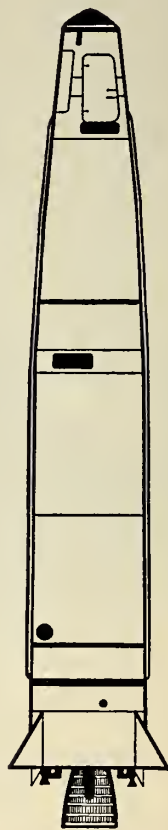
## The man:

... a launch-control specialist in a *Thor* SAC squadron. His instruments report each automatic step in the launching procedure of the big IRBM. U.S. Air Force and Royal Air Force missilemen are receiving *Thor* training side-by-side ... have readied and fired these missiles within a 20-minute count-down.



## The missions:

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## The missile:

... can destroy targets as far as 1500 miles away within minutes after hostile action is detected. Douglas *Thor* missiles were the first intermediate range ballistic missiles to be deployed overseas. The United Kingdom has announced the delivery of the first *Thors*, for operation by Royal Air Force personnel.

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# Simple Solion May Fill Low-Frequency Gap



*Very small and lightweight, solion gives high sensitivity, low power input. Here lead wires are welded on integrator.*

by Charles D. LaFond

WASHINGTON—The solion, a liquid-state device, is one of the newer additions to the electronic components field providing one more link in the evolution of dynamic circuit elements. Embodying ions in solution as a charge carrier, the solion contrasts sharply with vacuum tubes and transistors in which the charges are transported by electrons.

Much research has been devoted to development of solion technology, but the art is still in its infancy with respect to application. So far, the solion has shown some very desirable attributes not normally available in either electron tubes or transistors. A rapid summary of some of the virtues of solion units will readily explain why interest is spreading.

**• Strong points**—Solions, for low-frequency use, require low voltage and low power (0.9V dry cell supply and most of all devices produced consume 10-15 milliwatts standby). They are highly stable (with some exceptions), long-lived, rugged, light and compact.

They can provide high amplification and circuits free of electrical circuit memory. When they are used as detectors, flows as small as  $10^{-5}$  millivolts/sec. can be indicated and pressures as low as 1 dyne/sq. cm. will effect a response.

Finally, they are simple in design, easy to manufacture and uncomplicated in operation.

**• And drawbacks**—Solions also have certain characteristics and limitations which will confine their use. They are restricted to low-frequency applications. They are unique technologically and designers require sound electrochemical knowledge. They are sensitive to temperature change, vibration, and position (these can be anticipated and compensated). Current manufacturing fac-

cilities including mass-production machinery are either limited or nonexistent.

**• Description**—The simplest type of solion (the term is generic) is a sealed unit containing two electrodes immersed in an electrolyte—the whole functioning as a diode. Configurations vary with the role. In general, the electrodes are fabricated from platinum or other noble metal. Serving as conductive surfaces only, they are not a part of the electrochemical reaction.

The electrolyte most commonly used is iodine-potassium iodide. It provides a reversible system (redox) wherein there is never a net change in any solution component—only local concentrations vary at the electrodes.

Highly sensitive to low-level stimuli, the solion is most suitable for low-frequency (0-200 cps) applications. Requiring from 0.01 to 0.001 the power required for transistors, research indicates that within its frequency range it may be more efficient than transistors.

Reason for the frequency limitation is the inherently high ratio of the ion mass to that of an electron (in an iodine solution, the ratio is about 233,000:1). On the other hand, since vacuum tubes and transistors are not used at such low frequencies—that is, without burdensome circuitry—the solion fills the gap.

**• History of solion**—The idea of concentration polarization, determined by Nernst in 1904, is a foundation of solion technology. The principle is basic to the consideration of polarography and a primary strut in the theories of electrochemical overvoltage. Basic quantitative theory in these areas has achieved wide dissemination in European technical publications and behind the Iron Curtain.

Dr. D. S. Muzzey, Jr., then of Shell Oil Company, first studied the effects of

using an electrode in a solution for acoustic and pressure transducers.

Later studies during World War II at the U.S. Naval Ordnance Laboratory (NOL), Silver Spring, Md., demonstrated the reversibility of an iodine-iodide closed system.

Following proof of feasibility for practical solion units, the Emhart Manufacturing Company of Hartford, Conn., successfully completed a contract for the Navy Bureau of Ordnance to manufacture some small units.

Pioneering in early applications of the solion, National Carbon Company, a division of Union Carbide Corporation, together with Texas Research Associates has been developing a whole line of experimental solion components.

**• Basic principles**—All of the so-called liquid state devices are electrochemical units, and certain common fundamental laws or theories govern the phenomena associated with each. To better understand the function and operation of a solion device, a few of the more dominant concepts should be reviewed.

In a galvanic cell, the voltage measured at the point of zero current flow in an electrode is called reversible potential. Applying an emf with an increasing current to one electrode will eventually cause the measured potential to change from the reversible potential. The amount of this voltage deviation from the reversible potential is the overvoltage; the electrode is considered to be polarized.

Overvoltage is a function of chemical processes at the electrode and can be considered as the result of three different processes: (1) Activation overvoltage is caused by a too-slow chemical reaction; (2) Film overvoltage results from formation of an insoluble film over the electrode surface. Actually the film serves as a resistance in

the circuit and results in a proportional voltage drop; (3) Concentration overvoltage, or concentration polarization, is caused by an electrolytic diffusion rate that is too slow at the surface of the electrode.

In an electrochemical system the rate of diffusion serves as a current limiter since the current flow is proportional to electrode area, salt concentration, and the diffusion coefficient of the cation or anion under consideration. This limit, the diffusion current, is proportional to the concentration of the solution. (Polarography is an analytic technique using this knowledge of specific diffusion currents for different compounds in solution.)

It follows then that to make use of the concentration polarization, the solutions must be affected with an external force in a manner associated with function of the particular solion device; that is, disturb the solution to alter or upset the diffusion layer, or force the flow of different concentrations of solution in juxtaposition about the same electrode.

Finally, two additional phenomena should be discussed. Between a solid surface and a solution there exists a state of electrical imbalance. An "electrical double layer" of ions is distributed along the boundary. Oppositely charged ions are tightly bound to the will move with respect to this surface. The result is a situation similar to a charged parallel plate condenser, although the potential drop perpendicular to the surface is not as sharp as in solid surface, but a few farther away a condenser. The ions in motion have a net charge opposite to that of the fixed ions.

To utilize this phenomenon, capillary tubes can be used to permit a net charge in this second layer significantly high with respect to the rest of the solution. Considering only one tube and providing that electrodes are located at the tube ends, with an applied potential, the fluid will be moved in one direction by a phenomenon known as electro-osmosis.

• **Progress to date**—What has been accomplished so far with solion? Early research at NOL and DRL indicated feasibility of the following: an electrochemical readout integrator, a low-frequency acoustic flow-detector (with logarithmic response and full range of at least 80 db), a micropump, an amplifier (with amplification factor of 300), and product units.

The solion is still considered experimental by the company, which has not yet decided to move to commercial production. High on their list of potentials is their electrical readout integrator. (Samples are available to other companies interested in the present or future use of solions.)

As described by National Carbon Co., the following is a list of anticipated uses for their existing solion components:

• **Solion Electrical Readout Integrator (SERI)**—

(1) Integration of output from automatic product analyzer to determine necessary input correction.

(2) To sense temperature and dupe error signal for correction output through control circuit.

(3) Very-low-frequency amplifier (to dc) for use in control circuits.

(4) Integration of output from environmental sensors of various types for use in routine testing and in term rocket or missile flights.

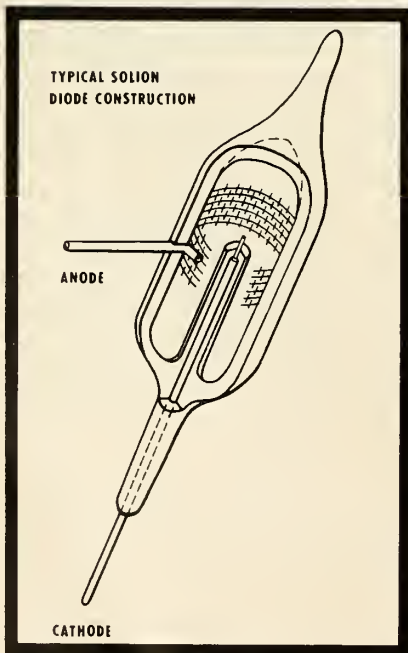
• **Solion Visual Readout Integrator**—

The solion visual readout integrator has much larger integral capacity than the SERI and the ability to retain integral for several months to an accuracy within 5%. This type unit is presently being used to integrate the output from a microphone in a noise meter.

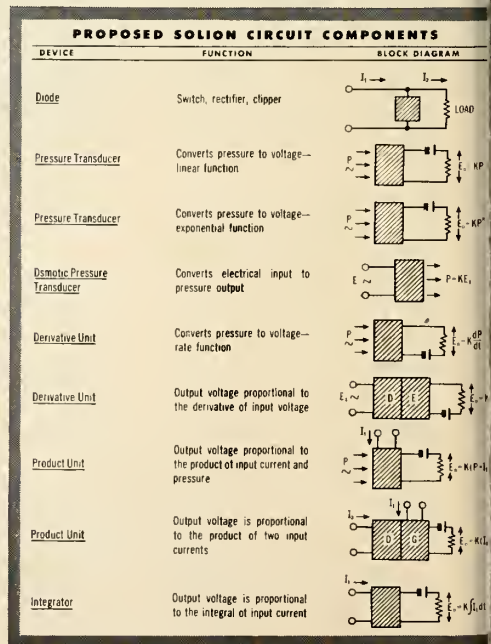
• **Solion Detectors**—

The solion flow detector produces small electrical currents in response to applied pressure at frequencies between 0.001 and 200 cps. The functional form of the relation between current and pressure can be varied over a wide range by proper electrode configurations. One type of solion detector presently being used experimentally detects low-frequency acoustic signals in water. Another type detector is being used in an experimental accelerometer.

The Emhart Manufacturing Company is the first manufacturer for the solion. It has the production know-how for solion fabrication. Company spokesmen have indicated that it is still too early to predict future commercialization of solions.



**CHARACTERISTICS of solion integrator, left; circuit arrangements concept, right.**





# Tubes and Transistors: Where Do We Stand?

*M/R survey shows that if anyone wins  
'battle' it'll be to benefit of entire industry*

by Hal Gettings

WASHINGTON—If anyone wins the "battle" between tubes and transistors must be the electronics industry as a whole. The development and phenomenal growth of the transistor has served to broaden the scope of electronics and advance the state of the art at a faster rate than ever before. The tube industry can thank the transistor for giving it a kick in its transconductance and forcing it to make some unprecedented progress of its own.

Tubes have seen many significant improvements made recently. The vacuum tube, the ceramic tube, cold-cathode, Sarong, and other innovations have served to cut down on many of the vacuum tube's shortcomings. Transistors, too, have jumped ahead to new capabilities with the new high-temperature gallium-arsenide semiconductors, solid-circuit modules, the erroneously-named "molecular electronics," and more rigidly controlled production techniques.

In spite of the fantastic increase in the number of transistor units sold each year, the receiving tube has lost ground. Indeed, more tubes are expected to be sold in 1965 than ever before. The obvious conclusion is that the market is expanding at a rate comparable to the transistor's growth.

**Intelligent design**—At the risk of unnecessarily elaborating on the obvious, the only solution to the problem of tubes vs. transistors is intelligent specification and design. This seems to be the consensus of the industry and government representatives, design engineers, prime contractors, and consultants contacted by M/R editors to solve the problem.

The day may sometime come when an engineer can crank all the desired characteristics, application, size, weight, and shape of a proposed system into a

computer and come up immediately with an answer as to what circuits and components to use.

Until that day, however, this work must be done by man. And for that man to do a satisfactory job on the design he must know and consider many things.

Two facets of this "intelligent" approach seem to have particular merit:

1) All factors must be thoroughly considered before specifying or designing either tubes or transistors into a circuit;

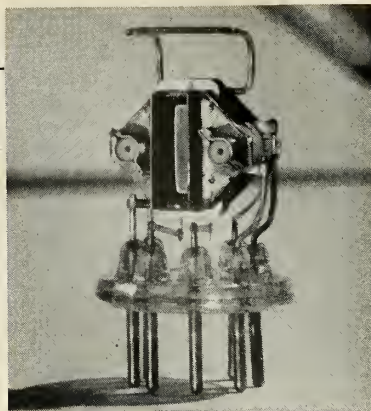
2) Consideration must be given to marriage of the two when advantages can be gained by so doing.

The first point requires that the final decision be made as far down the line as possible. The design engineer who must, in the end, tie the circuit together and make it work, should be given as much freedom as possible in making the choice, subject to other factors in the system or circuit design.

And he, of course, must make his decision based on a thorough study of the problem and the best solution. Ideally, such a man should be entirely objective in his choice; he should have no preconceived notions as to one being better than the other.

**Hybrid techniques**—Possibly one of the greatest relatively unexplored possibilities is that of using hybrid techniques: designing tube/transistor combinations to take advantage of the best features of each. Some little has been done here—Motorola has a hybrid automobile radio that reportedly is a good basic design—but undoubtedly much more can be accomplished. Such an approach may solve many problems and open up new areas not even considered before.

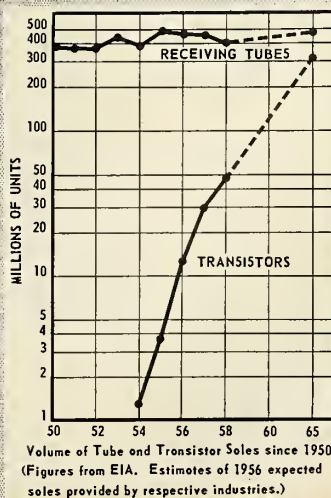
There are, of course, many applications where nearly everyone agrees that transistors are the answer. Where



SYLVANIA's stack tubes combine advantages of glass and ceramic.



GE's solid-state thyatron can switch kilowatts of power in microseconds.



size and weight and power dissipation requirements are of first importance—and are not outweighed by other factors—then transistors can unquestionably do the job.

They have been proven in computers, battery-powered devices, underwater communication cable amplifiers, dc-dc and dc-ac converters, audio amplifiers, etc., where their obvious advantages make them first choice. Transistors' main selling points—small size, light weight, efficiency—can certainly be used to advantage in today's requirement for things smaller, lighter, and cheaper to build and operate.

Currently, IBM is developing a prototype transistorized SAGE computer under an Air Force contract. This unit will reportedly have seven times the computation capability of the

present unit and will be only about 10% its size. Some thought is being given to ultimately transistorizing the entire SAGE installation.

**• Transistorization buys**—In a paper delivered last week at the National Telemetry Conference, Max A. Lowy, Data Control Systems, Inc., made an interesting comparison of identical transistor and vacuum tube 16-band FM/FM telemetry systems.

A condensed summary of his findings are shown in the table. His conclusion is that transistorized systems are more expensive, but this extra money buys reduced volume, reduced weight, better performances, and higher reliability in this particular case.

Other things being equal, the transistor has been and will be the obvious choice between the two for its size,

weight, and power advantage. Not however, nor in the foreseeable future can it do everything the tube can. It's a mistake to expect it to do a greater mistake to try to force it to jobs beyond its capabilities.

Ideally, it would seem that should be able to draw a graph: here are the parameters within which tube is best, here the transistors, here either or both. Unfortunately, question is not that simple. Although frequency, heat, power, radiation, any number of other considerations influence the choice between the two the lines cannot be sharply drawn.

Much propaganda has been put by both tube and transistor manufacturers. Both are competing for a market and their respective claims must be, to a certain extent, subject. Consider some of the areas stressed by one or the other and see if definite conclusions can be reached.

**• Reliability**—So many factors enter into considerations of reliability that generalities cannot be easily defined. Both tubes and transistors have performed well in rugged applications where the initial design and packaging techniques were good. At the high temperatures and over wide ranges of signal and power levels, tubes definitely hold an edge. Under extreme environments, transistors are generally conceded to be better. Especially after an initial operating period, transistors show an exceptional stability over long periods. Some variation of characteristics has been shown by transistors after a relatively long storage.

**• Radiation**—Tube manufacturers argue that transistors are inherently much more susceptible to high-energy gamma radiation, and this is true. Transistors have been subject to more radiation testing than tubes, however, and more data is available. In addition, the semiconductor makers point out that the tolerance levels of solid state devices are as high and sometimes higher than those of other circuit components and personnel.

**• Noise**—In applications where noise is an important consideration, tubes definitely are the choice. Transistors have an inherently higher noise figure.

**• Size and weight**—Here the transistor is indisputably king so long the advantage is not thrown away by compensatory or protection circuits.

**• Temperature**—Transistors are more sensitive to temperature variations than tubes and cannot operate at higher temperatures (over 200°) or over wide ranges with reliable stability. Progress is being made in this area, however, by such devices as Texas Instruments' gallium arsenide diode which operates up to 325°C.

COMPARISON OF IDENTICAL VACUUM TUBE AND TRANSISTOR TELEMETRY SYSTEMS

	Vacuum Tube		Transistor	
	UNIT 1	UNIT 2	UNIT 1	UNIT 2
Total Battery Power (watts) .....	81	155	10	4.5
Total Volume (cu. in.) .....	208	375	103	197
Total Weight (lbs.) (incl. battery) .....	21	29	8	13
Total cost of system (less mtg. base & battery box) .....	\$4315	\$6610	\$9710	\$7805

1939

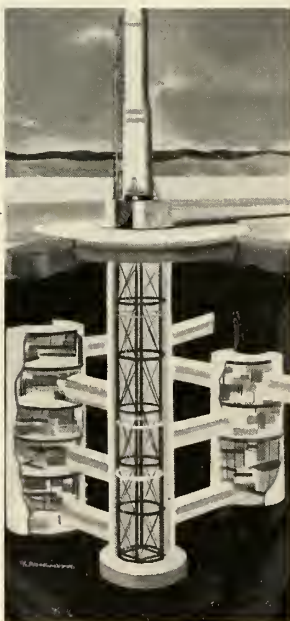
Ets-Hokin and Galvan installed "Mousetrap" rocket launchers on U.S. Navy sub-chasers.

1956

EHG pioneered in the installation of electronic systems of test and launching complexes for Inter-continental Ballistic Missiles.

1959

EHG has now installed or serviced the electrical and electronic phases on most of the ICBM complexes in the United States.



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## people

• **Impedance**—Low-impedance circuits definitely favor transistors. High impedance (over 200 ohm) requires tubes. A wide range of both input and output impedance is available with tubes.

• **Frequency**—Transistors are generally suitable only at the lower frequencies. With careful selection and, in some cases, compensation, satisfactory performance may be obtained even up to 300 mc. Generally speaking, of course, power is universally proportional to frequency.

• **Power dissipation**—The transistor is, again, the acknowledged leader. Especially in huge computer installations, where the cooling load is tremendous and a cooling equipment breakdown could be critical, transistorization offers many advantages. It must be remembered, however, that transistor circuits must sometimes also be temperature-regulated and that it is much more sensitive to even relatively slight variations.

• **Voltage**—Tubes are definitely the device where higher voltages (over 500 v) are used and where the circuit is subject to surges and transients. Where transistors are used under adverse conditions, some of their advantages must be sacrificed for protection of the equipment.

• **Uniformity**—Tubes justly claim uniformity and interchangeability as two of their significant advantages. Transistor manufacturers admit that uniformity of characteristics is hard to maintain. For critical applications, users are forced to reject from one-tenth to one-half of production-run lots. Even selected groups, a 2 to 1 spread in characteristics is not unusual.

• **Power**—At the lower frequencies (up and down) tubes and transistors are considered about equal. Tubes are more suitable at the higher power ratings. Power transistors sacrifice some advantage with cooling measures.

There are perhaps just as many, or more, "tube" men as there are "transistor" men. The rapid progress of electronics leaves no room for engineers who are specification writers with prejudices and preconceived notions who believe there is only one way—theirs—to do a job. The industry feels it can't meet specifications calling for transistorizing at any price; neither can it meet obsolete designs that use tubes because they were good enough last year.

The strongest conclusion that can be drawn from these "facts" is that neither tubes nor transistors can claim a significant overall advantage over the other—which goes back to the original statement that an intelligent decision as to which to use must be based on an intelligent appraisal of all the factors.

**Louis N. Ridenour, Jr.**, vice president and general manager of Lockheed Aircraft Corp.'s Electronics and Avionics Division, died suddenly here last week. Death was from natural causes. He was 47 years old.

Dr. Ridenour had come to Washington to act as chairman of the National Aeronautics and Space Administration's Science Advisory Committee on Navigation, Guidance and Electronics. He presided at the two-day organization meeting.

Internationally known for his work in both nuclear physics and electronics, Ridenour was a member of the Air Force's Scientific Advisory Board, heading up the electronics panel. He was first chief scientist of the AF. In 1950-1951, he headed a special committee

which surveyed the AF's science and research effort. The report which bears his name was considered responsible for creation of the Air Research & Development Command and the organization of the deputy chief of staff (development). The report is also considered the basis for current attempts to revitalize ARDC.

During World War II, as assistant director of the Radiation Laboratory at Massachusetts Institute of Technology, he was instrumental in development of airborne radar and radar bombing systems. For this work, he received the President's Medal of Merit.

Ridenour was the author of a number of scientific books, as well as many technical and non-technical papers. He was a member of the American Physical Society, the American Association for the Advancement of Science, the Institute of Radio Engineers and the American Rocket Society.

**Donald E. Dufford** has been named head of applications engineering at Genesys Corp., manufacturers of digital process control computer systems. Dufford earlier was associated with Autonetics, Marquardt Aircraft, and previously the Telecomputing Corp.



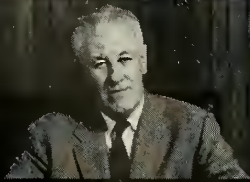
Ridenour



Dufford

To meet numerous requests from readers, M/R has made available reprints of the recent series of articles by Dr. S. Fred Singer on the meaning of Project Argus. Copies of the combined series may be obtained by writing to the magazine. The rate is 50¢ for a single order (bulk rates on request).

## A Personal Invitation to ENGINEERS



from **ROBERT McCULLOCH**

President

"If you would like to be a member of a select corps of Engineers, working for an interesting, growing company... in one of the country's most stimulating areas... I invite you to write to Temco. Temco's growth is sound and planned, its products are diversified and challenging, our facilities are modern. Every benefit, for you professionally and in good living for you and your family, is here. Below are some of the areas in which jobs are open now."

### INSTRUMENTATION

Graduate Electronics Engineer or Physicist to perform analysis and design of instrumentation, telemetering, and other data-gathering components for use in missile and electronic system test programs. Individual will develop the instrumentation system concept, make decisions on the most practicable types, application, and arrangement of equipment, and perform actual design of components, circuits, and linking of the entire system.

### AUTOMATIC CONTROLS

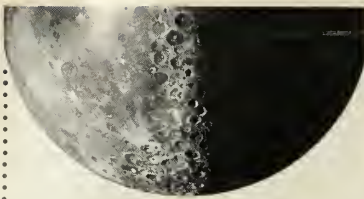
Graduate Electronics, Mechanical, Aeronautical Engineer, or Mathematician or Physicist to perform analysis and design of automatic flight control equipment and corresponding missile stabilization mechanisms. Individual will be responsible for analyzing the performance characteristics of particular configurations and developing motion-sensitive electronic apparatus and servo-mechanisms to provide the necessary control-surface corrections and make guided or directed flight possible.

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To make studies on propellants for ion propulsion. Experienced in electronics, atomic physics, and physical chemistry.

### Physicists

Primary activities will be in the field of ion sources and high vacuum techniques. Experienced in particle accelerators, ion sources, and electronics.

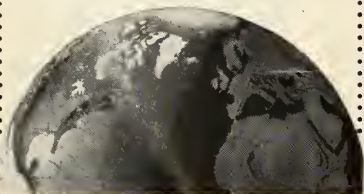
### Electrical Engineer

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## contract awards

### NAVY

\$11,000,000—**Remington Rand Univac, Div. of Sperry Rand Corp.**, for an advanced computer to be used aboard ship.

\$800,000—**FXR, Inc.** Woodside, N.Y., for high-voltage supply for classified AN/SPG-55A shipboard radar set (subcontract from Sperry Gyroscope Co.).

\$500,000—**Gladding, McBean & Co.**, Los Angeles, for production of ceramic radomes (contract awarded by Raytheon Mfg. Co.).

\$292,431—**Loewy-Hydropress Div. of Baldwin-Lima-Hamilton Corp.**, New York, for services, labor and material to fabricate and test one complete warhead handling system, prototype for *Talos*.

\$136,544—**McKittrick Construction Co.**, Huntington Park, Calif., for construction of technical services engineering facility at Point Mugu.

\$64,560—**Hazeltine Corp., Electronics Div.**, Little Neck, L. I., N.Y., for 48 man months of field engineering services in the installation and operation of APA-127 and ASA-23 missile launching accessories in F3H-2 aircraft.

### ARMY

\$1,038,000—**North American Aviation, Inc., Rocketdyne Div.**, Canoga Park, Calif., for secret item for ARPA.

\$977,941—**Cubic Corp.**, San Diego, for research and development for electronic measuring system.

\$881,599—**Douglas Aircraft Co.**, for *Nike-Hercules* components, *Nike* repair parts and classified material (three contracts).

\$513,248—**Ryan Aeronautical Co.**, San Diego, for research and development for target missile.

\$455,237—**Western Electric Co., Inc.**, New York, for *Nike* spare parts and components, (three contracts).

\$200,000—**California Institute of Technology**, Pasadena, for research and development to be performed at the Jet Propulsion Laboratory.

\$173,238—**Rheem Manufacturing Co.**, Downey, Calif., for design and development work.

\$164,703—**Bridgeport Brass Co.**, Riverside, Calif., for inside tube remover.  
\$125,000—**North American Aviation, Inc., Rocketdyne Div.**, Canoga Park, Calif., for missile spare parts.

\$86,900—**Wiancko Engineering Co.**, Pasadena, for data systems components.

\$85,809—**Wiancko Engineering Co.**, Pasadena, for eighteen items of oscillators, linearity controls and pressure pickups.

\$75,470—**Allegany Instrument Co., Inc.**, Cumberland, Md., for multi-component static test stand.

\$73,850—**The Firestone Tire & Rubber Co.**, for engineering services.

\$71,174—**Gilfillan Brothers, Inc.**, Los Angeles, for engineering services and *Corporal* missile spare parts (two contracts).

\$70,000—**Polytechnic Institute of Brooklyn**, for basic research on performance

comparison of various system satellite re-entry.

\$59,882—**Dow Chemical Co.**, Tulsa development of procedure for cing *Jupiter* suction lines and tank

\$51,565—**Consolidated Electrodynamic Corp.**, Atlanta, for nine items of vanometers, CEC type.

\$46,060—**Aerojet-General Corp.**, Azusa, Calif., for study-process ofhesive bonding.

\$44,172—**Preshaw and Thompson**, Van Nuys, Calif., for spare parts.

### AIR FORCE

\$3,000,000—**International Business Machines Corp., Military Products** for components of the AN/ABomb navigational system used on B-52G.

\$2,500,000—**Melpar, Inc.**, Falls Church, Va., for flight simulators and reequipment.

\$1,742,500—**General Electric Co.**, Johnson City, N.Y., for component automatic flight control systems the F-105D and the F-105E.

\$470,000—**Curtiss-Wright Corp.**, S. Barbara, Calif., for aerial target drones, launch rail adapters and equipment of the *GAR-8* missile.

\$391,000—**Consolidated Systems Corp., subsidiary of Consolidated Electronics Corp.**, for propellant-utility-system exercisers to be used *Atlas* program at Vandenberg (subcontracts from RCA).

\$233,099—**Block Associates, Inc.**, Cambridge, Mass., for research directed toward the design, development and testing of small rocketborne spectrometry systems.

\$233,000—**Leeds & Northrup Co.**, Philadelphia, for precision potentiometers and accessories.

\$215,000—**Gladding, McBean & Co.**, Los Angeles, for further research development on ceramic radome

\$196,706—**Convair Div. of General Dynamics Corp.**, San Diego, for project PR 59-1131, SA #7. This is an increase in funds.

\$76,631—**J. W. Frecker, Inc.**, Pittsburgh, for equatorial table to be used support of project 5177.

\$76,253—**Consolidated Controls Co.**, Bethel, Conn., for miscellaneous switch-pressure consolidated contract

\$63,000—**Kuthe Labs, Inc.**, Newark, N.J., for electron tubes.

\$53,669—**Olin Mathieson Chemical Co., Chemicals Div.**, Baltimore, for methyl hydrazine for testing and evaluation in support of Weapon System 138A.

\$53,667—**Tektronix, Inc.**, Portland, Ore., for miscellaneous oscilloscopes, amplifiers, tubes and standard spare parts

\$51,525—**Westinghouse Electric Corp.**, Pittsburgh, N.Y., for miscellaneous electronic tubes.

\$40,243—**Grand Central Rocket Co.**, Los Angeles, Calif., for rocket motors to be used in support of Project 7850.

**The Marquardt Corporation's ASI Div.** has been awarded a prime contract for expansion of its efforts on Project *Pluto*. (Amount not disclosed).

Vary the thrust to get optimum performance from a nuclear jet, say C. J. Wang, G. W. Anthony and H. R. Lawrence of Space Technology Laboratories in the current (May) *ARS Journal*. They say the thrust should be variable, and programmed, to take advantage of partial molecular dissociation and then recombination of gaseous propellants. Dissociation drastically increases specific heat which gives an  $I_{sp}$  greater than normally expected by using the square-root-of-temperature law.

There is "an optimum way of programming the thrust to fulfill the particular mission" of a nuclear rocket, the Space Technology Laboratories says. Dissociation characteristics of gaseous propellants now considered potential nuclear rocket propellants are such that this is possible: At a given temperature, decrease the operating pressure, and consequently the thrust, and you will increase the specific impulse.

Energy communicated to the rocket at burnout of the total energy injected into the rocket system" is a maximum under their theory. Wang, Anthony and Lawrence discuss a case where dissociation of the gaseous propellant was taken into consideration, and a program of varying thrust was designed. Their conclusion: "The optimum thrust program results in much better performance than the usual constant thrust operation."

Another unconventional propellant situation is analyzed in detail in the same *ARS Journal*. A team formerly with Food Machinery Chemical outlines all the important physical properties for the oxygen tetroxide-nitric oxide system from minus 100°F to 0°F. This one of the systems most highly touted to become an important propellant in prepackaged, storable liquid engines. Presented for the first time: Vapor pressure, density, viscosity, surface tension. To make the data more valuable to designers of rockets and equipment, the data has been taken on commercial grades of the mixed oxides. For workers who want it, Donat B. Brice, now with The Fluor Corp., and Norman Fishman, now at Stanford Research Institute, include detailed drawings of their apparatus.

Trapped free radicals will give up all their secrets, or at least the National Bureau of Standards will make every effort to force them to do so at the Fourth International Symposium on Free Radical Stabilization late this summer. Theme of the meeting, to be held August 1-5, 1957, at NBS in Washington, is "Trapped Radicals at Low Temperatures." Deadline for preregistration forms was March 25, however the deadline for getting a short communication into the discussion part of the program. Nature of these brief reports should be sent to Dr. A. M. Bass, National Bureau of Standards, Washington 25, D.C. So far, the program includes tours of NBS laboratories participating in the free radical work, and these discussion topics: Low-Temperature Chemistry, Method of Production of Trapped Radicals and Physical Properties of Radical-Trapping Solids, Stability and Concentrations of Trapped Radicals, Future Trends in Free Radical Stabilization, Interaction of Free Radicals with Solids.

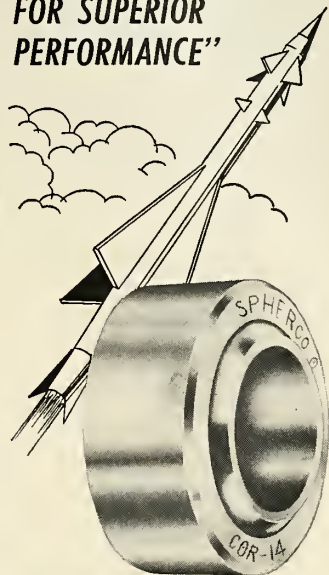
Shape of refractory plugs influences their durability, a Russian researcher notes. Not a surprising conclusion, but I. Sh. Shvartsman says this out in detail in *Ogneupory*, Vol. 22, No. 4. He says longitudinal cracks develop in screw plugs with thick-walled spherical parts. This does not happen in the case of bolt plugs with thinner, lighter spherical parts, he reports.

Low-cost corrosion inhibitor for refrigeration and cooling systems may be sodium molybdate, now that the price barrier has been crashed by research. Sodium molybdate always has been an excellent—but expensive—corrosion inhibitor in these systems. Climax Molybdenum chemists now say it can be mixed with very small amounts of orthophosphate to achieve full inhibiting action. Result: A smaller amount goes a longer way.

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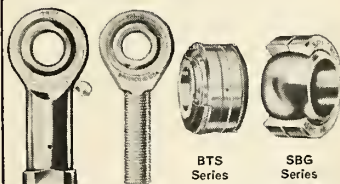
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## Optik Goes to London

To the Editor:

I have read with much interest in the April 27 issue of M/R the proposal for standardization of velocity terms in astronautics and the suggestion of "Optik" put forward by Major Mannix.

This is to advise you that at the IAF Congress to be held in London in September this year, I will raise this important question.

Meanwhile, I have prepared a memorandum which I intend to discuss with Mr. (Andrew G.) Haley, President of IAF, at the end of this month, when he will be in Rome.

Glauco Partel  
President  
Terminology and Classification  
Committee  
IAF  
Rome, Italy

## Praise for Optik

To the Editor:

Cheers for Major William C. Mannix on his new proposal for a space velocity unit in the April 27 issue! Already the aerodynamicists have almost captured the field with their thoroughly incongruous unit of "Mach Number" based on the velocity of sound in air. This term obviously has no meaning in free space and worst of all is utterly dependent on the temperature of the medium. While its use is admittedly of value in aerodynamic problems, it is practically worthless in kinematic analyses or ballistic problems.

We should act quickly and energetically to adopt a unit of absolute velocity to alleviate somewhat the hopeless situation which has developed in English-speaking countries in regard to dimensional units.

For example, engineers use a horrible conglomeration of units, horsepower, slugs, foot-pounds, pounds-force, pounds-mass, BTUs, cu. yards, rods, miles, yards, acres, sq. mi., knots, kilowatts, gals. (both U.S. and British), feet/sec., m.p.h., Mach No., tons (short and long), barrels, fathoms, bushels, etc., ad infinitum, ad nauseum.

The wonder is that British and U.S. engineers have ever been able to develop anything with such a hodge-podge of units. How many hours are wasted in tedious conversions?

Scientists generally use the metric system although even here the physicist uses the centimeter-gram-second system while the meteorologist uses the meter-kilogram-second system. There are other variations in use. Perhaps the engineers and the scientists would work more closely together if their systems of units were made more nearly uniform.

Take the matter of charts used for navigation and aerial flight. Long distances are usually in nautical miles, short distances in yards, heights in feet, and depths in fathoms. The units now employed for velocity are as numerous as there are combinations of units for length and time.

The unit of "Optik" proposed by Major Mannix fulfills the requirements suggested by Messrs. A. Hurlick and E. B. Bell at the Second Symposium on Hypervelocity Impact Effects in 1957. It is referenced to a natural phenomenon and one as nearly absolute in a quantitative sense as is possible. Furthermore, the subdivision of making the basic unit one-millionth of the velocity of light permits the statement of all velocities in convenient quantities.

The name itself, "Optik," is a natural. Since the world is becoming smaller and people closer together, because of the increase in velocity of travel, the word should be one easily recognizable in all languages.

Certainly the final "k" is a small concession to be ask of English-speaking peoples. Names such as "Roemer" should be avoided. This name is at home only in German-speaking countries. With all due respect, the choice of "Roentgen" for a unit of ionizing effect of high-energy radiation is unfortunate because of the difficulty of pronunciation by non-German-speaking peoples. In sum, the name "Optik" not only denotes its origin, but should be easily transcribed and pronounced in any language on earth.

I vote loudly for the adoption of the term and its definition by all engineering and scientific professions.

John O. F. Dorsett,  
Captain, USN (Ret.),  
Johns Hopkins University,  
Operation Research Office

## 'Furlong per Fortnight'

To the Editor:

In response to the recent proposal by Major William C. Mannix (M/R, April 27), concerning a unit of velocity, I suggest that we bestir ourselves now, while on the threshold of the Space Age, and adopt a different unit for velocity. It is the "furlong per fortnight." Although the unit appears to be somewhat illogical, I believe it will satisfy our need for having the largest of everything (somewhat lacking in satellites of late).

Thus, our satellites will be reported as having an orbital velocity of 47,000,000 furlongs per fortnight as compared to the insignificant 18,000 mph.

John R. Osborn  
1409 Center Street  
Lafayette, Ind.

## 'Back to Newton?'

To the Editor:

In connection with the April 27 issue (Dr. Edward Teller proposes test of stein Theory), it would be quite a able, for everyone who likes to investigate so-called "relativistic theories," to study quite carefully the book of Georges de Bothezat, "Back to Newton" (available in libraries).

Prof. Bothezat, formerly of Princeton University, a great scientist, mathematician, author of many books and inventor, may give the proper direction evaluating the fallacies of relativity theory.

Victor A. Ivanoff,  
Research Engineer  
524 E. 5th Street  
New York 9, N.Y.

## Lunar Bases

To the Editor:

I have just read the April 20 issue of M/R and note on page 48 a reference to articles written by Dr. Castrucci on the "strategic advantages of lunar bases and on lunar power supplies using solar energy. I am very much interested in obtaining copies of these articles and would appreciate any information you could offer as to how I might obtain copies and/or references to where articles appeared.

L. Reiffel  
Director of Physics Research  
Armour Research Foundation  
Illinois Institute of Technology  
Chicago

## Stock Slip

To the Editor:

In your May 25 issue, part of an article on missile financing said that firm obtaining equity capital from SBIC is required "to buy stock in SBIC up to 2 per cent of the loan \$50,000, whichever is less."

The law which reads that a borrowing company must purchase stock in the firm from 2 to 5 per cent, depending on the amount of capital it borrows. SBIC not using Government funds for financing may issue such stock with repurchase option for the borrower.

I hope you will include a correction of this error in a subsequent issue, since wise missile firms might be under apprehension as to Small Business Administration financial policies and relations.

Arthur Hachten  
Director  
Office of Information  
Small Business Administration

# viet affairs

by Dr. Albert Parry

In what patents can we find descriptions of fuels needed in a jet? Who in the world is making a carburetor for a certain engine? What metal alloy is necessary for this or that machine that the machine or a vital part of it would work well under certain conditions? Man should be able to get quick and complete answers to such questions by just telephoning a central office where a special machine would have the solutions to all the problems which have been solved anywhere on earth. The need for such an "information machine," to be built on the latest findings and inventions in electronics, is discussed at length in *Izvestia* by Professor L. Enmakher.

He points out that the limit of human absorption can be reached by a man if he reads 12 hours a day for 50 years at the speed of 100 words per second, finally totaling 18,000 books of 300 pages each. Yet the already-accumulated printed works of mankind are more than 50 million titles. Patents registered in all the world's countries exceed 5 million. The world's annual output of books and pamphlets is nearly 200,000 titles. Scientific, engineering and technical information on hand is growing at a terrific rate, thanks to the incessant work of the world's 500,000 scientists and many millions of engineers and technicians.

The world's treasury of all this information is "more valuable than any reserves of gold, diamonds, or uranium," the Soviet professor declares. The problem of its proper utilization is far more complex than any problem of ore mining, he continues. Scientists everywhere know more and more about their steadily narrowing specialties, and "the ever-expanding terminology of these specialties separates experts of adjacent fields even more than any such division can be caused by foreign languages."

The Soviet scientist proposes that in the future whatever gets printed be simultaneously processed electronically into capsules for a new information machine. The Soviets must lead the world once again, by being first to build this information machine, the Russian professor insists. He writes: "If the creation of ordinary writing and the invention of the printing press served as the foundation of a contemporary civilization, then the future invention of what may be called machine writing will be characteristic of the epoch of automation."

Steps necessary for the creation of such a machine were discussed recently at a nationwide Soviet conference on problems of machine linguistics, attended by Russia's outstanding specialists in electronics, mathematics and languages. Present also were a few scientists from Red China and Czechoslovakia who read reports on machine linguistics in their countries. In giving details of this conference, L. Voronkova in the Moscow *Trud* makes it clear that Leningrad was chosen as the site of the conference because that city is fast becoming the Red empire's foremost center of such experimentation. She claims that the world's first subdivision of machine linguistics and experimental laboratory of machine translation were established at the Philology Department of the University of Leningrad.

The laboratory is now working to evolve 17 systems which the Russians define as "algorhythms," and among which the Soviet scientists have already included the Indonesian, Burmese, Arabic and other Oriental languages. The inclusion of these and other Eastern tongues for machine translation and "information machine" experimentation shows Moscow's conviction that the time is not far off when scientists of the Orient will increasingly contribute to the world's storehouse of modern knowledge.

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# west coast industry

by Fred S. Hunter

In this initial-conscious age, Lockheed hopes its selection of name for the new Lockheed Electronics and Avionics Division (LEAD) turns out to be prophetic. It may well be.

At the annual meeting of shareholders, Chairman Robert E. Gr said Lockheed was starting the new electronics enterprise with modest capital outlay. It is spending approximately \$400,000 in refurbishing the former Constellation subassembly plant in southern Los Angeles for a headquarters and manufacturing facility. Lockheed already owned the property.

Gross also said the division will grow "slowly and soundly." At this writing, the payroll numbers 27 persons. The employment projection is for 450 by the end of this year.

In its first year, Lockheed's Missile Systems Division had sales of \$7.2 million, but, barring a windfall, LEAD's first-year revenue will be substantially less. In 1954, the new missile division, then located wholly at Van Nuys, was given a head start by the transfer of the X-7 test vehicle program from the California division. LEAD is starting from scratch, with no diversions from other divisions, and its primary objective right now is to establish its capabilities.

Initially, Lockheed is preparing 163,000 square feet of a total plant area of approximately 380,000 square feet for occupancy by the new electronics division. New walls have been installed to separate off engineering, manufacturing, shipping and receiving and other areas. "They're moveable—we can expand in any direction," said Russell C. Galbraith, the former director of financial operations for the California division, who came over to fill the No. 2 executive post as assistant general manager of LEAD.

The plant—first occupied temporarily during World War II for the production of P-38 assemblies and then, after a lapse of 10 years, purchased in 1955 to expedite Super Constellation subassembly work—is to be a permanent manufacturing facility for LEAD. Headquarters here for the general office and engineering staffs will be temporary. Lockheed has its eye on a site in the Newport Beach area, where it plans a new facility specially designed to house administrative and engineering staffs.

Lockheed is in the hardware business in all its divisions and LEAD will be no exception. This means it will be striving for competence in the production of systems. Its first efforts will be in instrumentation and subsystems useful principally for military systems but it will also investigate the possibilities of entering industrial and commercial markets. "We have no aspirations in the consumer field," said Stephen J. Jatras, acting director of marketing.

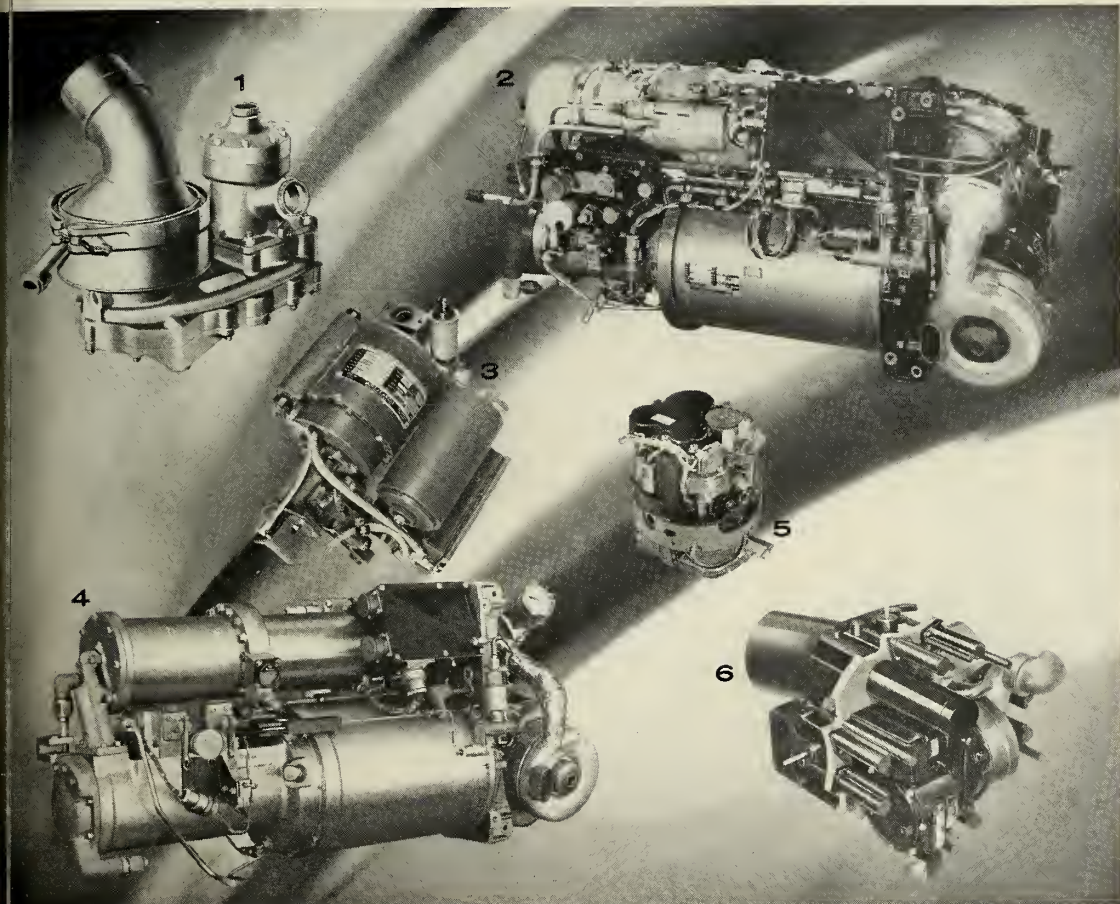
Lockheed has started on the job of staffing the new division across the board—engineering, manufacturing, administrative. "We must have men who stand at the top of their fields," said K. Kiddoo, who worked on personnel procurement for Lockheed when it established its missile division and is now doing the same thing for the new electronics division.

Some of the key jobs will be filled by people drawn from other divisions of the company, but others will come from outside. "It will depend upon where we find the capabilities we require," said Howard S. Hagen, director of industrial relations.

By June 15, Lockheed expects to have procured a number of the people it needs. By the same time, it will be ready to start moving in some of its machines. It will then be in a position to step into the production development stage.



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## JUNE

**Institute of Radio Engineers' Professional Group on Microwave Theory & Techniques, National Symposium, Harvard University Cambridge, Mass., June 1-3.**

**Armed Forces Communications and Electronics Association, 13th National Convention, Sheraton Park Hotel, Washington, D.C., June 3-5.**

**Institute of Radio Engineers' Professional Group on Production Techniques, Third National Conference, Villa Hotel, San Mateo, Calif., June 4-5.**

**The Pennsylvania State University's Missiles System Engineering Seminar, University Park, June 7-13.**

**Aero Club of Michigan, Industry Missile and Space Conference, Sheraton-Cadillac Hotel, Detroit, June 8-9.**

**American Rocket Society, Semiannual Meeting, El Cortez Hotel, San Diego, June 8-11.**

**American Society of Mechanical Engineers, Semiannual Meeting, Chase-Park Plaza Hotel, St. Louis, June 14-18.**

**United Nations Educational, Scientific and Cultural Organization, UNESCO House, Paris, June 15-20.**

**Michigan Aeronautics and Space Association, Industry Missile and Space Conference, Sheraton-Cadillac Hotel, Detroit, June 16-17.**

**Cornell University Industry Engineering Seminars, Cornell University, Ithaca, N.Y., June 16-19.**

**Institute of the Aeronautical Sciences, National Summer Meeting, Ambassador Hotel, Los Angeles, June 16-19.**

**Institute for Practical Research on Operations, The University of Connecticut, Storrs, June 21-July 3.**

**American Institute of Electrical Engineers, Air Transportation Conference, Olympic Hotel, Seattle, June 24-26.**

**Nuclear Industry Division, Instrument Society of America, Second National Symposium, Idaho Falls, Idaho, June 24-26.**

**Institute of Radio Engineers' Professional Group on Military Electronics, Third National Convention on Military Electronics, Sheraton Park Hotel, Washington, D.C., June 29-July 1.**

**Pennsylvania State University, Summer Seminar on Plastics—Its Mechanical Properties, Design and Applications, University Park, June 29-July 3.**

## JULY

**Tenth Annual Basic Statistical Quality Institute, University of Connecticut, Storrs, July 12-24.**

**Radio Technical Commission for Aeronautics and Los Angeles Section of the Institute of Radio Engineers, Third Biennial Joint Meeting, Ambassador Hotel, Los Angeles, July 16-17.**

**Second Annual Institute on Missile Technology, Chief of Research and Development, U.S. Army, University of Connecticut, Storrs, July 26-Aug. 7.**

**The Denver Research Institute of the University of Denver, 6th Annual Symposium on Computers and Data Processing, Stanley Hotel, Estes Park, Colo., July 30-31.**

## AUGUST

**Institute of Investigation of Biological Sciences, sponsored by Air Force Office of Scientific Research-Aeromedical Div., World Health Organization and United Nations Educational, Scientific and Cultural Organization, Montevideo, Uruguay, Aug. 2-7.**

**William Frederick Durand Centennial Conference, Problems of Hypersonic and Space Flight, Stanford University, Stanford, Calif., Aug. 5-7.**

**Institute of Radio Engineers, Western Electronic Show & Convention, Cow Palace, San Francisco, Aug. 18-21.**

**International Astronautical Federation, 10th Annual Congress, Church House, Westminster, London, Aug. 31-Sept. 5.**

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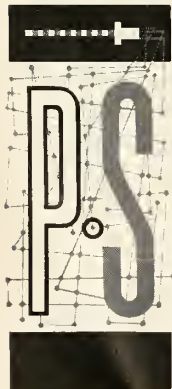
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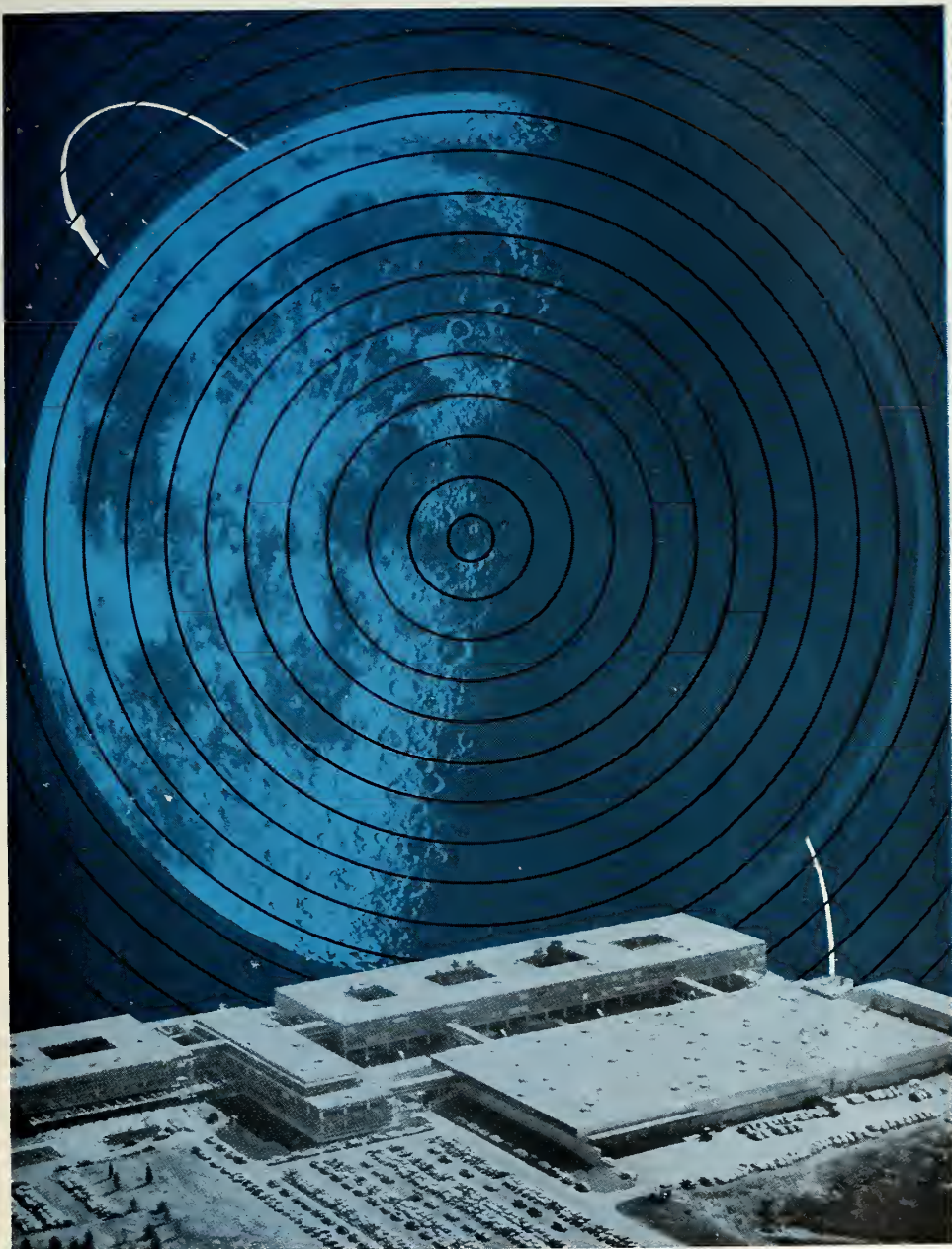


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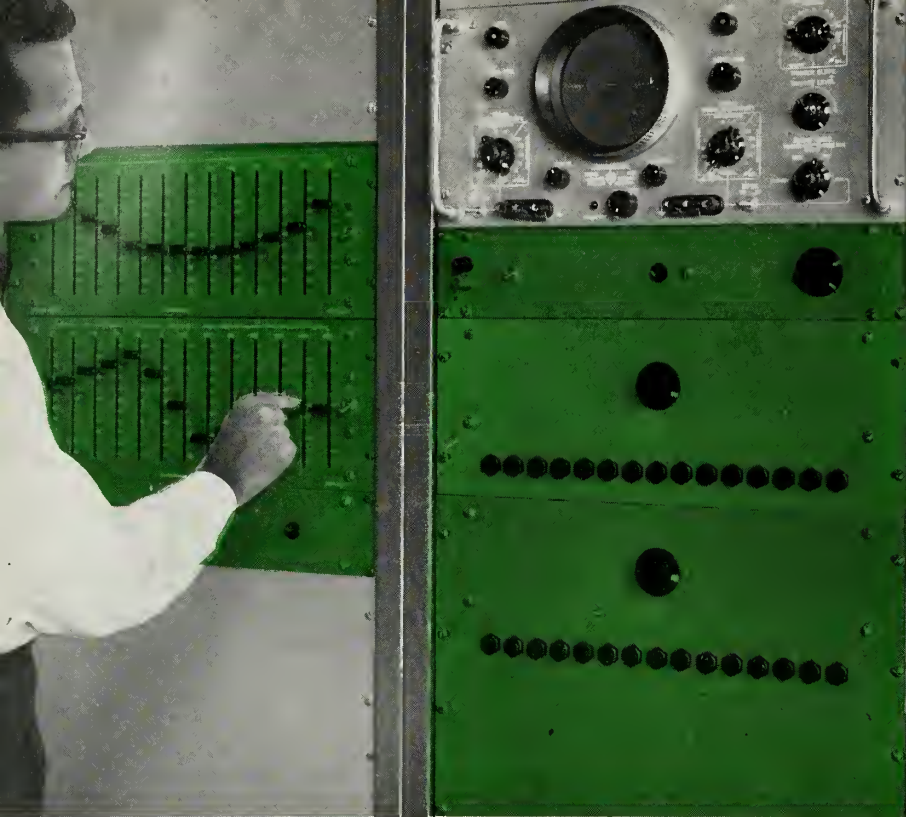


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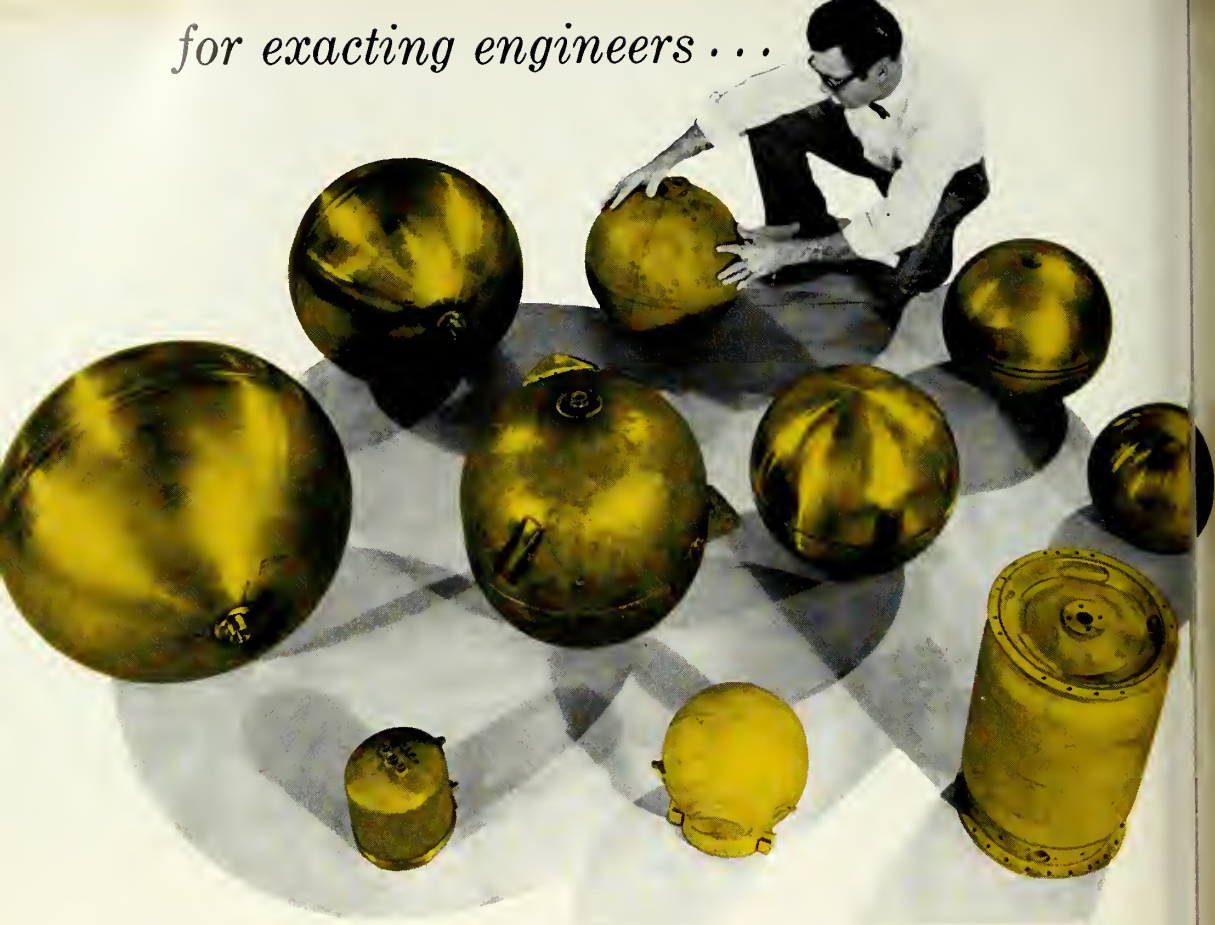
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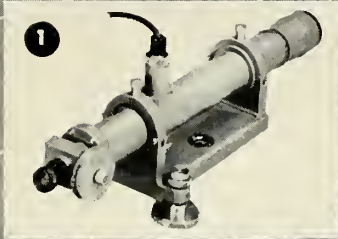
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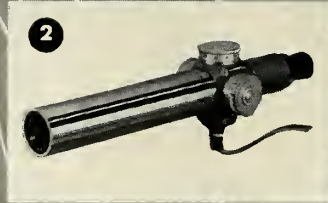
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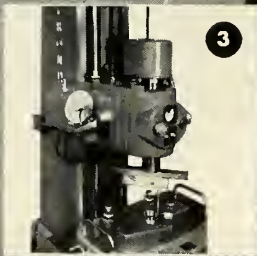
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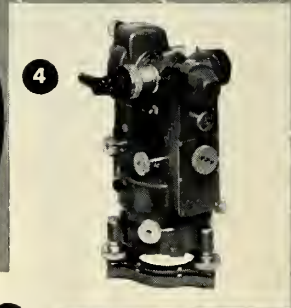


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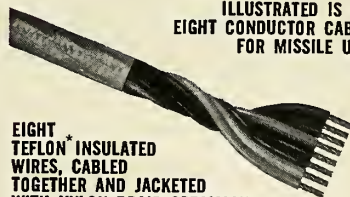


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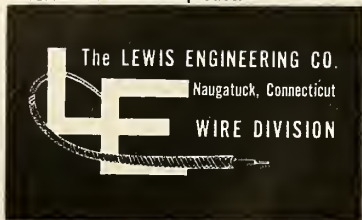
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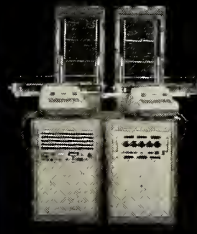
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Another important advance in

**TITANIUM**

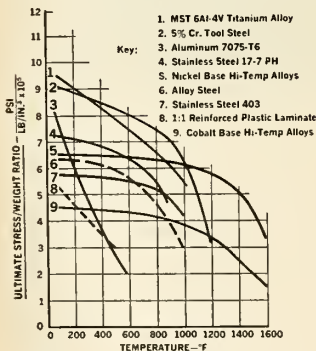
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# missile market and product guide

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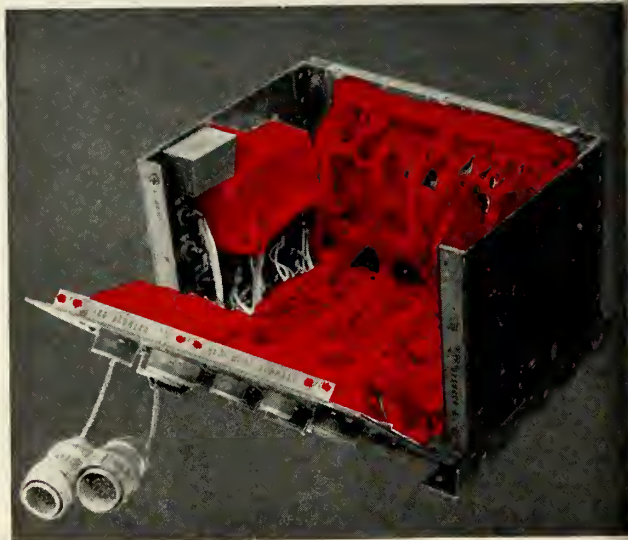


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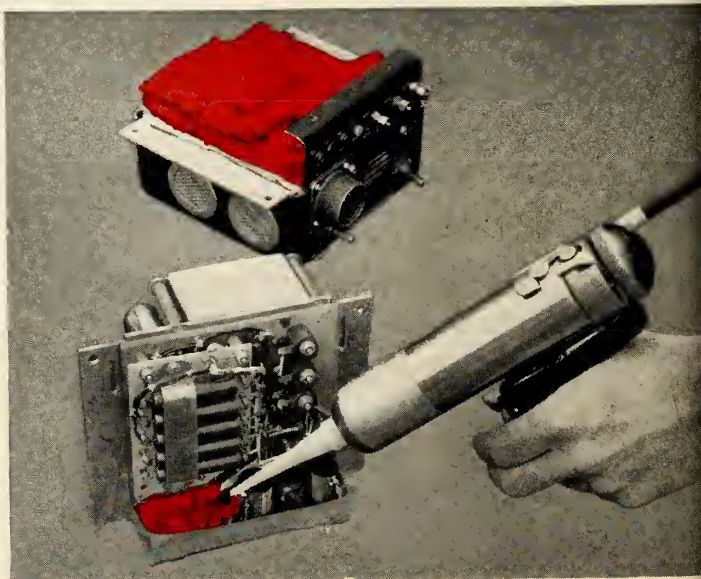
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## Missile Support—a New U.S. Industry

Within the months ahead this country will see the development of an almost new segment of industry—one which will eventually run into billions of dollars. It is the construction of ballistic missile bases and the equipping of them with supporting hardware.

Involved to some extent will be the same companies which produce the missiles, the big primes which have traditionally been associated with the spacecraft and/or the aircraft business. But in addition to them, thousands of big and little companies to whom the missile and space industry a few months ago was as foreign, say, as a trip to Mars, will find themselves accidentally or intentionally concerned with producing or installing the thousand and one items which go to support the missiles of the very new future.

For the missile—and while this is intended primarily to treat of the big intercontinental ballistic types it also holds true for the smaller ballistic weapons and the air-breathers as well—is somewhat like the iceberg where cost visibility is concerned. Something like four-fifths is hidden. For example, a *Titan* ICBM may cost \$2 million. The site to contain a squadron of nine *Titans* will cost \$45 million, not including the personnel to man it.

The \$45 million takes in the cost of a concrete blockhouse strong enough to withstand an accidental explosion; the cost of communications cables connecting with each launching pad—many-stranded cables which will snake through conduits at the cost of \$800 a foot. It will include tons of concrete for handstand, miles of pipe for both liquids and gases; scores of pumps, hundreds of valves, generators, tubes and transistors, tons of steel in every form, aluminum and a dozen other metals, scores of chemicals. Heavy earth-moving equipment will be used, trucks, bulldozers, forklifts, lumber, lighting equipment—gauges and computers and every form of checkout equipment.

Some of the big ballistic missile launching pads will be hardened, that is, either sunk in holes or otherwise protected from possible enemy nuclear weapons. Our first ICBM, the *Atlas*, will be partially hardened, at some sites at least, probably to lie in a rough concrete-lined coffin with a sliding cover. From this "coffin" it will be raised and fired. The second liquid fuel ICBM, the *Titan*, will be lowered into holes in the ground, inverted silos,

from which they will be raised to the surface and fired. The third ICBM, the second-generation, solid-fuel *Minuteman*, will also be housed in inverted silos from which it will be fired without elevating to the surface. A solid-fuel vehicle can be fired from the hole because it rises much more quickly in the initial firing stage and thus does not present the heat dissipation problem of the liquid-fuel missile.

The ICBM sites must also include living quarters for personnel, storage facilities for materials and for maintenance equipment. They must include, believe it or not, recreation facilities for crews who will be on constant alert 24 hours of every day.

None of the equipment needed for a missile site—and none of the skill—is new to American industry (with the exception of some of the more esoteric checkout and testing devices), but industry will be faced with a demand from the military services to come up with new techniques for both speed and lower costs.

How do you drill a hole 100 feet deep and 20 feet in diameter for the *Minuteman*? How do you line it with concrete, properly reinforced to withstand the shock of a near-miss nuclear explosion?

The services say: "Give us a new technique which will dig the holes in one day and line them with concrete in another—all at a cost of \$50,000 and not \$500,000." And they are talking about as many as a thousand holes for a thousand *Minutemen*.

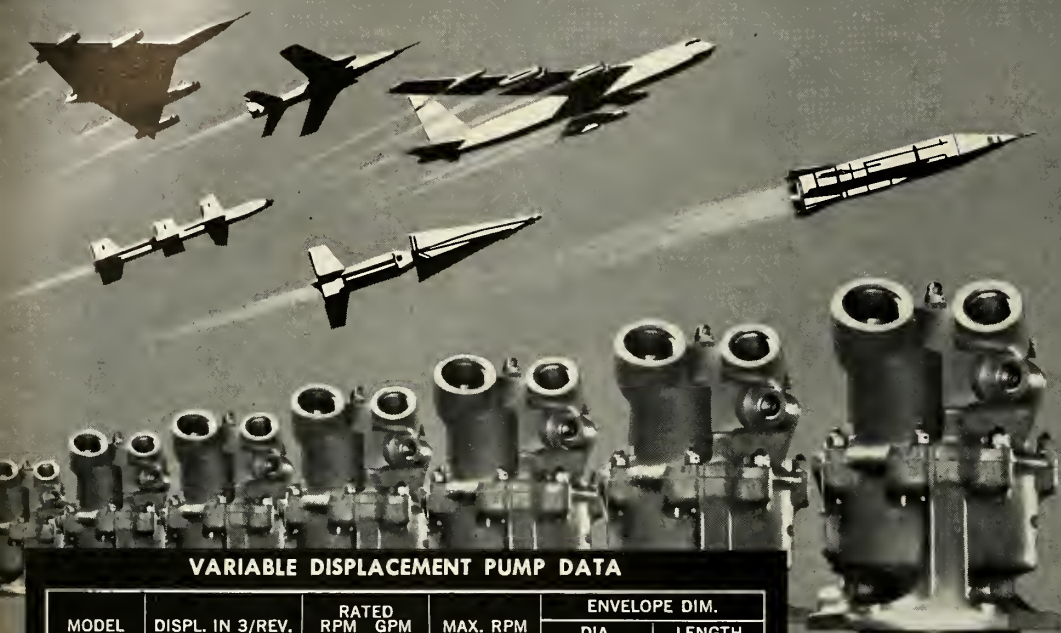
Which will be the companies to come up with new ideas in prefabrication, in miniaturization? Who will provide the shortcuts, the better, the faster and the cheaper way to do it?

There is no royal road to defense contracts and no magic formula for bidding. Uncle Sam is a tough customer and he wants and usually gets a full dollar's worth for every dollar he spends. He is as eager to find the little company with the bright idea or the special skill as he is to deal with the giant primes. Equally true is the fact that the big companies are always searching for the little man who has found a better way to do it. The price of missiles will come down as the skills of spacecraft advance—\$100,000 for the *Minuteman*, for example. In parallel fashion, the cost of missile sites must lower, too, and it will be industry, big or little, which will bring that cost down through ingenuity while reaping a golden harvest as it happens.

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FOR MISSILE AND AIRCRAFT SYSTEMS . . .



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P105	1.050	4000	17.3	6000	5.250	4.250
P56	.568	6000	13.9	8000	4.687	6.625
P16	.163	12000	7.9	16000	3.000	4.250
P11	.115	12000	5.5	16000	2.750	3.625
P064	.064	12000	3.1	18000	2.125	3.125
P044	.044	12000	2.1	18000	2.125	3.062

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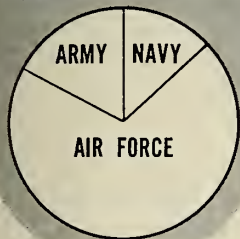
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Procurement & Production  
Missiles, FY 1960

# How To Do Business With the Defense Department

*Outlined here are some helpful pointers for the average business man who wants to sell to the Department of Defense but doesn't know quite where to start . . .*

**TO THE AVERAGE** business man hunting a contract from the Defense Department, the questions of whom to see, where to go and what to take with him are almost insoluble. Difficulties stem not only from the complexity of the Defense Department's procurement organization but also from changes which are almost constantly made in the techniques and rules of procurement.

As a starting point, the Defense Department, itself, buys nothing. It has a number of procurement agencies. The biggest, of course, are the Army, Navy and Air Force, with the Defense Department's Advanced Research Projects Agency likely to enter the field later. Each of these agencies themselves are subdivided with procurement responsibility decentralized throughout the country.

DOD's basic role in procurement is one of policymaking. It also decides how many dollars each of the services may spend and, in some cases, actually decides which weapon system may be bought and by whom.

Purchases are made either by formal advertising or by negotiation. For missiles, rockets, ground support equipment, and subsystems, normally a procedure called "competitive negotiation" is used. This means, generally, that contractors thought to be qualified are invited to submit competitive proposals which are evaluated. After evaluation, a contract is negotiated with the contractor whose proposal seems most nearly to meet the military requirement.

Rules governing both formal advertising and competitive negotiation are spelled out in great detail in the Armed Services Procurement Regulation, Army Procurement Procedure, Navy Procurement Directives and, Air Force Procurement Regulations and Instructions.

Most big manufacturers who do business with the agencies of the De-

fense Department on a regular basis maintain Washington organizations to handle the technical problems inherent in the complex procurement structure. It is the company which wants to come in for the first time or the small business firm which needs the most guidance.

All kinds of advice is available, particularly to small business concerns. To qualify, a concern must have less than 500 employees and cannot be dominant in its field of operation. A certificate from the Small Business Administration will be taken at face value by Defense Department procurement officers.

Each of the military departments has an active program to help small business to compete for defense procurement. In addition, some contracts may be set aside in whole or in part for the exclusive benefit of small business.

In the case of equal low bids submitted by a large and a small company, preference would generally be given to the small concern. However, if a big company agrees to perform the work in an area of substantial unemployment, it will receive a preference over a small concern which won't or can't produce in a labor surplus area. To bolster the small business program, Defense officials work with the Small Business Administration to screen procurement that can be set-aside for exclusive small business participation. However, there is more than a little question as to the effectiveness of the program.

Generally, Defense officials have expressed the belief that the most effective role which small business can play is in the subcontract structure. All major contractors maintain an active program which aims at establishing a qualified list or lists of subcontractors and suppliers. Many defense contracts specifically require that a specified per-

centage of a big contract be subcontracted and gradually, the military services are screening the subcontract structure to be sure that conditions are complied with.

For subcontracts, manufacturers are advised to apply directly to prime contractors. Names of the principal contractors can be obtained from a Commerce Department Synopsis of Bids published almost daily and from records maintained by the Defense Department.

In the research and development area, special opportunities are available to small concerns and nonprofit institutions. Here the yardstick is competence, which frequently has little to do with size. Special efforts are made both by the military departments and the Defense Department to find the right man or the right company for the job in the area of research and development. More details will be found in other articles in this section.

In general, a would-be contractor will find the following rules helpful:

- (1) Don't come to Washington when you first decide you want military work.
- (2) Analyze the capabilities of your company, including facilities know-how, available labor pool, management and finance.
- (3) Visit the nearest procurement or contract administration office to your plant, taking with you your analysis of company capabilities.
- (4) Visit prime contractors, taking an analysis or proposal with you, picking those prime contractors who are located close to your own plant.
- (5) Study or have a competent lawyer study the procurement structure of the military departments to be sure that buying representatives are made aware of your company's capabilities.
- (6) Don't sign a contract without competent advice.

\$2,356,000,000



PROCUREMENT & PRODUCTION  
MISSILES, FY 1960

# How To Do Business With the Air Force

*The buying arm of the Air Force carries over one million items in inventory. Here is a rundown on where the would-be contractor should go and what he should do when seeking this business . . .*

**AIR MATERIEL COMMAND** located at Dayton, Ohio, is the Air Force's buying, supply and maintenance arm. Its workload is decentralized to Air Materiel Areas, Centers and Depots. It buys new production weapons for inventory, provides spare parts and material to maintain equipment already in the hands of the troops and makes research and development contracts on orders from the Air Research and Development Command. Some idea of the scope of the job can be obtained from the fact that AMC carries more than 1,300,000 items in inventory.

Knowing that a requirement will exist for better tooling, a new material, or new electronic equipment, it makes manufacturing methods contracts with research organizations and with industry in an effort to assure the availability of equipment in production quantities and at practicable costs.

**Air Materiel Command** is headed by Lt. Gen. Samuel E. Anderson, Jr. His deputy is Lt. Gen. William F. McKee. It is divided into six directorates which now operate as staff offices. These are: Plans and Programs, Procurement and Production, Supply, Maintenance Engineering, Transportation and Services, and Personnel and Support Operations. There is a separate Quality Control office to improve reliability.

Major responsibility for procurement is vested in the Aeronautical Systems Center at Wright Patterson Air Force Base, Ohio, and the Ballistic Missiles Center, AF Unit Post Office, Los Angeles 45, Calif.

Aeronautical Systems Center is responsible for the purchase of complete missiles, other than ballistic, complete aircraft and aerial targets. In addition, it is responsible for the procurement of fire control systems, launchers, rocket

and pyrotechnic weapons, warheads and explosives, photographic equipment, bombing and gunnery equipment, airborne radio and radar equipment, initial spares and ground support and tools/test equipment except for propulsion systems, research and development and service test of non-stock listed items. It buys, of course, many kinds of aircraft accessories and equipment.

Ballistic Missiles Center buys ballistic missiles, space vehicles and related equipment such as propulsion and guidance systems, ground support equipment, initial spares, tools, test equipment and the like. In the space field, Ballistic Missiles Center lets contracts on instructions from Advanced Research Projects Agency as well as the Air Force.

Electronic Defense Systems Division, 220 Church Street, New York City is responsible for the procurement of engineering management and other services for Air Defense Systems such as SAGE, DEW Line/White Alice (Alaska) and the new Ballistic Missile Early Warning Line.

The Air Materiel Areas have been designated Logistic Support Managers as well as weapon system managers to be sure positive supply support is provided to tactical units of first line weapons. This means:

**Middletown Air Materiel Area**, at Olmsted Air Force Base, Middletown, Pa. buys guided missile components support and rocket engine parts for the *Falcon* (GAR 1,2,3, and 4); *Side-winder* (GAR 8); fuels, lubricants oils, waxes and corrosion preventative compounds; chemicals and chemical products; gases, compressed and liquefied and gas cylinders; miscellaneous instruments (other than Government-Furnished Aircraft Equipment—GFAE) and laboratory equipment; electrical

meters and maintenance parts; parachutes and aerial pickup and cargo tie-down equipment. It also provides for contractual maintenance and modification services for the support of commodities listed above and missiles and/or engines for which it has prime maintenance responsibility. It also buys structural components and aircraft engine parts for specified training, transport and liaison aircraft.

**Mobile Air Materiel Area**, Brookley AFB, Mobile, Ala., buys guided missile components for the SA-16 *Jupiter* intermediate range ballistic missile and aircraft components for the F-84 and F-105. It also provides for contractual maintenance and modification services for this missile.

**Ogden Air Materiel Area**, at Hill AFB, Ogden, Utah buys guided missile components, support and engine parts for the IM 99 *Bomarc*, SM-62 *Snark* and the SM-73 *Goose* (now cancelled). It also buys laboratory equipment biological surveillance and provides contractual maintenance and modification services for the listed missiles and/or engines. It also keeps parts for F-101 and other specified aircraft.

**Oklahoma City Air Materiel Area**, Tinker AFB, Oklahoma City, buys guided missile components, and support for the *Rascal* (GAM-63, now cancelled); *Hound Dog* (GAM-77) and *BullPup*, and provides maintenance and modification services for these missiles. It also buys parts and support for B-52, B-47, KC-135 and other aircraft.

**Rome Air Materiel Area**, Griffiss AFB, Rome, N.Y. is responsible for the purchase of the largest part of the Air Force's electronic, radio and radar

equipment procurement. Specifically, it buys ground radio, radar and navigational equipment, meteorological equipment, instruments (except airborne) and supplies; ground communications equipment, miscellaneous electric power and distribution equipment and supplies, lighting fixtures for airports, lighting fixtures and lamps (except airborne), and electric wire and cable.

Rome AMA buys the engineering and installation of ground electronics support equipment, facilities and systems (GEEIA). It also buys systems integration, development, service test and similar functions required for implementation and operation of Electronic Support Systems (ESSPOs).

**San Bernardino Air Materiel Area**, at Norton AFB, Calif., has been designated the support manager for ballistic missiles. As such, it buys guided missile components and support for the *Atlas*, *Titan* and *Thor* ballistic missiles and will, presumably, take on the job for *Minuteman* at a later date. It is also responsible for the support of the Q-2 target drone built by Ryan and the Q-4 drone built by Radioplane. It also buys parts and support for specified aircraft.

**Warner Robins Air Materiel Area**, Robins AFB, Macon, Ga., buys guided missile component support for the *Matador* (TM-61) and *Mace* (TM-76) and airframe structural components for the C-130 and B-57. Aircraft launching, landing and ground handling equipment; weapons, except Army Ordnance assigned items; bearings; metal working and woodworking machinery and equipment; maintenance and repair shop equipment (aircraft, motor vehicle and weapons); tires and tubes, except aircraft; gas turbines and jet engines, except aircraft; rescue and safety equipment. The AMA will provide contractual maintenance and modification services for support of commodities listed above and aircraft, bombing, gunnery and fire control systems and equipment and aircraft and missiles and/or engines for which the AMA has primary responsibilities.

**Dayton AF Depot**, Gentile AF Station, Dayton, Ohio, buys airborne radio, radar and navigational equipment and components, airborne communications equipment; electrical and electronic equipment, components; terminals; terminal boards, connectors, fuses, lightning arrestors, capacitors, resistors, switches, circuit breakers, tubes, relays, contactors, solenoids, insulators, knobs, pointers, dials and piezo electric crystals, laboratory and shop test inspection equipment and maintenance

parts, measuring tools, inspection gages, and combination and miscellaneous instruments. Dayton does not buy any Government Furnished Aircraft Equipment (GFAE) in the way of airborne radio or airborne communications equipment.

There are two other air materiel areas and one depot. **Sacramento AMA** at McClellan AFB specializes in the purchase of airframe structural parts for aircraft including the F-100, F-104 and the upcoming F-108 among others. **San Antonio Air Materiel Area**, at Kelly AFB, Tex., buys airframe structural parts and engine parts for the B-58, the F-102 and has been designated the support manager for the B-70, chemical bomber and the WS-125A, nuclear-powered aircraft.

In outlining the decentralized procurement responsibility, Air Materiel Command notes that there is, in addition, a local purchase or base procurement program. This deals with the purchases of supplies and services required to support a specified installation. Most of the items bought are of a housekeeping nature.

Actually the would-be contractor or subcontractor doesn't have to go to the listed AMAs for help. Middletown AMA is responsible for five procurement districts, located at Boston, Newark, New York, Philadelphia and Rochester. In addition, there are eight Air Procurement offices, located at Hartford, Conn., Hackensack, N.J., and South Orange, N.J.; Stamford, Conn.; two in Pittsburgh, Pa., and one at Buffalo and Syracuse, N.Y. Finally AF has stationed at the plants of principal contractors representatives who can help. These are located at Bell Aircraft, Niagara Falls; Curtiss-Wright Wood-Ridge, N.J.; Fairchild Engine and Airplane at Hagerstown, Md., General Electric, Syracuse; Sperry Gyroscope, at Great Neck, L.I. and United Aircraft at Stamford, Conn.

How does the Air Force manage its vast buying program? It uses what it calls the Weapon System Integration concept. This means that an AF contract gives a strong prime contractor the basic responsibility to design, develop, produce and manage the total effort under the supervision of the Air Force.

However, this does not mean that subcontractors and suppliers are left out in the cold. AF usually requires that a specific part of the contract be subcontracted. It also wants to approve the subcontract structure.

Purpose is to be sure that the prime contractor does not keep in-house work which can be done more efficiently or economically on the outside.

Most of the prime contractors maintain active organizations which aim at

building up and maintaining a strong subcontract structure. These involve in some cases as many as 23,000 subcontractors and suppliers, with 5,000-6,000 not being in any way unusual. A good point of contact for business is the prime contractors including: Boeing Airplane Co., Seattle, Wash.; North American Aviation, Canoga Park and Downey, Calif.; Lockheed Aircraft, Sunnyvale, Calif.; Aerojet General Corp., Nimbus, Calif.; Convair Division of General Dynamics at San Diego, Calif.; McDonnell Aircraft, St. Louis; Radio Corporation of America, Camden, N.J.; General Electric, Philadelphia, Pa., and Syracuse, N.Y.; Douglas Aircraft, Santa Monica, Calif.; Republic Aircraft, Farmingdale, L.I.; The Martin Company, Denver, Col., and Orlando, Fla.; Hughes Aircraft, Culver City, Calif., and Tucson, Ariz.

In one important area, Air Force does not handle its own work. Construction of missile bases, while planned for by the Air Force is handled by the Corps of Army Engineers acting as agent for the Air Force. Most of the contracts for construction of bases, many of which involve the installation of equipment, are handled on open bids invited by the District Engineer in which the installation will be located.

If you aren't interested in producing hardware but have a new idea, or a new way of doing something important for the AF, the Air Research and Development Command at Andrews AFB, just outside of Washington, D.C., frequently will talk business to private research groups, industrial concerns, regardless of size, and to nonprofit organizations.

ARDC is headed by a lieutenant general. There is a vice commander and an assistant vice commander. The office is divided into five main sections: Resources; Air Defense Systems Integration; Research; Ballistic Missiles, and Weapon Systems. Air Defense Systems Integration is located at Bedford, Mass. and the Ballistic Missiles Division is located at Inglewood, Calif. The other divisions are at Andrews AFB.

The resources office would probably be the first point of contact for a would-be contractor. It consists of: Directorate of Materiel; Directorate of Installations; Directorate of Procurement; Technical Services; Personnel; Operations; and Manpower and Organization. An Assistant Deputy Commander is charged with responsibility for contractual and technical services and would be helpful to the man with an idea.

The research engineering section would be another point of contact. It is the office which places most of the "pure" research contracts.

\$417,000,000



Procurement & Production,  
Missiles, FY 1960

# How To Do Business With the Navy

*Navy will spend over \$6 billion in the next fiscal year. Here is a breakdown of those expenditures and tips to prime and subcontractors on how to obtain contracts . . .*

**F**OR THE FISCAL YEAR 1959-60, the Navy plans procurement obligations totaling more than \$6 billion. These contracts will involve everything the Navy needs from missiles, ships and planes to machined parts, food and clothing.

A breakdown of these planned expenditures shows the following major items:

Aircraft, \$1.86 billion; ships, \$1.7 billion; followed by various categories in the missile and rocket, and support systems areas—missiles, \$716 million; electronics and communications, \$318 million; construction, \$266 million; miscellaneous procurement and production including target drones, machine tools etc., \$96 million; production equipment and facilities, \$26 million; and support vehicles, \$30 million.

As with the Department of Defense and the other services, the two major approaches to selling to the Navy—whether it be hardware, supplies, equipment, missiles or support equipment, or research and development ability—are either as a prime contractor or as a subcontractor to a prime.

To obtain prime contracts, it is necessary to get on the bidders' lists for those items the company is qualified to produce. The Navy recommends reference to the booklet "How to Sell to Agencies Within the Department of Defense" which is available from the field offices of all the services. Major Navy field offices are the Inspectors of Naval Material located in 29 cities in all parts of the nation. The booklet covers both advertised and negotiated contracts.

If the interest is in the subcontract, it is necessary to get on the bidders' lists of the various primes. Lists of these primes also can be obtained from the Inspectors of Naval Material. The Navy recommends another booklet, "Selling to Navy Prime Contractors,"

NaVEXOS P-1030, as a source of information on procurement and production.

The third largest item in procurement obligations is for research and development work. Frequently such R&D contracts lead to production contracts.

These contracts usually are let by the interested bureau or office of the Navy on a competitive basis to the firm best qualified to do the work at the lowest cost. Detailed information may be found in two publications: "The Office of Naval Research Contract Research Program," which is available from the Chief of Naval Research, Department of the Navy, Washington 25, D.C.; and "Inventions Wanted by the Armed Forces," published by the National Inventors Council, Office of Technical Services, U.S. Department of Commerce, Washington 25, D.C.

Another good source of information, the Navy says, is the Department of Commerce's "Daily Synopsis of U.S. Government Proposed Procurement, Sales and Contract Awards" which is available for a yearly subscription of \$7.00 from the Commerce Department's Field Service, Administration Service Office, 433 West Van Buren St., Chicago 7, Ill.

During the past five years, approximately 20% of the Navy's domestic procurement dollar went directly to small business, with another 20% to small business in subcontracts. The Navy has a vigorous program to encourage small business—some 130 persons are primarily concerned with helping small business and are located in all major naval purchasing activities and in the Offices of the Inspectors of Naval Material.

One effective way to help small business is to set aside total procurements or parts of procurements exclusively for negotiation with small

business. This is done generally when limiting of competition will not result in payment of unreasonable prices by the government.

In addition, the Navy Department in 1954, in cooperation with the Army, Air Force and other Federal agencies, developed the Industrial Assistance Program. Under this program, businessmen are advised of trends and needs of the services by means of procurement conferences, exhibits of items needed, and other activities to stimulate interest.

The coordination and direction of "material matters" in the Navy are the responsibility of the Assistant Secretary of the Navy (Material) assisted by the Chief of Naval Material. Under his guidance, the technical bureaus and offices are responsible for providing the Navy's needs.

Each of these offices or bureaus designs, procures, controls and maintains those segments of equipment coming under its particular cognizance.

This includes some 36,000 major end items such as ships, missiles, planes, communications devices etc., and more than 1,200,000 secondary supply items needed to support, operate and maintain the major equipment. This latter replenishable material includes 800,000 repair parts and 400,000 consumable and general supply items.

The Bureau of Aeronautics is charged with maintenance of superiority of the U.S. Navy in the air. In addition to the procurement of aircraft, BuAer is charged with procurement of the air-to-air and air-to-ground missiles. As with BuOrd, BuAer is interested in research and development work in its own field.

The Bureau of Ships is charged with design, building, conversion and altera-

tion of naval vessels, including the missile launching surface units and the submarines including *Polaris*.

**The Bureau of Supplies and Accounts** fills many needs throughout the Naval Service. The Bureau, through a network of more than 200 decentralized offices throughout the country, spends annually more than \$2 billion to acquire more than a million items.

This procurement covers almost all categories of consumables, repair parts and technical items including electronics and special parts for guided missiles and support equipment including nuclear powered submarines for the *Polaris* missile system.

The Bureau is interested in expanding its procurement sources and encourages competition from both large and small business alike. It invites all qualified suppliers to have their names placed on the Navy's bidding lists. An information brochure can be obtained from the Bureau of Supplies and Accounts (Code OZ), Navy Department, Washington 25, D.C.

**The Bureau of Yards & Docks** has the responsibility for the construction and maintenance of the Navy's shore establishments. Also, through the Naval Civil Engineering Laboratory, Port Hueneme, Calif., the Bureau conducts broad research, development, testing and evaluation of methods, procedures, materials and equipment pertinent to its field of endeavor.

Civilian contractors interested in work for the Bureau, or inventors, researchers and others who wish to investigate possibilities or bid on work should contact one of the Naval District Public Works Offices located in various large cities.

**The Bureau of Medicine & Surgery** procures its supplies through a joint procurement agency—Military Medical Supply Agency, 84 Sands St., Brooklyn 1, N.Y.

**The Office of Naval Research** is responsible for sponsoring both basic and applied research. Its fields of interest to date include all the basic sciences such as physics, acoustics, chemistry, geophysics, electronics, mathematics, statistics, mechanics, systems analysis and others.

**The Marine Corps**, which is part of the Naval Establishment, through its Quartermaster General, procures electronics and engineering items, refrigeration and air conditioning equipment. Much of its procurement is carried out through contracting officers at the Marine Corps Supply Activity, 1100 South Broad St., Philadelphia, Pa.

The Navy's overall policy in procurement provides that research and development contracts be awarded on the basis of comparative technical ability in the specific science or technology involved in the work. Because of the exploratory nature of the work, and the uncertainties of successful accomplishment, cost-reimbursement contracts generally are used in this field.

Consequently, the award of such contracts normally is based on the comparative ability of the proposed contractors rather than on comparison of the estimated costs, since in cost-reimbursement contracts advance estimates of cost do provide a valid indication of the actual final costs.

So that there will not be unnecessary waste and cost involved, the Navy usually requests technical proposals only from firms which have been technically evaluated and believed qualified to do the work involved.

When applications are received, the Navy reviews the prospective contractor's management techniques, his compliance with the Department of Defense policies and thoroughly investigates the subcontracting plan.

### Navy Purchasing Offices

**Inspectors of Naval Material**  
50 7th St. NE  
Atlanta 5, Ga.  
Phone TRinity 6-3311 ext. 5593

**Inspectors of Naval Material**  
401 Walter St.  
Baltimore 2, Md.  
Phone PLaza 2-7900 ext. 2-8460

**Inspectors of Naval Material**  
495 Summer St., Post Office Box 2276  
Boston 7, Mass.  
Phone Liberty 2-5100

**Inspectors of Naval Material**  
181 Middle St., Jayson Building  
Bridgeport, Conn.  
Phone FOrrest 8-2567

**Inspectors of Naval Material**  
740 Main St.  
Buffalo 2, N.Y.  
Phone Washington 4400-4406

**Inspectors of Naval Material**  
RCA Building, Front and Cooper Sts.  
Camden, N.J.  
Phone WOODlawn 3-8690

**Inspectors of Naval Material**  
800 1st Ave. NE., Box 1510  
Cedar Rapids, Iowa  
Phone EMpire 4-0165

**Inspectors of Naval Material**  
608 South Dearborn St.  
Chicago 5, Ill.  
Phone HARRison 7-9300

**Inspectors of Naval Material**  
230 East 9th St.  
Cincinnati 2, Ohio  
DUNbar 1-2200

**Inspectors of Naval Material**  
Ferguson Building, 1783 East 11th St.  
Cleveland 14, Ohio  
Phone CHerry 1-7900

**Inspectors of Naval Material**  
1114 Commerce St.  
Dallas, Texas  
Phone RIVERSide 8-561, ext. 311

**Inspectors of Naval Material**  
310 East Jefferson Ave.  
Detroit 26, Mich.  
Phone WOODward 5-0714

**Inspectors of Naval Material**  
3802 South Calhoun St.  
Fort Wayne 6, Ind.  
Phone HARRison 4231

**Inspectors of Naval Material**  
605 Stewart Ave.  
Garden City, Long Island, N.Y.

**Inspectors of Naval Material**  
318 East 10th St.  
Kansas City 6, Mo.  
Phone BALtimore 1-700

**Inspectors of Naval Material**  
1206 South Santee St.  
Los Angeles 15, Calif.  
Phone RICHmond 9-4711

**Inspectors of Naval Material**  
783 North Water St.  
Milwaukee 2, Wis.  
Phone BRoadway 3-5901

**Inspectors of Naval Material**  
U.S. Courthouse, 3rd St. and Marquette Ave. South  
Minneapolis 1, Minn.  
Phone FEderal 2-3244, Ext. 157-159

**Inspectors of Naval Material**  
Naval Industrial Reserve Shipyard  
Building 13, Port Newark  
Newark 5, N.J.  
Phone MITchell 3-5700

**Inspectors of Naval Material**  
207 West 24th St.  
New York 11, N.Y.  
Phone WATkins 4-5000

**Inspectors of Naval Material**  
17 Brief Ave., Upper Darby, Pa.  
Philadelphia, Pa.  
Phone GRANite 4-4840

**Inspectors of Naval Material**  
401 Old Post Office Building  
Pittsburgh 19, Pa.  
Phone EXpress 1-2560

**Inspectors of Naval Material**  
10 North 8th St.  
Reading, Pa.  
Phone FRanklin 4-5194

**Inspectors of Naval Material**  
321 U.S. Customhouse (Old), 815 Olive St.  
St. Louis 1, Mo.  
Phone MAIn 1-8100

**Inspectors of Naval Material**  
Building 178, Treasure Island  
San Francisco 19, Calif.  
Phone EXbrook 2-3931

**Inspectors of Naval Material**  
Post Office Box 1085  
Schenectady 1, N.Y.  
Phone DICkens 6-8476

**Inspectors of Naval Material**  
2300 11th Ave. SW  
Seattle 4, Wash.  
Phone ELLiott 8800

**Inspectors of Naval Material**  
Post Office Building, Room 310  
Springfield, Mass.  
Phone REpublic 9-7391

**Inspectors of Naval Material**  
428 South Warren St.  
Syracuse 2, N.Y.  
Phone GRANite 4-6861

\$587,000,000



PROCUREMENT & PRODUCTION,  
MISSILES, FY 1960

# How To Do Business With the Army

*This article show the businessman how he can get part of the Army missile dollar. Included also is a list of current Army missile and rocket systems and their prime contractors . . .*

**T**HERE ARE two basic ways for a businessman to get a part of the Army missile dollar. One way is get a contract to do certain research and development work, or as the prime contractor for a missile or system. The second approach—and the one through which the greater part of the business volume is channeled—is as a subcontractor to a prime or as a supplier of parts, components or services.

The prime contractor who gets a research and development contract, usually for an entire missile system, is responsible for the initial production of all system components including the missile, launching and handling equipment, guidance, documentation and test equipment. While the prime has the overall responsibility, in most cases the dollar volume of the subcontracted components far exceeds the value of the components manufactured directly by the prime contractor. This, naturally, depends on the capabilities of the prime and the scope of the entire system.

## Selection of a Contractor

Selection of a contractor for production of a missile system or components is achieved through formal advertising and negotiation. Selection is based on a number of criteria including production capability, reliability, costs, quality of the company's commercial or military products, and specific production requirements for the particular item being considered.

Consequently, it is important that the Army know what each industrial firm can do. The overall responsibility for the Army missile program has been assigned to the U.S. Army Ordnance Missile Command, Redstone Arsenal, Alabama, under the jurisdiction of the Chief of U.S. Army Ord-

nance Corps. The Army Ordnance Missile Command (AOMC) maintains a source file on industrial firms.

Those interested in doing business with the Army should supply the following information: name and type of company; total number of employees including research scientists and development engineers or other technical personnel; plant space and equipment including laboratory equipment and other facilities for research and development work; security clearance if a "facility clearance" is held for Army, Navy or Air Force work; general information on engineering capability and commercial and defense products; financial statement and descriptive brochure or any other information which would help in determining the full capability of the company.

Regional points of contact are provided by the 11 Ordnance Districts (see listing). Each of these districts maintains lists of items to be procured. AOMC normally requests the Ordnance Districts to secure quotations when a supplier of missile items is to be selected. After evaluation and bids, AOMC will request the District to prepare a contract with the selected supplier.

While contract administration always is the responsibility of AOMC, under certain circumstances procurement may be allocated directly to the Districts for selection of suppliers and contractual action.

An interested contractor or supplier is given an opportunity to review such research and development drawings and specifications are obtained before submitting formal proposals or bids. This information can be had from the 11 District Offices. A security clearance may be required to obtain this information and details as to subcon-

tracting possibilities. It is of prime importance that prospective Army contractors and suppliers maintain contact with the Ordnance District Offices.

By its very nature, the procurement of guided missile systems and the replenishment of spares, is different from procurement of other items. Frequently, urgency of the program will not permit normal competitive procedure until late in the program. The more information the District Office and AOMC has on a company, the better its opportunities for selection.

## New Army Procedures

The Army welcomes ideas for new weapons and material items voluntarily generated by industry and civilian organizations. However, there have been cases where costly voluntary efforts resulted only in disappointment because the ideas were not sufficiently compatible with the factors which must be considered by the Army.

To assist prospective contractors the Ordnance Corps has published Order 7-58 which establishes some new procedures to aid in the availability of information as to what new items the Army would like to have developed. Any interested U.S. civilian organization which has a suitable R&D capability, has the necessary clearances and has signed the policy agreement form can now obtain information on what the Army wants.

The required Policy Agreement form may be obtained from the district offices. If the company already is working with Ordnance on an R&D type contract, queries may be submitted directly to the Ordnance Commodity Command or the Commodity Arsenal with which it has been dealing. This is because they already are familiar with the company's capability. Where such

work is not in progress, or the company wishes to expand into areas not covered by current contracts, the query should be submitted directly to the nearest Ordnance District Office. The District Office will then advise as to how to become a qualified organization and put the company in touch with the proper Commodity Command or Commodity Arsenals.

Normally, development requirements information will be released only from the Ordnance Commodity Commands and Arsenals. This may be done by means of interviews, group briefings, distribution of written documents, or by correspondence. However, for the present, it is anticipated that group briefings will be the principal method.

Inasmuch as a missile system in its final operation draws on practically every agency and corps of the Army, business opportunities in support of the missile program can be developed through other units, as well as the Ordnance Corps. For information as to the proper agency for R&D work, queries should be submitted to the Office of the Chief, Research and Development, Department of the Army, Washington 25, D.C., Attn.: Technical Liaison Office. This office maintains a list of items and activities with which each of the technical services and commands of the Army is concerned.

Such proposals should be complete and concise with full information on the proposing firm and a discussion of the proposed work in terms of objective and scope.

If the proposal is accepted, a contract may be negotiated between the organization and the appropriate agency. If it is not accepted, the government is not obligated in any way to reimburse the firm for costs it might have incurred in submitting the proposal or seeking the contract. Corps, and their fields of endeavor include:

**Corps of Engineers**—most of the support equipment for missile systems, rockets and satellite programs. This involves a variety of work such as: construction and maintenance equipment; launching towers; cover and concealment of weapons; electrical equipment such as generators and converters; fire-fighting equipment; industrial engines including turbines; industrial gases and compressors; infrared and night vision equipment; liquid fuels distribution; mapping, geodesy and surveying materials; nuclear power and heating plants; prefabricated buildings and other areas of interest.

**Ordnance Corps**—in addition to weapons, Ordnance has cognizance of the control equipment and material; oils and lubricants.

**Quartermaster Corps**—chemicals and plastics; environmental protection; individual clothing and equipment which should become more important with the development of nuclear power for missiles and the attendant hazards of radiation and decontamination; mechanical equipment; and test materials and techniques.

**Signal Corps**—avionics; electronic countermeasures; electronic data processing systems; infrared, ultraviolet, meteorological instrumentation; radar; radio and wire communications; radio direction finding; sound, and light and television.

**Transportation Corps**—air, marine, motor and rail transportation.

**Chemical Corps**—biological agents; chemical agents; incendiaries; protective equipment; screening agents; smokes, weapons.

**Army Medical Service**—all basic research in medical sciences.

For research in areas of personnel training, motivation and leadership, the Army has the Human Resources Research Office in Washington.

The current list of Army missile and rocket systems and their prime contractors include:

**Corporal**—Firestone Tire & Rubber Co. (missile and ground handling equipment), Gilfillan Brothers, Inc. (ground guidance equipment).

**Hawk**—Raytheon Manufacturing Co.

**Jupiter**—Army Ballistic Missile Agency (missile system) and Chrysler Corp. (missile fuselage and assembly and ground equipment).

**Honest John**—procurement responsibility for this rocket, with the exception of the fins and warhead compartments, has been transferred to the Commanding General, U.S. Army Ordnance Ammunition Command, Joliet, Ill. Ground equipment is under the authority of the Commanding General, U.S. Army Ordnance Weapons Command, Rock Island, Ill. Fins and warhead compartments are under Emerson Electric Mfg. Co., one of the prime contractors.

**Lacrosse**—Cornell Aeronautical Lab., and The Martin Company.

**Nike**—Western Electric Company; Goodyear Aircraft Company and Borg Warner Corp. (solid sustainer motor booster motor). Procurement of booster motor metal parts is the responsibility of the Commanding General Army Ordnance Ammunition Command, Joliet, Ill.

**Pershing**—The Martin Company.

**Plato**—Sylvania Electric Products, Inc.

**Redstone**—Army Ballistic Missile Agency and Chrysler Corp.

**Sergeant**—Jet Propulsion Laboratory (missile system) and Sperry Utah Engineering Lab. (all critical R&D components).

The Army has issued a statement which reads:

"It seems quite clear that a company which aspires to become an important factor in the guided missile industry in the role of a prime contractor should strive to attain a position of being able to assume full responsibility for system development and program management. The smaller company would do well to concentrate on superiority of individual components so that their reputation for reliability, superior performance, and better cost will lead prime contractors to their door."

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## The Ordnance Districts

**Birmingham Ord. Dist.**  
2120 No. Seventh Ave.  
Birmingham, Ala.  
Birmingham 53-3421

**Boston Ord. Dist.**  
Boston Army Base  
Boston 10, Mass.  
Liberty 2-6000

**Chicago Ord. Dist.**  
209 W. Jackson Blvd.  
Chicago 6, Ill.  
Webster 9-6000

**Cincinnati Ord. Dist.**  
Swift Bldg., 230 E. 9th St.  
Cincinnati 2, Ohio  
Dunbar 1-2200

**Cleveland Ord. Dist.**  
Lincoln Bldg., 1367 E. 6th St.  
Cleveland, Ohio  
Tower 1-4960

**Detroit Ord. Dist.**  
574 E. Woodbridge  
Detroit 31, Mich.  
Woodward 5-3720

**Los Angeles Ord. Dist.**  
55 S. Grand Ave.  
Pasadena, Calif.  
Ryan 1-8471

**New York Ord. Dist.**  
770 Broadway  
New York 3, N.Y.  
Oregon 7-3030

**Philadelphia Ord. Dist.**  
128 N. Broad St.  
Philadelphia 2, Pa.  
Locust 8-0400

**St. Louis Ord. Dist.**  
430 Goodfellow Blvd.  
St. Louis 20, Mo.  
Evergreen 2-8200

**San Francisco Ord. Dist.**  
1515 Clay Street  
P.O. Box 1829  
Oakland 12, Calif.  
Twin Oaks 3-6330

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**Ernest Brackett**

*Director of Procurement and Supply*

# How To Do Business With NASA

*National Aeronautics and Space Administration was added this year to the list of contracting agencies in the missile business. Outlined here are some of NASA's procurement procedures . . .*

**A**NOTHER NAME has been added this year to the list of contracting agencies in the rockets and space development field. Under the National Aeronautics and Space Act of 1958, signed into law by the President July 29th last year, the charter and responsibilities of the National Advisory Committee on Aeronautics was expanded. NASA was given the overall responsibility for the nation's space program which the Act stated "should be devoted to peaceful purposes for the benefit of all mankind."

Generally speaking, NASA procurement follows the provisions of the Armed Services Procurement Regulations. This normally is by formal advertising for competitive bids where the supplies, materials, equipment or construction work can clearly be defined in drawings or specifications. However, in the case of research and development and other instances where such specification is not feasible, procurement is through negotiation with qualified firms.

The greater part of the procurement and contracting for services is carried through the field stations. However, any contract in excess of \$25,000 must be countersigned by the NASA headquarters. All contracting negotiation and administration is performed via the field stations except in certain cases when the items or work sought does not fall specifically under the cognizance of one of the field stations.

NASA normally negotiates its own contracts with prime contractors. This is done directly with the contractor by NASA's own staff for contract negotiation and administration. A flexible procedure is employed which permits use of the services of the Department of Defense or other governmental agencies, as NASA sees fit. NASA's own technical direction, including proj-

ect officer supervision, for all prime contracts is used except for standard hardware items more easily obtained by extension of already existing military contracts.

The actual level within the NASA organization responsible for the detailed technical direction and execution of the particular project negotiates with research and development contractors.

To the maximum extent possible, small business is given opportunity to participate in supplying NASA's supplies and services.

For actual procurement, NASA employs a decentralized system. This means that all equipment and supplies needed by a NASA field station are procured by the procurement officer at that station. Each of these procurement activities maintains its own bidders list, and should be contacted by those wishing to participate in NASA's procurement (see listing).

## Advertising Procedures

In the case of purchases by formal advertising, strict adherence to a prescribed procedure is followed. At a specified time bids are opened and the bid most advantageous to the government is accepted. Upon award, the accepted bid becomes a legally binding contract.

When formal advertising does not meet the needs of NASA, procurement by negotiation is permitted. This method is when experimental, developmental or research work is involved or the urgency of the situation demands it. However, it is the policy of NASA to assure full and free competition as far as possible. Award in such cases is made in the best interest of the government considering price, delivery, quality of the product and

other factors based on the original proposals or negotiation.

NASA reminds would-be contractors preparing their bids to watch for special conditions relating to material packing, packaging and delivery which may vary from the standard printed instructions. Any bid which does not conform to the requirements of the invitation for bids will be rejected. All bids may be rejected when rejection is in the interest of the government, or when the contracting office does not consider the bids reasonable or arrived at independently, or feel they are collusive or in bad faith.

Generally speaking, NASA employs the fixed-price contract for both advertised and negotiated procurement. Certain variations of the fixed-price contract is used for price redeterminations where the performance of the contract may involve large contingencies or uncertainties in costs.

Cost-reimbursement contracts are reserved for certain situations and may be awarded with or without a fee. In emergencies, or under unusual circumstances requiring maximum reduction of procurement lead time, letter-of-intent contracts enable the contractor to begin work pending negotiation and execution of the actual contract.

Cost - plus - percentage - of - cost contracts are prohibited by law.

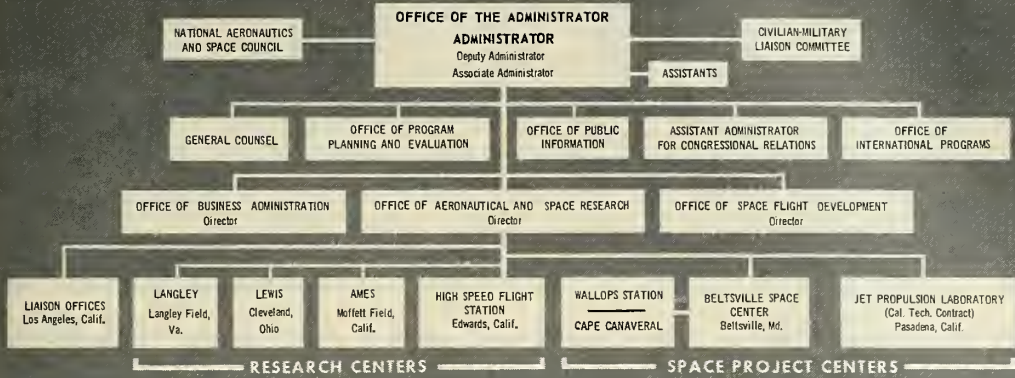
Although contractors are expected to be fully qualified and competent to carry out the contract including the financial requirements, when such work will result in serious drain of the contractor's working funds, the government may provide financial assistance.

In addition, the Small Business Administration can grant loans to small concerns for the financing of plant construction, equipment or for use as working capital.

NASA recognizes the increasing



# National Aeronautics and Space Administration



of quality control techniques by industry and emphasizes the importance of quality in all supplies and parts used in the highly complex space vehicles and equipment. Before materials are accepted, they are subject to inspection for compliance with contract specifications.

As with the military services, frequently a facility clearance is required for NASA contracts. This is necessary whenever access to classified matter is required either by the contractor or his employees. Subcontractors on classified projects should obtain a facility security clearance via the prime contractor. Most of the supplies purchased by NASA conform to the federal or military specifications on quality, size, performance etc., available from the Government Printing Office.

As with other government agencies, it is the policy with NASA to include in contracts involving employment of labor, a provision obligating the contractor not to discriminate against any employee or applicant for employment because of race, religion, national origin, or color.

NASA points out that in research and development work especially, the competence of a firm is not always determined by its size. Contracts for R&D are awarded on a basis of highest competence in the specific branch of science or technology required for successful execution of the project.

In addition, NASA each year lets a number of research grants and contracts to educational institutions and non-profit organizations. These contracts involve research of two general types—supporting research and fundamental research. Research proposals should be submitted (10 copies will facilitate evaluation) to the National Aeronautics and Space Administration, 150 H. St., N.W., Washington 25,

D.C. marked for the attention Research Grants and Contracts Office. All such contracts are handled by the NASA headquarters and not by any of the field stations.

While bona fide representatives are permissible, the "Covenant Against Contingent Fees" clause included in all NASA contracts is warranty by the contractor that he has not retained other parties in soliciting or securing the contract. Breach of this warranty may result in an annulment of the contract or recovery by the government of the amount of fee already paid. Employees or established commercial or selling agencies maintained by the contractor to secure new business can represent the firm.

**List of products**—A representative list of items and supplies procured by NASA follows:

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working Equipment and Supplies; Plumbing Supplies; Pressure Systems and Equipment; Pressure Vessels; Reproduction Equipment and Supplies; Safety Equipment and Supplies; Shop Furniture; Telemetry Equipment; Vacuum Systems and Equipment; Welding Equipment and Supplies; Weldments; Wind Tunnel Instrumentation Equipment and Supplies; Woodworking Equipment and Supplies.

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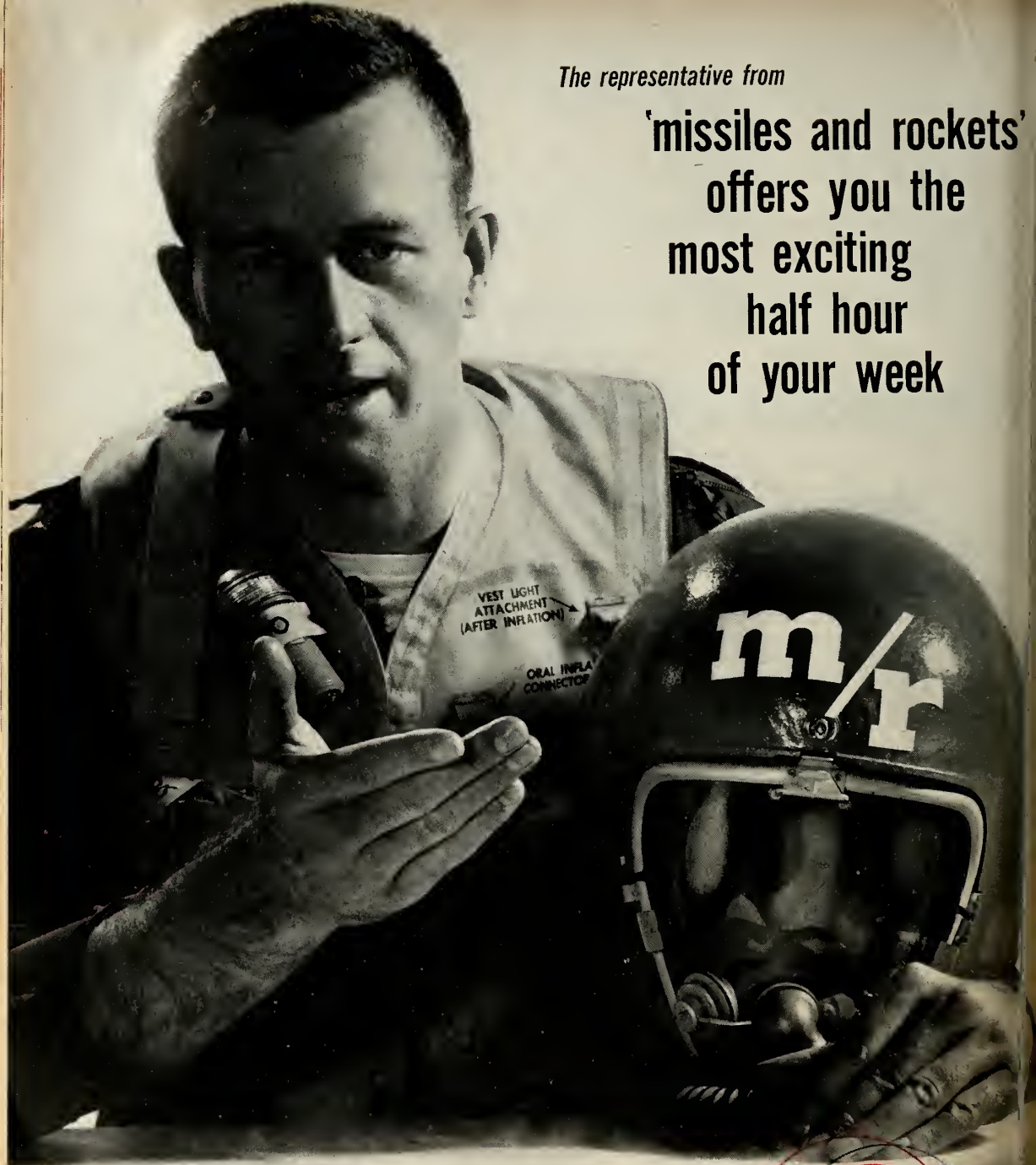
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# What a Prime Seeks from a Sub

*A prime contractor official describes the weapon system concept and explains what a weapon system contractor expects from the suppliers . . .*

by **Rulon Nagely**

*Corporate Director, Material  
North American Aviation, Inc.*

**T**HE RELATIONSHIP between a weapon system contractor, and his suppliers and subcontractors is perhaps one of the most important elements in today's defense picture.

A well-established, smooth working relationship can lead to increased production efficiency and can save the government thousands upon thousands of dollars. On the other hand, poor coordination between the key organizations can only result in wasted time and effort, financial loss and, in extreme cases, perhaps could lead to the elimination of the particular weapon system involved.

To fully understand the problems involved, it is important to first understand the method of procurement which is described as "the weapon system concept." Historically, the various military contractors, particularly those doing business with the Air Force or the Navy, were responsible only for the design and production of the primary piece of equipment. In the case of aircraft manufacturers, this was the airplane itself; the Government furnished such items as engines, wheels, brakes, instruments, radar equipment, radios and so on.

Only occasionally was the contrac-

tor involved in the selection of these items.

The concerned government agency, in effect, acted as weapon system contractor, utilizing a number of subcontractors to furnish the necessary components which when assembled, became a finished, flyable airplane.

The system had certain advantages, not the least of which was that the prime manufacturer was absolved of the thousands of details—and the resultant headaches—that go with the procurement of the many pieces that make the whole.

## Time for a Change

However, there were many more, and overriding, disadvantages. All too often the airplane manufacturer found that a vital equipment item would not work properly, or was incompatible with the balance of the system; making the necessary adjustments often delayed the whole program. Delivery schedules were not always as well planned as they should have been. Making major design changes while in the middle of a contract was very difficult and was often expensive because some completed hardware was no longer usable, but had to be paid for.

Where did the fault lie? In few instances could the responsibility be pinpointed to any one group, company or agency. Since there was no clear-cut line of responsibility, confusion and difficulties were unavoidable.

With the advent of the space age, it became increasingly obvious that the problems encountered through this procedure must be eliminated. The newer weapons then envisaged demanded the most exacting coordination and cooperation throughout the defense industry, and required a pooling of the most advanced scientific knowledge, the most specialized technologies, and the newest industrial skills.

The result: the so-called "weapon system concept."

Under this procedure, the prime contractor is held fully responsible for the success of the program, with only a very few, if any, items being furnished by the contracting agency. It is up to the contractor to find the proper equipment item for a given task, to see that delivery schedules are met, and that a high standard of quality, engineering and reliability is maintained. It is up to the contractor, also, to make certain that costs are held within prescribed limits and a very close cost control is



*Rulon Nagely, Director of Material for North American Aviation, Inc., was promoted to his present position in 1951 from Purchasing Agent. He joined North American as Purchasing Agent in 1941.*

*Nagely first entered the aircraft industry in 1937 as purchasing agent for Vultee Aircraft Co., where he remained until 1941.*

*Nagely is Chairman of the Aerospace Industries Association's Materials Committee and is a member of the U.S. Air Force Advisory Group-Small Business.*

maintained by the weapon system contractor.

In the case of today's complex weapons, these procedures involve far more than just selection and purchase; in many, if not most, instances the needed systems and subsystems are nonexistent. The contractor must first determine exactly what is required, he then must not only find the proper company to develop the item, but must also expend considerable effort of his own in assuring that the development process results in getting the right item on schedule and at a minimum expense.

North American Aviation is now weapon system contractor for two major weapon systems, the B-70 Valkyrie, intercontinental jet bomber, and the F-108 long-range jet interceptor. Both are designed for high altitude performance in the Mach-3 range. Under the latter two programs, the only items furnished by the Government are the engines; all other items, including fire-control flight control, mission and traffic control, electronic countermeasure and bombing-navigation systems, as well as other equipment that formerly would have been government-furnished equipment, are now North American's responsibility. We are charged with selecting, ordering and coordinating the manufacture of all the various components and subsystems which will go in to the B-70 and F-108. Moreover, we are also responsible for the ground-handling equipment, servicing equipment and everything else necessary to make the complete weapon system operate properly.

There should be no misunderstanding: the government is still deeply concerned with these programs and through the concerned weapon systems project offices keeps a close and constant watch over what we are doing. However, the responsibility is North American's.

## Criticism of Procedure

There has been some criticism of the weapon system procedure, most of it on the basis that costs will increase and that small business will be squeezed out of the picture.

As to the first charge, we fully believe that is an unfounded fear. It is true that some of today's projects are staggeringly expensive as compared with World War II weapons; this is due to the increased complexity of the systems, not to the change in procurement procedures. Additionally, costs under the weapon systems concept can actually be determined and controlled because they are in one spot; pre-

viously, these costs were scattered over so many areas, and through so many agencies and companies, that it was almost impossible to determine and control the true and absolute cost of any single completed aircraft.

As to the second fear, we know that there is no basis for its existence. The small businessman will continue to play a vital role in the procurement picture and indeed, may even have increased opportunities for business. The business is still there, and the small businessman will get his share.

## Changes in the System

The only basic change is that he will be dealing at a different level; in most instances, he will contact, or be contacted by, a prime contractor rather than a weapon system contractor.

The latter—whether one company or as in the case of some weapon systems, a group of related companies—will simply have moved up a rung on the ladder. The weapon system contractor will be handling most of the duties heretofore handled by the services, the major subcontractors will have replaced the prime contractors in certain procurement situations, and so on.

This means, of course, that the weapon system contractor will not have as much direct contact with the small business firm as has been customary in the past.

The size and scope of today's weapon systems demands that a greater portion of the business be subcontracted with major manufacturing concerns than in the past. It is doubtful that any one company in this country could handle as much as one-half the work involved in the design, development and production of a major modern weapon system.

For example, in the case of the B-70, we have named Boeing Airplane Co. as the subcontract for a wing section. This particular subcontract involves considerable engineering and design effort, as well as actual manufacture. It could not have been handled by a small concern and still have met design requirements and delivery schedules.

Boeing, in turn, will subcontract many of the items that will make up this section—and this is where small business will get its share of the program.

Other major subsystems are being handled in the same manner.

North American has taken several steps to insure that small business does, in fact, participate.

We require our suppliers, on every purchase order or subcontract of \$100,000 or more, to supply us with a quarterly report on his small business subcontracting; he in turn must insure a similar requirement in all of his purchase orders and subcontracts in the amount.

We notify the regional office of the Small Business Administration, as well as the Small Business Specialist of the appropriate branch of the Armed Services whenever a purchase order or subcontract is let that appears to offer opportunities for small business participation.

Each of our buyers is required to make a "small business checklist" on each purchase, showing whether the order went to large or small business and if the former, whether small businesses were solicited and why they did not get the order.

Through these and other procedures, we are confident small business will get its fair share of the work on these weapon systems.

Approximately 80 per cent of the work on the B-70 and F-108 will go to other companies, most of whom would be prime contractors to the government in a different situation. The companies will continue to let at least the same amount of work to small concerns as they did in the past.

These procedures, while established by North American for specific programs, are essentially the same as will be followed by other weapon system contractors. The details may differ, but the basic philosophy will be the same if for no other reason than the complexity and size of the programs no being conducted.

## Position of Contractor

It is readily apparent that the weapon system contractor is placed in a peculiarly vulnerable position. Holding a tremendous responsibility for success of an expensive program of great importance to our defense picture, he at the same time cut off from direct contact with many of the people who could increase costs or otherwise cripple the program.

The weapon system contractor must therefore, be very demanding in his relationships with the immediate subcontractors and suppliers. He must establish firm ground rules for operation, must make certain that all requirements are met, and must be ready to insist on competent performance on the part of both his own subcontractors and those companies on the third an-

fourth tiers of effort.

The weapon system contractor must supervise and control the cost and the progress of all work, and periodic reports on these items from subcontractors are a necessity.

Examination of these reports might indicate inefficiencies or schedule slippage. In such a case, the contractor must be prepared to take any steps necessary to correct the situation.

## Quality Control

Quality control is extremely important, and here, too, the controller must be vigilant. The subcontractor is, by virtue of his role, primarily responsible for high standards of workmanship. Where quality is not up to par, the weapon system contractor must reserve the right to be arbitrary in demanding rework or, if necessary, rejection. Within the limits of sound working

relationships, he must have the right to supervise the quality control procedures established by the other company.

And finally, the weapon system contractor must make certain that there is fast, clear, and accurate communication, not only with the subcontractor, but also between that organization and the others participating in the program. Red tape must be kept to a minimum, and decision-making must be prompt. This is a two-way street, and the weapon system manager has an equal responsibility to his subcontractors to provide fast and accurate information regarding changes of any kind.

The objectives of a particular weapon system program can only be met if this pattern is established at the beginning of the program and maintained to its completion. There must, naturally, be a certain amount of give-and-take on both sides, but essentially, the subcontractor must recognize that

ultimate responsibility rests with the weapon system contractor, and that his demands must be met if the program is to succeed.

## Working Relationship

This is the same businesslike relationship that should exist between two companies under any procurement system. The difference lies only in the size and complexity of today's weapon systems, and the increased responsibility that falls upon the weapon system contractor.

If these requirements are understood by all parties, and followed from the initial steps in contract negotiation, then there can be assurance that the government and the citizen will receive what is justifiably their due: a reliable, high-performance weapon system, delivered on time and at a minimum of cost.



# What a Sub Seeks from a Prime

*Profit is not the only thing the subcontractor seeks when he does business with a prime. Recognition of quality, courtesy, and fairness are major needs, says this defense industry expert . . .*

by John Marschalk

THE NUMBER ONE thing a sub seeks from a prime is a chance to make a profit on quality work. Most primes recognize that a subcontractor has to make a profit to deliver a quality product and stay in business.

This means that *recognition of quality* is next to the top of the list of what a competent subcontractor wants. Years of operation with minimum rejection rates and prompt deliveries ought to mean more than lowest initial price, most qualified sup-

pliers believe. And experienced buyers usually agree. With the heavy emphasis on reliability of supersonic weapons, this would seem to be the only way to buy. Even so, there are many dog-good-to-small-business people who keep insisting that award to the lowest bidder (regardless of relative quality) is the "American way" to buy.

Competitive bidding on price alone may be completely satisfactory on common supply items like rope, nails and paper clips—where specifications can

be fixed for a period of years. But the firms who work on the technical components of weapons think a low-price award is the certain way of assuring either default or poor quality.

I can think of no better word than "courtesy" for another want expressed time and again by small subcontractors with whom I've talked. They tell me that too many buyers take on a "power-of-God" attitude when dealing with representatives of smaller firms. It is human, I guess, to think of one's



*John Marschalk, a public relations consultant, has specialized for the past fifteen years in the problems of industry dealing with Government. Until recently, he was executive director of Strategic Industries Association, a national trade group of small and independent firms in the defense supporting industry.*

self as being pretty important when the control over several millions of dollars worth of purchasing is involved. The fellow from the small firm who wants to talk about an order for \$3,000 is likely to seem relatively unimportant in the midst of such grandiose activities.

Here, again, the experienced buyer knows that the fellow from the small firm may have something to offer which can save both the prime and the Government millions of dollars and maybe thousands of lives. As the Director of Material for one large company told me recently, "A buyer has to know a little bit about a lot of things. The people he buys from need to know a great deal about just a few things. We try to teach our buyers to listen. They buy better that way."

The most common and costly discourtesy to a small firm representative is to keep him waiting for an hour or more after an appointment time. Frequently the small firm caller is either head of his company or close to it. Every hour he spends away from his plant is a costly deduction from management time. Yet it is his personal know-how which the buyer needs most.

He is the one person who can readily interpret buyer needs in terms of his shop's capacity.

To make the small firm representative drive for an hour to the prime plant, park in a lot a half mile from the buying office, and then cool his heels for an hour-and-a-half before getting a three-minute brush-off from a self-important buyer, is about the poorest way to treat a fellow human being, let alone the waste involved.

### Fair Return for Design

Finally, among the things small subcontractors want is a fair return for design effort. A common practice with some prime buying departments is to put out an "envelope" specification, asking several subs to submit a design for a component to do a certain job with size and weight limitations. Each sub is expected to submit his design for evaluation, plus a price proposal for doing the work.

When the engineers at the prime choose what they think is the best approach you expect them to negotiate with the firm that submitted the best design. Most companies do handle it

that way. Some of them don't. Some take the winning design, copy it and send it out for bids from other companies. If the company that submitted the best design isn't low bidder, he gets not a dime for his work. Worse than that, we know of a couple of classic cases in which the prime people said in effect, "Thanks for the idea; now we know enough to make this ourselves."

The top managements of even prime we know have no patience with that kind of practice. It can almost always be traced to that rare small-minded individual who congratulated himself on pulling a fast one. To get such practices stopped is one of the main hopes of thousands of small suppliers.

Adding it up, there are four major needs on the part of most small subcontractors:

- 1) A chance to make a fair profit
- 2) Recognition of quality over price
- 3) Courtesy in handling contacts
- 4) Integrity in dealing

This is not much different from what the large firms want for themselves.

## Why Subcontractors Go Gray...

"We have lost money on our subcontracting for the past two years in a row. If it were not for our coupling sales, we would be out of business."

The man who told me this two months ago heads one of the most experienced and reliable small subcontract firms in New York State. As an individual, he has spent more than twenty-five years in defense manufacture. He normally employs about 125 people; his shop is rated A-1 on quality and reliability by many major prime contractors for whom he has been a supplier since World War II. Yet he has kept "alive" only through his sales—mostly commercial—of a small proprietary item.

Why has he taken orders at loss figures for the past two years? His answer is simple: "You owe something to your people; if it isn't too much of a loss, we'd rather keep them working."

Losses are less than fun for any businessman. But what really gets under this particular subcontractor's skin is the conviction that more than a few buyers with whom he deals enjoy the

situation. He described the method used by one large company not far from his plant.

"They have a bidding system. When a job comes up, they send out bids. They claim all their bidders have been qualified to do the job, one no better than another. My company has the lowest rejection rate you can find, but we start out bidding against other outfits who have nowhere near our quality record. So we know we're going to have to shave to the bone to get close.

"So our engineers spend a couple of days analyzing the prints, working out production methods, preparing our bid. This costs a lot of money, in itself. Sometimes it can pay off, though. Sometimes we find a real good way to cut production cost, so the bid we send in is lower than we expected we could do. Maybe it even turns out we're the low bidder.

"But there's a hitch. They don't take the low bid. First thing they do is send it to their Cost Analysis boys. They try to find some holes in it. Maybe they call me on the phone and argue

I figured too much for machine set-time or some other thing. Finally, I get a call from the buyer. Say I bid \$2 apiece for each of twenty items. He tells me if I'll knock off \$50 on each piece, they will give me the job.

"I tell them to go hang. But you know what? They'll start calling the other bidders with the same pitch and they find a sucker who will go along."

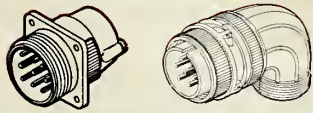
Although I heard the same story from two other New York subcontractors with whom I visited, I'm personally convinced that this squeeze system isn't common practice. I have run into it in other parts of the country and it may well be confined to the single prime about whom it was told. In the only other case I know of personally, a contracting officer for one of the military services bragged that he had saved over a million dollars. Uncle Sam in a single year by using this sort of system. When he was asked how many small companies had gone broke as the result, he just shrugged his shoulders.

—John Marsch

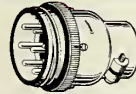
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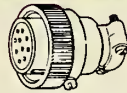
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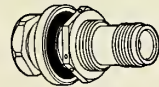
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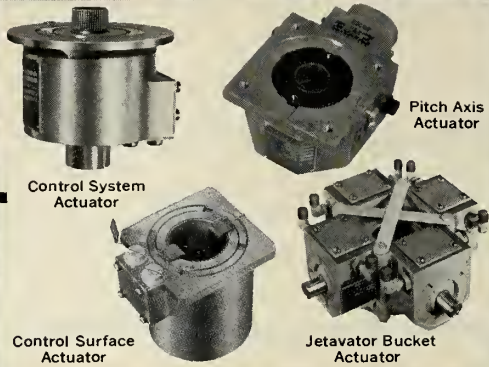
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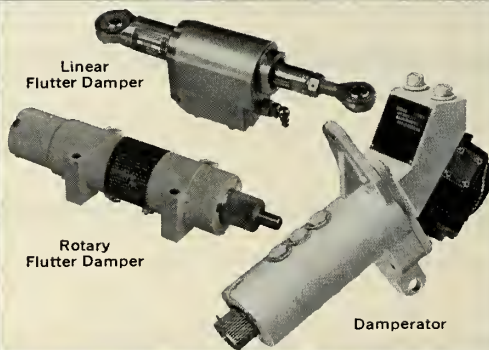
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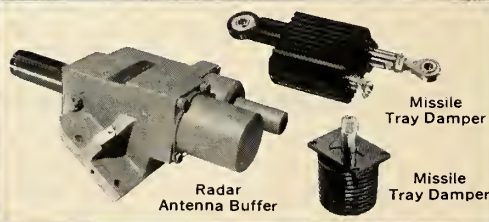
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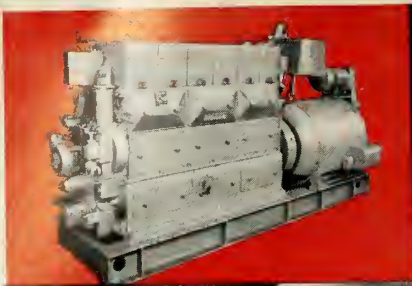
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In the battle for space, Superiors are veterans, being installed on sections of SAGE, "DEW" line and the "Texas Towers." They will soon find important civilian sky duty also at many of the Federal Aviation Agency new air-traffic control stations. White can custom-engineer engines to meet your exact needs . . . offers experience with automatic, unattended and remotely controlled operation. If your requirements range from 215 to 2150 HP, or 150 to 1500 KW, get complete information now!

**WHITE DIESEL ENGINE DIVISION**

THE WHITE MOTOR COMPANY, Plant and General Offices: Springfield, Ohio

*White Diesel*



# New Products

• missile frame, warhead and nose cone

## NEW FASTENERS MEET MISSILE PROGRAM DEMANDS

Huckbolt fasteners fabricated from high alloy die steels and a variety of stainless steels are now available from Huck Manufacturing Co.

The new fastener specifications have been developed primarily to meet recent demands for miniaturized fastener designs for use in new missile programs. The new materials permit use of smaller, lighter components with no sacrifice in strength. They are recommended for use in elevated temperature applications where unusually high strength is required.

Among the new Huckbolt pin materials that may now be specified are AISI Types 321 and 431 stainless steels, A286 and 17-4 PH stainless steels, Vasco Jet 1000 alloy steel and Thermold J alloy steel. Huckbolt colors for these applications are of AISI type 430 stainless steel, annealed.

Fastener strengths formerly achieved only at room temperature are provided up to 900°F by some of these materials. In addition, fastener performance has



been satisfactory in certain applications at temperatures well beyond 900°F.

Huckbolt fasteners of both shear and tension types as well as Huckbolt stumps can now be obtained in the new materials for the full range of nominal pin diameters (5/32-in., 3/16-in., 1/4-in., 5/16-in. and 3/8-in.) Alloy steel fasteners are available with diffused cadmium-nickel alloy plate where required in accordance with A.M.S. 2416.

Fill in No. 100 on Subscriber Service Card.

## Gloss-Cote Designed for Air-Space Usage

Hi-Brite Gloss-Cote is specifically designed for use in military applications and on private and commercial aircraft. The high-visibility colors are used extensively on missiles for visual and photographic tracking, on drone aircraft and tow targets, on drogue chutes for in-flight re-fueling operations, and on private and commercial airplanes for improvement in the visibility of the aircraft against backgrounds of hazy sky, or dull green and brown earth.

Fill in No. 101 on Subscriber Service Card.

## New Weldable Alloy Solves Joining Problem

A new air-hardening, weldable and fully martensitic alloy has been developed by The Carpenter Steel Co., to meet the need for a metal that can be used for highly stressed parts at temperatures up to 1050°F where joining is a problem.

The steel, known as Carpenter 404 alloy, is designed to be free from weld cracking without preheating or post-welding. Weldments can be readily cold worked after stress relieving or annealing.

The new alloy is recommended especially for applications such as steam turbine buckets, blades and bucket covers, as well as for "casting in" assemblies such as turbine diaphragms.

The new metal is essentially a 12%-chromium 1½% nickel composition having relatively high tensile strength and good ductility. It shows a marked improvement in weldability over stainless Type 410, and a more uniform structure and higher hardness than Type 405.

In the annealed condition, the steel is said to be easily blanked, drawn, formed or cold headed. Another advantage is its easy machineability in both the treated and annealed conditions.

Carpenter 404 alloy is made by the company's Mel-Trol process, a new quality control system with patented ingot design. Mel-Trol is used to minimize the causes of inconsistent centerline quality which so often causes erratic service in alloys of this type made by conventional methods.

The alloy offers resistance against a wide range of corrosives, including the atmosphere, fresh water, mine water, steam, carbonic acid, crude oil, gasoline, blood, perspiration, alcohol, ammonia, mercury, soap, sugar solutions and other reagents. It also has good resistance to scaling at elevated

temperatures and can be used for continuous service up to about 1200°F.

Forms now available include forging billets; hot rolled bars and forgings, either annealed or heat treated; cold drawn and ground bars; wire and wire rods; and strip, both annealed and tempered.

Fill in No. 102 on Subscriber Service Card.

## Subminiature Devices May Be Smallest Power Units

The engineering laboratories of Ferrotan Electronics Co. have recently developed a new subminiature series of their "Powertran" power supply units which may be the smallest power supply package ever developed. They are manufactured in a molded or in an encased form.

The molded unit which is made for mounting on a printed circuit board is approximately the size of a flashlight battery. A typical unit measures 1 3/8" x 1 3/4" x 1 1/4". (Photo shows relative size of unit compared to a power transistor.)



Four stock units which will give any fixed d-c output voltage in the range from 10-30 volts are available. The 10 volt unit, for example, operating from 115 volts, 60 cycles will supply 25 ma. of current. It is well-regulated, ripple-free, and short-circuit protected.

The device is ideal for transistor supply purposes, bias purposes, or reference voltage purposes.

This series of power supply units is the smallest in the "Powertran" series.

Stock units are as follows:

Model No.	D.C. Output Volts	D.C. Output Current	% Reg.	% Ripple
SM-10-A	10	25 ma.	2.3	0.5
SM-15-A	15	20	2.3	0.5
SM-20-A	20	20	2.5	0.5
SM-30-A	30	15	3.0	0.5

Encased units are 1 5/8" x 1 3/4" x 1 1/2" and are available with transformer type terminals, multiple pin headers, or as plug-ins. (7-pins or 8-pins)

Molded units are 1 3/8" x 1 3/4" x 1 1/4" and are furnished with short pins for mounting into printed circuit boards. The units may be solder-dipped.

A far greater current than shown above can be drawn from the unit, without overheating, at a somewhat reduced output voltage.

Temporary short circuits may be placed across the output without damaging the unit.

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• missile frame

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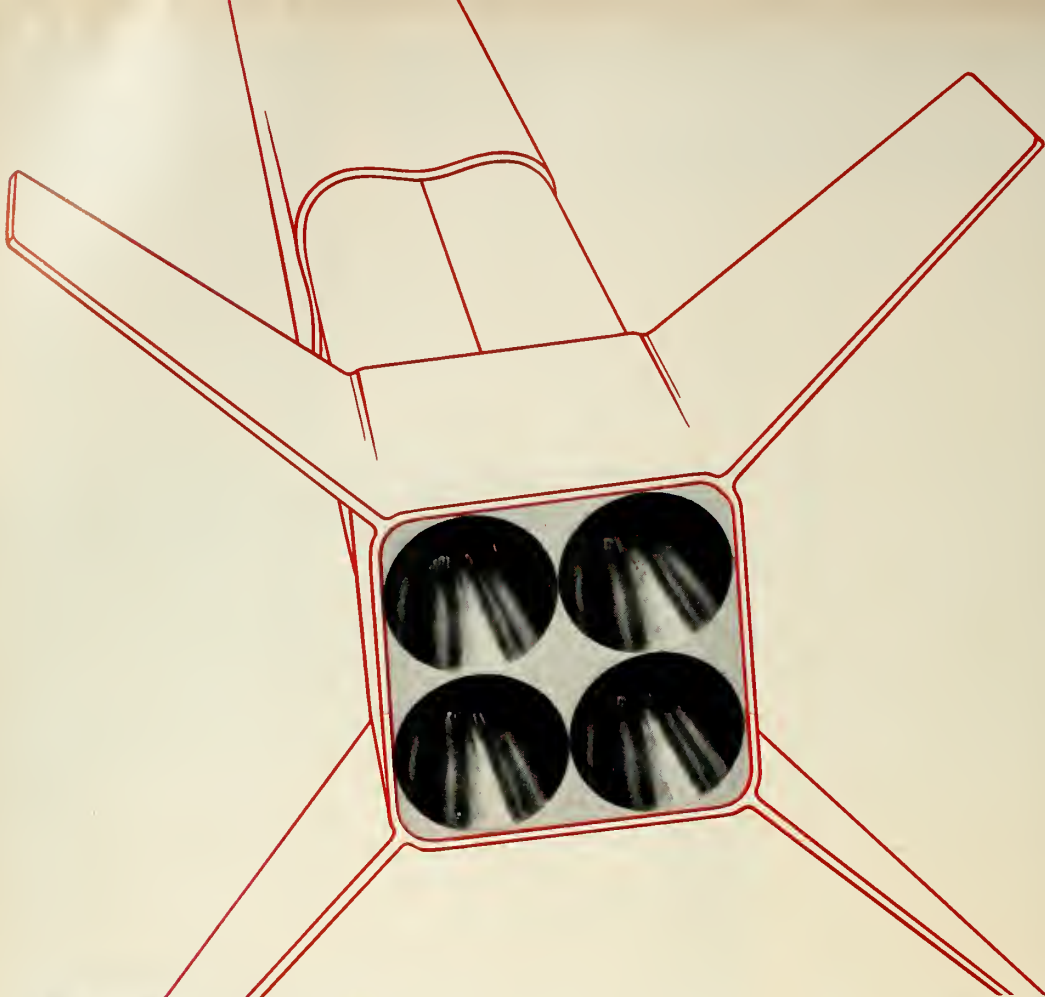
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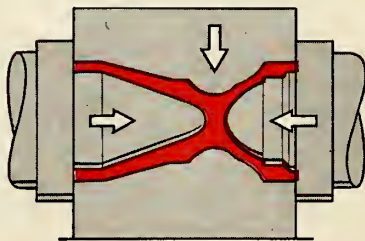


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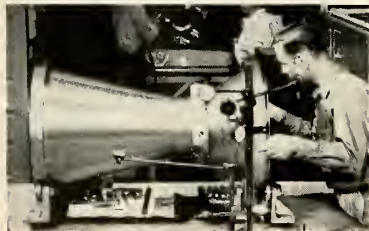
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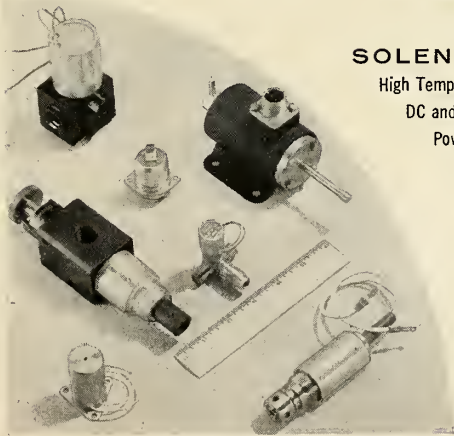
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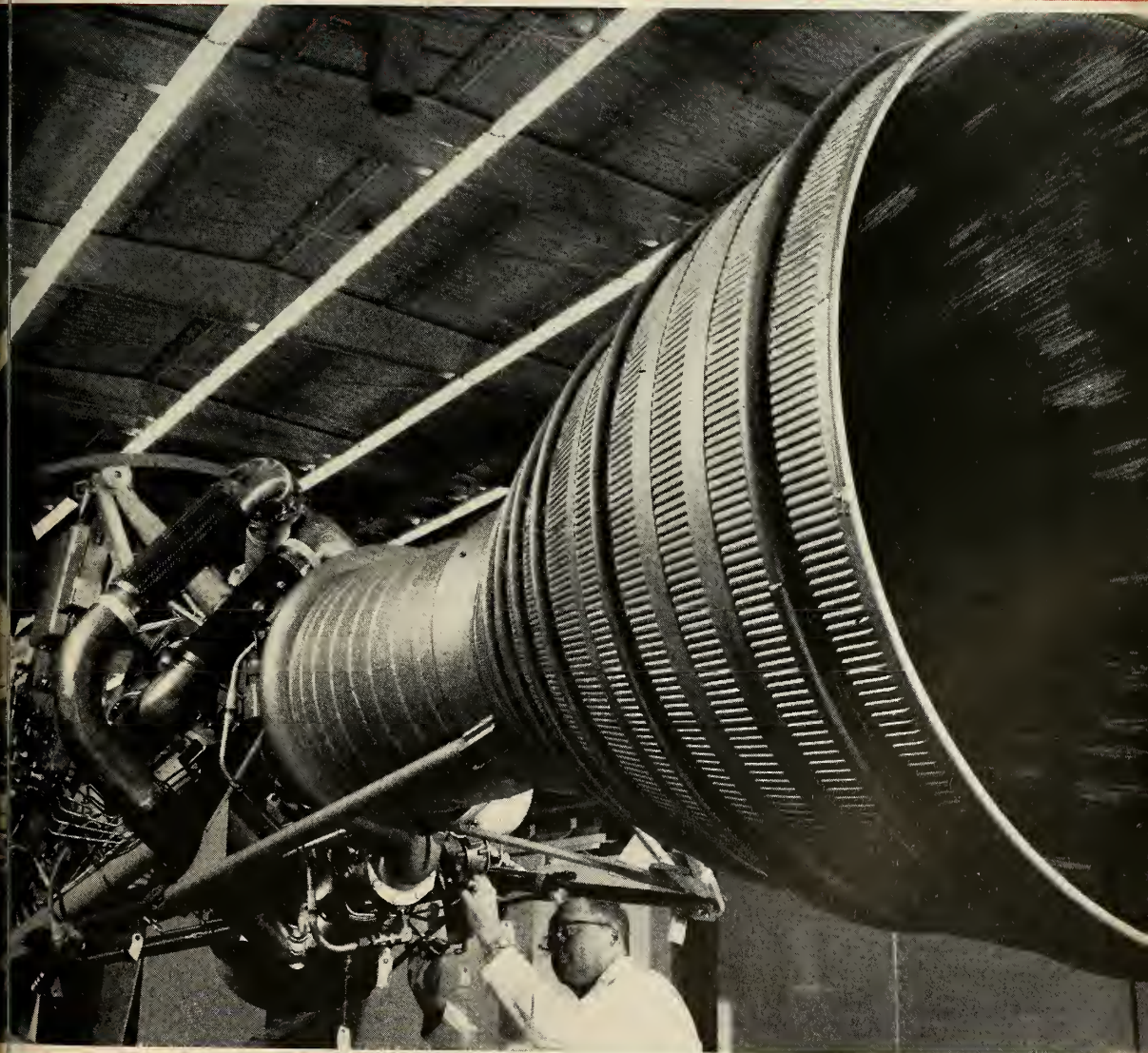
• warhead and nose cone


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# PROPULSION SYSTEMS AND AUXILIARY POWER UNITS

These units include the power plant and its associated equipment; such as, tanks, pumps, blast chambers, nozzles, resonance rods and fuel. Propulsion systems are simple in solid rockets, complex in liquid rockets. Auxiliary power units consist either of hot gas turbines driving hydraulic pumps and generators, or of batteries supplying power for missile guidance and control systems.





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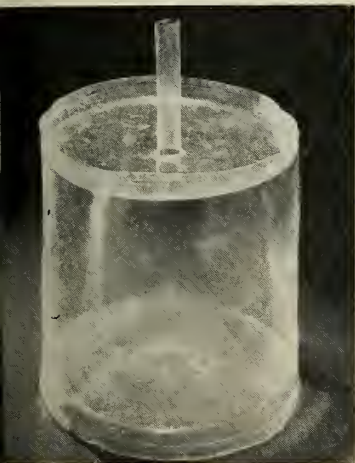
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# New Products

• propulsion systems

## KEL-F PLASTICS HAVE MISSILE APPLICATIONS



"Kel-F" polymers produced by Minnesota Mining and Mfg. Co. are noted for chemical inertness, low-temperature range, low "cold-flow" characteristics, all-round moldability, and easy machining.

Another useful property, especially for missiles and rockets, is the polymers' flexibility. Lip seals for rotating and reciprocating shaft seals and propellant gate-valve seals must be flexible at temperatures from about -450 to 165°F. They also require spring-back and dimensional stability to seal against low and high pressure, from 5 to 600 psi.

These qualities can be achieved by special heat treatment of "Kel-F" plastics to control physical properties. Tensile strength of the plastics remains high (up to 5800 psi at -300°F.), while flexibility is maintained at these temperatures to withstand impulses and cycling as a seal from pressures of up to 1000 psi.

Missile applications include:

**Coil forms**—Zero moisture absorption, good dielectric strength, and excellent dimensional stability make "Kel-F" plastics an exceptional coil form material for missiles. Biggest problem solved is that it shows no effects from the extremely high temperatures reached by the wire wrapped around the form—temperatures that tend to often warp coil forms made of other materials.

**Expellent bladders**—Function of these bladders is to store such highly corrosive liquids as LOX, WFNA, HFNA, and 90% hydrogen peroxide in the fuel chambers of missiles. Fabri-

cated from plastic tubing and heat-sealed after loading, the bladders are usually employed as liners in stainless steel tanks. They range in diameter and length from ¼" to 150".

**Gasket seals**—Transfer-molded gasket seals, made of an elastomer O-ring mechanically-bonded to a square of anodized aluminum, are now being produced for nitric acid contacts in missiles. "Kel-F" polymers provide the only applicable elastomer that will withstand such contacts.

**LOX lip seals**—Chemical inertness and flexibility at the extremely low temperature of LOX are responsible for the wide use of "Kel-F" plastics in LOX lip seal applications. The material is first compression-molded, then post-formed and machined into seals of the desired shapes and sizes, with tolerances as close as plus or minus 1.5 mils with a 7 micro finish.

**O-rings in rocket engines**—Successful operation of a liquid rocket depends almost entirely on the proper functioning of its elastomeric parts. O-rings are used as shaft seals, gaskets, and valve seats. "Kel-F" elastomer was early applied in this area, mainly because of its resistance to WFNA.

**Self-locking nuts**—Inserts of "Kel-F" plastic prevent seepage of such strongly reactive missile fuel liquids as RFNA and WFNA past the internal bolt threads of self-locking nuts.

**Sprays**—"Kel-F" dispersion film, the most flexible of the polymers, is being used in many missile applications, chiefly diaphragms, as follows: the dispersion is sprayed on a metal form (which may be of any convolution or configuration); after baking, it is removed, yielding a component that is non-porous, tough and flexible.

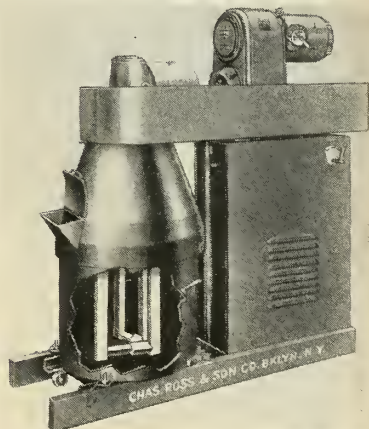
**Structural-thermal use**—Because of high compressive strength and wide temperature utility, "Kel-F" plastics are the main structural support and thermal barrier between the outer shell and the "internal package" in Vanguard satellites. Major concentrated load of the package is carried directly through a "Kel-F" plastic support to the main hub at the base of the structure.

**Vent seals**—A small device injection-molded from "Kel-F" plastics is used to prevent moisture or foreign material from entering small bleed holes in rocket engine components. The seal also acts as a low-pressure, small-volume relief valve.

Fill in No. 104 on Subscriber Service Card.

## Machines Developed for Mixing Propellants

A complete new line of heavy duty double planetary change can mixers has been developed by Charles Ross & Son Co., Inc. for mixing solid propellants. The company, which also manufactures a line of horizontal type kneading machines for mixing propellants, has improved on the design of the vertical type changeable can mixer to incorporate many features designed specifically for propellant mixing.



The double planetary change can mixers are available in many sizes from 1 gallon Laboratory size to 200 gallon large production size, and all mixers are furnished with variable speed motor drives. Nonsparking materials are utilized, and, aside from versatility in operation and ease of clean out of the changeable can type mixers, mixers of this type eliminate stuffing boxes and bearing in the product zone.

The double planetary changeable can mixers are furnished with stainless steel stirrers and can, jacketed cans, and vacuum covers when required.

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## Propellant Valve Has Dual Flow Control

For simultaneous flow control of liquid Oxygen and Fuel, Hydromatics Inc.'s provides zero leakage control of a 5/8" LOX line and ½" fuel line at pressure up to 100 psi and temperatures as low as -350°F.

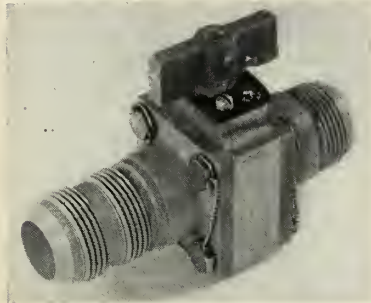
A single-acting, spring-return pressure actuator drives a precision mechanical linkage which controls both valves, thus insuring constant timing. The valves are extremely fast acting, with response times as short as 10 milliseconds. All dynamic sealing is double with a vent between seals for maximum safety. A sealed, rotary action snap switch permits remote observation of valve position. Valve flanges, available in standard or special styles, are removable and interchangeable.

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## ... new products

### Koehler Ball Valves Have Missile Applications

An extensive line of KOEHLER/Dayton Ball Valves, Koehler Aircraft Products Co., is now available for missile in-flight and ground support applications.



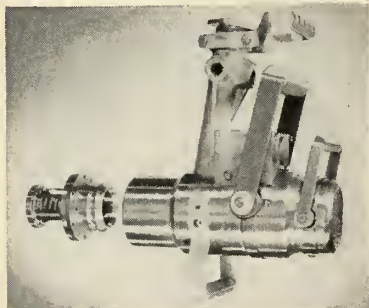
KOEHLER/Dayton Ball Valves are ideal for use with standard fuels and oils, high energy fuels, oxidizers coolants and cryogenics. They combine simple design and rugged construction and as a result are among the lightest and smallest available.

When functioning as drain, selector, fill and flushing valves, this ball type design can be actuated by manual, mechanical or electrical means.

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### Fuel Oxidizer Servicing Nozzle Designed

Missiles and ground servicing equipment require specially designed nozzles and adapters for fueling operations prior to countdown. Lear-Romec Division of Lear, Inc. has developed such a device for missiles embodying special design and materials, standardizing the equipment for filling oxidizer reservoirs and fuel tanks at missile bases.



Developed for dependability and safety in handling oxidants, the nozzle is fully capable of transferring any of the exotic fuels and oxidants except those requiring stoneware transmission equipment.

For "closed circuit" fueling opera-

tion, two nozzles are required to transfer propellant or oxidant from the supply source to missile and overflow venting from missile to source. Thru the three way locking action between the nozzle and its companion adapter (permanently mounted on supply source and missile) absolute leak and hazard-proof seal is effected.

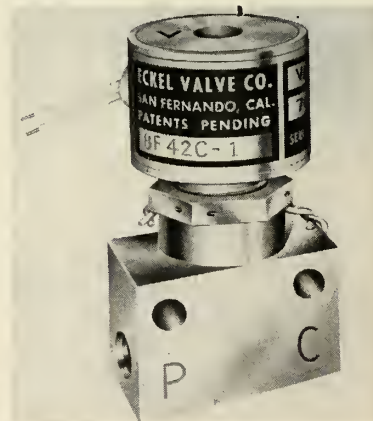
Operation is satisfactory at temperatures ranging from -65 degrees to plus 140 degrees Fahrenheit, in accordance with the requirements of Military Test Specifications Mil-N-25556 (nozzle RR13110) and MIL-N-25555 (adapter RD13040).

Originally designed to accommodate fuming red nitric acid (HNO<sub>3</sub>), only the purer and more advanced aluminum and stainless steels are used for their overall resistance qualities to the corrosive action of oxidants.

Fill in No. 108 on Subscriber Service Card.

### Eckel Offers Miniature Three-Way Valve

Eckel Valve Co.'s Series BF42C is a miniature 3-way valve for small actuators and instrumentation systems. It operates to 70 psi—gases or liquids—with inherent minimum leakage. The current consumption is just 9 watts at 28V DC, and the valve is available either with electrical connectors or lead wires.



Because of the Eckel coaxial configuration, this new BF42C valve is only one-third the weight of previous "smallest" 3-way valves.

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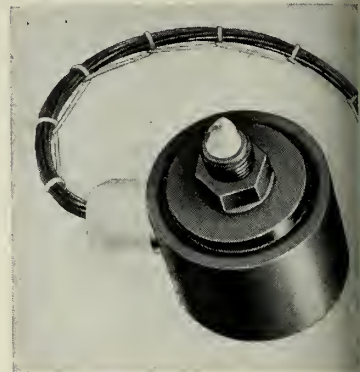
### Lox Pump Motor Delivers 60 gal/min.

Recently developed by the J. C. Carter Co. for pumping liquid oxygen of liquid nitrogen is an electric motor driven two stage centrifugal pump. Designed to deliver 60 gallons per minute against a 550 ft. head, this pump is particularly suited for installations where light-weight, compact design is important.

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### New Concept Featured in Liquid Sensing

A new Liquid Sensor featuring simplicity and greater reliability is now being produced by the Pioneer-Central Division of Bendix. The new Sensor which was developed to supplement the fuel measurement and control systems and the airborne liquid and gaseous oxygen systems with which Bendix has been identified is expected to have wide application in many related and unrelated fields.



The Sensor provides a new means of sensing the existence or level of liquids even in the presence of gas or vapor. It is adaptable to a wide range of applications—from sensing the presence of liquid at a given level in tanks to the critical measurement and control of missile propellants. It will function in fluids with widely divergent characteristics including the liquefied gases, hydrocarbon fuels, red fuming nitric acid, fluorides, hydrazine, water ink and viscous fluids such as molasses.

The Sensor is currently available in the form of a probe with built-in transistorized amplifier and relay or, for other applications, with the probe separated from the amplifier and relay. Both designs are adaptable to different configuration and to dimensional changes to conform to specific requirements.

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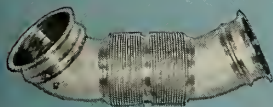
### New Hydrogen Peroxide Nozzle Is Non-Corrosive

A new self-sealing, high flow rate hydrogen peroxide nozzle and adapter for servicing aircraft or missiles using hydrogen peroxide as an oxidizer has been announced by Flight Refueling Inc.

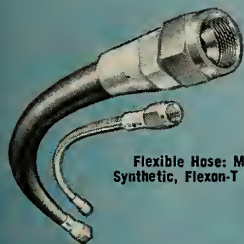
Safety requires the nozzle to be manually locked to the adapter before the internal valves can be actuated and collaterally, the internal valves must be completely closed before disengagement.

Another important feature is the working parts are fitted externally and do not come in contact with the fluid eliminating the possibility of corrosion.

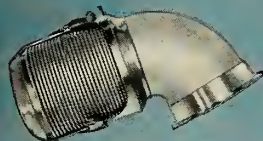
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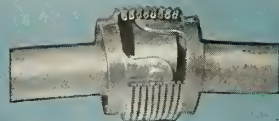
Missile Turbine Exhaust Duct



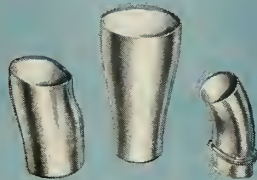
Flexible Hose: Metal, Synthetic, Flexon-T (Teflon)



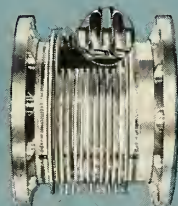
Turbine Exhaust Anti-Roll Nozzle



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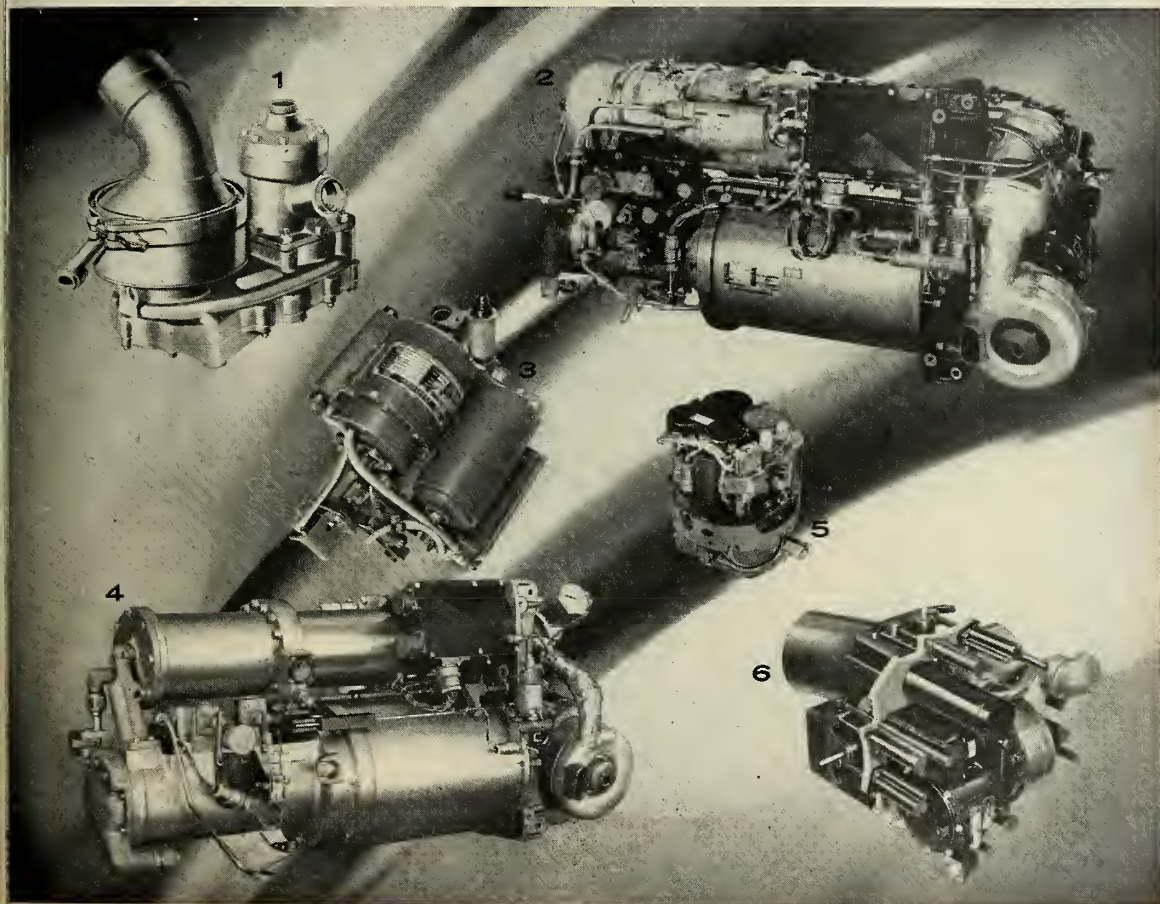
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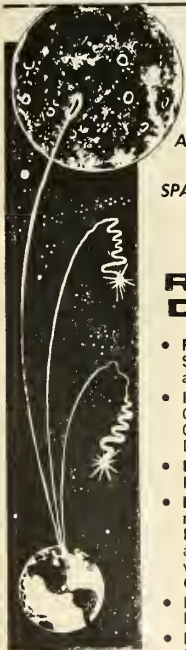
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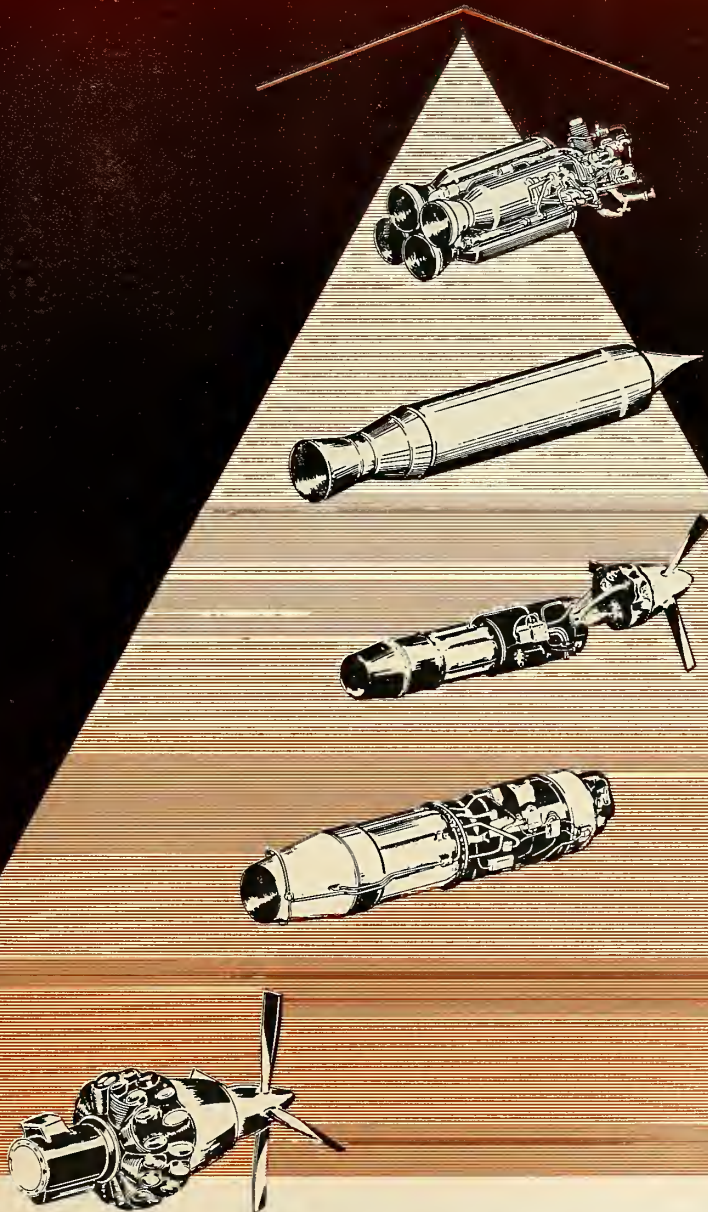
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# CONTROLS

FOR THE FULL SPECTRUM OF PROPULSION SYSTEMS



Bendix\* has long been a leader in supplying controls and fuel systems for all types of aircraft engines. Today, Bendix is proving to be a natural for new challenges in related missile fields—on ram jets, rockets, nuclear power, and other advanced propulsion systems. So, when it comes to controls, remember that Bendix has the background—and is anxious to share it in solving your problems. \*REG. U.S. PAT. OFF.

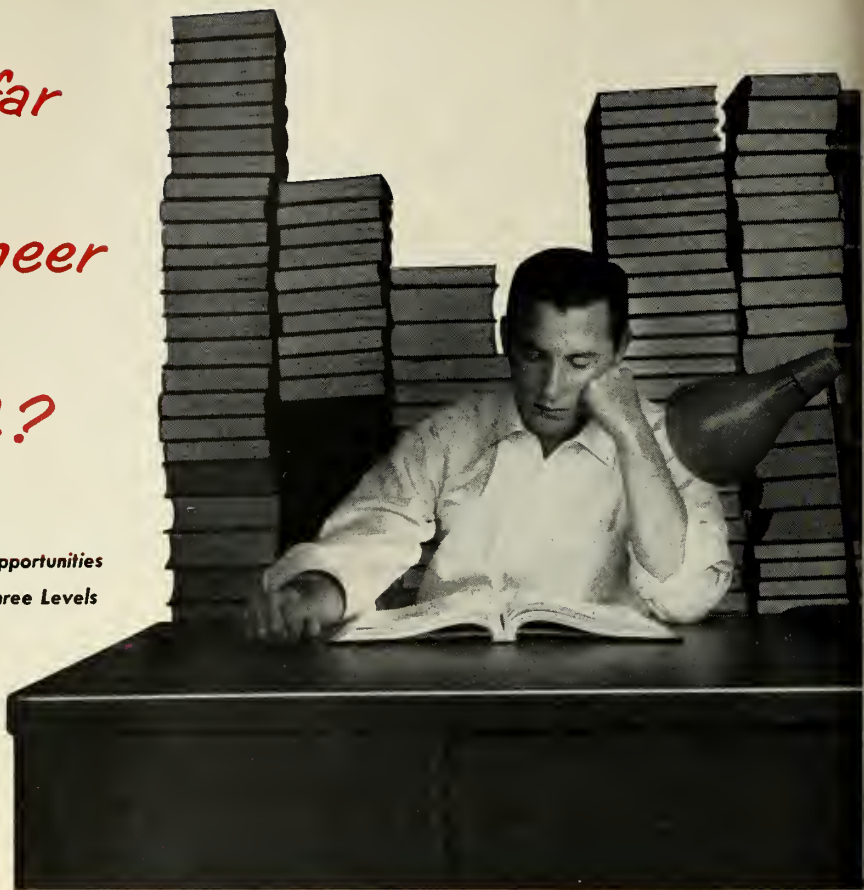
**BENDIX** PRODUCTS DIVISION **SOUTH BEND, IND.**

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# How far can an engineer go at AC?

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Develop Career Potential on Three Levels



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physics, plus advanced state-of-the-art courses. Time?—during working hours or evenings.


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These thoroughly practical courses—taught by university professors or recognized AC specialists—constitute AC educational "extras." AC offers them in addition to their educational assistance programs for men who wish to study for advanced degrees in nearby universities.

AC invites you to compare these advanced training offerings with those of any other company. Get complete details today. Just write the Director of Scientific and Professional Employment: Mr. Robert Allen, Oak Creek Plant, Dept. B, Box 746, South Milwaukee, Wisconsin.

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GUN-BOMB-ROCKET SIGHTS • GYRO-ACCELEROMETERS  
GYROSCOPES • SPEED SENSITIVE SWITCHES • SPEED SENSORS • TORQUEMETERS • VIBACALL • SKYPHONE



AC SPARK PLUG   
THE ELECTRONICS DIVISION  
OF GENERAL MOTORS

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# REGULATED DC POWER SUPPLIES

## HIGH-VOLTAGE SERIES



Model 250 S 025

Designed for powering airborne electronics equipment under the most adverse environmental conditions, Arnoux High Voltage DC Power Supplies assure the utmost in reliability. These magnetic-amplifier regulated supplies are available in the range of 108 to 450 volts DC, with current ratings from 50 ma to 800 ma. Other ratings are also available on special order.

## ARNOUX

Input Power: 115 volts, 400 cps  
 Regulation: Input (Variation) Output (% Rated)  
 Line Voltage:  $\pm 10\%$   $\pm 0.25\%$   
 Line Frequency:  $\pm 20$  cps  $\pm 0.1$   
 Load Current: 20-100%  $\pm 0.1$   
 0-100%  $\pm 0.2$

Ripple: Less than 0.05% rms at full load.

Output Adjustment: 5% adjustment available on request of slightly higher price.

Environmental: Meets specification MIL-E-5272 A for acceleration, vibration, altitude, humidity and temperature operating at 20% to 100% rated load. Also meets MIL-I-6181 B.

Connector: AN-type connector.

Mounting: Stud-mounted.  
 (Write for Bulletin 200)

Intended for use in precision airborne instrumentation systems, Arnoux Low-Voltage DC Power Supplies are available in both single and dual output. Ranging from 5 to 50 volts at currents up to 10 amperes, these rugged units are hermetically sealed.

## LOW-VOLTAGE SERIES



Model 5 S 10

## ARNOUX

Input Power: 115 volts, 400 cps  
 Regulation: Input (Variation) Output (% Rated)  
 Line Voltage:  $\pm 15$  volts  $\pm 0.10$   
 Line Frequency:  $\pm 20$  cps  $\pm 0.15$   
 Output Load: 20-100%  $\pm 0.05$   
 0-100%  $\pm 0.10$

Temperature Stability: 0.5% per 100°F.  
 (-60°F. to +160°F.)

Ripple: Less than 0.1% rms at full load.

Output Adjustment: Screwdriver adjustment provides  $\pm 0.5$  volt change. Wider range of adjustment available on request.

Connector: Standard AN-type connector, or hermetically sealed header on request.

Mounting: Stud-mounted.

Environmental: Meets specification MIL-E5272 A for acceleration, vibration, altitude, temperature and humidity.  
 (Write for Bulletin 100)

Designers and Manufacturers of  
 PRECISION INSTRUMENTATION



ARNOUX CORPORATION

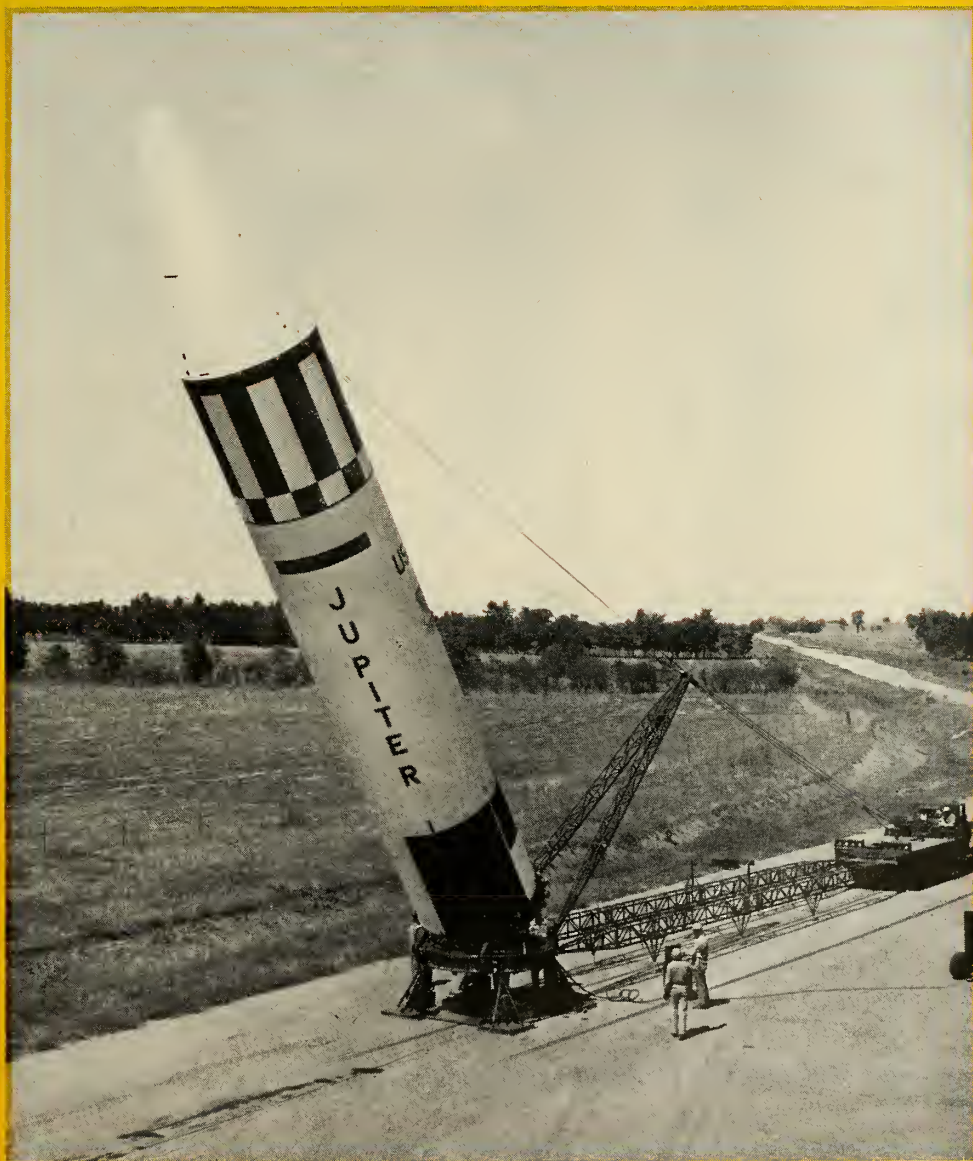
11924 WEST WASHINGTON BLVD. • LOS ANGELES 66, CALIFORNIA

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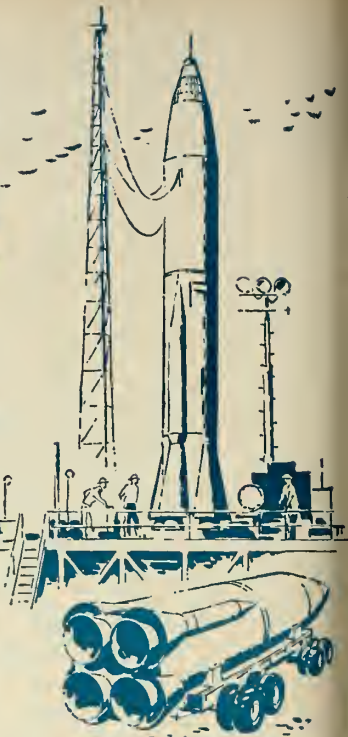
# GROUND SUPPORT EQUIPMENT

This is the equipment that supports the missiles; such as, "go, no-go" boxes and other electronic checkout gear, liquid oxygen generators, fuel trucks, fire trucks, portable generators, launching pads and block-houses.



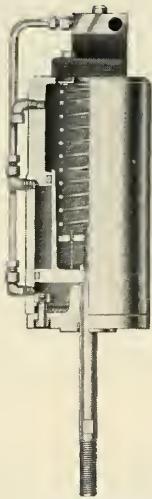
# Annin OFFERS YOU MORE IN ACTUATORS

*Your choice* OF ADVANCED DESIGNS  
WITH MORE PRECISE POSITIONING AND  
DYNAMIC RESPONSE CHARACTERISTICS



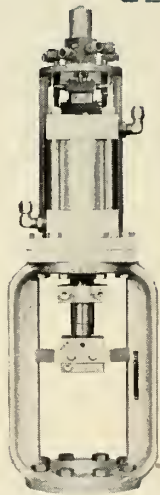
**1542 & 1544 SERIES  
DOMOTOR POWERED  
ACTUATORS**

Two types, "Direct Thrust" (illustrated) or "Lever" units are available for any application requiring accurate positioning in response to a pneumatic signal, such as butterfly valves, dampers, turbines and engine governors. Guaranteed positioning accuracy of better than 0.001" per inch of stroke over the complete range of piston travel is combined with a smooth operating action that provides an accurate, stable output force.



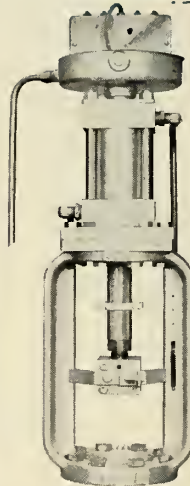
**600 SERIES  
STROKE POSITIONING  
ACTUATORS**

Offered primarily for the control of variable speed drives, rheostats, pumps and cams, as well as control valves, with strokes up to 6 inches and forces up to 2510 pounds of thrust. Compact and rugged, for easy mounting on existing equipment. May be operated from a standard 3-15 psi instrument signal, with a positional accuracy within 0.001" per inch of stroke.



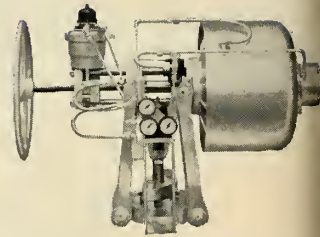
**10,000 SERIES  
PNEUMATIC-HYDRAULIC  
ACTUATORS**

For valves requiring strokes to 6 inches and thrusts to 100,000 lbs. Furnished on body assemblies where process conditions require very fine valve response, hysteresis and stability. Operate on 1500 psi oil supply system from any common instrument air signal.



**20,000 SERIES  
ELECTRO-HYDRAULIC  
ACTUATORS**

Provide a means of converting an electrical signal to a powerful hydraulic positioning force, where high speed of response and stable operation are required under extreme conditions of pressure differentials, high velocities and large volume loads.



**TOGGLE ACTUATORS**

For process requirements where the unbalanced forces are extremely high, or where large through-puts are required. Three types are offered: pneumatic positioning, pneumatic on-off, and manual control, all embodying the toggle actuator; or a manual control arrangement can be combined with the pneumatic positioning or on-off toggle actuator.



*Annin* VALVES

THE ANNIN COMPANY

1040 S. Vail Avenue, Montebello, California

Write for Bulletin 1236-ST



# New Products

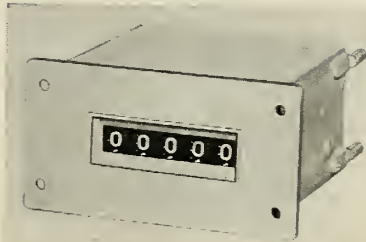
• ground support

## SEALED ELECTRIC COUNTER HAS ELECTRIC RESET

Durant Mfg. Co.'s new Model 5-YE-9156-ER is a hermetically sealed electric counter with electric reset, designed specifically for use on military and other applications where adverse operating conditions are a factor. It is manufactured to meet MIL specifications 5272-A and similar rugged specifications.

Although especially designed for such military applications as missile ground support equipment and aircraft instrumentation, Model YE-9156-ER may also be used on industrial installations where severe atmospheric conditions prevail, or where an explosion-proof unit is required.

Provision is made for mounting the counter to the front panel through four 3/32 threaded holes on the face of the counter. It is also equipped with four mounting lugs at the base for applications where additional support is needed, or for base installation. Compact in size and sturdy in construction, Model 5-YE-9156-ER is complete with Winchester hermetic seal connector



on the bottom for quick connection to the power source.

Case size—3½" wide x 1-7/8" deep x 3-7/16" high. Figures—3/16" high x 9/64" wide. White on black background, with wide window opening for maximum readability. Speeds—1500 CPM or 25 CPS standard, with maximum resetting time of 105 milliseconds. Voltage—28 V. DC—Other voltages available on special order. Finish—Gray color 36492 per federal standard 596 for military panels.

Fill in No. 113 on Subscriber Service Card.

Hose is designed for the more severe requirements of missile pneumatic charging systems. The 4 to 1 safety factor of the hose provides greater safety to crews handling very high pressure air, helium, nitrogen, and other gases.



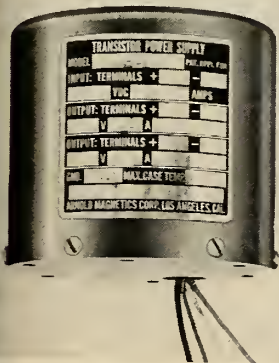
The hose has a Teflon tube with zero moisture absorption and an anti-adhesive surface to permit fast, easy purging and dehydration of hose lines and equipment. Spirally-wound stainless steel wire overlaying a stainless inner braid reinforces the hose, which has a stainless braided cover. Though constructed for use under rough handling, it retains flexibility making it easy to coil on reels. It is available in in -6 (3/8") and in -8 (½") sizes.

New segmented fittings for 678 Hose are reusable and incorporate a proven lip-seal for permanent leakproof performance. Designed concurrently with the 678 Hose is a lighter weight pneumatic hose for 3500 psi pneumatic systems. Designated 675 Hose, it features a Teflon tube and two-ply stainless steel wire braid reinforcement. With the exception of pressure requirements, it has the same characteristics of the 678 Hose and other Aeroquip Hoses of Teflon. It is available in sizes -4 (¼") to -12 (¾"), and fittings are of the reusable "super gem" type.

Fill in No. 115 on Subscriber Service Card.

## Power Supply Produces DC to Square Wave

Arnold Magnetics Corp. has announced a transistorized power supply that will produce 400 cps single-phase, square wave power from a 28 volt DC line.



Unit delivers 50 VA of output power with a frequency and voltage regulation of ±1% for variations of input voltage of 5 volts. An output power of 115 volts, 400 cycles is stand-

ard, but any voltage between 6 or 1200 VRMS, and any frequency between 400 and 2000 cps, is available on request.

Protection against internal damage is provided by the use of an added circuit, which has the effect of rendering the power supply non-operative when the polarity is inadvertently reversed. Unit can withstand short circuit indefinitely, input voltage transients of 60 volts for 0.01 seconds, and 50 volts indefinitely at reduced power. Voltage drift is ±3% across a temperature range of from -55°C to +71°C.

Designated Model 591AC, unit is fully encapsulated and hermetically sealed, and meets the test specifications of MIL-E-5272B. Size is 3" OD x 3-3/16" high, and weight is 22 ounces.

Three standard terminations are available—A/N connector, wire-lead pigtail, and solder-lug terminals.

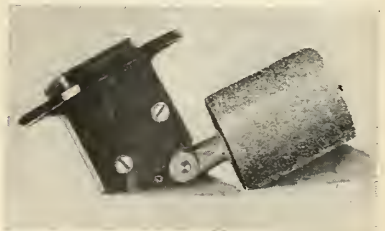
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## Pneumatic Hose Has 24,000 Psi Burst Pressure

Aeroquip's Development-Engineering Center offers 678 Hose of Teflon for 6000 psi pneumatic systems and with a 24,000 psi burst pressure. 678

## FRI Float Switch To Close Circuits

The Flight Refueling, Inc. Model FS-2 Float Switch is ideal for use in any system where it is required to operate electrically actuated valves and



indicator light systems. It can be used for closing a circuit either by the rise or fall of a fluid level. Switches of this type can be used for both ground, aircraft and missile installations with the highest degree of reliability. A variety of float arm configurations are available to suit alternate requirements. Other float switches of this general type are available on special order for varying fluids and for special applications.

Fill in No. 116 on Subscriber Service Card.

**I** INSTRUMENTATION WIRING

**C** COMPLETE INSTALLATION

**B** BASE COMMUNICATION SYSTEM

**M** MISSILE GROUND SUPPORT SYSTEMS

BY  
AMERICA'S  
MOST COMPLETE  
ELECTRICAL SERVICE

## ETS-HOKIN & GALVAN

551 Mission Street, San Francisco, California  
218 N. Avolan Boulevard, Wilmington, Calif.  
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484 Washington Street, Monterey, California  
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## HIGH STRENGTH FASTENERS

Hex head cap screws—  
low carbon, high carbon,  
stainless 304 or 316 in stock

Specials made to order  
in any alloy

Hardened and ground  
components to aircraft  
standards

31 years of aircraft  
engine experience and  
quality

**HMS**

**HARTFORD MACHINE SCREW CO.**

Division of Standard Screw Co.

HARTFORD 2, CONNECTICUT

Fill in No. 2 on Subscriber Service Card.

## ... new products

### Monitoring Equipment Tracks Interference

The Mobile Interference Analysis Station assembled by Missileonics, Inc. of Melbourne, Fla., locate, track down, and record interference; and are able to eliminate any interfering radio signals by coordination with area frequency users. These signals may affect radio control of missile firings, or the telemetry signals from the missile.



The stations monitor radio signals in the frequencies from 1500 kilocycles to 10,000 megacycles. Advanced direction finding and field intensity equipment coupled with the ability of the stations to traverse cross-country roads, afford a quick means of locating the origin of any interfering radio signal. The stations are installed in specially designed truck vans constructed by Gramm Trailer Corp., Lima, O., and mounted on a heavy-duty Ford chassis, fitted with power steering and power brakes. Complete air conditioning and heating equipment are furnished, and independent gasoline-driven generators supply up to 7 KVA for operation of the electronic equipment.

Fill in No. 117 on Subscriber Service Card.

### Pipe and Tube Connectors Offer Advantages

Meeting the high pressure, temperature and minimum weight requirements of the aircraft and missiles industry, Flight Refueling Inc.'s complete line of pipe and tube connectors offers many additional advantages. Positive grip and seal under conditions of angular misalignment, parallel axial offset and tube gaps assure a constant connection on beaded or flange type tubing.

One family of connectors provides for easy hand installation in hard-to-get-to places, where wrench movements are prohibited. Connectors are available in sizes from  $\frac{3}{4}$ " to  $4\frac{1}{2}$ ".

Fill in No. 118 on Subscriber Service Card.

### Low-Cost Standards Used For Ground Support

New low-cost frequency standards which perform well in uncontrolled environments such as found in the operation of military ground support equipment and industrial applications, have been developed by The Gyrex Corp.

Resonant elements of the new Model TQ 60C units operate at their fundamental frequencies. This feature eliminates the need for auxiliary step-down circuitry, giving the instrument exceptionally high reliability. They can be operated or stored over a wide temperature range. Shock, vibration and atmospheric conditions normally found in connection with the operation of ground support equipment will not affect their operation. All units are hermetically sealed and qualify to MIL environment test specifications for ground support equipment.

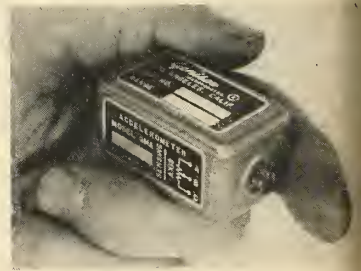
Other advantages of the new Model TQ 60C units include simple transistorized circuitry and compact size.

Fill in No. 119 on Subscriber Service Card.

### Miniature Accelerometer Is Developed

A new accelerometer measuring only  $1" \times 1" \times 1\frac{1}{4}"$  and weighing just three ounces, has been developed by Genisco, Inc., Los Angeles. A potentiometer-type pickoff is used.

The small size and light weight of the new instrument, designated Model GMA, makes it particularly suited for aircraft and missile fire and flight control systems and telemetering applications.



Range of the Model GMA is  $\pm 0.5g$  to  $\pm 100g$ 's with natural frequencies of from 12 cps to 75 cps. Linearity is  $\pm 1\%$  of full scale for balanced range instruments. Damping nominally 0.7 of critical at  $+75^\circ\text{F}$ , is provided by the shearing of silicon fluid between closely spaced moving surfaces. The instrument is temperature compensated and will operate to specifications between  $-20^\circ\text{F}$  and  $+250^\circ\text{F}$ .

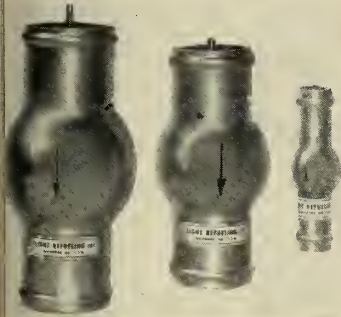
It is able to withstand vibration accelerations of 10g's, 10 to 20,00 cps. on any axis, and shock accelerations of 50g's for 7 ms duration on an axis.

Fill in No. 120 on Subscriber Service Card.

.. new products

**Versatile Missile Check Valve Is Lightweight**

Flight Refueling Inc.'s Model CV-1 missile and aircraft check valves are lightweight, reliable and extremely versatile. Standard beaded AND-10060 (Type A) ends permit rapid in-line installation by using two pipe connectors. The interest of weight reduction,



These check valves may be incorporated into any long tube merely by expanding a small end section of the tube, thereby eliminating one pipe connector.

These operationally proved valves are positive sealing and feature low "backing" pressure and low pressure drop. Design makes it practical for use with most fluids and gases. The CV-1 is also available with threaded ends for special applications.

Fill in No. 121 on Subscriber Service Card.

**Aluminum Shelter  
Is Air Transportable**

Gramm Trailer Corp. offers shelter of continuous ribs of extruded aluminum, located between end panels so equipment can be supported properly in any area. Longitudinal members are welded to rib sections at the four corners. Equipment can also be fastened to these members for support. The skid is integral with the bottom longitudinal members for strength as well as simplicity of design. All inside dimensions are square so equipment may be mounted flush against the wall. The inside may be lined with plywood, sheet aluminum, perforated metal to suit individual requirements. Hardware is flush mounted to minimize damage. Dutch door comes equipped with flush frost blocking hardware as standard equipment.

This shelter is air transportable and can be transported by C-119, or C124, helicopter and M-35 truck.

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# HARCO

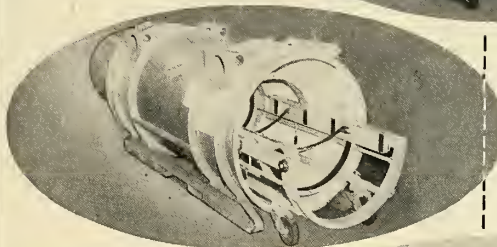
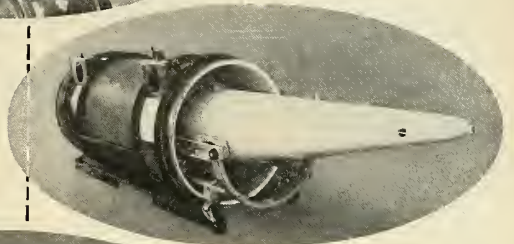
**a PROVEN source  
OF FIBERGLASS CONTAINERS AND  
INTEGRAL GROUND HANDLING TRAILERS**



**LOADED CONTAINERS**  
Measuring 18 1/2' long, 4 1/2' diameter and weighing up to 4800-pounds when loaded with in-flight refueling stores and integral trailer, can be stacked 3 high to conserve storage space.

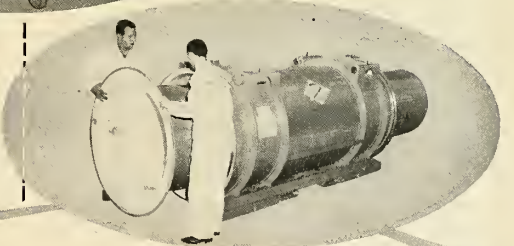
**FAST UNLOADING OF REFUELING STORES**

Less than 60-seconds required to remove end sections, through use of unique Vee-band clamps, greatly speeds unloading of stores on integral ground handling Harco trailer.



**END SECTIONS REVERSED FOR RETURN SHIPMENT**

Overall length is reduced by half for empty-return shipment, conserving valuable shipping space. Use of fiberglass reduces container weight by 60%; is impervious to rust or corrosion; easily repaired in the field.



**TRAILER IN PLACE FOR RETURN TO BASE**

Harco Containers are a complete system for storage, transport and ground handling of critical stores; important part of system is Harco developed trailer which is returnable within container for re-loading.

Harco Containers are the only fiberglass containers for storage, transport and handling of in-flight refueling stores approved by BuAer. Features include 60% reduction in weight, reversible end sections to cut return shipping size by 1/2, integral ground handling trailers for stores, 60-second availability of stores through use of quick release Vee-bands on end sections. Two years of field service prove their superiority. Other Harco Containers available for missiles, jet engines, re-fueling system components, electronic equipment.



Write for literature and quotations on your container and ground handling equipment requirements.  
EMPLOYMENT OPPORTUNITIES FOR TRAINED MECHANICS.

## Harco Containers

A DIVISION OF HARBOR BOAT BUILDING CO.

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Ordnance Refuelers  
Tank Retrievers**

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**Air Suspension Systems**

\*

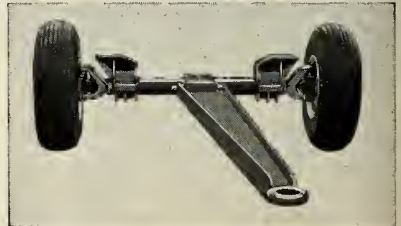
**Spring Suspension Systems**

\*

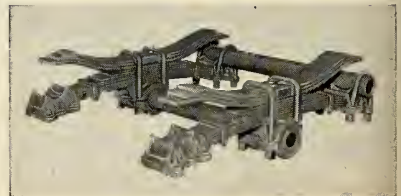
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• ground support

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PHASE 1

PHASE 2

PHASE 3

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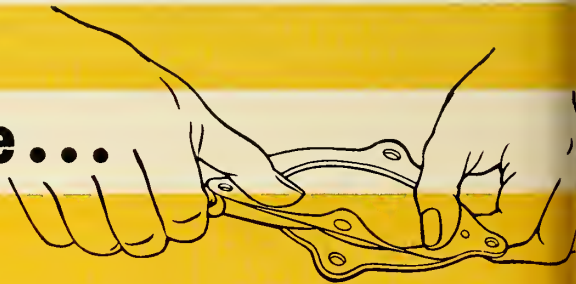


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with laminations of .002" or .003"

### Mild Steel

with laminations of .002" or .003"

### Stainless Steel

with laminations of .002" or .003"

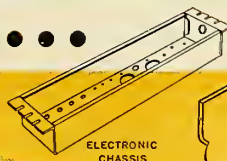
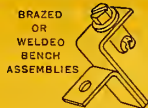
### Aluminum

with laminations of .003" and

**NEW** → .002"

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Actually, our famous Shims of LAMINUM are perfect precision STAMPINGS. Consequently, we have perfected our own special equipment and tooling, our own skills and techniques, unknown to ordinary stampings producers. Result: the unique ability to quickly produce precision STAMPINGS...in any contour, in any size...in any quantity "one to a million"...at the lowest possible unit cost. We have 3 exclusive Methods—pick the one that fits *you* best...

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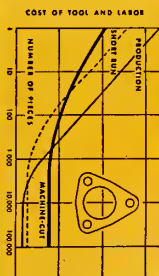
Experimental Pilot Stage  
We use our MACHINE CUT METHOD. No dies needed. Our special equipment, plus our unique techniques, are applied to produce small quantities at very low cost.

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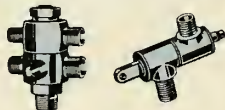
HOSE, END FITTINGS and ASSEMBLIES



MS, ER<sup>®</sup> FLARELESS TUBE FITTINGS



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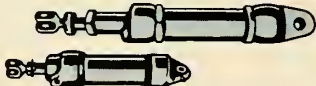
VALVES and BENT TUBE ASSEMBLIES



**FOR AIRCRAFT and  
MISSILE  
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and PNEUMATICS**

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and COMPONENTS**

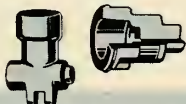
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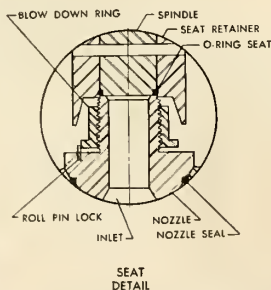
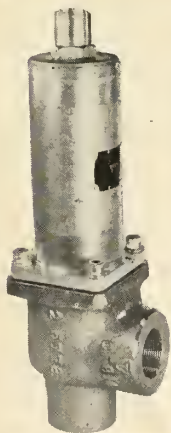
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**Relief valve with replaceable O-ring seat**

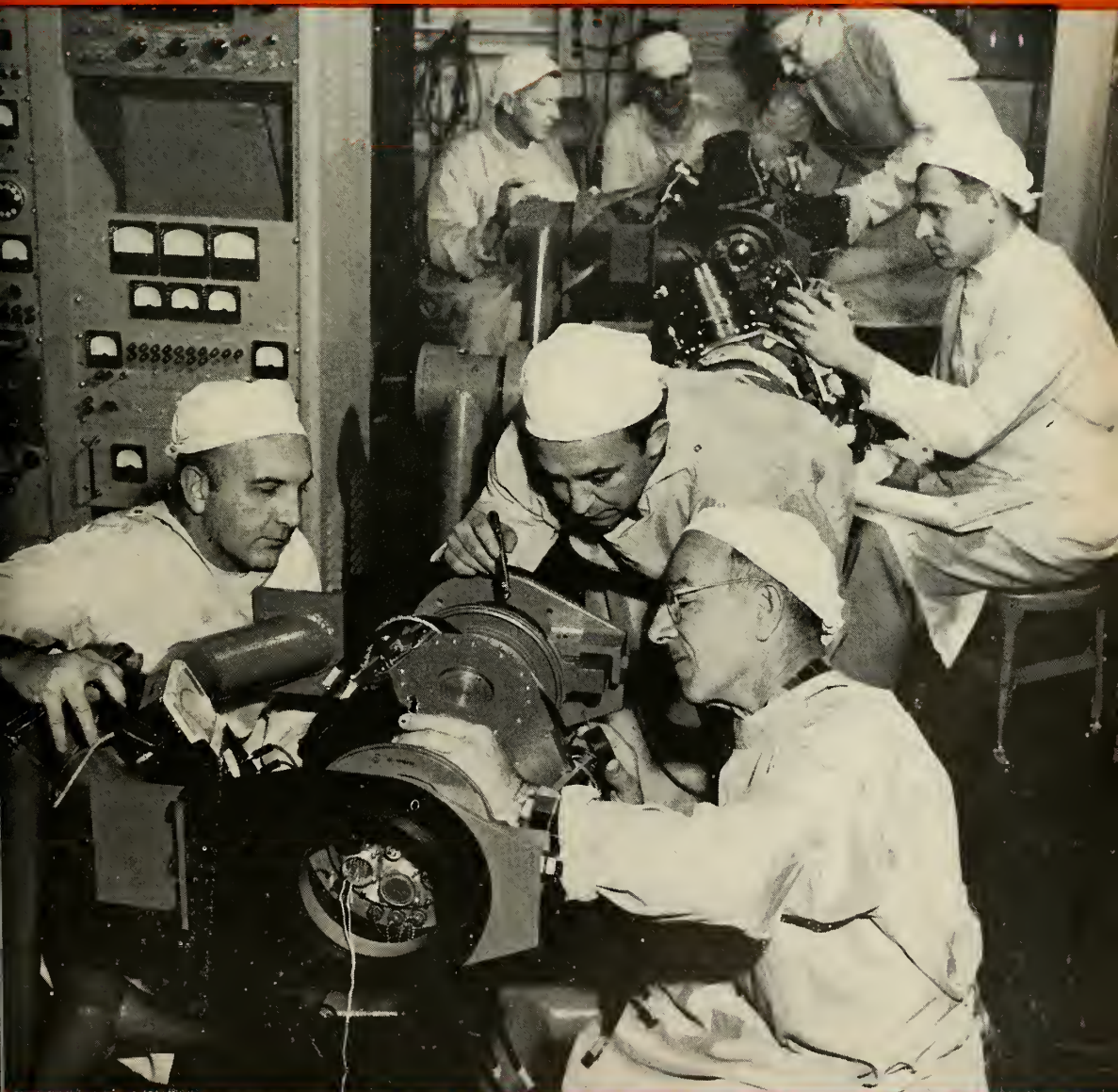
Bubble-tight operation up to set pressure is now possible with Anderson, Greenwood & Co.'s Type 3 Relief Valves. This new design uses replaceable O-ring seats to give perfect sealing and reseating qualities over a long dependable life — even on helium at 7000 psi. Write for catalog 151.

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# CHECKOUT EQUIPMENT

This equipment determines prior to launching whether all portions of the missile will or will not perform as intended. It is used to check out warhead, guidance, control and propulsion systems.





## DESTINATION KNOWN

When a mighty "Thor" blasts off from Vandenberg Air Force Base it is checked out, launched and tracked by Packard Bell's ground support equipment and Missile Impact Prediction System.

### ENGINEERING BEYOND THE EXPECTED

The Missile Impact Predictor is one-eighth the size and was built at one-tenth the cost of previous systems. Ground support equipment matches the reliability built into the "Thor." All combine to guarantee an effective weapon for retaliation or space exploration... destination known.

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# New Products

• checkout equipment

## CHART RECORDERS USE ADVANCED COMPONENTS

New circular chart recorder-controllers, with either electric or pneumatic controls, have been introduced by the Daystrom-Weston Industrial Division of Daystrom, Inc.

The new circular chart recorders employ advanced components, such as the division's recently developed D-Pak unit, and other improved mechanisms to provide greater instrument reliability and service in process industries," according to the company.

All models of the new recorder-controllers feature the revolutionary D-Pak constant voltage supply unit which eliminates batteries, standard cells, and standardizing mechanisms in potentiometers; interchangeable slide-wires, easy replaceable range standards, plug-in amplifiers, universal mountings, recessed indicator pointers to facilitate chart replacements; and rigidly supported scales on back of the plate assembly to permit easy calibration and indicator readings with the door open.

Pneumatic controls—in models 6836 potentiometer and 6856 Wheatstone bridge—are available as universal controller, proportional plus automatic reset, or proportional with automatic reset and derivative; proportional band adjustability—2 to 300 per cent. The proportional controller with reset, or reset and derivative, is recommended for more complex processes with high capacity or where appreciable transfer lag and/or dead-time is present.

Optional 4-position pneumatic transfer switch—automatic, manual, test, and service—provides complete control loop flexibility (supply air at 20 psig; controlled air at three to 15 psig). Flipping of the "flip switch" also provides bumpless transfer since gage accuracy is not a governing factor.

Electric controls—in models 6833 potentiometer and 6853 Wheatstone bridge—are available as contact type two-position or three-position and



proportioning control with 5, 10, or 20 per cent proportional band.

The control mechanism is directly coupled to the slidewire shaft, eliminating lag and backlash inherent with linkage and cams. According to division engineers, the unusual design of the control mechanism eliminates chatter due to vibration with even the narrowest differential and, being completely enclosed, insures long trouble-free performance under adverse atmospheric conditions.

The new null-balancing type circular chart recorders are designed for a-c operation only; 115 volts, 60 cycles; or 115 volts, 50 cycles as specified; accuracy of plus or minus 0.25 per cent of span, or .025 mv. Design features include 12-inch chart with full scale pen travel of 4-5/8 inches; 33.86-inch long, 320° concentric scale; large easily read numerals; many standard calibration ranges for potentiometer or Wheatstone bridge; full-scale response time of 5, 10, and 20 seconds; enclosed connection terminals; and standard chart speeds.

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## Theta Instrument Makes System Error Bridge

With the Theta-Bridge the angular position of any synchro or resolver inaccessibly located within a complex system can be directly measured without any mechanical coupling. The only connection is via the electrical leads of the synchro or resolver. Loading of the system is avoided through use of very high impedance elements in Theta Instrument Corp.'s new device. It is

also used to simulate a perfect synchro or resolver input to a system. Three dials display angular position digitally to three decimal places over a 360° range. The initial calibration to a particular system is accomplished without the necessity for mechanical rotation of any part of the system, and without the necessity for adjusting the system voltage excitation to an accurate level. Specifications: Accuracy, 10 sec. of arc. Readability, .001°. Size, 19 in. wide by 10½ in. high by 8 in. deep.

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## New Five-Channel Timer Has Low Contact Bounce

An extremely accurate, fixed position Interval Timer which limits contact bounce to within a range of 50 to 300 microseconds has been developed by Western Design & Manufacturing Corp., Santa Barbara, California, a division of U. S. Industries, Inc.

Currently utilized by two major aircraft companies in aircraft and missile systems checkout under severe environmental conditions, this compact electromechanical device is designed to provide highly accurate switching operations at precise time intervals for electrical circuits. Timing cycles may be as short as a second or as long as several hours.

With up to five independent channels available in the standard unit, events may be sequenced simultaneously or in a series, or in a combination of both. On special order, the number of channels may be increased to 10 as the synchronous motor has ample torque to handle the increased operating load.

The Western Design Timer, in addition to the synchronous motor, consists of a unique cam and positive action contact arrangement in which one set of contacts makes the circuit and the other set breaks the circuit. This action sharply defines the start or finish of any pulse and is accomplished by the use of abrupt discontinuities on the cam surfaces which permit the tripping points to be set precisely. The speed of contact operation is independent of the speed of rotation of the cams.

This unique design reduces duration of contact bounce to an absolute minimum. Total contact bounce on the circuit make and break is so slight it can be measured in microseconds, less than 300 microseconds on make, and less than 50 microseconds on break in production line units.

Contacts are designed for a load current of at least 0.5 amperes and are capable of operating satisfactorily with higher currents depending on the type of circuits and duty cycle required.

Because of the synchronous drive motors, the tolerance of the timing pulses is held to  $\pm 1/5$  of one percent or  $\pm 10$  milliseconds whichever is greater. These tolerances are relative to a 60 cycle or 400 cycle time base accuracy.

A variable speed drive may be used so that one channel of the output pulses of the timer may be fed back into a closed loop servo system which will automatically synchronize the timer function with an external process.

The Interval Timer is supplied to operate at various input voltages on 60 cps and 400 cps alternating current lines or on direct current. Diminutive in size, the units are 5 inches long, with a 2.2 inch diameter and weigh as little as 1.5 lbs.

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**... new products**

## Transistorized Tachometer Goes on Market

To fill the need in industry for a moderately priced indicating instrument suitable for numerous applications, Kahn and Co. has developed and put on the market their Transi-Tach Transistorized Tachometer.

The Transi-Tach is available in three basic models—for 19" rack panel mounting, as a portable unit, or with remote indicator. All models are self-powered by a 9-volt battery, but can also be used with 115 volts, 60 cycle AC.

The Transi-Tach indicates the speed of rotating shafts through the use of a magnetic or other speed pickup. RPM is read directly on a large meter scale which can be calibrated in any speed range desired with as many as 120 linear scale divisions. Speeds up to 60,000 rpm can be accurately measured. Zero suppression can be built into the scale to enable scale expansion within a desired speed range.

Since it is essentially a frequency meter, the Transi-Tach can be supplied as such for the measurement of audio or ultrasonic frequencies. It may also be adapted for use in conjunction with any transducer which converts flows, pressures or other physical forces into electrical signals of variable frequencies. Accuracy is plus or minus 2% of full scale of the meter reading. The proper transducer for each application can be supplied by Kahn and Company. Complete information is contained in illustrated bulletin which is available from Kahn and Company, Inc.

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## Manometer Model TA Has 25 Tubes

Dynametrics Model TA Tiltable Manometer, Dynametrics Corp., is designed for operation as either a standard vertical manometer or a slant tube manometer at any selected angle from 11° to 90°. This mobile, backlighted unit has 25 tubes mounted in a rigid box frame. The frame is balanced in precision line-bored pivots on the mobile stand, and has a manual-locking adjustment to fix the frame at any desired angle between vertical and 11° of horizontal. Slanting the bank increases the sensitivity of fluid height indication over smaller ranges and permits a more accurate pressure measurement. Zero register is accurate on all tubes even at the greatest tilt angle. When used as a standard vertical unit, the Model TA retains all the favorable characteristics of the Dynametrics multibank and multitube manometers.

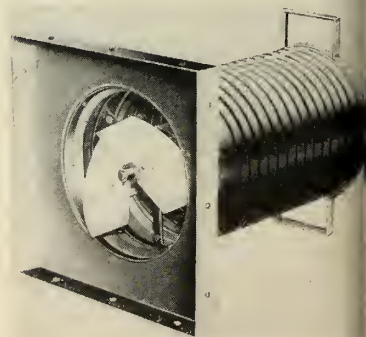
All tubes are manifolded to a single, manually adjustable reservoir. A vernier is provided for fine adjustment at angles near the horizontal. To reduce the quantity of fluid necessary, the pyrex tubes have a smaller than standard bore. The accurate co-planar scale sheet is backlighted for photography and is graduated in inches and tenths of inches. The stand is mounted on 4 swivel casters for mobility and has built-in leveling jacks and level indicator for precise set up after locating.

As in all other Dynametrics manometers, the Model TA can be equipped, at slight extra cost, with a metric scale, check valves, or other standard accessories. One model of this unit is standard: TA-25-60 (25 tubes 60" scale height).

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## Sun Electric Improves Electric Power Absorber

An improved version of their versatile Electric Power Absorber is announced by Sun Electric Corporation. The unit is used extensively in aircraft and missile testing systems applications. It is compact and has a low weight factor in relation to power absorption and heat dissipation. 10 to 15 KV capacity is claimed for AC use and up to 450 amperes at 30 volts DC.



New features include a front mounting panel for stacking units to conserve space. Mounting panel is on 13 inches square, overall length approximately 18 inches and weight 1 to 20 pounds depending on capacity.

A low temperature coefficient resistance ribbon within a slotted housing is cooled by ambient air drawn through a cooling tube by an internally mounted fan and motor. The motor may be operated as a part of the load or from an independent power source.

The unit is easily wired and is fully protected against overload. Infinite variable loading within the range of each unit can be achieved by the addition of a carbon pile or similar variable resistor.

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presents . . . A new panel concept that promises to revolutionize monitoring or control of Missiles and Rockets

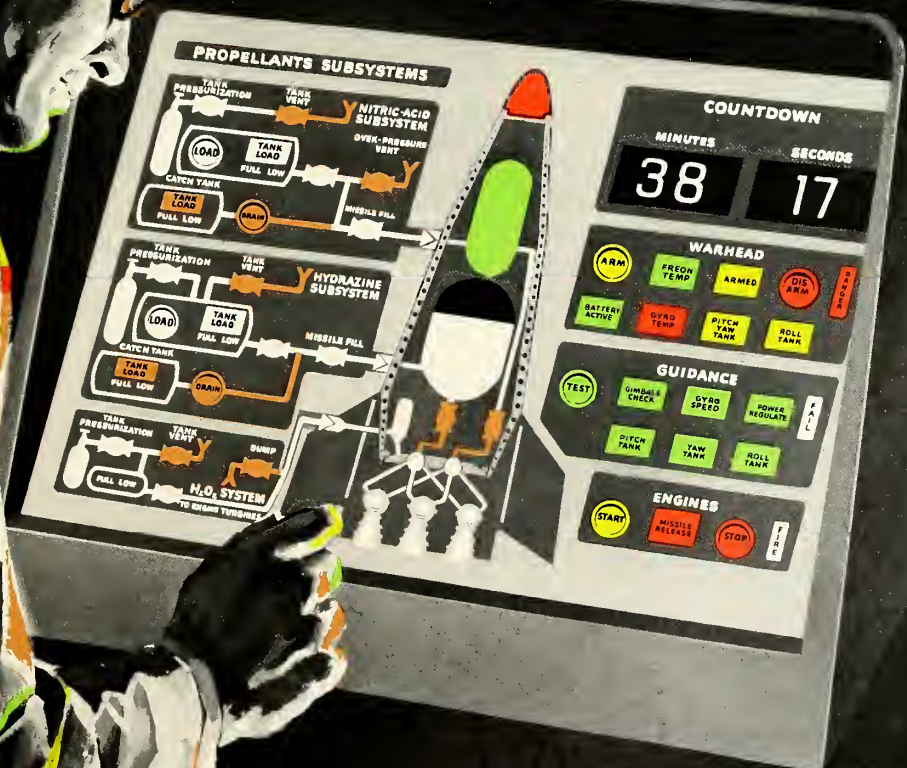
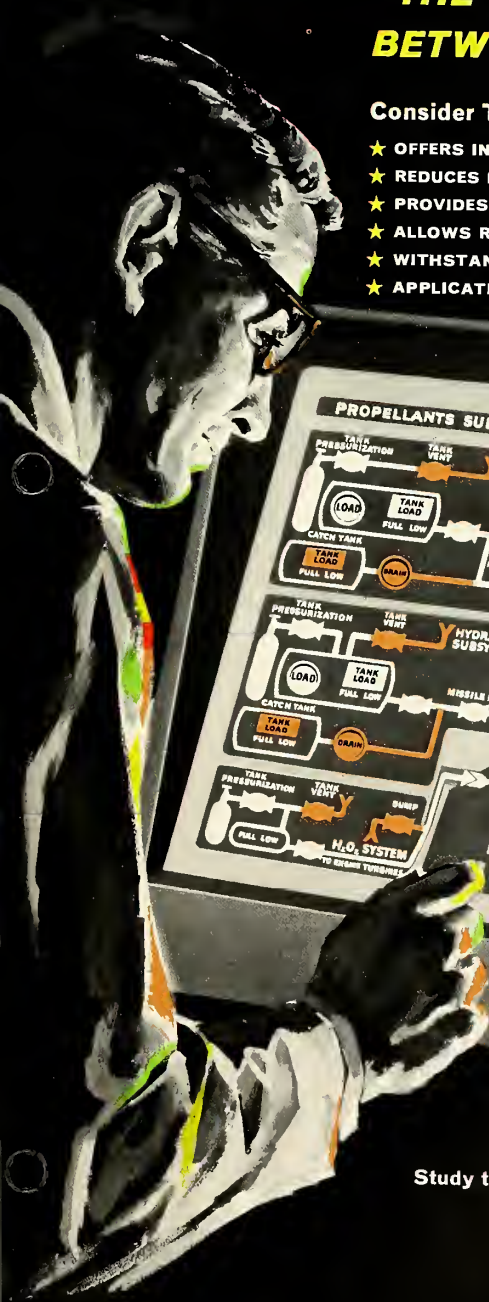


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- ★ REDUCES HUMAN ERROR TO AN IMPROBABILITY
- ★ PROVIDES SIMPLIFICATION OF THE MOST COMPLEX OPERATION
- ★ ALLOWS REMARKABLE CONSERVATION OF VITAL SPACE
- ★ WITHSTANDS EXTREME LIMITS OF TESTING SPECIFICATIONS
- ★ APPLICATION POSSIBILITIES AS UNLIMITED AS THE IMAGINATION



Study the following specifications with your project in mind . . . .

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**Electrosnap Corporation**

4218 West Lake Street, Chicago 24, Illinois

# the astromatic panel concept by **ELECTROSAP**

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higher control requirements

**HUMAN FACTOR  
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with extreme accuracy

This new concept in panel techniques combines the latest advances in scientific, technological and psychological achievements to insure the highest possible degree of efficiency and accuracy in control or monitoring of equipment.

## PRECISION ENGINEERED

... Meets or exceeds most exacting specifications



### SHOCK AND ABUSE TOLERANT ...

Laminated Fiberglas panel resists chipping, shattering, crazing. Coefficient of expansion identical to aluminum sub-assemblies eliminates buckling under stress or extreme cold or heat conditions.



### LASTING LEGIBILITY ...

Exclusive process imbues color into Fiberglas ... resists wear-off of legend and diagramming. Vivid colors actually photoprinted—will not chip or scratch off. Meets all requirements of MIL-P-7788 for Aircraft Cock-pit Panel.



### QUICK LAMP REPLACEMENT ...

Front panel hinged for quick access to components below, permitting 10-second bulb change if necessary.

### EASY TO ALTER ...

During prototyping legend and schematic diagramming can be easily changed to visualize any new findings. Components under panel may be relocated.

**VERSATILITY OF DESIGN ...** The module concept of construction makes the Astromatic panel technique extremely versatile. **WHATEVER ACTION YOU DESIRE TO VISUALIZE, ASTROMATIC CAN SUBMIT A PANEL DESIGN TO SURPASS YOUR EXPECTATIONS.**

MAIL COUPON BELOW FOR ADDITIONAL TECHNICAL INFORMATION ... OR PHONE ROBERT PROVART, TECHNICAL DIRECTOR COLLECT, VAN BUREN 6-3100

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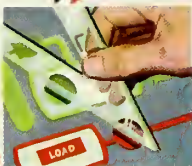
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**100% FLUSH PANEL ...** Eliminates protruding hardware ... unless specified by human engineering requirements. Switching functions may be recessed, flush, or over-flush.



**TRI-COLOR LIGHTS ...** Each light module contains 3 separate bulbs and circuits to permit triple indications such as GO, NO-GO and CAUTION signalling.



### CONCENTRATED GROUPING OF CONTROLS ...

Multiple function of TRI-LITE controls permits high component density, saving from two to four times space required by ordinary panel. Permits instant visual recognition and action by operator, minimizing time-loss found in larger panels.



### VERSATILE SWITCHING ...

The switching and indicating techniques are specifically designed for maximum compatibility with this advanced panel. Momentary, positive feel and alternate action switching is available.



### LIMITLESS COLOR COMBINATIONS ...

The unique combination of TRILITES plus multi-color photo printing of panel allows unlimited color guidance, distinctly identifiable even by color blind.



### SCHEMATIC DIAGRAMMING ...

Photo color printing of panel surface permits visual schematic diagramming. Increases speed and efficiency of operators and recognition of system indications. Reduces indoctrination period for operator training. Eliminates the written word.



**ASTROMATIC  
DIVISION**

**Electrosnap Corporation**

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VAN BUREN 6-3100, TWX CG-1400



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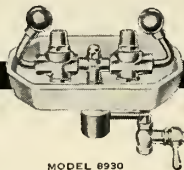
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MODEL 8600



MODEL 8930



MODEL 8950

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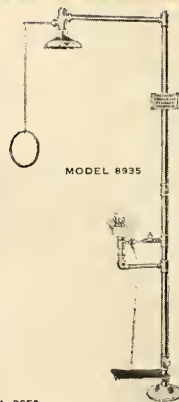
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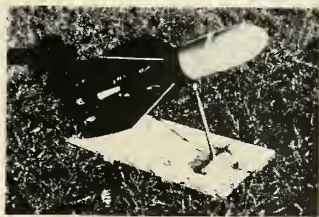
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# SS 10



# SS 11



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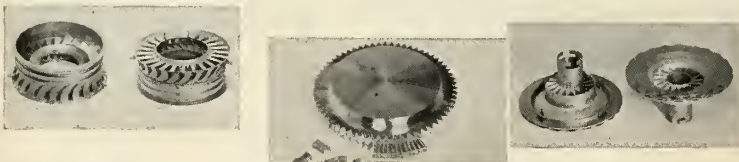
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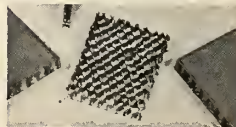
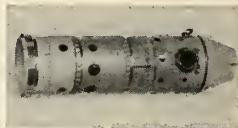
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# GUIDANCE EQUIPMENT

Guidance equipment (electronic, inertial, optical) determines where the missile is relative to where it should be in order to hit its target, and subsequently issues corrective instructions to the missile control system. Guidance equipment also includes the control system that makes the missile change its direction of flight: the fins, hydraulic, electrical or mechanical circuitries, actuators, jetavators, jets, and so on.



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## TIME DELAY RELAY

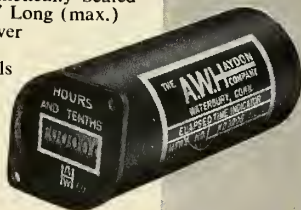
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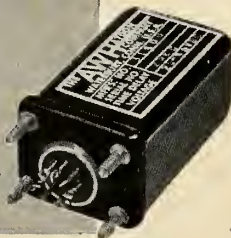
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- 1 7/16" x 1 21/32" x 2½" long
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  - Meet MIL-E-5272A
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  - Time Delays 50 MS to 120 sec.



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- Weight only 3 ounces
- 4 Watts maximum power

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# New Products

• guidance equipment

## MAGNETIC AMPLIFIER IS SMALL UNIT

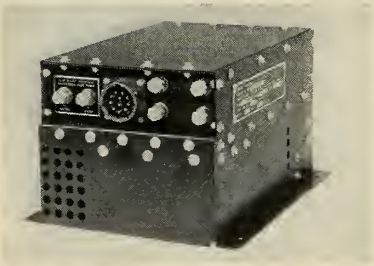
A new Variable Output Magnetic Amplifier for aircraft and missile use has been developed by the Vap-Aireronautical Products Division of Vapor Heating Corporation, Chicago, Ill. It is said to be the smallest in size and weight of any unit of this type available. It has an output of from 100 to 2000 watts.

The Variable Output Magnetic Amplifier can be used in many aircraft and missile systems including wind-tunnel temperature control, heater control, and motor speed control.

The advantage of the Variable Output Magnetic Amplifier over the on-off type is the modulating output, eliminating power surges in the aircraft or missile electrical system.

It also replaces three units normally used in a system; the temperature controller, power contactor, and the transformer.

Combining the functions of these units into a single control eliminates extra AN Connectors and harness tie them together, 2) moving electrical contacts in the control box and contactor, and 3) installing three units.



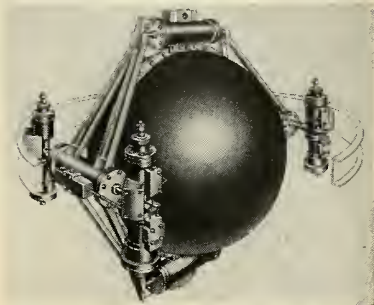
The controller also offers fail-safe features which will shut the controller off in the event of loss of power, pickup short, or pickup open.

In addition, the Variable Output Magnetic Amplifier has the ruggedness which is characteristic of mag-amps. The unit meets the requirements of MIL-E-5272A, is adjustable over a wide range, has the built-in reliability which mag-amps offer, and features extreme accuracy and repeatability of operation in ambients of minus 65° to 200°F.

Fill in No. 129 on Subscriber Service Card.

## Isolation System Protects Delicate Units

Walter Kidde & Co., Inc.'s pneumatic vibration isolation system protects delicate units such as missile controls, aircraft components, and sled test instrumentation subjected to large and rapid "g" load changes. The isolation system accomplishes this by maintain-



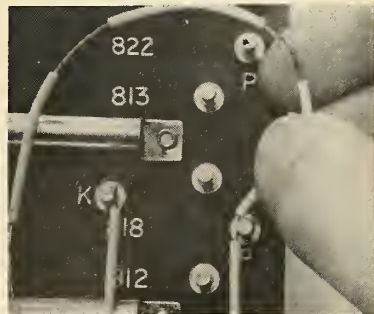
ing its desired low natural frequency while limiting relative displacement at various load conditions. The system consists of three independent sets of servo-controlled gas springs, each set absorbing a component of the vibrational and acceleration loadings along one of three mutually perpendicular axes.

Fill in No. 132 on Subscriber Service Card.

## Centerstripped Leads Permit Fast Assembly

Manger Electric Co. offers centerstripping as one of its custom wire processing services. The firm has developed equipment which removes the insulation from stranded or solid conductors of any gauge.

The stripped portion may be any length from a minimum of 1/8" and may be located at either regular or irregular intervals throughout the length of the wire. Leads can be cut, end-stripped, and counter-stripped as required, or they can be supplied in a continuous coil.

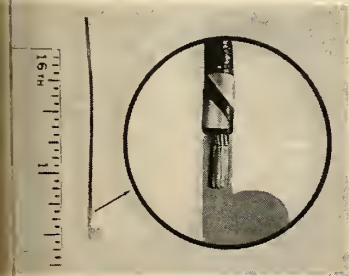


Centerstripping is of particular interest to manufacturers of products where multiple banks of electrical components have common terminating points. One continuous centerstripped wire can be used in place of two or more single leads.

Fill in No. 133 on Subscriber Service Card.

## Miniature Terminals Are Resistant Welded

A new process has been developed by Manger Electric Co. to meet the terminating requirements of subminiature electronic assemblies. No longer limited to ready made terminals, terminations can now be designed to fit assembly. These terminals can be securely welded to wire as small as 0.010" A.V.G. #32.



Close tolerances are maintained and long flex life is assured. Engineering service is available to assist with any special terminating problems relating to all types of electrical terminations.

Fill in No. 130 on Subscriber Service Card.

## Mouse Tails Eliminate Clamps

The electronic package for Boeing Airplane Co.'s IM-99 *Bomarc* interceptor missile utilizes a recently-developed "mouse tail" for securing wire bundles to the chassis. These "mouse tails" produced by Rubber Teck, Inc., are made of a tough rubber compound. They are available in lengths from 1 to 4 inches, and are tapered at each end. They are installed easily by passing one tapered end through a hole in the chassis, looping the shank over the wire bundle and inserting the other tapered end through an adjacent hole. When clinched up tight and the tension relieved, expansion of the rubber holds the "mouse tail" firmly in place.

A series of laboratory shake tests has proved that these "mouse tails" will hold firm under all environmental conditions expected during the missile's flight. Use of mouse tails eliminates the need for clamps or waxed string ties. As a result, both weight and a considerable amount of manufacturing time are saved. Rubber Teck has been chosen to be the licensee for their manufacture.

Fill in No. 131 on Subscriber Service Card.

## ... new products

### Circuit Breaker Weighs Only 2.1 Oz.

A hermetically-sealed circuit breaker of less than matchbox size has been developed by Heinemann Electric Co. of Trenton, New Jersey.

Called Model SM3, it is the first of Heinemann's SM series of sub-miniature breakers to go into production. The SM series is aimed at applications where small size and light weight are demanded, and where stable performance under varying conditions of shock, vibration, and ambient temperature is vital.

A series-overload breaker, the SM3 is designed for operation at 110 volts at either 60 or 400 cycles, or for 50 volts DC. It is available in ratings from 50 milliamps to 10 amperes. A choice of two time delay curves is offered, for fast or slow overload response, and the breaker is also available with instantaneous-trip response.

Since the SM3 combines magnetic actuation with hydraulic time delay, its current capacity and must-trip points are free from ambient temperature



effects. The breaker will maintain its 125-percent must-trip point from  $-65^{\circ}$  to  $+125^{\circ}$  Centigrade. No de-rating is necessary for temperature or vibration. The rugged, hermetically sealed construction assures dependable operation under severe environmental conditions.

Fill in No. 134 on Subscriber Service Card.

### Magnetic Amplifier Is New On-Off Type

Vap-Air Division, Vapor Heating Corp., offers a new On-Off Type Magnetic Amplifier Controller that is claimed to be the smallest and lightest unit of its type on the market today. Encapsulated in epoxy, it can stand extreme shock and vibration, yet is smaller than a pack of cigarettes.

The controller has many applications in the aircraft and missile field, among them, windshield temperature control, heater control and overheat warning.



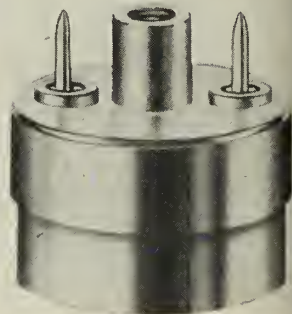
Ruggedness and reliability are characteristics of magnetic amplifiers. Other features of this unit are adjustability  $\pm 25^{\circ}$ F. of control point, accuracy, and repeatability of operation in ambients of minus  $65^{\circ}$  to  $200^{\circ}$ F. The amplifier meets requirements of MIL-E-5272A.

There are several built-in-fail-safe features which will shut the unit off in case of 1) loss of power, 2) partial or full pickup short, and 3) pickup open.

Fill in No. 135 on Subscriber Service Card.

### Bimetal Thermal Switch Weighs 1/2 Ounce

Weighing  $\frac{1}{2}$  ounce, Control Products, Inc.'s "Button" switch is a high-temperature bimetal thermal switch which can be supplied with contacts for either close-on-rise or close-on-fall in temperature. The switch can be supplied calibrated at a maximum of  $600^{\circ}$ F or down to a minimum of  $-20^{\circ}$ F with a possible close temperature tolerance of  $2^{\circ}$ F under laboratory conditions. Temperature differential and repeat ability for a given switch is about  $1^{\circ}$ F. An overshoot to  $800^{\circ}$ F or undershoot to  $-100^{\circ}$ F can be tolerated.



The switch can be mounted by lugs soft soldered directly to, or recessed into the surface to be controlled, thus giving precise surface temperature measurement for applications such as aircraft and airborne electric equipment. It is available with single-wire or two-wire construction.

Hermetically sealed (metal-to-glass) it will meet the shock and vibration requirements of MIL-E-5272A Procedure I. The lower portion of the switch is  $\frac{3}{4}$ " in diameter and the upper portion is  $\frac{25}{32}$ " to permit seating the unit in a recessed mounting. The overall height is  $\frac{3}{4}$ " including the glass seals and bushing.

Fill in No. 136 on Subscriber Service Card.

### Price Electric Improves Crystal-Can Style Relay

Price Electric Corp., Frederick, Md. has announced a design improvement in its Style 6 Crystal-Can-size relay to improve reliability. An internal bracket has been added to support the relay mechanism and position it relative to the header, reinforcing the can in the function.

This design change has not affected the basic simplicity of the design, which does not require an armature hing pin and thus eliminates the need for precision fitting of the armature hinge. The new bracket is said to improve uniformity and reliability of performance in vibration, shock, contact life and other environmental exposures.

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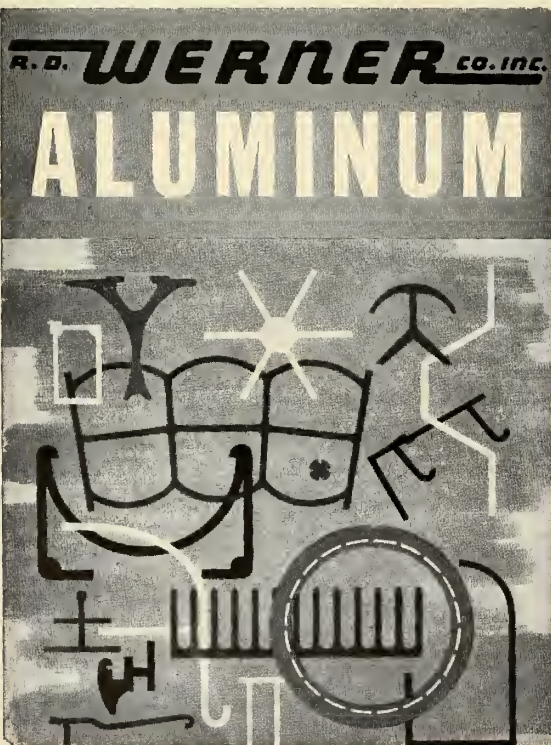
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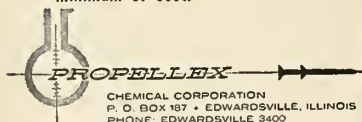
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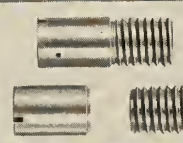
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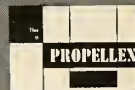
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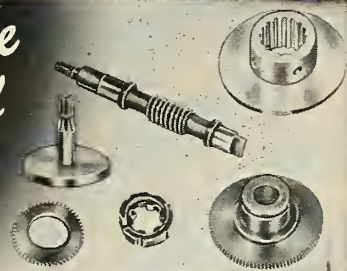
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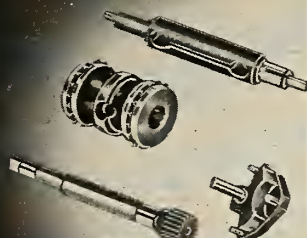
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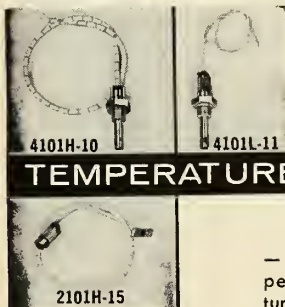
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*Repeatability and hysteresis:*  
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100 ± 5 ohms

*Nominal temperature-resistance coefficient:*  
0.0018/°C

*Output:*  
0-5 vdc, when Arnoux 100-ohm TME is used.



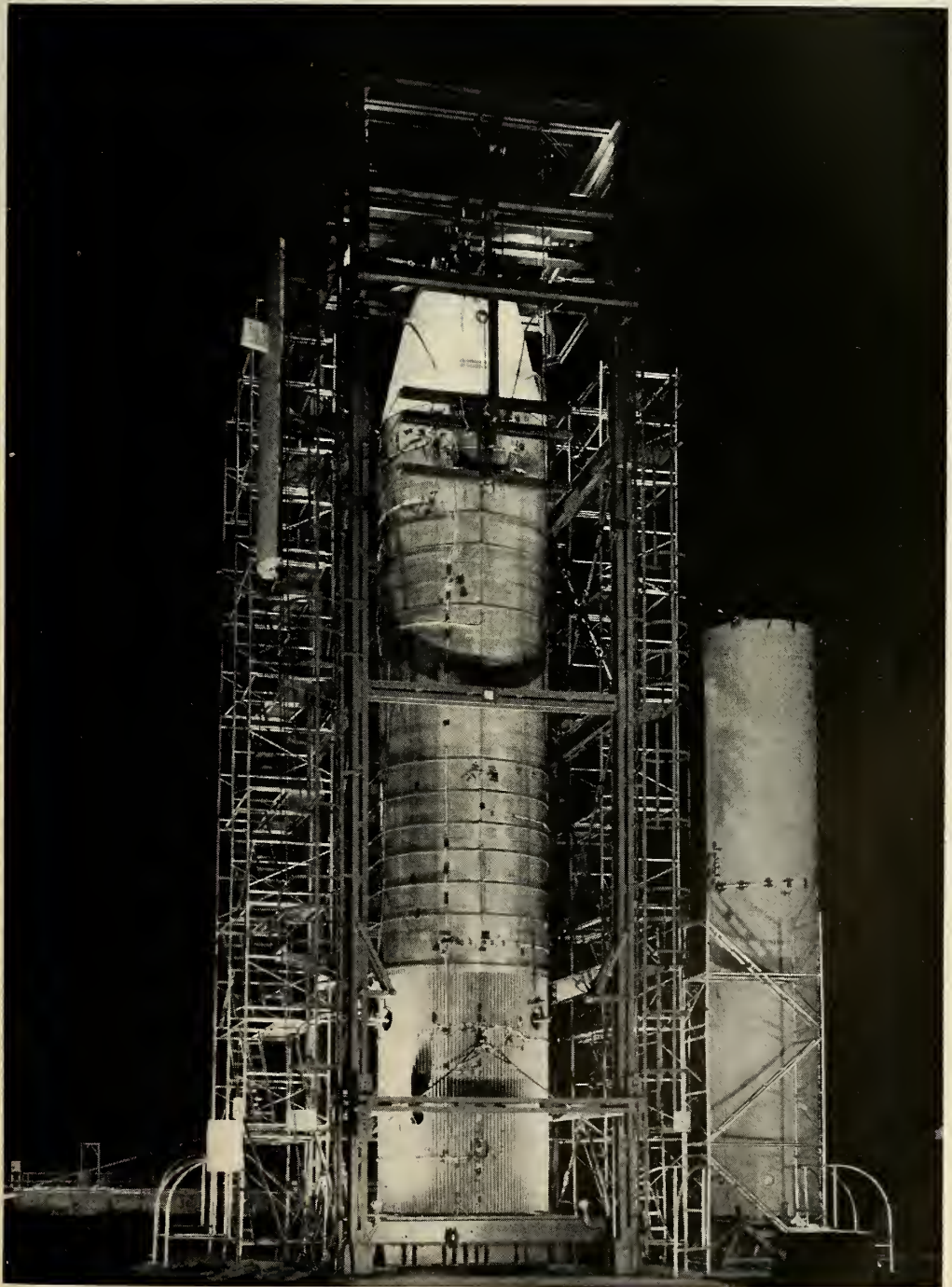
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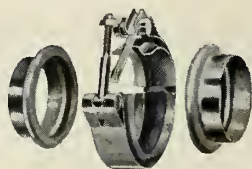
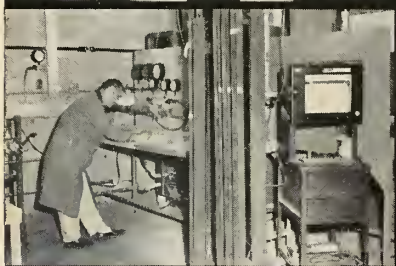
Fill in No. 60 on Subscriber Service Card.

# TEST EQUIPMENT

This includes everything in missile testing, ranging from checkout equipment through static test stands, launching pads and flight simulators.

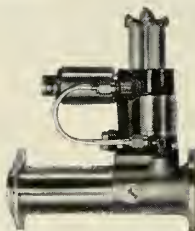


# *proved* *reliable*



## *duct couplings / duct supports*

Couplings provide metal-to-metal seal, fast disconnects, for high pressure, high temperature air ducts. Standard diameters 1" to 7", specials to 36". Separate or integral duct supports. Many materials.



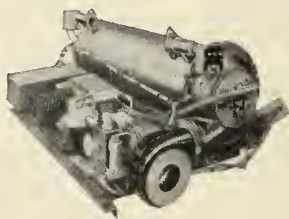
## *pneumatic controls*

Multi-function weight-saving air valves and regulators manufactured to missile tolerances. Adequate staff for fast design and production changes.



## *Platular\* heat exchangers*

Combine efficiency of plates with strength of tubes into new economical modular design. Can fit into cramped, odd-shaped spaces in missiles and high performance aircraft for great variety of applications. \*Trademark of Surface Combustion Corporation.



## *ground support liquid heaters*

Standard units for vehicle, space, and fuel transfer applications. Available in capacities from 90,000 to 1,000,000 Btu/hour and can be combined easily for greater output. Now in service in a wide range of ground support equipment.

Janitrol development and test facilities provide proof in advance of reliable performance in service.

Contact your Janitrol representatives when you need components or systems for heat transfer or air control. Janitrol Aircraft Division, Surface Combustion Corporation, Columbus 4, Ohio.

# **JANITROL**

pneumatic controls • duct couplings & supports • heat exchangers



# New Products

• test equipment

## HIGH VOLTAGE TEST SETS BECOME AVAILABLE

Testing of high voltage electronic tubes, cables and bushings, as well as the dielectric strength of all insulating materials to ASTM standards is performed with the new super-duty line of HYPOT<sup>®</sup> high voltage test sets, announced by Associated Research, Inc.

The new Series 5700 DC HYPOT<sup>®</sup> models provide facilities for non-destructive proof testing of high voltage electronic equipment during production as well as at final inspection. They also meet the needs of preventive maintenance inspection of high voltage electronic gear, since they are readily portable.

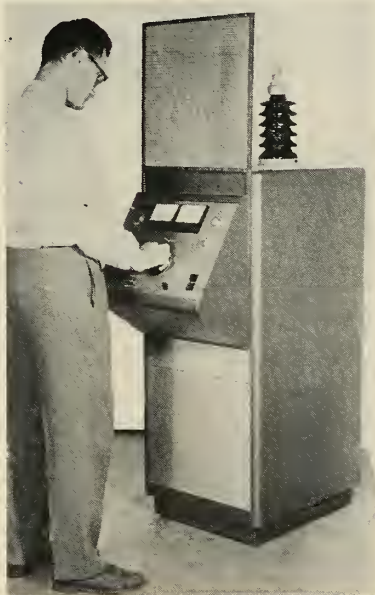
The new super-duty models are housed in a single caster-mounted floor cabinet which affords more convenient operation and greater safety than do two-unit high voltage test sets.

All controls are located on the front panel which is sloped for easy reading. Two 4½" meters on the panel indicate output voltage and leakage current.

Many important safety features are incorporated, including the zero-reset high voltage interlock, quick acting overload breaker, and a safety screen between the operator and the high voltage output bushing.

A new "Amplivolt" power supply is incorporated in these models, having selenium rectifiers, capacitors, and kilovoltmeter multipliers sealed in a oil-filled tank.

The output test potential is continuously variable from zero to maximum and indicated by metering directly in the final output.



Effects of corona, surface and phase leakage are eliminated by an advanced by-pass return (guard) metering circuit, allowing accurate reading of small leakage currents.

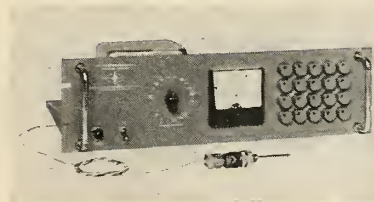
A bulletin describing these new super-duty models, as well as the complete line of AC and DC HYPOT<sup>®</sup> High Voltage Test Sets is available by request.

Fill in No. 138 on Subscriber Service Card.

## UNI-TEMP Has Greater Range and Accuracy

Increased operating ranges and greater accuracy are specified for resistance temperature measurement systems and components released by the Cardinal Instrumentation Corp. Marked under the trade name of "UNI-TEMP," the new lines are designed on a "building block" principle which makes it possible to purchase either individual components or completely packaged systems.

UNI-TEMP systems cover the entire range of -320°F to +2000°F utilizing resistance temperature transducers. Maximum sensitivity is achieved through the material property of Balco or Platinum resistance wires which display high temperature coefficients



and excellent linearity characteristics. Resistance variations as a function of temperature, are changed into voltage variations by UNI-TEMP bridges and power supplies. This provides a full 5 volt output for direct reading on the UNI-TEMP readout module or as input to any standard recording, telemetering or readout device.

The new Cardinal systems require no amplifiers, reference junctions or

special shielding—they eliminate the grounding problems inherent in thermoelectric assemblies. System accuracies are available up to  $\pm 0.1^\circ\text{F}$  with LOX compatible platinum transducers and up to  $\pm 3/4^\circ\text{F}$  with Balco transducers including high pressure applications.

Fill in No. 139 on Subscriber Service Card.

## New Dynamometer Model Checks Gyro Motors

The Eder Engineering Co.'s Model 3366 Gyro Wheel Motor Dynamometer for checking the parameters of gyro wheel motors, is used for determining the characteristics for development purposes, and for production testing stators and/or hysteresis rings. The dynamometer measures stall torques and synchronous pullout torques.

For the synchronous pullout test (torque), the hysteresis ring is rotated at 100 RPM less than sync speed of the rotating electrical field of the stator.

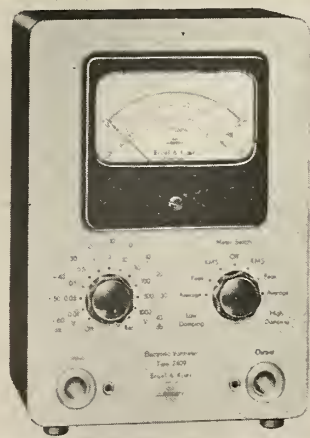
Model 3366 Dynamometer comes in several torque ranges from 0-10,000 to 0-100,000 dyne cm  $\pm 2\%$ . Other torque ranges are available.

The drive motor for the rotor or hysteresis ring can be obtained with almost any desired RPM. Model 3366 has the following RPM: 1200  $\pm 12$ , 7800  $\pm 50$ , 11,900  $\pm 50$ , 15,900  $\pm 50$ .

Fill In No. 140 on Subscriber Service Card.

## Electronic Voltmeter Reads True RMS

The Bruel & Kjaer Model 2409 Electronic Voltmeter measures either the True RMS, peak or average values of voltages over the frequency range from 2 to 200,000 c/s. An accuracy of 0.5 db is obtained for RMS indication of signals with crest factors up to 5.



According to B & K Instruments, Inc., the Model 2409 may serve as a VTVM with full scale sensitivities of 10 MV to 1,000 V or as a calibrated decade amplifier with 60 db gain.

Fill in No. 141 on Subscriber Service Card.

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• test equipment

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# TRACKING AND TELEMETERING EQUIPMENT

These devices (optical, electronic, or both) follow a missile in flight and report on how it is actually functioning internally. This equipment includes telemetry, radio, radar and optical devices.





**POWER YOU CAN COUNT ON.**

The catalog sheets shown here are descriptive of HOBART power supplies available to aviation and avionics industries!

Only at HOBART... can you get such a wide range of units to meet any type of ground power requirement.

Hobart machines are available to match the new requirements of today's aircraft, whether 400 cycle a.c., 28 or 112 volt d.c. In addition to the airlines and corporate users, airframe, powerplant, component part, helicopter and guided-missile manufacturers look to Hobart to meet their power supply needs.

It will pay to look into this! You can get your operations under way sooner and keep costs down when you use Hobart power supplies. 50 to 1500 amperes are available with wide continuously adjustable 26 to 31 volt range for either reciprocating or jet engine starting and testing. For the new jet aircraft and missile check-out and launching there are in the Hobart line, 400 cycle generators in capacities ranging from 3.75 to 125 KVA. This equipment is available in electric motor or engine driven designs and in the type of mounting you need. In other words, no matter what kind of equipment you're looking for, you can get it at one source—Hobart!

The company planning ahead in the fast-moving aviation field will do well to check into Hobart Power Supplies. Your inquiry will promptly bring complete literature and information on the equipment of interest to you. WRITE, PHONE, or WIRE today!



**MOTOR GENERATOR CORPORATION**  
*Hobart Brothers Affiliate*  
 Box MI-59, Troy, Ohio

# New Products

• tracking and telemetering equipment

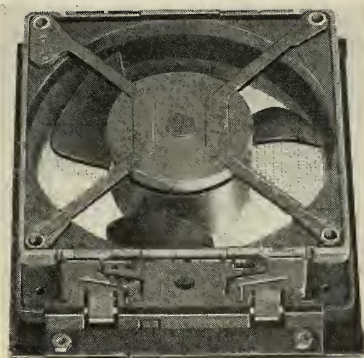
## MUFFIN FAN COOLS ELECTRONIC EQUIPMENT

Rotron Mfg. Co. Inc.'s Muffin is logical choice for a wide cross section of cooling projects. Typical applications would include: electronic "Black boxes"—transmitters, receivers, radar, etc.; microwave-link equipment; power supplies—rectifiers, converters, battery chargers, etc.; machine tools—electronic control enclosures, speed changers, clutches; light projectors—slide and filmstrip, contour projection; test equipment, instruments; industrial maintenance equipment.

Muffin Fan provides efficient forced air cooling for projects where cooling has hitherto been prohibitive. It is an original aerodynamic design with a high air performance of 100 CFM while developing sufficient pressure for operation through a dust filter and tightly packed electronic equipment. Muffin Fan is available in three versions: Skeleton Fan; A whirling propeller with 4 mounting arms is what results from using the "guts" only of the Muffin Fan. It can be mounted as an air-stirring device among hot components or can be mounted in the equipment enclosure; Ventury Fan, and Grilled Fan.

The Muffin Fan features an inside-out motor with cantilevered bearings and with the air impeller integral with the rotor. This shaded-pole motor draws only 13 watts. No capacitor is required nor are there any commutators, slip rings or brushes which would shorten life or threaten reliability. No oiling or maintenance of any kind is necessary throughout the life of the fan. Due to the inside-out, cantilevered design the grease does not chemically deteriorate nor is there a need for a large grease reservoir.

A permanent, solid electrical connection is made to two solder terminals requiring just a few seconds time. The



solder terminals eliminate the possibility of lead wires being damaged in shipment, in handling or at the time of final installation—a common source of trouble in the case of conventional motors.

The Muffin Fan is designed for continuous duty operation with a life expectancy of 3 to 5 years when operated within the ambient temperature limits of 40°F to 110°F and within the nameplate electrical rating of 105 to 120 volt AC, 60 cycles. It requires no maintenance and is lubricated for the entire life of the fan.

Since the stator and all electrical parts, including the two input terminal lugs are molded into a watertight shell, the fan is not subject to humidity damage and is, in fact, submergence proof.

When installed in a cabinet with the grille assembly in place and measured in accordance with NAFM code, the noise level is only 42 db on the A scale or about 10 db lower than the average present day room air conditioner.

Fill in No. 142 on Subscriber Service Card.

## Raytector-- Monitors Radar

Miller Associates' Raytector monitors any radar system. It notifies instantly—by audible or visual means or both—of the entrance of an object into a search zone selected by the radar operator and it maintains a constant check of the conditions of operation of the radar system and on its own operation. It relieves the radar operator and enhances the dependability of search op-

erations. Features—high sensitivity is achieved by a new means of greatly enhancing signal-to-noise ratio; zone of search is adjustable from 2 to 30 miles out with an adjustable width of 2 to 30 miles for a maximum zone operation reach of 60 miles; on early warning it will operate out to radar's full reach; produces its own range rings for easy selection of search zone; notifies operator of radar failure; notifies operator of Raytector failure; gives constant "magic eye" indication of top echo-to-noise efficiency adjustment. Dimensions:

l. 15½", h. 10½", d. 9-1/8"; weight: 30 lbs.; power: 115 volts, 60 cycles, 100 Va. Raytector produces a steady or repeated alarm signal; is easy to install, simple to operate and will not interfere with normal radar operation.

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## New Duplexer Has High Reject Attenuation

D. S. Kennedy & Co. has introduced a duplexer having a reject attenuation greater than 100 db and designed for operation in the 755 to 985 mc band. It is especially suited to tropospheric scatter applications. The duplexer enables the same antenna to be used simultaneously for both transmitting and receiving. It is made of high strength aluminum alloy. The transmitter and receiver ports are equipped with transitions which are fitted with coaxial inputs.

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## 4-5 Digital Ohmmeters Give High Accuracy

Production of four and five-digit Digital Ohmmeters has been announced by Cubic Corp., San Diego electronics firm.

The new Ohmmeter, powered by Cubic Control Unit Model C-2, provides high accuracy on all ranges, Cubic says, plus or minus .01% and one digit for typical resistance measurements with the four-digit instrument for example.

Features include the incorporation of four input leads to avoid the effects of lead or contact resistance; an AC rejection filter which prevents induced



hum pickup; an open circuit test voltage of 10 volts maximum, which eliminates shock hazards and reduces resistor dissipation. Another feature, the addition of a resistor in the digital bridge, provides the instrument with the capability of calibration against standards up to 10% over full scale.

The firm says that only a small magnitude of current is drawn through the unknown resistance, because of unique bridge design and the incorporation of a highly sensitive null detector.

The Ohmmeter features Cubic's "controlled drive" stepping switches, with the switch turning off the drive circuit part way through the switch cycle, thus reducing the mechanical impact to a minimum and preventing the switches from being overdriven.

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## ... new products

### New Multifarious Core Storage Unit Is Versatile

A series of revolutionary random access data storage units is now available from Telemeter Magnetics, Inc., manufacturer of data equipment. These memory-buffer units offer addressable random access, sequential access, or a combination of both as desired.

Designated SERIES RB random access buffer units, they feature:

**Variable input output**—Will accept pulses or levels of either polarity and input may be changed during operation. Output is equally versatile. Accepts and emits single-ended or double-ended information. **Environment**—Reliable operation between 0° and 55°C, unaffected by humidity. **High speed**—200 kc operating rate. **Long term reliability**—Solid state active elements conservative derating of components advanced design and manufacturing techniques. **Wide range of capacities**—from 256 to 1024 words of from 4 to 20 bits per word. **Random or sequential access**—Addressable storage registers for regenerative read/write or buffer operation in a sequential nonregenerative mode. **Binary or decimal**—Either binary or binary coded decimal addressing.

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### Cathode Ray Tubes Have Ultra-High Resolution

The CBS-Hytron cathode ray tubes, primarily ultra-high resolution read out tubes or monitors, are designed for high precision display and photographic use. They are capable of resolving 2000 lines per inch. For a line scan of 4.5 inches in a 5 inch diameter tube, a total of 8000 lines can be achieved.

By the immersion electron optical design, the beam is controlled over its entire post-acceleration path. The half-deflection angle of 9.5° insures accurate deflection linearity with suitable yokes. Defocusing at the edge of the usable screen is less than 2.5%, but may be corrected to near zero by simple dynamic focusing. Some loss of resolution will occur at the extremes of deflection.

Tubes are available with P5 or P11 phosphor. These CR tubes are particularly suitable for photographic recording since the peak wavelengths of the phosphor fall within the blue region of the spectrum (4300Å and 4600Å respectively).

Tubes are also available in P16 phosphor. P16 has a shorter persistence of 1 $\mu$ s permitting use of these tubes in flying spot scanner work.

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### Transmitter Is Designed for Space Satellites

An all-transistor 20 megacycle telemetering transmitter, designed for possible use in space satellites, and built by Philco Corp. for the U.S. Army is the first U.S. satellite transmitter to operate in the 20 mc band and it has the same type of modulation used by standard radio stations and amateur radio operators. It also has more power output and is more efficient than the transistorized transmitters used in present U.S. satellites.



Developed by Philco's Research division for the Army Ordnance Missile Command, the satellite transmitter weighs less than 10 ounces, is five inches in diameter and one inch high.

New Philco high frequency power transistors made it possible to build this telemetering transmitter which provides up to one watt of output power. This is in contrast to one-to-two hundredths of a watt of output from transistorized transmitters in present U.S. satellites.

These power transistors, developed especially for the 20 mc transmitter by Philco's Lansdale Tube division, are used instead of bulky vacuum tubes which require large batteries of short life span.

Another transistor advantage is that nearly one half of the power taken from a satellite's batteries, which operate the transmitter, is radiated as radio frequency energy. This is important since electrical power is limited and precious in an orbiting space satellite.

The Philco satellite transmitter is capable of operating at high efficiency in outer space within a temperature range of 5 to 187 degrees Fahrenheit.—It consists of three sections:

**Oscillator**—Uses one Philco high frequency power transistor in crystal controlled oscillator circuit.

**Power Amplifier**—Uses four Philco high frequency power transistors in parallel. Power gain of amplifier is 8 to 10 db.

**Modulator**—Uses one Philco transistor as audio amplifier-driver and two transistors in Class B push-pull. Power gain of the modulator is in excess of 50 db. Modulation is applied to the collector of the RF amplifier.

**Performance**—Power output is about 600 milliwatts unmodulated carrier; 830 milliwatts with full modulation (nominal operating conditions).

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### Oscillators for Missile Systems Are Pretuned

M F Electronics Co.'s series 101 and 102 fixed frequency RC pretuned sine wave oscillators are available in standard telemetering and decimal frequencies as stock items.

Oscillators are delivered from the factory set for the desired frequency; no external adjustments are required, thus reducing possibilities for misadjustment in final equipment. They become operative upon application of only one DC voltage (12 volts or 28 volts).

Resistance to mechanical shock and humidity is achieved by epoxy resin filling and the complete unit is hermetically sealed; oscillators may be operated under water. They are built in drawn metal cans of approximately 1½ cubic inches and may be conveniently mounted with two side flanges.

The 101 is distinguished from the 102 Series by difference in the frequency tolerance. The 101 has a total accuracy of  $\pm 5\%$ , while the 102 has a total accuracy of  $\pm 2\%$ . All oscillators are characterized by low distortion. Stability and functionality have been the two key factors in their development. Mechanical description: case-drawn steel, hot tin dipped; terminals—hermetic seal solder pin or hermetic noval connector; potting—epoxy resin; weight—35 grams nominal; storage temperature—minus 40 to plus 75°C.; operating temperature—minus 29 to plus 60°C.



The purpose of the packaged oscillator is to provide a reliable and stable frequency source, thereby allowing the systems designer to work with a black box with known performance.

Although rated for either 12 or 28 VDC, the 101 and 102 Series are operable with the wide range of supply voltages which might be expected during a typical battery life. With a nominal 12 volt source, the 101 or 102 should be chosen, while the 101A and 102A are intended for use with aircraft battery voltages of from 24 to 32 volts.

Oscillators will find their greatest use in aircraft, space vehicle and portable ground equipment. Typical applications include: telemetry, balloons, water vessels, missiles, guidance systems, timing circuits, bridge circuits, and test equipment.

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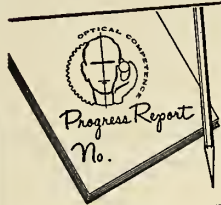
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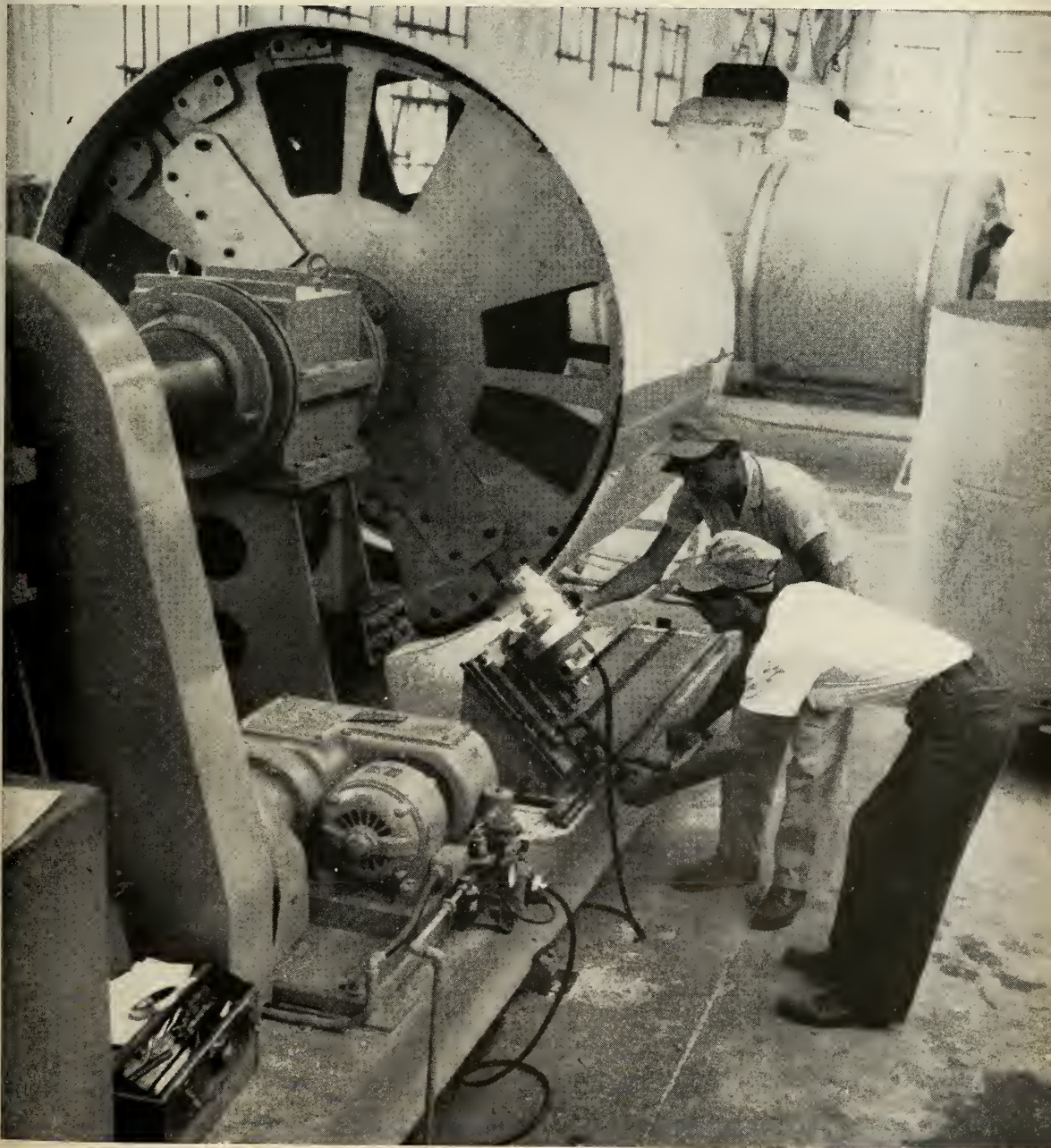
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# MATERIALS AND METALS

The chemicals, metals, and other materials from which missiles are made. This includes the processes which form these materials into the various parts of the missile.



# LAVELLE

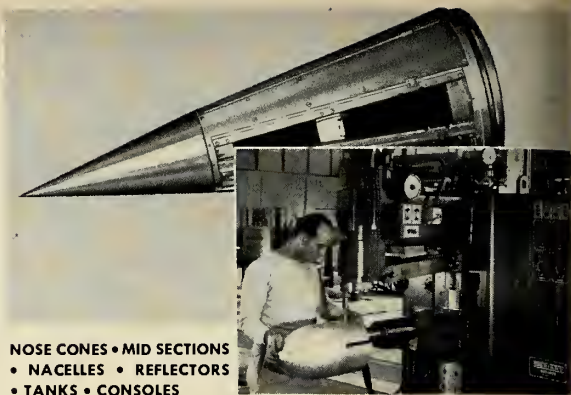
## SPECIALISTS IN ROCKET, MISSILE, JET ENGINE, AIRFRAME AND ELECTRONIC COMPONENT FABRICATION

Sheet metal parts and assemblies precision welded, machined, and processed to your specifications by certified men, methods and machines . . . of stainless steel, titanium, aluminum, and heat resistant, high strength nickel alloys.

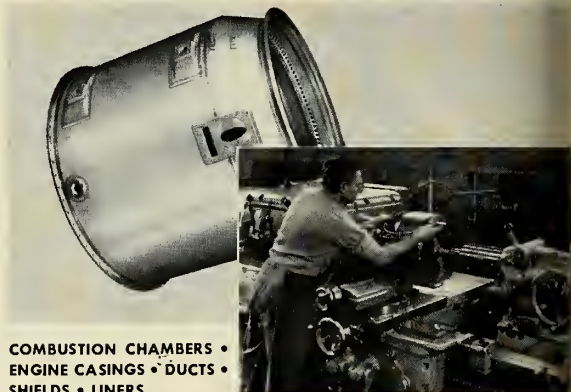
Weldments fabricated by resistance, inert gas shielded arc, metallic arc and oxyacetylene welding. X-ray, Zyglon and Magnaflux methods of non-destructive inspection are used to establish and control weld quality.

Services include engineering, production planning, tool making, sheet metal fabricating facilities, machine shop, anodizing, painting and quality control.

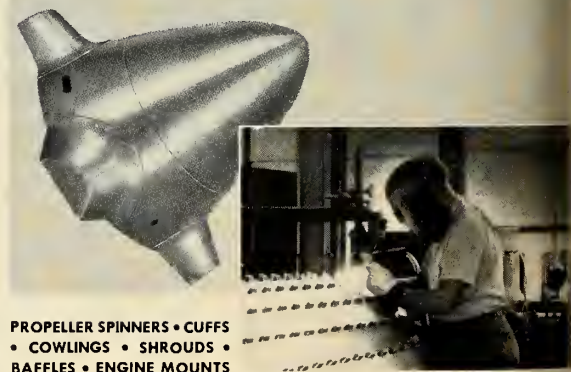
For components requiring precision fabrication, quality workmanship, dependable delivery . . . at reasonable cost . . . contact Lavelle.



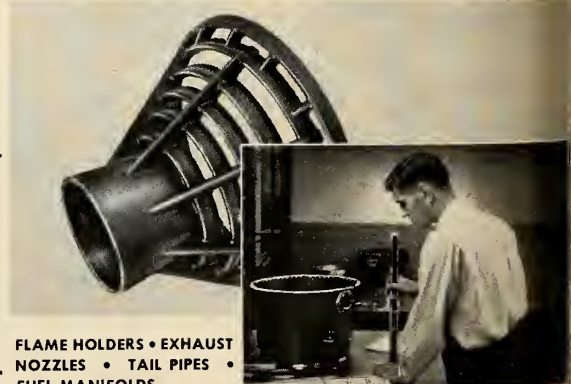
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• NACELLES • REFLECTORS  
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*Between Philadelphia, Pa., and Trenton, N. J.*

# New Products

• materials and metals

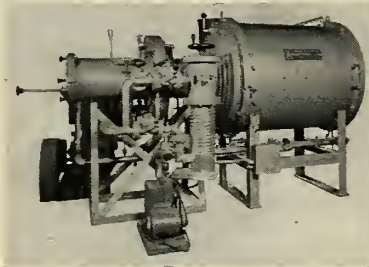
## PRODUCTION FURNACE IS INTERNALLY HEATED

High Vacuum Equipment Corp. 3000 Series furnaces are internally heated vacuum or controlled atmosphere furnaces capable of continuous operation at 3000F at a vacuum of  $10^{-5}$  mm Hg or less, or for operation with an inert gas at 2500F. Four (4) models are available with any one of the following three (3) uniform hot zones: 4x8, 6x12, or 6x24 inches, depending on diameter and length, respectively.

The basic unit (Model 1) comprises a standard 660 or 1800 cfm packaged pumping system, with the end wall vacuum furnace installed on top. Furnace is water jacketed and consists of a stainless steel inner shell and an outer stainless steel water jacket. The furnace elements are made of heavy molybdenum rod; the furnace chamber shields are made of molybdenum and stainless steel. Automatic temperature control is achieved by means of a variable core reactor, available with either an indicating or recording controller. A hearth is provided for supporting the work load. A door with a viewing sight port is provided at one end for access to the working zone.

Necessary ports and fittings are included in the basic unit so that it can be converted in the future to any of the other three models.

Model 2 is identical to the basic unit with the addition of an externally mounted, water-cooled heat exchanger and blower to provide extremely fast cooling rates using inert atmosphere. This arrangement has the advantages of allowing the work load to remain stationary and permit fastening thermocouples directly to the work.



Model 3 is identical to the basic unit with the addition of a cooling zone and a water-cooled gate valve between furnace and cooling zone. Separate cooling zone permits vacuum and temperature to be maintained continually within the furnace since work may be loaded or unloaded using the cold zone as a 'vacuum lock' without breaking the furnace to atmosphere. This type system provides the fastest heating rates.

Model 4 is also identical to the basic unit except for the addition of a high vacuum gate valve and cooling zone with integral quench chamber. A variety of quench oils may be utilized to achieve desired heat treatment properties.

Models 3 and 4 are equipped with separate vacuum manifold and valve for independent evacuation of the chamber—thus, equalizing the vacuum between furnace and cold zone for semi-continuous operation. Both models contain a sliding seal in cooling chamber door to allow manipulation of a charging mechanism.

Fill in No. 150 on Subscriber Service Card.

## New Power Rollers Feature Magnetic Brake

A new series of six power-operated rollers with cam actuated idler roll and magnetic brake to prevent overcoasting has been introduced by O'Neil-Irwin Mfg. Co., makers of Di-Acro Precision Metalworking Machines.

Called Di-Acro Power Roller, each model features a magnetic brake which provides a positive stop enabling the operator to work to a scribed or hair line without having to try and compensate for the rolls coasting. According to the company, direction of the rolls can be switched backward, forward or stopped at anytime by tripping a foot control.

Perfect circles of any diameter larger than two inches can be formed in sheet material in just two passes through the rolls due to the cam actuated idler roll. Bends can be located at any point in sheet material with straight sections on one or both sides. This also enables quantities of parts to be accurately duplicated as the idler roll is always returned by the lower cam to its preset position.

Di-Acro Power Rollers are available in models with 12", 18", 30", 36" and 42" forming widths. Each model has a power unit with enclosed housing mounted to the side frame of the machine and connected directly to the upper and lower rollers through a series of machine cut gears.

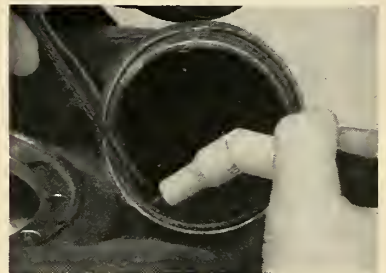
All forming rolls are ground and polished, the company said. Welded steel base extends the full length of the machine for permanent alignment of housing, bearings and rolls.

Standard equipment includes: calibrated rear roll indicators that enable the operator to adjust quickly the idler roll to a previous setting saving the time of rechecking the material for spring back; movable foot control, motor and all electrical equipment.

Fill in No. 151 on Subscriber Service Card.

## Arc Welding Torch Is Compact, Lightweight

The Wilson Equipment Corp., of Paterson, N.J., has developed an inert gas shielded arc welding torch that is extremely compact and lightweight. This torch is aircooled, weighs  $2\frac{3}{4}$  ozs. and handles currents from 5 to 150 amps. The overall head length of the angle torch (also available in straight model) is  $1\frac{3}{4}$ " with gas cup installed.



Durability is achieved by the use of laminated glass cloth and silicone resin to insulate the head. This material will neither char nor soften.

The lightweight cable remains flexible in all working temperatures, considerably reducing operator fatigue.

Fill in No. 152 on Subscriber Service Card.

## Swayne, Robinson & Co. Improves Casting

Swayne, Robinson & Co. announces the development of a process for producing molds for castings by the new CO<sub>2</sub> molding method. This new method is particularly suited for castings designed for ultimate cost reduction through the elimination of machining.

Key to success in the process, according to the company, is proper sand mix. Considerable tests were made to determine proper balance of sand, binder and release agent to produce castings with exceptional fidelity of detail.

Gassing of the mold, the firm stated, is generally more efficient and economical than the shell method of baking since molds are cured in a cold state. Also, there is less chance of dimensional change due to uneven cooling in sections of varying thickness as in shell mold baking.

Fill in No. 153 on Subscriber Service Card.

## ... new products

### Subminiature Tool Makes Wire Wrapping Easy

The difficult problem of connecting wires to subminiature tube sockets and transistor sockets can be made easy with the subminiature wire wrapping tool manufactured by Winkler Laboratories. The tool makes secure electrical and mechanical connections.

The operation is extremely fast, very simple, and almost obvious. It takes three simple steps.

1. The end of the wire to be wrapped is inserted in the off-center hole of the tool.

2. The center hole of the tool is placed over the socket terminal to provide mechanical alignment.

3. The tool is spun with the fingers, wrapping the wire around the terminal.

During the wrapping, the wire is drawn out of the off-center hold. The rib on the end of the tool wraps the end of the wire neatly against the terminal; it is shaped to prevent snagging at the start of the wrapping operation. As the wrapping progresses, the tool is allowed to push itself away from the terminal. After wrapping, the connections may be soldered easily.

The difficulty of connecting wires to subminiature sockets has undoubtedly influenced other alternatives such as using printed circuit techniques and wiring tubes and transistors directly into the circuit. There is neither strength nor room to wrap size 22 awg (0.025 in. diameter) wire around terminals which are approximately 0.017 in. thick by 0.035 in. wide and spaced 0.096 in. center to center. It might be better to wrap the terminal around the wire. The practice of mounting components directly to subminiature socket terminals is similarly impractical; half watt resistors have size 20 (0.032 in. diameter) leads. For good joints, here are the important considerations.

The conductor must be consistent in size with the terminal and its spac-

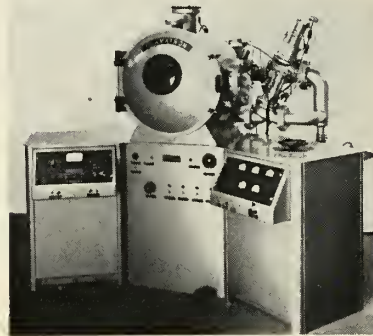
ing. This can be accomplished if 28 awg wire is used. Under no circumstances should wire larger than size 26 be used.

Some acceptable means must be available to secure mechanically the wire to the terminal.

Fill in No. 154 on Subscriber Service Card.

### Production Welder Uses High Velocity Electrons

High Vacuum Equipment Corp., manufacturer of vacuum processing equipment, has introduced a production welder utilizing the concentrated energy of a focused beam of high velocity electrons to weld metals.



These new welders, termed BEAMATRON will be used to weld those high temperature reactive metals and super-alloys important in today's nuclear, electronic and missile hardware. They are capable of welding metals ranging from aluminum to zirconium. By this process, it is possible to weld tungsten, tantalum or molybdenum to each other or to other metals, with results unobtainable by previously known methods.

The use of electrons in welding is possible only in a high vacuum, hence the union of electronic and vacuum techniques to produce a new welding process.

BEAMATRON equipment is effective in applications involving metals which react unfavorably with minute

amounts of oxygen, nitrogen or hydrogen. It is a notable improvement over other welding processes such as the dry-box or shielded arc. Operator in high vacuum provides the most inert atmosphere—an atmosphere many times more pure than the best commercially available inert gases. Because most impurities trapped in metal become volatile in the high operating vacuum of the BEAMATRON, the entire weld zone, not just the surface is purified. The net result is a weld joint with physical properties and life expectancies which cannot be obtained by other means. At the same time the unit cost of such items as nuclear fuel jackets and electronic parts is reduced by the elimination of costly shielding atmospheres and the reduction of re-jects.

Fill in No. 155 on Subscriber Service Card.

### Uniweld Process Offered for Space Vehicles

Menasco Manufacturing Co. has successfully applied its Uniweld process to extremely light weight spherical and cylindrical pressure vessels for space age vehicles.

Qualification testing to rigid customer specifications have been completed on several sizes of vessels constructed of both titanium alloy and high heat treat steels. Among the more unique of these is a cylindrical tank believed to be the largest yet made of titanium alloy. Approximately 9 1/2 inches in length and 14 inches in diameter, it contains liquid helium at 3,900 pounds per square inch pressure and yet weighs only 275 pounds.

While Menasco has produced over 6,000 missile pressure vessels, these new vessels represent the first application of Uniweld to tanks utilizing the latest in high strength, low weight materials. The consistent high strength of the Uniwelds, made under completely automatic machine control, also allows the company to offer a vessel with the maximum in reliability factor which is so extremely important in the space travel industry.

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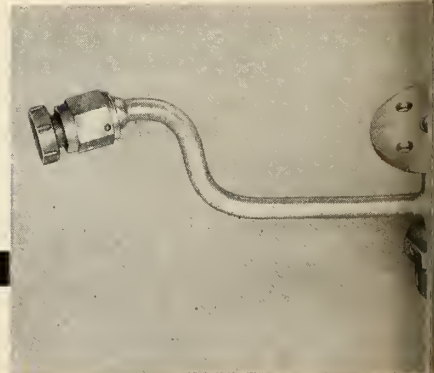
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# MATERIALS AND METALS

## Product Directory

Since Materials and Metals is a new category with this edition, a complete listing of products and manufacturers is listed within this section rather than in the MISSILE PRODUCT DIRECTORY, which appears in the last part of this book. As with the regular Product Directory, company names and addresses can be found in the MISSILE PURCHASING DIRECTORY which begins on page 111.

### ALLOYS, HIGH PERMEABILITY

Accurate Specialties Co. Inc.  
Alad Aluminum Ladder Corp.  
Al Baro Metal Products Co., Inc.  
Allegheny Ludlum Steel Corp.  
Alloys Unlimited Inc.  
Aluminum Co. of America  
American Hinge Corp.  
American Silver Co.  
Arnold Engr. Co., The  
**AVCO MFG. CORP., NASHVILLE DIV.**  
Belmont Smelting & Refining Works, Inc.  
Benson Mfg., Co., The  
Bishop & Co., Platinum Works  
Bond Metal Surplus Co.  
Bram Metallurgical & Chemical Co.  
Bridgeport Brass Co.  
Byrne Doors Inc.  
Carpenter Steel Co., The  
Consolidated Wire & Associated Companies  
Continental Metals, Inc.  
Crucible Steel Co. of America  
Delta Chemical Works, Inc.  
Electric Steel Foundry Co.  
Electronic Parts Mfg. Co., Inc.  
Hamilton Watch Co.  
Hamilton Watch Co.—Industrial Div.  
Jandy & Harman  
International Nickel Co., The  
Jorle M. Jorgensen Co.  
Kelsey Hayes Co.  
Largest Industries—Div. Thompson Ramo Wooldridge Inc.  
Lucas Aircraft Supply Co.  
Magnetic Shield Div. Perfection Mica Co.  
Mercast Mfg. Corp.  
Nesor Alloy Products Co.  
Peregrine Mfg. Inc.  
Pw. Remberg & Sons Co.  
Joseph T. Ryerson & Son, Inc.  
Schenck Roller Bearing Co., The  
S. Steel Supply Div., United States Steel Corp.  
Universal Cyclops Steel Corp.  
Walscovey-Ramet Corp.  
Yalmer Alloys Co., Div. Consolidated Foundries & Mfg. Corp.  
Waukesha Foundry Co.  
Western Gold & Platinum Co.  
Westinghouse Electric Corp.  
Westinghouse Electric Corp., Metals Plant

### ALUMINUM

Accurate Specialties Co. Inc.  
Anchor Metal Supply Inc.  
Advance Carbon & Electric Mfg. Co.  
Alloys Unlimited Inc.  
American Brazing Alloys Co.  
American Nickel Alloy Mfg. Corp.  
American Silver Co.  
American Smelting & Refining Co.  
Anchor Metal Co. Inc.  
**AVCO MFG. CORP., NASHVILLE DIV.**  
Avcon Foundry Corp.  
Ayer Steel & Tube Co.  
Belmont Smelting & Refining Works, Inc.  
Bridgeport Brass Co.  
Chase Brass & Copper Co., Inc.  
Continental Metals, Inc.  
Copperweld Steel Co., Wire & Cable Div.  
Dalweld Co. Inc.  
Delta Chemical Works, Inc.  
Evcon Corp.  
Doehler-Jarvis Div., National Lead Co.  
Empire State Aluminum Corp.  
Franson Orban Co., Inc.  
Hamilton Watch Co.—Industrial Div.  
Harvey Aluminum  
Nesor Alloy & Chemical Sales, Inc.  
Largest Industries—Div.—Thompson Ramo Wooldridge Inc.  
Hit Metals, Inc.  
Lucas Aircraft Supply Co.  
**LYCOMING DIV., AVCO MFG. CORP.**  
Mason Co., Inc., The  
Mueller Brass Co.  
National Metallurgical Corp.  
Nesor Alloy Products Co.  
Ohio Precision Castings, Inc.  
H. Paul & Stein Brothers, Inc.  
Peerless Machine Co.  
Precision Castings, Inc.  
Precision Shapes, Inc.  
Precision Tube Co., Inc.  
Arnolds Metals Co.  
Reynolds Metals Inc.  
Scovill Mfg. Co.  
Wayne, Robinson & Co.  
United Mineral & Chemical Corp.  
Union Brass Corp. of America  
Union Bronze & Aluminum Co.  
Wisconsin Aluminum Foundry Co., Inc.

### ANTIMONY

Accurate Specialties Co. Inc.  
Alloys Unlimited Inc.  
American Nickel Alloy Mfg. Corp.  
American Smelting & Refining Co.  
Barium & Chemicals, Inc.  
Bow Solder Products Co., Inc.  
Bram Metallurgical & Chemical Co.  
Division Lead Co.  
Lamtex Industries, Inc.  
Matheson Co., Inc., The  
National Lead Co.  
Nesor Alloy Products Co.  
Ohio Semiconductors, Inc.  
Raybestos-Manhattan, Inc.  
United Mineral & Chemical Corp.

### ASBESTOS

Abasto Corp.  
Allard Plastics Supply Corp.  
American Smelting & Refining Co.  
Armstrong Cork Co.  
Auburn Mfg. Co., The  
Eagle-Fisher Co., The  
Electrical Insulation Co., Inc.  
Gatke Corp.  
General Gasket Inc.  
Johns-Manville  
Johns-Manville Sales Corp.  
Matheson Co., Inc., The  
Raybestos-Manhattan, Inc., Pa.  
Union Asbestos & Rubber Co.  
United States Rubber Co.  
Zippertubing Co., The

### ASPHALT

Ashland Oil & Refining Co.  
Belmont Smelting & Refining Works, Inc.  
Delta Chemical Works, Inc.  
Esso Standard Oil Co.  
Matheson Co., Inc., The  
Zophar Mills Inc.

### BARIUM

Alloys Unlimited Inc.  
Barium & Chemicals, Inc.  
Belmont Smelting & Refining Works, Inc.  
Bram Metallurgical & Chemical Co.  
Consolidated Wire & Associated Companies  
Delta Chemical Works, Inc.  
Matheson Co., Inc., The  
Mercast Mfg. Corp.  
United Mineral & Chemical Corp.

### BERYLLIUM

Accurate Specialties Co. Inc.  
American Beryllium Co.  
Belmont Smelting & Refining Works, Inc.  
Beryllium Corp., The  
Bios Labs, Inc.  
Bram Metallurgical & Chemical Co.  
Bridgeport Brass Co.  
Brush Beryllium Co., The  
Damascus Tube Co.  
**\*LYCOMING DIV., AVCO MFG. CORP.**  
P. R. Mallory & Co. Inc.  
Metals & Controls Corp., General Plate Div.  
Miniature Precision Bearings, Inc.  
Nesor Alloy Products Co.  
Ohio Precision Castings, Inc.

### BORON

Accurate Specialties Co. Inc.  
Alloys Unlimited Inc.  
**\*AMERICAN POTASH & CHEMICAL CORP.**  
Belmont Smelting & Refining Works, Inc.  
Bond Metal Surplus Co.  
Bram Metallurgical & Chemical Co.  
Galley Chemical Co.  
Dalweld Co. Inc.  
George K. Garrett Co., Inc.  
Lucas Aircraft Supply Co.  
Matheson Co., Inc., The  
Norton Co., New Products Dept.  
Shenango Furnace Co., The, Centrifugally Cast Products Div.  
Waukesha Foundry Co.

### BRASS

Advance Carbon & Electric Mfg. Co.  
American Brake Shoe Co.  
American Brass Co., The  
American Hinge Corp.  
American Silver Co.  
American Smelting & Refining Co.  
Beaurum Metals Corp.  
Belmont Smelting & Refining Works, Inc.

Bond Metal Surplus Co.  
Bram Metallurgical & Chemical Co.  
Bridgeport Brass Co.  
Bristol Brass Corp., The  
Chase Brass & Copper Co., Inc.  
Dalweld Co. Inc.  
Damascus Tube Co.  
Doehler-Jarvis Div., National Lead Co.  
Franson Orban Co., Inc.  
George K. Garrett Co., Inc.  
Hamilton Watch Co.—Industrial Div.  
Harvey Aluminum  
Mercast Mfg. Corp.  
Mueller Brass Co.  
Nesor Alloy Products Co.  
Ohio Precision Castings, Inc.  
Peerless Machine Co.  
Phelps Dodge Copper Products Corp.  
Precision Shapes, Inc.  
Scovill Mfg. Co.  
Shenango Furnace Co., The, Centrifugally Cast Products Div.  
Somers Brass Co. Inc.  
Titan Metal Mfg. Co.  
Waukesha Foundry Co.  
Wisconsin Aluminum Foundry Co., Inc.

### BRONZE

American Brake Shoe Co.  
American Brass Co., The  
American Hinge Corp.  
American Silver Co.  
American Smelting & Refining Co.  
Ampco Metal, Inc.  
Beaurum Metals Corp.  
Belmont Smelting & Refining Works, Inc.  
Bond Metal Surplus Co.  
Bram Metallurgical & Chemical Co.  
Bridgeport Brass Co.  
Bristol Brass Corp., The  
Chase Brass & Copper Co., Inc.  
Consolidated Wire & Associated Companies  
C. Lee Cook Co., Airtomic Products Div.  
Dalweld Co. Inc.  
Damascus Tube Co.  
George K. Garrett Co., Inc.  
Hamilton Watch Co.—Industrial Div.  
Lucas Aircraft Supply Co.  
Mercast Mfg. Corp.  
Mueller Brass Co.  
Nesor Alloy Products Co.  
Ohio Precision Castings, Inc.  
Peerless Machine Co.  
Phelps Dodge Copper Products Corp.  
Precision Shapes, Inc.  
Randall Graphite Bearings, Inc.  
Saginaw Bearing Co.  
Scovill Mfg. Co.  
Somers Brass Co. Inc.  
Titan Metal Mfg. Co.  
Wisconsin Aluminum Foundry Co., Inc.

### BRONZE, PHOSPHOR

American Brass Co., The  
American Brazing Alloys Co.  
American Silver Co.  
Ampco Metal, Inc.  
Belmont Smelting & Refining Works, Inc.  
Bios Labs, Inc.  
Bram Metallurgical & Chemical Co.  
Bridgeport Brass Co.  
Chase Brass & Copper Co., Inc.  
Damascus Tube Co.  
George K. Garrett Co., Inc.  
Hamilton Watch Co.  
Hamilton Watch Co.—Industrial Div.  
Lucas Aircraft Supply Co.  
Mueller Brass Co.  
Nesor Alloy Products Co.  
Precision Shapes, Inc.  
Randall Graphite Bearings, Inc.  
Saginaw Bearing Co.  
Scovill Mfg. Co.  
Somers Brass Co. Inc.  
Wisconsin Aluminum Foundry Co., Inc.

### CADMIUM

Accurate Specialties Co. Inc.  
Allied Research Products, Inc.  
Alloys Unlimited Inc.  
American Silver Co.  
American Smelting & Refining Co.  
Anchor Metal Co., Inc.  
Belmont Smelting & Refining Works, Inc.  
Bios Labs, Inc.  
Bram Metallurgical & Chemical Co.  
Bridgeport Brass Co.  
Division Lead Co.

Eagle Picher Co. The  
Hamilton Watch Co.—Industrial Div.  
Lucas Aircraft Supply Co.  
P. R. Mallory & Co. Inc.  
Matheson Co., Inc. The  
Nesor Alloy Products Co.  
United Mineral & Chemical Corp.

## CALCIUM

Alloys Unlimited Inc.  
Beryllium Corp., The  
Bios Labs., Inc.  
Bram Metallurgical & Chemical Co.  
Matheson Co., Inc. The  
Metal Hydrides Inc.  
Republic Lens Co. Inc.  
Union Carbide Metals Co., Div.—Union Carbide Corp.

## CARBIDES

Allaghey Ludlum Steel Corp.  
Bram Metallurgical & Chemical Co.  
Carbone Corp., The  
Carborandum Co., Refractories Div.  
Firth Sterling Inc.  
General Electric Co., Metallurgical Products Dept.  
Kennametal Inc.  
Linde Co., Div.—Union Carbide  
Lucas Aircraft Supply Co.  
National Lead Co.  
Norton Co.  
Norton Co., New Products Dept.  
Union Carbide Metals Co., Div.—Union Carbide Corp.  
United Mineral & Chemical Corp.  
Vascoloy Ramet Corp.  
Wayne Pump Co., The, Div.—Symington Wayne Corp.

## CARBON

American Nickel Alloy Mfg. Corp.  
Bornebey-Cheney Co.  
Carbone Corp., The  
Delta Chemical Works Inc.  
Great Lakes Carbon Corp.—Electrode Div.  
Helsberg Carbon Products, Inc.  
Kalsac Industries—Div. Thompson Ramo Wooldridge Inc.  
Louthan Mfg. Co., The, Div.—Ferro Corp.  
Morgante, Inc.  
Ohio Carbon Co., The  
Peerless Machine Co.  
Joseph T. Ryerson & Son, Inc.  
St. Marys Carbon Co.  
Stackpole Carbon Co.  
Superior Carbon Products, Inc.  
United Carbon Products Co.

## CERAMICS

Aerajet General Corp.  
American Lava Corp.  
American Refractories & Crucible Corp.  
Auburn Spark Plug Co., Inc.  
\*BENDIX PRODUCTS DIV., BENDIX AVIATION CORP.  
Beryllium Corp., The  
Bios Labs., Inc.  
Carbone Corp., The  
Carborandum Co., Labroba Plant, Refractories Div.  
Carborandum Co., Refractories Div.  
Centralab, Div.—Globe Union  
Cooper Development Corp., Sub.—Marquardt Aircraft Co.  
Corning Glass Works  
Curtiss-Wright Corp., Research Div.  
Curtiss-Wright Corp., Santa Barbara Div.  
Diamond Products Mfg. Co.  
Dyrac Products Inc.  
Dyna-Therm Chemical Corp.  
Electric Auto-Lite Co., The  
Electrical Refractories Co., The  
Emerson & Cuming, Inc.  
General Electric Co., Insulator Dept.  
General Electric Co., Metallurgical Products Dept.  
\*Gladding, McBean & Co.  
Haveg Industries, Inc.  
Haynes Stellite Co., Div.—Union Carbide Corp.  
International Resistance Co.  
Isolanite Mfg. Corp.  
Linde Co., Div.—Union Carbide  
Maryland Lava Co.  
Metalizing Co. of Los Angeles Inc.  
Minneapolis-Honeywell Regulator Co., Ordnance Div.  
Minnesota Mining & Mfg. Co.  
Mitrans Inc.  
Mitsubishi Inc., Military Electronics Div.  
National Beryllia Corp.  
National Lead Co.  
Norton Co.  
Norton Co., New Products Dept.  
Pittsburgh Corning Corp.  
Rohrer Design Corp.  
Rogers Corp.  
Thermal Refractories Corp.  
Topper Mfg. Co., Inc.  
Trionics Corp.  
United Mineral & Chemical Corp.  
Vascoloy Ramet Corp.  
Western Gold & Platinum Co.  
Zirconium Corp. of America

## CESIUM

Accurate Specialties Co. Inc.  
Alloys Unlimited Inc.  
\*AMERICAN POTASH & CHEMICAL CORP.  
Belmont Smelting & Refining Works, Inc.  
Bios Labs., Inc.  
Bram Metallurgical & Chemical Co.  
Matheson Co., Inc. The  
United Mineral & Chemical Corp.

## CHEMICALS, DEHUMIDIFYING

Aluminum Co. of America  
Barium & Chemicals, Inc.

Belmont Smelting & Refining Works, Inc.  
Bios Labs., Inc.  
Borden Chemical Co.  
Dow Chemical Co., The  
Driarie, Inc.  
Fisher Scientific Co.,  
Foote Mineral Co.  
Matheson Co., Inc. The  
Merix Chemical Co.  
Metal Hydrides Inc.  
United Mineral & Chemical Corp.

## CHEMICALS, ELECTROPLATING

### \* ALLIED CHEMICAL CORP., GENERAL CHEMICAL DIV.

Allied Research Products, Inc.  
American Smelting & Refining Co.  
J. T. Baker Chemical Co.  
Barium & Chemicals, Inc.  
Belmont Smelting & Refining Works, Inc.  
J. Bishop & Co., Platinum Works  
Delta Chemical Works, Inc.  
E. I. Du Pont de Nemours & Co. Inc.  
Engelhard Industries, Inc.  
Penetone Co., The  
Sel-Rex Corp.  
Shell Chemical Corp., Industrial Chemicals Div.  
Wildberg Bros. Smelting & Refining Co.  
Wyandotte Chemicals Corp.

## CHROMIUM

Alloys Unlimited Inc.  
American Nickel Alloy Mfg. Corp.  
Bram Metallurgical & Chemical Co.  
Hoskins Mfg. Co.  
Kalsac Industries—Div. Thompson Ramo Wooldridge Inc.  
Matheson Co., Inc. The  
Joseph T. Ryerson & Son, Inc.  
Union Carbide Metals Co., Div.—Union Carbide Corp.  
United Mineral & Chemical Corp.  
Vanadium Corp. of America

## CLOTH, GLASS

Aerajet-General Corp.  
Allied Plastics Supply Corp.  
American Machine & Foundry Co., Government Products Group  
Auburn Mfg. Co., The  
Aviation Textile Associates  
Bellforam Corp.  
Birma Mfg. Co. Inc.  
Coast Mfg. & Supply Co.  
Continental Can Co., Inc.  
C. R. Daniels, Inc.  
Dyracote Corp.  
Eagle-Picher Co., The  
Electro Technical Products Div. Sun Chemical Corp.  
Emmco Plastic Fabricators—Div.—E. M. McCarthy Machine Co.  
Haveg Industries, Inc.  
Johns-Manville  
Minnesota Mining & Mfg. Co.  
Reinhold Engrg. & Plastics Co.  
St. Regis Paper Co., Panelyte Div.

## CLOTH, PLASTIC

Aerajet-General Corp.  
Allied Plastics Supply Corp.  
Auburn Mfg. Co., The  
Aviation Textile Associates  
Blossom Mfg. Co. Inc.  
Cordo Chemical Corp.  
C. R. Daniels, Inc.  
Dyracote Corp.  
Electrical Insulation Co., Inc.  
Emmco Plastic Fabricators—Div.—E. M. McCarthy Machine Co.  
General Plastics Corp. of New Jersey  
Johns-Manville  
Kresslik Products, Inc.  
Minnesota Mining & Mfg. Co.  
New York Rubber Corp.  
Plastic Film Co., Inc.  
St. Regis Paper Co., Panelyte Div.  
Schlegel Mfg. Co.  
United States Rubber Co.  
Zippertubing Co., The

## CLOTH, RUBBERIZED

Asbeta Corp.  
Auburn Mfg. Co., The  
Aviation Textile Associates  
J. Bishop & Co., Platinum Works  
Cordo Chemical Corp.  
C. R. Daniels, Inc.  
E. I. Du Pont de Nemours & Co. Inc.  
Dyracote Corp.  
Emmco Plastic Fabricators—Div.—E. M. McCarthy Machine Co.  
Gatke Corp.  
Goodyear Tire & Rubber Co., The, Aviation Products Div.  
Hewitt Robbins, Inc.  
Johns-Manville  
Minnesota Mining & Mfg. Co.  
Permacel  
Raybestos Manhattan, Inc. Pa.  
Rez. Coat of California  
Schlegel Mfg. Co.  
United States Rubber Co.

## CLOTHS, WOVEN WIRE

Aviation Textile Associates  
Birma Mfg. Co. Inc.  
Buffalo Wire Works Co., Inc.  
Chose Brass & Copper Co., Inc.  
Flock Process Co., Inc.  
Goodyear Tire & Rubber Co., The, Aviation Products Div.  
Hewitt Robbins, Inc.  
International Nickel Co., The

Kresslik Products, Inc.  
Lofstrand Co., The  
National-Standard Co.  
Republic Steel Corp.  
Schlegel Mfg. Co.

## COATINGS

- Conductive-tube interior
- Finishing
- High temperature
- Printed circuit
- Protective
- Salt spray resistance
- Special purpose

Acheson Cellulose Co., Div.—Acheson Industries, Inc., a, c, d.  
Aerajet General Corp., c, g.  
Allied Research Products, Inc., b, e, f, g.  
American Latex Products Corp., c, e, f, g.  
American Optical Co., Instrument Div., g.  
American Rocket Co., b, e, g.  
American Solder & Flux Co., e, f.  
Arco Co., The, b, e, f, g.  
Artes Laboratories, Inc., c thru g.  
Ashland Oil & Refining Co., e, f, g.  
Atlas Precision Products, Co., b, e.  
Bart Mfg. Corp., e, f, g.  
George Bosch Co., The, e, g.  
Belmont Smelting & Refining Works, Inc., g.  
\*BENDIX PRODUCTS DIV., BENDIX AVIATION CORP., c, e, f, g.  
Carl H. Biggs Co., b thru g.  
J. Bishop & Co., Platinum Works, h.  
Borden Chemical Co., a, b, c, e, f, g.  
Carboline Co., e, f, g.  
Carbone Corp., The, c.  
Carborandum Co., Refractories Div., c, g.  
Chemplast, Inc., c, g.  
Columbia Technical Corp., b thru g.  
Consolidated Electrodynamics Corp., c.  
Cordo Chemical Corp., e, f, g.  
Curtiss-Wright Corp., Research Div., c.  
Curtiss-Wright Corp., Santa Barbara Div., c, g.  
Delta Chemical Works, Inc., a thru g.  
Devcon Corp., e, f, g.  
Division Lead Co., d.  
\*DOW CORNING CORP., c, e, g.  
E. I. Du Pont de Nemours & Co. Inc., a thru g.  
Dyracote Corp., e, f, g.  
Duralith Corp., e, f, g.  
Dyna-Therm Chemical Corp., c, f, g.  
Eagle-Picher Co., The, b, c, e.  
Eastman Kodak Co., d.  
Eaton Electronics Corp., d.  
Ed-Berl Products, Inc., c, e, f.  
Electro Technical Products Div. Sun Chemical Corp., c.  
Emerson & Cuming, Inc., a thru g.  
Emmco Plastic Fabricators—Div.—E. M. McCarthy Machine Co., b, e, g.  
Engelhard Industries, Inc., d, e.  
Esso Standard Oil Co., e, f, g.  
Fidelity Chemical Products Corp., d, f, g.  
Fluorocarbon Co., The, g.  
Fluorulon Labs., Inc., f, g.  
Furion Plastics, Inc., c thru f.  
General Plastics Corp. of New Jersey, c, g.  
F. F. Goodrich Industrial Products Co., d.  
Goodyear Tire & Rubber Co., The, Aviation Products Div., e, f.  
Grant Chemical Co., Inc., c, e, f, g.  
Green Rectifier Co., Inc.  
Gulton Industries, Inc., c, e.  
Haveg Industries, Inc., c.  
R. M. Houghtonhead Corp., e.  
F. F. Houghton & Co., e, f, g.  
Houghton Laboratories, Inc., d, e, g.  
Huntington Rubber Mills, e.  
Industrial Metal Protectives, Inc., e.  
Integrated Mica Corp., e, f, g.  
International Nickel Co., The, f, g.  
Johns-Manville, c, e, g.  
Kano Labs, b, e.  
Kinney Mfg. Div., The New York Air Brake Co., c, g.  
Kresslik Products, Inc., d.  
Krylon, Inc., a, b, d, e, f.  
Lebec Chemical Corp., c, e, f, g.  
Liberty Mirror Div., Libbey-Owens-Ford Glass Co., g.  
Linde Co., Div.—Union Carbide, b, c, e, g.  
London Chemical Co., Inc., c thru g.  
Maas & Waldstein Co., a, b, d thru g.  
Marbette Corp., The, d, e.  
Marquardt Aircraft Co., c.  
Merix Chemical Co., a, b, e, g.  
Metaltrao Lab., a, b, c, e, f, g.  
Metalizing Co. of Los Angeles Inc., c thru g.  
Metaplast Co. Inc.  
Micro-Circuits Co., e, f, g.  
Midland Industrial Finishes Co., a thru f.  
Minnesota Mining & Mfg. Co., d, e, g.  
Minnesota Mining & Mfg. Co.—Adhesives, Coating & Sealers Div., e, f, g.  
Minnesota Rubber Co., e.  
Mitrans Inc., a, c.  
Nemco Resins & Coatings Co., c, e.  
National Beryllia Corp., c.  
National Research Corp., c, f.  
Nesor Alloy Products Co., g.  
New England Tape Co., Div.—United Carr. Fastener Corp., a, e, g.  
Norton Co., c, e, g.  
Norton Co., New Products Dept., c, e, g.  
Optical Coating Lab., Inc., g.  
Penetone Co., The, g.  
Pennsalt Chemicals Corp., e, f.  
Permacel, c thru f.  
Joseph E. Podgor Co., Inc., a, d.  
Polymer Corp., The, b, e, f, g.  
Products Research Co., c thru g.  
Protex-A. Cate, Inc., b, c, e, f, g.

Raybestos-Manhattan, Inc., e.  
 Raybestos Manhattan, Inc., Pa., e.  
 Reinhold Engrg. & Plastics Co., c, e, g.  
 Republic Lens Co. Inc., e, g.  
 Saurisen Cements Co., c, e.  
 Sel-Rex Corp., d, g.  
 Serwell Products Co., g.  
 W. S. Shambaugh Co., d.  
 Sterrocin Corp., The, g.  
 Silicones Div.—Union Carbide Corp., c, e, f.  
 Skycroft Tool Engrg. Co., f.  
 Thiokol Chemical Corp., e.  
 Thomas Electronics, Inc., a, b.  
 Arthur Tickle Engrg. Works, Inc., c, e, g.  
 Topper Mfg. Co., Inc., a, c thru g.  
 Trionics Corp., c thru g.  
 Turco Products, Inc., e, f, g.  
 United States Chemical Milling Corp., d.  
 Vitro Labs., a, b, c, e, g.  
 Vorac Co., The, b, c, e, f, g.  
 Western Coating Co., e, g.  
 Westline Products Div.—Western Lithograph Co., f.  
 X-Pando Corp., e, f, g.  
 Zenith Optical Laboratory, g.  
 Zippertubing Co., The, a, c, e, f, g.  
 Zirconium Corp. of America, c.  
 Zophor Mills Inc., d thru g.

**JBALT**

Alloys Unlimited Inc.  
 American Nickel Alloy Mfg. Corp.  
 Belmont Smelting & Refining Works, Inc.  
 Brom Metallurgical & Chemical Co.  
 Delta Chemical Works, Inc.  
 Foote Mineral Co.  
 Haynes Stellite Co., Div.—Union Carbide Corp.  
 International Nickel Co., The  
 Kolcast Industries—Div. Thompson Rama Woolldridge Inc.  
 Matheson Co., Inc., The  
 Mercast Mfg. Corp.  
 National Lead Co.  
 Waimet Alloys Co., Div. Consolidated Foundries & Mfg. Corp.

**LUMBIUM METALS**

American Silver Co.  
 Belmont Smelting & Refining Works, Inc.  
 Brom Metallurgical & Chemical Co.  
 Bridgeport Brass Co.  
 Damascus Tube Co.  
 Delta Chemical Works, Inc.  
 Hamilton Watch Co.  
 Hamilton Watch Co.—Industrial Div.  
 Kennametal Inc.  
 Kolcast Industries—Div.—Thompson Rama Woolldridge Inc.  
**ALLOY-SHARON METALS CORP.**  
 Metals & Controls Corp., General Plate Div.  
 National Research Corp.  
 Somers Brass Co., Inc.  
 Tapco Group, Thompson Rama Woolldridge Inc.  
 Union Carbide Metals Co., Div.—Union Carbide Corp.  
 Universal-Cyclops Steel Corp.  
 Venadium Corp. of America  
 Waimet Alloys Co., Div. Consolidated Foundries & Mfg. Corp.  
 Westinghouse Electric Corp., Metals Plant

**MPOUNDS**

- a. Calking & sealing
- b. Electrical insulating & sealing
- c. Encapsulating
- d. Impregnating
- e. Molding
- f. Phenolic molding
- g. Potting
- h. Waterproofing

Acheson Colloids Co., Div.—Acheson Industries, Inc.  
 Adhesive Engr., Div.—Hiller Aircraft Corp.  
 b, c, g.  
 Alloys Unlimited Inc.  
 American Latex Products Corp., a, c, d, g, h.  
 Anchor Metal Co., Inc., a.  
 Arco Co., The, a, h.  
 Aries Laboratories, Inc., b, c, d, f.  
 Armstrong Cork Co., a, b, g, h.  
 Iacon Industries, Inc., c, d, g.  
 George Basch Co., The, d.  
 Belmont Smelting & Refining Works, Inc., g.  
 Carl H. Biggs Co., a thru e, g, h.  
 Jordan Chemical Co., a thru d, f, g, h.  
 Carbolite Co., a, h.  
 Carborundum Co., Refractories Div., a, b, c, g.  
 Chicago-Allis Mfg. Corp., d.  
 Ziba Products Corp., c, g.  
 Coast Mfg. & Supply Co., f.  
 Cooper Industries, Inc., a.  
 Curtiss-Wright Corp., Research Div., c.  
 Dayton Rubber Co., The, a, b, c, g, h.  
 Delta Chemical Works, Inc., a thru g.  
 Devcon Corp., a, b, c, g, h.  
**DOWN CORNING CORP., a thru d, g, h.**  
 E. I. Du Pont de Nemours & Co. Inc., a, b, c, g, h.  
 Duracite Corp., d, h.  
 Durez Plastics Div.—Hooker Chemical Corp., f.  
 Dyna-Therm Chemical Corp., c, d.  
 Eagle-Picher Co., The, h.  
 Engr. Co., a.  
 Id-Berl Products, Inc., h.  
 Emerson & Cuming, Inc., a thru d, f, g.  
 Ilurocarbon Co., The, b.  
 Iodate Mineral Co., c, e, g.  
 Iram-Tel Products, Inc., f, h.  
 Iurone Plastics, Inc., a thru d, f, g, h.  
 Grant Chemical Co., Inc., a thru d, f, g.  
 Hoveg Industries, Inc., b thru h.  
 Houghton Laboratories, Inc., b, c, d, g.  
 Johns-Manville, a, b, d, h.  
 Iomtex Industries, Inc., a, b, c, g, h.  
 Ibec Chemical Corp., d, f, g, h.

Leffingwell Chemical Co., g, h.  
 Magnetic Shield Div., Perfection Mica Co., e.  
 Marquette Corp., The, a, b, c, d, g.  
 Microcraft Products Inc., e.  
 Midland Industrial Finishes Co., g.  
 Minnesota Mining & Mfg. Co., a thru h.  
 Minnesota Mining & Mfg. Co.—Adhesives, Coating & Sealers Div., a, b, g, h.  
 Narmco Resins & Coatings Co.  
 National Engrg. Products, Inc., a, b, c, g.  
 New England Tape Co., Div.—United-Carr Fastener Corp., b, d, g, h.  
 Noppo Chemical Co., c, g.  
 Pennsil Chemical Corp., g.  
 Permaceal, a thru d, g, h.  
 Permatex Co., Inc., a.  
 Products Research Corp., a, b, c, g, h.  
 Protex-A-Cote, Inc., a thru d, g, h.  
 Raybestos-Manhattan, Inc., Pa., a, f, g, h.  
**\*REDEL INC., a.**  
 Reichhold Chemicals, Inc., f.  
 Reinhold Engrg. & Plastics Co., a, c, d, f, g.  
 Rez-Coat of California, f.  
 Saurisen Cements Co., a, b, c, f.  
 Seal-Peel, Inc., a, g, h.  
 Serwell Products Co., d.  
 Shell Chemical Corp., Industrial Chemicals Div., c, d, g.  
 Silicones Div.—Union Carbide Corp., a thru h.  
 Smooth-On Mfg. Co., a, b, c, g, h.  
 Special Projects Lab., Food Machinery & Chemical Corp., g.  
 Thiokol Chemical Corp., a, b, h.  
 Topper Mfg. Co., Inc., a thru d, g, h.  
 Trio Chemical Works, Inc., h.  
 Trionics Corp., g, h.  
 United States Rubber Co., c, d.  
 Westinghouse Electric Corp., b.  
 X-Pando Corp., a, c, h.  
 Zophor Mills Inc., a thru d, g, h.

**CONES, METAL**

American Brake Shoe Co.  
 Belmont Smelting & Refining Works, Inc.  
 Brooks & Perkins, Inc.  
 Consolidated Wire & Associated Companies  
 Delta Chemical Works, Inc.  
 Diverser Engrg. Co.  
 Dresser Industries, Inc.  
 Farwell Metal Fabricating  
 General Communication Co.  
 General Electric Co., Missile & Space Vehicle Dept.  
 Kaiser Aircraft & Electronics, Div.—Kaiser Industries Corp.  
 Kaiser Metal Products, Inc.—Fleetwings Div.  
 C. B. Kaupp & Sons, Inc.  
 Kelsey-Playes Co.  
 King Metal Spinning & Stamping Co.  
 Lukens Steel Co.  
**\*LYCOMING DIV., AVCO MFG. CORP.**  
 Metal Textile Corp., Electronics Div.  
 Nippert Electric Products Co., The  
 Peerless Machine Co.  
 Superior Spinning & Stamping Co.  
 United States Chemical Milling Corp.

**COPPER**

Acme Mfg. & Gasket Co.  
 Allied Research Products, Inc.  
 American Brass Co.  
 The American Brazing Alloys Co.  
 American Hinge Corp.  
 American Nickel Alloy Mfg. Corp.  
 American Silver Co.  
 Anchor Metal Co., Inc.  
 J. T. Baker Chemical Co.  
 Belmont Smelting & Refining Works, Inc.  
 Bond Metal Surplus Co.  
 Brom Metallurgical & Chemical Co.  
 Bridgeport Brass Co.  
 Chase Brass & Copper Co., Inc.  
 Copperweld Steel Co., Wire & Cable Div.  
 Destrone Metallurgical Corp.  
 Fromson Orban Co., Inc.  
 George K. Garrett Co., Inc.  
 Hamilton Watch Co.—Industrial Div.  
 Kensico Tube Co., Inc.  
 Matheson Co., Inc., The  
 Mueller Brass Co.  
 Phelps Dodge Copper Products Corp.  
 Precision Tube Co., Inc.  
 Sel-Rex Corp.  
 Standard Metals Corp.  
 Superior Carbon Products, Inc.

**CORK**

Acme Mfg. & Gasket Co.  
 Armstrong Cork Co.  
 Auburn Mfg. Co., The  
 General Gasket Inc.

**FABRIC**

Aero leather Products Co.  
 Bemis Brothers Bag Co.  
 Coast Mfg. & Supply Co.  
 Cooper Industries, Inc.  
 C. R. Daniels, Inc.  
 Duracate Corp.  
 Johns-Manville  
 Schlegel Mfg. Co.  
 W. S. Shambaugh & Co.  
 United States Rubber Co.

**FELT & FELT PARTS**

Acme Mfg. & Gasket Co.  
 Aero Leather Products Co.  
 American Felt Co.  
 Armstrong Cork Co.  
 Auburn Mfg. Co., The  
 Aviation Textile Associates  
 Booth Felt Co., Inc.

Boston Felt Co.  
 Commonwealth Felt Co.  
 Delta Chemical Works, Inc.  
 E. I. Du Pont de Nemours & Co. Inc.  
 Felters Co., The  
 General Gasket Inc.  
 National Felt Co.  
 W. S. Shambaugh & Co.  
 Western Felt Works & Acadia Synthetic Products Div.

**FERRIC OXIDES**

Columbian Carbon Co., Mapica Iron Oxides Unit  
 Delta Chemical Works, Inc.  
**\*KEARFOTT CO., INC.**  
 Matheson Co., Inc., The  
 The Minnesota Mining & Mfg. Co.  
 United Mineral & Chemical Corp.  
 Vitro Labs.

**FERRITES**

Crucible Steel Co. of America  
 Curtiss-Wright Corp., Research Div.  
 Curtiss-Wright Corp., Santa Barbara Div.  
 DBM Research Corp.  
 Ferroxcube Corp. of America  
**\*KEARFOTT CO., INC.**  
 Matheson Co., Inc., The  
 Motorola Inc., Military Electronics Div.  
 National Moldite Co.  
 Stackpole Carbon Co.  
 Trionics Corp.  
 United Mineral & Chemical Corp.  
 Vitro Labs.

**FIBER GLASS**

Aerojet-General Corp.  
 Air Logistics Corp.  
 Aircraft Porous Media, Inc.  
 Allied Plastics Supply Corp.  
 Almac Plastics Inc.  
 American Rocket Co.  
 Apex Reinforced Plastics, Div.—White Sewing Machine Corp.  
 Auburn Mfg. Co., The  
 Aviation Textile Associates  
 Coast Mfg. & Supply Co.  
 DBM Research Corp.  
 Duracate Corp.  
 Eagle-Picher Co., The  
 The Electrical Insulation Co., Inc.  
 Emcco Plastic Fabricators—Div.—E. M. McCarthy Machine Co.  
 Gustin-Bacon Mfg. Co.  
 Hardman Tool & Engrg. Co.  
 Hoveg Industries, Inc.  
 Johns-Manville  
 Johns-Manville Sales Corp.  
 Narmco Mfg. Co.  
 Reinhold Engrg. & Plastics Co.  
 W. S. Shambaugh & Co.  
 Skydyne, Inc.  
 Swedlow Inc.  
 H. I. Thompson Fiber Glass Co.  
 United States Chemical Milling Corp.  
 Universal Moulded Products Corp.  
 Wenzlau Engrg. Co.  
 Westinghouse Electric Corp.

**FIBER GLASS REINFORCED PLASTICS**

Aero Gasket Corp.  
 Aerojet-General Corp.  
 Air Logistics Corp.  
 Allied Plastics Supply Corp.  
 Almac Plastics Inc.  
 American Aerophysics Corp.  
 American Printed Circuits Co., Inc.  
 American Rocket Co.  
 Apex Reinforced Plastics, Div.—White Sewing Machine Corp.  
 Aristocrat Plastics, Inc.  
 Astrodyne, Inc.  
 Atkins & Merrill, Inc.  
 Carl H. Biggs Co.  
 Bonny Mfg. Corp.  
 Boston Insulated Wire & Cable Co.  
 Bow Solder Products Co., Inc.  
 Calflite Co., Inc.  
 Chemplast, Inc.  
 Coast Mfg. & Supply Co.  
 Colonial Aircraft Corp.  
 Columbia Products Co.  
 Continental Can Co., Inc.  
 Continental Diamond Fibre Corp.  
 Cordo Chemical Corp.  
 Crystal-X Corp.  
 Curtiss-Wright Corp., Santa Barbara Div.  
 DBM Research Corp.  
 Delta Products Div.—Air Accessories, Inc.  
 E. I. Du Pont de Nemours & Co. Inc.  
 Duracate Corp.  
 Durez Plastics Div.—Hooker Chemical Corp.  
 Electrical Insulation Co., Inc.  
 Electro Technical Products Div., Sun Chemical Corp.  
 Eljay Corp.  
 Emerson & Cuming, Inc.  
 Emerson Plastics Corp.  
 Emcco Plastic Fabricators—Div.—E. M. McCarthy Machine Co.  
 Engineered Plastics, Inc.  
 Form-It Products, Inc.  
 Franklin Fibre-Lamitex Corp.  
 General Plastics Corp. of New Jersey  
 Gering Products, Inc.  
 B. F. Goodrich Aviation Products  
 Goodyear Aircraft Corp.  
 Grant Chemical Co., Inc.  
 Hardman Tool & Engrg. Co.  
 Hoveg Industries, Inc.  
 Hays Mfg. Co.  
 Honeycomb Co. of America, Inc.  
 Jarvis Corp.

Joelin Mfg. Co.  
 Johns-Manville  
 Johns-Manville Sales Corp.  
 H. Koch & Sons  
 Lomax Industries, Inc.  
 Liss Products, Inc.  
 Lone Star Plastics Co.  
 Thomas J. Long, Inc.  
 Lunn Laminates, Inc.  
 Mansfield Fabricators Inc.  
 Marbena Corp., The  
 McMillan Industrial Corp.  
 Mica Insulator Div.—Minnesota Mining & Mfg., Co.  
 Milom Electric Mfg. Co.  
 Minnesota Mining & Mfg. Co.  
 Normco Mfg. Co.  
 Normco Resins & Coatings Co.  
 National Vulcanized Fibre Co.  
 New England Laminates Co., Inc.  
 Northern Plastics Corp.  
 Penn Fibre & Specialty Co., Inc.  
 Perry Plastics, Inc.  
 Plastic Age Sales, Inc.  
 Primbis Corp.  
 Raybestos-Manhattan, Inc., Pa.  
 Reinhold Engr. & Plastics Co.  
 Republic Aviation Corp.  
 Rogers Corp.  
 Russell Reinforced Plastics Corp.  
 Ryan Anatomical Co.  
 Scalle Co.—Div.—Wilson Bros.  
 W. S. Shambon & Co.  
 Skydyne, Inc.  
 Spaulding Fibre Co., Inc.  
 Specialty Engrg. & Electronics Co.  
 Stevens Products, Inc.  
 Swedlow, Inc.  
 H. I. Thompson Fiber Glass Co.  
 Topper Mfg. Co., Inc.  
 U. S. Fiber & Plastics Corp.  
 United States Chemical Milling Corp.  
 United States Plywood Corp.  
 United States Rubber Corp.  
 Universal Moulded Products Corp.  
 Wenzlau Engrg. Co.  
 Young Development Div., Hercules Powder Co.

#### FIBER, VULCANIZED

Acme Mfg. & Gasket Co.  
 Allied Plastics Supply Corp.  
 American Aerophysics Corp.  
 Auburn Mfg. Co., The  
 Boston Insulated Wire & Cable Co.  
 Comco Plastics Inc.  
 Continental Diamond Fibre Corp.  
 Electrical Insulation Co., Inc.  
 Engineered Plastics, Inc.  
 Formite Products, Inc.  
 Franklin Fibre-Lamites Corp.  
 General Gasket Inc.  
 Hoveg Industries, Inc.  
 Thomas J. Long, Inc.  
 Mansfield Fabricators Inc.  
 Milom Electric Mfg. Co.  
 National Vulcanized Fibre Co.  
 Penn Fibre & Specialty Co., Inc.  
 Rogers Corp.  
 Spaulding Fibre Co., Inc.  
 Taylor Fibre Co.  
 Wilmington Fibre Specialty Co.

#### GERMANIUM

Accurate Specialties Co. Inc.  
 Alloys Unlimited Inc.  
 Belmont Smelting & Refining Works, Inc.  
 Bram Metallurgical & Chemical Co.  
 Delta Chemical Works, Inc.  
 Eagle-Picher Co., The  
 Knapp Electro-Physics  
 Metals & Controls Corp., General Plate Div.  
 Motorola Inc., Military Electronics Div.  
 Sylvania Electric Products Inc., Chemical & Metallurgical Div.  
 United Mineral & Chemical Corp.

#### GLASS INSULATION

Acme Wire Co.  
 Allied Plastics Supply Corp.  
 American Machine & Foundry Co., Government Products Group  
 Auburn Mfg. Co., The  
 Boston Insulated Wire & Cable Co.  
 Corning Glass Works  
 Eagle-Picher Co., The  
 Electrical Insulation Co., Inc.  
 Gustin-Bacon Mfg. Co.  
 Johns-Manville Sales Corp.  
 Lamitec Industries, Inc.  
 Mica Fabricating Co.  
 Pittsburgh Corning Corp.  
 Union Asbestos & Rubber Co.  
 Universal Moulded Products Corp.  
 Wenzlau Engrg. Co.  
 Westinghouse Electric Corp.

#### GLASS, MICA-WOVEN OR LAMINATED

Allied Plastics Supply Corp.  
 American Machine & Foundry Co., Government Products Group  
 American Printed Circuits Co., Inc.  
 Boston Insulated Wire & Cable Co.  
 Continental Diamond Fibre Corp.  
 Deringer Metallurgical Corp.  
 Duracate Corp.  
 Electrical Insulation Co., Inc.  
 Hoveg Industries, Inc.  
 Integrated Mica Corp.  
 Thomas J. Long, Inc.  
 Mica Fabricating Co.  
 Mica Insulator Div.—Minnesota Mining & Mfg., Co.

New England Laminates Co., Inc.  
 St. Regis Paper Co., Panelyte Div.  
 Sierracon Corp., The  
 Sterling Glass Corp.  
 United Mineral & Chemical Corp.  
 Westinghouse Electric Corp.

#### GOLD

Accurate Specialties Co. Inc.  
 Alloys Unlimited Inc.  
 American Printed Circuits Co., Inc.  
 American Silver Co.  
 Attleboro Refining Co., Inc.  
 J. Bishop & Co., Platinum Works  
 Bram Metallurgical & Chemical Co.  
 Eastern Smelting & Refining Corp.  
 Engelhard Industries, Inc.  
 Engelhard Industries, Inc., D. E. Makepeace Div.  
 Handy & Harmon  
 M-W Labs, Inc.  
 Matheson Co., Inc., The  
 Metals & Controls Corp., General Plate Div.  
 Nesor Alloy Products Co.  
 J. M. Ney Co., The  
 Pacific Scientific Co.  
 Precision Electroplating Co.  
 Sel-Rex Corp.  
 Spectronix Plating Co., Inc., Div.—Spectranome Plating Co., Inc.  
 Standard Metals Corp.  
 United Mineral & Chemical Corp.  
 Western Gold & Platinum Co.  
 Wildberg Bros. Smelting & Refining Co.

#### GRAIN, ALUMINUM

Del's Tumbling Service  
 Thermal Refractories Corp.

#### GRAPHITE, COLLOIDAL

Acheson Colloids Co., Div.—Acheson Industries, Inc.  
 Delta Chemical Works, Inc.  
 Graflo Colloids Corp.

#### GRAPHITE, LUBRICATING

Acheson Colloids Co., Div.—Acheson Industries, Inc.  
 Carbone Corp., The  
 Dyna Thermo Chemical Corp.  
 Graflo Colloids Corp.  
 Helwig Carbon Products, Inc.  
 Permatex Co., Inc.  
 Randall Graphite Bearings, Inc.  
 Serwell Products Co.  
 Superior Carbon Products, Inc.  
 Topper Mfg. Co., Inc.

#### GREASES, VACUUM

\*DOW CORNING CORP.  
 Kinney Mfg. Div., The New York Air Brake Co.  
 Minnesota Mining & Mfg. Co.

#### INSULATION MATERIALS

a. Aluminum oxide  
 b. Asbestos  
 c. Ceramic  
 d. Fabric  
 e. Fibre  
 f. Glass  
 g. Glass Fibre  
 h. Nylon  
 i. Paper  
 j. Silicone compounds

Acme Wire Co., h, i  
 Aero Gasket Corp., b, g, h, j  
 Aero Lapher Products Co., f  
 Allied International Co.  
 Allied Plastics Supply Corp., b, d, thru i  
 Aluminum Co. of America, a  
 American Latex Products Corp., j  
 American Iova Corp., a, c  
 American Refractories & Crucible Corp., a, c  
 Auburn Mfg. Co., The, b, d, e, g, thru j  
 Auburn Spark Plug Co., Inc., a, c  
 Aviation Textile Associates, d, e, g, h  
 Bacon Industries, Inc., j  
 J. T. Baker Chemical Co., a  
 Bemis Brothers Bag Co., d, i  
 Bendix Filter Div., Bendix Aviation Corp., g  
 \*BENDIX PRODUCTS DIV., BENDIX AVIATION CORP., c  
 Bio-Rad Labs., a  
 Brima Mfg. Co., Inc., c, e, g  
 Calibbe Co., Inc., g  
 Comco, Div.—Chicago Molded Products Corp., h  
 Corborundum Co., Lathrop Plant Refractories Div., c, f  
 Corborundum Co., Refractories Div., c, e  
 Controlab, Div.—Globe-Union, c  
 Chemplast, Inc., h  
 Coast Mfg. & Supply Co., d  
 Colonial Rubber Co., j  
 Comco Plastics Inc., e, h, i  
 Connecticut Hard Rubber Co., The, j  
 Continental Diamond Fibre Corp., e  
 Corning Glass Works, a, c, f  
 Crucible Steel Co. of America, j  
 Crystal-X Corp., h  
 Curtiss-Wright Corp., Santa Barbara Div., a, c  
 DBM Research Corp., c  
 Delta Chemical Works, Inc., i  
 Diamonite Products Mfg. Co., c  
 \*DOW CORNING CORP., j  
 E. I. Du Pont de Nemours & Co. Inc., e, h  
 Duracate Corp., d, g, h  
 Duramc Products Inc., e, c  
 Dyna Thermo Chemical Corp., b, c, j  
 Eagle-Picher Co., The, b, e, g  
 Ed Berl Products, Inc., j  
 Electrical Insulation Co., Inc., b, d, thru h, j

Electrical Refractories Co., The, c  
 Electronic Mechanix, Inc., a, c  
 Emerson & Cuming, Inc., c  
 Emerson Plastics Corp., e, h  
 Emnico Plastic Fabricators—Div.—E. M. McCarthy Machine Co., f thru i

Enfab Inc., g  
 Fluorlon Labs., Inc., h  
 Form-It Products, Inc., e, g, h  
 Franklin Fibre-Lamitec Corp., e, g, h, j  
 Frenchtown Porcelain Co., c  
 Furane Plastics, Inc., f  
 George K. Gorrett Co., Inc., j  
 Gotke Corp., b  
 General Electric Co., Insulator Dept., c, j  
 General Gasket Inc., b, e, g, thru j  
 Gladding, McBean & Co., a, c  
 Gulton Industries, Inc., c  
 Gustin-Bacon Mfg. Co., e, g  
 Hoveg Industries, Inc., b, thru g, j  
 Hewitt-Robins, Inc., i  
 Integrated Mica Corp., i  
 Isolantite Mfg. Corp., c  
 Johns-Manville, b, thru e, g, i, j  
 Johns-Manville Sales Corp., b, thru g, j  
 Jonesville Paper Tube Corp., i  
 \*KEARFOOT CO., INC., a  
 Kip Electronics Corp., c  
 Lamtec Industries, Inc., g  
 Thomas J. Long, Inc., d, thru j  
 Magnetic Shield Div., Perfection Mica Co., d, f  
 Maryland Iova Co., b, h  
 Metallizing Co. of Los Angeles Inc., a, c, j  
 Mica Fabricating Co., c, e  
 Milom Electric Mfg. Co., b, d, e, i  
 Minnesota Mining & Mfg. Co., a, c, d  
 Mitronics Inc., a, c  
 Motorola Inc., Military Electronics Div., c  
 National Beryllia Corp., a, b, c  
 National Vulcanized Fibre Co., e, h  
 New England Tape Co., Div.—United-Carr Fastener Corp., h  
 Northern Plastics Corp., b, d, g, h, i  
 Norton Co., a, c  
 Norton Co., New Products Dept., a, c  
 Penn Fibre & Specialty Co., Inc., e, i  
 Permacel, d, g, h, i  
 Perry Plastics, Inc., h  
 Pilgrim Products Inc., d, thru i  
 Pittsburgh Corning Corp., c, f  
 Plastic Age Sales, Inc., b, c, g, j  
 Polymer Corp., The, h  
 Products Research Co., j  
 Raybestos-Manhattan, Inc., b, j  
 Raybestos-Manhattan, Inc., Pa., b, j  
 Reinhold Engr. & Plastics Co., b, f  
 Rogers Corp., b, c, e, i  
 Sanford Plastics Corp., h  
 Schlegel Mfg. Co., d, h  
 W. S. Shambon & Co., i  
 Silicones Div.—Union Carbide Corp., j  
 Spaulding Fibre Co., Inc., e, h, i  
 Sterling Glass Corp., f  
 Stone City Products Co., i  
 Superior Steatite & Ceramic Corp., c  
 Swedlow Inc., g, h  
 Thermal Refractories Corp., a, c  
 H. I. Thompson Fiber Glass Co., g  
 Topper Mfg. Co., Inc., a, c  
 Union Asbestos & Rubber Co., b, d, e, f  
 United Mineral & Chemical Corp., a, c  
 United States Plywood Corp., b  
 United States Rubber Co., b  
 Universal Moulded Products Corp., a, thru j  
 Wenzlau Engrg. Co., b, f  
 Western Gold & Platinum Co., c  
 Westinghouse Electric Corp., d  
 Westinghouse Electric Corp., Lamp Div., f  
 Wilmington Fibre Specialty Co., e  
 Zippertubing Co., The, b  
 Zirconium Corp. of America, c

#### IRON

American Brake Shoe Co.  
 American Silver Co.  
 Armo Steel Corp.  
 C. Lee Cook Co., Atomic Products Div.  
 Farrell Birmingham Co., Inc.  
 Hamilton Watch Co.—Industrial Div.  
 Lapham Hickey Steel Corp.  
 Lindgren Foundry Co.  
 Matheson Co., Inc., The  
 Nesor Alloy Products Co.  
 Nordberg Mfg. Co.  
 Peerless Machine Co.  
 Precision Shapes, Inc.  
 Republic Steel Corp.  
 Joseph T. Ryerson & Son, Inc.  
 Swayne, Robinson & Co.

#### LEAD & ALLOYS

Accurate Specialties Co. Inc.  
 Allied Research Products, Inc.  
 Alloys Unlimited Inc.  
 Alpha Metals, Inc.  
 American Brake Shoe Co.  
 American Smelting & Refining Co.  
 Anchor Metal Co., Inc.  
 J. T. Baker Chemical Co.  
 Belmont Smelting & Refining Works, Inc.  
 Bow Solder Products Co., Inc.  
 Delta Chemical Works, Inc.  
 Devcon Corp.  
 Division Lead Co.  
 Eagle-Picher Co., The  
 Farrell Birmingham Co., Inc.  
 Liss Products, Inc.  
 National Lead Co.  
 Nesor Alloy Products Co.  
 United Mineral & Chemical Corp.

**LIUM**

Accurate Specialties Co. Inc.  
Alloys Unlimited Inc.  
**AMERICAN POTASH & CHEMICAL CORP.**  
arium & Chemicals, Inc.  
elmont Smelting & Refining Works, Inc.  
ram Metallurgical & Chemical Co.  
ontinental Metals, Inc.  
alta Chemical Works, Inc.  
ate Mineral Co.  
luminum Corp. of America, Inc.  
atheson Co., Inc., The  
ublic Lens Co., Inc.  
nited Mineral & Chemical Corp.

**NISIUM & ALLOYS**

Accurate Specialties Co. Inc.  
Alloys Unlimited Inc.  
merican Brake Shoe Co.  
merican Brazing Alloys Co.  
merican Silver Co.  
merican Smelting & Refining Co.  
vian Foundry Corp.  
lmost Smelting & Refining Works, Inc.  
ameta, Co., The  
and Metal Surplus Co.  
ram Metallurgical & Chemical Co.  
ridgeport Brass Co.  
rooks & Perkins, Inc.  
ructible Steel Co. of America  
plweld Co., Inc.  
nison Chemical Co.  
alta Chemical Works, Inc.  
epler-Jarvis Div., National Lead Co.  
ow Chemical Co., The  
gh Metals, Inc.  
ercast Mfg. Corp.  
etals & Controls Corp., General Plate Div.  
ecision Shapes, Inc.  
eph T. Ryerson & Son, Inc.  
ellman Bronze & Aluminum Co.

**IGANESSE**

Alloys Unlimited Inc.  
merican Nickel Alloy Mfg. Corp.  
lmost Smelting & Refining Works, Inc.  
ram Metallurgical & Chemical Co.  
alta Chemical Works, Inc.  
ctric Steel Foundry Co.  
ate Mineral Co.  
atheson Co., Inc., The  
tion Carbide Metals Co., Div.—Union Carbide Corp.  
tomet Alloys Co., Div.—Consolidated Foundries & Mfg. Corp.

**MCURY**

Alloys Unlimited Inc.  
char Metal Co. Inc.  
lmost Smelting & Refining Works, Inc.  
ram Metallurgical & Chemical Co.  
tern Smelting & Refining Corp.  
her Scientific Co.  
eneral Electric Co., Lamp Metals & Components Dept.  
atheson Co., Inc., The  
ilberg Bros. Smelting & Refining Co.

**VAL PARTS**

- a. Bushings
- b. Lead
- c. Powdered
- e. Screw machine
- f. Small metal stampings
- g. Spinings
- g. Trimmings

IF Industries Inc., d, e.  
ccurate Specialties Co. Inc., b, c, e.  
me Mfg. & Gasket Co., b, e.  
ra Gasket Corp., e.  
rodx, Inc., e.  
en Tool Corp.  
oys Unlimited Inc., b, e.  
ho Metals, Inc., b, e.  
minum Co. of America, c, d, e.  
ystem Electronic Hardware Co. Inc., d, e.  
merican Aluminum Co., e, f.  
merican Brake Shoe Co., a.  
merican Brass Co., The, e.  
merican Hinge Corp., a, d.  
merican Non Gran Bronze Co., a, d.  
merican Silver Co., e.  
merican Standard Products, Inc., a, d, e.  
pca Metal, Inc., a.  
char Metal Co. Inc., b.  
char Metal Spinning Co., The, a, f.  
ociated Engr. & Mfg. Corp., c, e, f.  
ronautics Engr. Co., d, e.  
urn Mfg. Co., The, e.  
pca Brothers, Inc., e.  
mer Engr. Co., a, c.  
lmost Smelting & Refining Works, Inc., b, c.  
**BENDIX PRODUCTS DIV., BENDIX AVIATION CORP.,** e.  
nson Mfg. Co., The, d, e, f.  
t Aircraft Corp., a, d.  
ghton Corp., e, f.  
rooks & Perkins, Inc., e, f.  
rtial City Mfg. Co., a, thru d.  
mbon Aviation, a, d, e, f.  
ntury Fasteners Corp., a, d, e.  
icago Screw Co., The, Div.—Standard Screw Co., c.  
weland Graphite Bronze, Div.—Clevite Corp., a.  
hame Inc., a, d.  
rtis-Wright Corp.—Wright Aeronautical Div., d, e, f.  
nbury Centerless Grinding Co., d.  
rsey Engr. Co., f.  
ision Lead Co., b.  
kendrill & Co., Inc., d, e.  
rsey Industries, Inc., a, d, e, f.  
o Specialty Co., Inc., d, e.

Eastern Specialty Co., The, d, e.  
Electric Steel Foundry Co., a.  
Electronic Parts Mfg. Co., Inc., d, e, f.  
Ezrae Metal Products Co., Inc., d, e, f.  
Emco Plastic Fabricators—Div.—E. M. McCarthy Machine Co., d, e, f.  
Engelhard Industries, Inc., c.  
Eched Products Corp., e, g.  
Farwell Metal Fabricating, e.  
George K. Garrett Co., Inc., e.  
Gibson Electric Co., c.  
Globe Industries, Inc., Supermet Div., c.  
Gordon Enterprises, d, e, f.  
Great Eastern Metal Products Co., e.  
Green Rectifier Co., e.  
HPI Mfg. Co., e.  
Harvey Aluminum, d.  
Habson Brothers, Inc., e.  
Interlake Stamping Corp., e.  
Jan Hardware Mfg. Co., Inc., a, d, e.  
Joma Inc., e.  
Kaiser Aircraft & Electronics, Div.—Kaiser Industries Corp., e, f, g.

Kaiser Metal Products, Inc.—Fleetwings Div., e, f.  
C. B. Kaupp & Sons, Inc., e, f.  
Kelsey-Hayes Co., e.  
Keystone Electronics Corp., a, d, e.  
Kickhoefer Mfg. Co., e.  
Kling Metal Spinning & Stamping Co., e, f, g.  
Lanson & Sessions Co., The, d.  
\***LAVEZZI MACHINE WORKS,** a, d, e.  
Lucas Aircraft Supply Co., c, d, e.  
Lux Clock Mfg. Co., Inc., c, d, e.  
\***LYCOMING DIV., AVCO MFG. CORP.,** f.  
Malco Mfg. Co., e.  
Metals & Controls Corp., General Plate Div.  
Moody Machine Products Co., Inc., d.  
Moran Co., d.  
Mueller Brass Co., e, d.  
National Moldite Co., c.  
J. M. Ney Co., The, c, d.  
Pacific Cut Washer Co., d, e.  
Peerless Machine Co., e.  
H. K. Porter Co., Inc., d.  
Precision Shapes, Inc.  
Prerog Mfg. Inc., e.  
R & R Engr. Co.  
Randall Graphite Bearings, Inc., a.  
Raybestos-Manhattan, Inc., Pa., c.  
Red Devil Mfg. Co., d.  
Research Development Mfg. Inc., d.  
Roll Formed Products Co., g.  
Joseph T. Ryerson & Son, Inc., e.  
St. Marys Carbon Co., a, c, e.  
Roy A. Schorer & Co., a, d, e.  
Shenango Furnace Co., The, Centrifugally Cast Products Div  
Sphinx-American Co., d.  
Spincraft, Inc., e, f.  
Standard Locknut & Lockwasher Inc., d, e.  
Stanley-Judd Div.—The Stanley Works, d thru g.  
Stover Co., Inc., The, d.  
Edwin B. Stimpson Co., Inc., e.  
Stone City Products Co., e.  
Superior Carbon Products, Inc., a, c.  
Superior Spinning & Stamping Co., e, f.  
Swiss Jewel Co., d.  
Sylvania Electric Products Inc., Parts Div., e.  
Roland Teimer Co., Inc., e, f.  
Torrington Co., The  
True Alloys Inc., a.  
United Mineral & Chemical Corp., c, e, f.  
United States Chemical Milling Corp., e, f.  
Waltham Screw Co., d.  
\***WEATHERHEAD CO., THE,** d.  
Westinghouse Electric Corp., Metals Plant, c.  
Wilks Precision Instrument Co., Inc., a, d, e, f.  
Woodworth Specialties Corp., d.  
Worcester Pressed Steel Co., e.  
Wrought Washer Mfg. Co., a, e.  
Zierick Mfg. Corp., e.

**METAL STOCK, POROUS BEARING**

Beemer Engr. Co.  
\***BENDIX PRODUCTS DIV., BENDIX AVIATION CORP.**  
Keystone Carbon Co.  
St. Marys Carbon Co.

**METAL STOCK, THERMOSTATIC**

American Silver Co.  
Engelhard Industries, Inc.

**MICA, GLASS BONDED**

Allied Plastics Supply Corp.  
Camco Plastics Inc.  
Hoveg Industries, Inc.  
Integrated Mico Corp.  
Magnetic Shield Div., Perfection Mico Co.  
Mico Fabricating Co.  
Minnesota Mining & Mfg. Co.  
United Mineral & Chemical Corp.  
Westinghouse Electric Corp.

**MOLYBDENUM**

Accurate Specialties Co. Inc.  
Alloys Unlimited Inc.  
American Nickel Alloy Mfg. Corp.  
American Silver Co.  
Associated Engr. & Mfg. Corp.  
J. T. Baker Chemical Co.  
Belmont Smelting & Refining Works, Inc.  
Brom Metallurgical & Chemical Co.  
Bridgeport Brass Co.  
Continental Metals, Inc.  
Crucible Steel Co. of America  
Damasus Tube Co.  
Delco Chemical Works, Inc.  
Eisler Engr. Co., Inc.  
Electronic Parts Mfg. Co., Inc.  
Elmet Div.—North American Philips Co., Inc.

Finn Aeronautical Div., T. R. Finn & Co., Inc.  
General Electric Co., Lamp Metals & Components Dept.  
Hamilton Watch Co.  
Hamilton Watch Co.—Industrial Div.  
Johnston & Funk Titanium Corp.  
P. R. Mallory & Co. Inc.  
\***MALLORY-SHARON METALS CORP.**  
Matheson Co., Inc., The  
Mercast Mfg. Corp.  
Metals & Controls Corp., General Plate Div.  
Neskor Alloy Products Co.  
Precision Shapes, Inc.  
Sylvania Electric Products Inc., Chemical & Metallurgical Div.  
Universal-Cyclops Steel Corp.  
Waimet Alloys Co., Div. Consolidated Foundries & Mfg Corp.  
Waukesha Foundry Co.  
Westinghouse Electric Corp., Lamp Div.  
Westinghouse Electric Corp., Metals Plant

**MONEL**

Accurate Specialties Co. Inc.  
Alloys Unlimited Inc.  
American Hinge Corp.  
American Nickel Alloy Mfg. Corp.  
American Silver Co.  
J. T. Baker Chemical Co.  
Belmont Smelting & Refining Works, Inc.  
Benson Mfg. Co., The  
Bond Metal Surplus Co.  
Brom Metallurgical & Chemical Co.  
Bridgeport Brass Co.  
Continental Metals, Inc.  
Crucible Steel Co. of America  
Damasus Tube Co.  
Delta Chemical Works, Inc.  
Wilbur B. Driver Co.  
Electric Steel Foundry Co.  
Electronic Parts Mfg. Co., Inc.  
Hamilton Watch Co.  
Hamilton Watch Co.—Industrial Div.  
Haynes Shellite Co., Div.—Union Carbide Corp.  
International Nickel Co., The  
Kalsco Industries—Div. Thompson Rama Wooldridge Inc.  
Charles E. Larson & Sons, Inc.  
Lebanon Steel Foundry  
M-W Labs, Inc.  
Neskor Alloy Products Co.  
Precision Shapes, Inc.  
Precision Tube Co., Inc.  
Shenango Furnace Co., The, Centrifugally Cast Products Div.  
Somers Brass Co. Inc.  
Waimet Alloys Co., Div. Consolidated Foundries & Mfg Corp.  
Waukesha Foundry Co.

**NICKEL**

Accurate Specialties Co. Inc.  
Allied Research Products, Inc.  
Alloys Unlimited Inc.  
American Brazing Alloys Co.  
American Hinge Corp.  
American Nickel Alloy Mfg. Corp.  
American Silver Co.  
Belmont Smelting & Refining Works, Inc.  
Brom Metallurgical & Chemical Co.  
Bridgeport Brass Co.  
Dawd Co. Inc.  
Damasus Tube Co.  
Wilbur B. Driver Co.  
Electric Steel Foundry Co.  
Forte Mineral Co.  
Hamilton Watch Co.  
Hamilton Watch Co.—Industrial Div.  
Haskins Mfg. Co.  
International Nickel Co.  
The Kalsco Industries—Div. Thompson Rama Wooldridge Inc.  
Lebanon Steel Foundry  
Lucas Aircraft Supply Co.  
Matheson Co., Inc.  
The Mercast Mfg. Corp.  
National Lead Co.  
Neskor Alloy Products Co.  
Precision Shapes, Inc.  
Precision Tube Co., Inc.  
Shenango Furnace Co., The, Centrifugally Cast Products Div  
Somers Brass Co. Inc.  
Waimet Alloys Co., Div. Consolidated Foundries & Mfg Corp.

**NUCLEAR SHIELDING, LEAD**

Accurate Specialties Co. Inc.  
Alloys Unlimited Inc.  
American Smelting & Refining Co.  
Belmont Smelting & Refining Works, Inc.  
Division Lead Co.  
Farrel Birmingham Co. Inc.  
Stover Co., Inc., The

**OXIDE, ALUMINUM**

Accurate Specialties Co. Inc.  
Aluminum Co. of America  
American Lavo Corp.  
J. T. Baker Chemical Co.  
Bio-Rad Labs.  
Corning Glass Works  
Curtiss-Wright Corp., Research Div  
Curtiss-Wright Corp., Santa Barbara Div.  
Del's Tumbling Service  
Delta Chemical Works, Inc.  
Diamond Products Mfg. Co.  
Engelhard Industries Inc., D. E. Makepeace Div.  
Gladding, McBeon & Co.  
Matheson Co., Inc., The  
Metallizing Co. of Los Angeles Inc.  
Norton Co.  
Norton Co., New Products Dept.  
Thermal Refractories Corp.  
United Mineral & Chemical Corp.  
Vascoloy-Romet Corp.

PALLADIUM

Accurate Specialties Co. Inc.
Alloys Unlimited Inc.
Almac Plastics Inc.
American Silver Co.
Bram Metallurgical & Chemical Co.
Delta Chemical Works, Inc.
Deringer Metallurgical Corp.
Eastern Smelting & Refining Corp.
Engelhard Industries, Inc.
Hamilton Watch Co.—Industrial Div.
Handy & Harmon
M-W Labs, Inc.
Matheson Co., Inc. The
Metals & Controls Corp., General Plate Div.
J. M. Ney Co., The
Sol Rex Corp.
Spectronic Plating Co., Inc.—Spectranome Plating Co., Inc.
United Mineral & Chemical Corp.
Wildberg Bros. Smelting & Refining Co.

PHENOLICS

Abesto Corp.
Air Lagistics Corp.
Allied Plastics Supply Corp.
Auburn Mfg. Co., The
Bios Labs, Inc.
Borden Chemical Co.
Comco Plastics Inc.
Continental Diamond Fibre Corp.
Crystal-X Corp.
Duralith Corp.
Electrical Insulation Co., Inc.
Electro Technical Products Div. Sun Chemical Corp.
Engineered Plastics, Inc.
Fisher & Crome
Franklin Fibre Lamitex Corp.
Havag Industries, Inc.
Joelin Mfg. Co.
Thomas J. Long, Inc.
Mansfield Fabricators Inc.
Marblette Corp., The
Mica Fabricating Co.
Minnesota Mining & Mfg. Co.
National Moldite Co.
National Vulcanized Fibre Co.
New England laminates Co., Inc.
Reichhold Chemicals, Inc.
Reinhold Engrg. & Plastics Co.
Rogers Corp.
Spaulding Fibre Co., Inc.
Wilmington Fibre Specialty Co.

PLASTIC

a. Acrylic
b. Alkyls
c. Cellulose acetate
d. Cellulose acetate butyrate
e. Cellulose nitrate
f. Ceramic-plastic combinations
g. Epoxy resins
h. Ethyl cellulose
i. Fiber glass
j. Fluorocarbons
k. Melamine formaldehyde
l. Mica-plastic combination
m. Phenolics
n. Polyester
o. Polyethylene
p. Polystyrene
q. Polytrifluoroethylene
r. Reinforced
s. Silicones
t. Styrene
u. Tetrafluoroethylene resin
w. Urea formaldehyde
w. Vinyl

Abesto Corp. a, c, d, e, g thru k, m thru w
Acheson Cellulose Co., Div.—Acheson Industries, Inc.
Acme Mfg. & Gasket Co., c, s, w
Adhesive Engrg. Div.—Hiller Aircraft Corp. g, i, m, r
Aero Gasket Corp. j, q, r, s, u
Air Lagistics Corp.
\*ALLIED CHEMICAL CORP., GENERAL CHEMICAL DIV., j, q, v
Allied Plastics Supply Corp. a, c, d, e, g thru u, w
Almac Plastics Inc. a, c, d, i, l, n, a, v, w
American Agile Corp. o, u
American Latex Products Corp. f, g, n, q, t
American Rocket Co. g, m, n, r, w
Anchor Plastics Co., Inc. a, c, d, h, o, p, t
Apex Reinforced Plastics, Div.—White Sewing Machine Corp. r
Aries Laboratories, Inc. g
Aristocrat Plastics, Inc. a, c, d, h, j, a, p, q, t, w
Astrodyne, Inc. r
Auburn Mfg. Co., The a, c, e, i, j, m, a, p, q, w
J. I. Baker Chemical Co. a
Balco Research Labs, Inc., Capacitor Div. g, n, p, q
Bemis Brothers Bag Co. o
\*BENDIX PRODUCTS DIV., BENDIX AVIATION CORP., f, Carl H. Biggs Co. g
Bios Labs, Inc. a thru k, m thru q, s thru w
Blossom Mfg. Co., Inc. m, n, o, w
Bonny Mfg. Corp. j, u
Borden Chemical Co. f, g, k, m, p, v, w
Borden Chemical Co., The Div.—The Borden Co., Resinite Dept. w
Brillhart Plastics Corp. g, i
Butler Mfg. Co.
Califfe Co., Inc. r
Comco, Div.—Chicago Molded Products Corp. c, d, h, o, p, t
Carbolite Co. g, m, w
Carbone Corp., The r
Catalin Corp. of America o, p, t
Chemical Products Corp. w
Chemold Co. n, r, s

Chicago Gasket Co., u
Chicago Rawhide Mfg. Co., j, q, r, s
Ciba Products Corp. g
Cimastra Div., The Cincinnati Milling Machine Co. r
Coast Mfg. & Supply Co. f, g, i, m, n, r, s
Colonial Rubber Co. C
Comco Plastics Inc. a, c, d, g, j, k, m, a, p, s, t, w
Continental Can Co., Inc. i, r
Continental Diamond Fibre Corp. g, i, j, l, m, n, r, s, u
Cooper Industries, Inc. d, e
Cordo Chemical Corp. g, m, w
Crystal-X Corp. a, c, d, e, h thru r, t, w
DBM Research Corp. f, g, i, m, p, w
De Bell & Richardson Inc.
Delta Products Div.—Air Accessories, Inc. a, c, d, e, o, p, q
Devcan Corp. a, c, d, e, g, p, s, t
Dow Chemical Co., The g, h, o, p, t, w
\*DOWN CORNING CORP., s
E. I. Du Pont de Nemours & Co., Inc. a, c, e, i, j, n, o, r, t, w
Duracote Corp. i, w
Duralith Corp. k, m, n, r, w
Durez Plastics Div.—Hooker Chemical Corp., m, n, r
Eagle-Fisher Co., The i
Eastman Kodak Co. c, d
Electrical Insulation Co., Inc. a, i, k, m thru q, s, u, w
Electro Technical Products Div. Sun Chemical Corp. g, i, m, n, r, s
Eljay Corp. a
Emerson & Cuming, Inc. f, g, n thru t
Emerson Plastics Corp. a thru d, g thru k, m thru u, w
Emma Plastic Fabricators—Div.—E. M. McCarthy Machine Co. g, i, w
Engineered Plastics, Inc. a, c, j, k, m, a, p, w
Fabi-Farm Co., The a, c, d, m, o, p, t, v
Fidelity Chemical Products Corp. d, h
Fleischel Co. j
Fluorocarbon Co., The a, q, t
Fluorolan Labs., Inc. j, q, u
Food Machinery & Chemical Corp. b
Franklin Fibre-Lamitex Corp. a, c, g, m thru p, w
Furane Plastics, Inc. f, g, r, u
General Gasket Inc. c, d, i, o, s, u, w
General Plastics Corp. of New Jersey, i, j, q, u
Garing Products, Inc. a, c, d, h, i, o, p, t, w
Gladding, McBean & Co. f
B. F. Goodrich Industrial Products Co. w
Grant Chemical Co., Inc. g, i, l, n, r
Halogen Insulator & Seal Corp., i, t
Harrison Tool & Engrg. Co. g, i, r
Havag Industries, Inc. f, g, j thru n, q, r, s, u, v, w
Hewitt-Robins, Inc. r
Homalite Corp., The b, g, i, n
Houghton Laboratories, Inc. g
Huntington Rubber Mills s
Illuminant Engrg. Co. a, m, o, p, t
International Resistance Co., m
Joelin Mfg. Co., i, j, k, m, q, r, u
Jodee Plastics Co. a, c, d, e, h, j, m, o, p, q, t, u, w
Johns-Manville, i
Johns-Manville Sales Corp. f, i, r
Koopfeyer, Inc. n, o, t
Lamtex Industries, Inc. g, i, r
Labec Chemical Corp. d, g, h, m
Liss Products, Inc. a, r
Thomas J. Long, Inc. a, c, m thru t, w
Luminous Resins Inc. a, a, p
Magnetic Shield Div. Perfection Mica Co. k
Mansfield Fabricators Inc. m, n
Marblette Corp., The a, g, m
Maryland Lava Co. g, p
Matheson Co., Inc. The c, j
Metalizing Co. of Los Angeles, Inc. f
Mica Fabricating Co., l
Mica Insulator Div.—Minnesota Mining & Mfg. Co. l
Milam Electric Mfg. Co. r
Minnesota Mining & Mfg. Co. g, i, j, l, m, q, r, w
Morningstar-Paisley, Inc. w
Mueller Brass Co. o, t, w
Narmco Mfg. Co., g, m, n, o, a
Narmco Resins & Coatings Co. g, q
National Tube Div.—United States Steel Corp. o, w
National Vulcanized Fibre Co. g, j, k, m, n, r, s, u
Natvar Corp. o, p, w
New England Laminates Co., Inc. m, r
New England Tape Co., Div.—United-Carr Fastener Corp. c, d, o, p, t, i
Norton Co. f
Orchard Industries, Inc., Actantflex Div. g, n, s
Penn Fibre & Specialty Co., Inc. m
Permacel, g, j, s, u
Pilgrim Products Inc. a
Plastick, Inc. a
Plastic Age Sales, Inc. a, c, d, f, g, i, m, n, r, s
Polyken Sales Div., The Kendall Co. a
Polymer Corp., The g, j, o, p
Printronics Corp., m
Pry Welding & Mfg., Inc. p
Raybestos-Manhattan, Inc. Pa. g, j, m, r, s, u
Seachold Chemicals, Inc. a, g, k, m, n, r, v
Reinhold Engrg. & Plastics Co. b, g, i, l, m, n, r
Republic Aviation Corp. g
Res Corp., The Sub.—American Enka, q
Rez-Coat of California, i, m, n, r
Rogers Corp. f, j, m, r
Milton Ross Metals Co., The a, c, d, e, g, h, j thru q, s thru t
Russell Reinforced Plastics Corp., r
Joseph T. Ryerson & Son, Inc. o, p, t
St. Regis Paper Co., Panelyte Div. k, m, a, r, s
Sanford Plastics Corp. j, q
Ray A. Scherer & Co. a, c, d, e, k, m thru w
Schlegel Mfg. Co. n, o
Seal-Peel, Inc. d, h
W. S. Shamban & Co., j, q, u
Shell Chemical Corp., Industrial Chemicals Div. g
Sierracorp, The. a, n
Silicane Insulation, Inc. g, m, n, r, s
Silicones Div.—Union Carbide Corp. s
Smooth-On Mfg. Co. g
Special Projects Lab., Food Machinery Chemical Corp. g
Superior Carbon Products, Inc. g, m

Swedlow Inc. a
Thermec Engrg. Corp. j
H. I. Thompson Fiber Glass Co. i, r
Topper Mfg. Co., Inc. f, g, j, p
Trionics Corp. a, f, g, m, n, a
Tri-Point Plastics Inc. j
Turbo Products, Inc. j
United Mineral & Chemical Corp., l
U. S. Fiber & Plastics Corp. w
United States Rubber Co. g, n, w
United Supply Co. a, b
Universal Unlimited, Inc. a, c, d, n, a, s, v
Virginia Plak Co. a, w
Western Coating Co. d, h
Western Felt Works & Acadia Synthetic Products Div., a, c, d, h, m, n, o, s
Westinghouse Electric Corp. k, m, n, r, s
Westlake Plastics Co. a, c, d, g, h, i, n, o, p, s, t, w
Winzen Research, Inc. n
X-Fondo Corp. g
Zipperbuing Co., The i, j, o, w

PLASTICS, LAMINATED

Abesto Corp.
Aerostat General Corp.
Air Lagistics Corp.
Allied Plastics Supply Corp.
American Aerophysics Corp.
American Printed Circuits Co., Inc.
American Rocket Co.
Atkins & Merrill, Inc.
Auburn Mfg. Co., The
Carl H. Biggs Co.
Califfe Co., Inc.
Chemold Co.
Coast Mfg. & Supply Co.
Colonial Aircraft Corp.
Columbia Products Co.
Comco Plastics Inc.
Continental Diamond Fibre Corp.
C. Lee Cook Co., Artomco Products Div.
Crystal-X Corp.
Curtis-Wright Corp., Santa Barbara Div.
E. I. Du Pont de Nemours & Co., Inc.
Duralith Corp.
Eagle-Fisher Co., The
Electrical Insulation Co., Inc.
Emerson Plastics Corp.
Emmo Plastic Fabricators—Div.—E. M. McCarthy Machine Co.
Engineered Plastics, Inc.
Farley & Loetscher Mfg. Co., Plastics Div.
Fluorolan Labs., Inc.
Franklin Fibre-Lamitex Corp.
Furane Plastics, Inc.
Gaite Corp.
General Gasket Inc.
General Plastics Corp. of New Jersey
B. F. Goodrich Aviation Products
Gripco Aircraft Corp.
Grant Chemical Co., Inc.
Hardman Tool & Engrg. Co.
Haskelite Mfg. Corp.
Havag Industries, Inc.
Honeycomb Co. of America, Inc.
International Resistance Co.
Joelin Mfg. Co.
Joden Plastics Co.
Lamtex Industries, Inc.
Liss Products, Inc.
Thomas J. Long, Inc.
Luminous Resins Inc.
Mica Insulator Div.—Minnesota Mining & Mfg. Co.
Mico Instrument Co.
Milam Electric Mfg. Co.
Minnesota Mining & Mfg. Co.
Narmco Mfg. Co.
National Vulcanized Fibre Co.
New England Laminates Co., Inc.
Northern Plastics Corp.
Panel Engrg. Corp.
Penn Fibre & Specialty Co., Inc.
Perry Plastics, Inc.
Pilgrim Products, Inc.
Plastick, Inc.
Plastic Age Sales, Inc.
Process & Instruments
Raybestos-Manhattan, Inc.
Raybestos-Manhattan, Inc., Pa.
Reinhold Engrg. & Plastics Co.
Roberts Industries, Inc.
Rogers Corp.
Milton Ross Metals Co., The
Russell Reinforced Plastics Corp.
Joseph T. Ryerson & Son, Inc.
St. Regis Paper Co., Panelyte Div.
W. S. Shamban & Co.
Sverracin Corp., The
The Silicone Insulation, Inc.
Spaulding Fibre Co., Inc.
Specialty Engrg. & Electronics Co.
Superior Carbon Products, Inc.
Swedlow Inc.
Taylor Fibre Co.
H. I. Thompson Fiber Glass Co.
U. S. Relay Co.
United States Chemical Milling Corp.
Universal Moulded Products Corp.
Virginia Plak Co.
Wenzlaw Engrg. Co.
Westinghouse Electric Corp.
Winzen Research Inc.
Zipperbuing Co., The

PLYWOOD & METAL, BONDED

American Rocket Co.
Carl H. Biggs Co.
Furane Plastics, Inc.
Haskelite Mfg. Corp.

iss Products, Inc.  
Mel-L-Wood Corp.  
Skydye, Inc.  
United States Plywood Corp.

## ZINCUM

Bios Labs., Inc.  
United States Radium Corp.

## ZIRCONIUM

Emerson & Cuming, Inc.  
General Electric Co., Insulator Dept.  
Gladding, McBeon & Co.

## ZIRCONIUM, FUSED

Associated Engrg. & Mfg. Corp.  
Bram Metallurgical & Chemical Co.  
Copper Glass Works  
Dell Optics Co., Ltd.  
Emerson & Cuming, Inc.  
Engelhard Industries, Inc.  
General Electric Co., Lamp Glass Dept.  
Hovey Industries, Inc.  
Honeycomb Co. of America, Inc.  
Mica Fabricating Co.  
Narmco Resins & Coatings Co.  
Republic Lens Co., Inc.  
\*ULTRA-VIOLET PRODUCTS, INC.

## ZIRCONIUM, BONDING

Acheson Colloids Co., Div.—Acheson Industries, Inc.  
Adhesive Engrg., Div.—Hiller Aircraft Corp.  
American Rocket Co.  
Aries Laboratories, Inc.  
Armstrong Products Co.  
Carl H. Biggs Co.  
Borden Chemical Co.  
Catalin Corp. of America  
Cordia Chemical Corp.  
DBM Research Corp.  
Dayton Rubber Co., The  
Jemis Chemical Co.

## \*DOW CORNING CORP.

Emerson & Cuming, Inc.  
Irene Plastics, Inc.  
Grant Chemical Co., Inc.  
Hovey Industries, Inc.  
Honeycomb Co. of America, Inc.  
Houghton Laboratories, Inc.  
Irene Plastics, Inc.  
Irene Plastics, Inc.  
Irene Plastics, Inc.  
Minnesota Mining & Mfg. Co.  
Permacel  
Products Research Co.  
Reichhold Chemicals, Inc.  
Reichhold Engrg. & Plastics Co.  
Shell Chemical Corp., Industrial Chemicals Div.  
Silicones Div.—Union Carbide Corp.  
Smooth-On Mfg. Co.  
Topper Mfg. Co., Inc.  
Trionics Corp.

## ZIRCONIUM, ENCAPSULATING

Adhesive Engrg., Div.—Hiller Aircraft Corp.  
American Rocket Co.  
Aries Laboratories, Inc.  
Armstrong Products Co.  
Carl H. Biggs Co.  
Borden Chemical Co.  
Ciba Products Corp.  
DBM Research Corp.  
Dayton Rubber Co., The  
Jemis Chemical Co.  
Devcon Corp.  
Double E Products Co.  
\*DOW CORNING CORP.  
E. I. Du Pont de Nemours & Co. Inc.  
Emerson & Cuming, Inc.  
Irene Plastics, Inc.  
Grant Chemical Co., Inc.  
Hovey Industries, Inc.  
Houghton Laboratories, Inc.  
Irene Plastics, Inc.  
Irene Plastics, Inc.  
Minnesota Mining & Mfg. Co.  
National Engrg. Products, Inc.  
Permacel  
Products Research Co.  
Reichhold Chemicals, Inc.  
Reichhold Engrg. & Plastics Co.  
Milton Ross Metals Co., The  
Shell Chemical Corp., Industrial Chemicals Div.  
Silicones Div.—Union Carbide Corp.  
Smooth-On Mfg. Co.  
Topper Mfg. Co., Inc.  
Trionics Corp.  
United States Rubber Co.  
Westinghouse Electric Corp.

## ZIRCONIUM, POTTING

Adhesive Engrg., Div.—Hiller Aircraft Corp.  
American Rocket Co.  
Aries Laboratories, Inc.  
Armstrong Products Co.  
Carl H. Biggs Co.  
Borden Chemical Co.  
Ciba Products Corp.  
DBM Research Corp.  
Dayton Rubber Co., The  
Jemis Chemical Co.  
Devcon Corp.  
Double E Products Co.  
\*DOW CORNING CORP.  
Emerson & Cuming, Inc.  
Irene Plastics, Inc.

Grant Chemical Co., Inc.  
Hovey Industries, Inc.  
Houghton Laboratories, Inc.  
Irene Plastics, Inc.  
Lebec Chemical Corp.  
Minnesota Mining & Mfg. Co.  
National Engrg. Products, Inc.  
Nopco Chemical Co.  
Pennsalt Chemicals Corp.  
Permacel  
Products Research Co.  
Reichhold Chemicals, Inc.  
Reichhold Engrg. & Plastics Co.  
Milton Ross Metals Co., The  
Shell Chemical Corp., Industrial Chemicals Div.  
Silicones Div.—Union Carbide Corp.  
Smooth-On Mfg. Co.  
Special Projects Lab., Food Machinery & Chemical Corp.  
Topper Mfg. Co., Inc.  
Trionics Corp.  
Westinghouse Electric Corp.

## RESINS, SYNTHETIC

Adhesive Engrg., Div.—Hiller Aircraft Corp.  
American Rocket Co.  
Aries Laboratories, Inc.  
Aristocrat Plastics, Inc.  
Carl H. Biggs Co.  
Bio-Rod Labs.  
Borden Chemical Co.  
Catalin Corp. of America  
Ciba Products Corp.  
DBM Research Corp.  
Double E Products Co.  
Dow Chemical Co., The  
\*DOW CORNING CORP.  
E. I. Du Pont de Nemours & Co., Inc.  
Durez Plastics Div.—Hooker Chemical Corp.  
Emerson & Cuming, Inc.  
Furone Plastics, Inc.  
Grant Chemical Co., Inc.  
Hovey Industries, Inc.  
Hercules Powder Co.  
Houghton Laboratories, Inc.  
Lebec Chemical Corp.  
Minnesota Mining & Mfg. Co.  
Permacel  
Polymer Corp., The  
Reichhold Chemicals, Inc.  
Reichhold Engrg. & Plastics Co.  
Shell Chemical Corp., Industrial Chemicals Div.  
Silicones Div.—Union Carbide Corp.  
Smooth-On Mfg. Co.  
Topper Mfg. Co., Inc.  
Trionics Corp.  
United States Rubber Co.

## RIVETS

Abbott Screw & Mfg. Co.  
Aluminum Co. of America  
American Hinge Corp.  
Century Fasteners Corp.  
Case Brass & Copper Co., Inc.  
Chicago Rivet & Machine Co.  
Cooper Industries, Inc.  
Corbin Products Div.  
Deringer Metallurgical Corp.  
Division Lead Co.  
Emco Plastic Fabricators—Div.—E. M. McCarthy Machine Co.  
B. F. Goodrich Aviation Products  
John Hassall, Inc.  
Huck Mfg. Co.  
Metals & Controls Corp., General Plate Div.  
National Screw & Mfg. Co., The  
Republic Steel Corp.  
Screw Corp.  
Edwin B. Stimpson Co., Inc.  
\*TOWNSEND CO., CHERRY RIVET DIV.

## RODS, TUNGSTEN

Alloys Unlimited Inc.  
American Nickel Alloy Mfg. Corp.  
Associated Engrg. & Mfg. Corp.  
Bram Metallurgical & Chemical Co.  
Delta Chemical Works, Inc.  
Ester Engrg. Co., Inc.  
Electronic Parts Mfg. Co., Inc.  
Elmet Div.—North American Philips Co., Inc.  
General Electric Co., Lamp Metals & Components Dept.  
\*MALLORY-SHARON METALS CORP.  
Sylvania Electric Products Inc., Chemical & Metallurgical Div.  
Universal-Cyclops Steel Corp.  
Westinghouse Electric Corp., Lamp Div.

## RUBBER

a. Conductive  
b. Hard  
c. Insulation  
d. Natural  
e. Synthetic  
Abesto Corp. a thru e.  
Acme Mfg. & Gasket Co. d, e.  
Aero Gasket Corp. a, c, d, e.  
Amaton Electronic Hardware Co. Inc., c.  
American Latex Products Corp. c, d, e.  
Auburn Mfg. Co., The a thru e.  
Bellofram Corp. e.  
Chicago Rawhide Mfg. Co., e.  
Chicago-Allis Mfg. Corp. e.  
Colonial Rubber Co. a, c, d, e.  
Connecticut Hard Rubber Co., The c, e.  
Continental Rubber Works, a, c, d, e.  
Dayton Rubber Co., The a thru e.  
Delta Chemical Works, Inc., e.  
Devcon Corp. c, e.

\*DOW CORNING CORP., e.  
Dresser Industries, Inc., a, c, e.  
E. I. Du Pont de Nemours & Co. Inc., a, c, d, e.  
Electrical Insulation Co., Inc., b.  
Emerson & Cuming, Inc., a.  
Firestone Tire & Rubber Co., The, Guided Missile Div., d, e.  
General Gasket Inc., a, d, e.  
B. F. Goodrich Aviation Products, a thru e.  
B. F. Goodrich Industrial Products Co., a, b, d, e.  
Goodyear Tire & Rubber Co., The, Aviation Products Div., a thru e.  
Goshen Rubber Co., Inc., a, d, e.  
Hewitt-Robins, Inc., b, c, d.  
E. F. Houghton & Co., e.  
Huntington Rubber Mills, a thru d.  
Johns-Manville, d, e.  
Mica Fabricating Co., e.  
Minnesota Mining & Mfg. Co., e.  
J. J. Monaghan Co., Inc., a, e.  
Newirth Rubber Co., a, b, d, e.  
Orchard Industries, Inc., Actionflex Div., e.  
Pacific Moulded Products, a, b, d, e.  
Raybestos-Manhattan, Inc., a thru e.  
Raybestos-Manhattan, Inc., Po. d, e.  
Fred T. Roberts & Co., d, e.  
Roberts Toledo Rubber Co., The, a thru e.  
Rubber Teck Inc., a thru e.  
Rubbercraft Corp. of California, a thru e.  
Roy A. Scherer & Co., a thru e.  
Silicones Div.—Union Carbide Corp., a, b, c, e.  
Smooth-On Mfg. Co., e.  
United States Rubber Co., a, c, d, e.  
Western Felt Works & Acadia Synthetic Products Div., a, b, c, e.

## SILICON

Abesto Corp.  
Alloys Unlimited Inc.  
American Nickel Alloy Mfg. Corp.  
Belmont Smelting & Refining Works, Inc.  
Bios Lab., Inc.  
Bram Metallurgical & Chemical Co.  
Colonial Rubber Co.  
Devcon Corp.  
E. I. Du Pont de Nemours & Co. Inc.  
Eagle-Fisher Co., The  
Foote Mineral Co.  
Knapic Electro-Physics  
Matheson Co., Inc., The  
Merck & Co. Inc., Electronic Chemicals Div.  
Motorola Inc., Military Electronics Div.  
National Metallurgical Corp.  
National Utilities Corp.  
Ohio Precision Castings, Inc.  
Plastic Age Sales, Inc.  
Sylvania Electric Products Inc., Chemical & Metallurgical Div.  
Union Carbide Metals Co., Div.—Union Carbide Corp.

## SILICONE GREASES

Anderson Chemical Co. Div.—Stauffer Chemical Co.  
\*DOW CORNING CORP.  
Ed-Berl Products, Inc.  
Merix Chemical Co.  
National Engrg. Products, Inc.  
Silicones Div.—Union Carbide Corp.

## SILICONE OILS

Anderson Chemical Co., Div.—Stauffer Chemical Co.  
Chicago Rawhide Mfg. Co.  
\*DOW CORNING CORP.  
Ed-Berl Products, Inc.  
Hewitt-Robins, Inc.  
Merix Chemical Co.  
Silicones Div.—Union Carbide Corp.  
Western Felt Works & Acadia Synthetic Products Div.

## SILICONE RUBBER

Abesto Corp.  
Acme Mfg. & Gasket Co.  
Aero Gasket Corp.  
Alloys Unlimited Inc.  
Auburn Mfg. Co., The  
Bellofram Corp.  
Chicago-Allis Mfg. Corp.  
Colonial Rubber Co.  
Connecticut Hard Rubber Co., The  
Continental Rubber Works  
Deringer Metallurgical Corp.  
\*DOW CORNING CORP.  
E. I. Du Pont de Nemours & Co. Inc.  
General Gasket Inc.  
B. F. Goodrich Aviation Products  
B. F. Goodrich Industrial Products Co.  
Goodyear Tire & Rubber Co., The, Aviation Products Div.  
Goshen Rubber Co., Inc.  
Greene, Tweed & Co.  
Hovey Industries, Inc.  
Huntington Rubber Mills  
Metapet Co., Inc.  
Newirth Rubber Co.  
Orchard Industries, Inc., Actionflex Div.  
Pacific Moulded Products  
Permacel  
Products Research Co.  
Raybestos-Manhattan, Inc.  
Raybestos-Manhattan, Inc., Po.  
Fred T. Roberts & Co.  
Rubber Teck Inc.  
Rubbercraft Corp. of California  
Roy A. Scherer & Co.  
Silicones Div.—Union Carbide Corp.

## SOLVENTS

\*ALLIED CHEMICAL CORP., GENERAL CHEMICAL DIV.  
Allied Research Products, Inc.  
Aries Laboratories, Inc.  
J. T. Baker Chemical Co.

Carl H. Biggs Co.  
Bios Labs., Inc.  
Cooper Industries, Inc.  
Dow Chemical Co., The  
E. I. Du Pont de Nemours & Co. Inc.  
Esso Standard Oil Co.  
Fisher Scientific Co.  
London Chemical Co., Inc.  
Maas & Waldstein Co.  
Matheson Co., Inc., The  
Micro-Circuits Co.  
Penetec Co., The  
Shell Chemical Corp., Industrial Chemicals Div.  
Trio Chemical Works, Inc.  
Turco Products, Inc.

#### SPINNINGS, METAL

Amatom Electronic Hardware Co. Inc.  
Associated Engrg. & Mfg. Corp.  
Benson Mfg. Co., The  
Brighton Corp.  
Brooks & Perkins, Inc.  
Dresser Industries, Inc.  
Elzee Metal Products Co., Inc.  
Huford Corp., The  
Jan Hardware Mfg. Co., Inc.  
Kaiser Metal Products Inc.—Fleetwings Div.  
C. B. Knapp & Sons, Inc.  
Kling Metal Spinning & Stamping Co.  
Lukens Steel Co.  
\*LYCOMING DIV., AVCO MFG. CORP.  
Superior Spinning & Stamping Co.  
Roland Teimer Co., Inc.  
United States Chemical Milling Corp.

#### STEEL, ELECTRIC

Acme-Newton Steel Co.  
Allegheny Ludlum Steel Corp.  
American Brake Shoe Co.  
Armco Steel Corp.  
Baker Steel & Tube Co.  
Byrne Doors Inc.  
Cannon-Muskegon Corp.  
Carpenter Steel Co., The  
Cleveland Equipment Co.  
Crucible Steel Co. of America  
Damascus Tube Co.  
Electric Steel Foundry Co.  
Firth Sterling Inc.  
Lucas Aircraft Supply Co.  
Lukens Steel Co.  
\*MALLORY-SHARON METALS CORP.  
National Forge Co.  
Peerless Machine Co.  
Perfecto Cast  
Precision Shapes, Inc.  
Republic Steel Corp.  
Joseph T. Ryerson & Son, Inc.  
Sharon Steel Corp.  
Southwire Co.  
U. S. Steel Supply Div., United States Steel Corp.  
Vanadium-Alloys Steel Co.

#### STEEL, STAINLESS

Acme Mfg. & Gasket Co.  
All Boro Metal Products Co., Inc.  
Allegheny Ludlum Steel Corp.  
American Brake Shoe Co.  
American Silver Co.  
Armco Steel Corp.  
\*AVCO MFG. CORP., NASHVILLE DIV.  
Baker Steel & Tube Co.  
Benson Mfg. Co., The  
Bond Metal Surplus Co.  
Bram Metallurgical & Chemical Co.  
Bridgeport Brass Co.  
Byrne Doors Inc.  
Cannon-Muskegon Corp.  
Carpenter Steel Co., The  
Somers Brass & Copper Co., Inc.  
Continental Metals, Inc.  
Crucible Steel Co. of America  
Damascus Tube Co.  
Deringer Metallurgical Corp.  
Wilbur B. Driver Co.  
Duraloy Co., The  
Eastern Stainless Steel Corp.  
Electric Steel Foundry Co.  
George K. Garrett Co., Inc.  
Hamilton Watch Co.  
Hamilton Watch Co.—Industrial Div.  
Hoskins Mfg. Co.  
Industrial Acoustics Co., Inc.  
Johnston & Funk Titanium Corp.  
Jones & Laughlin Steel Corp., Stainless & Strip Div.  
Earle M. Jorgensen Co.  
Kentucky Metal Products Co.  
Charles E. Larson & Sons, Inc.  
Lebanon Steel Foundry  
Lucas Aircraft Supply Co.  
\*LYCOMING DIV., AVCO MFG. CORP.  
P. R. Mallory & Co. Inc.  
Mercast Mfg. Corp.  
Miniature Precision Bearings, Inc.  
National Forge Co.  
National-Standard Co.  
National Tube Div.—United States Steel Corp.  
Nesar Alloy Products Co.  
Peerless Machine Co.  
Perfecto Cast  
Precision Shapes, Inc.  
Precision Tube Co., Inc.  
Republic Steel Corp.  
Rodney Metals Inc.  
Joseph T. Ryerson & Son, Inc.  
Ray A. Schorer & Co.  
Sharon Steel Corp.  
Somers Brass Co., Inc.  
Timken Roller Bearing Co., The

U. S. Steel Supply Div., United States Steel Corp.  
Universal-Cyclops Steel Corp.  
Vanadium-Alloys Steel Co.  
Waimet Alloys Co., Div. Consolidated Foundries & Mfg. Corp.  
Wallingford Steel Co.  
Washington Steel Corp.  
Waukesha Foundry Co.

#### STRONTIUM

Accurate Specialties Co. Inc.  
Barium & Chemicals, Inc.  
Bram Metallurgical & Chemical Co.  
Delta Chemical Works, Inc.  
Matheson Co., Inc., The  
United Mineral & Chemical Corp.

#### TANTALUM

Accurate Specialties Co. Inc.  
Alloys Unlimited Inc.  
Almac Plastics Inc.  
American Nickel Alloy Mfg. Corp.  
American Silver Co.  
Associated Engrg. & Mfg. Corp.  
Belmont Smelting & Refining Works, Inc.  
Bram Metallurgical & Chemical Co.  
Bridgeport Brass Co.  
Damascus Tube Co.  
Delta Chemical Works, Inc.  
Wilbur B. Driver Co.  
Hamilton Watch Co.  
Hamilton Watch Co.—Industrial Div.  
Haynes Stellite Co., Div.—Union Carbide Corp.  
Johnston & Funk Titanium Corp.  
Kennametal Inc.  
\*MALLORY-SHARON METALS CORP.  
Metals & Controls Corp., General Plate Div.  
National Research Corp.  
F. H. Paul & Stein Brothers, Inc.  
Somers Brass Co. Inc.  
Union Carbide Metals Co., Div.—Union Carbide Corp.  
Universal-Cyclops Steel Corp.

#### TERLON

Aero Ball & Screw Co., Inc.  
Aero Gasket Corp.  
Allied Plastics Supply Corp.  
Amatom Electronic Hardware Co. Inc.  
American Printed Circuits Co., Inc.  
Aristocrat Plastics, Inc.  
Auburn Mfg. Co., The  
Aurum Spark Plug Co., Inc.  
Bios Labs., Inc.  
Bonny Mfg. Corp.  
Chemplast, Inc.  
Chicago Gasket Co.  
Comco Plastics Inc.  
Connecticut Hard Rubber Co., The  
Continental Diamond-Fibre Corp.  
Crystal X Corp.  
Delta Products Div.—Air Accessories, Inc.  
Dixon Corp.  
E. I. Du Pont de Nemours & Co. Inc.  
Electrical Insulation Co., Inc.  
Emcco Plastic Fabricators—Div.—E. M. McCarthy Machine Co.  
Engineered Plastics, Inc.  
Fluorocarbon Co., The  
Fluorulon Labs., Inc.  
Form-It Products, Inc.  
Franklin Fibre Lamtex Corp.  
General Gasket Inc.  
Greene, Tweed & Co.  
Haveg Industries, Inc.  
Hitemp Wires Inc.  
Huntington Rubber Mills  
Illumitronic Engrg. Co.  
Jaclyn Mfg. Co.  
Jodex Plastics Co.  
Thomas J. Long, Inc.  
Mansfield Fabricators Inc.  
Maryland Lava Co.  
Mica Fabricating Co.  
Peerless Machine Co.  
Permacel  
Polymer Corp., The  
Raybestos-Manhattan, Inc.  
Raybestos-Manhattan, Inc. Pa.  
Reinhold Engrg. & Plastics Co.  
Ragers Corp.  
Milton Ross Metals Co., The  
Sanford Plastics Corp.  
Schlegel Mfg. Co.  
Staver Co., Inc., The  
Thermech Engrg. Corp.  
Topper Mfg. Co., Inc.  
Tri-Point Plastics Inc.  
Turbo Products, Inc.  
\*WEATHERHEAD CO., THE  
Western International Co.

#### TUNGSTEN

Accurate Specialties Co. Inc.  
Alloys Unlimited Inc.  
American Nickel Alloy Mfg. Corp.  
Associated Engrg. & Mfg. Corp.  
Belmont Smelting & Refining Works, Inc.  
Bram Metallurgical & Chemical Co.  
Damascus Tube Co.  
Delta Chemical Works, Inc.  
Esler Engrg. Co., Inc.  
Electronic Parts Mfg. Co., Inc.  
Elmet Div.—North American Philips Co. Inc.  
General Electric Co., Lamp Metals & Components Dept.  
Johnston & Funk Titanium Corp.  
Kennametal Inc.  
\*MALLORY-SHARON METALS CORP.  
Nesar Alloy Products Co.  
Rodney Metals Inc.  
Superior Carbon Products, Inc.  
sylvania Electric Products Inc., Chemical & Metallurgical Div.  
Union Carbide Metals Co., Div.—Union Carbide Corp.  
United Mineral & Chemical Corp.  
Universal-Cyclops Steel Corp.  
Waimet Alloys Co., Div. Consolidated Foundries & Mfg. Corp.  
Westinghouse Electric Corp., Lamp Div.  
Westinghouse Electric Corp., Metals Plant

Alpha Metals, Inc.  
American Silver Co.  
American Smelting & Refining Co.  
Anchor Metal Co., Inc.  
J. T. Baker Chemical Co.  
Belmont Smelting & Refining Works, Inc.  
Bow Solder Products Co., Inc.  
Delta Chemical Works, Inc.  
National Lead Co.  
Nesar Alloy Products Co.  
United Mineral & Chemical Corp.

#### TITANIUM

Accurate Specialties Co. Inc.  
Alloys Unlimited Inc.  
American Silver Co.  
Belmont Smelting & Refining Works, Inc.  
Bond Metal Surplus Co.  
Bram Metallurgical & Chemical Co.  
Bridgeport Brass Co.  
Continental Metals, Inc.  
Crucible Steel Co. of America  
Damascus Tube Co.  
Delta Chemical Works, Inc.  
Wilbur B. Driver Co.  
E. I. Du Pont de Nemours & Co. Inc.  
Foste Mineral Co.  
Hamilton Watch Co.—Industrial Div.  
Harvey Aluminum  
Johnston & Funk Titanium Corp.  
Kennametal Inc.  
\*LYCOMING DIV., AVCO MFG. CORP.  
P. R. Mallory & Co. Inc.  
\*MALLORY-SHARON METALS CORP.  
Matheson Co., Inc., The  
Metal Hydrides Inc.  
Metals & Controls Corp., General Plate Div.  
National Lead Co.  
Peerless Machine Co.

#### TUNGSTEN

Accurate Specialties Co. Inc.  
Alloys Unlimited Inc.  
American Nickel Alloy Mfg. Corp.  
Associated Engrg. & Mfg. Corp.  
Belmont Smelting & Refining Works, Inc.  
Bram Metallurgical & Chemical Co.  
Damascus Tube Co.  
Delta Chemical Works, Inc.  
Esler Engrg. Co., Inc.  
Electronic Parts Mfg. Co., Inc.  
Elmet Div.—North American Philips Co. Inc.  
General Electric Co., Lamp Metals & Components Dept.  
Johnston & Funk Titanium Corp.  
Kennametal Inc.  
\*MALLORY-SHARON METALS CORP.  
Nesar Alloy Products Co.  
Rodney Metals Inc.  
Superior Carbon Products, Inc.  
sylvania Electric Products Inc., Chemical & Metallurgical Div.  
Union Carbide Metals Co., Div.—Union Carbide Corp.  
United Mineral & Chemical Corp.  
Universal-Cyclops Steel Corp.  
Waimet Alloys Co., Div. Consolidated Foundries & Mfg. Corp.  
Westinghouse Electric Corp., Lamp Div.  
Westinghouse Electric Corp., Metals Plant

#### ZINC

Accurate Specialties Co. Inc.  
Allied Research Products, Inc.  
Alloys Unlimited Inc.  
American Nickel Alloy Mfg. Corp.  
American Silver Co.  
American Smelting & Refining Co.  
Anchor Metal Co., Inc.  
J. T. Baker Chemical Co.  
Belmont Smelting & Refining Works, Inc.  
Bond Metal Surplus Co.  
Delta Chemical Works, Inc.  
Dewiller Jarvis Div., National Lead Co.  
Eagle Picher Co., The  
Illinois Zinc Co.  
Matheson Co., Inc., The  
National Lead Co.  
United Mineral & Chemical Corp.

#### ZIRCONIUM

Alloys Unlimited Inc.  
American Nickel Alloy Mfg. Corp.  
American Silver Co.  
Associated Engrg. & Mfg. Corp.  
Belmont Smelting & Refining Works, Inc.  
Bram Metallurgical & Chemical Co.  
Bridgeport Brass Co.  
Damascus Tube Co.  
Delta Chemical Works, Inc.  
Firth Sterling Inc.  
Foste Mineral Co.  
Hamilton Watch Co.  
Hamilton Watch Co.—Industrial Div.  
Harvey Aluminum  
Johnston & Funk Titanium Corp.  
P. R. Mallory & Co. Inc.  
\*MALLORY-SHARON METALS CORP.  
Matheson Co., Inc., The  
Metal Hydrides Inc.  
Metalizing Co. of Los Angeles Inc.  
Metals & Controls Corp., General Plate Div.  
National Lead Co.  
F. H. Paul & Stein Brothers, Inc.  
Precision Shapes, Inc.  
Roberts Industries Inc.  
Rodney Metals Inc.  
Somers Brass Co. Inc.  
United Mineral & Chemical Corp.  
Universal-Cyclops Steel Corp.  
Wayne Pump Co., The Div.—Symington Wayne Corp.  
Westinghouse Electric Corp., Metals Plant





**MISSILE  
PURCHASING  
DIRECTORY**



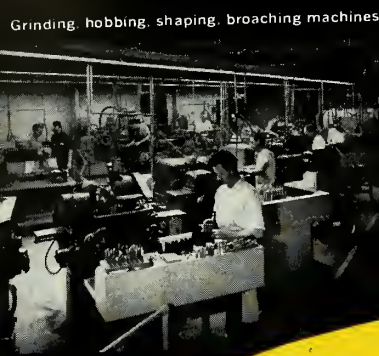
Complete facilities are under one roof



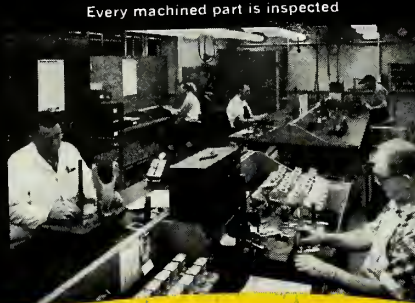
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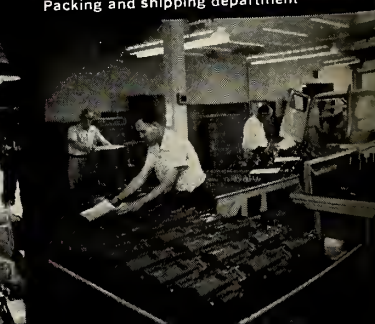
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Every production unit is functionally tested



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Packing and shipping department

# MISSILE PURCHASING DIRECTORY

Below are listed over 3,500 companies engaged in the missile business, along with their address, phone number, and key purchasing and sales personnel. Information concerning type of company activity may be determined by the coding at the end of each listing. Codings are explained in the lower right hand corner of every other page. The editors have made every effort to obtain listings for all companies active in the missile industry, but in an undertaking such as this, there are bound to be omissions. If we have omitted anyone who should have been included, we are sorry—and hope that our readers will inform us for correction in future editions. Write to: Editor, MISSILE MARKET & PRODUCT GUIDE, American Aviation Publications, 1001 Vermont Ave., N.W., Washington, D.C.

**C ELECTRONICS DIV., GENERAL MOTORS CORP.**  
 1925 E. Kenilworth Pl., Milwaukee 1, Wis. (Tel. BR 3-1120)  
 Purch. Dir.: Jack Briner  
 Sales & Adv. Mgr.: M. B. Price PS, GS, GE, TS  
 See Page 48 for Advertisement)

**F INDUSTRIES INC.**  
 50 Third Ave., New York 17, N. Y. (Tel. YUkon 6-8600)  
 P.-Purchases: Philips B. Hoyt  
 P.-Mktg: Henry A. Correo  
 urch. Agent (Avion Div.): H. H. Parnell (Tel. COLfax 1-4100, Paramus, N. J.)  
 urch. Agent (Ercoc Plant): P. C. Niil (Tel. WARfield 7-4444, Riverdale, Md.)  
 urch. Agent (Reactor Engr.): E. L. Phillips (Tel. TUCKerman 2-9650, Washington, O. C.)  
 urch. Agent (Albuquerque Plant): H. V. Wood (Tel. CHapel 7-0361, Albuquerque, N. Y.)  
 urch. Agent (WKM Oiv.): N. F. Slay (Tel. 4611, Stafford, Texas)  
 urch. Purch. Agent (ACF Electronics): W. O. Spriggs (Tel. KING 8-4400, Alexandria, Va.)  
 urch. Purch. (Carter Cars Div.): O. G. Teosdale (Tel. JEFFerson 1-2950, St. Louis, Mo.)  
 MF, WN, GS, GH, GE, CO, TS, TR, R&O

**A DIV., ELASTIC STOP NUT CORP. OF AMERICA**  
 127 Newark Ave., Elizabeth 3, N. J. (Tel. ELizabeth 2-2900)  
 urch. Agent: R. E. Joubert  
 Sales Mgr.: W. A. Feitner

**A INC.**  
 Eisenhower Blvd., Harrisburg, Pa. (Tel. JORDan 4-0101)  
 urch. Purch: George A. Beck  
 P.-Sales: G. Earle Walker MF, GS, GE, CO, TS, TR

**A. W. CORP.**  
 10 N. 9th St., Elwood, Ind. (Tel. FEderal 2-3346)  
 urch. Agent & Prod. Mgr.: Roy M. Riske  
 Sales Mgr.: Ted Nemes

**A METAL PRODUCTS MFG. CORP.**  
 1 Blommingdale Rd., Hicksville, L. I., N. Y. (Tel. WElls 1-1575)  
 urch. Agent: L. J. Wepy GS, GH

**A. M. CORP.**  
 2 Hawthorne Ave., Yonkers 5, N. Y. (Tel. YONkers 8-2010)  
 urch. Agent: Cloy Brandt  
 Sales Mgr.: Riva Solins MF, GS, GH, MM  
 Sales: Michael C. Presnick

**A. W. CO.**  
 1 W. Main St., Rockaway, N. J. (Tel. OAKwood 7-0643)  
 urch. & Sales: Arthur Pfeil  
 Sales Repres.: Henry J. Abbott GE, TS

**ALON PRECISION MFG. CORP.**  
 1 Cosonovo St., New York 59, N. Y. (Tel. LUDlow 9-5682)  
 urch. Agent: Lon Orent GE

**ADTT SCREW & MFG. CO.**  
 28 W. Wolnut St., Chicago 12, Ill. (Tel. CHesapeake 3-3500)  
 urch. Agent: Joseph H. Spiegel  
 P.-Sales: Max Cordell MF, WN, PS, GH, MM

**ASTO CORP.**  
 Ackerman St., Bloomfield, N. J. (Tel. ED 8-6814)  
 W. Krumscheid MM

**AWMS INSTRUMENT CORP.**  
 6 E. Shiowasse St., Lansing 1, Mich. (Tel. VANhoo 4-9441)  
 urch. Agent: C. E. Adams  
 urch. Purch. Agent: E. Conner  
 P.-Sales: C. J. Arksey PS, GS, GH, GE, CO, TS, TR

**ABRASIVE DRESSING TOOL CO.**  
 14528 Second Blvd., Detroit 3, Mich. (Tel. TOWnsend 8-6000)  
 Pres.: Jerry Krondall  
 Sales Mgr.: R. C. McCullough MM

**ACCESSORY CONTROLS & EQUIPMENT CORP.**  
 805 Bloomfield Ave., Windsor, Conn. (Tel. MURdock 8-4986)  
 urch. Agent: C. A. Putini  
 V. P.-Engr.-Sales: John J. Kordys MF, WN, PS, GS, GH, TS

**ACCESSORY PRODUCTS CO., DIV.-TEXTRON INC.**  
 616 W. Whittier Blvd., Whittier, Calif. (Tel. OXBow 3-3747)  
 urch. Agent: Jerry Hudson  
 Sales Mgr.: O. A. Cordes WN, PS, GS, GH, CO, R&O

**ACCO EQUIPMENT DIV., AMERICAN CHAIN & CABLE CO., INC.**  
 1110 E. Princess St., York, Pa. (Tel. 7313)  
 urch. Agent: W. E. Speck  
 Buyers: N. A. Husson & P. I. Polt  
 Sales Mgr.: E. C. Mabbis GS, GH, MM

**ACCURATE ELECTRONICS CORP., Dept. O**  
 169 S. Abbe Rd., Elyria, O. (Tel. EMerSON 6-7925)  
 Pres.: J. F. Seybold  
 Plt. Engr.: T. J. Lokacy GE

**ACCURATE INSTRUMENT CO.**  
 2422 Branard St., Houston, Texas (Tel. JACKson 3-2712)  
 Treas.: E. E. Hopf  
 V. P.-Sales: J. G. Seors GE, TR

**ACCURATE MFG. CO.**  
 Hepworth Place, Gorfield, N. J. (Tel. GREgory 3-2900)  
 Pres.: V. A. DeMatio  
 Oir.-Sales: A. W. Rista

**ACCURATE SPECIALTIES CO. INC.**  
 37-11 57th St., Woodside, N. Y. (Tel. TWining 9-5757)  
 urch. Agent: Lawrence Oiamond  
 Asst. Purch. Agent: Irving M. Solotoff  
 Buyer: Robert Moclsoac  
 Sales Mgr.: Nathan Zimmer MM

**ACE COIL & ELECTRONICS CO.**  
 917 Lincoln Hwy., Metuchen, N. J. (Tel. LIBerty 8-3580)  
 urch. Agent: A. O. Meyer  
 Buyer: I. M. MacOnald  
 Sales Mgr.: Fred Sompson GE, CO, TS, TR

**ACE ORILL BUSHING CO. INC.**  
 5407 Fountain Ave., Los Angeles 29, Calif. (Tel. HO 9-8253)  
 V. P.-Mfg.: George Clement PS  
 V. P.-Sales: George T. Smith

**ACE ELECTRONICS ASSOCIATES, INC.**  
 99 Dover St., Somerville 44, Mass. (Tel. SOMerset 6-5130)  
 urch. Agent: Oick Mizzoni  
 Sales Admin.: John J. Kennedy  
 Sales Mgr.: George Berman GE, R&D

**ACE ENGRG. & MACHINE CO., INC.**  
 Tomlinson Rd., Huntington Valley, Pa. (Tel. WILson 7-1900)  
 urch. Agent: Charles E. Kienzle  
 Sales Mgr.: Charles C. Borden

**ACE PRODUCTS CO.**  
 1820 N. 12th St., P. O. Box 784, Toledo 1, O. (Tel. CHery 3-6513)  
 urch. Mgr.: Emory A. Fall

**ACE SPRING MFG. CO., INC.**  
 148 32nd St., Brooklyn 32, N. Y. (Tel. STerling 8-0100)

**ACHESON COLLOIDS CO., DIV.-ACHESON INDUSTRIES, INC.**

1952 Washington Ave., Port Huron, Mich. (Tel. YUKon 4-4171)  
 Sales Mgr.: Arthur T. Olsson  
 Purch. Agent: Lester H. Miller MM

**\*ACK RADIO SUPPLY CO.**  
 3104 4th Ave. South, Birmingham 5, Ala. (Tel. FA 2-0588)  
 Pres.: E. C. Atkerson  
 Gen. Mgr.: William F. Harmon  
 Sales Mgr.: Edwin W. Thomas  
 \*(See Page 66 for Advertisement)

**ACKERMAN ENGRAVERS, INC.**  
 458 Broadway, New York 13, N. Y. (Tel. BARclay 7-1479)  
 Pres.: Bernard Strionese  
 Gen. Mgr.: Michael Strionese GE, CO, TS, R&D

**ACKERMAN JOHNSON CO.**  
 625 W. Jackson Blvd., Chicago 6, Ill. (Tel. RANDolph 6-2816)

**ACME BRASS FOUNDRY CO. OF SAN ANTONIO, INC.**  
 716 Wyoming St., San Antonio 3, Texas (Tel. CAPitol 7-4601)  
 Gen. Mgr.: Steve Margozewitz  
 Sales Mgr.: Mrs. Agnes M. Mahulo

**ACME ELECTRIC CORP.**  
 20 Water St., Cuba, N. Y. (Tel. CUBa 4)  
 Dir.-Purch.: A. J. Rudy  
 Dir.-Sales: J. O. Holl GE, TS, R&O

**ACME INDUSTRIAL CO.**  
 200-222 N. Loffin St., Chicago 7, Ill. (Tel. MONroe 6-4122)  
 urch. Agent: Ronald Farrell  
 V. P.-Sales: Warner T. Brocken MF, PS, GS, GE, CO, TS

**ACME MFG. & GASKET CO.**  
 738-40 N. 41st St., Philadelphia 4, Pa. (Tel. EVERgreen 8-8622)  
 Gen. Mgr.: Harry E. Wagenseller MF, PS

**ACME WIRE CO.**  
 1253 Oxwell Ave., New Haven 14, Conn. (Tel. LO 2-2171)  
 urch. Agent: Walter Rousch  
 Asst. Purch. Agent: Robert Kowalchell  
 Pres.: H. A. Bossett MM

**ACME-NEWPORT STEEL CO.**  
 9th & Lowell Sts., Newport, Ky. (Tel. COLonial 1-5620)  
 Dir.-Purch.: H. M. Baker  
 V. P.-Sales: C. M. Riefkin MM

**ACORN BEARING CO.**  
 66 Stanley, New Britain, Conn. (Tel. BA 9-0839)  
 Dir.-Sales: O. E. Malona

**ACORN TOOL & MFG., INC.**  
 York & John Sts., Cincinnati 14, Ohio (Tel. CHerry 1-2330)  
 V. P.: Ed Stern  
 Sales: Ed Krabochoer MF, WN, PS

**ACUSTICA ASSOCIATES, INC.**  
 26 Windsor Ave., Mineola, N. Y. (Tel. Pioneer

	CODING
	Missile Frame MF
	Warhead & Nose Cone WN
	Propulsion System PS
	Ground Support GS
	Ground Handling GH
	Guidance Equipment GE
	Checkout Equipment CO
	Test Equipment TS
	Tracking & Telemetering TR
	Research & Development R&D
	Materials & Metals MM

# ... purchasing directory ac—all

7-7900)  
**Purch. Agent:** Arthur Baumach  
**V. P.-Sales:** Ralph Reynolds  
**PS, GS, GH, GE, CO, TS, TR**

**ACRO DIV., ROBERTSHAW-FULTON CONTROLS**  
 2040 E. Main St., Columbus 16, D. (Tel. CL 3-8531)  
**Purch. Agent:** A. Lafferty  
**Mktg. Mgr.:** M. S. Felz

**ACROMAG INC.**  
 22519 Telegraph Rd., Detroit 41, Mich. (Tel. ELgin 6-7211)  
**Purch. Agent:** Robert G. Hennings  
**V. P.-Sales:** T. N. Jones  
**GE, CO, TS, TR, R&D**

**ACROMARK CO., THE**  
 445 Marrell St., Elizabeth 4, N. J. (Tel. ELizabeth 2-6500)  
**Purch. Agent:** M. A. Palmieri  
**Gen. Sales Mgr.:** W. R. Heine, Jr.

**ACTON LABORATORIES INC.**  
 533 Main St., Acton, Mass. (Tel. CDlonial 3-7756)  
**Prod. Mgr.:** Richard Hall  
**Sales Mgr.:** Leroy C. Bower, Jr.  
**GE, TS, TR, R&D**

**ACTUATION RESEARCH CORP.**  
 416 N. Glendale Ave., Glendale 6, Calif. (Tel. CHapman 5-6866)  
**Mat. Coordinators:** B. G. Mueller  
**Sales Mgr.:** E. H. Mitchell  
**GS, R&D**

**ACTUATOR PRODUCTS DIV., GEARTRONICS CORP.**  
 10 Neshua St., Waburn, Mass. (Tel. WElls 3-1400)  
**Purch. Agent:** Albert N. Galante  
**Sales Mgr.:** John H. Lyman  
**MF, GS, GH, GE, CO, TS, TR**

**AOAM METAL SUPPLY INC.**  
 4-63 48th Ave., Long Island City 1, N. Y. (Tel. STillwell 6-7737)  
**V. P.-Purch.:** Jules Brody  
**Sales Mgr.:** Al Bernard  
**MM**

**R. P. ADAMS CO., INC.**  
 Dept. M & R, Box 145, Kenmore Branch, Buffalo 17, N. Y. (Tel. VICTORIA 2608)  
**Purch. Agent:** T. J. Wintermute  
**Gen. Sales Mgr.:** L. M. Rawlings

**ADAMS RITE MFG. CO.**  
 540 W. Chevy Chase Dr., Glendale 4, Calif. (Tel. CHapman 5-1096)  
**Dir.-Purch.:** J. Rocca  
**Dir.-Dev. & Chief Sales Engr.:** Donnell Grizzard  
**GS**

**AOEL PRECISION PRODUCTS, DIV.-GENERAL METALS CORP.**  
 1444 Washington Ave., Huntington, W. Va. (Tel. JA 2-7345)  
**Purch. Agent:** D. V. Reynolds  
**Sales Mgr.:** H. G. Shy  
**MF, GS, GH, TS**

**ADEL PRECISION PRODUCTS OF CALIF., DIV.-GENERAL METALS CORP.**  
 10777 Vanowen St., Burbank, Calif. (Tel. STanley 7-2611)  
**Purch. Agent:** A. Haines  
**Gen. Mgr.:** L. P. Wainink  
**GS, GE**

**ADEPT INDUSTRIES INC.**  
 1636 W. Hunting Park Ave., Philadelphia 40, Pa. (Tel. DAVenport 4-6800)  
**Purch. Agent:** Sidney Whitman  
**Sales:** John F. Sohl  
**MF, WN, PS, GS, GE, CO, TS, TR**

**ADHESIVE ENGRG. DIV.-HILLER AIRCRAFT CORP.**  
 1411 Industrial Rd., San Carlos, Calif. (Tel. LYell 1-2686)  
**Purch. Agent:** W. E. Schneider  
**V. P.-Sales:** John L. Morrill  
**MF, MM, R&D**

**ADLER ELECTRONICS, INC.**  
 1 Le Fevre Lane, New Rochelle, N. Y. (Tel. NE 6-1620)  
**Purch. Agent:** Eugene Laks  
**V. P.-Sales:** Alfred Strogoff  
**GS, CO, TS, TR, R&D**

**ADVANCE CARBON & ELECTRIC MFG. CO.**  
 2505 Mariposa St., San Francisco 10, Calif. (Tel. HEmlock 1-4034)  
**Dir.-Purch.:** Boyd Bithell  
**Sales Mgr.:** W. J. Crader  
**GE, CO, TS, TR, MM, R&D**

**ADVANCE GEAR & MACHINE CORP.**  
 5851 Holmes Ave., Los Angeles 1, Calif. (Tel. LUDlow 7-8103)  
**Purch. Agent:** Stan Jackson  
**Sales Mgr.:** Raymond L. Seitz  
**PS, GE, TS, TR**

**ADVANCE RELAYS, ELECTRONICS DIV., ELGIN NATIONAL WATCH CO.**  
 2435 N. Noomi St., Burbank, Calif. (Tel. VI 9-1446)  
**Purch. Agent:** J. Shrieber

**Notl. Sales Mgr.:** Gene Straube  
**GS, GH, GE, CO, TS, TR**

**ADVANCED ELECTRONICS, INC.**  
 94 Silas Deane Hwy., Rocky Hill, Conn. (Tel. JACKson 9-6881)  
**Purch.:** Alfred Dinunzio  
**Sales:** Sam Friedman  
**MF, PS, GS, GH, GE, CO, TS**

**ADVANCED ELECTRONICS MFG. CORP.**  
 2116 S. Sepulveda Blvd., Los Angeles 25, Calif. (Tel. GRanite 8-9220)  
**Pres.:** David Rutland  
**V. P.-Sales:** B. F. Ambrosio  
**GS**

**ADVANCEO PRODUCTS CO., THE**  
 S9 Broadway, North Haven, Conn. (Tel. CEdar 9-1664)  
**Treas.:** Arthur Hostoge  
**MF, WN, PS, GS, GH, GE, CO, TS, TR**

**AD-YU ELECTRONICS LAB., INC.**  
 249 Terhune Ave., Passaic, N. J. (Tel. GRegory 2-5622)  
**Purch. Agent:** N. Slinger  
**TS, R&D**

**AER, INC.**  
 871 E. Washington St., Pasadena, Calif. (Tel. SY 4-9725)  
**Dir.-Purch.:** L. E. Pritchard  
**Dir.-Res.:** Dr. A. J. A. Morgan  
**R&O**

**AERO BOLT & SCREW CO., INC.**  
 25 W. Hartsdale Ave., Hartsdale, N. Y. (Tel. RDickwell 1-0210)  
**Purch. Agent:** F. DiBiase  
**Sales Mgr.:** A. Oliver

**AERO ELECTRONICS CORP.**  
 1657 W. 134th St., Gardena, Calif. (Tel. FAculty 1-2196)  
**Gen. Mgr.:** Stephen E. Taylor  
**Chief Engr.:** James X. Green  
**Prod. Mgr.:** Gracia Green  
**TR**

**AERO GASKET CORP.**  
 763 Hanover Rd., Meriden, Conn. (Tel. BEverly 5-3361)  
**Dir.-Purch.:** Rhoda Hurwitz  
**Dir.-Sales:** Raymond C. Schmitt  
**PS**

**AERO INSTRUMENT CO.**  
 11223 Vanowen St., North Hollywood, Calif. (Tel. STanley 7-5433)  
**Pres.:** T. O. Cox  
**Asst. Secy.:** Mrs. L. Hough

**AERO INSTRUMENT CO., INC.**  
 5105 Denison Ave., Cleveland 2, O. (Tel. WOODbine 1-5574)  
**Gen. Mgr.:** Emil Daiber  
**GE**

**AERO LEATHER PRODUCTS CO.**  
 1740 W. 59th St., Los Angeles 47, Calif. (Tel. PLeasant 3-1461)  
**V. P.-Purch.:** C. E. Seymour  
**Gen. Sales Mgr.:** W. E. Seymour  
**MF, PS, GE, TR**

**AERO RESEARCH INSTRUMENT CO. INC.**  
 315 N. Aberdeen St., Chicago 7, Ill. (Tel. TAYlor 9-6400)  
**Purch. Agent:** D. Bernstein  
**Gen. Mgr.-Sales:** Arthur Anderson  
**TS, TR, R&D**

**AERO SUPPLY MFG. INC.**  
 611 W. Main St., Corry, Pa. (Tel. 2-8261)  
**Purch. Agent:** P. E. Dwyer  
**Buyer:** Dean Houser  
**V. P.-Sales & Engrg.:** E. F. Pain  
**MF, WN, PS, GS, GH, GE, CO, TS, R&D**

**AEROCHEM RESEARCH LABS., INC.**  
 P. D. Box 12, Princeton, N. J. (Tel. WALnut 1-7070)  
**Gen. Mgr.:** George R. Bent, II  
**R&D**

**AERODEX, INC.**  
 P. O. Box 123 (Airport Br.), Miami 48, Fla. (Tel. TUXedo 5-2411)  
**Purch. Agent:** A. Van Wagner  
**Buyer:** Ralph LaPerche  
**Sales & Serv. Mgr.:** Hermann Waker, Jr.  
**MM**

**AEROFLEX CORP., THE, AEROFLEX LABS. DIV.**  
 34-06 Skillman St., Long Island City 1, N. Y. (Tel. STillwell 4-7000)  
**V. P.-Sales:** R. G. Sanders  
**MF, GS, GE, TS, TR**

**AEROIL PRODUCTS CO., INC.**  
 69 Wesley St., South Hackensack, N. J. (Tel. DIamond 3-5200)  
**Sales Dir.:** M. M. Yarrington

**AEROJET-GENERAL CORP.**  
 6352 N. Irwindale Ave., Azusa, Calif. (Tel. CLumberland 3-6111)  
**Purch. Agent:** John Roth  
**WN, PS, GS, GE, CO, TS, R&D**

**AEROLAB DEVELOPMENT CO.**  
 330 W. Holly St., Arcadia, Calif. (Tel. SYcamore 3-1184)  
**Works Mgr.:** A. C. MacMillan  
**Purch. Agent:** A. Grenon  
**Sales & Contracts Mgr.:** J. W. Reed  
**MF, PS, GS, GE, R&D**

**AEROLITE ELECTRONICS CORP.**  
 1077 Summit Ave., Union City, N. J. (Tel. UNION 3-2955)  
**Purch. Agent:** V. G. Motto  
**MF, WN, PS, GS, GH, GE, CO, TS, TR**

**AERONAUTICAL & INSTRUMENT DIV., ROBERTSHAW-FULTON CONTROLS CO.**  
 Santa Ana Freeway at Euclid Ave., Anaheim, Calif. (Tel. KEystone 5-8151)  
**Purch. Agent:** L. L. Moloney  
**Asst. Purch. Agent:** W. Houseworth  
**Buyers:** W. Hamilton & J. Krause  
**Mgr.-Field Engr. & Sales:** R. H. Heller  
**GS, CO**

**AERONCA MFG. CORP.**  
 1712 Germantown Rd., Middletown, D. (Tel. GArden 2-2751)  
**Dir.-Purch.:** R. M. Paul  
**Dir.-Material Negotiation Section:** Thomas Brunjes  
**V. P.-Tech. Services Div.:** Roy F. Hermes  
**MF, GS**

**AERONCA MFG. CORP.-BALTIMORE FACILITY**  
 Hilltop & Frederick Rds., Baltimore 29, Md. (Tel. RIDgeway 7-0200)  
**Purch. Agent:** G. M. Swesey  
**Dir.-Sales:** J. W. Calleran  
**GS, CO, R&D**

**AERONUTRONIC SYSTEMS, INC., SUB.-FORO MOTOR CO.**  
 Ford Rd., Newport Beach, Calif. (Tel. DRiole 3-2520)  
**Mgr.-Purch.:** C. D. Graef  
**Purch. Agent, Computer Div.:** Gregory S. Cadice  
**Dir.-Mktg., Computer Div.:** S. D. Wanless  
**Dir.-Mktg., Space Tech.:** C. G. Gant  
**Dir.-Mktg., Range Systems:** J. R. Ambrose  
**MF, WN, PS, TS, TR, MM, R&D**

**AERO PRODUCTS OPERATIONS, ALLISON DIV., GENERAL MOTORS CORP.**  
 Municipal Airport, Dayton, D. (Tel. TWinooks 8-4661)  
**Mgr.-Purch.:** J. E. Baird  
**Asst. Purch. Agent:** W. S. Neff  
**Purch. Parts Buyer:** F. A. White  
**Mgr.-Sales, Serv. & Contracts:** C. E. Dixon  
**WN, PS, GS, GE, TS**

**AEROQUIP CORP., JACKSON DIV.**  
 300 S. East Ave., Jackson, Mich. (Tel. STate 2-0361)  
**Purch. Mgr.:** Lewis A. Greene  
**Gen. Sales Mgr.:** F. W. Schwier  
**MF, PS, GS, GH, GE**

**AEROSCIENCE, INC.**  
 3155 N. Rosemead Blvd., Rosemead, Calif. (Tel. ATLantic 9-2112)  
**Purch. Agent:** S. R. Young  
**Dir.-Sales:** T. M. Morrow  
**PS, GH, TS, R&D**

**AEROTEC CORP., THE**  
 Pembrok Rd., Greenwich, Conn. (Tel. JEFferson 1-8400)  
**Dir.-Planning & Procurement:** Harold Anderson  
**Sales Mgr.:** Thomas Walker  
**MF, WN, PS, GS, GH, GE**

**AEROTEST LABORATORIES, INC.**  
 129-11 18th Ave., College Point 56, N. Y. (Tel. INdependence 1-7272)  
**Purch. Agent:** S. Liebfreund  
**Sales Mgr.:** L. Permut  
**CO, T**

**AEROVOX CORP.**  
 740 Belleville Ave., New Bedford, Mass. (Tel. WYman 4-9661)  
**Purch. Agent:** Robert Crabbe  
**Buyers:** Edward Hickey, John Warren, Fred Graebner  
**Joe Desjardis**  
**V. P.-Sales:** Frank Marshall  
**G**

**AETNA ELECTRONICS CORP.**  
 Redington Rd., North Branch, N. J.  
**Purch. Agent:** Robert McDonald  
**Dir.-Sales:** Henry J. Buser, Jr.  
**1**

**AINSLIE CORP.**  
 312 Quincy Ave., Quincy 69, Mass. (Tel. GRAnite 2-8747)  
**Purch. Agent:** L. D. Ainslie  
**Sales:** H. W. Ainslie  
**MF, PS, GS, GE, CO, TS, T**

**AIR FILTER CORP.**  
 4554 W. Woolworth Ave., Milwaukee 18, Wis. (Tel. FLagstone 3-5800)  
**V. P.-Purch.:** R. J. Breckheimer  
**Sales:** Rodger J. Clark  
**GS, T**

**AIR FRAME INSPECTION INC.**  
 10801 Sessler St., South Gate, Calif. (Tel. TOPaz 1-6733)  
**Dir.-Sales:** B. H. Smith

**JR LOGISTICS CORP.**  
3600 E. Foothill Blvd., Posadena, Calif. (Tel. SYcomere 6-7191)  
Mgr.-Material: G. A. Tietz  
Chief Purch. Agent: C. J. Wilson  
Supvr.-Buyers: M. F. Hientz  
V. P.-Engr. & Customer Relations: C. J. Breitwieser GS, GH, CO

**IR PRODUCTS, INC.**  
Allentown, Pa. (Tel. Express 5-3311)  
Gen. Purch. Mgr.: F. B. Droke  
Purch. Agent: A. Wilson  
Gen. Sales Mgr.: D. E. Cummings PS, GS, GH

**R REDUCTION SALES CO., DIV.-AIR REDUCTION CO., INC.**  
150 E. 42nd St., New York 17, N. Y. (Tel. MUrray Hill 2-6700)  
Gen. Purch. Agent: R. N. Chopin  
Asst. Adv. & Sales Prom. Mgr.: William C. Bertes MF, PS, GS

**R SPEED TOOL CO.**  
1502 W. Slauson Ave., Los Angeles 47, Calif. (Tel. PLeasant 2-8340)  
Gen. Mgr.: H. J. Thiessen  
Asst. Gen. Mgr.: R. G. Zimmerman  
Purch.: H. L. Johnson PS, GS, TS

**RATERRA**  
520 Poulou Ave., Glendale 1, Calif. (Tel. CHopman 6-1196)  
Purch. Agent: Jack Schroeder  
V. P.-Sales: Dan Butler GS, GH, TS, R&D

**RBORNE ACCESSORIES CORP.**  
414 Chestnut Ave., Hillside 5, N. J. (Tel. MU 8-0250)  
Purch. Agent: P. Marantz  
Pres. & Gen. Mgr.: W. Cortlyn Rhodes MF, WN, GS, GH

**RBORNE INSTRUMENTS LAB., DIV.-CUTLER-HAMMER, INC.**  
345 New York Ave., Huntington Station, N. Y. (Tel. MYrtle 2-6100)  
Mr.-Procurement: George Hensen  
Mr.-Mktg.: M. J. Rowe GS, CO, TS, R&D

**RBORNE RESEARCH & DEVELOPMENT CORP.**  
530 San Fernando Rd., Sun Valley, Calif. (Tel. STanley 7-9647)  
Purch. Agent: Neil Boren  
Sales Mgr.: Richard B. Blythe MF, WN, PS, GS

**RCOM INC.**  
54 Main St., Winthrop, Mass. (Tel. OCean 3-3096)  
Chief Engr.: Robert A. Rivers  
Sales Mgr.: Edward J. Stock TR, R&O

**RCOM INC. OF NEW JERSEY**  
89 E. First Ave., Roselle, N. J. (Tel. CHestnut 5-2990)  
Asst. Purch. Agent: O. Nodel  
P.-Sales: R. LeNoble GE, CO, TR

**RCRAFT ARMAMENTS, INC.**  
Lockeysville, Md. (Tel. VAlley 5-8400)  
Chief-Procurement: Blaine M. Swartz  
P.-Sales: Robert B. Chopman, III. WN, GS, GH, CO, TR, R&O

**RCRAFT COMPONENTS, INC.**  
15 Woodland Ave., Twin Cities Airport, Benton Harbor, Mich. (Tel. WAlnut 5-8861)  
es.: C. O. Zollar  
Sales Mgr.: C. R. Raines  
Asst. Sales Mgr.: R. E. Green

**RCRAFT CONTROLS CO., DIV., GORN ELECTRIC CO., INC.**  
15 Main St., Stamford, Conn. (Tel. FReside 8-7591)  
Purch. Agent: A. J. Saraceno  
Mr.-Sales Engrs.: A. H. Morgan

**RCRAFT EQUIPMENT DIV.-CONSOLIDATED DIESEL ELECTRIC CORP.**  
0 Canal St., Stamford, Conn. (Tel. OAvis 5-2261)  
r.-Ops.: J. F. Campbell  
rch. Agent: J. Kistner  
ief. Quotations: C. Ziehl  
P.-Sales: Gerald Rosenberg PS, GS, GH

**RCRAFT EQUIPMENT TESTING CO., INC.**  
12 Fleet St., Baltimore 31, Md. (Tel. ORleans 8-8337)  
es.: Harry P. Kupiec TS, R&D

**RCRAFT FITTING CO., THE**  
1 N. Federal Hwy., Oania, Fla. (Tel. WAbosh 3-2331)  
r.-Purch.: Paul Hummel  
es Mgr.: H. P. Borger MF, PS, GS

**RCRAFT MECHANICS, INC.**  
30 N. Nevada Ave., Colorado Springs, Colo. (Tel. ALrose 2-7687)  
P.: Edwin Arno  
yer: A. S. McCann MF, GS, GH

**RCRAFT POROUS MEDIA, INC.**  
Sea Cliff Ave., Glen Cove, N. Y. (Tel. ORiole 1-4000)  
Purch. Agent: N. Friedman  
Sales Mgr.: J. A. Whitwell GS, GH, GE, CO, TS

**AIRCRAFT PRECISION PRODUCTS, INC.**  
8720 North End Ave., Oak Park 37, Mich. (Tel. JOrdan 4-5830)  
Purch. Agent: W. W. Henderson, Jr. PS, R&O

**AIRCRAFT PRODUCTS DIV.-CLINE ELECTRIC MFG. CO.**  
3405 W. 47th St., Chicago, Ill. (Tel. CLiffside 4-7500)  
Production Mgr.: Harold Hicks GS, GH

**AIRCRAFT TOOLS, INC.**  
9030 Bellanca Ave., Los Angeles, Calif. (Tel. OR 8-3432)  
Purch. Agent: William Avey  
Asst. Purch. Agent: Paul Dowd  
Buyer: D. Jackson  
V. P.-Sales: H. W. Dellett MF, GS, GH

**AIROESITE CORP.**  
241 Fairfield Ave., Upper Oorby, Po. (Tel. GRonite 4-8000)  
Purch. Agent: James LaBelle  
Sales Mgr.: Mervin I. Beard GS, GE

**AIRROME PARTS CO.**  
922 W. Hyde Park Blvd., Inglewood 3, Calif. (Tel. ORegan 8-7133)  
Purch. & Prod. Mgr.: Harold O. Stout  
Sales Mgr.: Walter J. Parker MF, GS, GH, TS, R&D

**AIRECD, INC.**  
2323 Second Ave. Carman, Schenectady, N. Y. (Tel. EL 5-6545)  
Secy.: F. DiGennaro  
Pres.: H. Levine TS

**\*AIRESEARCH MFG. OF ARIZONA**  
402 S. 36th St., Phoenix, Ariz. (Tel. BRidge 5-6311)  
Dir.-Purch.: Leslie Rhuart  
Sales Mgr.: Stan Whitaker PS, GS  
\*(See Page 43 for Advertisement)

**\*AIRESEARCH MFG. CO. DIV., THE GARRETT CORP.**  
9851 Sepulveda Blvd., Los Angeles 45, Calif. (Tel. SP 6-1010)  
Purch. Agent: B. Schindler  
Sales Mgr.: P. M. Bartlett MF, PS, GS, GH, GE, CO, R&D  
\*(See Page 43 for Advertisement)

**AIRFLYE ELECTRONICS CO.**  
535 Ave. A, Bayonne, N. J. (Tel. HElock 6-2230)  
Purch. Agent: Ben Navy  
Buyer: O. Pintoara  
Sales Dir.: Milton Feinman GS, GE, TR

**AIRGUGE INSTRUMENT CO.**  
2210 Wabansia Ave., Chicago 47, Ill. (Tel. HUmboldt 6-3000)  
V. P.-Sales: Fred D. Eckert

**AIR-MARINE MOTDRS, INC.**  
369 Bayview Ave., Amityville, N. Y. (Tel. AMityville 4-3700)  
Purch. Agent: Paul Harrington  
Sales Mgr.: David H. Thomas  
Sales Mgr. (E/C Div.): William Sly GS, GE, R&O

**AIR-MAZE CORP.**  
25000 Miles Rd., Cleveland 28, O. (Tel. MOntrorse 2-8000)  
Dir.-Purch.: James Carson  
Sales Mgr.: John M. Clem PS, GS, GH

**AIRPAX ELECTRONICS INC., SEMINOLE DIV.**  
Fort Lauderdale, Fla. (Tel. LUDlow 3-6160)  
Purch. Agent: R. Oandlinger  
Gen. Sales Mgr.: J. Sullivan GS, TS, TR, R&O

**AIRTEWP DIV., CHRYSLER CORP.**  
1610 Webster St., Dayton 1, Ohio (Tel. Baldwin 3-2141)  
Purch. Agent: H. M. Coy  
Purch. Supvr.: C. L. Buck GS

**AIRTRON INC. DIV.-LITTON INDUSTRIES**  
200 E. Honover Ave., Morris Plains, N. J. (Tel. JEfferson 9-5500)  
Dir. Purch.: H. Carrin  
Sales Mgr.: J. Raveto GS, GE, TR

**AIRTRONICS INTERNATIONAL CORP.**  
6900 W. Rd. 84, P. O. Box 8576, Ft. Lauderdale, Fla. (Tel. LUDlow 3-4541)  
Purch. Agent: Paul Best  
Pres.: Robert G. Kramer GS

**AIRWORK CORP.**  
5245 N. W. 36th St., Miami Springs, Fla. (Tel. TUXedo 8-3467)  
Connector Sales: R. R. Read PS, GS, GE

**AKRON BRASS MFG. CO., INC.**  
Wooster, Ohio (Tel. HDward 2-0070)  
Purch. Agent: F. B. Watson  
V. P.-Sales: Harold Strain

**ALAC, INC.**  
365 W. Arden St., Glendale, Calif. (Tel. CHopman 5-3787)  
Sales Mgr.: Milton Terklo

**ALAD ALUMINUM LADDER CORP.**  
7260 Melrose Ave., Los Angeles 46, Calif. (Tel. WEster 4-5000)  
Gen. Sales Mgr.: F. A. van Baum GH, GS

**ALADDIN ELECTRONICS, DIV.-ALADDIN INDUSTRIES INC.**  
705 Murfreesboro Rd., Nashville 10, Tenn. (Tel. CH 2-3411)  
Prod. Control Mgr.: F. G. Bassler  
Purch. Agent: William B. Potterson  
V. P. & Gen. Mgr.-Sales: W. W. Strifer GE, CO, TS, TR, R&D

**ALBANO CO. INC.**  
549-555 W. 54th St., New York, N. Y. (Tel. PLozo 7-5888)

**ALBION INDUSTRIES, INC.**  
816 N. Clark St., Albion, Mich. (Tel. NAtional 9-3965)  
Purch. Agent: C. W. Burns  
Gen. Mgr.: J. F. Karmolski

**ALCAR INSTRUMENTS, INC.**  
17 Industrial Ave., Little Ferry, N. J. (Tel. HUbbard 7-3040)  
V. P.-Purch.: Louis R. Jeffrey, Jr. PS, GS, GH, GE, CO, TS, TR

**ALCO PRODUCTS, INC.**  
P. O. Box 1065, Schenectady 1, N. Y. (Tel. FRonkln 7-3311)  
Dir.-Procurement: E. J. Van Valkenburgh  
Sales Mgr., Nuclear & Defense Products: A. T. Lawrence PS, GH, WM, R&D

**ALCO VALVE CO.**  
865 Kingsland Ave., St. Louis 5, Mo. (Tel. PArkview 2-2460)  
Proc. Off.: W. F. Helfrich  
Buyers: Wm. C. Calvin & Jack DeCarmier  
Mgr.-Aircraft Sales: W. F. Lochmoeller MF, PS, GS

**ALDEN PRODUCTS CO.**  
154 N. Main St., Brockton, Mass. (Tel. JUNiper 3-0160)  
Purch. Agent: A. E. Illsley  
Sales Mgr.: N. W. Hearn MF, PS, GS, GH, GE, CO, TS, TR

**ALECTRIC MFG. CO.**  
7842 39th Ave., Kenosha, Wisc. (Tel. OLYmpic 7-3248)  
Owner: J. B. Winther  
Plant Mgr.: V. Zens TS

**ALFAX PAPER & ENGRG. CO.**  
Washington St., Westboro, Mass. (Tel. FOrrest 6-4467)  
Chief Engr.-Purch.: E. O. Cross  
Plant Mgr.-Sales: S. C. Sviokla TR

**AL-FIN DIV., FAIRCHILD ENGINE & AIRPLANE CORP.**  
Cammack Rd., Deer Park, L. I., N. Y. (Tel. DEer Park 2-7211)  
Chief Engr.: R. E. Seal  
Sales: H. W. Crusey MF

**ALFORD MFG. CO.**  
299 Atlantic Ave., Boston, Mass. (Tel. HANcock 6-2150)  
Purch. Agent: Robert O'Brien  
Sr. Engr.-Sales: Harold H. Leach TS

**ALFRED ELECTRONICS**  
897 Commercial St., Palo Alto, Calif. (Tel. DAVenport 6-6496)  
Purch.: Al Jew  
Sales Mgr.: Paul N. Fulton GE, CO, TS, TR

**ALL AMERICAN ENGRG. CO.**  
Box 1247, Wilmington, Del. (Tel. WYman 4-0951)  
Purch. Agent: John F. Stocki  
Head, Military Proj.: Chuck J. Daniels  
Head, Comm. Proj.: Edwin B. Pierce GS, GH, R&D

**ALL AMERICAN TOOL & MFG. CO.**  
8027 Lawndale Ave., Skokie, Ill. (Tel. ORchard CODING  
Missile Frame MF  
Warhead & Nose Cone WN  
Propulsion System PS  
Ground Support GS  
Ground Handling GH  
Guidance Equipment GE  
Checkout Equipment CO  
Test Equipment TS  
Tracking & Telemetering TR  
Research & Development R&D  
Materials & Metals MM

# ... purchasing directory all—amer

- 3-7084)  
Gen. Mgr.-Purch.: S. K. Hein  
Chief Engr.-Purch. & Sales: Robert O. Hein TS
- ALL BORO METAL PRODUCTS CO., INC.**  
610 Fenimore Rd., Mamaroneck, N. Y. (Tel. OWens 8-0104)  
V. P.-Purch.: H. B. Maxwell  
Purch.: J. J. Schnapp & H. M. Sterling MF, PS, GH
- ALL PRODUCTS CO.**  
P. O. Box 110, Mineral Wells, Tex. (Tel. FAirfax 5-3301)  
Purch. Agent: Harry Opanowitz GS, TR, R&D
- ALL SPECS CORP.**  
145 Paterson Ave., Wallington, N. J. (Tel. GR 1-4700)  
Pres.: H. London  
V. P.-Purch.: H. Mohrwinkel  
MF, WN, PS, GS, GH, GE, R&D
- ALLEGANY INSTRUMENT CO., INC.**  
1091 Wills Mountain, Cumberland, Md. (Tel. PArkview 4-1200)  
Purch. Agent: Miss Helen Whiteman  
Sales Mgr.: Charles K. Johnson GS, TS
- ALLEGHENY BALLISTICS LAB.**  
Cumberland, Md.
- ALLEGHENY LUDLUM STEEL CORP.**  
Oliver Bldg., Pittsburgh 22, Pa. (Tel. COurt 1-5300)  
V. P.-Purch.: L. H. Bittner  
V. P.-Sales: W. B. Pierce MM
- R. C. ALLEN AIRCRAFT INSTRUMENT DIV.,  
R. C. ALLEN BUSINESS MACHINES, INC.**  
333 Commerce St., S. W., Grand Rapids, Mich. (Tel. GL 6-8541)  
Purch. Agent: F. C. Paterson  
V. P.-Sales: Henry A. Greene GE, TR
- ALLEN AIRCRAFT PRODUCTS, INC.**  
Rovenna, O. (Tel. AX 6-9621)  
Purch. Agent: Russ Lengs  
Sales Mgr.: Wm. H. Holladay PS, GS
- ALLEN MFG. CO.**  
Crawser 570, Hartford 1, Conn. (Tel. CH 2-8511)  
Purch. Agent: Wm. A. MacOonold  
V. P.-Sales: W. D. Horner MF, PS
- ALLEN TOOL CORP.**  
308 Malbie St., Syracuse, N. Y. (Tel. GR 2-4426)  
Sales: Lawrence C. Miner & Norman C. Thompson  
Office Mgr.: Jay J. Amidon R&D
- ALLEN AIR CORP.**  
255 E. Second St., Mineola, N. Y. (Tel. Pioneer 7-5450)  
Purch. Agent: Irving Charm  
Sales: A. C. Kelly PS, GS
- \*ALLIED CHEMICAL CORP., GENERAL  
CHEMICAL DIV.**  
40 Rector St., New York 6, N. Y. (Tel. HANover 2-7300)  
Dir.-Purch.: W. B. Machmer, Jr.  
Mgr.-Purch.: J. A. Simpson  
Mgr.-Sales: C. P. Berdell MM  
(See Page 45 for Advertisement)
- ALLIED CHEMICAL CORP., NATIONAL ANILINE  
DIV.**  
40 Rector St., New York 6, N. Y. (Tel. HANover 2-7300)  
Sales: P. T. Oertel
- ALLIED CHEMICAL CORP., NITROGEN DIV.**  
40 Rector St., New York 6, N. Y. (Tel. HANover 2-7300)  
Dir.-Industrial Sales: John J. Porter  
Dir.-Prod. Dev. & Tech. Sv.: R. M. Jones
- ALLIED CONTROL CO., INC.**  
2 E. End Ave., New York, N. Y. (Tel. BUtterfield 8-7403)  
Purch. Agent: Carl Holland  
Gen. Sales Mgr.: Edward Bachorik GS, GE, CO, TS
- ALLIED DECALS, INC.**  
8400 Hough Ave., Cleveland 3, O. (Tel. SW 1-6863)
- ALLIED INTERNATIONAL CO.**  
230 Park Ave., New York 17, N. Y. (Tel. MU 9-6126)  
Asst. Secy.: Ed Nemeth  
V. P.-Sales: Oan Marshall
- ALLIED PLASTICS SUPPLY CORP.**  
75 Cliff St., New York 38, N. Y. (Tel. BEekman 3-7377)  
Pres.-Sales: Morton B. Mavrick  
V. P.-Purch.: Raymond O. Vetter  
MF, WN, PS, GS, GE, CO, TS, TR
- ALLIED RESEARCH & ENGRG., DIV.-ALLIED  
RECORD MFG. CO.**
- 6916 Santa Monica Blvd., Hollywood 38, Calif. (Tel. HOLLYWOOD 2-1251)  
Purch. Agent: Jack Kalk  
Sales Mgr.: Bruce C. Jones GE, R&D
- ALLIED RESEARCH PRODUCTS, INC.**  
4004 E. Monument St., Baltimore 5, Md. (Tel. PE 2-9070)  
Purch. Agent: H. C. Quast  
V. P.-Sales: J. A. Cairns MM
- ALLIED WITAN CO. INC.**  
12500 Bellair Rd., Cleveland 35, O. (Tel. Wlnton 1-2800)  
Purch. Agent: S. J. Gibel  
Sales Mgr.: George Gibel GH, CO, TS
- ALLIES' PRODUCTS CORP.**  
P. O. Box 188, Kendall Branch, Miami 56, Fla. (Tel. CEdar 5-5424)  
Sales Mgr.: Miss Hazel I. Brown
- ALLIS-CHALMERS**  
Milwaukee 1, Wisc. (Tel. SPring 4-3600)  
Dir.-Purch.: K. R. Geist  
Dir.-Sales: C. W. Schweers MM
- ALLISON LABS.**  
14185 Skyline Or., La Puente, Calif. (Tel. OXFord 4-4056)  
Dale E. O'Donnell R&D
- ALLISON STEEL MFG. CO.**  
19th Ave. & SP Tracks, P. O. Box 6067, Phoenix, Ariz. (Tel. ALPine 8-7731)  
Purch. Agent: L. M. Farr  
Sales Mgr.: E. J. Peake GS, GH
- ALLMETAL SCREW PRODUCTS CO., INC.**  
821 Stewart Ave., Garden City, L. I., N. Y. (Tel. Pioneer 1-1200)  
Dir.-Purch.: P. Fishman  
Purch. Agent: J. Segal  
Buyer: F. Risteyn  
Sales Mgr.: S. R. Marsh MM
- ALLOY BELLOWS INC.**  
18123 Roseland Rd., Cleveland 12, O. (Tel. IVanhoe 6-3990)  
Dir.-Purch.: E. Fantine  
Pres.: R. W. Petterson
- ALLOY STEEL CASTING CO.**  
202 County Line Rd., Southampton, Pa.
- ALLOY STEEL PRODUCTS CO.**  
1300 W. Elizabeth Ave., Linden, N. J. (Tel. WAbash 5-4600)  
Purch. Agent: W. Bugher  
Gen. Sales Mgr.: R. E. Boller, Jr. GS, TS
- ALLOYS UNLIMITED INC.**  
21 - 01 43rd Ave., Long Island City 1, N. Y. (Tel. Stillwell 6-4480)  
Purch. Agent: H. Tang  
Dir.-Sales: G. Coleman MM
- ALL-STATE WELDING ALLOYS CO., INC.**  
249 Ferris Ave., White Plains, N. Y. (Tel. WH 8-4646)  
Purch. Dir.: Charles J. Oleson  
Sales Mgr.: Lee S. Wade MF, PS, GE, TR, MM
- ALL-TRONICS, INC.**  
45 Bond St., Westbury, N. Y. (Tel. EDgewood 3-3090)  
Purch. Agent: Theodore Silvia  
Sales Mgr.: Stephen E. Bullock, Jr. GS, GE, TS, TR, R&D
- ALMAC PLASTICS INC.**  
600 Broadway, New York 12, N. Y. (Tel. REctor 2-2275)  
V. P.: James Grad MM
- ALPAR MFG. CORP.**  
220 Demeter St., Palo Alto, Calif. (Tel. DAvenport 6-8105)  
Off. Mgr.: Paul Rochester  
Sales Mgr.: R. V. Lastrup GS, TR
- ALPHA METALS, INC.**  
56 Water St., Jersey City, N. J. (Tel. HEnderson 4-6778)  
Field Mgr.: Martin A. Boyle MM
- ALPHA MOLYKOTE CORP., THE**  
65 Harvard Ave., Stamford, Conn. (Tel. FI 8-3724)  
V. P.-Purch.: C. E. Sonntag  
Dir.-Sales: Oavid M. Noltie MM
- ALPHA WIRE CORP.**  
200 Varick St., New York 14, N. Y. (Tel. ALgonquin 5-5400)  
Purch. Agent: Sheldon Ellenoff  
Asst. Purch. Agent: John Gallagher  
Gen. Mgr.-Sales: Howard B. Soltzman MF, PS, GS, GH, TS, TR
- ALPINE ELECTRONIC COMPONENTS, INC.**  
Walcott Rd., Waterbury, Conn. (Tel. PLaza 7-1449)  
Pres.: Thomas Rowlson  
Buyer-Mat.: Joseph Pagano  
Asst. Buyer: Ted J. Iorio  
V. P.-Sales: Richard Sceery GE
- ALPITEC, INC.**  
49 Gleason Ave., Stamford, Conn. (Tel. FIlreside 8-7788)  
Pres.: P. Piter  
Dir.-Sales: I. Peters GS, TR
- ALSOPE ENGRG. CORP.**  
Milldale, Conn. (Tel. Southington MArket 8-9661)  
Purch. Agent: John F. Beatson, Jr.  
Gen. Mgr.: Raymon F. Horland GS, TS, MM, R&I
- ALTAIR INC.**  
Terryville, Conn. (Tel. LIdlow 3-1343)  
Purch. Agent: L. E. Odell  
Sales Mgr.: J. J. Mancusi, Jr. G
- ALTAMIL CORP.**  
225 Oregon St., El Segundo, Calif. (Tel. EAstgate 2-5520)  
Purch. Dir.: Dave Davis  
Purch. Agent: Al Ouval  
V. P.-Sales: H. E. Blythe, Jr. MF, WH
- ALTO SCIENTIFIC CO., INC.**  
855 Commercial St., Palo Alto, Calif. (Tel. OAvenport 1-3434)  
Purch. Agent: Miss V. Barrett  
Gen. Mgr.-Sales: David Cherry GS, CO, R&I
- ALUMINUM ALLOYS CORP.**  
6650 W. Walton, Oetroit 10, Mich. (Tel. TYler 8-5300)  
V. P. & Gen. Mgr.: Stanley R. Day MF, P
- ALUMINUM CO. OF AMERICA**  
1501 Alcoa Bldg., Pittsburgh 19, Pa. (Tel. ATLantic 1-4545)  
V. P. & Gen. Purch. Agent: R. O. Keefer  
Asst. Gen. Purch. Agent: T. O. English  
V. P. & Gen. Sales Mgr.: R. V. Davies M
- \*ALUMINUM SAFETY PRODUCTS, INC.**  
289 Fifth Ave., New York 16, N. Y. (Tel. MU 6-3160)  
Asst. Adv. Mgr.: Harry Nix  
(See Page 78 for Advertisement) GS, GH, T
- ALWAC CORP.**  
13040 S. Cerise Ave., Hawthorne, Calif. (Tel. OR 8-5774)  
Materials Mgr.: C. A. Pena  
Marketing Dir.: M. D. Lester MF, GE, T
- AMATOM ELECTRONIC HARDWARE CO. INC.**  
88 Orake Ave., New Rochelle, N. Y. (Tel. BEverly 5-4441)  
Asst. to Pres.: R. Mazzulli  
Buyer & Stock Control Ch.: C. Demore  
V. P.-Sales: N. D. Frank GS, GE, CO, TS, T
- AMBROID CO. INC.**  
Box 30, Weymouth 88, Mass. (Tel. EDgewater 5-6658)  
Sales & Adv. Mgr.: A. E. Laneau M
- AMCHEM PRODUCTS INC.**  
Brookside Ave., Amherst, Pa. (Tel. MITchell 6-1700)  
Dir.-Purch.: E. A. Snyder  
Purch. Agent: W. M. Wilson  
Dir.-Mktg.: J. O. J. Shellenberger M
- AMELCO, INC.**  
2040 Colorado Ave., Santa Monica, Calif. (Tel. EXbrook 3-7281)  
Purch. dept.: 1131 Olympic Blvd., Santa Monica, Calif. (Tel. EXbrook 3-7206)  
Purch. Agent: B. J. Shryock  
Buyer (Electronic Assemblies): Harvey Noel (Tel. EXbrook 3-7206)  
Buyer (Electronic Components): Ralph Bateman (Tel. EXbrook 3-7206)  
Contract Co-ordinator: James Baumgardner & J. A. Burnett  
V. P.-Contract Administrator: Frank J. Bretzing GS, GH, GE, CO, TS, TR, R
- AMERAC INC.**  
Ounham Rd., Beverly, Mass. (Tel. WAlker 2-8610)  
Sales Engr.: Owen Hassard GS, GE, CO, TS, T
- AMERICAN AERO PARTS**  
725 N. Highland Ave., Los Angeles 38, Calif. (Tel. WEbster 8-3538)  
V. P.-Purch.: C. Conrad Goodreau  
Sales Mgr.: C. Roisin GH, MM, R
- AMERICAN AEROPHYSICS CORP.**  
109 Sheldon St., El Segundo, Calif. (Tel. OREGon 8-3789)  
Purch. Agent: W. C. Dunlop  
Asst. Purch. Agent: H. F. Williams  
Sales Mgr.: C. B. Spratt WN, GS, R
- AMERICAN AGILE CORP.**  
P. O. Box 168, Bedford, O. (Tel. MO 2-6900)

Purch. Agent: V. S. Balogh  
Exec. V. P. & Gen. Mgr.-Sales: C. F. Freedman  
MM, R&D

**AMERICAN AIR FILTER CO., DEFENSE PRODUCTS DIV.**  
310 3rd St., Rock Island, Ill. (Tel. 8-9311)  
Purch. Agent: M. L. Marloire  
Buyers: H. Martin & E. Ramser  
Sales: R. Andersen  
GS, GH, CO, R&D

**AMERICAN ALUMINUM CO.**  
230 Sheffield St., Mountinside, N. J. (Tel. ADoms 3-3500)

Dir.-Purch.: E. B. Hayden  
Exec. V. P.-Sales: M. H. Klousmann  
MM, R&D

**AMERICAN BERYLLIUM CO.**  
P. O. Box 3142, Sarasota, Fla. (Tel. ELgin 5-5105)  
Purch. Agent: George A. Adley  
MM

**AMERICAN BOSCH ARMA CORP.**  
Fulton Bldg., Hempstead, N. Y.  
GS, GE, TS, R&D

**AMERICAN BRAKE SHOE CO.**  
30 Fifth Ave., New York 36, N. Y. (Tel. OX 7-7000)  
Purch. Agent: F. B. Newbert  
MF, WN, GS, GH, MM, R&D

**AMERICAN BRAKE SHOE CO. ENGINEERED CASTING DIV.**  
10 Mt. Read Blvd., Rochester 11, N. Y. (Tel. Genesee 8-6455)  
Defense Prod. Mgr.: Richard A. Pinto  
Sales V. P.: P. H. Clapp  
MF, WN, PS, GS

**AMERICAN BRAKE SHOE CO., KELLOGG DIV.**  
7 Humboldt St., Rochester 9, N. Y. (Tel. BUlier 8-2020)  
Purch. Agent: D. S. Judd  
Mgr.-Aircraft Prod. Sales: K. C. Binder  
PS, GE

**AMERICAN BRASS CO., THE**  
4 Meadow St., Waterbury, Conn. (Tel. PLaza 4-1121)  
Purch. Agent: E. A. Lane  
Sales Mgr.: E. B. Tracy  
MM

**AMERICAN BRASS CO., AMERICAN METAL HOSE DIV.**  
85 Main St., Waterbury 10, Conn. (Tel. PLaza 4-1121)  
Purch. Agent: W. S. Edwards  
MF, PS, GS, GH

**AMERICAN BRAZING ALLOYS CO.**  
O. Box 11, Pelham, N. Y. (Tel. MO 4-5858)  
Sales Mgr.: Mike Ross  
MM

**AMERICAN CAR & FOUNDRY DIV., ACF INDUSTRIES, INC.**  
10 Third Ave., New York 17, N. Y. (Tel. YUkon 6-8600)  
P.-Purch.: P. B. Hoyt  
P.-Mktg.: J. E. Angst  
MF, PS, GS, GH, MM, R&D

**AMERICAN CONVEYOR CO.**  
33 S. Christiana Ave., Chicago 23, Ill. (Tel. LAwndale 1-2144)  
Purch. Agent: George J. Handa  
Sales Engr.: D. C. Colletti  
GS

**AMERICAN CYSTOSCOPE MAKERS, INC.**  
Pelham Pkwy., Pelham Manor, N. Y. (Tel. PE 4-8000)  
Purch. Agent: F. J. Scotti  
Sales: R. V. Lange

**AMERICAN ELECTRIC CABLE CO.**  
1 Appleton St., Holyoke, Mass. (Tel. JEFFerson 7-9893)  
Sales-Purch.: M. A. Feinstein  
Sales Mgr.: H. Shore  
MM

**AMERICAN ELECTRICAL HEATER CO.**  
10 Cass Ave., Detroit 2, Mich. (Tel. TRinity 5-2505)  
Purch. Agent: Helen Wilson  
Sales-Sales: Robert A. Kuhn

**AMERICAN ELECTRONIC LABS., INC.**  
N. Seventh St., Philadelphia 6, Pa. (Tel. WALnut 5-8780)  
Prod-Purch.: Seymour Kalos  
Buyers: Jack Wojcik, William White  
Sales Mgr.: Robert D. Freedman  
TR

**AMERICAN ELECTRONICS, INC.**  
15 W. 7th St., Los Angeles 17, Calif. (Tel. MA 1-9241)  
Purch.: Dale V. Cropsey  
GS, GH, TS, R&D

**AMERICAN ELECTRONICS, INCORPORATED**  
93 W. Jefferson Blvd., Culver City, Calif. (Tel. TEXas 0-5581)  
Buyer: C. S. Cormack  
Mktg. Services Mgr.: A. S. Izuel  
GE

**AMERICAN ELECTRONICS, INC., AMERICAN NUCLEAR DIV.**  
99 W. Jefferson Blvd., Culver City, Calif. (Tel. TEXas 0-5471)

Purch. Agent: Mary Wallin  
Chief Applic. Engr.: T. J. Smith  
TS

**AMERICAN ELECTRONICS, INC., DATATRONICS DIV.**  
9463 W. Jefferson Blvd., Culver City, Calif. (Tel. TEXas 0-7245)  
Head-Purch.: J. Snedoker  
Buyer: V. Gillette  
Sub-Systems & Controls Chief, Appl. Engr.: Eric Swanson  
Data Recording & Processing Chief, Appl. Engr.: Ken Williamson  
MF, PS, GS, GE, CO, TS, TR

**AMERICAN ELECTRONICS, INC., ELECTRIC MACHINERY & EQUIPMENT DIV.**  
2112 N. Chico Ave., El Monte, Calif. (Tel. CLumberland 3-7151)  
Purch. Agent: R. A. Haeuser  
Asst. Purch. Agent: Al Glick  
Sr. Buyer: Paul McDonough  
Buyers: Sid Trowbridge & Frank O'Neil  
GS

**AMERICAN ELECTRONICS, INC., INSTRUMENT DIV.**  
9503 W. Jefferson Blvd., Culver City, Calif. (Tel. TEXas 0-5581)  
Buyer: Charles Cormack  
Mktg. Service Adm.: Albert Izuel  
Mgr.-Field Engr. & Sales: Jack S. Gasoway  
GE

**AMERICAN ELECTRONICS, INC., TALLER & COOPER DIV.**  
75 Front St., Brooklyn 1, N. Y. (Tel. ULster 8-0500)  
Dir.-Purch.: Arthur Fettig  
Dir.-Sales: James Zastro  
CO, TS, TR, R&D

**AMERICAN ELITE, INC.**  
48-50 34th St., Long Island City 1, N. Y. (Tel. 5Tillwell 6-8713)  
V. P.-Sales: Ben Jacobs

**AMERICAN FELT CO.**  
Glenville, Conn. (Tel. JEFFerson 1-8700)  
Dir.-Procure.: K. R. Peattie  
Gen. Purch. Agent: G. P. McShane  
Gen. Sales Mgr.: R. Power Fraser  
MM

**AMERICAN GAGE & MACHINE CO.**  
5200 W. Kinzie St., Chicago 44, Ill. (Tel. EStebrook 9-1121)

**AMERICAN GAS FURNACE CO.**  
140 Spring St., Elizabeth, N. J. (Tel. EL 2-2120)  
Purch. Agent: W. Mitterman  
Sales Mgr.: F. C. Schaefer

**AMERICAN HINGE CORP.**  
88 Porter Ave., Brooklyn 37, N. Y. (Tel. GLEnmore 6-7761)  
Dir.-Purch.: Harold Shupack  
Dir.-Sales: Florence Shupack

**AMERICAN INSTRUMENT CO., INC.**  
8030 Georgia Ave., Silver Spring, Md. (Tel. JUUniper 9-1727)  
Purch. Agent: T. Good  
Sales Mgr.: Harry Huck  
Mktg.: Stanley Dosik  
GS

**AMERICAN INSULATED WIRE CORP.**  
36 Freeman St., Pawtucket, R. I. (Tel. PA 6-0700)  
MF, PS, GS, TR

**AMERICAN INSULATOR CORP.**  
New Freedom, Pa. (Tel. GLEN Rock 4211)  
Purch. Agent: A. L. Bertner  
Sales Mgr.: Berto L. Attig

**AMERICAN LADDER & SCAFFOLD CO., INC.**  
5505 N. W. 7th Ave., Miami, Fla. (Tel. PLaza 4-2663)  
Pres.: Melvin Goldfein  
Sales Mgr.: Ruth Brown  
GS, GH

**AMERICAN LA FRANCE CORP.**  
100 E. La France St., Elmira, N. Y. (Tel. 8181)  
Purch. Agent: F. R. Baker  
Asst. Purch. Agent: George Hughes  
V. P.-Sales: G. J. Halpin  
GS

**AMERICAN LATEX PRODUCTS CORP.**  
3341 W. El Segundo Blvd., El Segundo, Calif. (Tel. DREGon 8-5021)  
Exec. V. P. & Gen. Mgr.: T. P. Dougan  
Sales Mgr.: William Gargile  
WN, MM, R&D

**AMERICAN LAMIA CORP.**  
Chattanooga 5, Tenn. (Tel. AMhurst 5-3411)  
Purch. Agent: C. R. Hughes  
Sales Mgr.: E. D. Bell  
MF, WN, PS, GE, TS, TR

**AMERICAN LIGHT ALLOYS, INC.**  
1265 McBride Ave., Little Falls, N. J. (Tel. CLifford 6-6000)  
Controller: Ernest Cirongile, Jr.  
Sales: William Wilson, Jr.  
MF

**AMERICAN MACHINE & FOUNDRY CO.**  
261 Madison Ave., New York 16, N. Y. (Tel. MURray Hill 7-3100)  
Chrm.: Morehead Patterson

Vice Chrm.: Walter Bedell Smith  
Pres.: Carter L. Burgess  
Group Exec.-Govt. Products: Fred K. Powell, Jr.  
Deputy Group Exec.-Govt. Products: R. W. Cook  
Deputy Group Exec.-Govt. Products Group, West Coast Operations: L. C. Craigie

NOTE: All correspondence concerning products listed in this Directory should be addressed to  
AMF Government Products Group  
1701 K Street, N. W., Washington 6, D. C.  
GS, GH, R&D

**AMERICAN MACHINE & FOUNDRY CO., GOVERNMENT PRODUCTS GROUP**  
1701 K St., N. W., Washington 6, D. C. (Tel. METropolitan 8-6505)  
Dir.-Customer Services: J. H. Blades  
WN, PS, GS, GH, R&D

**AMERICAN MACHINE & FOUNDRY CO., GREENWICH**  
11 Bruce Pl., Greenwich 1, Conn. (Tel. NORmandy 1-7400)  
Mgr.-Purch. Dept.: Stephen R. Bradley, Jr.  
Purch. Dept.: Walter Dunn  
Mgr., Electronics Dept.: D. Pendleton  
Mgr., New Programs: J. N. Albaugh, Jr.  
GS, GH, CO, TS, TR, R&D

**AMERICAN MEASUREMENT & CONTROL, INC.**  
240 Calvary St., Waltham 54, Mass. (Tel. TWInbrook 4-6212)  
V. P.-Purch.: A. E. McCoy  
Dir.-Sales: F. B. Cope  
GE, TS

**AMERICAN MISSILE PRODUCTS CO., INC.**  
15233 Greville Ave., Lawndale, Calif. (Tel. OSborne 9-1401)  
Purch. Agent: Kathy Potchka  
Buyer: Charlotte Ward  
Mktg. Mgr.: Bill Caldwell  
GS, TS, TR, R&D

**AMERICAN MOLDED PRODUCTS CO.**  
2727 W. Chicago Ave., Chicago 22, Ill. (Tel. ARmitage 6-3235)  
Purch. Agent: R. Liljeberg  
Sales Engr.: A. Weyrich  
GE, TS, TR, R&D

**AMERICAN MONORAIL CO., THE**  
13107 Athens Ave., Cleveland 7, O. (Tel. LAkewood 1-6000)  
Dir.-Purch.: J. C. Roth  
V. P.-Mktg.: C. L. Fell  
GH

**AMERICAN NICKEL ALLOY MFG. CORP.**  
30 Vesey St., New York, N. Y. (Tel. CORTland 7-6420)  
Asst. Secy.: W. B. Lobbenberg  
Secy.: Albert Sulzbach  
MM

**AMERICAN NON GRAN BRONZE CO.**  
511 Old Lancaster Rd., Berwyn, Pa. (Tel. NIagora 4-0240)  
Purch. Agent: Charles H. Morris  
MF, WN, PS, GE

**AMERICAN OPTICAL CO., INSTRUMENT DIV.**  
Optical Ave., Keene, N. H. (Tel. ELmwood 2-3202)  
Purch. Agent: George Howarth  
Sales Mgr.: W. E. Folland  
WN, GE, TS, TR, MM, R&D

**AMERICAN PAULIN SYSTEM**  
1524 S. Flower St., Los Angeles 15, Calif. (Tel. RICHmond 9-0013)  
Dir.-Sales: Arch F. Munter

**\*AMERICAN POTASH & CHEMICAL CORP.**  
3000 W. Sixth St., Los Angeles 54, Calif. (Tel. DUnkirk 2-8231)  
Purch. Agent: Manuel Gonsolves, NATIONAL NORTHERN DIV., W. King St., West Hanover, Mass. (Tel. TRIangle 7-1770)  
Sales Mgr.: J. A. Haynes  
TR, MM, R&D  
(See Page 38 for Advertisement)

**AMERICAN PRINTED CIRCUITS CO., INC.**  
104 Forrest St., Metuchen, N. J. (Tel. LIBerty 8-5777)  
V. P.-Purch.: Mrs. Betty M. Weaver  
Pres.-Sales: Howard L. Tait  
GE, MM

CODING  
Missile Frame MF  
Warhead & Nose Cone WN  
Propulsion System PS  
Ground Support GS  
Ground Handling GH  
Guidance Equipment GE  
Checkout Equipment CO  
Test Equipment TS  
Tracking & Telemetering TR  
Research & Development R&D  
Materials & Metals MM

# ... purchasing directory amer—assem

- AMERICAN RADAR COMPONENTS INC.**  
45 E. Main St., Denville, N. J. (Tel. DAKward 7-5530)  
Dir.-Purch.: John P. Hundley **GE, TR**
- AMERICAN REFRACTORIES & CRUCIBLE CORP.**  
345 Washington Ave., North Haven, Conn. (Tel. CEDar 9-1624)  
V. P. & Sales Mgr.: George H. Coligan  
Purch. Agent: E. R. Crandall
- AMERICAN RESEARCH CORP.**  
Rt. 6, Farmington, Conn. (Tel. ORchard 7-2693)  
Dir.-Purch.: Ted Augustyn  
Dir.-Sales: Jack Shamroth **TS**
- AMERICAN RESEARCH & MFG. CORP.**  
920 Helpline Ave., Rockville, Md. (Tel. HAZelwood 7-7116)  
Purch. Agent: Robert J. Taylor  
**MF, PS, GS, GH, GE, CO, TS, TR, R&D**
- AMERICAN RCKET CO.**  
P. O. Box 1112, Wyandotte, Mich. (Tel. LOGan 5-3408)  
Pres.: Alfred J. Zaehring **MF, PS, TS, MM, R&D**
- AMERICAN SCREW CO.**  
1680 W. Main St., Willimantic, Conn. (Tel. HARRison 3-6331)  
Purch. Agent: Wallace A. Smedley  
Gen. Sales Mgr.: J. J. Coy **MF, PS**
- AMERICAN SILVER CO.**  
36-07 Prince St., Flushing 54, N. Y. (Tel. FLushing 3-8012)  
Purch. Agent: L. Chibnik  
Sales: M. Sherman **MM**
- AMERICAN SMELTING & REFINING CO.**  
120 Broadway, New York 5, N. Y.  
Adv. Mgr.: Edward Friedlander **MM**
- AMERICAN SOLDER & FLUX CO.**  
19th & Willard Sts., Philadelphia, Pa. (Tel. BALDwin 6-1800)  
Gen. Mgr.: M. H. Matz  
Sales Mgr.: J. J. McBride
- AMERICAN SPEEDLIGHT CORP.**  
63-01 Metropolitan Ave., Middle Village 79, N. Y. (Tel. EMpire 6-3000)  
Purch. Agent: Pat Tagriello  
Pres.: Harry L. Parker
- AMERICAN STANDARD PRODUCTS, INC.**  
3030 Main St., Hartford, Conn. (Tel. CHapel 9-7707)  
Purch. Agent: Bernard Cantor  
Sales Mgr.: William B. Lindholm  
Buyers: George Nelson & Elliot Ginden  
**MF, WN, PS, GS, GE, MM**
- AMERICAN STEEL FOUNDRIES, HAMMOND OIV.**  
Hohman & Hoffman Sts., Hammond, Ind. (Tel. WESTmore 1-1900)  
Oiv. Purch. Agent: D. L. Kaantz  
Oiv. Sales Mgr.: L. L. Phelps  
Buyers: Dean Norton, Ernie Holzwarth, John L. McKittrick **MF, WN, GH**
- AMERICAN STEEL & WIRE DIV.-UNITED STATES STEEL CORP.**  
Rocketteller Bldg., 614 Superior Ave., N. W., Cleveland 13, O. (Tel. TOWER 1-2000)  
Purch. Agent: R. W. Berrett  
Prod. Planning & Dev. Oiv.-Aircraft & Missiles: H. F. Powders  
V. P.-Sales: E. A. Murray **MF, PS, GH, TS**
- AMERICAN SUPER-TEMPERATURE WIRES, INC.**  
34 W. Canal St., Winooski, Vt. (Tel. UNIVERSITY 2-9636)  
Purch. Agent: Charles Bellmare  
Sales Mgr.: Richard D. Hoyt  
**MF, PS, GS, GH, TS, TR, MM**
- AMERICAN TUBE BENDING CO., INC.**  
7 Lawrence St., New Haven 8, Conn. (Tel. STATE 7-2131)  
Purch. Agent: A. L. Shumway  
Sales Mgr.: C. T. Navak **MF, PS, GS**
- AMERICAN WELDING & MFG. CO., THE**  
Dietz Rd., Warren, O. (Tel. EXPRESS 3253-1)  
Purch. Agent: C. A. Miller  
Buyers: G. L. Madigan, D. W. Parker  
Sales Mgr.: Frank J. Shanberg  
Asst. to Sales Mgr.: Warren Gressle  
**MF, WN, PS, GS, GH, GE, TS**
- B. C. AMES CO.**  
131 Lexington St., Waltham 54, Mass. (Tel. TWInbrook 3-0095)  
Purch. Agent: B. C. Ames  
Dir.-Sales: H. B. Kruse **R&D**
- AMGLO CORP.**  
4333 N. Ravenswood Ave., Chicago 13, Ill. (Tel. BUCKingham 1-2727)  
Purch.: C. M. Babka **GS, GE, CO, TS, TR**
- AMCO CHEMICALS CORP.**  
910 S. Michigan Ave., Chicago 80, Ill. (Tel. HARRison 7-8886)  
Suprv.-Propellants: E. P. Easterday **PS**
- AMPCO METAL, INC.**  
1759 S. 38th St., Milwaukee 46, Wisc. (Tel. MITchell 5-3750)  
**MF, WN, PS, GH, GE**
- AMPEX MAGNETIC TAPE**  
934 Charter St., Redwood City, Calif. (Tel. EMERson 9-1481)  
Purch. Agent: Frank Masi  
Sr. Buyers: Glen Zieher, Hal Nelson & John Lovett  
Dir.-Gen. Purch.: Bill Hoack **CO, TS, TR, R&D**
- AMPHENDL CABLE & WIRE DIV., AMPHENOL-BORG ELECTRONICS CORP.**  
S. Horlem Ave. at 63rd St., Chicago 38, Ill. (Tel. BISHop 2-1000)  
Purch. Agent: Arthur B. Geiger  
Sales Mgr.: Robert W. Felber **GS, GE, TS, TR**
- AMPHENOL CONNECTOR DIV., AMPHENOL-BORG ELECTRONICS CORP.**  
1820 S. 54th Ave., Chicago 50, Ill. (Tel. BISHop 2-1000)  
Purch. Agent: John Leahy  
Sales Mgr.: Herbert Matz **WN, GS, GE, CO, TS, TR**
- AMPHENOL WESTERN DIV., AMPHENOL-BORG ELECTRONICS CORP.**  
9201 Independence Ave., Chatsworth, Calif. (Tel. DIAMond 8-6600)  
Buyer: Harold Simpson  
District Sales Mgr.: John Kays  
**WN, GS, GE, CO, TS, TR**
- AMPLEX DIV.-CHRYSLER CORP.**  
P. O. Box 2718, Detroit 31, Mich. (Tel. WALnut 1-6733)  
Sales Mgr.: W. L. Martin  
**MF, WN, PS, GS, GH, GE, TR**
- AMPLIFIER CORP. OF AMERICA**  
398 Broadway, New York 13, N. Y. (Tel. WORth 6-2929)  
Purch. Agent: M. R. Ellis  
Sales Mgr.: A. J. Gillette **GS, GE, CO, TS, R&D**
- AMTHOR TESTING INSTRUMENT CO., INC.**  
45 Van Sinderen Ave., Brooklyn 7, N. Y. (Tel. DICKens 6-8841)  
Sales Mgr.: Al Littmann **CO, TS**
- ANACHROME CORP.**  
10647 S. Garfield Ave., South Gate, Calif. (Tel. LO 4-3381)  
Oiv.-Sales: Joseph E. Trankla **MF, WN**
- ANACONDA METAL HOSE OIV., THE AMERICAN BRASS CO.**  
698 S. Main St., Waterbury 20, Conn. (Tel. PLaza 4-1121)  
Sales Mgr.: W. B. Hammond  
Oiv. Purch. Agent: W. S. Edwards **MF, PS, GS, GH**
- ANACONDA WIRE & CABLE CO.**  
25 Broadway, New York, N. Y. (Tel. HA 2-6300)  
V. P.-Sales: D. E. Allen
- ANAQITE INC.**  
10630 Sessler St., South Gate, Calif. (Tel. LO 7-0511)  
Purch. Agent: Clarence Edwards  
Dir.-Sales: Stanley M. Buckley **MF**
- ANAHEIM ELECTRONICS CO., INC.**  
2259 Falmouth, Anaheim, Calif. (Tel. PRospect 4-2755)  
Mgr.: R. T. Arnold  
Asst. Mgr.: J. E. Miller  
Sales Mgr.: W. Key
- ANALOGUE CONTROLS, INC.**  
200 Frank Rd., Hicksville, N. Y. (Tel. OVERbrook 1-7300)  
Dir.-Purch.: Abe Barbanel  
V. P.-Sales: Edward J. Garrett  
**GS, GE, CO, TS, R&D**
- ANALYTICAL INSTRUMENTS, INC.**  
R. F. D. 2, Cedar Lake, Bristol, Conn. (Tel. BRistol, LUDlow 2-6941)  
Pres.: James G. McClure **TS, R&D**
- ANALYTICAL MEASUREMENTS, INC.**  
585 Main St., Chatham, N. J.  
Pres.: Frank G. Pauly
- ANCHOR COUPLING CO. INC.**  
342 N. Fourth St., Libertyville, Ill. (Tel. 2-1800)  
Sales Mgr.: J. D. Luebkekan **MF, PS, GS**
- ANCHOR METAL CO. INC.**  
766 Meeker Ave., Brooklyn, N. Y. (Tel. ST 2-7090)  
Purch.: Walter R. Cole, Edwin Kent  
Sales: H. Dropkin **MF, WN, PS, GS, GH, GE, CO, TR**
- ANCHOR METAL SPINNING CO., THE**  
46 Fluhart Ave., Dayton 8, O. (Tel. BALDwin 8-2107)  
Purch.: M. Weinel  
Sales Mgr.: William Semmler **MF, WN, PS, GS, GE**
- ANCHOR PACKING CO., THE**  
401 N. Broad St., Philadelphia 8, Pa. (Tel. WALnut 2-1343)  
Secy.-Treas.: J. H. Maston  
Gen. Sales Mgr.: B. B. Reagan (Tel. HARRison 7-5432, Chicago)
- ANCHOR PLASTICS CO., INC.**  
36-36 36th St., Long Island City 6, N. Y. (Tel. RAVENswood 9-1494)  
Pres. & Sales Mgr.: R. A. Fisch **MM**
- ANCHOR SPECIALTY MFG. CO. INC.**  
300 Hollister Rd., Teterboro, N. J. (Tel. AT 8-1935)  
Purch.: Wm. Zablocky **PS, GS, GH, GE, TS, R&D**
- ANDERSEN LABS.**  
501 New Park Ave., West Hartford, Conn. (Tel. ADAMS 3-4491)  
Purch. Agent: H. W. Stewart  
Pres.: F. E. Baker **GE, CO, TS, TR, R&D**
- ANDERSON AIRCRAFT CO.**  
Spring St., North Dighton, Mass. (Tel. VAN DYke 4-8611)  
Purch. Agent: Robert H. Leeming  
Dir.-Sales: Albert Gramm
- ANDERSON CHEMICAL CO., DIV.-STAUFFER CHEMICAL CO.**  
Weston, Mich. (Tel. GENEva 6-2322)  
Purch. Agent: G. D. Sharpe  
Dir.-Sales: H. G. Detert
- \*ANDERSON, GREENWOOD & CO.**  
5425 N. Rice Ave., Houston 36, Texas (Tel. MADison 3-2343)  
Purch. Agent: C. J. Scollan (Tel. MADison 3-8956)  
Sales Mgr.: W. W. Hering **GS, GH, R&D**
- (See Page 62 for Advertisement)*
- ANDERSON MACHINE & TOOL CO.**  
7 Flower St., Hartford, Conn. (Tel. CH 6-8059)  
C. O. Anderson
- ANDERSON OIL & CHEMICAL CO., INC.**  
P. O. Box 111, Portland, Conn. (Tel. DIAMond 7-2555)  
Purch. Agent: Mrs. H. M. McLean  
Gen. Mgr.-Sales: T. M. Purtell
- ANDREW CORP.**  
363 E. 75th St., Chicago 19, Ill. (Tel. TRIangle 4-4400)  
Purch. Agent: John Carnyn  
Oiv.-Mktg.: Robert P. Lamans  
Sales Mgr.: C. Robert Lane  
Buyer: Richard H. Knall  
**WN, PS, GS, GH, GE, TS, R**
- ANOROMEA, INC.**  
3742 Howard Ave., Kensington, Md. (Tel. LDOckwo 5-3775)  
Dir.-Purch. & Sales: Ernest F. Ainsworth **R**
- \*ANNIN CO., THE**  
1040 S. Van Ave., Mantebella, Calif. (Tel. RAYmond 3-9351)  
Purch. Agent: H. A. Jacobs  
Sales Mgr.: H. C. Earle, Jr. **GS, GH, TS, R**
- (See Page 52 for Advertisement)*
- R. B. ANNIS CO.**  
1101 N. Delaware St., Indianapolis 2, Ind. (Tel. ME 5-2838)  
Purch. Agent: R. K. Coskey  
Dir.-Sales: R. B. Annis
- ARTHUR ANSLEY MFG. CO.**  
New Hope, Pa. (Tel. AXtel 7-2711)  
Purch.: Arthur C. Ansley **GE**
- ANSONIA WIRE & CABLE CO., THE**  
111 Martin St., Ashton, R. I. (Tel. PAWtucket 6-6300)  
Purch. Agent: J. A. Milner  
Gen. Sales Mgr.: A. J. W. Navak  
**MF, PS, GS, GH, TS, R**
- ANSUL CHEMICAL CO.**  
1 Stanton St., Marinette, Wisc. (Tel. REDwood 5-7411)  
Mgr.-Purch.: Lee O'Leary  
V. P.-Sales: L. C. McKesson
- ANTENNA & RADOME RESEARCH ASSOCIATES**  
1 Bond St., Westbury, L. I., N. Y. (Tel. ED 4-87)  
Oiv.-Purch.: J. Berg  
Sales Mgr.: E. B. Weissman **CO**
- ANTENNA SPECIALISTS CO., THE**  
12435 Euclid Ave., Cleveland 6, O. (Tel. SWEET 1-1878)  
Purch. Agent: N. Schroeder  
Pres.: M. Friedberg **GS**



TI-CORROSION METAL PRODUCTS CO., INC.  
P. O. Box 1894, Albany, N. Y. (Tel. PERsing 2-7711)

V. P.-Purch.: Frank Legnard  
Asst. Purch. Agent: David J. Freed  
V. P.-Sales Mgr.: Price Berrien MM

TLAB INC.  
320 Proprietors Rd., Worthington, O. (Tel. TUXedo 5-5396)  
Purch. Agent: Kenneth L. Riggle  
Buyer: Odell H. Wellman TS

TON ELECTRONIC LABS., INC.  
226 Flushing Ave., Brooklyn 37, N. Y. (Tel. EVergreen 6-5715)  
Purch. Agent: Bernard Neveloff  
Vr.-Sales: George Weinman MF, PS, GS, GH, GE, CO, TS, TR

EX MACHINE & TDOL CO., THE  
P. O. Box 952, Oayton 1, O. (Tel. BALdwin 2-7871)  
Adv. Mgr.: T. A. Polley

EX REINFORCED PLASTICS, DIV.-WHITE SEWING MACHINE CORP.  
Washington & Elm Sts., Cleveland 13, O. (Tel. CHerry 1-7834)  
Purch. Agent: John Clyne  
Asst. Purch. Agent: Louis Zak  
Chief Sales Engr.: William W. Patterson MM, R&D

ALIED DESIGN CO.  
807 Elmwood Ave., Buffalo 7, N. Y. (Tel. EDIloway 9595)  
Pres.: H. E. Johnson  
Purch. Agent: D. J. Stonish  
P.-Contracts: H. E. Hill WN, GS, GH, GE

ALIED DYNAMICS CORP.  
21 N. Main St., Natick, Mass. (Tel. OLYmpic 3-5271)  
P.-Purch.: R. G. Ahlquist  
Engr.: C. A. Bentley, Jr. TS, GS

ALIED PHYSICS CORP.  
724 S. Peck Rd., Manrovia, Calif. (Tel. Hillcrest 6-7181)  
Pr.-Material: Scott Metcalf  
Vr.-Sales: Robert W. Moulton R&D

ALIED RADIATION CORP.  
104 N. Main St., Walnut Creek, Calif. (Tel. YELlowstone 5-2250)  
Purch. Agent: Howard D. Layson  
Vr.-Sales & Operations: Warren W. Eukel PS, R&D

ALIED RESEARCH LABS., INC.  
17 Park Place, Glendale, Calif. (Tel. CHapman 5-5524)  
Material Mgr.: J. O. McKim (Tel. CHurchill 9-6193)  
Buyers: James Reddy & Donald Nadell (Tel. CHurchill 9-6193)  
In. Sales Mgr.: William E. Oavis CD, TS, TR

ALIED SCIENCE CORP. OF PRINCETON INCLON, New Jersey (Tel. SWinburn 9-1000)  
Pr.-Procurement: James G. Robinson  
Purch. Agent: Wendell S. Hall  
Buyers: Robert J. Marcy, Edwin W. Oawson, Timothy K. Donath  
Isl. Sales Mgr.: D. S. Samuelson TR, R&D

AFH GEAR WORKS INC.  
Holmes St., North Quincy, Mass. (Tel. PR 3-8801)  
and 4336 E. 10th Court, Hialeah, Fla. (Tel. MURray 8-2528)  
Purch. Agent: Quincy: R. M. Allen  
Purch. Agent, Hialeah: A. E. Carroll  
Buyers: R. W. Gray (Tel. CEDor 5-5296) GE, TR

AFO CO., THE  
101 Bessemer Ave., Cleveland 27, O. (Tel. WIGhian 1-1170)  
Purch. Agent: Lon Esther  
Asst. Purch. Agent: George Otto  
Buyers Mgr.-Maintenance Sales: Oan G. Kloss  
Buyers Mgr.-Product Finishes: Ben F. Edman MF, WN, GE, TS

ARTURUS MFG. CORP.  
14 Lincoln Blvd., Venice, Calif. (Tel. TEXas 3-2751)  
Purch. Agent: Vern Marlow  
Buyers Mgr.: Fred Schneller

ARE-PORTLAND, INC.  
Austin St., Newark 2, N. J. (Tel. BIgelow 8-8500)  
District Admin.: E. Brummel  
Buyers: Or. I. G. Sage PS, R&D

AREORE PRDDUCTS  
15 Sherman Rd., Northbrook, Ill.  
Buyers Mgr.: Charles W. Jones

ARBERG ULTRASONIC LAB., INC.  
Green St., Jamaica Plain 30, Mass. (Tel. JA 1-8640)  
Buyers: David L. Arenberg R&D

ARIS CONTRDLS, INC.  
27 Greenleaf St., Evanston, Ill. (Tel. DAVis 4-4700)

Purch. Agent: Fred W. Green  
Sales: William Buschart GS, GH

ARIES LABORATORIES, INC.  
45-33 Oavis St., Long Island City 1, N. Y. (Tel. RAVenswood 9-9001)  
Purch. Agent: H. Grisar  
Sales Mgr.: W. Stern MM

ARISTOCRAT PLASTICS, INC.  
23-25 Sussex Ave., Newark, N. J. (Tel. MITchell 3-6110)  
Pres.: Arthur Meier MF, PS, GE, TR

ARKWIN INDUSTRIES, INC.  
648 Main St., Westbury, L. I., N. Y. (Tel. EOGewood 3-2640)  
Purch. Agent: Hank Baurf  
V. P.-Sales: Julius Kendall MF, WN, PS, GS, GH, GE, TS

ARMA DIV., AMERICAN BOSCH ARMA CORP.  
Roosevelt Field, Hempstead, N. Y. (Tel. PLioneer 2-2000)  
Mgr.-Procurement: George J. Ryan  
Corporate Dir.-Purch.: W. M. Maughan GS, GE, R&D

ARMO STEEL CORP.  
703 Curtis St., Middletown, O. (Tel. GARDen 2-2811)  
Purch.: J. S. Thomas  
Sales: L. T. Johnston MM

ARREL ELECTRONICS, INC.  
840 Fifth Ave., Brooklyn 32, N. Y. (Tel. STERling 8-0422)  
Purch. Agent: A. K. Niemi  
Sales Mgr.: O. J. Gustafson GS, GE, CD, TS, TR, R&D

ARMITE LABS.  
6609 Broad St., Los Angeles 1, Calif. (Tel. LUDlow 7-7744)  
V. P.-Purch.: J. H. Armington  
Sales Mgr.: S. A. Chesnutt MF, PS, MM

ARMOUR AMDNIA DIV.  
1355 W. 31st St., Chicago 9, Ill. (Tel. LAFayette 3-7000)  
Purch. Agent: Frank Kraft  
Purch.: E. Van Eyleen, W. Roos, F. Peterson  
Sales Mgr.: P. W. Fulford MM

ARMOUR AND CO.  
16123 Armour St., N. E., Alliance, O. (Tel. TALbot 1-3510)  
Purch. Agent: H. M. Wilson, Jr.  
Gen. Sales Mgr., Coated Abrasives Div.: R. L. Heiniger  
Gen. Sales Mgr., Cushioning Prod. Div.: J. P. Coughlin TS, R&D

ARMOUR & CO., ARMOUR ALLIANCE INDUSTRIES  
16123 Armour St., N. E., Alliance, O. (Tel. TALbot 1-3510)  
Purch. Agent: H. M. Wilson  
Gen. Sales Mgr.-Coated Abrasives: H. R. Heiniger  
Gen. Sales Mgr.-Cushion Prod.: J. P. Coughlin  
Sales Mgr.-Adhesives Div.: J. H. Keys  
Sales Mgr.-Packaging Dept.: J. F. Beckert

ARMSTRONG CORK CO.  
W. Liberty St., Lancaster, Pa. (Tel. EXpress 7-0611)  
Gen. Purch. Agent: M. L. Lampe  
Asst. Gen. Purch. Agent: W. A. Abel  
Gen. Sales Mgr.: W. B. Tucker MF, PS

ARMSTRONG PRDDUCTS CO.  
P. O. Box 1-MG, Warsaw, Ind. (Tel. ALMherst 7-3226)  
Mgr.: F. E. Harrison MF, WN

ARNAV AIRCRAFT ASSOCIATES, INC.  
32 Industrial Ave., Little Ferry, N. J. (Tel. HUBbard 9-8600)  
V. P.-Purch.: M. A. Murray  
Sales Mgr.: J. M. Muchnikoff  
Mgr., West Coast Plant: H. Oeets, 121 Main St., El Segundo, Calif. (Tel. EASTgate 2-4433) MF, PS, TS

ARND ADHESIVE TAPES, INC.  
U. S. 20 at Ohio St., Michigan City, Ind. (Tel. TRIangle 4-3235)  
Purch. Agent: R. L. Scholl  
Sales Mgr.: D. W. Burke MF, PS, TR

ARNOLO ENGRG. CO., THE  
P. O. Box G, Marengo, Ill. (Tel. CHicago ANdover 3-6300; Marengo JORDan 8-7251)  
Purch. Agent: R. L. Pottinger  
Buyer: J. Strain  
Sales Mgr.: Benjamin Falk MF, PS, GS, GE, TR

ARNOLT CORP.  
Warsaw, Ind. (Tel. ALMherst 7-7111)  
Dir.-Purch.: Roger H. Oavis  
Purch. Agent: Carl D. Schultz  
V. P.-Military Liaison: H. M. Henderson GS, GH

\*ARNOUX CORP.  
11924 W. Washington Blvd., Los Angeles 66, Calif. (Tel. TEXas 0-5371)  
Purch. Agent: George Pesner  
Asst. Purch. Agents: Darlene Thompson & Conrad J. Doerr GS, TR  
\* (See Pages 50 & 82 for Advertisement)

ARD EQUIPMENT CORP., THE  
Bryan, O. (Tel. 6-1161)  
Purch. Dir.: O. M. Nixon  
Purch. Agent, Aircraft Div.: C. E. DeGraff  
Sales Mgr.-Aircraft: O. W. Orrick, Jr. MF, PS, GS, GH, GE, TS, TR

ARD, INC.  
Tullahoma, Tenn. (Tel. GL 5-2611)  
Mgr.-Procurement: J. G. Crigler  
Asst. Mgr.-Procurement: Charles M. Solomon R&D

ARRO EXPANSION BDLT CO.  
N. Boone Ave., Marion, O. (Tel. 3-1154)  
Purch. Agent: Ray W. Coy  
Sales Mgr.: John J. Dugan

ARRDW TOOL CO. INC.  
36 Mill St., Wethersfield, Conn. (Tel. JACKson 9-2507)  
V. P.-Purch.: Oavid Oewhurst  
Buyer: Joseph Burgess  
Sales Mgr.: Robert E. Walsh GS, GH

ARROWHART & HEGEMAN ELECTRIC CO., THE  
103 Hawthorn St., Hartford 6, Conn. (Tel. CHapel 9-8471)  
Purch. Agent: N. P. Belcourt  
V. P.-Sales: F. L. Mathes

ARROWHEAD PRODUCTS, DIV.-FEDERAL-MOGUL-BOWBER BEARINGS, INC.  
2300 Curry St., Box 1890, Long Beach 1, Calif. (Tel. NEVada 6-0571)  
Purch. Agent: Charles Smith  
Sales: Arnold J. Dovey MM, R&D

ART SPECIALTY CO.  
3720 N. Milwaukee Ave., Chicago, Ill. (Tel. KILDare 5-6607)  
Purch. & Sales: Robert Nattenberg

ART WIRE & STAMPING CO.  
227 High St., Newark 2, N. J. (Tel. HUMBoldt 4-2100)  
Purch. Agent: Fred Riedmuller  
Sales: Nils Johnson MF, WN, PS, GE

ARTISAN ELECTRONICS CORP.  
171 Ridgedale Ave., Morristown, N. J. (Tel. JEFFerson 8-8500)  
V. P.-Purch.: Sheldon Masser  
Sales Mgr.: S. Joseph Carris GS, CO, TS, TR

ARTOS ENGRG. CO.  
2757 S. 28th St., Milwaukee 46, Wisc. (Tel. MITchell 4-2100)  
Shop Supt.: Hubert Mueller  
Sales Mgr.: Haakon T. Randar MF, PS, GS

ARWOOD PRECISION CASTING CORP.  
321 W. 4th St., New York 36, N. Y. (Tel. JUDson 2-4210)  
Purch. Agent: F. W. Wacker  
V. P.-Sales: William O. Sweeny

ASHLAND ELECTRIC PRDDUCTS, INC.  
32-02 Queens Blvd., Long Island City 1, N. Y. (Tel. EXeter 2-4101)  
Purch. Agent: E. R. Obermann  
Sales Mgr.: C. W. McElhinney PS, GH, GE, TR

ASHLAND DIL & REFINING CO.  
1409 Winchester Ave., Ashland, Ky. (Tel. EAST 4-1111)  
Dir.-Purch.: J. K. Barron  
Purch.: J. S. Hannah, D. T. Dunn, Wilburn Caskey  
V. P.-Sales: P. C. Talbutt PS, TS, MM, R&D

ASSEMBLY PRDDUCTS, INC.  
Wilson Mills Rd., Chesterland, O. (Tel. HAMILton 3-4436)  
Purch. Agent: Robert Falz  
V. P.-Sales: Robert H. Pugsley GS, CD, TS, TR, R&D

	CODING
Missile Frame	MF
Warhead & Nose Cone	WN
Propulsion System	PS
Ground Support	GS
Ground Handling	GH
Guidance Equipment	GE
Checkout Equipment	CO
Test Equipment	TS
Tracking & Telemetering	TR
Research & Development	R&D
Materials & Metals	MM

# ... purchasing directory assoc—bar

**ASSOCIATE AIRCRAFT TOOL & MFG., INC.**  
3660 Dixie Hwy., Hamilton, O. (Tel. TWinbrook 3-2812)  
Pres.: Henry W. Malhowski  
MF, WN, PS, GH, GE, R&D

**ASSOCIATED AMERICAN WINDING CO., INC.**  
750 St. Ann's Ave., New York 56, N. Y. (Tel. Cypruss 2-5050)  
Chief Purch. Agent: N. Goldman  
Sales Mgr.: G. B. Franklin  
PS, GS, GH, GE, TR

**ASSOCIATED ENGRG. CORP.**  
65 Kent St., Brookline 46, Mass. (Tel. ASpinwall 7-4664)  
Purch. Agent: L. R. Demarkles  
Dir.-Sales: F. K. Chin  
MM

**ASSOCIATED ENGRG. & MFG. CORP.**  
210 M Stone House Rd., Glen Ridge, N. J. (Tel. Pilgrim 3-8899)  
Dir.-Purch.: V. B. Fox  
Mgr.: Frank Rhodes  
MM

**ASSOCIATED ENGINEERS, INC.**  
P. O. Box 1628, Springfield, Mass. (Tel. RE 4-6431)  
Purch. Agent: A. E. Chalfrin  
Asst. Purch. Agent: Wayne Palmer  
V. P.-Sales: John Flaskomper  
WN, GS, GH, GE, TS, R&D

**ASSOCIATED RESEARCH, INC.**  
3779 W. Belmont Ave., Chicago 18, Ill. (Tel. CORnelia 7-4040)  
Purch. Agent: J. W. Bente  
V. P.-Sales: Richard W. Inman  
GE, CO, TS, TR

**\* ASSOCIATED TESTING LABS., INC.**  
135 Clinton Rd., Coldwell, N. J. (Tel. CAPITAL 6-7407)  
Dir.-Engrg.: William Tonkovich  
Chief Product Engr.: John W. Fricke  
Sales Mgr.-Engrg.: Bernard Novack  
PS, GS, CO, TS

\*(See Page 32 for Advertisement)

**ASTRAVAC CORP.**  
1011-D Industrial Way, Burlingame, Calif. (Tel. Diamond 2-6048)  
Pres.: P. A. Peller  
Secy.-Treas.: M. B. Stern  
GS, GH, GE, CO, TS

**ASTRODYNE, INC.**  
P. O. Box 548, McGregor, Tex. (Tel. GRANite 5-2811)  
Chief, Material: R. S. Mulligan  
Purch. Agent: R. C. Terry  
Supvr.-Buying: W. M. St. John  
PS, R&D

**ASTRON CORP.**  
255 Grant Ave., East Newark, N. J. (Tel. HUmboldt 2-7800)  
Purch. Agent: George H. Sexton  
Gen. Sales Mgr.: Irving I. Ser  
WN, GE, R&D

**ASTRONAUTICS ENGRG. CO.**  
500 W. 13th St., Hialeah, Fla. (Tel. TXUkedo 7-8114)  
Dir.-Purch.: L. M. Gray  
Dir.-Sales: Robert W. Wise  
GS, GH, TS, R&D

**ASTRONETICS, INC.**  
Box 450-C, Red Bank, N. J. (Tel. AT 1-2700)  
Dir.-Purch.: T. George  
Sales: A. Kluchak, Jr.  
PS, R&D

**ATKINS & MERRILL, INC.**  
Boston Post Rd., South Sudbury, Mass. (Tel. Hilltop 3-8822)  
Purch. Agent: Robert Johnson  
Buyer: Lee Goodbor  
Buyer: Howard Elet (Reinforced Plastics Div., Bartlett St., Marlboro, Mass. (Tel. MARlboro 1114)  
Dir.-Sales: Arthur V. Boyce  
WN, GS, GH, TS, MM, R&D

**ATKOMATIC VALVE CO., INC.**  
545 W. Abbott St., Indianapolis 25, Ind. (Tel. MEIrose 8-6545)  
Treas.: Robert A. Morris  
Sales Mgr.: Mark W. Lowe  
PS, GS, GH, TS

**ATLANTIC ENGRAVERS, INC.**  
52 Ocean Ave., Amityville, N. Y. (Tel. AM 4-5088)  
V. P.-Purch.: Wayne Fajans  
MF, WN, PS, GE, TS, TR

**ATLANTIC INSTRUMENT CORP., SUB-AMERICAN ELECTRONICS, INC.**  
90 Broadway, Norwood, Mass. (Tel. NO 7-2638)  
Sales Mgr.: D. L. Thomas  
GE, CO, TS

**ATLANTIC METAL HOSE CO., INC.**  
308 Dyckman St., New York City 34, N. Y. (Tel. LORraine 9-3400)  
Purch. Agent: David M. Fuchs

**ATLANTIC RESEARCH CORP.**  
901 N. Columbus St., Alexandria, Va. (Tel. Kling 9-7500)  
Purch. Agent: Wilbur H. Smith

Mgr.-Development: DeWitt O. Myatt  
WN, PS, GH, CO, TS, MM, R&D

**ATLAS COIL INC.**  
63 Main St., Ansonia, Conn. (Tel. RE 5-4628)  
Purch. Agent: Harold Kaye  
GE, CO, TS, TR

**ATLAS E E CORP.**  
47 Prospect St., Waburn, Mass. (Tel. WElls 3-5390)  
Purch. Agent: R. A. Joyce  
Mktg. Mgr.: Dan E. Baker  
GE

**ATLAS ENGRG. CO. INC.**  
176 Blue Hill Ave., Roxbury, Mass. (Tel. Highlunds 5-7100)  
Purch. Agent: John Ward  
Sales Mgr.: Norman Scotch  
R&D

**ATLAS ENGRG. CORP.**  
26 Custer St., West Hartford 10, Conn. (Tel. CHOpel 6-5651)  
Pres.: R. C. Biggers

**ATLAS PRECISION PRODUCTS CO.**  
3801 Castor Ave., Philadelphia 24, Pa. (Tel. JEFFerson 5-3700)  
Purch. Agent: Robert Stotes  
Buyer: Alec Duncan  
Gen. Sales Mgr.: Herbert L. Zwirn  
WN, GS, GH, GE, CO, TS, TR, R&D

**ATLAS SCREW & SPECIALTY CO.**  
450 Broome St., New York 13, N. Y. (Tel. NOrth 6-0600)  
Purch. Agent: Irwin Koplan, 396 Jelliff Ave., Newark, N. J. (Tel. Blgelow 8-3000)  
V. P.-Sales: V. J. Merz  
MM

**ATMO SEAL CO.**  
3475 Cardiff Ave., Cincinnati 9, O. (Tel. TRinity 1-5512)  
Co-Owners: W. L. Niswander & R. J. Stoeve  
GS, GE, TR

**ATTEBORO REFINING CO., INC.**  
42 Union St., Attleboro, Mass. (Tel. ATtleboro 1-3705)  
Plt. Supt. & V. P.-Purch.: Edward F. Towle  
Sales Mgr.: John H. Quebman  
MF, WN, PS, GE, TR

**AUBURN MFG. CO., THE**  
Stack St., Middletown, Conn. (Tel. DIamond 6-6631)  
Purch. Agent & Sales Mgr.: M. B. Weiner  
MF, WN, PS, GS, GE, TR

**AUBURN SPARK PLUG CO., INC.**  
89 York St., Auburn, N. Y. (Tel. 2-9501)  
V. P.-Purch.: A. R. Nolin  
Supt.: Len Bates  
Sales Mgr.: A. W. DeChord  
MF, WN, PS, GS, GH, GE, CO, TS, TR

**AUDIO DEVELOPMENT CO.**  
2833 13th Ave. S., Minneapolis 7, Minn. (Tel. PA 9-7386)  
Purch. Agent: V. S. Borman  
Asst. Purch. Agent: Ed Rosendale  
Dir.-Sales: D. E. Engebretson

**AUDIO DEVICES, INC.**  
444 Madison Ave., New York 22, N. Y. (Tel. PLoza 1-6640)  
Purch. Agent: Ellis Mays  
V. P.-Sales: Bryce Haynes  
TR

**AUDIO DEVICES, INC.-RECTIFIER DIV.**  
620 E. Dyer Rd., Santa Ana, Calif. (Tel. Kimberly 5-8241)  
Purch. Agent: E. C. Fries  
Sales Mgr.: A. J. Romano

**AUDIO INSTRUMENT CO., INC.**  
135 W. 14th St., New York 11, N. Y. (Tel. ORegon 5-7820)  
Sales Mgr.: C. J. LeBel

**AUDIO-MASTER CORP.**  
17 E. 45th St., New York 17, N. Y. (Tel. OXFord 7-0725)  
Purch.: Herbert Rosen  
TR

**AUGAT BROTHERS, INC.**  
33 Perry Ave., Attleboro, Mass. (Tel. 1-2202)  
Purch.: Louis H. Young  
Sales: Robert S. Lawrence  
MM

**AUSTENAL CO., DIV.-HOWE SOUND CO., MICROCAST PRODUCTS**  
224 E. 39th St., New York 16, N. Y. (Tel. OXFord 7-5656)  
Dir.-Purch.: Anne D. Repko  
Sales Mgr.: R. L. Wiseman  
Sales Engr.: E. L. White, Jr.  
MF, PS, MM, R&D

**AUSTENAL INC.**  
224 E. 39th St., New York 16, N. Y. (Tel. OXFord 7-5656)  
Purch. Mgr.: A. D. Repko  
Asst. Purch. Mgr.: W. Riley  
Sales Mgr.: R. L. Wiseman  
MF, PS

**AUSTIN CO., THE, SPECIAL DEVICES DIV.**  
76 9th Ave., New York 11, N. Y. (Tel. WATkins 4-3630)  
Purch. Agent: H. W. Hunsberger  
Sales: W. G. Birkel  
GS, GE, TS

**AUSTIN-WESTERN, CONSTR. EQUIP. DIV.-BALDWIN-LAMAR-HAMILTON CORP.**  
601 N. Farnsworth Ave., Aurora, Ill. (Tel. 7-8753)  
Dir.-Purch.: J. D. McMakin  
Asst. Gen. Mgr.-Sales: H. P. Lockhart  
GS, GH

**AUTO SPECIALTIES MFG. CO., INC.**  
St. Joseph, Mich. (Tel. YUKon 3-2521)  
Dir.-Procurement: E. Millhouse  
Asst. Dir.-Procurement: C. Miller  
Buyers: E. Luhrs, K. Bingham, O. Pollas & D. Schuknecht  
PS, GS, GH, R&D

**AUTO-CONTROL LABS., INC.**  
333 S. Hindry Ave., Inglewood 1, Calif. (Tel. OREGon 8-4934)  
Chief Engr.: Bob Lieberman  
Engr. (Environmental Sec.): Chuck R. Knokey  
MF, PS, GS, GH, GE, TS

**AUTOMATIC ELECTRIC SALES CORP.**  
Northlake, Ill. (Tel. FILLmore 5-7111)  
Purch. Agent: W. S. Cadwell  
Pres.: D. H. Deaver  
GS, GH, GE, CO, TS

**AUTOMATIC SWITCH CO.**  
Hanover Rd., Florham Park, N. J. (Tel. FRontier 7-4600, New York City-Digby 4-3765)  
Purch. Agent: Harold W. Hyland  
V. P.-Sales: R. F. McCormick  
V. P.-Switch Dept.: F. P. Spinelli  
GS

**AUTOMATION DYNAMICS CORP.**  
255 County Rd., Tenafly, N. J. (Tel. LOWell 7-3232)  
Purch. Agent: Mrs. Dorothy Suhrre  
Sales: Richard A. Szal  
TS, TR, R&D

**AUTOMATION INSTRUMENTS INC.**  
401 E. Green St., Pasadena, Calif. (Tel. SY 3-8169)  
Purch. Agent: Wes Seeley (Tel. RY 1-6311)  
Sales Mgr.: Robert Shafer (Tel. RY 1-6311)  
TS, TR

**AUTOMATION PRODUCTS, INC.**  
3030 Max Roy St., Houston 24, Tex. (Tel. UN 9-1485)  
Purch. Agent: Quin M. Baker

**AUTOMETRIC CORP.**  
1501 Broadway, New York, N. Y. (Tel. BRyant 9-8700)  
Purch. Agent: William Matzen

**AUTOMOTIVE & AIRCRAFT DIV.-AMERICAN CHAIN & CABLE CO., INC.**  
601 Stephenson Bldg., Detroit 2, Mich. (Tel. TRinity 5-4104)  
Purch.: H. C. Wepelcke, Adrian, Mich.  
V. P.-Sales Mgr.: Harry Williams  
GH, GE, TS

**AUTONETICS, DIV.-NORTH AMERICAN AVIATION, INC.**  
9150 E. Imperial Hwy., Downey, Calif. (Tel. SPuce 3-2233)  
Material Dir.: C. R. Raftery, 201 W. Manville St., Compton, Calif. (Tel. HEWmark 2-5721)  
Purch. Agent: S. D. Zemonsky, Compton, Calif.  
Dir.-Mktg.: Charles A. Wolf  
MF, PS, GS, GH, GE, CO, TS, TR

**AUTOTRON, INC.**  
3629 N. Vermilion St., Danville, Ill. (Tel. 650)  
V. P.-Purch.: M. Gieseke  
PS, GH, GE, CO, TS, TR

**AUTOTRONICS INC.**  
Box 208, Florissant, Mo. (Tel. TEmple 7-3565)  
V. P.-Purch. & Sales: E. F. White  
Production Mgr.: A. F. Baous  
Chief Engr.: C. A. Jackson  
Pres.: A. J. Thompson  
GS, GE, TR, R&D

**AUTO-VALVE INC.**  
12 Molden Ave., Dayton 27, O. (Tel. AMherst 3-827)  
Pres.: Anthony P. Barcus  
GS, GH, R&D

**\*AVCO MFG. CORP., CROSLLEY DIV.**  
1329 Arlington St., Cincinnati, Ohio (Tel. KIRby 1-6600)  
Dir. Purch.: A. J. Verax  
Gen. Sales Mgrs.: T. J. Michel (Bomber Defense System & Commun.), L. E. Benitez (Space Missiles, Ordnance), E. Hopley (Radar & Air Traffic Control)  
WN, GS, GE, CO, TS, TR, R&D

\*(See 3rd Cover for Advertisement)

**\*AVCO MFG. CORP., NASHVILLE DIV.**  
Nashville 1, Tenn. (Tel. ALPine 4-9551)  
Purch. Agent: D. C. Hergert  
Gen. Mktg. Mgr.-Structures: Henry Ritter  
V. P.-Mktg., Defense Products: Dr. L. C. Maier, Jr.  
MM, R&D

\*(See 3rd Cover for Advertisement)

**AVCO RESEARCH LAB., DIV.-AVCO MFG. CORP.**  
2385 Revere Beach Parkway, Everett, Mass. (Tel. DUnkirk 9-2300)  
Purch. Agent: Harold Bloom  
Exec. Asst. to Dir.: F. C. Durant, III R&D  
See 3rd Cover for Advertisement

**VIATION DEVELOPMENTS INC.**  
210 S. Victory Blvd., Burbank, Calif. (Tel. Victoria 9-4631)  
Dir.-Purch.: John R. Moger  
Dir.-Sales: James D. Sontocroce MF, GS, GH, TS, MM, R&D

**VIACTION TEXTILE ASSOCIATES**  
17180 Wyoming, Detroit 21, Mich. (Tel. UN 2-3565)  
V. P.-Purch.: E. A. Thomson  
Pres.: W. T. Greig

**VIAATORS EQUIPMENT CORP.**  
143 Main St., Beacon, N. Y. (Tel. BEacon 1570)  
Pres.: John E. Liebmann  
Purch. Agent: John H. Duffy

**VICA CORP.**  
Newport, R. I. (Tel. VIKing 6-9100)  
Purch. Mgr.: D. J. Mulholland  
V. P.-Chief Sales Engr.: R. S. Weiss MF, PS, GS, GH

**VLEN, INC.**  
58-15 Northern Blvd., Woodside 77, N. Y. (Tel. YElowstone 2-4600)  
Mgr.-Purch.: Clifford Napolitano  
Mktg. Mgr.: H. H. Georgens GS, CO, R&D

**VION DIV., ACF INDUSTRIES, INC.**  
1 Park Place, Paramus, N. J. (Tel. COlfox 1-4100)  
Purch. Agent: Warren Guy GS, GE, CO, TR, R&D

**VION FOUNDRY CORP.**  
P. O. Box 395, Torpon Springs, Fla. (Tel. VICTor 2-6633)  
Pres.: E. R. Huneke MF, WN, PS, GS, GH, GE, TR, MM

**VIONICS RESEARCH CORP.**  
11 E. Colonial Dr., Orlando, Fla. (Tel. GA 5-0547)  
Gen. Mgr.: Alan Drucker GS, GE

**VNET CORP.**  
877 Rodeo Rd., Los Angeles 16, Calif. (Tel. TEXos 0-6141)  
Purch. Agent: Norman Karchem  
Sales Mgr.: M. G. Newberger MF, GS, GH

**V O LTD.**  
10 Shore Rd., Port Washington, N. Y. (Tel. PO 7-7700)  
Dir.-Sales: Si Bosworth

**VONDALE CO., THE**  
60 Happ Rd., Northfield, Ill. (Tel. AMB 2-0342)  
Purch.: Paul Manning  
Sales: H. N. Limbeck MF, WN, PS, GS, GH, GE

**VTRON MFG., INC.**  
0409 Meech Ave., Cleveland 5, Ohio (Tel. MI 1-8310)  
Purch. Agent: Thomas Sulzberger GS, CO

**VUL E. ELECTRONICS**  
34-20 Jamaica Ave., Jamaica, N. Y. (Tel. REpublic 9-1700)  
Purch. Agent: Robert H. Elkes  
Asst. Purch. Agent: Bernard Gollop  
Sales Mgr.: Joseph P. O'Donnell GE, TR

**VULNER ASSOCIATES INC.**  
02-42 43rd Ave., Corona 68, N. Y. (Tel. HAVemeyer 9-7718)  
Purch. Agent: K. Hillman  
Sales: M. Axler TR, R&O

**VULC. INSULATION PRODUCTS, INC.**  
90 Lincoln Hwy., Iselin, N. J. (Tel. LIBerty 8-0815)  
Gen. Mgr.: Bernard Sherman MF, PS

**VULF INSTRUMENTS, INC.**  
644 N. Lawrence St., Philadelphia 40, Pa. (Tel. GA 5-4175)  
V. P.-Purch.: C. E. Stufflebeam  
Chief Purch. Clk.: B. Snyder TS, TR, R&O

**VULCORP., THE**  
21 Broad Ave., Ridgefield, N. J. (Tel. WHITney 5-9800)  
Purch. Agent: Melville Miller  
Dir.-Sales & Engrg.: Robert W. Brattvet MF, WN, PS, GH, TR

**VH. AIRCRAFT CO., INC.**  
Eastern Parkway at Maplewood Ave., Farmingdale, L. I., N. Y. (Tel. CHOpel 9-5000)  
V. P.-Purch.: Donald F. Baum MF, PS

**VH. INSTRUMENT CO., INC.**  
479 W. Vickers Blvd., Fort Worth, Tex. (Tel. EDison 6-7243)  
Purch. Agent: Dwight Adams  
Sales Mgr.: Leon H. Becker CO, TS

**BJ ELECTRONICS, BORG-WARNER CORP.**  
3300 Newport Blvd., Santa Ana, Calif. (Tel. KImberly 8-7581)  
Purch. Agent: H. E. Schuyler  
Sales Mgr.: H. G. Ayers GS, GH, CO, TS, TR, R&D

**B & K INSTRUMENTS, INC.**  
3044 W. 106th St., Cleveland 11, Ohio (Tel. CLearwater 1-8430)  
Office Mgr.: Robert E. Madden  
Pres.: James W. Day TS

**BABCOCK RADIO ENGRG., INC.**  
1640 Monrovia Ave., Costa Mesa, Calif. (Tel. LIBerty 8-7703)  
Purch. Agent: Russell Clifton  
Dir.-Material: Richard T. Liggett  
Buyers: Robert Moore, Chas. E. Wilson, Carl Bewlan, Jess Hardy  
Asst. V. P.-Sales Engrg.: Norman E. Cima GE, TS

**BABCOCK RELAYS, INC.**  
1640 Monrovia Ave., Costa Mesa, Calif. (Tel. LIBerty 8-7703)  
Dir.-Material: Richard Liggett  
Purch. Agent: Russ Clifton  
V. P.-Sales: Carl L. Martin

**BABCOCK & WILCOX CO., TUBULAR PRODUCTS DIV.**  
Beaver Falls, Pa. (Tel. Beaver Falls 2100)  
V. P.: J. S. Anderson MF, PS

**SEMON BACHE & CO.**  
636 Greenwich St., New York 14, N. Y. (Tel. WA 4-2121)  
Purch.: Henry Del Tosto  
Sales: B. Newton MF, PS, GE

**BACON INDUSTRIES, INC.**  
192 Pleasant St., Watertown 72, Mass. (Tel. WATertown 4-5000)  
Purch. Agent: Kenneth H. Barton  
Sales Mgr.: Eldon H. Fay MF, WN, PS

**BADGER OIL CASTING CORP.**  
201 W. Oklahoma Ave., Milwaukee 7, Wis. (Tel. SH 4-6643)  
V. P.: Lyle Tichel MM

**BADGER MFG. CO.**  
363 Third St., Cambridge 42, Mass. (Tel. UNIVERSITY 4-9800)  
Purch. Agent: T. J. Eorley  
Buyers: E. L. Turner, J. C. Mannix, G. H. Horn, Jr., J. J. Duggan  
V. P.-Sales: W. C. Rousseau

**N. S. BAER CO.**  
1-11 Montgomery St., Hillside, N. J. (Tel. MURdock 8-2250)  
Office Mgr.: P. J. Stec  
Sales Mgr.: S. W. Nette MF, WN, PS

**BAIRD-ATOMIC, INC.**  
33 University Rd., Cambridge 38, Mass. (Tel. UNIVERSITY 4-7420)  
Purch. Agent: John B. Milliken  
Sales Mgr.: F. L. Foster GE, TS, TR, R&D

**J. T. BAKER CHEMICAL CO.**  
N. Broad St., Phillipsburg, N. J. (Tel. GLencourt 4-2151)  
Dir.-Purch.: John L. Zopf  
Buyers: John R. Herd, Thomas W. Mohr, R. H. M. Meil  
V. P.-Sales: Ralph A. Clark

**BAKER INDUSTRIAL TRUCKS, DIV.-OTIS ELEVATOR CO.**  
8000 Baker Ave., Cleveland, Ohio (Tel. OLYmpic 1-3000)  
Purch. Agent: E. W. Sonkey  
Asst. Purch. Agents: Joseph Petras, K. W. Keylerber  
Gen. Sales Mgr.: Robert J. Laws  
Sales Prom. Mgr.: Russell A. Moore GS, GH, R&O

**BAKER PERKINS INC.**  
1000 Hess St., Saginaw, Mich. (Tel. PLeasant 2-4121)  
Purch. Agent: R. F. Byrne  
V. P.-Sales: K. A. Mack  
Sales Mgr.: W. D. Chapman PS

**BAKER STEEL & TUBE CO.**  
1540 Calzona St., Los Angeles 23, Calif. (Tel. ANGelus 3-7231)  
Asst. Gen. Mgr.: C. L. Baker  
Sales Mgr.: H. E. Byerrum MM

**BALCO RESEARCH LABS., INC., CAPACITOR DIV.**  
49-53 Edison Place, Newark, N. J. (Tel. MITchell 3-5200)  
Purch.: Bob Nobel GE, TR

**\*BALCRANK INC., MACHINE TOOL DIV.**  
Disney St., Cincinnati, Ohio (Tel. RE 1-7200)  
Purch. Agent: E. M. Flannery  
Sales Admin.: J. A. Weiss GS, MM

**BALDWIN MFG. CO. INC., THE**  
140 Homer St., Waterbury, Conn. (Tel. PLaza 6-5561)  
Pres.: Francis V. Gullo

**BALDWIN PIANO CO., THE, INDUSTRIAL PRODUCTS DIV.**  
1801 Gilbert Ave., Cincinnati 2, Ohio (Tel. MA 1-4300)  
Dir.-Purch.: F. X. Shonnon  
Dir.-Industrial Sales: John Rotte GS, GE, TR, R&D

**BALDWIN-LIMA-HAMILTON CORP., ELECTRONICS & INSTRUMENTATION DIVS.**  
42 4th Ave., Waltham 54, Mass. (Tel. TW 4-6700)  
Purch. Agent: R. A. Welch  
Asst. Purch. Agent: R. Lepare  
Buyers: C. W. Jiggetts, G. A. Chodwell & R. Laurzano  
Gen. Sales Mgr.: William Kerr PS, GS, GH, CO, TS, TR

**BALL MACHINE PRODUCTS CO., THE**  
82 Fillmore St., New Haven 11, Conn. (Tel. STate 7-2776)  
Sales Mgr.: R. Lane  
Buyers: Eric T. Ball, R. B. Ball

**BALLANTINE LABS., INC.**  
Boonton, N. J. (Tel. DEerfield 4-1432)  
V. P.-Purch.: Frank R. Zayoc TS, R&O

**BALLASTRAN CORP.**  
1701 N. Calhoun St., Fort Wayne 7, Ind. (Tel. EAsbrook 2285)  
Purch.: H. L. Mothias  
Chief Engr. & Gen. Mgr.: Wm. Weir  
Buyer: Howard D. Carr TR

**BALLYMORE CO.**  
Lincoln & Garfield Aves., West Chester, Pa. (Tel. OWen 6-3250)  
Gen. Mgr.: William B. Hart  
Sales Mgr.: Harry G. Westerfield GS, GH

**BALTEAU ELECTRIC CORP.**  
P. O. Box 385, 5 New St., Stamford, Conn. (Tel. DA 4-6118)  
Oiv. Mgr., X-Ray Sales: Fred C. Sarchet  
V. P.-Purch.: M. Morechal TS

**BANNER INDUSTRIES**  
9501 Inkster Rd., Taylor, Mich. (Tel. WH 1-9800)  
Purch. Agent: Richard Olesak  
Sales Mgr.: Tom MacDonald

**BAR WORK MFG. CO., INC.**  
1198 Highland Ave., Waterbury, Conn. (Tel. PLaza 3-4103)  
Office Mgr.: Floyd Bird  
Pres.: Charles H. June, Jr.

**ALFRED W. BARBER LABS.**  
32-44 Francis Lewis Blvd., Flushing 58, N. Y. (Tel. IN 3-3306)

**BARBER-COLMAN CO.**  
1411-3 Rock St., Dept. Q, Rockford, Ill. (Tel. WOODlond 8-6833)  
Purch. Agent: D. R. Farquhar  
Sales Mgr.: Aircraft Contractors Div.: R. A. Baird  
Sales Mgr., Electrical Components Div.: W. F. Tice PS, GS, GE, TS, TR

**BARCO MFG. CO., INC.**  
566 N. Hough St., Barrington, Ill. (Tel. DUnkirk 1-1700)  
Purch. Agent: W. F. Donaldson  
V. P.-Sales: J. O. Heyworth, F. M. Moore PS, GS, GH

**BARON CORP., THE**  
33 E. Franklin St., Danbury, Conn. (Tel. PIONEer 3-3885)  
Purch. Agent: W. R. Ferguson  
Buyer: K. A. Taylor  
V. P.-Sales: Alphe G. Jarreau PS, GS, GE

**BARIUM & CHEMICALS, INC.**  
Lake Co. Np. Bank Bldg., Willoughby, O. (Tel. WI 2-5151)  
V. P.-Chg. of Purch.: Douglas Naylor  
V. P.-Sales & Adv.: Albert Povlik, Jr. PS, MM

**CODING**

Missile Frame MF  
Warhead & Nose Can WN  
Propulsion System PS  
Ground Support GS  
Ground Handling GH  
Guidance Equipment GE  
Checkout Equipment CO  
Test Equipment TS  
Tracking & Telemetering TR  
Research & Development R&D  
Materials & Metals MM

(See Page 71 for Advertisement)

# ... purchasing directory bar—bil

- BARKER SALES CO.**  
339 S. Broad Ave., Ridgefield, N. J. (Tel. Whitney 3-2477)  
Purch.: J. Donovan  
Sales Mgr.: T. R. Sheron  
Sales: T. R. Cox **GS, GE, TR**
- BARKER & WILLIAMSON INC.**  
Bristol, Pa. (Tel. STillwell 8-5581)  
Purch. Agent: Joseph Fattorini  
V. P.-Sales: J. C. Pearce
- BARKSDALE VALVES**  
5125 Alcoa Ave., Los Angeles 58, Calif. (Tel. LUdlow 7-6181)  
Purch. Agent: H. Lemcke  
Gen. Mgr. & V. P.-Sales: M. C. Nelson  
**GS, GH, TS, R&D**
- BARNEBEY-CHENEY CO.**  
Eighth Ave. & North Cassidy, Columbus 19, Ohio
- BARNES ENGRG. CO.**  
30 Commerce Rd., Stamford, Conn. (Tel. Flreside 8-5381)  
Purch. Agent: James D. Bennett
- BARNSTEAD STILL & STERILIZER CO.**  
2 Lanesville Terr., Boston 31, Mass. (Tel. JA 4-3100)  
Purch. Agent: J. C. Mullan  
Sales Mgr.: D. G. Miller **PS, GS**
- BARNUM MACHINE WORKS, INC.**  
200 Wooster St., New Haven, Conn. (Tel. LCOcust 2-2169)  
Pres.: Henry G. Halbing
- BAR-RAY PRODUCTS, INC.**  
211 25th St., Brooklyn 32, N. Y. (Tel. SOuth 8-1020) **TS**
- LEON J. BARRETT CO., THE**  
1495 Grafton Rd., Worcester, Mass. (Tel. PLessant 5-4306)  
Dir.-Purch.: D. C. Page  
Purch. Agent: L. E. Clark  
Sales Mgr.: R. B. Ayres
- W. L. BARRETT CO., THE**  
School St., Bristol, Conn. (Tel. LUdlow 2-7487)  
Purch. Agent: M. Graham  
Sales Mgr.: A. J. Levins **MF, PS, GE, TS, TR**
- BARRETT-CHRISTIE CO.**  
118-124 N. Clinton St., Chicago 6, Ill. (Tel. FRanklin 2-9540)  
Purch. Agent: R. O. Hanson **MM**
- BARRY CONTROLS INC.**  
938 Pleasant St., Watertown 72, Mass. (Tel. WAtertown 3-1150)  
Purch. Agent: Thomas Foster  
Buyers: James Wise, James Writsel  
V. P.-Mktg.: Edward A. Johnson **MF, GS, GE, TS, R&D**
- BARRY ELECTRONICS CORP.**  
512 Broadway, New York 12, N. Y. (Tel. WAlker 5-700)  
Pres.: B. N. Gensler
- BART MFG. CORP.**  
227 Main St., Belleville, N. J. (Tel. PLYmouth 9-0200)  
Purch. Agent: Edward Mangas  
Buyer: Dorothy Durrigan  
V. P.-Sales: L. P. Vollmuth **R&D**
- BARTON INSTRUMENT CORP.**  
580 Monterey Pass Rd., Monterey Park, Calif. (Tel. CLumberland 3-6501)  
Purch. Agent: Sylvia Clingerman  
V. P.-Sales: A. I. Thompson
- BARWOOD ELECTRONICS INC.**  
921 E. Broadway, Glendale 5, Calif. (Tel. CHopman 5-4063) **GS**
- GEORGE BASCH CO., THE**  
19 Hanse Ave., Freeport, N. Y. (Tel. FReeport 8-8100)  
Pres.: George Basch  
Gen. Mgr.: Jerome D. Basch **MM, R&D**
- BASCO METAL PRODUCTS, INC.**  
7649 San Fernando Blvd., Burbank, Calif. (Tel. ROgers 7-3711)  
Purch. Agent: Robert Crawford  
Sales Mgr.: Don Lawrie **MF, GS, GH**
- BASIC & EXPERIMENTAL PHYSICS**  
Box 689, Falmouth, Mass. (Tel. KImball 8-2175)  
Purch. Agent: L. Grafton  
Sales Mgr.: J. A. Roberts **R&D**
- BASIC TOOL INDUSTRIES, INC.**  
14439 S. Avalon Blvd., Gardena, Calif. (Tel. FAculty 1-2665)  
Purch. Agent: Robert F. Rigali
- Asst. Purch. Agent: K. S. Frenger  
Buyer: H. B. Sibert  
Exec. V. P.-Sales: Robert G. Lucas **MF, GS, GH**
- BASO INC.**  
730 N. Jackson St., Milwaukee 1, Wisc. (Tel. BRoadway 2-5388)  
Purch. Agent: G. C. Winters  
Asst. Purch. Agent: F. J. Jens  
Mgr.-Relay Sales: D. Weidenfeller
- REX BASSETT, INC.**  
1314 N. E. 17th Ct., Ft. Lauderdale, Fla. (Tel. LOfan 4-3028)
- BASSICK CO., THE, DIV.-STEWART-WARNER**  
3045 Fairfield Ave., Bridgeport 5, Conn. (Tel. FOrrest 6-3671)  
Dir.-Purch.: George Raiselis  
Purch. Agent (Paris): Henry Burr  
Dir.-Sales: W. G. Reyrcort **GS, GH**
- CHRISTIE BATLAS, INDUSTRIAL SCALE MODELS**  
17 Irving Pl., Summit, N. J. (Tel. CR 3-8364)
- \*BAUSCH & LOMB OPTICAL CO.**  
88459 St. Paul St., Rochester, N. Y. (Tel. LCOcust 2-3000)  
Purch. Agent: C. Buss  
V. P.-Sales: A. K. Marsters  
Mgr.-Contract Dept.: J. W. Wright  
**MF, WN, PS, GS, GH, GE, CO, TS, TR**  
(See Page 95 for Advertisement)
- BAW STATE ABRASIVE PRODUCTS CO.**  
12 Union St., Westboro, Mass. (Tel. FOrrest 6-4433)  
Purch. Agent: Frank A. Rossi  
V. P.-Mktg.: E. L. Auker **MM**
- BEACH-RUSS CO.**  
420 Lexington Ave., New York 17, N. Y. (Tel. OR 9-7636)  
Dir.-Purch.: S. Schmanski  
V. P.-Sales: A. T. Beach **TS, R&D**
- MORRIS BEAN & CO.**  
Yellow Springs, O. (Tel. ROkewell 7-7301)  
Dir. Purch.: D. W. Waechter  
Purch. Agent: T. E. Charlton  
Asst. Purch. Agent: R. E. Pollock  
V. P.-Sales: R. H. Hallister **MM**
- BEARING INSPECTION, INC.**  
3311 E. Gage Ave., Huntington Park, Calif. (Tel. LUdlow 2-6431)  
Pres. & Sales Mgr.: Charles McKnight  
Purch. Agent: J. O. Butler  
**MF, GS, GH, GE, CO, TS, TR, R&D**
- BEARIUM METALS CORP.**  
Mill & Commercial Sts., Rochester, N. Y. (Tel. LCOcust 2-7700)  
Purch. Agent: A. E. Zielke  
Sales Mgr.: B. M. Garek **MF, PS, GE**
- \*BEATON & CORBIN MFG. CO., THE**  
328 N. Main St., Southington, Conn. (Tel. MArket 8-3636)  
V. P.: C. W. Rush, Jr. **MF, PS, GS, GH, GE, TS, TR**  
(See Page 100 for Advertisement)
- BEATTIE-COLEMAN, INC.**  
1000 N. Olive St., Anaheim, Calif. (Tel. PRospect 4-4503)  
Buyer: John Brewer  
Sales Mgr.: J. A. Wilcox **GE, CO**
- W. A. BEAUCHAINE & SONS INC.**  
P. O. Box 127, Lakeport, N. H. (Tel. LAKeside 4-5118)  
Pres.: A. D. Beauchaine  
Sales Mgr.: C. C. Fernald **GE, TR**
- BEAVER GEAR WORKS, INC.**  
1025 Parmele St., Rockford, Ill. (Tel. WO 3-9691)  
Dir.-Purch. Dept.: R. A. Zwicky  
Dir.-Sales Dept.: Charles L. Kessler **GE, TR**
- BEAVER PRECISION PRODUCTS INC.**  
651 N. Rochester Rd., Clawson, Mich. (Tel. JOrdan 4-6547)  
Purch. Agent: Edw. Smakoski  
V. P.-Sales: John A. Hope **GS, GH, GE, TS, TR**
- BEAVER-ADVANCE CORP.**  
P. O. Box 792, Ellwood City, Pa. (Tel. PL 8-7571)  
Purch. Agent: J. T. Penman  
Sales Mgr.: R. B. Cooper **GH**
- BECCO CHEMICAL DIV.-FOOD MACHINERY & CHEMICAL CORP.**  
Station B, 34 Sawyer Ave., Buffalo, N. Y. (Tel. BEdford 8300)  
Purch. Agent: Herbert J. Newman  
Asst. Purch. Agent & Traffic Mgr.: Edward Wheeler  
Buyer: Charles Keller  
Asst. Buyer: Mrs. Lois Archinger  
Dir.-Sales: A. P. Shutts **PS**
- BECKMAN INSTRUMENTS, INC., BERKELEY DIV.**  
2200 Wright Ave., Richmond, Calif. (Tel. LA 6-7730)  
Purch. Mgr.: Walter Day  
Sales Mgr. (Test & Indst. Instruments): John W. Schreck  
Sales Mgr. (Analog Computers): Karl Sterne  
**CO, TS, R&D**
- BECKMAN/SCIENTIFIC & PROCESS INSTRUMENTS DIV.**  
2500 Fullerton Rd., Fullerton, Calif. (Tel. TRojan 1-4848)  
Purch. Agent: K. A. Bruner  
Mktg. Mgr.: M. K. Howlett **GH, R&D**
- BECKMAN/SPINCO DIV.**  
1117 California Ave., Palo Alto, Calif. (Tel. Davenport 1-2121)  
Purch. Agent: Walter Day  
Acting Div. Mgr.: G. F. Clifford
- BECKMAN/SYSTEMS DIV.**  
325 N. Muller Ave., Anaheim, Calif. (Tel. PRospect 4-5430)  
Purch. Agent: L. A. Call  
Buyers: D. McDowell, T. R. Novis, A. D. Pennington  
Mktg. Mgr.: Frank J. Scheufele **GS, CO, TR, R&D**
- BECKMAN & WHITLEY, INC., INSTRUMENT DIV.**  
973 San Carlos Ave., San Carlos, Calif. (Tel. LYtle 3-7824)  
Purch. Agent: R. Rader  
Camera Prdct.: L. T. Teeple  
Meteorological Instr.: H. V. Thompson **GE, R&D**
- BECKMAN & WHITLEY, INC., MISSILE PRODUCTS DIV.**  
985 E. San Carlos Ave., San Carlos, Calif. (Tel. LYtle 3-7824)  
Purch. Agent: J. W. Booth  
Subcontracting: R. Fasoletos  
Sales: C. R. Newman **MF, WN, PS, GS, GH, GE**
- BEECH AIRCRAFT CORP.**  
9709 E. Central, Wichita 1, Kans. (Tel. MUrray 3-4681)  
Mgr.-Materials: L. E. Bowery  
Asst. Mgr.-Proc.: W. R. Sullivan  
Gen. Supvr.-Proc.: L. E. Huffman  
Supvr.-Proc.: H. W. Deets & V. M. Melick  
V. P.-Contract Admin.: James N. Lew  
V. P.-Commercial Sales: Ledy Greever  
V. P.-Export Sales: Michael G. Neuburger
- BEEDE ELECTRICAL INSTRUMENT CO. INC.**  
Fisherville Road, Penacook, N. H. (Tel. PLaza 3-6362)  
Purch. Agent: William F. Wall
- BEEWER ENGRG. CO.**  
401 N. Broad St., Philadelphia 8, Pa. (Tel. WAlnut 2-0900)  
Purch. Mgr.: J. M. Brower **M**
- \*BEHLMAN ENGRG. CO.**  
2911 Winona Ave., Burbank, Calif. (Tel. VICTORIA 9-5733)  
Purch. Agent: Robert C. Danis  
V. P.-Sales: J. M. Schroeder **GS, CO, TS, R&D**  
(See Page 57 for Advertisement)
- BEKINS INDUSTRIAL PACKAGING**  
12512 Inglewood Ave., Hawthorne, Calif. (Tel. OR 8-713)  
Gen. Mgr.: R. A. Patton  
Operations Mgr.: Norman L. Johnson  
Dir.-Sales & Engrg.: Noble W. Jones **GH, G**
- BEL FUSE INC.**  
198 Van Vorst St., Jersey City, N. J.  
Pres.: Elliot Bernstein  
Dir.-Sales: H. V. Anderson **R&**
- BELDEN MFG. CO.**  
415 S. Kilpatrick, Chicago 44, Ill. (Tel. ESTerbrook 8-1000)  
Dir.-Purch.: William A. Sandy  
Gen. Sales Mgr.: Les A. Thayer  
**MF, PS, GS, GH, GE, CO, TS, TR**
- BELFAB CORP., THE**  
382 Walnut St., Agawam, Mass. (Tel. STate 8-6247)  
Purch. Mgr.: D. J. McCarrall  
Sales Mgr.: Robert F. Harrison  
**MF, WN, PS, GS, GE, TR**
- BELL AIRCRAFT CORP., AIRCRAFT DIV.**  
Wheatfield Plt., P. O. Box 1, Buffalo 5, N. Y.  
Div. Mgr.: J. J. Domankos  
Sales & Engrg. Dir.: J. W. Rane  
Works Mgr.: T. M. Nolan  
Chief Engr.: G. D. Roy  
Mfg. Services: R. W. Varriall  
**AVIONICS DIV., Wheatfield Plt., P. O. Box 1, Buffalo 5, N. Y.**  
Div. Mgr.: J. van Lonkhuizen  
Dir.-Engrg.: Frank Anderson  
Dir.-Mfg.: W. Lawrence  
**SPACE FLIGHT DIV., Kenmore Plt., P. O. Box 1, Buffalo 5, N. Y. (Tel. BEdford 2373)**  
Div. Mgr.: William Smith

Dir.-Engrg.: R. D. Rinehart  
 Dir.-Mfg.: F. H. Walters  
 Sales Mgr.: J. R. Piselli  
 Programs Dir.: H. A. Ferullo  
 MF, WN, PS, GS, GH, GE, CO, TS, R&D

**BELL AIRCRAFT CORP., NIAGARA FRONTIER DIV.**  
 P. O. Box 1, Buffalo 5, N. Y. (Tel. Niagara Falls, BLiter 5-7851)  
 Dir. Procurement: Maurice J. Coughlin TR

**BELL & GOSSETT CO.**  
 8200 N. Austin, Morton Grove, Ill. (Tel. DR 3-3700)  
 Purch. Agent: N. Van Parys  
 Sales Mgr.: Electronics Div.: D. J. Shea, Jr.  
 GS, GH, GE, TR

**BELL & GOSSETT CO., MARLOW PUMPS DIV.**  
 Box 200, Midland Park, N. J. (Tel. GILbert 4-6900)  
 Purch. Agent: Miss R. K. Boyd  
 Govt. Sales: H. L. Kociencki  
 Gen. Sales Mgr.: A. F. Woods GS, GH

**BELL & HOWELL CO.**  
 7100 McCormick Blvd., Chicago 45, Ill. (Tel. Ambassador 2-1600)  
 Dir. Purch.: S. W. Knobe  
 Dir. Govt. Sales: Carl J. Strauff GE, TS, TR, R&D

**ELL OIL & GAS CO.**  
 National Bank Tulsa Bldg., Tulsa, Okla. (Tel. CHerry 2-7191)  
 Mgr.-Purch.: M. W. Sullivan  
 Sales Mgr.: L. H. Deatherage

**ELL TELEPHONE LABORATORIES, INC.**  
 463 West St., New York 14, N. Y. (Tel. CHelsea 3-1000)  
 V. P. & Gen. Mgr.: R. L. Helmreich

**ELLOFRAM CORP.**  
 Blanchard Rd., Burlington, Mass. (Tel. Mlsson 3-9000)  
 Sales Mgr.: John F. Toplin  
 Buyer: Harold Currier PS, GE, R&D

**ELMONT SMELTING & REFINING WORKS, INC.**  
 330 Belmont Ave., Brooklyn 7, N. Y. (Tel. DICKens 2-4900)  
 V. P., Purch.: Robert V. Henning  
 MF, WN, PS, GE, CO, TS, TR, MM

**ELOCK INSTRUMENT CORP.**  
 112-03 14th Ave., College Point, Queens, N. Y. (Tel. HICKory 5-4200)  
 Purch. Mgr.: Herbert Helmers  
 V. P.-Sales: John F. Donato  
 GS, GE, CO, TS, TR, R&D

**EL-TRONICS CORP.**  
 344 Interstate Rd., Addison, Ill. (Tel. KIngwood 3-7778)  
 Mgr.-Purch.: Lee Belowich  
 Purch. Agent: Mrs. E. Wanders  
 Pres. & Sales Mgr.: Thomas J. Wright

**EMS BROTHERS BAG CO.**  
 111 N. Fourth St., Box 72, St. Louis 2, Mo. (Tel. Chestnut 1-0900) GS

**ENBOW MFG. CORP.**  
 11920 W. Jefferson Blvd., Culver City, Calif. (Tel. EX. 8-5766)  
 Purch. Agent: Donald R. Longe  
 V. P.-Sales: Wayne S. Boals GS, TS, R&D

**ENDIX AVIATION CORP.**  
 Executive Office: Fisher Bldg., Detroit 2, Mich. (Tel. TRimby 5-5000)  
 Pres.: M. P. Ferguson

**ENDIX AVIATION CORP., ECLIPSE-PIONEER DIV.**  
 Teterboro, N. J. (Tel. ATlas 8-2000)  
 Dir.-Purch.: J. Quinn  
 Purch. Agents: Paul Farley & R. E. Rosemund  
 Dir.-Sales & Serv.: J. P. Buckley  
 GS, GE, CO, TS, R&D

**ENDIX AVIATION CORP., FRIEZ INSTRUMENT DIV.**  
 400 Taylor Ave., Townson 4, Md. (Tel. VALley 3-4040)  
 Purch. Agent: H. J. Grady  
 Gen. Sales Mgr.: R. B. Stevenson WN, GS, R&D

**ENDIX AVIATION CORP., HAMILTON DIV.**  
 11th St. & Ford Blvd., Hamilton, Ohio (Tel. TWInbrook 3-6181)  
 Purch. Agent: D. J. MacGregor  
 Sales Mgr.: S. R. Craig GE  
 (See Page 12 for Advertisement)

**ENDIX AVIATION CORP., MONTROSE DIV.**  
 1017 Montrose, Pa. (Tel. MONTrose 570)  
 Purch. Agent: J. B. Wilson  
 Buyers: R. J. Pope, R. L. Kerr, J. E. Mahon & K. R. Flint  
 Sales & Service: M. G. Douglas PS, GS, GE, TR

**ENDIX AVIATION CORP., PIONEER-CENTRAL DIV.**

Hickory Grove Rd., Davenport, Iowa (Tel. DAVenport 7-9101)  
 Dir.-Purch.: George Thomas  
 Asst. Dir.-Purch.: Vernon Dick  
 Sr. Buyers: Donald Patrick & William Hiegel  
 Buyer: Robert Lindsay  
 Dir.-Sales & Serv.: I. H. MacMillan  
 MF, WN, PS, GS, GH, GE, CO, TS, TR

**BENDIX AVIATION CORP., RED BANK DIV.**  
 Eatontown, N. J. (Tel. LIBerty 2-2000)  
 Purch. Agent: L. Fyfe  
 Buyer: Wm. Rennick  
 Gen. Sales Mgr.: N. P. Bony  
 Mktg. Mgr.-Electron Tubes: J. F. Bozzelli  
 WN, GS, TR

**BENDIX AVIATION CORP., SCINTILLA DIV.**  
 Delaware Ave., Sidney, N. Y. (Tel. LDwell 3-9511)  
 Purch. Agent: W. B. Wilson  
 Asst. Purch. Agent: C. L. Kessler  
 Asst. Purch. Agent-Raw Materials & Castings: C. E. Rodgers  
 Asst. Purch. Agent-MRO Supp.: L. Johnson  
 Dir.-Sales: D. B. Morse  
 MF, PS, GS, GH, GE, CO, TS, TR

**BENDIX AVIATION CORP., SEMICONDUCTOR PRODUCTS, RED BANK DIV.**  
 201 Westwood Ave., Long Branch, N. J. (Tel. CAPITAL 2-6220)  
 Mktg. Mgr.: Robert R. Meijer  
 Dir.-Purch.: L. D. Fyfe, Eatontown, N. J. (Tel. LIBerty 2-2000)  
 Purch. Agent: Thomas Hackett, Eatontown, N. J. (Tel. LIBerty 2-2000)

**BENDIX AVIATION CORP., YORK DIV.**  
 York, Pa. (Tel. 47-2611)  
 Purch. Agent: R. H. Moore  
 Chief Purch. Agent: P. B. Gross  
 Sales Mgr.: T. R. Barliant  
 MF, WN, PS, GS, GH, GE, CO, TS, TR

**BENDIX COMPUTER, DIV-BENDIX AVIATION CORP.**  
 5630 Arbor Vitae Str., Los Angeles 45, Calif. (Tel. Spring 6-2220)  
 Purch. Agent: R. J. Thelen  
 Sr. Buyer: M. McCafferty  
 Buyers: J. Brewer & R. Donovan  
 Dir.-Mktg.: D. P. Staderman GE, TR

**BENDIX FILTER DIV., BENDIX AVIATION CORP.**  
 434 W. Twelve Mile Rd., Madison Hgts., Mich. (Tel. JDRon 6-2380)  
 Purch. Dept.: D. S. Kinsman  
 Buyer: Ivan Papin  
 Dir.-Sales: W. N. Caldwell, Jr.  
 Sales Mgr.: G. T. Grimstad  
 PS, GS, GH, GE, CO, TS, MM, R&D

**BENDIX FOUNDRIES, BENDIX AVIATION CORP.**  
 Teterboro, N. J. (Tel. ATlas 8-2000)  
 Foundry Mgr.: R. D. Ferguson  
 Foundry Purch. Agent: G. F. Cartier  
 Sales Mgr.: L. Eigenrauch MF, PS

**\*BENDIX PRODUCTS DIV., BENDIX AVIATION CORP.**  
 401 Bendix Dr., South Bend, Ind. (Tel. CENtral 3-4141)  
 Dir.-Purch.: C. E. Budd  
 Sales: K. L. Mulholland PS, GS, GH, CO, MM, R&D  
 \*(See Page 47 for Advertisement)

**BENDIX PRODUCTS DIV.-MISSILES, BENDIX AVIATION CORP.**  
 400 S. Beiger St., Mishawaka, Ind. (Tel. BL 5-2111)  
 Dir.-Procurement: Daniel J. Youngerman  
 Supvr. Subcontract Section: Roger D. Weller  
 Asst. Purch. Agent: Fred R. Glassman  
 Contracts Mgr.: M. R. Balis

**BENDIX RADIO DIV. BENDIX AVIATION CORP.**  
 E. Joppa Rd., Baltimore 4, Md. (Tel. VALley 3-2200)  
 Govt. Prods. Materials Mgr.: J. L. Winchester  
 Govt. Prods. Sales Mgr.: E. A. King  
 GS, GE, CO, TR, R&D

**BENDIX UTICA DIV., BENDIX AVIATION CORP.**  
 211 Seward Ave., Utica, N. Y. (Tel. SWif 7-2500)  
 Dir.-Purch.: Alan J. Dodd  
 Senior Buyers: P. B. Huested, G. R. Didio, R. V. Douglas  
 Buyer: R. C. Mallory  
 Dir.-Sales & Service: D. S. Tilden GS, CO, TS

**BENDIX-PACIFIC DIV., BENDIX AVIATION CORP.**  
 11600 Sherman Way, N. Hollywood, Calif. (Tel. PDplar 5-1010)  
 Dir. Purch.: R. R. Zimmerman  
 Asst. Dir.-Purch.: R. N. Huntoon  
 Electro-mechanical Sales Mgr.: C. J. Robinson  
 Electronics Sales Mgr.: H. D. Wilkinson  
 Hydraulics Sales Mgr.: J. G. Weldon  
 Telemetering Sales Mgr.: E. W. Copeland  
 GS, GH, GE, CO, TS, TR, R&D

**BENSON MFG. CO., THE**  
 1811 Agnes Ave., Kansas City, Mo. (Tel. BE 1-8300)

Dir.-Purch.: Ralph Bure  
 Buyers: Dick Stuessi, Lawrence Davis, Jim Mitchell, Earl Miller  
 Pres.: A. J. Benson MF, WN, GS, GH, MM

**BENSON-LEHNER CORP.**  
 11930 W. Olympic Blvd., Los Angeles 64, Calif. (Tel. BRadsho 2-3484)  
 Head-Purch.: Everett Case  
 Buyers: John Dudas, Richardson Hill, George Sharp  
 V. P.-Appl. Engrg.: Donald B. Prell  
 MF, PS, GS, GH, GE, CO, TS, TR, R&D

**BENTON HARBOR ENGRG. WORKS, INC.**  
 622 Langley Ave., St. Joseph, Mich. (Tel. YUKon 3-5523)

**BERGEN CARBIDE CO.**  
 P. O. Box 531, Fair Lawn, N. J. (Tel. GREGory 1-3538)  
 Gen. Mgr.: Charles Dpenden  
 MF, WN, PS, GS, GE, TR

**BERGEN LABS., INC.**  
 247 Crooks Ave., Clifton, N. J. (Tel. GREGory 3-7800)  
 Purch. Agent: D. Mierop  
 Sales Mgr.: M. Hoberman TS, R&D

**BERGEN WIRE ROPE CO.**  
 11 Gregg St., Lodi, N. J. (Tel. HUBbard 7-3521)  
 Purch. Agent: Jack Harper  
 Dir.-Sales: Robert Ernst MF, GS, GH, TS

**BERGER BROTHERS CO., THE**  
 135 Derby Ave., New Haven, Conn. (Tel. MAIn 4-0131)  
 Purch. Agent: Donald MacDonald  
 Assoc. Purch. Agent: Richard Wallace  
 Dir.-Special Prod.: Fred D. Moller  
 GS, GH, TS, TR, R&D

**BERKSHIRE ELECTRIC CABLE CO.**  
 River Rd., Leeds, Mass. (Tel. NORrhampton-JUSTice 4-3853)  
 Treas.: Garson R. Feinstein  
 MF, PS, GS, GH, CO, TS, TR

**BERNCO ENGRG. CORP.**  
 2320 S. Tibbs Ave., P. D. Box 41037, Indianapolis 41, Ind. (Tel. CHapel 1-2871)  
 Purch. Agent & Plant Mgr.: E. F. Winterfeldt  
 Pres. & Sales Mgr.: Drbon H. Reich GS, CO

**BERYLLIUM CORP., THE**  
 P. O. Box 1462, Reading, Pa. (Tel. WALKer 9-0781)  
 Purch. Agent: T. Blessing  
 V. P.-Sales: L. F. Boland MM, R&D

**CHARLES BESELER CO.**  
 219 S. 18th St., East Orange, N. J. (Tel. DR 6-6500)  
 Purch. Agent: J. Proger  
 Sales Mgr.: M. F. Myers GH

**BEST AIRCRAFT CORP.**  
 711 Sip St., Union City, N. J. (Tel. UNION 5-1681)  
 Sales Mgr.: F. Gebhardt  
 Gen. Mgr.: C. J. Higgins MF, GS, GH, MM

**BEVA LAB., INC.**  
 22 Parker Ave., Trenton 9, N. J. (Tel. EXport 4-4074)  
 Mgr.: W. Hartig  
 Secy.: L. A. Hartig CO, TS, R&D

**JAMES G. BIDDLE CO.**  
 1316 Arch St., Philadelphia 7, Pa. (Tel. LD 4-1620)  
 Purch. Agent: Lester Markham  
 Chief Engr.: E. B. Curdts  
 Sales Mgr.: P. E. Sellers TS

**A. BIEDERMAN, INC.**  
 1045 Air Way, Glendale 1, Calif. (Tel. CITrus 6-2421)  
 Purch. Agent: Frank A. Herle  
 Dir.-Sales: Herbert J. Pyle GS, CO, TS, R&D

**CARL H. BIGGS CO.**  
 1547 14th St., Santa Monica, Calif. (Tel. GR 8-0461)  
 Purch. Agent: G. Hert  
 Dir.-Sales: D. N. Lott MM

**BIL-JAX INC.**  
 Wyse Rd., Archbold, Ohio (Tel. 2045)  
 Purch. Agent: Wilbur M. Wyse GS, GH

	CODING
Missile Frame	MF
Warhead & Nose Cone	WN
Propulsion System	PS
Ground Support	GS
Ground Handling	GH
Guidance Equipment	GE
Checkout Equipment	CO
Test Equipment	TS
Tracking & Telemetering	TR
Research & Development	R&D
Materials & Metals	MM

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**BILLINGS & SPENCER CO., THE**  
1 Laurel St., Hartford, Conn. (Tel. Jackson 7-5181)  
Purch. Agent: Wm. V. Pflam  
Sales Mgr., Spec. Forgings Div.: E. A. Cracker MM

**BINKLEY MFG. CO.**  
Warrenton, Mo. (Tel. GLadstone 6-3455)  
Purch. Agent: M. D. Coleman  
Gen. Sales Mgr.: Frank A. Bornmann

**BIO-RAD LABS.**  
32nd & Griffin Ave., Richmond, Calif. (Tel. BEacan 4-4130)  
Purch. Agent: A. S. Klein  
Sales Mgr.: David Schwartz MM, R&D

**BIOS LABS., INC.**  
17 W. 60th St., New York 23, N. Y. (Tel. PLaza 7-8171)  
Asst. Dir.-Purch.: H. Brodie  
Dir.-Sales: Fred Linsker MF, WN, PS, GS, TS, TR

**RICHARD H. BIRD & CO., INC.**  
1 Spruce St., Waltham 54, Mass. (Tel. TWinbrook 4-0160)  
Supt.: C. F. Whittemore GE, TR

**BIRDAIR STRUCTURES, INC.**  
290 Larkin St., Buffalo 10, N. Y. (Tel. MDhawk 6-520)  
Purch. Agent: Warren K. Harey  
Sales Mgr.: Alvin C. Smith

**BIRMA MFG. CO. INC.**  
525 Hertel Ave., Plant #1, Buffalo, N. Y. (Tel. Victory 7000)  
Purch. Agent: Dan West  
Sales Mgr.: George H. Nelson MM, R&D

**BIRNBACH RADIO CO., INC.**  
145 Hudson St., New York 13, N. Y. (Tel. WALKer 5-6980)  
Sales Mgr.: Aaron D. Danziger  
Pres.-Purch.: M. Birnbach MM

**BIRTCHEER CORP., THE**  
4371 Valley Blvd., Los Angeles 32, Calif. (Tel. CApitol 2-9101)  
Purch. Mgr.: Mrs. Jessie Matranga  
Sales Mgr., Indsl. Div.: Charles F. Baaher TR

**J. BISHOP & CO., PLATINUM WORKS**  
E. King St., Malvern, Pa. (Tel. NIagara 4-3100)  
Dir.-Purch.: J. Carrez  
V. P.: J. J. Buckley  
Sales Coordinator: H. S. Roberts  
Mgr., Platinum Divs.: Lee Maules MF, WN, PS, TS, MM, R&D

**BISHOP MFG. CDRP.**  
10 Canfield Rd., Cedar Grove, N. J. (Tel. CEnter 9-2400)  
Purch. Agent: Mrs. Alice F. Cook  
Sales Mgr.: F. X. McCormack

**BJDRKSTEN RESEARCH LABS. FDR INDUSTRY, INC.**  
P. O. Box 1175, Madison 1, Wis. (Tel. ALpine 6-5581)  
Purch. Agent: David B. Bennett  
V. P.-Sales: James E. Henning R&D

**BLACK & DECKER MFG. CO., THE**  
E. Pa. Ave., Towson 4, Md. (Tel. VA 3-4400)  
Purch. Mgr.: Alex Dahi  
V. P.-Mkng.: R. G. Horner GS, GH

**BLACK, SIVALLS & BRYSOIN, INC.**  
7500 E. 12th St., Kansas City 26, Mo. (Tel. BEntan 1-7200)  
V. P.-Purch.: William F. Gates  
Mgr., Safety Head Sales: James F. Myers PS, GS, GH, TS, R&D

**BLACKHAWK MFG. CO.**  
5325 W. Rogers St., Milwaukee 46, Wisc. (Tel. ORchard 1-4000)  
Purch. Agent: T. A. Clark  
Buyers: R. C. Newman, E. F. Larsen  
Mgr.-Dist. Sales: Wes Kiley MF, GH, MM

**BLACKMER PUMP CO.**  
1809 Century Ave., S. W., Grand Rapids 9, Mich. (Tel. CHerry 1-1611)  
Purch. Agent: Darcey Mahan  
Dir.-Sales: E. H. Lamthorn PS, GS, GH

**BLACKSTONE CDRP.**  
1111 Allen St., Jamestown, N. Y. (Tel. 5-1121)  
Dir.-Purch.: J. P. Milham  
Products Mgr.: G. A. Gustafson

**BLACD MFG. CO.**  
6541 Euclid Ave., Cleveland 3, O. (Tel. EXpress 1-0497)  
Purch.: S. J. Horetik MF, WN, GS, GH, GE, TR

**WHITNEY BLAKE CO.**  
1565 Dixwell Ave., New Haven 14, Conn. (Tel. CHEstnut 8-5515)

Purch. Agent: D. C. McKean  
Gen. Sales Mgr.: R. H. Beilschwenger  
GE, CO, TS, TR, MM, R&D

**ERNEST E. BLANCHE & ASSOCIATES, INC.**  
10425 Fawcett St., Kensington, Md. (Tel. LOKwood 4-7527)  
Chief-Purch.: Mrs. Irene Van Yuga TR, R&D

**BLAND BURNER CO., THE**  
83 Woodbine St., Hartford 6, Conn. (Tel. CHapel 9-8651)  
Purch. Agent: Jerry Glassman  
Sales Mgr.: Joel Livingston MM

**BLAW-KNOX EQUIPMENT, DIV.-BLAW-KNOX CO.**  
P. O. Box 1198, Pittsburgh 1, Pa. (Tel. STerling 1-2700)  
Div. Purch. Agent: Phillip H. Rollings  
Gen. Sales Mgr.: H. Russell Laxterman GE, TR

**E. W. BLISS CO.**  
1375 Raff Rd., S. W., Canton, Ohio (Tel. GRenwood 7-3421)  
Purch. Mgr.: F. R. Mayer  
Buyers: W. B. Boyd, G. W. Baker, J. M. Baylor, J. Tucker  
Sales Mgr.-Govt. Contracts: R. E. Reilly MF, WN, PS, GS, GH

**BLISS ELECTRONIC CORP.**  
Box 366, Sussex, N. J. (Tel. SUsex 2-3000)  
Dir.-Purch.: Gilbert Coates  
Dir.-Sales: Robert Kaiser GS, TS

**BLONDER-TONGUE LABS., INC.**  
9 Alling St., Newark 2, N. J. (Tel. MArket 2-8151)  
Purch. Agent: David Rubin  
Asst. Purch. Agent: John Fahey  
Component Purch.: George Faccone  
Govt. Sales Mgr.: Irv Faye  
Sales Mgr.: Joseph H. Kerner GE, TR, R&D

**BLOOMINGDALE RUBBER CO.**  
Raasevelt & Grant Aves., Aberdeen, Md. (Tel. ABerdeen 2050)  
Prod. Mgr.-Purch. Dept.: LaVerne R. Britton, R. #40 & Plater St., (Tel. ABerdeen 2370)  
Chief Engr.-Sales: R. B. Krieger, Jr. (Tel. ABerdeen 2050) MM

**BLDSSM MFG. CO. INC.**  
2337 McDonald Ave., Brooklyn 23, N. Y. (Tel. DEwey 6-5555)  
Dave Schaenfeld MF, PS

**BLOWERS INC.**  
12655 S. Western Ave., Blue Island, Ill. (Tel. FUlton 8-3060)  
Purch. Agent: S. A. Witte MF, WN, GS, GH, CO

**BLUE M ELECTRIC CO.**  
136th & Chatham St., Blue Island, Ill. (Tel. FUlton 5-9000)  
Purch. Agent: W. F. Wilde  
V. P.-Sales: Angela Lazzaro TS, R&D

**BOBRICK MFG. CDRP.**  
1839 Blake Ave., Los Angeles 39, Calif. (Tel. NOrmandy 2-3188)  
Purch. Agent: R. L. Blough  
V. P.-Sales: Arnold A. Cowan R&D

**BDDNE ELECTRIC CO.**  
2500 W. Bradley Pl., Chicago 18, Ill. (Tel. IR 8-3515)  
Exec. V. P.-Purch.: E. W. Larson  
Asst. Purch. Mgr.: H. G. Anderson  
Sales Mgr.: W. M. Yagerst PS, GE, TS, TR

**BOEING AIRPLANE CO., PILOTLESS AIRCRAFT DIV.**  
Seattle, Wash. (Tel. JUnger 6-2121)  
Material Mgr.: N. W. Grigg (Tel. MU 2-1760)  
Sales Mgr.: Fred Young (Tel. JU 6-4611)  
MF, GS, GH, GE, CO, TS, TR, R&D

**BDGART MFG. CORP.**  
315 Seigel St., Brooklyn 6, N. Y. (Tel. HY 7-4972)  
Supvr.: H. Schoenfeld  
Purch. Agents: W. Edgar & A. Levinson  
Expeditar: R. Goldberg  
Mgr.-Engrg. Sales: Lee N. Blatt R&D

**BDGEN-PRESTO CD., DIV.-THE SIEGLER CORP.**  
P. O. Box 500, Paramus, N. J. (Tel. DIamand 3-5700)  
Dir.-Purch.: Abe Morin  
Purch. Agents: Ted Neher, Paul Lesh, Jim Gaddy  
Sales Mgrs.: M. S. Summers & T. L. Aye

**BDGUE ELECTRIC MFG. CO.**  
52 Iowa Ave., Paterson 3, N. J. (Tel. LAmbert 5-2200)  
Purch. Agent: Miss A. Schinman  
Purch. Dept.: J. Whitcomb  
Sales Mgr.: Joseph Rambusek WN, PS, GS, GH, CO

**BDMAC LABDRATORIES, INC.**  
Salem Rd., Beverly, Mass. (Tel. WALKer 2-6000)

Purch. Agent: William H. Gysan  
Buyer-Microwave Components: Dexter W. Rundlett  
Buyer-Prod. Machine Parts: George W. Pickering  
Buyer-Engrg. Machine Parts: John P. White  
Sales Mgr.: E. D. Benson TR, R&D

**BOND METAL SURPLUS CO.**  
321 Canal St., New York 13, N. Y. (Tel. CA 6-2928)  
Sales Mgr.: Jack Cooper MM

**BONNY MFG. CORP.**  
146 Main St., Maynard, Mass. (Tel. TWin Oaks 7-9311)  
V. P.-Sales: John A. Crowe TR

**BOOKER-COOPER, INC.**  
6940 Formale Ave., North Hollywood, Calif. (Tel. ST 7-7105)  
Sales Dir.: Roy Smith MF, PS, GH, GE, MM

**BODDTON RADIO CORP.**  
50 Intervale Rd., Baantun, N. J. (Tel. DEerfield 4-3200)  
Purch. Agent: R. W. Laughlin  
Sales Mgr.: H. J. Lang TR

**BOOTH FELT CD., INC., THE**  
1724 10th Ave., Brooklyn 15, N. Y. (Tel. STerling 8-5700)  
Purch. Agent: Harold T. Kenyon MM

**BDDTS AIRCRAFT NUT CDRP.**  
Newtown Turnpike, Norwalk, Conn. (Tel. VICTor 7-2446)  
Purch. Agent-Material: A. T. Carlson  
Purch. Agent-Gen.: C. A. Milton  
Sales Mgr.: Frank Lawn MF, PS, GS, GE

**BORDEN CHEMICAL CO.**  
350 Madison Ave., New York 17, N. Y. (Tel. MUrray Hill 7-4100)  
Purch. Agent: Wayland P. Morse  
Chem. P. A.: Richard J. Magner  
Exec. V. P.-Sales: E. J. Sullivan MM, R&D

**BDRDN CHEMICAL CO., THE RESINITE DEPT.**  
P. O. Box 1589, 436 E. Gutierrez St., Santa Barbara, Calif. (Tel. WDAadland 3134)  
Purch. Agent: Robert W. Hull  
Purch.: H. L. Bartlett, 1 Clark St., North Andover, Mass. (Tel. MUrdock 7-7131)  
MF, WN, PS, GE, TS, TR

**BORG EQUIPMENT DIV. AMPHENOL-BORG ELECTRONICS CDRP.**  
120 S. Main St., Johnsville, Wisc. (Tel. PLeasant 4-6616)  
Sales Mgr.: R. K. Johnson GS, GE

**BORG-WARNER CORP.**  
200 S. Michigan Ave., Chicago 4, Ill. (Tel. WA 2-7700)  
Pres. & Chief Exec.: Robert S. Ingersall

**GEORGE C. BORTHIG CO. INC.**  
242 Paterson Ave., P. O. Box 115, East Rutherford, N. J. (Tel. WEbster 9-9260)  
Purch. Agent: David M. Kelly

**BOSTAN AUTO GAGE CO., THE**  
70 West St., Pittsfield, Mass. (Tel. HILLcrest 5-5691)  
Purch. Agent: J. H. Mattaan  
Sales: T. C. Nelson GS, GI

**BOSTON FELT CO.**  
210 South St., Boston, Mass. (Tel. LIBerty 2-8897)

**BOSTON GEAR WORKS**  
14 Hayward St., Quincy 71, Mass. (Tel. PResident 3-0400)  
Purch. Agent: William MacRae  
Mgr.-Field Sales: William J. Johnson  
Mgr.-Inside Sales: Edward P. Williams

**BOSTDN INSULATED WIRE & CABLE CO.**  
64 Bay St., Boston, Mass. (Tel. COlumbia 5-2104)  
Purch. Agents: Alden C. Davis, Hochig Aghiyon GS, GI

**BOULIN INSTRUMENT CORP.**  
10 First St., Pelham, N. Y. (Tel. PELham 8-3966)

**BOUND BRDDK DIL-LESS BEARING CO.**  
Bound Brook, N. J. (Tel. ELlIat 4-0041)  
Purch. Agent: Charles Durlach  
Sales Mgr.: S. S. Connor MF, WN, PS, GH, GI

**BOURNS LABS., INC.**  
6135 Magnolia Ave., P. O. Box 2112, Riverside, Calif. (Tel. OVerland 4-1700)  
Purch. Agent: Brad Stevens  
Dir.-Sales (Trimpot Div.): D. P. Vaughan  
Dir.-Sales (Instrument Div.): E. J. Goepfinger  
Pres.: Marlon E. Bourns

**BOW SOLDER PRDDUCTS CO., INC.**  
251 Freeman St., Brooklyn 22, N. Y. (Tel. EVergreen 9-4863)  
Purch. Agent: S. Turkus, Jr.  
Sales Mgr.: N. Zimmer MF, PS, GE, T

**BOWER ROLLER BEARING DIV.**  
3040 Hart, Detroit 14, Mich. (Tel. VA 2-7300)  
Purch. Agent: Charles Heller  
Mgr.-Sales: S. E. Ovoidson

**BOWERS BATTERY & SPARK PLUG CO.**  
P. O. Box 1262, Reading, Pa. (Tel. WALKER 9-0771)  
Purch. Agent: Harold L. Oephrill  
Sales: Paul E. Goodrich GS

**BOWMAR INSTRUMENT, CORP.**  
8000 Bluffton Rd., Box 2835, Ft. Wayne, Ind. (Tel. Sherwood 3121)  
Purch. Agent: Robert J. Strotman  
Gen. Sales Mgr.: George F. McCarthy, Great Neck, N. Y. (Tel. HUNTER 2-1750) PS, GS, GH, GE, CO, TS, TR

**BOWSER, INC., DEFENSE DEPT.**  
1302 E. Creighton Ave., Ft. Wayne, Ind. (Tel. Harrison 2341)  
Dir.-Purch.: E. A. Steinhouser  
Sales Admin.: O. O. Seely GS, GH, R&D

**BRACH MFG. CORP., DIV.-GENERAL BRANCH**  
200 Central Ave., Newark, N. J. (Tel. HUMBOLDT 2-1500)  
Dir.-Purch.: H. Stople  
Specialist Buyers: F. Werner & P. Morino  
Mktg. Mgr.: J. Keough  
Dir.-Sales: J. Berger GS, TR

**BRACKE-SEIB X-RAY CO., INC.**  
16 Pelham Bay Park West, Pelham Manor, N. Y. (Tel. PELHAM 8-4346)  
Pres.-Sales Mgr.: Edward H. Brocke  
Buyer: William R. Muller

**BRADFORD COMPONENTS, INC.**  
65 South Ave., Salamanca, N. Y. (Tel. 2340)  
Pres.: F. G. Schermerhorn GE, TS, TR

**BRADLEY SEMICONDUCTOR CORP.**  
275 Welton St., New Haven, Conn. (Tel. SP 7181)  
Purch. Agent: Stewart Wockel  
Gen. Sales Mgr.: Willtom J. Gognon TS, TR

**H. H. BRADY CO.**  
727 W. Glendale Ave., Milwaukee 9, Wisc. (Tel. EOGWOOD 2-8100)  
Purch. Agent: Eldon Meier  
V. P.-Sales: T. W. Wise MM

**S. BRAININ CO.**  
320 Washington St., Mt. Vernon, N. Y. (Tel. 8-5500)  
Production Mgr.: G. V. Plachy  
Engrg. Salesman: D. A. Calder

**RAM METALLURGICAL CHEMICAL CO.**  
820 65th Ave., Philadelphia 26, Pa. (Tel. Waverly 4-2121)  
Metallurgical-Chemical Exec.: H. H. Bram  
Asst.: T. G. Brom MM

**ILLIAM BRAND & CO., INC.**  
North St., Willimantic, Conn. (Tel. HARRISON 3-6301)  
Purch. Agent: J. R. Garey  
Supvr.-Materials & Planning: C. J. Crawford  
MRO Buyer: P. Doly  
Sales Mgr.: T. M. Sonden MM

**RANSON CORP.**  
41 S. Jefferson Rd., Whippany, N. J. (Tel. TUCKER 7-1100)  
Purch. Agent: C. H. Tuttle  
Sales Mgr.: C. G. Brown

**RANSON INSTRUMENTS, INC.**  
37 Brown House Rd., Stamford, Conn. (Tel. DAVIS 4-6721)  
Purch. Officer: Celso Biogini  
Pres.: Peter K. Bloch  
Sales Mgr.: John E. Bobbin TS

**RANSON ULTRASONIC CORP.**  
37 Brown House Rd., Stamford, Conn. (Tel. Fireside 8-7781)  
Gen. Mgr.-Purch.: W. J. Bleinstein  
V. P.: Peter K. Bloch  
Sales Mgr.: H. F. Osterman GS, GH

**REEZE CORPORATIONS, INC.**  
700 Liberty Ave., Union, N. J. (Tel. MURDOCK 6-4000)  
Purch. Agent: R. Fuller  
Gen. Sales Mgr.: Matthew Lyon  
Asst. Gen. Sales Mgr.: J. M. Hearn

**CHARD O. BREW & CO., INC.**  
70 Airport Rd., Concord, N. H. (Tel. CAPITOL 5-6606)  
Purch. Agent: Merton H. Tolman  
Sales Mgr.: Roy E. Lonnberg GE, TR, R&D

**BRIDGEPORT BRASS CO.**  
80 Grand St., Bridgeport 2, Conn. (Tel. EDISON 4-1182)  
V. P.-Sales: R. L. Allen  
V. P.-Research & Dev.: R. A. Quoad MF, WN, PS, GS, GE, CO, TS, TR, MM, R&D

**BRIDGEPORT THERMOSTAT DIV., ROBERTSHAW-FULTON CONTROLS CO.**  
155 Hill St., Milford, Conn. (Tel. TRINITY 8-1721)  
Purch. Agent: H. V. Bosheo  
Sales Mgr.: Carl F. Ahlheim WN, GS, GH, GE, CO, TS

**BRIGGS ASSOCIATES, INC.**  
10 De Kolb St., Norristown, Pa. (Tel. BRADWAY 9-0400)  
Admin.-Purch.: Joseph F. Boldino  
Sales Mgr.: Laurence R. Brown GE, CO, TS, TR

**BRIGGS FILTRATION CO., THE**  
River Rd., Washington 16, D. C. (Tel. OLIVER 4-7722)  
Purch. Agent: O. H. Hardester  
V. P.-Gen. Mgr.: J. H. Nosh  
Sales: John MacGuffin PS, GS

**BRIGHT STAR INDUSTRIES**  
600 Getty Ave., Clifton, N. J. (Tel. GREORY 1-3200)  
Purch. Agent: A. Levy  
Sales Mgr.: Leon Kalkut GS

**BRIGHTON CORP.**  
820 State Ave., Cincinnati 4, Ohio (Tel. GRONVIEW 3-7914)  
Purch. Agent: C. Johnson  
Sales Mgr.: Richard G. Hext PS

**BRILHART PLASTICS CORP.**  
Old Country Rd., Mineola, L. I., N. Y. (Tel. PIONEER 6-0425)  
Purch. Agent: William Sheo  
Sales Mgr.: Thomas Ackerly

**E. W. BRILMAYER LABS., INC.**  
86 Fulton St., New York 38, N. Y. (Tel. BEEKMAN 3-7914)  
Pres.: Eugene W. Brilmoyer TS

**BRISCOE MFG. CO.**  
1055 Gibbard Ave., Columbus 3, Ohio (Tel. AX 4-3736)  
Pres.: E. H. Briscoe

**BRISTOL BRASS CORP., THE**  
580 Broad St., Bristol, Conn. (Tel. LUDLOW 2-3161)  
Purch. Agent: Fred J. Greenleaf  
Gen. Sales Mgr.: Donald Joy MM

**BRISTOL CO., THE**  
Waterbury 20, Conn. (Tel. PLOZA 6-4451)  
Purch. Agent: F. Frohn  
V. P.-Sales: H. E. Beone  
Sales Mgr., Aircraft Dept.: W. C. Colvert  
Purch. Agent: Fred W. Frohn GS, CO

**BRISTOL MOTORS DIV.-VOCALINE CO. OF AMERICA, INC.**  
Coulter St., Old Saybrook, Conn. (Tel. EVERGREEN 8-3414)  
Purch. Agent: Robert B. Cooney  
Sales: Charles M. Murphy

**BRITTON ELECTRONICS CORP.**  
213-20 99th Ave., Queens Village 29, N. Y. (Tel. HOLLIS 8-0940)  
Purch. Agent: Oaris Fitzsimmons  
Pres.: Henry S. Ovrut MM

**BROADCAST EQUIPMENT SPECIALTIES CORP.**  
Box 149, Beacon, N. Y. (Tel. 9-4587)  
V. P.: Oavid S. Gibson TS

**BROOK MOLOING CORP.**  
30 Industrial Way, Norwood, Mass. (Tel. NORWOOD 7-4375)  
Purch. Agent: F. K. Whiting  
Sales Mgr.: C. M. Cunningham MF, WN, PS

**BROOK MOTOR CORP.**  
3302-04 W. Peterson Ave., Chicago 45, Ill. (Tel. INd. 3-6464)  
V. P.-Sales: P. L. Laewe MM

**BROOKS & PERKINS, INC.**  
1950 W. Fort St., Detroit 16, Mich. (Tel. TA 5-5900)  
Purch. Agent (Mgr.): H. L. Westerdale  
Purch. Dept.: John Drypen & Neil McLean  
Gen. Sales Mgr.: H. P. Dunne MF, GS, GH, MM

**BROOKS ROTAMETER CO.**  
407 W. Vine St., Hatfield, Pa. (Tel. ULYSSES 5-5174)  
Purch. Agent: Frederick Rotheheimer  
Exec. V. P.-Sales: Seymour Blechman TS

**BROWN ENGRG. CO., INC.**  
1320 Meridian St., Huntsville, Ala. (Tel. JEFFERSON 6-5536)  
Purch. & Contracting Officer: George K. Williams  
Supvr. Purch. Agent: William F. Thompson  
Purch. Agent: Robert A. Steelman  
Buyers: Billy G. Hunter & Wayne Hunter  
Sales Mgr.: Oscar M. Hawkins MF, WN, GS, GH, GE, CO, TS, R&D

**BROWN INDUSTRIES DIV., BROWN TRAILERS, INC.**  
P. O. Box 54, Spokane, Wash.

**BRUCE ENGRG. CO.**  
1633 W. 134th St., Gardena, Calif. (Tel. FACULTY 1-2220)  
Sales Mgr.: Burr McOowell  
Supt.: M. K. Redlin MF, WN, GH

**BRUNING CO., THE**  
601 S. 9th St., Lincoln, Neb. (Tel. 5-3511)  
Pres.: E. F. Bruning GS, GH

**BRUNSWICK INSTRUMENTS**  
Box 813, New Brunswick, N. J. (Tel. CHARTER 7-5919)  
Chief Engr.-Purch.: L. A. Rosenthal  
Sales Mgr.: E. J. Horodner GE, CO, TS

**BRUSH BERYLLIUM CO., THE**  
4301 Perkins Ave., Cleveland, O. (Tel. ENDCOTT 1-5400)  
Dir.-Purch.: Richard Anuskiewicz  
Purch. Agent: R. A. Cobb  
V. P.-Sales: N. W. Bass MF, PS

**BRUSH INSTRUMENTS, DIV.-CLEVITE CORP.**  
37th & Perkins Ave., Cleveland 14, Ohio (Tel. ENDCOTT 1-3315)  
Purch. Mgr.: W. J. Doivid  
Gen. Sales Mgr.: Norman R. Klivans GS, GE, CO, TS, TR, R&D

**BRUSH NAIL EXPANSION BOLT CO.**  
Greenwich, Conn. (Tel. TOLWSEND 9-3190)  
Pres.: Irving G. Snyder MF, PS

**BUCHANAN ELECTRICAL PRODUCTS CORP.**  
225 Rt. 22, Hillside, N. J. (Tel. Waverly 3-7474)  
Plt. Supt. & Purch. Agent: Albert Mittleman  
V. P.-Chg. Sales: Paul E. Vance

**BUCKEYE IRON & BRASS WORKS**  
324 E. 3rd St., Dayton, O. (Tel. DAIDWIN 4-8355)  
Purch. Agent: E. K. Griest  
Asst. Purch. Agent: R. L. Reel  
Sales Mgr.: Roy O. Comp PS, GS, GH

**BUCKEYE TOOLS CORP.**  
P. O. Box 966, Dayton, Ohio (Tel. AXMINSTER 8-5281)  
V. P.-Sales: E. B. Meynard  
Treas.: E. E. Reeves MF, GS

**BUO RAOIO, INC.**  
2118 E. 55th St., Cleveland 3, Ohio (Tel. HENDERSON 1-7166)  
V. P.-Purch.: E. J. Korey  
Pres.: A. N. Haas MA

**BUDD STANLEY CO. INC.**  
43-01 22nd St., Long Island City 1, N. Y. (Tel. STILLWELL 6-1706)  
Purch. Agent: C. Alexander WN, GE, TS, TR

**BUDELMAN ELECTRONICS CORP.**  
375 Fairfield Ave., Stamford, Conn. (Tel. FRESIDE 8-9231)  
Purch. Agent: Edward Collum  
Asst. Purch. Agent: M. Onnelly  
Sales Mgr.: Robert L. Feistel GE

**BUFFALO METAL CONTAINER CORP.**  
35 Roetzer St., Buffalo 11, N. Y. (Tel. BA 3944)  
Dir.-Purch.: Robert J. Schieder  
Sales Mgr.: A. E. Bausenbach GS, GH

**BUFFALO WIRE WORKS CO., INC.**  
320 Terroce, Buffalo 2, N. Y. (Tel. CLEVELAND 4520)  
Purch.: Charles F. Scheeler, Jr.  
Sales Mgr.: Norman F. Grundner MM

**BUHL OPTICAL CO.**  
1009 Beech Ave., Pittsburgh 33, Pa. (Tel. FAIRFOX 1-0076)  
Purch.: M. Seder MF, PS, GS, GE, CO, TS, TR

**BULLARD CO., THE**  
286 Confield Ave., Bridgeport 9, Conn. (Tel. EDISON 6-2511)  
Mgr.-Purch. & Traffic: T. H. Wilber  
Gen. Sales Mgr.: H. E. Neale WN, PS, GS

**BULOVA WATCH CO., ELECTRONICS DIV.**  
40-06 62nd St., Woodside 77, N. Y. (Tel. NEWTOWN)

CODING  
Missile Frame MF  
Warhead & Nose Cone WN  
Propulsion System PS  
Ground Support GS  
Ground Handling GH  
Guidance Equipment GE  
Checkout Equipment CO  
Test Equipment TS  
Tracking & Telemetering TR  
Research & Development R&D  
Materials & Metals MM

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- 9-5700  
Sales Mgr.: A. B. Ill, Jr. GS, GE, TR
- BULOW ELECTRIC CO.**  
11000 Capital, Dak Park 37, Mich. (Tel. LI 7-1133)  
Dir.-Purch.: C. J. Galea  
Sales Mgr.: R. L. Bulow GS, CO, TS, TR, R&D
- BURG TOOL MFG. CO., INC.**  
15001 S. Figueroa St., Gardena, Calif. (Tel. FA 2-2161)  
Purch. Agent: M. Tavlin  
V. P.-Sales: J. Burg
- BURGESS BATTERY CO.**  
Foot of Exchange, Freeport, Ill. (Tel. ADams 2-2161)  
Purch. Agent: Raymond Beldt  
V. P.-Sales: C. E. Balz GS, GE, CO, TS, TR
- BURGMASER CORP.**  
Box 311, Gardena, Calif. (Tel. FAculity 1-3510)  
Sales Mgr.: E. G. Merk  
Purch. Agent: Marvin Taulin MM
- BURKE & JAMES INC.**  
321 S. Washash Ave., Chicago 4, Ill. (Tel. HArrison 7-8393) R&D
- BURKLYN CO.**  
3429 Glendale Blvd., Los Angeles 39, Calif. (Tel. NDramand 2-3111)  
Chief Clerk: A. Reed  
Pres.: Roland Stevens  
Asst. Mgr.: A. L. Kissler MF, GS, GH, GE, TS, TR
- BURNDY CORP., OMATON DIV.**  
Richards Ave., Norwalk, Conn. (Tel. TEmple 8-4711)  
Dir.-Purch.: L. Menzl  
Dir.-Sales: S. O. Bergman  
Buyers: W. Frey, J. Hartcorn MF, PS, GS, GH, GE, CO, TS, TR
- BURNELL & CO., INC.**  
10 Pelham Pkwy., Pelham Manor, N. Y. (Tel. PELham 8-5000)  
Purch. Agent: V. Triwedi  
Sales Mgr.: L. Schwartz GS, GE, CO, TR
- BURNLEY BATTERY & MFG. CO., THE**  
103 Jay St., North East, Pa. (Tel. 5-3595)  
Pres.: N. C. Swanson
- BURR-BROWN RESEARCH CORP.**  
Box 6444, Tucson, Ariz. (Tel. AXtel 8-0772)  
Dir.-Purch. & Sales: Thomas R. Brown, Jr. R&D
- BURROUGHS CORP.**  
6071 2nd Ave., Detroit 32, Mich. (Tel. TRinity 5-2250)  
Dir.-Purch.: Russ T. Stark  
Defense Sales Mgr.: Jack C. Lindley GS, GE, CO, TS, R&D
- BURROUGHS CORP., ELECTRONIC TUBE DIV.**  
P. D. Box 1226, Plainfield, N. J. (Tel. PL 6-0876)  
Purch. Agent: Vincent Petrucci  
Sales Dir.: Arthur B. Shesser GE, CO, TS
- BURTON-RODGERS, INC.**  
Blade & Helen Sts., Cincinnati 16, Ohio (Tel. UNiversity 1-2155)  
Asst.-Pres.-Sales: O. A. Linse  
Purch. Agent: Allen Laftspring GH, GS, CO, TS, R&D
- BURTON-ROGERS CO., SALES DIV.-HOYT ELECTRICAL INSTRUMENTS**  
42 Carleton St., Cambridge 42, Mass. (Tel. ELiot 4-1643)  
Dir.-Sales: William Burton  
Pres.: V. S. Church TS
- BUSHINGS, INC.**  
4358 Coolidge Hwy., Royal Oak, Mich., (Tel. LIBerty 9-3320)  
V. P.-Purch.: K. W. Maust  
V. P.-Sales: H. G. Moore MM
- BUSSMANN MFG. DIV., MCGRAW-EDISON CO.**  
University at Jefferson, St. Louis 7, Mo. (Tel. GArdfield 1-1740)  
Dir.-Purch.: Lee J. Bussmann  
V. P.-Sales: J. C. Ingram WN, GE, CO
- BUTLER MFG. CO.**  
7400 E. 13th St., Kansas City, Mo. (Tel. BEnran 1-7400)  
Dir.-Purch.: L. P. Melcher  
V. P.-Mktg.: H. A. Edlund MF, WN, PS, GS
- BYRNE DOORS INC.**  
1603 E. Nine Mile Rd., Ferndale, Detroit 20, Mich. (Tel. JOrdan 4-5875)  
V. P.-Purch.: A. M. Larimer  
Purch. Agent: F. J. Middleton GS, GH, R&D
- BYRON JACKSON PUMPS, INC.**  
2301 E. Vermont Ave., Los Angeles, Calif. (Tel. LUDlow 7-6171)  
Purch. Agent: Elmer C. Prairie  
Mgt.-Sales: N. D. Jesse GS, GH, TS, R&D
- CBS-HYTRON, DIV.-COLUMBIA BROADCASTING SYSTEM, INC.**  
100 Endicot St., Danvers, Mass. (Tel. SPring 4-2360)  
Dir.-Purch.: Edward R. Carroll  
Purch. Agent: John F. Ryan  
Asst. Purch. Agent: William E. Dennis  
Buyers: R. A. Powers, J. W. Cannery, F. W. Courage, W. W. Cook, E. F. Murphy  
V. P.-Mktg.: Reed V. Bantecau
- CDC CENTRAL SERVICES, INC.**  
400 S. Warminster Rd., Hatboro, Pa. (Tel. DSbarne 5-4100)  
Head, Purch. Dept.: Alfred Krieger  
V. P.-Sales: J. Lawrence Teosky MF, WN, PS, GS, GH, GE, CO, TS, TR
- CELCO (CONSTANTINE ENGR. LABORATORIES CO.)**  
70 Island Ave. Mahwah, N. J. (Tel. DAVIS 7-1123)  
Purch. Agent: Robert Meres  
Buyer: Angeline Constantine  
Sales Mgr.: Stephen Stephana PS, GE
- CGS LABS., INC.**  
Rts. 7 & 35, Ridgefield, Conn. (Tel. ID 8-2317)  
Supvr.-Purch.: George W. Korper, 391 Ludlow St., Stamford, Conn. (Tel. DAVIS 5-1581)  
V. P.-Mktg.: Melvin L. Jackson GE, TR, R&D
- C & K COMPONENTS, INC.**  
101 Morse St., Newton 58, Mass. (Tel. WATertown 3-0524)  
Purch. Agent: Charles Crothers  
Sales Mgr.: Robert H. Sturdy GE, TR
- CABLE ELECTRIC PRODUCTS INC.**  
234 Obabel St., Providence, R. I. (Tel. STUART 1-5400)  
Purch. Agent: W. Balutowski  
Dir.-Sales: F. W. Schwartz GS, GE
- SAMUEL CABOT INC.**  
141 Milk St., Boston, Mass. (Tel. HANcock 6-1010)  
Plant Supt.: Augustus H. Hermann  
Sales Mgr.: Samuel Cabot, Jr.
- CADILLAC GAGE CO.**  
25760 Groesbeck Hwy., Warren, Mich. (Tel. PResscott 7-7100)  
Purch. Agent: George Bathrayd  
Sales Mgr., Aero Div.: Robert E. Kolp GE, R&D
- CAIG LABS.**  
46 Stanwood Rd., New Hyde Park, L. I., N. Y. (Tel. PLaneer 2-0278)  
Purch.: A. Pagelson  
Sales: D. Lohkemper GS, GH
- CALCON MFG. CO., INC.**  
100 Oakland Ave., Washington, Pa. (Tel. BALdwin 2-8190)  
Wks. Mgr.-Purch.: A. W. Moore  
Gen. Sales Mgr.: James C. Morasco TR
- CALFIBE CO., INC.**  
Coltan & Wabash Ave., Mantene, Calif., Mailing Add.: P. O. Box 832, Redlands, Calif. (Tel. PY 4-1166)  
V. P.-Purch.: William M. Jordan  
Purch.: Paul Bowler  
Sales: Oan F. Maier, 6214 W. Manchester Ave., Los Angeles 45, Calif. (Tel. OR 8-6890) MM
- CALIDYNE CO., INC., THE**  
120 Cross St., Winchester, Mass. (Tel. WI 6-3810)  
Purch. Agent: G. Worthen  
Sales Mgr.: O. L. Wrisley TS
- CALIFORNIA AIRCRAFT PRODUCTS**  
790 Greenfield Dr., El Cajon, Calif. (Tel. HICKory 2-3451)  
Purch. Agent: Gavin W. Coles  
Sales Mgr.: Joseph S. Alan MF, PS
- CALIFORNIA SPRING CO., INC.**  
8401 E. Slauson Ave., Pico-Rivera, Calif. (Tel. RAYmond 3-8581)  
Purch. Agent: Robert Harris  
V. P. & Sales Mgr.: Ray E. Coffield
- CALIFORNIA TECHNICAL INDUSTRIES, DIV.-TETRON INC.**  
1421 DId County Rd., Belmont, Calif. (Tel. LYtell 3-8466)  
Purch. Agent: John Waadsie  
Sales Mgr.: E. J. Bradley GS, CO, TS
- CALINOV-DIV.-ILLINOIS TOOL WORKS**  
12917 Cerise, Hawthorne, Calif. (Tel. DR 8-3437)  
Dir.-Engrg. & Mfg.: T. R. Bayd
- Buyer: B. Henderson  
Sales Mgr.: H. O. Hansen MF, GS, GH, MA
- CALLAIR, INC.**  
Alton, Wyoming (Tel. 166)  
Pres. & Gen. Mgr.: Barlow H. Call  
Purch.: Jack E. Taggart  
V. P.-Sales: C. J. Petersen
- CALLERY CHEMICAL CO.**  
9600 Perry Hwy., Pittsburgh 37, Pa. (Tel. FDrest 4-1130)  
Purch. & Traffic Mgr.: L. D'Hearn  
Sr. Buyer: H. W. McDaniel  
Mgr.-Mktg. Div.: R. A. Mulholland PS, R&D
- CALTRON PRODUCTS CO.**  
3518 W. Pica Blvd., Los Angeles 19, Calif. (Tel. REpublic 4-2420)  
Mgr.-Purch.: C. P. Swanson  
Sales Mgr.: J. B. Sebrell MA
- CALVERT ELECTRONICS INC.**  
536 Broadway, New York 12, N. Y. (Tel. CAnal 6-7400)  
V. P.-Sales: Bernard Fox
- CAMBRIDGE CO.-DIV.-CARRIER CORP.**  
2 Industrial Park, Lowell, Mass. (Tel. GLenview 4-7811)  
Chief Purch. Agent: Vaughan Biggert  
V. P.-Sales: Edward Elliott, Jr. GS, GH
- CAMBRIDGE FILTER CORP.**  
728 E. Erie Blvd., Syracuse 1, N. Y. (Tel. GRanite 5-1608)  
Purch. Agent: Richard C. Linehan  
Sales Mgr.: Donald E. Wendel GS, GE
- CAMBRIDGE INSTRUMENT CO., INC.**  
311 Grand Central Terminal, New York, N. Y.  
Purch. Agent: R. A. Packard  
Pres. & Sales Mgr.: R. H. Kruse
- CAMBRIDGE THERMIONIC CORP.**  
445 Concord Ave., Cambridge 38, Mass. (Tel. TRowbridge 6-2800)  
Purch. Agent: Frank C. Waterhouse  
Asst. Purch. Agent: Jane Cheney  
Sales Mgr.: Lowell Wilkes
- CAMBRIDGE WIRE CLOTH CO., THE**  
Cambridge, Md. (Tel. CAmbridge 1033)  
Purch. Agent: Fulton Moore MF, PS, GS, GH
- CAMCAR SCREW & MFG. CO., DIV.-TETRON INDUSTRIES, INC.**  
600 Eighteenth Ave., Rockford, Ill. (Tel. WDAldan 5-9451)  
Purch. Agent: Iver Hawkinson  
V. P.-Sales: James L. Holland
- CAMDALE PRECISION, INC.**  
28300 Groesbeck Hwy., Roseville, Mich. (Tel. PResscott 1-0400)  
Purch. Agent: H. L. Miller  
V. P.-Sales: A. R. Schwesinger G
- CAMERA MART INC., THE**  
1845 Broadway, New York 23, N. Y. (Tel. PLazo 7-6977)  
Dir.-Purch.: E. McCarthy  
Dir.-Sales: S. Hyman R&D
- CAMERAFLEX CORP.**  
1947 Broadway, New York 23, N. Y. (Tel. TRafalgar 3-4022)  
V. P. & Gen. Mgr.: George H. Kouffeld, Jr.  
Chief Engr.: Joseph Henkel  
Prod. Mgr.: Frank LaSola GS, TR, R&D
- \*CAMERON IRON WORKS, INC.**  
P. D. Box 1212, Houston, Texas (Tel. UNDERwood 4-4411)  
Purch. Agent: L. P. Oshl  
Mgr.-Special Products Div.: J. W. Braugher WN, PS, R&D  
(See Page 34 for Advertisement)
- CAMLLOC FASTENER CORP.**  
22 Spring Valley Rd., Paramus, N. J. (Tel. HUbbard 9-4900)  
Gen. Supt.: T. A. Barkauskas  
Purch. Agent: U. G. Grapengeter  
Purch. Dept.: T. Skelly  
Eastern Sales Mgr.: Wm. E. Bracey  
Western Sales Mgr.: James G. English, 5410 Wilshire Blvd., Los Angeles, Calif. (Tel. WEster 1-1361) MF, GS, GH, G
- CAMPSCO, DIV.-CHICAGO MOLDED PRODUCTS CORP.**  
2738 N. Normandy Ave., Chicago 35, Ill. (Tel. TUxeda 9-5520)  
Purch. Agent: Frank Klingenstein  
Asst. Purch. Agent: Cuyler E. Stanek  
Sales Mgr.: James L. Bachner M
- CANADIAN RADIUM & URANIUM CORP.**  
630 Fifth Ave., New York 20, N. Y. (Tel. Circle 6-0460)  
Purch.: Carl Krieger



Soles Mgr.: Henry B. Kearney  
MF, WN, PS, GE, CD, TS, TR

**C. F. CANNON CO.**  
Springwater, N. Y. (Tel. 531)  
Dir.-Sales: A. W. Shriner

**CANNON ELECTRIC CO.**  
3208 Humboldt St., Los Angeles 31, Calif. (Tel. Capital 5-1251)  
Purch. Mgr.: Roy Whitney  
Purch. Agent: Earl Bixler  
Gen. Sales Mgr.: Floyd M. Cote  
Furch. Agent (Salem Div.): Lauvis McCarthy (Tel. Pioneer 5-0700)  
Purch. Agent (Toronto Div.): Les Colvert (Tel. PLymouth 7-2845)  
(See Page 27 for Advertisement)

**CANNON-MUSKOGON CORP.**  
2875 Lincoln St., Muskegon, Mich. (Tel. 5-1676)  
Purch. Agent: George Gimokas  
Sales Mgr.: F. Kenneth Iverson MM

**CANOGA DIV. UNDERWOOD CORP.**  
15330 Oxnard St., Van Nuys, Calif. (Tel. STate 6-9010)  
Dir.-Purch.: Louis E. Moore  
Buyers: Warren W. Flee, J. Caminiti, H. Palmer  
Dir.-Sales: G. H. Nibbe GS, GE, TR, R&D

**CAPEWELL MFG. CO.**  
60 Governor St., Hartford 2, Conn. (Tel. JACKson 2-8191)  
V. P.: Seery C. Gordon  
Purch. Agent: Bernard Dunphy R&D

**APITAL CITY MFG. CO.**  
857 King Ave., Columbus 12, O. (Tel. AX 9-2149)  
Purch. Agent: R. F. Little  
Sales Engr.: Carl Weger PS, GH, R&D

**APITOL MACHINE CO., THE**  
36 Balmain Ave., Danbury, Conn. (Tel. Pioneer 3-2758)  
Purch. Agent & Sales Mgr.: Arthur E. Wilson GS, TS, TR, R&D

**APTIVE SEAL CORP.**  
30 Henry, Teterboro, N. J. (Tel. AT 8-0205)  
Purch. Agent: R. Oodd PS, GS, R&D

**ARBOLINE CO.**  
32 Hanley Ind. Ct., St. Louis 17, Mo. (Tel. MI 7-5795)  
Purch. Agent: R. R. Rosenthal  
Pres.: S. L. Lopato MM

**ARBONE CORP., THE**  
400 Myrtle Ave., Boonton, N. J. (Tel. DE 4-0700)  
Purch. Agent: E. Wizeman  
Sales Mgr.: E. Oixon MM

**ARBORUNDUM CO., LATROBE PLANT, REFRACTORIES DIV.**  
Latrobe, Pa. (Tel. KEYstone 7-3331)  
Purch. Agent: J. W. Bell, Jr.  
Mgr.-Electronic Sales: D. S. Bowman MM, R&D

**ARBORUNDUM CO., REFRACTORIES DIV.**  
Perth Amboy, N. J. (Tel. HILLcrest 2-3380)  
Buyer: F. Richter  
Mgr.-Refractories Sales Branch: A. A. Turner  
Mgr.-Mktg.: J. M. Smith MM

**ARBORUNDUM METALS CO., THE**  
P. O. Box 32, Akron, N. Y. (Tel. RAy 454)  
Buyer: William F. Pritchard  
Mgr., Sales Branch: H. A. Andersen

**ARDINAL INSTRUMENTATION CORP.**  
201 Redwood Ave., Los Angeles 66, Calif. (Tel. EXmont 1-5201)  
Purch. Agent: O. R. Porter  
Mktg. Mgr.: J. S. Frank GS, TS, TR

**ARDOX DIV., CHEMETRON CORP.**  
40 N. Michigan Ave., Chicago 11, Ill. (Tel. Whitehall 4-7450)  
Purch. Agent: M. Hemmon  
V. P.-Sales: F. C. Rodgers GS

**ARLETON AVIATION CO.**  
16 Buffalo Rd., East Aurore, N. Y. (Tel. CYpress 4838)  
Merlin K. Jones

**ARLING ELECTRIC, INC.**  
04 New Park Ave., West Hartford 7, Conn. (Tel. AQams 2-4461)  
Purch. Agent: William Fleming  
Asst. Sales Mgr.: Francis Hanselman  
V. P.-Sales: Wesley T. Sorenson MM

**ARLAC AVIATION**  
414 San Fernando Rd., Sun Valley, Calif. (Tel. Stanley 7-5541)  
Sales: Carmine J. Vito MF, PS, GS, GH, MM

**ARMODY CORP.**  
860 Wehrle Dr., Buffalo 21, N. Y. (Tel. SPring 7700)

Purch. Agent: R. E. Pollock  
Dir. Trng.: A. R. Molnar GS, R&D

**CAROL ELECTRONICS CORP.**  
315 W. Stephen St., Martinsburg, W. Va. (Tel. AMherst 7-8911)  
Gen. Mgr.: Eric Ruckbrod TS

**CARPENTER MFG. CO., INC.**  
Highbridge Rd., P. O. Box 217, DeWitt 14, N. Y. (Tel. Gibson 6-0670)  
Gen. Mgr.: Hubert J. Carpenter

**CARPENTER STEEL CO., THE**  
153 W. Bern St., Reading, Pa. (Tel. Reading FRanklin 4-8211)  
Purch. Agent: R. P. Freehofer  
Asst. Purch. Agent: G. D. Nahn  
V. P.-Sales: H. S. Potter MM

**CARPENTER STEEL CO., THE, ALLOY TUBE DIV.**  
Springfield Rd., Union, N. J. (Tel. MURdock 6-7230)  
Purch. Agent: V. T. Nolan  
Asst. Purch. Agent: R. A. Southard  
Sales Mgr.: W. R. Staples MM

**CARRIER CORP.**  
Carrier Pkwy., Syracuse, N. Y. (Tel. HOward 3-8411)  
Dir.-Purch.: Adolph Ruediger MF, PS

**CARRUTHERS & FERNANDEZ, INC.**  
1501 Colorado Ave., Santa Monica, Calif. (Tel. EXbrook 4-6768)  
Dir.-Purch.: Karel F. Zabloudil  
V. P.-Sales: Frank C. Fernandez GS, GE, TS, R&D

**J. C. CARTER CO., THE**  
671 W. 17th St., Costa Mesa, Calif. (Tel. LIBerty 8-3421)  
Purch. Agent: William C. Melo  
V. P.-Mfg.: C. J. Allan  
V. P.-P.-Engr. & Sales: M. D. Kilmer  
Sales Mgr.: W. W. Saxton

**CARTER CONTROLS, INC.**  
2800 Bernice Rd., Lansing, Ill. (Tel. GR 4-3305)  
Purch. Agent: Thomas S. Britton  
Sales Mgr.: J. Carter Miller GS, GH

**CARTER MFG. CORP.**  
23 Washington St., Hudson, Mass. (Tel. HUDson 1309)  
Pres.: W. Groustein

**CARTRISEAL CORP.**  
3515 W. Touhy Ave., Lincolnwood, Ill. (Tel. BR 4-6140)  
Buyer: Stanley Pyzik  
Sales Mgr.: James Linsky MF, PS, GS

**A. W. CASH VALVE MFG. CORP.**  
666 E. Wabash Ave., Decatur, Ill. (Tel. 2-8574)  
Dir.-Purch.: Donald M. Perry  
V. P.-Sales: G. William Modden

**CASTING ENGINEERS DIV., CONSOLIDATED FOUNDRIES & MFG. CORP.**  
2323 N. Bosworth Ave., Chicago 14, Ill. (Tel. BUCKingham 1-5940)  
Purch. Agent: Arthur Matulis  
Sales Mgr.: F. H. Meeder MM

**CATALIN CORP. OF AMERICA**  
1 Park Ave., New York 16, N. Y. (Tel. MURroy Hill 3-2100)  
Adv. Mgr.: R. A. Woodard MM

**CATERPILLAR TRACTOR CO., ENGINE DIV.**  
Peoria, Ill. (Tel. 6-3311)  
Purch. Agent: R. D. Norris  
Asst. Sales Mgrs.: H. J. Hunkele & J. P. Morgan  
Sales Mgr.: J. H. Gill GS, CO, TS

**ALBERT H. CAYNE EQUIPMENT CORP.**  
71 Spring St., New York 12, N. Y. (Tel. CANal 6-3371)  
Purch. Agent: J. C. Lynn  
Dir.-Sales: Albert H. Cayne GS, MM

**CAYWOOD-SCHILLER, ASSOCIATES**  
203 N. Wabash Ave., Chicago 1, Ill. (Tel. ANdover 3-3340)  
Purch.: T. E. Coywood  
Purch. & Sales: D. H. Schiller R&O

**CEDAR ENGRG. DIV.-CONTROL DATA CORP.**  
5806 W. 36th St., Minneapolis 16, Minn. (Tel. WEst 9-1681)  
Purch. Agent: L. G. Bernier  
Buyer: C. W. Engleman  
Asst. Gen. Mgr.: Gordon J. Clark GE, TR, R&D

**CENTRAL ELECTRONIC MFRS., DIV.-NUCLEAR CORP. OF AMERICA**  
2 Richwood Plce, Denville, N. J. (Tel. OAKwood 7-4200)  
Purch. Agent: Mike Buff  
Gen. Sales Mgr.: Gene G. Perry GE, TS, TR

**CENTRAL SCIENTIFIC CO.**  
1700 Irving Park Rd., Chicago 13, Ill. (Tel. WE 8-8600)  
G. C. Gadejohn TS

**CENTRAL TRANSFORMER CO.**  
900 W. Jackson Blvd., Chicago 7, Ill. (Tel. TAYlor 9-1936)  
Purch. Agent: Miss Katharine Bednar  
Sales Mgr.: Frank J. Gallagher PS, GS, GE, TS, TR

**CENTRALAB, DIV.-GLDBE-UNION**  
900 E. Keefe Ave., Milwaukee 1, Wisc. (Tel. WO 2-9200)  
Dir.-Purch.: Frank A. Messar  
Gen. Sales Mgr.: W. E. Peek MM

**CENTRAX LTD., AMERICAN SALES OFFICE**  
Park Sq. Bldg., 31 St. James Ave., Boston 16, Mass. (Tel. LIBerty 2-2425)  
V. P.-Sales: Charles J. Trees PS

**CENTRONIX INC.**  
4000 N. W. 28th St., Miami 42, Fla. (Tel. NE 3-2505)  
Purch. Dir.: I. Saxenhaus  
Sales Mgr.: H. J. Roberts MF, GS, GH, GE, CO, TS, TR, R&D

**CENTURY ELECTRONICS & INSTRUMENTS, INC.**  
1333 N. Utica, Tulsa, Okla. (Tel. LUther 4-7111)  
Purch. Agent: C. R. Campbell  
V. P.-Sales: C. H. Brunell TS, TR

**CENTURY FASTENERS CORP.**  
88 Sandford St., Brooklyn 5, N. Y. (Tel. ULster 2-6440)  
Mgr., Aircraft Div.-Purch.: Pierre Tard  
Sales Mgr.: George Steiglitz MF, WN, PS, GS, GH, GE, TR, MM

**CERAMASEAL, INC.**  
P. O. Box 25, New Lebanon Ctr., N. Y. (Tel. West Lebanon 3-5851)  
Purch. Agent: Everett Franzson  
Mgr.-Sales Engr.: Gene O. Sawin MF, PS, GE, MM, R&D

**CHADWICK-HELMUTH CO.**  
472 E. Quarte Rd., Monrovia, Calif. (Tel. EL 8-4567)  
Purch. Agent: Robert A. Stiver  
Sales Mgr.: William F. Cox TS, R&O

**CHAIN BELT CO.**  
4701 W. Greenfield Ave., Milwaukee, Wisc. (Tel. EVERgreen 4-3000)  
V. P.-Purch.: F. G. Syburg  
Asst. Dir.-Purch.: F. A. Coenen  
Purch. Agent: C. B. Johnson  
Asst. Purch. Agent: M. D. Menzel  
V. P.-Mktg.: G. H. Woodland MF, PS, GS, GH, GE

**CHAIN BELT CO. SHAFTER BEARING DIV.**  
Belmont Rd. at Curtiss St., Downers Grove, Ill. (Tel. WOODland 9-1770)  
Div. Purch. Mgr.: J. J. Friedrich  
Asst. Sales Mgr.: R. Schramm

**CHALCO ENGRG. CORP.**  
15126 S. Broadway, Gardena, Calif. (Tel. FACulty 1-0121)  
Dir.-Material: Irving Kierman  
Purch. Agent: Ronald Ferdman  
Dir.-Sales: William L. Rose GS, GH, GE, CO, TR, R&D

**CHALLENGE MACHINERY CO., THE**  
First St., Grand Haven, Mich. (Tel. 2800)  
Purch. Agent: James Harvey  
Plant Mgr.: Arthur Nelson  
Sales Mgr.: Paul Bobcock TS

**CHAMBERSBURG ENGRG. CO.**  
Chambersburg, Pa. (Tel. COLony 4-7151)  
Purch. Agent: W. H. Derbyshire  
Sales Mgr.: S. C. Clarke

**CHAMPDIN AIRPUMPING INC.**  
Box 8786, Pittsburgh 21, Pa. (Tel. EXport 360)  
Purch. Agent: J. J. Konaski, Jr.  
Mgr.-Sales: H. B. Middendorf MF, WN, PS, GS, GH, CO, TS, TR

	CODING
	Missile Frame MF
	Warhead & Nose Cone WN
	Propulsion System PS
	Ground Support GS
	Ground Handling GH
	Guidance Equipment GE
	Checkout Equipment CO
	Test Equipment TS
	Tracking & Telemetering TR
	Research & Development R&D
	Materials & Metals MM

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**CHAMPION CO., THE**  
400 Harrison St., Springfield, O. (Tel. FAirfax 3-7545)  
Purch. Agent: W. E. Cooksey  
Asst. Purch. Agent: Samuel Patch  
Mgr., Contracts Spec. Prod.: Thomas J. Martin  
Mgr., Military Special Prod.: Norman L. Dickey **GH**

**CHAMPION SPARK PLUG CO.**  
900 Upton Ave., Toledo 1, O. (Tel. JEFFerson 6-3711)  
Dir.-Purch.: Keith Wilson  
Asst. Dir.-Purch.: C. W. Sweet  
Aviation Sales Mgr.: B. R. Maus **PS**

**CHANCE VOUGHT AIRCRAFT, INC.**  
P. D. Box 5907, Oallas, Tex. (Tel. AN 2-3211)  
Gen. Purch. Agent: B. A. Carlson  
Dir.-Sales & Service: Forbes Mann **R&O**

**CHANDLER EVANS CORP.**  
Chorler Oak Blvd., West Hartford 1, Conn. (Tel. ADams 6-0651)  
Dir.-Purch.: F. Onald Dildine  
Purch. Agent: G. Kenneth Metcalfe  
V. P.: Louis G. Burns **PS, GE, R&D**

**CHANDLER PRODUCTS CORP.**  
1491 Chardon Rd., Cleveland 17, D. (Tel. IVanhoe 1-4400)  
Purch. Agent: R. H. Akers  
Sales Mgr.: Fred C. Chandler **MF, PS, GS, GH**

**CHASE BRASS & COPPER CO., INC.**  
236 Grand St., Waterbury 20, Conn. (Tel. PLaza 6-9444)  
Gen. Purch. Agent: C. D. Patterson  
V. P.-Sales: G. B. Mosely  
Gen. Sales Mgr.: W. E. Evans  
MF, WN, PS, GE, TS, TR, MM, R&D

**CHASSIS-TRAK, INC.**  
525 S. Webster Ave., Indianapolis, Ind. (Tel. FLeetwood 9-5407)  
Gen. Mgr.: Martin R. Christman  
Purch. Agent: J. Maurice Harrell

**JOHN CHATLIFF & SONS**  
85-93 Cliff St., New York 38, N. Y. (Tel. BEekman 3-2552)  
Dir.-Purch.: V. D. McCoy  
Exec. V. P.-Sales: George C. Reiley **TS**

**CHEMALLOY ELECTRONICS CORP.**  
Gillespie Airport, Santee, Calif. (Tel. San Diego—Hickory 4-7661)  
Gen. Mgr.: Samuel Freedman **MF, GE, CO, TS, TR**

**CHEMICAL PRODUCTS CORP.**  
King Phillip Rd., East Providence, R. I. (Tel. GE 4-1770)  
V. P.-Purch.: J. Ross Mainland  
V. P.-Chemical Sales: Hugh B. Allison  
V. P.-Lacquer Sales: Joseph S. Hawes **MM**

**CHEMOLD CO.**  
2000 Colorado Ave., Santa Monica, Calif. (Tel. TEXas 0-6046)  
V. P. & Gen. Mgr.: L. R. Dailey  
Sales Mgr.: Ralph Anelson **WN, GS, GH, MM**

**CHEMPLAST, INC.**  
3 Central Ave., East Newark, N. J. (Tel. HUmboldt 2-2622)  
Dir.-Purch.: Harry M. Truska  
Dir.-Sales: Stephen S. Dorn **WN, MM**

**CHEMPUMP CORP.**  
1300 E. Mermaid Lane, Philadelphia 18, Pa. (Tel. CHEstnut Hill 7-6300)  
Mgr.-Prod. Div.: F. Coonan  
Purch. Agent: R. Ashenfelter  
Mgr.-Mktg. Div.: W. W. Orake **GS, R&D**

**CHESAPEAKE INSTRUMENT CORP.**  
Shadeside, Md. (Tel. UNiversity 7-2151)  
Purch. Agent: J. D. Hogan  
Sales Mgr.: Neill A. Teets **TS, R&O**

**CHESTER CABLE CORP.**  
2000 Hill St., Chester, N. Y. (Tel. HOmestead 9-2141)  
Gen. Purch. Agent: J. A. Henderson  
MF, PS, GS, GH, CO, TS, TR

**CHICAGO AERIAL INDUSTRIES, INC.**  
1980 Hawthorne Ave., Melrose Park, Ill. (Tel. FIlmore 5-1840)  
Purch. Agent: Robert Rundle  
Dir.-Customer Rel.: Arthur R. Fichter  
GS, GE, CO, TS, R&D

**CHICAGO-ALLIS MFG. CORP.**  
113-125 N. Green St., Chicago 7, Ill. (Tel. MOhroe 6-5050)  
Dir.-Purch.: C. S. Immig  
Buyer: W. J. Kelly  
Gen. Sales Mgr.: D. H. Ball **MF, WN, PS, GS, MM**

**CHICAGO BRIDGE & IRON CO.**  
332 S. Michigan Ave., Chicago, Ill. (Tel. HA 7-6708)  
Purch. Agent: R. E. Hallenbeck  
V. P.-Sales: S. C. Hamilton **PS, TS, MM, R&O**

**CHICAGO DEVELOPMENT CORP.**  
5810 47th Ave., Riverdale, Md. (Tel. APpleton 7-2821)  
V. P.-Purch.: William W. Gullett  
Sales Mgr.: C. S. Goodloe **MM, R&D**

**CHICAGO DIV., AMERICAN BOSCH ARMA CORP.**  
5857 W. 95th St., Oak Lawn, Ill. (Tel. PRescott 9-7100)  
Purch. Agent: Gene Flood  
Mgr.-Contracts & Sales: A. M. Bozich  
GS, GE, CO, TS, TR

**CHICAGO ELECTRONIC ENGRG. CO., INC.**  
3223 W. Armitage Ave., Chicago 47, Ill. (Tel. CApital 7-3130)  
Gen. Mgr.: B. F. Vivacqua **PS, GS, GE, TS, TR**

**CHICAGO GASKET CO.**  
1271 W. North Ave., Chicago 22, Ill. (Tel. HUmbolt 6-3060)  
Mgr., Purch. Dept.: Paul H. Dittmer  
Sales Mgr.: R. H. Martin **MM**

**CHICAGO MINIATURE LAMP WORKS**  
1500 N. Dgden Ave., Chicago 10, Ill. (Tel. MOhawk 4-1741)  
Secy.: T. Singer  
V. P.-Sales: Ernest E. Freeman, Jr. **GS, CO, TS, TR**

**CHICAGO MOLOEO PRODUCTS CORP.**  
1070 N. Kolmar Ave., Chicago 51, Ill. (Tel. DICkens 2-9000)  
Purch. Agent: Frank E. Klingensmeier  
Asst. Purch. Agent: Cuyler Staneck  
V. P.-Chg. Molding Div.-Sales: James E. Johnston **MF**

**CHICAGO PNEUMATIC TOOL CO.**  
6 E. 44th St., New York 17, N. Y. (Tel. MUrray Hill 7-1700)  
Purch. Agent: K. T. Dolsen  
Sales Mgr., Pneumatic Tools: R. T. Beers  
Sales Mgr., Electric Tools: L. J. Walker  
WN, PS, GS, GH, GE, TS, TR

**CHICAGO RAWHIDE MFG. CO.**  
1301 N. Elston Ave., Chicago 22, Ill. (Tel. BRunswick 8-2100)  
V. P. & Dir.-Purch.: Norman R. Hanson  
Asst. Dir.-Purch.: B. J. Yunker  
V. P. & Dir.-Sales: Phelps Wilder

**CHICAGO RIVET & MACHINE CO.**  
950 S. 25th Ave., Bellwood, Ill. (Tel. LInden 4-5100)  
Purch. Agent: W. A. Bautz  
Asst. Purch. Agent: J. A. Campbell  
Sales Mgr.: Wm. O. Shineflug

**CHICAGO SCREW CO., THE, DIV.-STANDARD SCREW CO.**  
2501 Washington Blvd., Bellwood, Ill. (Tel. LInden 4-3500)  
Dir.-Purch.: W. J. McCoy  
Asst. Purch. Agents: P. W. McKenna & John James  
V. P.-Standard Prod. Sales: E. L. Claussen  
MF, WN, PS

**CHICAGO STANDARD TRANSFORMER CORP.**  
3501 W. Addison St., Chicago 18, Ill. (Tel. INdependence 3-7400)  
Purch.: E. Donnellan  
Buyer: C. Dubas  
Dir.-Sales: P. N. Cook **GE, CO, TS, TR**

**CHIKSAN CO. SUB-FOOD MACHINERY & CHEMICAL CORP.**  
330 N. Pomona Ave., Brea, Calif. (Tel. JAasper 9-2121)  
Mgr.-Purch.: E. H. Nelson  
Sales Mgr.: L. J. Smith **GS, GH**

**CHISHOLM-MOORE HOIST DIV., COLUMBUS MCKINNON CHAIN CORP.**  
Fremont Ave., Tonawanda, N. Y. (Tel. JAckson 2230)  
Purch. Agent: W. J. Wolf  
Sales Mgr.: E. J. Byrne  
Sales Prom. Mgr.: R. N. Warnke **GH**

**C. B. CHRISTIANSEN CO.**  
164 Pennington St., Newark 5, N. J. (Tel. MAarket 3-4979)  
Purch. Agent: L. Tarzinski  
Sales: B. W. Oeehan **MF, WN, PS, GS, GH, TS, TR**

**CHRISTIE ELECTRIC CORP.**  
3410 W. 67th St., Los Angeles 43, Calif. (Tel. PLeasant 3-2607)  
Purch. Agent: H. B. Doty  
Sales Mgr.: E. E. Hughes **GS, CO**

**CHRISTIE MACHINE WORKS**  
201 Harrison St., San Francisco 5, Calif. (Tel.

E Xbrook 2-2187)  
V. P.-Purch. & Sales: Lloyd F. Christie  
PS, GE, TR, R&

**CHRYSLER CORP. DEFENSE OPERATIONS DIV.**  
7000 E. Eleven Mile Rd., Center Line, Mich. (Tel. JEFFerson 9-3000) Mailing Address: P. O. Box 757, Detroit 31, Mich.  
Dir.-Proc.: A. H. Hilverkus  
Purch. Supvr.: A. M. Thom  
Dir.-Govt. Relations: G. W. Snider  
MF, WN, PS, GS, GH, GE, CO, TS, TR, MM, R&

**CHRYSLER CORP. MISSILE DIV.**  
P. O. Box 2628, Detroit 31, Mich. (Tel. JEFFerson 9-2000)  
Purch. Agent: S. J. Roach  
Purch. Admin.: J. M. Orr  
Mgr.-Buying & Follow-up: J. P. Forbes  
Mgr.-Purch. Analysis: C. R. McMacken  
Mgr.-Sub-Contracts: H. L. Sinclair  
MF, WN, PS, GS, GH, GE, CO, TS, TR, MM, R&

**CIBA PRODUCTS CORP.**  
P. O. Box 415, Fair Lawn, N. J. (Tel. SWarthmore 1-1122)  
Sales Mgr.: E. N. Dorman **M**

**CIMA STRA DIV., THE CINCINNATI MILLING MACHINE CO.**  
Marburg Ave., Cincinnati 9, O. (Tel. RE 1-2121)  
Purch. Agent: H. Decatur  
Sales Mgr.: R. Bevis

**CINCINNATI CLEANING & FINISHING MACHINERY**  
1100 Hageman St., Cincinnati 41, O. (Tel. PRinceton 1-5100)  
Purch. Agent: C. Tyahur  
Dir.-Sales: H. Nonneman

**CINCINNATI MILLING MACHINE CO., THE**  
Marburg Ave., Cincinnati 9, Ohio (Tel. RE dwood 1-2121)  
Purch. Agent: Herman Decatur  
Sales Mgr.: R. Bevis

**CINCINNATI SHAPER CO., THE**  
Cincinnati, Ohio

**CINCINNATI SUB ZERO PRODUCTS**  
3932 Reading Rd., Cincinnati 29, O. (Tel. PLaza 1-8810)  
Purch. Agent: H. Koupp  
Proj. Engr.: R. E. Schroeder  
Chief Engr.: T. J. Frederick **T**

**CINEMA ENGRG.**  
1100 Chestnut St., Burbank, Calif.  
Gen. Mgr.: James L. Fouch

**CINE-VIDEO PRODUCTIONS, INC.**  
Boston Post Rd., Milford, Conn. (Tel. TRinity 4-6590)  
Pres.: G. W. Ray

**CIRON COMPONENT CORP.**  
Santa Barbara Municipal Airport, Goleta, Calif. (Tel. WOODland 7-1113)  
Sales Mgr.: M. J. Ainsworth  
MF, WN, PS, GS, GH, GE, TS, T

**CLAIREX CORP.**  
19 W. 26th St., New York 10, N. Y. (Tel. WAtkins 9-1668)  
Dir.-Purch.: V. M. Schell  
Sales: A. F. Deuth

**CLARAGE FAN CO.**  
619 Porter St., Kalamazoo, Mich. (Tel. FIlreside 9-1541)  
Purch. Agent: R. F. Ware  
Asst. Purch. Agent: O. F. Johnson  
Dir.-Sales: C. R. McConner

**C. P. CLARE & CO.**  
3101 Pratt Blvd., Chicago 45, Ill. (Tel. AMBassador 2-7700)  
Purch. Agent: B. E. Brooks  
V. P. in Chg. of Sales: O. R. Oooley  
Asst. Purch. Agents: Thomas Grace & Robert Hickerson **M**

**DAVID CLARK CO., INC.**  
360 Park Ave., Worcester, Mass. (Tel. PLeasant 6-6216)  
Purch. Agent: Philip Miller, Jr.  
Sales Mgr.: Charles W. Kaufman

**CLARK CRYSTAL CO.**  
2 Farm Rd., Marlboro, Mass. (Tel. MArlboro 1411)  
Purch. Agent: F. O. Nobles **GS, T**

**CLARK ELECTRONIC LABORATORIES**  
Box 165, Palm Springs, Calif. (Tel. FA 8-2210)  
Sales Mgr.: O. B. Clark **GE, TR, R&**

**CLARK EQUIPMENT CO.**  
324 E. Oeewey Ave., Buchanan, Mich. (Tel. OXBow 5-3811)  
V. P.-Purch.: J. G. Mack  
Mgr., Development Div.: Cyril B. Rogers

<b>CLARK-AIKEN CO., THE</b> Water St., Lee, Moss. (Tel. 1261) Prod. Engr.: J. P. Stoeke MF, PS, GS, GH	<b>COAST MFG. &amp; SUPPLY CO.</b> Box 71, Livermore, Calif. (Tel. Hilltop 7-1000). Purch. Agent: A. J. Andersen Sales Mgr.: James A. Merritt MM	<b>COLONIAL RUBBER CO.</b> 706 Oakwood St., Rovenna, D. (Tel. AXminister 6-9611) Purch. Agent: R. M. Richmond Sales Mgr.: D. E. Moson MM
<b>CLARKSON LABS., INC., THE</b> 920-30 N. Darien St., Philadelphia 23, Pa. (Market 7-6764) Treas.: Morris Coppersmith Pres.: E. W. Heller R&D	<b>COAXIAL CONNECTOR CO. INC.</b> 37 N. 2nd Ave., Mt. Vernon, N. Y. (Tel. MDunt Vernon 8-6416) Purch. Agent: William R. Clayton Dir.-Sales: Don Reade GE, TS, TR	<b>COLORADO RESEARCH CORP.</b> Broomfield, Colo. (Tel. HARRISON 9-3501) Purch. Agent: A. R. Holden, Jr. Dir.-Mktg.: David R. Miller R&D
<b>CLARDSTAT MFG. CO., INC.</b> Dover, N. H. (Tel. SHERWOOD 2-1120) Purch. Dir.: E. D. Schromm Gen. Sales Mgr.: E. W. Kingsbery	<b>COBEHN, INC.</b> 226 Passaic Ave., Caldwell, N. J. (Tel. CApitol 6-6675) Purch. Agent: William E. Bellors V. P.-Sales: David F. Cook GS	<b>COLSON CORP., THE</b> 440 Somerville Ave., Somerville 43, Mass. Purch. Agent: C. Lockwood Sales Mgr.: S. A. Leone GH
<b>CLARY DYNAMICS</b> 408 Junipero St., San Gabriel, Calif. (Tel. CLumberland 3-2724) Purch. Agent: Don Werter Gen. Sales Mgr.: Charles T. Cosser GE, TR, R&D	<b>COBRA METAL HDSE DIV., DK MFG. CO.</b> 5059 S. Kedzie Ave., Chicago 32, Ill. (Tel. REpublic 7-3311) Purch. Agent: T. Kwasnik Buyers: R. A. Michuda, W. K. Davis, A. Virgo Sales Mgr.: Clyde D. Greeno MF, GS	<b>COLUMBIA ELECTRIC MFG. CO.</b> 4519 Hamilton Ave., Cleveland 14, D. (Tel. ENDicott 1-8060) Purch. Agent: John Sygielski Sales Mgr.: H. W. Susman GS, TS, R&D
<b>CLAUSING DIV.-ATLAS PRESS CO.</b> 1915 N. Pritchard St., Kalamazoo, Mich. (Tel. Fireside 5-7157) Dir.-Purch.: S. L. Show V. P.-Sales: G. C. Noncarrow MM	<b>COFFING HOIST DIV., DUFF-NORTON CO.</b> 800 Walter St., Danville, Ill. (Tel. 6-3800) GH	<b>COLUMBIA NUT &amp; BOLT CO., INC.</b> 945 Main St., Bridgeport 3, Conn. (Tel. EDISON 3-4956) Pres.: Howard P. Cook MM
<b>CLEMO AERO PRODUCTS, INC.</b> 210 E. Monville St., Compton, Calif. (Tel. NEVada 6-8162) Purch. Agent: E. J. Szkoradek Plant Mgr.-Sales: R. E. Marsh GE	<b>COHAN EPNER CO. INC.</b> 142 W. 14th St., New York 11, N. Y. (Tel. CHelsea 6-3411) Purch. Agent: William Epner Dir.-Sales: Gerald Epner MF, WN, PS, GS	<b>COLUMBIA PRODUCTS CO.</b> R.F.D. #3, Columbia, South Carolina (Tel. SUNset 7-8710) Purch. Agent: Frank Cox Sales Mgr.: S. W. Trehwello TR
<b>CLEVELAND AUTOMATIC MACHINE CO., THE</b> 4932 Beech St., Cincinnati 12, O. (Tel. REdwood 1-5300) Purch. Agent: A. W. Niederhelman V. P.-Sales Mgr.: John Prohaska	<b>CDIL CO. OF AMERICA</b> 215 Washington St., Northvale, N. J. (Tel. CLoster 5-3434) Purch.: H. Gay GS, GE, TS, TR	<b>COLUMBIA RESEARCH &amp; DEVELOPMENT CORP.</b> 4608 Indianola Ave., Columbus 15, O. (Tel. AMherst 7-1277) Purch. Agent: D. E. Lehman Gen. Mgr.: H. O. Kempton GS, GH, R&D
<b>CLEVELAND CONTAINER CO., THE</b> 6201 Bortman Ave., Cleveland, O. (Tel. Olympic 1-4500) Purch. Agent: R. F. Boll Sales Mgr.: Jay Sebesky MM	<b>COIL WINDING EQUIPMENT CO.</b> 19 Maxwell Ave., Oyster Bay, N. Y. (Tel. OYster Bay 6-1285) Purch. Agent: Mrs. Blanche A. George Purch.: James H. George Sales: Howard A. George GS, GH	<b>COLUMBIA RESEARCH LABS.</b> McCade Blvd. & Bullens Lane, Woodlyn, Pa. (Tel. CHEster 2-0381) Buyer: Victor F. Alibert Asst. Buyer: Thomas Carey, Jr. Sales Mgr.: Vernon F. Alibert MF, PS, GS, GH, GE, CO, TS, TR
<b>CLEVELAND CRANE &amp; ENGRG. CO., THE</b> Wickliffe, O. (Tel. WHitney 3-3700) Purch. Agent: G. W. Urbon GS	<b>COILCRAFT INC.</b> Jondus Rd., Cary, Ill. (Tel. MErcury 9-2361) Purch. Agent: William Desmond V. P. & Dir.-Sales: Rolph Smith	<b>COLUMBIA TECHNICAL CORP.</b> 61-02 31st Ave., Woodside 77, N. Y. (Tel. AS 8-7401) Purch. Agent & Treas.: V. Leibmann Buyer: L. Taylor
<b>CLEVELAND GRAPHITE BRONZE DIV.-CLEVITE CORP.</b> 17000 St. Clair Ave., Cleveland 10, O. (Tel. IVanhoe 1-7221) Dir.-Purch.: J. G. Mehring Purch. Agent: J. C. Hall Asst. Purch. Agent: P. W. Love Purch. Analyst: J. Hopkins V. P.-Sales: L. W. Christensen Staff Asst.-Sales: R. C. Webster MM	<b>COILS-ELECTRONICS</b> 2939-49 N. 2nd St., Philadelphia 33, Pa. (Tel. REgent 9-6465) Purch. Agent: Ben Malkin Dir.-Sales: Leon Ozier R&D	<b>COLUMBIAN CARBON CO., MAPICO IRON OXIDES UNIT</b> 380 Madison Ave., New York 17, N. Y. (Tel. MUrray Hill 7-2300) Sales Mgr.: C. O. Davidson MF, PS
<b>CLEVELAND INSTRUMENT CO.</b> 6220 East Schoof Rd., Cleveland 31, O. (Tel. LA 4-4821) Purch. Agent: W. Young Mgr.-Sales: F. W. Witzke GE, CO, TS	<b>COLE-HERSE CO.</b> 20 Old Colony Ave., South Boston 27, Mass. (Tel. ANdrew 8-2190) Dir.-Purch.: G. B. Jacobs Chief Engr.-Purch: T. Unsworth Sales Engr.: Jerry Desjardins Gen. Sales Mgr.: L. Mayer PS, GE, TR	<b>COLUMBIAN ROPE CO.</b> 309 Genesee St., Auburn, N. Y. (Tel. 3-3221) Purch. Agent: C. A. Fowler V. P.-Sales: L. R. Hole MM
<b>CLEVELAND METAL SPECIALTIES CO., ELECTRONICS DIV.</b> 1783 E. 21st St., Cleveland 14, O. (Tel. PRospect 1-4186) V. P.-Purch.: Joe Jopel WN, TR, R&D	<b>COLEMAN ENGRG. CO., INC.</b> 3500 Torrance Blvd., Torrance, Calif. (Tel. FAculty 1-3900 & FRontier 6-8921) Purch. Agent: E. J. Hannaman Buyers: Robert Williams & Reg Bliss V. P.-Cust. Relations: E. M. Armstrong GS, GH, CO, TR, R&D	<b>COLUMBIA ELECTRONICS CORP.</b> 1010 Saw Mill River Rd., Yonkers, N. Y. (Tel. YONkers 8-1221) Purch. Agent: David Parker Sales Mgr.: Gustov Bord
<b>CLEVELAND PNEUMATIC INDUSTRIES, INC.</b> 3781 E. 77th St., Cleveland 5, Ohio (Tel. DIamond 1-1700) Material Mgr.: John Chapman V. P.-Sales: Elmer Krueger PS, GS, GH, MM	<b>COLLECTRON CORP.</b> 304 E. 45th St., New York, N. Y. (Tel. MU 9-7120) Purch. Agent & Sales Mgr.: R. B. Coombs MM	<b>COLVIN LABS., INC.</b> 364 Glenwood Ave., East Orange, N. J. (Tel. ORange 7-1221) Purch. Agent: V. Tobias Gen. Mgr.: D. P. Vogel GE, TS, TR
<b>CLEVELAND WELDING DIV.-AMERICAN MACHINE &amp; FOUNDRY CO.</b> W. 117th St. & Berea Rd., Cleveland 11, Ohio (Tel. WEddstone 1-2820) Gen. Sales Mgr.: F. L. Nemeth Purch. Agent: A. A. Mitsch GS, GH, MM	<b>G. L. COLLINS CORP.</b> 2820 E. Hullett Ave., Long Beach 5, Calif. (Tel. MEcalf 0-3121) V. P.-Purch.: G. D. Collins V. P.-Sales: L. A. Bondy GE	<b>COM-AIR PRODUCTS, DIV.-A-S-R PRODUCTS CORP.</b> 1201 Rio Vista Ave., Los Angeles 23, Calif. (Tel. ANgelus 3-2171) Purch. Agent: Frank Georgianni Dir.-Material: F. L. Loyd Buyer: Jane Smith Dir.-Field Engrg.: Victor Belfiore PS, GS, GE, CO, R&D
<b>CLEVITE TRANSISTOR PRODUCTS, DIV.-CLEVITL CORP.</b> 241-257 Crescent St., Waltham 54, Mass. (Tel. TWInbrook 4-9330) Dir.-Purch. & Prod. Control: W. T. Howland Purch. Agent: G. Hird Sr. Buyer: T. Kenney GE, TS, TR	<b>COLLINS ENGRG. CORP.</b> 9050 Washington Blvd., Culver City, Calif. (Tel. TEXos 0-4811) Chief Purch. Agent: Ada Kadinger Pres.: Joe Collins MM	<b>COMAR ELECTRIC CO.</b> 3349 Addison St., Chicago 18, Ill. (Tel. JUNiper 8-2410) Purch. Agent: Richard Boer Asst. Purch. Agent: Chos. Kirchenbauer Sales Mgr.: L. E. Noelck GS, GE, TR
<b>CLIFTON PRECISION PRODUCTS CO., INC.</b> Araple at Broadway, Clifton Heights, Pa. (Tel. MADison 6-2101) Purch. Agent: Tyson Parker V. P. & Sales Mgr.: Thomas W. Shoop GE, CO, TS	<b>COLLINS MICROFLAT CO.</b> 3249 W. El Segundo Blvd., Hawthorne, Calif. (Tel. OREGon 8-7694) V. P.-Purch.: E. Mike Bruhwiler Pres.: Lee Collins MM, R&D	<b>CODING</b> Missile Frame MF Warhead & Nose Cone WN Propulsion System PS Ground Support GS Ground Handling GH Guidance Equipment GE Checkout Equipment CO Test Equipment TS Tracking & Telemetering TR Research & Development R&D Materials & Metals MM
<b>CLIPPAID INSTRUMENT LAB., INC.</b> Cincinnati 39, D. (Tel. JACKson 1-4261) V. P.-Purch.: James W. Dillon Sales Engineers: Dscar S. Clippard & William C. Rou Rou	<b>COLLINS RADIO CO.</b> 855 35th St., N. E., Cedar Rapids, Iowa (Tel. EMpire 3-0281) Dir.-Purch: John H. Wagner, 411 First Ave., S. E., Cedar Rapids, Iowa (Tel. EMpire 3-2661) V. P.-Sales: J. G. Flynn, Jr., Dallas, Tex. (Tel. ADams 5-4511) GS, GE, CO, TR, R&D	
<b>COVER INDUSTRIES, INC.</b> 78,588 Young St., Tonawanda, N. Y. (Tel. LUdlow 1-331) V. P.-Purch.: H. Paul Henderson V. P.-Sales: L. N. Friel MM	<b>COLONIAL AIRCRAFT CORP.</b> Box 250, Sanford, Me. (Tel. SANford 80) Purch. Agent: Harvey Carpenter Pres.: David B. Thurston MF, GS, GH, TS	

... purchasing directory com—cur

**COMCO PLASTICS INC.**  
97-24 Albert Rd., Ozon Park 17, N. Y. (Tel. Michigan 1-0934)  
Purch. Agent: E. Wemett  
Sales Mgr.: J. C. Steele

**COMMERCIAL FILTERS CORP.**  
2 Main St., Melrose 76, Mass. (Tel. DAVenport 4-7000)  
Purch. Agent: Alan F. Riley  
Sales Mgr.: J. R. Chisholm PS, GS

**COMMERCIAL PLASTICS & SUPPLY CORP.**  
630 Broadway, New York, N. Y. (Tel. GR 7-5000)  
V. P. & Dir.-Purch.: Morton R. French  
Gen. Mgr.: Don I. Yarnall MM

**COMMERCIAL SHEARING & STAMPING CO.**  
1775 Logan Ave., Youngstown 1, Ohio (Tel. RI 6-8011)  
Purch. Agent: D. A. Boop  
V. P.-Chg. Sales: H. B. Wollison WN, MM

**COMMONWEALTH FELT CO.**  
76 Summer St., Boston 10, Mass. (Tel. Liberty 2-6590)  
Treas.: I. Goldberg  
Mgr.-Cut Parts Div.: N. M. Benson  
Sales: J. S. Patterson MM

**COMMUNICATIONS CO.**  
300 Greca Ave., Coral Gables, Fla. (Tel. HI 6-0846)  
Purch. Agent: W. K. Whitmire  
Asst. Gen. Mgr.-Sales: Frederick R. Macklin GS, GH, GE, TR

**COMMUNICATIONS RESEARCH CO.**  
P. O. Box 778, Richmond 6, Va. (Tel. Mlton 4-3255)  
Pres.: Paul K. Heim  
Dir.-Research & Dev.: Dr. David P. Armstrong  
Purch. Agent & Bus. Mgr.: Edward I. Davies TR, R&O

**COMMUNITY ENGRG. CORP.**  
Box 824, State College, Pa. (Tel. ADams 7-7221)  
Pres.-Purch.: James R. Palmer  
Sales: Floyd B. Fischer

**COMPONENTS CORP.**  
35 N. Arroyo Pkwy., Pasadena, Calif. (RYan 1-7448)  
Pres.: Evert C. Hokanson MF, WN, PS, GS, GH, GE, CO, TS, TR

**COMPUTER CONTROL CO., INC.**  
92 Broad St., Wellesley 57, Mass. (Tel. CEdar 5-6220)  
Purch. Agent: Bradford P. Daniels  
V. P.-Sales: William Wolfson  
Sales Mgr.-Eastern Div.: James I. Leabman GE, TR

**COMPUTER ENGRG. ASSOCIATES, INC.**  
350 N. Halstead St., Pasadena 8, Calif. (Tel. ELgin 5-7121)  
Purch. Agent: John Brunk  
Customer Service Mgr.: Richard T. Campbell

**COMPUTER INSTRUMENTS CORP.**  
92 Madison Ave., Hempstead, L. I., N. Y. (Tel. IVonhoe 3-8200)  
Dir.-Purch.: H. Adise  
Purch. Agent: I. Clinton  
Sales Mgr.: J. Herman GH, TS, MM, R&O

**CONANT LABS.**  
Box 3997, Bethony Station, Lincoln 5, Nebr. (Tel. 4-0432)  
Gen. Mgr.: G. Conant

**CONAX CORP.**  
2300 Walden Ave., Buffalo 25, N. Y. (Tel. REgent 0600)  
Purch. Agent: Edgar Kowalski  
Sales Mgr.: John M. Considine MF, WN, PS, GS, GE, CO

**CONCO ENGRG. WORKS**  
Mendota, Ill. (Tel. 2121)  
Purch. Agent: P. J. Donahue  
Asst. to Exec. V. P.-Sales: J. W. Burch MF, GS

**CONMAR PRODUCTS CORP.**  
140 Thomas St., Newark 1, N. J. (Tel. BIgelow 8-2211)  
Asst. Gen. Sales Mgr.: A. L. Moss

**CONN-CRAFT CO.**  
301 Fairlawn Ave., Waterbury 5, Conn. (Tel. PLaza 4-1811)  
Mgr.: Leo J. Bakinow

**CONNECTICUT HARO RUBBER CO., THE**  
407 East St., New Haven 9, Conn. (Tel. SPruce 7-3631)  
Purch. Agent: T. E. Grandshaw  
Sales Mgr.: J. A. Moffitt, Jr. MF, WN, PS, GS, GH, TR

**CONNECTOR CORP. OF AMERICA**  
12959 Sherman Way, N. Hollywood, Calif. (Tel.

Stanley 7-9653)  
Pres.-Sales: Ralph R. Thomas MF, WN, PS, GH, GE, TR

**CONOFLOW CORP.**  
2100 Arch St., Philadelphia 3, Pa. (Tel. LDcust 7-7560)  
Purch. Agent: H. Bonekat  
Sales Mgr.: J. Robert Simpson TS

**CONRAO, INC.**  
Conrad Sq., Holland, Mich. (Tel. EXport 2-3161)  
Purch. Agent: Merle Pointer, 141 Jefferson St., Holland, Mich.  
V. P.-Sales: Charles Conrad, 141 Jefferson St., Holland, Mich. TS, R&O

**CONSOLIOATE AIRBORNE SYSTEMS, INC.**  
321 Willis Ave., Mineola, N. Y. (Tel. PLioneer 6-7224)  
V. P.-Gen. Mgr.: John I. Nestel  
V. P.-Chief Engr.: Leo Stamler  
Proj. Engr.: Hugo Daffaro  
Sales Mgr.: Jahn A. Milbouer GH, GE, CO, TS, TR

**CONSOLIOATE AMERICAN SERVICES, INC.**  
999 W. Jefferson Blvd., Culver City, Calif. (Tel. TEXas 0-4725)  
Pres.: M. J. Ruland  
Mgr.: R. A. Verna  
Sales: R. F. Faille PS, GS, MM

**CONSOLIOATE AVIONICS CORP.**  
800 Shomes Dr., Westbury, L. I., N. Y. (Tel. EDgewood 4-8400)  
Purch. Agent: Carl Cooper  
Sales Mgr.: Peter J. Reuter GS, CO, TR, R&O

**CONSOLIOATE CONTROLS CORP.**  
13 Durant Ave., Bethel, Conn. (Tel. PLioneer 3-6721)  
Purch. Agent: C. S. Joyce  
Sales Mgr.: C. M. Colt PS, GS

**CONSOLIDATE DIESEL ELECTRIC CORP.**  
880 Canal St., Stamford, Conn. (Tel. DAVIS 5-2261)  
Purch. Agent: John Adams  
Sales Mgr., Power Equipment Div.: M. J. Sullivan  
Sales Mgr., Test Equipment Div.: Kenneth Gerhardt  
Sales Mgr., Aircraft Equipment Div.: Robert Sellers GS, GH, CO, TS, R&O

**CONSOLIDATE DIESEL ELECTRIC CORP., TEST EQUIP. DIV.**  
1 John St., Stamford, Conn. (Tel. DAVIS 5-2261)  
Purch. Agent: John Budnik  
Sales Mgr.: Kenneth C. Gerhardt GS, GH, CO, TS

**CONSOLIDATE DIESEL ELECTRIC CORP., WESTERN DIV.**  
15519 Lanark St., Von Nuys, Calif. (Tel. STate 2-4060)  
Purch. Agent: T. C. McKinney GS, GH, CO, TS

**CONSOLIDATE ELECTRODYNAMICS CORP.**  
300 N. Sierra Madre Villa, Pasadena, Calif. (Tel. RYon 1-8421)  
Dir.-Purch.: Mario Gardner  
V. P.-Mktg.: R. L. Smallman

**CONSOLIDATE ELECTRODYNAMICS CORP., ROCHESTER DIV.**  
1775 Mt. Read Blvd., Rochester 3, N. Y. (Tel. GLenwood 3-7972)  
Purch. Agent: W. Barton  
Dir.-Mktg.: W. Dolke

**CONSOLIDATE FILM INDUSTRIES**  
959 N. Seward St., Hollywood 38, Calif. (Tel. HOLlywood 2-0881)  
V. P. & Gen. Mgr.: Sidney P. Solow  
Dir.-Sales: Jack M. Goetz

**CONSOLIDATE INDUSTRIES, INC.**  
Mixville Rd., West Cheshire, Conn. (Tel. Cheshire-BRowning 2-5371)  
Sales Engr.: E. A. Fentzloff MF, PS

**CONSOLIDATE PRODUCTIONS, INC.**  
3991 S. W. 12th Terrace, Fort Lauderdale, Fla. (Tel. JACKson 4-8361)  
Purch. Agent: Gordon Jonas  
V. P.-Sales: A. L. D' Connor GS

**CONSOLIDATE WIRE & ASSOCIATE COMPANIES**  
1635 S. Clinton St., Chicago 16, Ill. (Tel. HA 1-4441)  
Sales Mgr.: J. J. Mann MF, PS, GS, GH, CO, TR

**CONTINENTAL AVIATION & ENGRG. CORP.**  
12700 Kercheval, Detroit, Mich. (Tel. VALley 2-1500)  
Dir.-Purch.: Carl L. Schiller  
Purch. Agent, Toledo Div.: John Watson (Tel. GR 5-4641)  
Mgr.-Sales & Service: Kenneth C. Smith PS, GS, R&O

**CONTINENTAL CAN CO., INC.**  
530 Fifth Ave., New York 17, N. Y. (Tel. MURray

Hill 2-1300)  
J. B. Jack MF, TR, MM

**CONTINENTAL CARBON, DIV.-WIRT CO.**  
5221-27 Greene St., Philadelphia 44, Pa. (Tel. GRemantown 8-9334)  
Purch. Agent: Kalman Litson  
Sales Mgr.: Robert H. Hayes GE, R&O

**CONTINENTAL CONNECTOR CORP.**  
34-63 56th St., Woodside 77, N. Y. (Tel. TW 9-4422)  
Purch. Agent: A. Jacob MF, G

**CONTINENTAL DIAMOND FIBRE CORP.**  
Newark, Del. (Tel. EDnicott 8-8531)  
Dir.-Purch.: W. H. Walker  
Asst. Purch. Mgr.: F. A. Cain  
Gen. Sales Mgr.: A. J. Briggs MM, R&O

**CONTINENTAL ORILL CORP.**  
555 W. Adams St., Chicago 6, Ill. (Tel. DEarborn 2-2776)  
V. P. & Dir.-Purch.: Lawrence A. Shick

**CONTINENTAL ELECTRIC CO., INC.**  
325 Ferry St., Newark 5, N. J. (Tel. MITcheII 2-4051)  
Dir.-Purch.: Fred Bamberger  
Dir.-Sales: A. W. Peterson

**CONTINENTAL ELECTRONICS MFG. CO.**  
4212 S. Buckner Blvd., Dallas 27, Tex. (Tel. EVERgreen 1-1137)  
Dir.-Procurement Dept.: A. W. Schmidt, Jr.  
Asst.-Procurement Dept.: Robert Keith  
Dir.-Sales & Contract Negotiations: Thomas B. Moseley

**CONTINENTAL MFG., INC.**  
1612 California St., Omaha 2, Nebr. (Tel. JACKson 2-7531)  
Purch. Mgr.: Gean D. Poole  
Pres.: Roy B. McMartin

**CONTINENTAL METALS, INC.**  
7001 Santa Monica Blvd., Los Angeles 38, Calif. (Tel. HOLlywood 9-8383)  
Purch. Agent & Sales: I. H. Taylor

**CONTINENTAL MOTORS CORP.**  
Market St., Muskegon Mich. (Tel. 2-7631)  
Pres. & Gen. Mgr.: C. J. Reese

**CONTINENTAL RUBBER WORKS**  
1963 Liberty St., Erie 6, Pa. (Tel. 2-5261)  
Purch. Agent: Robert A. Bailey  
Sales Mgr.: Charles C. Shenk MF, WN, PS, G

**CONTINENTAL SCREW CO.**  
459 Mr. Pleasant St., New Bedford, Mass. (Tel. WYman 3-2621)  
Purch. Agent: Edward Pettengill  
Gen. Sales Mgr.: Victor Ladetto

**CONTINENTAL TECHNICAL SERVICE, INC.**  
29 W. Apple St., Dayton 2, O. (Tel. BA 2-8626)  
Purch. Agent: F. Nation  
Sales Coordinator: George Thomas GS, GH,

**CONTINENTAL WIRE SALES CORP.**  
322 N. Cherry St., Ext. P. O. Box 366 Wallingford, Conn. (Tel. COLony 9-1421)  
Purch. Agent: C. C. Christensen  
Sales Mgr.: E. T. Harrigan

**CONTROL CIRCUITS INC.**  
5 Barton Hill, East Hampton, Conn. (Tel. ANDrew 7-9445)  
Purch. Agent: H. L. Voelker

**CONTROL DATA CORP.**  
501 Park Ave., Minneapolis 15, Minn. (Tel. FEDERAL 9-0947)  
Dir. Purch.: James D. Harris  
Purch. Agent: L. Bernier  
Dir. Sales: James G. Miles

**CONTROL ENGRG. CO., DIV.-JERVIS B. WEBB**  
8900 Roselawn, Detroit 4, Mich. (Tel. WE 3-9311)  
Purch. Agent: John K. Gage  
Asst. Sales Mgr.: Thomas J. Lindsay  
Gen. Mgr.: Marvin S. Blemly GS, GH, CO,

**CONTROL PRODUCTS, INC.**  
306 Sussex St., Harrison, N. J. (Tel. HUMBolt 2-0213)  
Purch. Agent: H. R. Brewster  
Sales Mgr.: J. R. Nile

**CONTROLS CO. OF AMERICA**  
9555 Sarong Ave., Schiller Park, Ill. (Tel. NATION 5-9000)  
Purch. Agents: L. Manfre & H. Keller  
V. P.-Sales: D. Strathearn & A. Topp MF, PS, GS, GH, GE, CO,

**CONVAIR-ASTRONAUTICS DIV.-GENERAL DYNAMICS CORP.**  
5001 Kearny Villa Rd., San Diego 12, Calif. (Tel. BR 7-6900)  
Material Mgr.: C. F. Uhden  
Gen. Purch. Agent: E. Fellows, Jr.

Purch. Agent: C. C. Farnsworth, C. T. Talbott & W. S. Tucker MF, GS, CO, TS, TR, R&D

**CONVAIR-INSTRUMENTS DIV.,-GENERAL DYNAMICS CORP.**  
3595 Frontier St., San Diego 10, Calif. (Tel. AC 3-1614)  
Dr. Egan E. Muehler CO, TS

**CONVAIR-POMONA DIV.-GENERAL DYNAMICS CORP.**  
1675 W. Fifth St., Pomona, Calif. (Tel. NAational 9-5111)  
Mgr.-Material: R. O. Webster  
Gen. Purch. Agent: O. W. Connell  
Purch. Agent-Standard Parts, Raw Materials, Facilities & Commercial: R. J. Hartmayer  
Purch. Agent-Subcontracts, Special Components, Castings & Forgings: J. O. Currier MF, GS, CO, TS, TR, R&D

**C. LEE COOK CO., AIRTOMIC PRODUCTS DIV.**  
916 S. Eighth St., Louisville 3, Ky. (Tel. JUniper 7-6783)  
Purch. Agent: S. J. Wahlhueter PS, MM  
Sales Engr.: W. E. Gassage

**FRANK R. COOK CO.**  
3850 Olive St., Denver 7, Colo. (Tel. FL 5-3531)  
Purch.: M. L. Mawbray  
Sales Mgr.: W. B. Winder

**COOK ELECTRIC CO.**  
2700 N. Southport Ave., Chicago 14, Ill.

**ERBERT COOPER CO., INC.**  
Box 1, Genesee, Pa. (Tel. 2761)  
Secy. & Treas.: Joseph C. Herbert, Jr.

**COOPER ALLOY CORP.**  
Hillside, N. J. (Tel. MU 8-4120)  
Mgr.-Adv. & Sales Prom.: Stuart F. Cooper MF, GS

**COOPER DEVELOPMENT CORP., SUB-MARQUARDT AIRCRAFT CO.**  
2626 South Peck Rd. Manrovia, Calif. (Tel. Hillcrest 6-3138)  
Purch. Agent: Eugene Binford  
Mgr.-Contracts Planning: Malcolm C. Tucker MF, PS, GS, CO, TS, TR, MM, R&D

**COOPER INDUSTRIES, INC.**  
2149 E. Pratt Blvd., Elk Grove, Ill. (Tel. HEmpstead 9-2050)  
Pres.: Harry Cooper  
Sales Mgr.: Herbert Cooper MM

**COOPERATIVE INDUSTRIES, INC.**  
100 Oakdale Rd., Chester, N. J. (Tel. 255)  
Purch. Agent: E. F. Youngquist  
Asst. Purch. Agent: Barnes Barker  
V. P.-Sales: V. C. Bonardel MF, WN, PS, GS, GH, GE, CO, TR

**COOPER-BESSEMER CORP., THE**  
Mt. Vernon, O. (Tel. EX 3-0121)  
Dir.-Purch.: H. C. Jones  
Purch. Agent: H. L. Winger  
Tr.-Adv.: R. S. Warren  
V. P.-Sales: S. E. Johnson GS

**COPPERWELD STEEL CO., WIRE & CABLE DIV.**  
Glassport, Pa. (Tel. North 4-7131)  
Purch. Agent: M. M. Siegel  
Sales Mgr.: F. E. Leib MF, PS, GS, GH, TS, TR, MM

**COPUS ENGRG. CORP.**  
44 Park Ave., Worcester 10, Mass. (Tel. PLeasant 2-5639)  
Purch. Agent: H. C. Hult  
Sales Mgr.: E. Kundig PS, GS, GH

**CRBIN PRODUCTS DIV.**  
rescent Plaza Bldg. 306-B, Long Island City 1, N. Y. (Tel. ST 6-0700)  
Secy.: D. R. Locke GS, GH, MM

**CRDO CHEMICAL CORP.**  
3 Smith St., Norwalk, Conn. (Tel. VOlunteer 6-4438)  
Purch. Agent: Robert F. Walsh  
Sec. V. P. & Gen. Mgr.: George H. Sherrard  
Sales Mgr.: F. W. Hall GS, MM

**CRNELIUS CO., THE AERO DIV.**  
0 39th Ave., N. E., Minneapolis 21, Minn. (Tel. SUnset 8-6133)  
Purch. Agent: Fred A. Anderson  
Tr.-Sales: J. W. Mahanay GS, GH, CO, R&D

**CRNELL AERONAUTICAL LAB.**  
Hofa, N. Y.

**CRNELL DEEP DRAWING CO., DIV.-LANES INDUSTRIES CORP.**  
2-620 Colorado Ave., Santa Monica, Calif. (Tel. EXbrook 3-1810)  
P.-Purch. & Personnel: Peter F. Lanes MM

**CRNELL-DUBILIER ELECTRIC CORP.**  
Millen Blvd., South Plainfield, N. J. (Tel. PLainfield 6-9000)

Dir.-Purch.: Paul H. Burbage  
Sales Mgr., Mfg. Div.: Arthur Williams TR

**CORNING GLASS WORKS**  
Corning, N. Y. (Tel. 2-5011)  
Dir.-Purch.: T. S. Wood  
Purch. Agent: Ralph Baker  
Dir.-Mktg.: T. A. Kirkland  
Sales Mgr.-Elec.: C. C. Horwood WN, MM

**CORNISH WIRE CO. INC.**  
50 Church St., New York 7, N. Y. (Tel. BArclay 7-5140)  
Purch. Agent: N. A. Brennan, 101 Water St., Williamstown, Mass. (Tel. GLenview 8-4111) MM

**CORRUGATED PAPER PRODUCTS, INC.**  
2235 Utica Ave., Brooklyn, N. Y. (Tel. ESpplanade 7-6112)  
Pres.: J. Kapur

**CORSON ELECTRIC MFG. CORP.**  
540 39th St., Union City, N. J. (Tel. UUnion 6-4227)  
Purch. Agent: Frank E. Oame  
Sales: D. Corson

**COSA CORP.**  
Chrysler Bldg., 405 Lexington Ave., New York 17, N. Y. (Tel. YUkon 6-9696)  
Sales Mgr.: P. M. Aubry GS, TS, TR

**COTO-COIL CO., INC.**  
65 Pavilion Ave., Providence 5, R. I. (Tel. WIlliams 1-3355)  
Pres.: L. S. Bellem, Jr.  
Treas. & Oir.-Sales: M. S. Musler

**COUCH ORDNANCE, INC.**  
3 Arlington St., North Quincy, Mass. (Tel. BL 8-4147)  
Purch. Agent: S. O. Bellis  
Mgr.-Relay Div.-Sales: B. W. Gray GE, TR

**COURTNEY & CO., INC.**  
1711 Walnut St., Philadelphia 3, Pa. (Tel. LOcust 7-1313)  
Admin. Officer: Charles Wheeler R&O

**COVEL MFG. CO.**  
P. O. Box 116, Graham Ave. at North Shore Or., Bantam Harbor, Mich. (Tel. WAInut 6-6157)  
Purch. Agent: J. E. Schaefer  
Sales Mgr.: Elmer A. Hafp

**COX & CO., INC.**  
115 E. 23rd St., New York 10, N. Y. (Tel. ORegon 4-4727)  
Purch. & Prod. Mgr.: Edward Kraft  
Dir.-Sales: Herbert M. Brusman

**COX INSTRUMENTS DIV., GEORGE L. NANKERVIS CO.**  
15300 Fullerton, Detroit 27, Mich. (Tel. VErmont 8-5780)  
Purch. Agent: R. I. Pieti  
Sales Mgr.: Robert Yung CO, TS

**CRAIG SYSTEMS, INC.**  
360 Merrimack St., Lawrence, Mass. (Tel. MURdock 8-6961)  
Oir.-Purch.: Joseph L. Frost  
Buyers: Miss Mildred Kazar & Barry Barker  
Dir.-Sales Engr.: Perry L. Nies GS

**CRAMER CONTROLS CORP.**  
Centerbrook, Conn. (Tel. SOutH 7-8255)  
Purch. Agent: R. W. Williams  
V. P. & Oir.-Sales: W. H. Armstrong GS

**CRANE CO.**  
836 S. Michigan Ave., Chicago 5, Ill. (Tel. WA 2-3123)  
Mgr.-Chem. Mdsq.: J. E. Bradbury GS, GH

**CRANE CARRIER CORP.**  
1150 N. Peoria, Tulsa, Okla. (Tel. LUther 3-5133)  
V. P.-Purch.: W. T. Barber  
Gen. Sales Mgr.: William Shames GS, GH

**CRANE PACKING CO.**  
6405 Oakton St., Morton Grove, Ill. (Tel. ORchard 4-0100)  
Purch.: Victor Gargleth  
Buyers: William Parlette & Harry Schnur  
V. P.-Sales: V. E. Varhees

**CRATEX MFG. CO.**  
1600 Rollins Rd., Burlingame, Calif. (Tel. OXFord 7-1600) MM

**CRESCENT ENGRG. & RESEARCH CO.**  
5440 N. Peck Rd., El Monte, Calif. (Tel. GIlbert 4-0528)  
Purch. Agent: J. Wackerman  
Sales Mgr.: Scott B. Linn PS, GS, GE, CO, TS, TR

**CROLL-REYNOLDS CO. INC.**  
759 Central Ave., Westfield, N. J. (Tel. AD 2-4200)  
Purch. Agent: C. D. Van Duzer R&D

**CROMER MFG. & ENGRG., INC.**  
2138 E. 88th St., Los Angeles 2, Calif. (Tel. LUdlow 2-5383)

Purch. Agent: Mildred Hilgardner  
Plt. Supt.: Darrel L. Sewart  
V. P.-Chg. Sales: Harry S. Green MF, PS, GS, GH

**CROWN & KNOWLES CORP.**  
93 Grand, Worcester, Mass. (Tel. PL 3-5431)  
Purch. Agent: Joseph J. Benoit  
Mgr.-Special Mfg. Dept.: R. J. McGivney MF

**CRONAME INC.**  
6281 Howard, Chicago 48 (Niles), Ill. (Tel. SPring 4-2100)  
Dir.-Purch.: Arthur J. Dahlgren  
V. P.-Sales: Anthony F. Nasek MM

**CROSBY LABORATORIES, INC.**  
299 Robbins Lane, Syosset, N. Y. (Tel. WElls 1-3191)  
Purch. Agent: Samuel George  
Liaison Engr.: Franklin J. White R&D

**CROUSE-HINDS CO.**  
Wolf & 7th North Sts., Syracuse, N. Y. (Tel. GR 4-8411)  
Purch. Agent: John Link  
Asst. Purch. Agents: Paul Billy, Frank Eagan, Robert Gardner, Floyd Spaulding  
Mgr.-Procurement: M. D. Law  
V. P.-Sales: E. R. Manesmith GS

**CROWN CONTROLS CO., INC.**  
40-44 S. Washington, New Bremen, O. (Tel. 2311)  
Dir.-Purch.: Harry Gilbert  
Contract Sales Mgr.: Ernest Jameson GS, GH

**CROWN MFG. CORP.**  
33 Pequot Ave., New London, Conn. (Gl 2-4325)  
Office Mgr.: Harry Ali  
Treas.: T. Kelly Parker MM

**CRUCIBLE STEEL CO. OF AMERICA**  
P. O. Box 2518, Oliver Bldg., Pittsburgh 30, Pa. (Tel. ATlantic 1-3800)  
Dir. Purch.: R. O. Bridge  
V. P.-Sales: G. W. Stamm MF, WN, MM

**CRYGAL-X CORP.**  
112 W. Lenni Rd., Lenni Mills, Pa. (Tel. GLabe 9-1000)  
Sales Mgr.: W. H. Seiler WN, MM

**CUBIC CORP.**  
5575 Kearny Villa Rd., San Diego 11, Calif. (Tel. BRowning 7-6780)  
Oir.-Purch.: John C. Buchan  
Buyers: George Oatsan & Gussie Seeley  
Sales Mgr.: Donald E. Root TR

**CUMMINS ENGINE CO., INC.**  
1000 Fifth St., Columbus, Ind. (Tel. ORxel 2-7211)  
Gen. Purch. Agent: R. W. McNealy  
Asst. Gen. Purch. Agent: J. A. Beaman  
V. P.-Sales: C. R. Ball GS

**JAMES CUNNINGHAM SON & CO., INC.**  
33 Litchfield, Rochester 8, N. Y. (Tel. BAKer 5-7240)  
Purch. Agent: James Elliott  
Sales: Peter F. Cunningham  
Chief Engr.: A. W. Vincent GS, CO, TS, TR

**CUNO ENGRG. CORP., THE**  
S. Vine St., Meriden, Conn. (Tel. BEverly 7-5541)  
Purch. Agent: Fred Gagnier  
V. P.-Sales: Walter Holder MF, WN, PS, GS, GH, GE, CO, TR

**CURTIS AUTOMOTIVE DEVICES, INC.**  
P. O. Box 297, Westfield, Ind. (Tel. 3-2415)  
Purch.: Dale Stevens  
V. P.-Sales: E. H. Hostettler PS, GS, GH

**CURTIS UNIVERSAL JOINT CO., INC.**  
5A Birnie Ave., Springfield 7, Mass. (Tel. RE 7-0281)  
Sales: T. B. Cavanaugh  
Purch.: R. E. Curtis MM

**CURTISS-WRIGHT CORP.**  
Valley Blvd., Wood-Ridge, N. J. (Tel. WEbster 3-0800)  
Chrm. & Pres.: Roy T. Hurley

**CURTISS-WRIGHT CORP., ELECTRONICS DIV.**  
631 Central Ave., Carlstadt, N. J. (Tel. GENEva 8-4000)

CODING  
Missile Frame MF  
Warhead & Nose Cone WN  
Propulsion System PS  
Ground Support GS  
Ground Handling GH  
Guidance Equipment GE  
Checkout Equipment CO  
Test Equipment TS  
Tracking & Telemetering TR  
Research & Development R&D  
Materials & Metals MM

# ... purchasing directory cur—dia

**Purch. Mgr.:** F. L. Nicholls  
**Buyer-Sheet Metal:** John Kroll  
**Buyer-Subcontract:** C. D. Post  
**Buyer-Resistors, Relays, Rheostats:** C. Guerriere  
**Buyer-Tubes, Rectifiers, Knobs, Switches:** R. Cucci  
**Buyer-Machined Parts, Gears, Raw Materials,**  
**Plating & Finishing:** A. Protono  
**Off.-Sales:** Charles O. Cory  
**PS, GS, GE, CO, TS, TR**

**CURTISS-WRIGHT CORP., INDUSTRIAL & SCIENTIFIC PRODUCTS DIV.**  
 P. O. Box 110, Princeton, N. J. (Tel. SWinburne 9-0500)  
**Supvr.-Purch.:** V. L. Croal  
**Gen. Mgr.-Sales:** H. S. Bamford  
**GS, GH, GE, CO, TS, TR**

**CURTISS-WRIGHT CORP., MARQUETTE DIV.**  
 1145 Galewood Dr., Cleveland 10, O. (Tel. GLenville 1-4800)  
**GS, GH, MM**

**CURTISS-WRIGHT CORP., PRINCETON DIV.**  
 P. D. Box 110, Princeton, N. J. (Tel. SWinburne 9-0500)  
**Purch. Agent:** Victor Croal  
**Mgr.-Radiographic Sales:** James Commins  
**Mgr.-Ultrasonic Sales:** William F. Smith  
**TS**

**CURTISS-WRIGHT CORP., PROPELLER DIV.**  
 Caldwell, N. J. (Tel. CApital 6-2540)  
**Mgr.-Purch.:** W. B. Thompson  
**Purch. Agent:** C. V. Cross  
**Sales Mgr.:** H. S. Robbins  
**PS**

**CURTISS-WRIGHT CORP., RESEARCH DIV.**  
 Quehana, Pa. (Tel. AMherst (Frenchville) 3-4711)  
**Purch. Agent:** D. Bottenus  
**Asst. Purch. Agent:** F. B. McBride  
**Buyers:** J. Auman & D. Sickrich  
**Sales Mgr.:** A. M. Weis  
**PS, GH, R&O**

**CURTISS-WRIGHT CORP., SANTA BARBARA DIV.**  
 P. O. Box 689, Santa Barbara, Calif. (Tel. WOODland 7-3411)  
**Off.-Purch.:** P. J. Canavan  
**MF, GS, TS, R&O**

**CURTISS-WRIGHT CORP., SOUTH BEND DIV.**  
 701 W. Chippewa Ave., South Bend, Ind. (Tel. ATLantic 9-7192)  
**Mgr.-Purch.:** G. R. Quilhot  
**Chief Buyer:** J. L. LaVine  
**Gen. Sales Mgr.:** Robert Campello  
**MF, WN, GS, GH, MM, R&O**

**CURTISS-WRIGHT CORP., UTICA DIV.**  
 50500 Mound Rd., Utica, Mich. (Tel. REPUBLIC 2-2111)  
**Purch. Mgr.:** A. T. Holland  
**Asst. Sales Offr.:** G. S. Moule

**CURTISS-WRIGHT CORP., WRIGHT AERONAUTICAL DIV.**  
 Wood-Ridge, N. J. (Tel. PRescott 7-2900)  
**Dir.-Purch.:** James R. Donahue  
**Off.-Sales:** J. V. Miccio  
**PS, R&O**

**CURTISS-WRIGHT ELECTRONICS DIV., IMI BRANCH**  
 P. O. Box 8324, 4401 Lunada S. E., Albuquerque, N. M. (Tel. AMherst 8-8791)  
**Purch. Agent:** H. Westcott  
**Branch Mgr.:** John F. Quirk  
**Branch Sales Mgr.:** Victor V. Myers  
**GS, CO, TS, TR, R&O**

**CUSHMAN PRECISION INDUSTRIES**  
 262 Alexander St., Princeton, N. J. (Tel. WAInut 1-7008)  
**Dir.-Purch.:** Irving Gemmill  
**Pres.:** Robert H. Cushman  
**TS, TR, R&O**

**CUSTOM COMPONENTS, INC.**  
 P. D. Box 248, Caldwell, N. J. (Tel. CALDwell 6-3403)  
**Sales:** Harold I. Danziger  
**TR**

**CUTLER METAL PRODUCTS CO.**  
 1025 Line St., Camden, N. J. (Tel. WOODlawn 3-1060)  
**V. P.-Purch.:** Irving Shipkin  
**Pres.:** Harry H. Cutler

**CUTLER-HAMMÉ INC.**  
 212 N. 12th St., Milwaukee 1, Wisc. (Tel. BRoadway 1-7800)  
**Off.-Purch.:** B. M. Harter  
**Purch. Analysts:** C. N. Harwood  
**Buyers:** J. A. Twet, J. R. Leedom, W. L. Gaulke  
**V. P.-Mktg.:** J. M. Cook  
**WN, GS, GH, CO, TS**

**CYCLE TRANSFORMER CORP.**  
 356 Glenwood Ave., East Orange, N. J. (Tel. ORange 4-0731)  
**Purch. Agent:** J. U. Dion  
**Chief Engr.:** H. Edgar Snow  
**Sales Engr.:** Paul M. Brubaker  
**GS, GE, CO, TS, TR**

**OBM RESEARCH CORP.**  
 Stoddard Bldg., Atlantic Ave., Cocoa Beach, Fla.

(Tel. SUNset 3-2438)  
**Mgr.-Purch. Dept.:** Cliff E. Mattox  
**TS, TR, MM, R&O**

**OK MFG. CO.**  
 5059 S. Kedzie, Chicago 32, Ill. (Tel. RE 7-3311)  
**Purch. Agent:** Ted Kwansnik  
**Sales Mgr.:** John Ferdinandsen  
**MF, PS, GS, GH**

**O & R, LTD.**  
 402 E. Gutierrez St., P. O. Box 1500, Santa Barbara, Calif. (Tel. WOODland 5-4511)  
**Purch. Agent:** C. E. Schaefer  
**V. P.-Purch.:** E. D. Sperry  
**Sales Mgr.:** J. A. Moseley  
**PS, GS, GE, CO, TS, TR**

**O & R PILOT PLANTS INC.**  
 Water St., Hazardville, Conn. (Tel. Riverview 9-8303)  
**Off.-Sales:** M. Mead  
**Group Leaders:** H. S. Schnitzer & S. B. King  
**MM**

**Q. S. D. MFG. CO., THE**  
 2964 Whitney Ave., Hamden, Conn. (Tel. ATwater 8-1678)  
**Wks. Mgr. & Secy.:** William J. Devin  
**MF, PS, GS**

**DAGE ELECTRIC CO., INC.**  
 67 N. 2nd St., Beach Grove, Ind. (Tel. STATE 6-0458)  
**Purch. Agent:** Roger Mays  
**Gen. Mgr.:** Calvin J. Zehr  
**GE, TR**

**DAGE TELEVISION DIV., THOMPSON RAMO WOODRIDGE, INC.**  
 West 10th St., Michigan City, Ind. (Tel. TR 4-3251)  
**Purch. Agent:** W. E. Dillon  
**GS, TR, R&O**

**HAHLSTROM METALLIC DOOR CO.**  
 443 Buffalo St., Jamestown, N. Y. (Tel. 7991)  
**Dir.-Purch.:** Henry N. Ericson  
**V. P.-Sales:** Carl T. Bergstrom

**DAKOTA ENGRG., INC.**  
 4315-4317 Sepulveda Blvd., Culver City, Calif. (Tel. TEXas 0-7983)  
**Sales Mgr.:** Betty Boundy  
**MF, PS, GS, GH, GE, TR**

**DALE PRODUCTS, INC.**  
 P. O. Box 136, Columbus, Nebr. (Tel. LOCust 4-3131)  
**Purch. Agent:** Wallace Brunken  
**V. P.-Sales:** Dan Geeding  
**MF, WN, PS, GS, GH, GE, CO, TS, TR**

**OALMO VICTOR CO., DIV.-TEXTRON INC.**  
 1515 Industrial Way, Belmont, Calif. (Tel. LYtell 1-1414)  
**Purch. Agent:** Ralph Brown  
**Supt.-Outside Procurement:** Bill Wurfer  
**Buyer-Electronic Components:** Mike Lichtenstein  
**Buyer-Electrical Supp.:** Bearings: Hal Amberg  
**Buyer-Maintenance, Machine Tools, Equip.:** Al Viano  
**Buyer-Stationary, AN Hardware & Fittings, Raw Materials:** Ken Irwin  
**Off.-Sales:** George C. Stewart  
**MF, WN, PS, GS, GE, CO, TS, TR**

**OALMORE CORP.**  
 47 Prospect St., Woburn, Mass. (Tel. WELLS 3-5390)  
**Purch. Agent:** R. A. Joyce  
**MF, WN, PS, GS, GE, TR**

**DALMOTOR DIV., YUBA CONSOLIDATED INDUSTRIES, INC.**  
 1375 Clay St., Santo Clara, Calif. (Tel. CHerry 9-9414)  
**Purch. Agent:** H. Woltraven  
**Sales Mgr.:** J. Booth  
**GS, GH, GE, CO, TS, TR, R&O**

**DALWELD CO. INC.**  
 15 Bertel Ave., Mt. Vernon, N. Y. (Tel. MDunt Vernon 4-8698)  
**Pres.:** Jerry Robinson  
**MM**

**DAMASCUS TUBE CO.**  
 P. O. Box 71, Greenville, Pa. (Tel. TRANSfer, Pa., Mitchell 6-1500)  
**Purch. Agent:** J. M. Thompson  
**Sales Mgr.:** Walter J. Erdell  
**MM**

**DAMP-CHASER, INC.**  
 1440 Ridgewood Blvd., Hendersonville, N. C. (Tel. OXFord 3-8271)  
**Purch.:** B. Colton  
**Sales Mgr.:** O. Jack Buckley  
**MM**

**OANBURY CENTERLESS GRINDING CO.**  
 Rt. 7, Sugar Hollow Rd., Oanbury, Conn. (Tel. PI 3-5525)  
**Gen. Mgr.:** George P. Valluzzo  
**Office Mgr.:** Anthony F. Asmar  
**MM**

**C. R. DANIELS, INC.**  
 Daniels, Md. (Tel. ELlicott City 1200)  
**Purch. Agent:** D. H. Kelley

**Buyers:** W. L. Young, F. J. Trumbour & J. Russell  
**V. P.-Sales:** W. E. Carson  
**GS, GH, TR**

**DANLY MACHINE SPECIALTIES, INC.**  
 2100 S. Laramie Ave., Chicago 50, Ill. (Tel. BISHop 2-1800)  
**Purch. Agent:** Paul R. Fields  
**Asst. Purch. Agent:** Donald McGibbon  
**Buyer:** William Gardner  
**V. P.-Press Sales:** D. R. Oonly  
**V. P.-Sales, Die Makers Supp.:** R. E. Danly  
**MF, WN, PS, GS, GH, TS**

**DANTE ELECTRIC MFG. CO.**  
 Marne Park, Bantam, Conn. (Tel. LITCHfield, JORDan 7-5307)  
**Gen. Mgr.:** Joseph J. Dante

**OARCOIO CO., INC., THE**  
 145 6th Ave., New York 13, N. Y. (Tel. ALgonquin 5-1393)  
**Gen. Mgr.:** Peter J. Digilio  
**MF, PS**

**DARLING VALVE & MFG. CO.**  
 Foot of Walnut, Williamsport, Pa. (Tel. 3-6121)  
**Off.-Sales:** D. F. Soble  
**Sales Admin. Mgr.:** H. B. Foster

**DARNELL CORP. LTD.**  
 37-28 61st St., Woodside 77, N. Y. (Tel. HAVemeyer 4-3717)  
**Sales Mgr.:** A. L. Foster  
**Div. Sales Mgr.:** R. J. Geberth  
**GH**

**DATA INSTRUMENTS DIV.-TELECOMPUTING CORP.**  
 12838 Saticoy St., North Hollywood, Calif. (Tel. STanley 7-8181)  
**Purch. Agent:** Jim Newton  
**Dir.-Sales:** Robert E. Poole  
**CO, TS, TR, R&O**

**DATA-CONTROL SYSTEMS INC.**  
 39 Rose St., Danbury, Conn. (Tel. PIONEer 3-0241)  
**V. P.-Operations:** W. E. Estelle  
**Sr. Buyer:** Joseph Rowlands  
**Acting Sales Mgr.:** Robert J. Jeffries  
**GS, GH, GE, CO, TS, TR, R&O**

**DATASCAN INC.**  
 48 North Rd., Little Falls, N. J. (Tel. CL 6-0077)  
**Dir.-Purch.:** Mrs. W. Morris  
**GS, CO, TS**

**DATEx CORP.**  
 1307 S. Myrtle Ave., Monrovia, Calif. (Tel. ELIot 9-5381)  
**Chief Buyer:** Richard V. Ireland  
**Buyer:** J. P. Ainsworth  
**V. P. & Sales Mgr.:** John W. Bodnar  
**GS, GE, CO, TS, TR, R&O**

**OATRAN ELECTRONICS, DIV.-MID-CONTINENT MFG., INC.**  
 1836 Rosecrans Ave., Manhattan Beach, Calif. (Tel. OSborne 5-7131)  
**Purch. Agent:** Robert E. Errington  
**Gen. Mgr.:** Allen J. Edwards  
**Chief Engr.:** Richard E. George  
**GS, CO, TS, TR**

**DAVEN CO., THE**  
 Rt. 10, Livingston, N. J. (Tel. WYman 2-4300)  
**Dir.-Purch.:** G. H. Newman  
**Buyers:** A. M. Watkins, M. H. Scherr & I. Valentine  
**Sales Mgr.:** E. L. Grayson  
**GS, GE, CO, TS, TR, R&O**

**DAVENPORT MFG. CO.**  
 1713 N. Ashland Ave., Chicago 22, Ill. (Tel. DICKens 2-5620)  
**Treas.:** A. W. Davenport  
**TS, R&O**

**DAVISON MFG. CO., INC.**  
 2223 Ramona Blvd., West Covina, Calif. (Tel. EDgewood 7-7281)  
**Purch. Agent:** O. A. Kidwell  
**Sales Mgr.:** L. Van Valkenburg  
**GS, GE, TS, R&O**

**DAVIS INSTRUMENTS**  
 47 Halleck St., Newark, N. J. (Tel. HUmboldt 2-3660)  
**Purch. Agent:** C. Freeman

**DAVISON CHEMICAL CO.**  
 Erwin, Tenn. (Tel. ERwin 2-1721)  
**Purch. Agent:** A. Price  
**Dir.-Sales:** T. C. Runion  
**MM**

**J. H. DAY CO., THE, DIV.-THE CLEVELAND AUTOMATIC MACHINE CO.**  
 4932 Beech St., Cincinnati 12, Ohio (Tel. RE 1-5300)  
**Purch. Agent:** A. W. Niederhelman  
**Sales Mgr.:** Jack Oiltz  
**V. P.-Sales:** Martin Miller

**OAY-RAY PRODUCTS, INC.**  
 1133 Mission St., South Pasadena, Calif. (Tel. MURray 2-1189)  
**Secy.-Treas.:** Mrs. W. O. Adams

**OAYSTROM INSTRUMENT, DIV.-DAYSTRDM, INC.**  
 Archbald, Pa. (Tel. JERmyn 1100)

Dir.-Purch.: A. J. Manuel  
V. P.-Sales & Contracts: Howard J. Warnken  
MF, WN, PS, GS, GE, TR

**DAYSTRDM PACIFIC DIV.-DAYSTRDM, INC.**  
9320 Lincoln Blvd., Los Angeles 45, Calif. (Tel. DRchard 4-7100)  
Purch. Agent: Bernard A. Thompson  
Sr. Buyers: Richard E. Sexton & Rex Ayares  
Dir.-Sales: J. T. Coirms  
GE

**DAYSTROM TRANSCIDIL DIV., DAYSTRDM, INC.**  
Worcester, Montgomery County, Pa. (Tel. JUna 4-2421)  
Dir.-Sales: G. Barnes Stevenson

**DAYTON AIRCRAFT PRDDUCTS, INC.**  
P. D. Box 8007, 812 N. W. First St., Ft. Lauderdale, Fla. (Tel. JAckson 3-5451)  
Dir.-Purch.: H. A. Cline  
Dir.-Engr.: A. J. Benkoczy  
Dir.-Sales: J. H. Sampson  
GE, TS, TR, R&D

**DAYTON AVIATION RADID & EQUIPMENT CDRP.**  
Box 258, Troy, Ohio (Tel. FEderal 2-5513)  
Purch. Agent: Earl Bolger  
Military Mgr.: Ralph D'Connar  
Sales Mgr.: E. Polonsicy  
GE, TS, R&D

**DAYTON RUBBER CO., THE**  
2345 Riverview Ave., Dayton 1, Ohio (Tel. CRestview 8-2666)  
Dir.-Purch.: L. J. Keyes  
Buyers: R. P. Heist, R. A. Greenwood, J. B. Cochenour & B. Rhines  
WN, GS, MM, R&D

**DAYTRONIC CORP.**  
216 S. Main St., Dayton 2, D. (Tel. Baldwin 3-7618)  
Prod. Mgr.: W. R. Winger  
Chief Engr.-Purch.: R. M. Kinkoad  
Dir.-Sales: M. M. Moorhead, Jr.  
PS, CO, TS

**DEAN & BENSON RESEARCH, INC.**  
16 Richmond St., Clifton, N. J. (Tel. GRegory 1-1600)  
Purch. Agent: Robert Bridge  
Sales Mgr.: Richard Portofee  
Plant Mgr.: Joseph Micko  
GS, GH, GE, TS, R&D

**DEAN PRDDUCTS, INC.**  
616 Franklin Ave., Brooklyn 38, N. Y. (Tel. ST 9-5400)  
V. P.-Sales: Ruben Roskin

**DEARBORN ELECTRONIC LABS.**  
1421 N. Wells St., Chicago, Ill. (Tel. WH 3-2412)  
Purch. Agent: Gus Stomatos  
Gen. Mgr.: Roy Simpson  
Sales Mgr.: Bill Cox  
GE, TR, R&D

**DEBELL & RICHARDSON INC.**  
Water St., Hazardville, Conn. (Tel. Riverview 9-8301)  
Pres.: John M. DeBell  
Sr. Group Leader: Arthur J. Warner  
TS, MM, R&D

**DECISION INC.**  
4602 Red Bank Rd., Cincinnati 27, D. (Tel. BRamble 1-3200)  
Pres.: Oliver P. Bordes  
R&D

**DECKER CORP., THE**  
45 Monument Rd., Bala-Cynwyd, Pa. (Tel. GARfield 5-2500)  
Dir.-Purch.: A. Richard Newhouse, Jr.  
Dir.-Sales: Neil B. Harding  
V. P.-Sales: Thomas W. Spirito  
WN, PS, GE, TS, TR, R&D

**DEE ELECTRIC CO.**  
101 N. Pauline St., Chicago 22, Ill. (Tel. BELmont 5-5151)  
Pres.: W. DeVenter  
Purch. Agent: G. Porrieh

**JUR-AMSCO CDRP., ELECTRDNIC SALES DIV.**  
5-01 Northern Blvd., Long Island City 1, N. Y. (Tel. RAvenswood 1-4009)  
Purch. Dir.: Peter Heaney  
Indst. Sales Mgr.: N. J. Goldman  
GS, GE, CD, TR

**DEL ELECTRDNICS CDRP.**  
21 Homestead Ave., Mt. Vernon, N. Y. (Tel. DWens 9-3232)  
P.-Engr.: H. J. DiGiovanni  
P.-Research: R. Koufman  
MM, R&D

**DELAVAN MFG. CO.**  
11 4th St., West Des Moines, Iowa (Tel. CR 4-1561)  
Purch. Agent: W. E. Stroeber  
Buyers: Robert Heles & Charles D'Brien  
Gen. Sales Mgr.: J. D. Hopkins  
PS

**DELCO RADID DIV.-GENERAL MDTDRS CDRP.**  
80 E. Firmin, Kokomo, Ind. (Tel. GLadstone 2-8211)  
Purch. Agent: R. Hill, Jr.  
Dir.-Sales & Engr.: H. M. Stelz  
Gen. Sales Mgr.: D. A. Sondberg  
GS, GE

**DELCO-REMY DIV., GENERAL MDTDRS CDRP.**  
101 Columbus Ave., Anderson, Ind. (Tel. 5581)

Dir.-Purch.: F. E. Boze  
Dir.-Sales & Engr.: J. H. Bolles  
GS, GE, CO, R&D

**DELL OPTICS CO., LTD.**  
327 55th St., West New York, N. J. (Tel. UN 7-1599)  
Dir.-Purch. & Sales: Peter F. Tralongo  
MM, R&D

**DEL'S TUMBLING SERVICE**  
232 N. Rosemary St., Dearborn 6, Mich. (Tel. LDgan 2-5537)  
Pres.: D. W. Dyer

**DELSEN CORP.**  
719 W. Broadway, Glendale 4, Calif. (Tel. CHapman 5-6126)  
Purch. Agent: H. A. Schnaeckel  
Sales Mgr.: Nils G. Strid  
TS, R&D

**DELTA CHEMICAL WRKRS, INC.**  
23 W. 60th St., New York 23, N. Y. (Tel. PLaza 7-6317)  
Asst. Dir.-Purch.: P. K. Mossey  
Comptroller: Max Lendner  
MF, WN, PS, GS, GH, GE

**DELTA DESIGN ENGINEERS, INC.**  
3163 Adams Ave., San Diego 16, Calif. (Tel. AT 3-3193)  
Pres.: Trigg Stewart  
V. P.: David P. Comey  
Sales Mgr.: D. H. Evans, Jr.  
TS

**DELTA PRDDUCTS DIV.-AIR ACCESSORIES, INC.**  
1400 Henderson St., P. D. Box 1440, Ft. Worth, Texas (Tel. EDison 5-3214)  
Chief-Materials: Donald M. Miles  
Purch. Agent: Thomas Swann  
Asst. Purch. Agents: Morvin Thompson & Richard Long  
Sales Mgr.: Roy Gaudreau  
GS, GH, MM

**DELUXE METAL PRODUCTS CO.**  
Warren, Pa. (Tel. 1791)  
Purch. Agent: V. E. Finzer  
Gen. Sales Mgr.: R. H. Hauser  
GH

**DEMING CO., THE**  
South Broadway, Salem, Ohio  
V. P.-Sales: R. F. Webber  
Sales Prom. Mgr.: G. E. Trisler  
GS

**DEMORNAV-BONARDI**  
780 S. Arroyo Pkwy., Pasadena, Calif. (Tel. SYcamore 2-4142)  
Dir.-Purch.: Herbert J. McCann  
Sales: M. G. Ekstrom  
GS, GH, CO, TS, TR, R&D

**DENISON ENGR. DIV., AMERICAN BRAKE SHOE CO.**  
1160 Dublin Rd., Columbus 16, D. (Tel. HUDson 8-1191)  
Dir.-Purch.: G. T. Hoys  
Gen. Sales Mgr.: R. H. Krepps  
Dir.-Sales: Denison Neale  
GS, GH, TS

**DENNIS CHEMICAL CO.**  
2701 Popin St., St. Louis 3, Mo. (Tel. PRespect 6-1868)  
Purch. Agent: L. R. Pope  
Sales Mgr.: Milton Corlie  
MM, R&D

**DERINGER METALLURGICAL CDRP.**  
8131 Monticello Ave., Skokie, Ill. (Tel. DRchard 5-1030)  
Pres.: Edwin F. Allison  
Exec. V. P.: J. Porter Duell, Jr.  
Purch. Agent: Quintin E. Wiersum  
Sales Mgr.: Paul H. Loeffler  
MM

**A. L. DERY & SDNS TDDL & DIE CO.**  
Main St., Pine Meadow, Conn. (Tel. FRontier 9-4951)  
Sr. Partner: Aldege L. Dery  
Jr. Partner: Edmund E. Dery  
WN, GS, GH, GE, CO, TS, TR

**DESIGNERS FDR INDUSTRY, INC.**  
4241 Fulton Pkwy., Cleveland, Ohio

**DESMOND-STEPHAN MFG. CO., THE**  
Urbana, Ohio

**DESMATIC PRDDUCTS, INC.**  
1109 W. Broad St., Falls Church, Va. (Tel. JEFFerson 3-9600)  
Purch. Agent: M. W. Reed  
Exec. V. P.-Sales: Gunnar C. F. Asker  
GS, TS, R&D

**DESTRON CD.**  
1321 Florwood Ave., Torrance, Calif. (Tel. FA 8-0579)  
Gen. Mgr.: D. E. St. John  
GS, GE, CD, TS, TR

**DETRIX CHEMICAL INDUSTRIES, INC.**  
Box 501, Detroit 32, Mich. (Tel. TDWnsend 8-8600)  
V. P.-Sales: W. F. Newbery  
GS, GH, MM

**DETRDIT DIESEL ENGINE DIV.-GENERAL MDTDRS CDRP.**

13400 W. Duter Dr., Detroit 28, Mich. (Tel. KE 1-7100)  
Mgr.-Purch. & Prod.: John E. McKenna  
Gen. Sales Mgr.: Robert E. Hunter  
PS

**DETROIT HDIST & MACHINE CO.**  
8201 Morrow St., Detroit 11, Mich. (Tel. TR 5-8344)  
Purch. Agent: J. S. Kolosa  
Sales Engr.: V. A. Fulton  
GH

**DETRDNIC INDUSTRIES**  
33840 Plymouth Rd., Livonia, Mich. (Tel. GA 4-4700)  
Dir.-Purch.: C. Miller  
Dir.-Sales: J. M. Wheeler  
GE, TS, R&D

**DEUTSCH FASTENER CDRP.**  
14504 S. Figueroa St., P. D. Box 61072, Los Angeles 61, Calif. (Tel. DAVIS 3-6640)  
Purch. Agent: A. Hicks  
V. P. & Sales Mgr.: B. S. Souter  
MF, GS

**DEVCO ENGR. INC.**  
Pier Lane West, Caldwell, N. J. (Tel. CA 6-0610)  
Purch. Agent: G. Schmidt  
Sales: C. Allen  
MF, WN, PS, GH, GE, CD, TS, TR

**DEVCDN CDRP.**  
Endicott St., Danvers, Mass. (Tel. SP 4-1990)  
Dir.-Sales: E. L. Hall  
MM

**DEVELOPMENT ENGR. CO., INC.**  
9 Cross St., Norwalk, Conn. (Tel. VDUnter 6-7720)  
Chief Engr.: Richard L. Seidman

**DEVICE DEVELOPMENT CDRP.**  
428 Boston Post Rd., Weston 93, Mass. (Tel. TW 3-0300)  
Dir.-Purch.: H. Stacey  
Dir.-Sales: R. B. Holt  
GE, TR, R&D

**DEVILBISS CO., THE**  
300 Phillips Ave., Toledo, D. (Tel. GREENwood 4-5411)  
Mgr.-Adv. & Sales Prom.: H. A. Longe  
MF, PS, GS, GH

**DEWALT DIV., AMERICAN MACHINE & FDNDRY CO.**  
Fountain Ave., Lancaster, Pa. (Tel. EXpress 3-5831)  
V. P. & Gen. Sales Mgr.: Truman Jones  
Purch. Agent: Frank Zecher  
MM

**DEWITT DEVELOPMENT CO.**  
3008 W. 127th St., Blue Island, Ill. (Tel. FULton 8-2480)  
Pres.: B. G. DeWitt  
MM

**DIAL PRODUCTS CO.**  
9 Ave. "E", Bayonne, N. J. (Tel. HELmlock 7-0720)  
V. P.-Purch.: Paul Schechter  
Sales Mgr.: E. Kay  
PS, GS, GH, GE

**DIALIGHT CORP.**  
60 Stewart Ave., Brooklyn 37, N. Y. (Tel. HYacinth 7-7600)  
Purch. Agent: E. S. Forman  
Sales: R. E. Greene  
GS, GH, GE, CD, TS, TR

**DIAMOND ANTENNA & MICRDWAVE CDRP.**  
7 North Ave., Wakefield, Mass. (Tel. CRYstal 9-4650)  
Purch. Agent: William L. Page  
Asst. Purch. Agent: William Rand  
Gen. Mgr.-Sales: Albert S. Hovannesian  
WN, PS, GE, CD, TS, TR

**DIAMOND DRILL CARBDN CD., THE**  
244 Madison Ave., New York 16, N. Y. (Tel. LEXington 2-3006)  
Sales: Bernard Rhodes  
MM

**DIAMONITE PRDDUCTS MFG. CO.**  
Shreve, Ohio (Tel. JD 7-4211)  
Dir.-Purch.: R. J. Uhl  
Sales Engr.: R. C. Mulligan  
MM

**DI/AN CNDRTRLS, INC.**  
40 Leam St., Boston 15, Mass. (Tel. HIGHLands 5-5640)

CODING  
Missile Frame MF  
Warhead & Nose Cane WN  
Propulsion System PS  
Ground Support GS  
Ground Handling GH  
Guidance Equipment GE  
Checkout Equipment CO  
Test Equipment TS  
Tracking & Telemetering TR  
Research & Development R&D  
Materials & Metals MM

# ... purchasing directory dic—edb

- Purch. Agent:** Walter A. Kaminski  
**Tech. Sales Mgr.:** Nathan O. Sokal **GS, CO, TS**
- J. W. DICE CO.**  
16 Highwood Ave., Englewood, N. J. (Tel. LOwell 9-0471)  
**Chief Engr.:** M. Strain  
**Purch. Agent:** E. Franz  
**Sales:** E. Van Ressel **TS**
- DIEHL MFG. CO.**  
1224 Finderne Ave., Somerville, N. J. (Tel. RAndolph 5-2200)  
**Purch. Agent:** F. Boyne  
**V. P.-Sales:** A. R. Booth **GE**
- DILECTRIC MATERIALS CO.**  
5315-17 N. Ravenswood Ave., Chicago 40, Ill. (Tel. LOnghbeach 1-5833)  
**Purch. Agent:** O. C. Muenzer  
**Asst. Purch. Agent:** Charles Kling **MM**
- HENRY G. DIETZ CO., INC.**  
12-16 Astoria Blvd., Long Island City 2, N. Y. (Tel. RAvenswood 6-3347)  
**Pres.:** Henry G. Dietz  
**Secy.:** M. Pheasey **GS**
- OIETZ DESIGN & MFG. CO.**  
Grandview, Mo. (Tel. SOuth 1-7216)  
**Purch. Agent:** L. M. Oietz  
**Sales Mgr.:** E. C. Oietz **GE, TR**
- DIGITRONICS CORP.**  
Albertson Ave., Albertson, N. Y. (Tel. PI 7-5090)  
**Purch. Agent:** Angelo Targia  
**V. P.-Sales:** Eugene Leonard **GS, CO**
- DILECTRIX CORP.**  
Allen Blvd., Farmingdale, L. I., N. Y. (Tel. CHopel 9-7999)  
**Purch. Agent:** M. Petriello  
**Sales Mgr.:** M. Zangrillo **MF, PS, GE, TR**
- W. C. DILLON & CO., INC.**  
14620 Keswick St., Van Nuys, Calif. (Tel. STate 5-3168)  
**Purch. Agent:** Earl O. Roberts  
**Sales Mgr.:** George A. Dillon **TS, MM**
- DIMCO-GRAY CO.**  
207 E. 6th St., Dayton 2, O. (Tel. BAldwin 2-6703)  
**Purch.:** J. O. Gray  
**Sales Mgr.:** C. F. Dearth **MF, PS, GS, GE, CO**
- DINION COIL CO., INC.**  
North St., Caledonia, N. Y. (Tel. KEystone 8-4412)  
**Purch. Agent:** R. S. Eldridge  
**V. P. & Sales Mgr.:** E. J. Holland **GE**
- DIRLYTE CO. OF AMERICA, INC.**  
P. O. Box 747, 1142 S. Main St., Kokomo, Ind. (Tel. GLadstone 2-5688)  
**V. P. & Secy.:** Robert P. Arnett **MF, MM**
- DIT-MCO, INC., ELECTRONICS DIV.**  
911 Broadway, Kansas City 5, Mo. (Tel. HArrison 1-8484)  
**Purch. Agent:** William O. Britt  
**V. P.-Mktg.:** W. W. Hannon **GS, GH, CO, TS**
- DIVCO-WAYNE ELECTRONICS DIV., DIVCO-WAYNE CORP.**  
9701 Reading Rd., Cincinnati 15, Ohio (Tel. POplar 1-0010)  
**Purch. Agent:** T. C. Grote  
**Dir.-Sales:** Gene Rove **GE, TS, TR, R&D**
- DIVERSEY ENGRG. CO.**  
10550 W. Anderson Pl., Franklin Park, Ill. (Tel. GLadstone 1-0200)  
**Purch. Agent:** Walter Kloske  
**Asst. to Pres.:** John Switlock **MF, WN, PS, GS, GH, GE, MM, R&D**
- DIVISION LEAD CO.**  
7742 W. 61st Place, Summit, Ill. (Tel. Chicago—REliance 5-8600)  
**Purch. Agent:** Mary J. Spocck **MM**
- DIXON CORP.**  
19-21 Burnside St., Bristol, R. I. (Tel. CLifford 3-7500)  
**Purch. Agent:** Gerald Almeida  
**V. P.-Sales:** John M. Feeley **MM**
- DOCKENDORFF & CO. INC.**  
606 Lindley St., Bridgeport 6, Conn. (Tel. ED 4-7329)  
**Purch. Agent:** J. M. Dockendorff  
**Sales Mgr.:** W. M. Bacon **MM**
- DODGE MFG. CORP.**  
S. Union St., Mishawaka, Ind. (Tel. BLackburn 9-2421)  
**V. P.-Prod. & Purch.:** Earl Wedlake  
**Dir.-Prod. & Purch.:** Donald Saunter  
**Purch. Agent:** Edwin Rhodes  
**Asst. Purch. Agent:** Clifford Miller
- Steel Buyer:** Clifford Mechling  
**V. P.-Sales:** Harry A. Torson **GS, GH, GE**
- DODGE STEEL CO.**  
6501 State Rd., Philadelphia 36, Pa. (Tel. OEvonshire 2-2200)  
**Purch. Agent:** R. Miller  
**Sales Mgr.:** Morris Neeley
- DOEHLER-JARVIS DIV., NATIONAL LEAD CO.**  
1945 Smead Ave., Toledo 1, Ohio (Tel. CHerry 4-9521)  
**Purch. Agent:** Miss N. DiPersia  
**Mgr.-Sales:** F. W. Burgie **MM**
- DOLGORUKOV MFG. CO.**  
407 Fisher Bldg., Detroit 2, Mich. (Tel. TR 1-6383)  
**Dir.-Sales:** Gregory S. Oolgorukov **R&O**
- DOLINKO & WILKENS, INC.**  
1907 Summit Ave., Union City, N. J. (Tel. UNion 7-6630)  
**V. P.:** Louis Dolinko **GE, TR**
- DOLLIN CORP.**  
600 S. 21st St., Irvington, N. J. (Tel. ESsex 4-3000)  
**V. P.-Sales:** Gordon C. Curry
- DONNER SCIENTIFIC CO.**  
888 Galindo St., Concord, Calif. (Tel. MULberry 2-616)  
**Purch. Agent:** W. H. Burr, Jr.  
**Dir.-Mktg.:** Gene Hopkins **GS, GE**
- DORNE & MARGOLIN, INC.**  
29 New York Ave., Westbury, L. I., N. Y. (Tel. EDgewood 4-3200)  
**Purch. Agent:** J. Escalette  
**Buyer:** O. M. Portocarrero  
**Sales Supvr.:** David L. Ward **GS, GE, TR**
- DORSETT LABS., INC.**  
P. O. Box 862, 401 E. Boyd St., Norman, Okla. (Tel. JEFFerson 4-3750)  
**Secy.:** H. L. Munde  
**Purch. Agent:** O. K. Simpson  
**V. P.-Sales:** O. G. Wantland **TR, R&D**
- DORSEY TRAILER**  
401 Hickman, Elba, Ala.
- DOTY ACOUSTICA ELECTRONIC LABS.**  
Tobychanna, Pa. (Tel. TW 4-8117)  
**Engr.-Purch.:** Jose Masr **GE, TS**
- DOUBLE "E" PRODUCTS CO.**  
208 Standard St., El Segundo, Calif. (Tel. EAstgate 2-2501)  
**Purch. Agent:** Stanley S. Trier  
**Sales Mgr.:** J. S. Trier **PS, GS, GH, GE, CO, TS**
- DOUGLAS AIRCRAFT CO., INC.**  
3000 Deean Park Blvd., Santa Monica, Calif. (Tel. EXbrook 9-9311)  
**Dir.-Materiel:** W. E. Doran  
**V. P.-Sales:** N. Paschall **MF, GS, GH, CO, TS, TR, MM, R&D**
- DOUGLAS MICROWAVE CO., INC.**  
252 E. Third St., Mt. Vernon, N. Y. (Tel. MOnunt 3-6900)  
**Purch. Agent:** Leonard G. Geier  
**Sales Mgr.:** Herbert M. Hendlin **R&D**
- TURNER F. DOW**  
261 Dakridge Or., Rochester 17, N. Y.  
Turner F. Dow
- DOW CHEMICAL CO., THE**  
Midland, Mich. (Tel. MEtrose 6-1000)  
**Dir.-Purch.:** M. E. Lefevre  
**Dir.-Sales:** D. K. Ballman
- \*DOW CORNING CORP.**  
Midland, Mich. (Tel. TEmple 2-2371)  
**Mgr.-Purch. & Stores:** O. R. Coultrip  
**V. P. & Sales Mgr.:** O. D. Blessing **MM**  
\* (See Page 10 for Advertisement)
- DOW-ELCO, INC.**  
1313 W. Dlyptic Blvd., Montebello, Calif. (Tel. RAYmond 3-1288)  
**Pres.:** J. W. Eldridge **GS, GH**
- DOWELL DIV.-THE DOW CHEMICAL CO.**  
P. O. Box 536, Tulsa, Okla. (Tel. RI 2-5501)  
**Chief Purch. Agent:** V. M. Lewis  
**Dir.-Sales:** R. H. Smith
- DOYLE & ROTH MFG. CO., INC.**  
136 S. Twenty Fourth St., Brooklyn 32, N. Y. (Tel. SOuth 8-3800)  
**Purch. Agent:** Richard Zino  
**Sales Mgr.:** Richard S. Hall
- B. F. DRAKENFELD & CO., INC.**  
Box 519, Washington, Pa. (Tel. BAldwin 5-5600)
- Purch. Agent:** F. K. Eakin  
**V. P.-Sales:** Irwin F. Zeiller **MM, R&D**
- DRAYER-HANSON DIV., NATIONAL-U. S. RADIATOR CORP.**  
P. O. Box 2215, Terminal Annex, Los Angeles 54, Calif. (Tel. ANgelus 9-0321)  
**Purch. Agent:** E. E. Petro  
**Sales Mgr.:** I. B. Secord **GS**
- DREMEL MFG. CO.**  
2420 18th St., Racine, Wisc. (Tel. MEtrose 3-8267)  
E. A. Erdman **GS**
- DRESSEN-BARNES CORP.**  
250 Vinedo Ave., Pasadena, Calif. (Tel. RYan 1-0643)  
**Sales Mgr.:** George A. Hall **GS**
- ORESSER ELECTRIC CO.**  
2705 Wight St., Detroit 17, Mich. (Tel. LOrain 8-1855)  
**Purch. Agent:** A. J. Hluylaert  
**Sales Dir.:** O. P. Friedt **GS**
- DRESSER INDUSTRIES, INC.**  
Republic Natl. Bank Bldg., Dallas, Tex. (Tel. RIVERSide 8-6411)  
**Dir.-Purch.:** Robert C. Kelley  
**Asst. Dir.-Purch.:** Robert D. Crane **GS, GH, CO, TS, MM, R&D**
- DRESSER MFG. DIV., ORESSER INDUSTRIES, INC.**  
41 Fisher Ave., Bradford, Pa. (Tel. BRAdford 3131)  
**Acting Purch. Mgr.:** G. G. Thomas  
**Supvr.-Purch.:** W. L. Dawson  
**Sales Mgr.:** George R. Leonard **MF, WN, PS, MM**
- DRESSER-IDECO CO., DIV.-DRESSER INDUSTRIES, INC.**  
875 Michigan Ave., Columbus 8, Ohio (Tel. AXminster 9-2123)  
**Dir.-Purch.:** Leo Wildermuth  
**Asst. Purch. Agent:** E. L. Frey **GS, GH, TR**
- DRIAIRE, INC.**  
132 S. Main St., South Norwalk, Conn. (Tel. TEmple 8-0686)  
**Mgr.-Purch.:** M. S. Miller  
**Mgr.-Prod.:** R. W. Haines  
**Mgr.-Maintenance:** J. Hollis  
**Sales:** J. H. Donovan **MM**
- WILBUR B. ORIVER CO.**  
1875 McCarter Hwy., Newark 4, N. J. (Tel. HUmboldt 2-5550)  
**Purch. Agent:** Edwin J. Looges  
**Asst. Purch. Agent:** Arthur Knittel  
**V. P.-Sales:** Norman P. Narlie **MM**
- DRYOMATIC CORP.**  
806 N. Fairfax St., Alexandria, Va. (Tel. KIng 9-3060)  
**Purch. Agent:** C. E. Wells  
**Sales Mgr.:** Anthony Hass **GS, GH**
- DU-CO CERAMICS CO.**  
Box 278, Saxonburg, Pa. (Tel. FL 2-1511)  
**Pres.:** John J. Duke **MM, R&D**
- M. OUCOMMUN CO.**  
580 Fifth Ave., New York 36, N. Y. (Tel. PLaza 7-2540)  
**Mgr.:** A. G. Stepchuk **GE, CO, TS**
- R. C. DUDEK & CO.**  
407 N. Maple Dr., Beverly Hills, Calif. (Tel. BRAdshaw 2-8097)  
Richard C. Dudek **GS, GE**
- OU KANE CORP.**  
St. Charles, Ill. (Tel. 2300)  
**Purch. Mgr.:** E. E. Swick  
**Purch. Agent:** R. H. Magden  
**Mgr.-Govt. & Contract Div.:** R. W. Robbins **GS, GE, CO, TS, TR**
- DUKES CO., INC.**  
3999 N. 25th Ave., Schiller Park, Ill. (Tel. GLadstone 5-5795)  
**Purch. Agent:** G. Tidd  
**Sales Mgr.:** J. C. Wetter **GS, GH**
- DUMONT AIRCRAFT FITTING CO.**  
1401 Freeman Ave., Long Beach 4, Calif. (Tel. GE 3-4931)  
**Gen. Mgr.:** Harry Pahner  
**Buyers:** Helen Hoffman & Shirley Wedekind  
**Sales Mgr.:** Fritzie Williams **MF, WN, PS, GS, GH, GE, MM**
- DUMONT AVIATION ASSOCIATES**  
1401 Freeman Ave., Long Beach 4, Calif. (Tel. 3-4931)  
**Purch. Agent:** George MacRae  
**Buyer:** Pat Welsh  
**Sales Mgr.:** E. J. Easterbrook **MF, WN, PS, GS, GH, TS, TR**
- OUNBAR-KAPPLER INC.-AIRCRAFT COMPONENTS DIV.**



Island Ave., Batavia, Ill. (Tel. BAtavia 5400)  
 Mgr.-Procurement: E. Ricker  
 Buyer: J. Vanliersburg  
 Sales Mgr., Aircraft Div.: H. M. Lockhart  
 MF, GS, R&D

**OUNHAM-BUSH INC.**  
 West Hartford, Conn. (Tel. CHapel 9-8671)  
 V. P.-Purch.: Frank Carney  
 Purch. Agent: T. Logan  
 V. P.-Sales: J. A. Mulcahey  
 GS, GE

**DUNLAP & ASSOCIATES, INC.**  
 429 Atlantic St., Stamford, Conn. (Tel. FReside  
 8-9271)  
 Treas.: A. M. Miller  
 V. P.: H. E. Blank, Jr.  
 R&D

**M. W. DUNTON CO. INC., THE**  
 No. 7 Goff St., Providence, R. I. (Tel. DExter  
 1-3600)  
 V. P. & Gen. Mgr.: Raymond T. Wilber  
 MM

**DUPTONE CO., INC.**  
 Locust St., Keyport, N. J. (Tel. CDifox 4-2200)  
 Pres.: Stephen Nester  
 V. P.-Purch.: B. Rosenberg  
 MM

**E. I. DU PONT DE NEMOURS & CO. INC.**  
 2537 Nemours Bldg., Wilmington 98, Del. (Tel.  
 PRespect 4-3373)  
 Purch. Agent: E. N. Burlinson  
 Asst. Purch. Agent: W. Blongt  
 Sales: M. N. Nickowitz  
 MM

**E. I. DU PONT DE NEMOURS & CO. INC.,  
 PHOTO PRODUCTS DEF.**  
 Wilmington 98, Del.  
 Dir.-Sales: H. L. Graham  
 TS

**URACOTE CORP.**  
 350 N. Diamond St., Ravenna, O. (Tel. AXminster  
 6-3487)  
 V. P.-Purch.: W. Randle Truog  
 Pres.: John B. Schneller  
 MM, R&D

**URAKOOL, INC.**  
 1010 N. Main St., Elkhart, Ind. (Tel. 3-3160)  
 Purch. Agent: J. B. Witcher  
 Sales & Product Mgr.: V. H. Hoehn  
 GS, GH

**URALITH CORP.**  
 1025 Race St., Philadelphia 7, Pa. (Tel. WAlnut  
 3-1900)  
 Gen. Sales Mgr.: Jack M. Smith  
 MM

**JRALDY CO., THE**  
 Bridge St., Scottsdale, Pa. (Tel. TUrner 7-5100)  
 Purch. Agent: B. W. Lydic  
 Gen. Sales Mgr.: Jack B. Dear

**JRAMARK, INC.**  
 2 Secretary Ave., Port Washington, N. Y. (Tel. Port  
 Washington 7-3322)  
 Purch. Agent: Mrs. Ada P. Schweder  
 V. P.-Sales: Andrew T. Collan

**JRAMETALLIC CORP.**  
 Factory St., Kalamazoo, Mich. (Tel. FI 3-2688)  
 Purch. Agent: Miss Fern Thrall  
 V. P. & Sales Mgr.: Roscoe R. Smith

**JRAMIC PRODUCTS INC.**  
 262-72 74th St., New York 12, N. Y. (Tel.  
 WAlker 5-1644)  
 Purch. Agent: C. Saso  
 Sales Mgr.: H. Schwartz  
 MM

**RANT MFG. CO.**  
 955 N. Buffum, Milwaukee 1, Wisc. (Tel. LOcust  
 2-5035)  
 Purch. Agent: A. M. Jones  
 Sales Mgr.: Robert B. Winkler  
 CO, TS, TR

**REZ PLASTICS DIV., HOOKER CHEMICAL  
 CORP.**  
 990 Wolck Rd., North Tonawanda, N. Y. (Tel.  
 LU 1860)  
 Purch. Mgr.: C. W. Selover  
 Gen. Sales Mgr.: A. W. Hamner, Jr.  
 R&D

**RO SPECIALTY CO., INC.**  
 11 Boston St., Lynn, Mass. (Tel. LYnn 3-3585)  
 Purch. Agent: William I. Frankel  
 Sales Dir.: S. Joseph Hoffman  
 MM

**RCHRO CORP.**  
 2 Centre Ave., Newton 58, Mass. (Tel. OEcatur  
 2-7307)  
 Purch. Agent: Arthur A. Goldberg  
 TR

**RWEC INC.**  
 95 Page Mill Rd., Palo Alto, Calif. (Tel.  
 OAvenport 6-1755)  
 Purch. Agent: Dale D. DeWitt  
 Mgr., Instrument Sales: E. C. Morgan  
 GS, GE, CO, TS, TR

**RNACOR, INC.**  
 0431 Metropolitan Ave., Kensington, Md. (Tel.  
 LLockwood 4-8120)  
 Chief Purch. Agent: P. W. Waymoth  
 Buyer: Henry Veezey  
 MM

**DYNAMETRICS CORP.**  
 N. W. Industrial Park, Burlington, Mass. (Tel.  
 BRowning 2-1600)  
 Mfg. Mgr.: Fred Hugel  
 Buyer & Sub-Contract: Malcolm Winsor  
 Sales Mgr.: John F. Clough  
 GS, CO, TS, R&D

**DYNAMIC CONTROLS CO.**  
 1955 Massachusetts Ave., Cambridge, Mass. (Tel.  
 ELiot 4-3633)  
 Dir.-Purch.: L. J. Oougall  
 Dir.-Sales: J. J. Gano  
 GS

**DYNAMIC CONTROLS CORP.**  
 30 Thomas St., E. Hartford, Conn. (Tel. BU 9-5906)  
 Purch. Mgr.: F. Roth  
 Gen. Mgr.: T. P. Forkas  
 MF, WN, PS, GS, GH, R&D

**DYNAMIC DEVICES, INC.**  
 P. O. Box 843, Denville, N. J. (Tel.  
 MI 2-7083)  
 V. P.-Purch.: John C. Stenberg  
 Pres.: C. E. Kastner, Jr.  
 PS, GS, TS, R&D

**DYNAMIC FILTERS INC.**  
 2100 Howard St., Detroit 16, Mich. (Tel. TASHmo  
 6-4107)  
 Purch. Agent: A. L. Pomaville  
 Dir.-Sales: Ray Okonski  
 PS, TS, R&D

**OYNAMIC GEAR CO., INC.**  
 20 Merrick Rd., Amityville, L. I., N. Y. (Tel. AM  
 4-4788)  
 Purch. Agent: Jacques Edeline  
 Asst. Buyer: Adam Kuby  
 Sales Mgr.: Thomas J. Smith  
 GE, TR, R&D

**OYNAMIC INSTRUMENT CO., INC.**  
 42 Carlton St., Cambridge 42, Mass. (Tel. UN  
 4-7260)  
 Of. Mgr.-Purch.: Dan Shea  
 Chief Engr.: Harvey Paston  
 PS, GE, CO, TS, TR

**DYNAMIC INSTRUMENT CORP.**  
 59 New York Ave., Westbury, L. I., N. Y. (Tel.  
 EDgewood 3-1600)  
 Buyer: Robert J. Messina  
 Gen. Mgr.-Sales: Harold E. Sulger

**DYNAMICS INSTRUMENTATION CO., DIV.-  
 ALBERHILL CORP.**  
 1118 Mission St., South Pasadena, Calif. (Tel. RY  
 1-3318)  
 Div. Mgr. & Purch. Agent: Nathan Brownstone  
 Sales Mgr.: O. E. Strickland  
 Mgr.-Mktg.: Geoffrey H. Grey  
 R&D

**DYNA-THERM CHEMICAL CORP.**  
 3813 Hoke Ave., Culver City, Calif. (Tel. TExas  
 6-4751)  
 Purch. Agent: J. M. Maddock  
 V. P.-Sales: Larry Vernon  
 V. P.-Research: Jerry Gabriel  
 MM, R&D

**DYTRONICS CO.**  
 P. D. Box 3676, Columbus 14, Ohio (Tel. AM  
 3-0890)  
 Dir.-Purch.: P. Ryan  
 Sales Mgr.: K. Gregersen  
 TS, R&D

**EFCON (ELECTRONIC FABRICATORS, INC.)**  
 682 Broadway, New York 12, N. Y. (Tel. SPring  
 7-4900)  
 V. P.-Sales: Mitchel Samuels  
 MM

**ESC CORP.**  
 534 Bergen Blvd., Palisades Park, N. J. (Tel.  
 WIndsor 7-0400)  
 Purch. Agent: J. Curtin  
 V. P.-Sales: Stanley S. Pocker  
 GE, CO, TS, TR

**E-Z-HOOK TEST PRODUCTS**  
 1536 Woodburn Ave., Covington, Ky. (Tel.  
 COLonial 1-1495)  
 Sales Mgr.: Robert N. Younger  
 TS

**E-Z WAY TEMPLATES**  
 P. O. Box 535, Resedo, Calif.  
 Gen. Mgr.: W. Juron

**EAGLE ELECTRIC MFG. CO. INC.**  
 23-10 Bridge Plaza S., Long Island City 1, N. Y.  
 (Tel. ST 4-9200)  
 Purch. Agent: I. Sobal  
 Asst. Purch. Agent: A. Feiner  
 Sales Mgr.: S. Jay Atkin

**EAGLE OTTAWA LEATHER CO.**  
 P. D. Box 308, Beachtree St., Grand Haven,  
 Michigan (Tel. 8)  
 Purch. Agent: E. D. Harbeck  
 Sales Mgr.: Milton E. Burr

**EAGLE-PICHER CO., THE**  
 Americc Bldg., Cincinnati 1, D. (Tel. Parkway  
 1-7010)  
 Dir.-Sales: D. R. Carter  
 WN, GE, TR, MM, R&D

**EAST COAST AERONAUTICS, INC.**  
 10 Pelham Pkwy., Pelham, N. Y.

**EAST DAYTON TOOL & DIE CO., THE**  
 1425 Keewee St., Dayton 4, O.

**EASTERN INDUSTRIES INC.**  
 100 Skiff St., Hamden 14, Conn. (Tel. CHestnut  
 8-3841)  
 Purch. Agent: C. Phillips  
 Asst. Purch. Agent: R. Jerzyk  
 Sales Mgr.: H. W. Whitaker  
 MF, WN, GS, GH, GE, R&D

**EASTERN JEWEL CORP.**  
 Rego Park 74, N. Y. (Tel. BOulevard 1-8072)  
 Purch. Dept.: Melvin Marcus

**EASTERN SMELTING & REFINING CORP.**  
 109 W. Brookline St., Boston 18, Mass. (Tel.  
 CDmmonwealth 6-7504)  
 Treas.: Maurice G. Alperin  
 Comptroller: Frank E. Wondrey  
 MM

**EASTERN SPECIALTY CO., THE**  
 3617 N. Eight, Philadelphia 40, Pa. (Tel.  
 Baldwin 8-0500)  
 Dir.-Purch.: H. F. McGinley  
 Dir.-Sales: Edward P. Cornely  
 TS, MM

**EASTERN STAINLESS STEEL CORP.**  
 P. D. Box 1975, Baltimore 3, Md. (Tel. ATwater  
 8-2000)  
 Buyer: E. J. Thon  
 V. P.-Sales: R. C. Cunningham  
 MF, PS

**EASTMAN KODAK CO.**  
 343 State St., Rochester, N. Y. (Tel. LOcust  
 2-5000)  
 Stacey F. Oakes  
 GS, GE, CO, TS, TR

**EATON ELECTRONICS CORP.**  
 Eaton Ave., Moodus, Conn. (Tel. TRiangle 3-8628)  
 Sales Mgr.: Joseph O. Eoton, Jr.  
 GS, GE, TR

**EATON MFG. CO.**  
 739 E. 140th St., Cleveland 10, D. (Tel. GLenville  
 1-5600)  
 Dir.-Purch.: H. A. Williams  
 Dir.-Sales: R. E. Fisher

**EATON MFG. CO., AIRCRAFT DIV.**  
 Avenue "C", Battle Creek, Mich. (Tel. WOODward  
 2-8751)  
 Purch. Agent: Robert Stevens  
 Sales Mgr.: Hol Reigner  
 PS

**EATON MFG. CO., RELIANCE DIV.**  
 25 Charles Ave., S. E., Massillon, Ohio (Tel.  
 TE 2-1511)  
 Div. Purch. Agent: J. W. Morton  
 Buyer: W. Matthey  
 Gen. Sales Mgr.: R. B. Little  
 MM

**EBERT ELECTRONICS CORP.**  
 212-26 Jamaica Ave., Queens Village 28, N. Y.  
 (Tel. SPruce 6-1800)  
 Purch. Agent: L. Mitchell  
 Sales Mgr.: V. Horowitz  
 GS, GH, CO

**ECKEL VALVE CO.**  
 1425 First St., San Fernando, Calif. (Tel.  
 Empire 1-6251)  
 Purch. Agent: Edward Beinfest  
 Gen. Mgr.: J. R. Bly

**ECKOL PACKAGING CO.**  
 3001 W. Columbia Ave., Philadelphia 21, Pa. (Tel.  
 STEvenson 7-6172)  
 Purch. Agent: Rodger Wellman  
 Sales Mgr.: Herbert R. Locke  
 MF, PS, GS, GH

**ECO ENGRG. CO.**  
 12 New York Ave., Newark 1, N. J. (Tel. MArket  
 4-6565)  
 Purch. Agent: Vernon Davis  
 Sales Mgr.: James Eisenberg  
 GS, GH, MM, R&D

**ECONOWELD CORP.**  
 519 Hunter Ave., Dayton, D. (Tel. Baldwin 3-7295)  
 V. P.-Purch.: Bart Wilgus  
 Engr. Sales: C. A. Thomas  
 GS, GH

**ED-BERL PRODUCTS, INC.**  
 96 S. Grand Ave., Baldwin, L. I., N. Y. (Tel.  
 Baldwin 3-1636)  
 Dir.-Purch.: Fred W. Will  
 V. P.-Sales: Howard Kaufman  
 R&D

	CODING
	Missile Frame MF
	Warhead & Nose Cone WN
	Propulsion System PS
	Ground Support GS
	Ground Handling GH
	Guidance Equipment GE
	Checkout Equipment CO
	Test Equipment TS
	Tracking & Telemetry TR
	Research & Development R&D
	Materials & Metals MM

# ... purchasing directory edc—ell

## EDCLIFF INSTRUMENTS

1711 S. Mountain Ave., Monrovia, Calif. (Tel. ELlison 8-4571)  
 Purch. Agent: John Smith  
 Mgr., Engrg. & Tech. Services: John R. Thompson  
 GS, GH, GE, CD, TS, R&D

## EDDINGTON METAL SPECIALTY CO.

3088 Bristol Pike, Eddington, Pa. (Tel. MErcury 9-3600; ORchard 3-8383)  
 Purch. Agents: Walter V. Czarniecki, Jr., Casimer M. Czarniecki, Wesley Czarniecki, Stanley Czarniecki  
 Engr.-Sales: Richard Connell PS, R&D

## EDER ENGRG. CO., INC.

1568 S. First St., Milwaukee 4, Wisc. (Tel. EVergreen 3-3900)  
 Purch. Agent: Anthony J. Mis  
 Pres.: Harvey P. Eder TS, R&D

## EDER INSTRUMENT CO. INC.

2293 N. Clybourn Ave., Chicago 14, Ill. (Tel. EASgate 7-2131)  
 Sales: L. Streifeneder

## EDGERTON, GERMESHAUSEN & GRIER, INC.

160 Brookline Ave., Boston 15, Mass. (Tel. COpley 7-9700)  
 Dir.-Product Sales: R. L. Purrington (Tel. COpley 7-9540)  
 GS, GH, TR, R&D

## EDGEWATER STEEL CO.

Box 478, Pittsburgh 30, Pa. (Tel. OAKmont 280)  
 Purch. Agent: L. W. Engel  
 Asst. Purch. Agent: W. Schano  
 Gen. Mgr.-Sales: W. M. Cree  
 Mgr., Indst. Sales: W. O. Fleming MM

## EDIN, DIV.-EPSCD, INC.

207 Main St., Worcester 8, Mass. (Tel. PLeasant 7-8394)  
 Gen. Sales Mgr.: Daniel R. Berne TS, TR

## THDMAS A. EDISON IND. INSTRUMENT DIV.-MCGRAW-EDISON CO.

85 Lakeside Ave., W. Orange, N. J. (Tel. ORange 3-6800)  
 Purch. Agent: Alex N. Teilschak  
 Purch.: Horst Keilman, Richard A. Brennan & Thomas M. Callahan  
 Gen. Sales Mgr.: George J. Bindewald GE, R&D

## EDMUND SCIENTIFIC CO.

101 E. Gloucester Pike, Barrington, N. J. (Tel. LIncoln 7-3488)  
 Pres.: Norman W. Edmund

## EDWARDS ENGRG. CO.

21 Yennick Ave., Port Washington, N. Y. (Tel. PO 7-6700)  
 Gen. Mgr.: John E. Kane TS, TR

## EICOR DIV.-SCRANTON

4059 W. North Ave., Chicago, Ill. (Tel. HUmbolt 6-2060)  
 Purch. Agent: R. Farneti, 517 W. Walnut St., Oglesby, Ill. (Tel. 3-8453)

## EIOAL MFG. CO., INC.

29 Woodward Rd., S. E., Albuquerque, N. M. (Tel. CHapel 2-5223)  
 Purch. Agent: W. A. Muff  
 V. P.-Sales: S. J. Woodin GH

## EISLER ENGRG. CO., INC.

769 S. 13th St., Newark 3, N. J. (Tel. BiGelow 3-5310)  
 Pres.: Charles Eisler, Jr.

## EITEL-MCCULLDUGH, INC.

301 Industrial Way, San Carlos, Calif. (Tel. LYtell 1-1451)  
 Purch. Agent: Donald Rogers  
 Mgr.-Prac.: John Stenson  
 Dir.-Mktg.: O. H. Brown GE, TR

## ELASTIC STOP NUT CORP. OF AMERICA

2330 Vauxhall Rd., Union, N. J. (Tel. MUrdock 6-6000)  
 Purch. Agent: Everett F. Howell  
 Gen. Sales Mgr.: D. E. Lally MF, PS, GS, MM, R&D

## ELCO CDRP.

\*M St. Below Erie Ave., Philadelphia 24, Pa. (Tel. CUMberland 9-530)  
 Purch. Agent: Henry Marks  
 V. P.-Sales: Leo Kagan GS, GH, GE, CD, TS, TR, R&D

## ELCDR, INC.

1225 W. Broad St., Falls Church, Va. (Tel. JEHerson 2-7718)  
 Bus. Mgr.: Edmund Smallwood  
 Pres.: John H. Reeves R&D

## ELDEMA CDRP.

1805 Belmont Ave., El Monte, Calif. (Tel. GILbert 4-7077)  
 Purch. Agent: Russel Jones

V. P.-Sales: J. A. Moore

GH, GE, CD, TS, TR, R&D

## ELDORADO ELECTRONICS

2821 10th St., Berkeley, Calif. (Tel. THornwall 1-4613)  
 Purch. Agent: A. E. Cummins  
 Sales Mgr.: J. H. Werlin TR, R&D

## ELECTRA MFG. CO.

4051 Broadway, Kansas City, Mo. (Tel. WEsport 1-6864)  
 Purch. Agent: D. E. Aitken  
 V. P.-Electronic Sales: R. R. Burton  
 Sales Mgr., Resistor Dept.: R. T. Means GE, TS, TR, R&D

## ELECTRALAB INC.

Industrial Ctr., Needham Hts., Mass. (Tel. Hillcrest 4-5000)  
 Purch. Agent: H. Vaughn  
 Materials Control: K. B. Lorey  
 Sales Mgr.: W. G. Abbott GE, TR

## ELECTRIC AUTO-LITE CO., THE

1201 Champlain St., Toledo 1, O. (Tel. CHerry 3-3131)  
 V. P.-Purch.: J. H. Lambrix R&D

## ELECTRIC AUTO-LITE CO., THE, WIRE & CABLE DIV.

3529 24th St., Port Huron, Mich. (Tel. YUKon 5-6131)  
 Purch. Agent: A. L. Bailey  
 Gen. Sales Mgr.: O. M. Skirving PS, GS, GH, GE, CO, TR

## ELECTRIC CORDS & SUPPLY CORP.

413 E. Third St., Los Angeles 13, Calif. (Tel. MA 8-2278)  
 Purch. Agent: Alfredo Chandler  
 Sales Engr.: J. W. Hemphill GH, CO

## ELECTRIC DESIGN & MFG. CO.

722 Jefferson St., Burlington, Iowa (Tel. PLaza 2-7685)  
 Pres.: Fred Bulmahn TS

## ELECTRIC HEATER CO., THE

45 Seymour St., Stratford, Conn. (Tel. DRexel 8-2659)  
 Dir.-Purch.: W. E. Newbauer MF, WN, GS, GH, MM

## ELECTRIC HOSE & RUBBER CO.

Wilmington, Del. (Tel. OLYmpia 5-6261)  
 Purch. Agent: S. M. Howard  
 Sales Mgr.: V. W. Wells PS, GS

## ELECTRIC MACHINERY MFG. CO.

800 Central Ave., Minneapolis 13, Minn. (Tel. FEderal 9-6751)  
 Dir.-Purch.: J. Murnane  
 Purch. Agent: W. Fisher  
 Asst. Purch. Agent: Duane Larson, H. Roeger  
 V. P.-Sales: A. P. Burris GS

## ELECTRIC MOTORS & SPECIALTIES, INC.

King & Hamsber Sts., Garrett, Ind. (Tel. 613)  
 Purch.: M. Bryant  
 Sales: J. A. Fuhrman TS

## ELECTRIC PRODUCTS CO., THE

1725 Clarkstone Rd., Cleveland 12, Ohio (Tel. IVanhoe 1-1500)  
 Secy-Treas.: Robert J. Berry  
 Mgr., Power Equip. Div.: John H. Kellogg GS, TR, R&D

## ELECTRIC REGULATOR CORP.

Pearl St., Norwalk, Conn. (Tel. VI 7-2401)  
 Purch. Agent: E. Aaronson  
 Sales Mgr.: W. H. Walter GS, R&D

## ELECTRIC STEEL FOUNDRY CO.

2141 N. W. 25th St., Portland 10, Ore. (Tel. Capital 8-2141)  
 Purch. Agent: Marvin E. Price  
 Gen. Sales Mgr.: Joe McQuaid MF, PS, GS, GH, MM

## ELECTRIC TERMINAL CORP.

Warwick Industrial Park, Providence, R. I. (Tel. STuart 1-2189)  
 V. P.-Prad.: William Massie, Jr.  
 V. P.-Sales: N. MacNeil MM

## \*ELECTRICAL ENGRG. & MFG. CORP.

4612 W. Jefferson Blvd., Los Angeles 16, Calif. (Tel. REdpublic 3-0151)  
 Pres.: Frank Gindroz  
 Chief Engr.: Gerhard Mauric  
 \*(See Page 110 for Advertisement)

## ELECTRICAL INDUSTRIES, DIV.-PHILIPS ELECTRONICS, INC.

691 Central Ave., Murray Hill, N. J. (Tel. CRestview 7-4300)  
 Purch.: Clarence Graham, Nicholas Perna, & Risley Marsh  
 V. P.-Sales: Peter Muto MF, PS, GS, GE, TR

## ELECTRICAL INSULATION CO., INC.

1245 Marcus Blvd., Copiague, L. I., N. Y. (Tel. AM 4-6190)  
 V. P.-Purch.: Robert S. Goldstein  
 Sales Mgr.: Gilbert Arm TS, TR

## ELECTRICAL & MECHANICAL OESIGN CO.

P. O. Box 706, Clark, N. J. (Tel. FUlton 8-3381)  
 Purch. & Sales: Raymond E. Hall

## ELECTRICAL REFRACTORIES CO., THE

East End, East Clark St., East Palestine, O. (Tel. GArden 6-9433)  
 Plant Supt.: Hector B. Moore  
 Gen. Mgr.: L. J. Turner MM

## ELECTRICAL WINQINGS, INC.

2015 N. Kolmar Ave., Chicago, Ill. (Tel. BElmont 5-3360)  
 Purch. Agent: Arnold M. Topper  
 Sales Mgr.: L. C. Kammeyer GS, GE, TS, TR

## ELECTRO DEVELOPMENT CO.

14701 Keswick St., Van Nuys, Calif. (Tel. STate 6-3660)  
 Purch. Agent: Rick Geiger (Tel. ST 3-1850)  
 Sales Mgr.: R. Vaccarella GE

## ELECTRO DEVELOPMENT CORP.

3939 University Way, Seattle 5, Wash. (Tel. MElrose 3-3094)  
 Pres.: G. Weinstein  
 Factory Mgr.: D. D'Angelo GS, GE, R&I

## ELECTRO DEVICES INC.

580 Main St., Wilmington, Mass. (Tel. PARKview 9-2851)  
 Chief Engr.: A. A. Ryalls (Tel. Twinbrook 4-5988)  
 Sales Mgr.: Paul J. Past MM

## ELECTRO ENGRG. WORKS

401 Preda St., San Leandro, Calif. (Tel. LO 9-3326)  
 Purch. Agent: Marvin C. Phillips  
 Sr. Buyer: Miss Lois C. Criger  
 Sales Mgr.: Rex E. Brooks

## ELECTRO INSTRUMENTS, INC.

3540 Aero Ct., San Diego 11, Calif. (Tel. BRowning 7-6590)  
 Purch. Agent: Wade C. Gilliland, Jr.  
 Sales Mgr.: R. H. Applin  
 V. P.-Sales: Walter H. East GS, CO, TS, R&I

## ELECTRO PRECISION CORP.

P. O. Box 669, Arkadelphia, Ark. (Tel. CHapel 6-2272)  
 Purch. Agent: Janona Allen  
 Sales Mgr.: A. James Edwards GS, CO, TS, R&I

## ELECTRO PRODUCTS LABS., INC.

4501 N. Ravenswood Ave., Chicago 40, Ill. (Tel. LONgbeach 1-1707)  
 Purch. Agent: E. V. Tetzner  
 Sales Mgr.: Lloyd A. Thatcher M

## ELECTRO TEC CORP.

10 Romaneli Ave., South Hackensack, N. J. (Tel. HUbbard 7-4940)  
 Dir.-Purch.: George Porigaris  
 Sales Mgr.: Eugene Parks GS, GE, CO, TS, TR, R&D

## ELECTRO TEC CORP., VIRGINIA DIV.

P. O. Box 219, Blacksburg, Va. (Tel. PRescott 2-8208)  
 Purch. Agent: Thomas F. Mantz  
 Sales Coordinator: Fred Sylvester, South Hackensack, N. J. (Tel. HUbbard 7-4940)  
 MF, PS, GE, T

## ELECTRO TECHNICAL PRODUCTS DIV., SUN CHEMICAL CORP.

113 E. Centre St., Nutley 10, N. J. (Tel. NUTley 2-7070)  
 Gen. Sales Mgr.: W. F. Hugger M

## ELECTRO-CAPACITORS CO.

10132 Edes Ave., Oakland 3, Calif. (Tel. LOKkhamen 8-7910)  
 Sales Mgr.: H. Marquess GE, T

## ELECTRO-CRAFT, INC.

4432 N. Kedzie Ave., Chicago 25, Ill. (Tel. COnelia 7-4011)  
 Sales: Stephen G. Richards  
 Buyer: Otto F. Leske MF, GS, GH, GE, T

## ELECTRODATA DIV.-BURROUGHS CORP.

460 Sierra Madre Villa, Pasadena, Calif. (Tel. SYcamore 3-6121)  
 Mgr.-Material Dept.: W. B. Wight  
 Mgr.-Sales Dept.: R. G. Dee GE, T

## ELECTROFILM, INC.

7116 Laurel Canyon Blvd., P. O. Box 106, N. Hollywood, Calif. (Tel. POPlar 5-4420)  
 Purch. Agent: R. R. Schweiger, Jr.  
 Gen. & Sales Mgr.: J. A. Oroege MF, WN, PS, M

## ELECTRO-FLEX HEAT, INC.

83 Woodbine St., Hartford 6, Conn. (Tel. CHapel

6-5413)  
Sales: Ronald J. Borrup

PS

Buyers: Gene Frake & Steve Gondolfo  
Sales, R&O: M. H. Sonder  
Sales Mgr.: W. R. McQuiston

TR, R&O

**ELECTRON-RAOAR PRODUCTS**  
4806 W. Chicago Ave., Chicago 51, Ill. (Tel. Esterbrook 9-1232)  
Laboratory: Rt. 30, P. O. Box 50, North Aurora, Ill.  
Purch. Agent: W. A. Boyley  
Proprietor: J. J. Boyley

GE, R&O

**ELECTROL INC.**  
85 Grand St., Kingston, N. Y. (Tel. FEderal 1-1980)  
Purch. Agent: J. Tyrrell  
Sales Mgr.: D. C. Pierson

PS, GS, GH

**ELECTRONIC FABRICATORS, INC.**  
682 Broadway, New York 12, N. Y. (Tel. SPring 7-4900)  
Pres.: M. Samuels

**ELECTRONIC INDUSTRIES**  
Stote Rd., Potterson, N. Y.

**ELECTRONIC INSTRUMENT CO., INC. (EICO)**  
33-00 Northern Blvd., Long Island City 1, N. Y. (Tel. STillwell 6-8700)  
V. P.: Philip A. Portnoy

TS

**ELECTRONS, INC.**  
127 Sussex Ave., Newark, N. J. (Tel. HUmboldt 2-5977)  
V. P.-Sales: J. H. Burnett

TR

**ELECTROMATH CORP.**  
42-14 Greenpoint Ave., Long Island City 4, N. Y. (Tel. STillwell 4-3483)  
Purch. Agent: Frank G. Taylor  
V. P.-Sales: Thomas A. D. Canova  
Sales Promotion Dept.: Frank R. Porisi

GE

**ELECTRO-SEAL CORP.**  
946 North Ave., DesPlaines, Ill. (Tel. VA 4-6173)  
Dir.-Purch.: E. J. Boch

GS, GH, CO

**ELECTRO-MEASUREMENTS, INC.**  
7524 S. W. Macadam, Portland 1, Ore. (Tel. CHerry 6-3332)  
Purch. Agent: Lloyd Smith  
Sales Mgr.: L. A. Marin

GS, TS, R&D

**ELECTRONIC MEASUREMENTS CO., INC.**  
Lewis St. & Mople Ave., Eotontown, N. J. (Tel. 3-0300)  
Purch. Agent: B. DeBlosio  
Buyer: Mrs. Doris Shultz  
Expediter: Mrs. Edith Walsh  
Sales Mgr.: Douglas Stevens

GS, GE, TR

**\*ELECTROSAP CORP., ASTROMATIC DIV., SWITCH DIV., OPTICAL & SCIENTIFIC DIV.**  
4218 W. Lake St., Chicago 24, Ill. (Tel. VAn Buren 6-3100)  
Purch. Agent: E. W. Hall  
V. P.-Sales: G. M. Bollee  
\*See Pages 67 & 68 for Advertisement

GS, CO, TS

**ELECTRO-MEC LAB. INC.**  
47-51 33rd St., Long Island City 1, N. Y. (Tel. STillwell 6-3402)  
Purch. Agent: Leo F. Ostar  
Sales Mgr.: Forbes Morse

GE, TS, TR

**ELECTRONIC MEASUREMENTS CORP.**  
625 Broadway, New York 12, N. Y. (Tel. GRomeray 5-0610)  
Purch. Agent: L. Stons  
Sales Mgr.: M. Lieblich

PS, GS, GH, GE, CO, TS, TR

**ELECTRO-SWITCH & CONTROLS, INC.**  
5755 Comille Ave., Culver City, Calif. (Tel. TExos 0-4643)  
Gen. & Sales Mgrs.: J. K. Brose  
Buyer: R. E. Preston

GS, GE, TR

**ELECTRO-MECHANICAL PRODUCTS CO.**  
32700 Ford Rd., Garden City, Mich. (Tel. LOgon 2-8900)  
Chief Purch. Agent: Charles Hefner  
Purch. Agent: Porke Chase

WN, GS, GH, GE, TS, TR

**ELECTRONIC MECHANICS, INC.**  
101 Clifton Blvd., Clifton, N. J. (Tel. GRegory 3-4108)  
Comptroller: N. E. Brown  
Gen. Sales Mgr.: J. E. Nester

MM

**ELECTRO-TECH EQUIPMENT CO.**  
308 Conal St., New York 13, N. Y. (Tel. WO 6-2350)  
Purch. Agent: Martin J. Jockins  
Expediting & Delivery: Miss Barbara Holler  
Gen. Mgr.-Sales: Arthur Prince

GS, GE, CO, TS, TR

**ELECTRO-MECHANICAL RESEARCH, INC.**  
Box 3041, Sarasota, Fla. (Tel. Ringling 6-1148)  
Purch. Agent: John Moore  
V. P.-Sales: T. E. Stewart

TR, R&O

**ELECTRONIC PARTS MFG. CO., INC.**  
508 25th St., Union City, N. J. (Tel. UNion 5-0258)

MM, R&O

**ELECTRO-WINDERS CO. INC.**  
854 W. Front St., Covino, Calif. (Tel. EDgewood 2-6207)  
Plt. Mgr.-Purch. Agent: George Payne  
Asst. Purch. Agent: Agnes Munson  
Sales Mgr.: Jock Rotner

**ELECTRO-MECHANICAL SPECIALTIES CO., INC.**  
743 W. 39th St., Banning, Calif. (Tel. VICTor 9-4795)  
Purch. Agent: R. L. Kritser  
Gen. Mgr.: James Goodman

GE

**ELECTRONIC PROCESSES CORP. OF CALIFORNIA**  
436 Bryant, San Francisco 7, Calif. (Tel. EXbrook 7-3882)  
Purch. Agent: Charles Meade

PS, GE, CO, TS, TR

**ELGEE OPTICAL CO., INC.**  
838 Smith St., Rochester 6, N. Y. (Tel. BEverly 5-8080)  
Purch. Agent: S. J. Roymbrun  
V. P.-Materials: M. A. London  
V. P.-Equip.: Peter Terbuska

TR

**ELECTRO-MEDICAL LAB. INC.**  
South Woodstock 25, Vt. (Tel. WOODstock 144M4)  
Pres.: Lovett Gorceou  
Treas.: D. S. Garceou

GE, TS, TR

**ELECTRONIC RESEARCH ASSOCIATES, INC.**  
67 Factory Pl., Cedar Grove, N. J. (Tel. CEnter 9-3000)  
Purch. Agent: N. D. Burgess  
Sales Mgr.: D. D. Grieg

GE, TS, TR, MM, R&O

**ELGENCE, INC.**  
P. O. Box 90344, Airport Sta., Los Angeles 45, Calif. (Tel. FRontier 5-46855)  
Chief Engr.: Henry Low

CO, TS, R&D

**ELECTRO-MINIATURES CORP.**  
1060 Elm Ave., Ridgefield, N. J. (Tel. WHitney 3-7300)  
Purch. Agent: Louis A. Lopez  
Sales Engr.: L. Sonders

GE, TR

**ELECTRONIC SPECIALTY CO.**  
5121 San Fernando Rd., Los Angeles 39, Calif. (Tel. CHapman 5-3771)  
Purch. Agent: H. A. Venturino  
Buyers: Doug Taylor, Joe Canfield, Horvey Korosov, Robert Dobe  
Sales Mgr.: Ted M. Duoy

GS, GE, CO, TS, R&O

**ELGIN MICRONICS DIV.-ELGIN NATIONAL WATCH CO.**  
368 Bluff City Blvd., Elgin, Ill. (Tel. SHerwood 2-5700)  
Purch. Mgr.: E. F. Antonson

WN, TS, R&O

**ELECTRON PRODUCTS CO.**  
430 N. Holstead, Pasadena, Calif. (Tel. RYon 1-0666)  
Purch. Agent: F. S. Pirrie  
Sales Mgr.: R. F. Hastings

MF, PS, GS, GE

**ELECTRONIC TRANSFORMER CO., INC.**  
70 Washington St., Brooklyn 1, N. Y. (Tel. MAIn 5-6123)  
Purch. Mgr.: Irv Fields  
Sales Mgr.: Hal Borgen

GS, GE, TR, R&O

**ELGIN MICRONICS, WEST COAST DIV.-ELGIN NATIONAL WATCH CO.**  
21001 Nordhoff St., Chatsworth, Calif. (Tel. Diamond 0-7220)  
Purch. Agent: Harold E. Houn  
Customer Rel. Mgr.: James W. Browder

MF, WN, PS, GS, GH, GE, CO, TS, TR

**ELECTRON APPLICATIONS, INC.**  
194 Richmond Hill Ave., Stamford, Conn. (Tel. DAVIS 5-1574)  
Purch. Agent: Vincent J. Skee  
Dir.-Sales: Truus M. Skee

TS, R&O

**ELECTRONIC TUBE CORP.**  
1200 E. Mermont Lane, Philadelphia 18, Pa. (Tel. CHEstnut Hill 7-6800)  
Pres.: Kenneth C. Meinken

GS, GE, TS, TR, R&D

**ELGIN NATIONAL WATCH CO.**  
107 Notional St., Elgin, Ill. (Tel. SHerwood 2-3300)  
Dir.-Purch., Watch Div.: W. H. Miller  
Gen. Sales Mgr., Watch Div.: Harold Rich

WN, PS, GS, GH, GE, CO, TR

**ELECTRON ASSEMBLY CO., INC.**  
5 Prescott St., Roxbury 19, Moss. (Tel. Highlonds 2-1600)  
Purch. Agent: Soul Buchbinder  
Asst. Purch. Agent: Joyce J. Harby  
Sales Engr.: Jacob B. Giller

GE, TR

**ELECTRONICS OF CLEARFIELD, INC.**  
P. O. Box 792, Clearfield, Pa. (Tel. POplar 5-3801)  
Purch. Agent: Katherine Patterson  
Exec. V. P.: James C. Boyd

TS

**ELJAY CORP.**  
2908 Herbert St., Baltimore 16, Md. (Tel. Wilkens 5-2902)  
Purch. Mgr.: Stanley A. Slodek

MF, WN, PS, GE, TS, TR

**ELECTRON ASSOCIATES, INC.**  
Long Beach, N. J. (Tel. CApital 9-1100)  
Purch. Agent: E. F. Von Pelt  
Sr. Buyers: L. W. Cavalier, J. H. Schochter & J. W. Thompson  
Buyers: R. A. Grammer and E. Volente

GE, CO, TS, TR

**ELECTRONICS CORP. OF AMERICA**  
One Memorial Dr., Cambridge, Moss. (Tel. UN 4-8000)  
Mgr., Military Contracts-Military Div.: B. Howard  
Deon MF, WN, PS, GS, GE, CO, TS, TR

**B. W. ELLIOTT MFG. CO., INC.**  
221 Prospect Ave., Binghamton, N. Y. (Tel. 4-2512)  
Purch.: E. M. Twining

PS

**ELECTRON BRAZING CO.**  
140 Glenridge Ave., Montclair, N. J. (Tel. Pilgrim 4-2160)  
Dir.-Purch.: Wolter J. Lombert

TS

**ELECTRONICS DEPT., HAMILTON STANOARD DIV., UNITED AIRCRAFT CORP.**  
Broad Brook, Conn. (Tel. NATIONAL 3-1621)  
Purch. Agent: K. Williams  
Sales Mgr.: Boone T. Guyton

MF, WN, PS, GS, GH, GE, CO, TS, TR

**ELLIS & WATTS PRODUCTS, INC.**  
8407 Monroe Ave., Cincinnati 36, Ohio (Tel. TWeed 1-8000)  
Admin. Supvr.: Robert J. Lommert

TR

**ELECTRON COILS, INC.**  
33 Lyman St., Springfield, Moss. (Tel. REpublic 6-5339)  
Purch. Agent: Miss F. Jaworek  
Chief Engr.: E. Bossett  
Sales Mgr.: G. Lindstrom

TR

**ELECTRONICS DEVELOPMENT CO., INC.**  
3743 Cohuengo Blvd., N. Hollywood, Calif. (Tel. STanley 7-3223)  
Gen. Mgr.: D. W. Boisch  
Sales: F. P. Leaming

TR

CODING	
Missile Frame	MF
Warhead & Nose Cone	WN
Propulsion System	PS
Ground Support	GS
Guidance Handling	GH
Guidance Equipment	GE
Checkout Equipment	CO
Test Equipment	TS
Tracking & Telemetering	TR
Research & Development	R&D
Materials & Metals	MM

**ELECTRON COMMUNICATIONS, INC.**  
1501 72nd St., N., St. Petersburg, Fla. (Tel. DICKens 5-9301)  
Purch. Mgr.: R. B. Wolworth  
V. P.-Mktg.: E. F. Coy

GS, GE, CO, TS, TR, R&O

**ELECTRONICS DIV., VAN NORMAN INDUSTRIES INC.**  
186 Granite St., Manchester, N. H. (Tel. NAtional 5-9701)  
Dir.-Purch.: S. Capewell  
Buyer: T. Galoni  
Tech. Sales Mgr.: Paul Barr

R&O

**ELECTRON CONTROL CORP.**  
573 E. Forest Ave., Detroit 7, Mich. (Tel. TEMple 2-6625)  
V. P.-Sales: Stephen V. Hart  
Dir.-Purch.: S. C. Lawrence

GS

**ELECTRONICS INTERNATIONAL CO., INC.**  
145 W. Magnolia Blvd., Burbank, Calif. (Tel. VICToria 9-2481)  
Purch. Agent: Philip Solomon  
Sales Mgr.: John R. Foster

PS, GE, TS

**ELECTRON ENGRG. CO. OF CALIFORNIA**  
601 E. Chestnut Ave., Santa Ana, Calif. (Tel. KIMberly 7-5501)  
Purch. Agent: A. R. Hormon

# ... purchasing directory elm—fer

- Purch. Agent:** James Mockett  
**V. P.-Sales:** William O. Ross  
**GS, R&D**
- ELMET DIV.-NDRTH AMERICAN PHILIPS CO., INC.**  
 Lisbon Rd., Lewiston, Me. (Tel. 4-5478)  
**V. P.-Purch., Elmet Div.:** R. Louis Sales, Elmet Div.: O. R. Donovan  
**MM**
- EL RAY MOTDR CD., INC.**  
 11747 Vase St., North Hollywood, Calif. (Tel. Stanley 7-3351)  
**Purch.:** Joseph Ferrante  
**V. P.-Sales:** Lee Valianos
- ELSN ELECTRONICS CORP.**  
 Eileen Way, Syosset, L. I., N. Y. (Tel. WA 1-5200)  
**Purch. Agent:** Robert Reinstein  
**Gen. Sales Mgr.:** Maurice L. Goodman  
**GE, CO, TS, TR**
- ELWELL-PARKER ELECTRIC CO., THE**  
 4205 St. Clair Ave., Cleveland 3, Ohio (Tel. UT 1-6200)  
**Purch. Agent:** P. F. Mitchell  
**Sales Mgr.:** J. A. Ackermann  
**GH**
- ELZEE METAL PRODUCTS CO., INC.**  
 775 39th St., Brooklyn 32, N. Y. (Tel. GEedy 5-5000)  
**Gen. Mgr.:** Milton M. Lynn  
**Dir.-Sales:** Mel Leipzig  
**MM**
- EMELDID CO. INC., THE**  
 1239 Central Ave., Hillside 5, N. J. (Tel. Elizabeth 2-1944)  
**Purch. Agent:** Mrs. Florence Headley  
**Sales Mgr.:** George W. Emerson  
**MF, GE, CO, TR**
- EMERSON & CUMING, INC.**  
 869 Washington St., Canton, Mass. (Tel. Canton 6-1066)  
**Purch. Agent:** C. B. McSorley  
**Sales:** E. W. Anderson  
**MM, R&D**
- EMERSDN ELECTRIC MFG. CO., THE, ELECTRONICS & AVIONICS DIV.**  
 8100 Florissant Ave., St. Louis 21, Mo. (Tel. Colfax 1-800)  
**Dir.-Purch.:** John A. Alles, 59th & Industrial Aves., Washington Park, Ill. (Tel. Bridge 1-6060, Sta. 850)  
**Purch. Agent:** M. Randall, Washington Park (Tel. Bridge 1-6060, Sta. 852)  
**Mgr., Sales Dept.-E & A Div.:** C. F. Pizac  
**MF, WN, GS, GH, GE, CO, TS, TR, MM, R&O**
- EMERSON PLASTICS CORP.**  
 1383 Seabury Ave., Bronx 61, N. Y. (Tel. SYcamore 2-4400)  
**Purch. Agent:** D. Singer  
**Asst. Purch. Agent:** I. Boxer  
**Dir.-Sales:** W. Elsfelder  
**WN, GE**
- EMERSON RADIO & PHONOGRAPH CORP.**  
 14th & Coles Sts., Jersey City 2, N. J. (Tel. SWarthmore 5-3500)  
**Dir.-Purch.:** William Hayward, Silver Spring, Md. (Office, Tel. JUniper 8-7273)  
**Purch., Emerson Research Labs.:** T. Pritchard  
**V. P.-Mktg.:** George Rappaport  
**WN, GS, GH, GE, CO, TS, TR, R&D**
- EMHART MFG. CO., MAXIM DIV.**  
 85 Homestead Ave., Hartford, Conn. (Tel. JA 7-9285)  
**Prod. Mgr.:** S. E. Phelps  
**Purch. Agent:** F. N. Dull  
**Dir.-Sales:** T. S. Willets  
**GS**
- EMHART MFG. CO., SKYWORKEE DIV.**  
 760 Windsor St., Hartford 1, Conn. (Tel. CHapel 9-0671)  
**Gen. Sales Mgr.:** Stephen B. Ooss  
**GS**
- EMMCO PLASTIC FABRICATORS-DIV.-E. M. MCCARTHY MACHINE CO.**  
 68 Vine St., Everett, Mass. (Tel. OUnkirk 9-1660)  
**Purch. Agent:** John Olney  
**Gen. Mgr.:** Roger M. Allen  
**Dir.-Sales:** Donald West (Warwick, Conn., Tel. REgent 7-5721)  
**MM**
- EMMERT MFG. CO.**  
 1051 E. Main St., Waynesboro, Pa. (Tel. 848)  
**Pres.:** A. B. Sollenberger  
**GS**
- EMPIRE ELECTRONICS CO., INC.**  
 166 River St., Paterson 1, N. J. (Tel. ARmory 4-8282)  
**V. P.:** George Surosky  
**PS, GS, GH, GE, TS, TR**
- EMPIRE PRODUCTS SALES CORP.**  
 37 Prospect St., Amsterdam, N. Y. (Tel. Victor 2-8400)  
**Purch. Agent:** Allen Cohen  
**Buyer:** Arthur F. Lubu  
**V. P.-Sales:** Michael T. Harges  
**GE, CO, TS, TR, R&D**
- EMPIRE STATE ALUMINUM CORP.**  
 15 Boston St., Newark 3, N. J. (Tel. Market 2-3150)  
**Secy.:** Edward Fielding  
**MF, PS, GH**
- ENDEVCO CORP.**  
 161 E. California Blvd., Pasadena, Calif. (Tel. RYan 1-5231)  
**Purch. Agent:** Alex Zielinski  
**Prod. Mgr.:** John Daly  
**Sales Mgr.:** Warren O. Hancock  
**TS, R&D**
- ENDICOTT FORGING & MFG. CO., INC.**  
 1901 North St., Endicott, N. Y. (Tel. 5-3331)  
**Gen. Sales Mgr.:** A. L. Coleman  
**MF, PS**
- ENFAB INC.**  
 312 E. Brokaw Rd., San Jose, Calif. (Tel. CY 5-1801)  
**V. P.-Purch.:** Mac C. Cutler  
**Plant Mgr.:** R. B. Taylor  
**Dir.-Sales:** L. W. Taylor  
**MM, R&D**
- ENGELHARD INDUSTRIES, INC.**  
 133 Astor St., Newark, N. J. (Tel. Blgelow 3-0030)  
**Purch. Agent:** W. Marks  
**Sr. V. P. & Sales Mgr.:** O. L. Alexander  
**MM**
- ENGELHARD INDUSTRIES INC., D. E. MAKEPEACE DIV.**  
 Pine R. Dunham Sts., Attleboro, Mass. (Tel. 2-0089)  
**Purch. Agent-Main Div.:** " Slip Ring Assn. Div.:" George Aucott  
**V. P.-Sales:** W. F. Mittendorf  
**MF, WN, PS, GE, TS, TR**
- ENGINEERED MAGNETICS, DIV.-GULTON INDUSTRIES, INC.**  
 13030 Cerise Ave., Hawthorne, Calif. (Tel. DRegion 8-7608)  
**Purch. Agent:** Don Willis  
**Buyers:** Art Corralos & Paul Foresman  
**GE, CO, TR, R&D**
- ENGINEERED PLASTICS, INC.**  
 Chase St., Gibsonsville, N. C. (Tel. 2411)  
**Purch. Agent:** C. V. Long, Jr.  
**Sales Mgr.:** C. H. Phillips  
**MF, PS, GE, TR**
- ENGINEERED PRECISION CASTING CO.**  
 Box 68, Hwy. 29, Matawan, N. J. (Tel. LOwell 6-2204)  
**GE, TR**
- ENGINEERED PRODUCTS CO., THE**  
 129 N. Grand Traverse St., P. O. Box 118, Flint, Mich. (Tel. CEard 9-8689)  
**Purch. Agent:** S. G. Both  
**Sales Mgr.:** H. Scott  
**PS, R&D**
- ENGINEERING ASSOCIATES**  
 434 Patterson Rd., Oayton 19, Ohio (Tel. AXminster 3-1662)  
**Pres.:** Charles C. Littell, Jr.  
**TS**
- ENGRG. CORP. OF AMERICA**  
 5111 Santa Monica Blvd., Hollywood 29, Calif. (Tel. NDrmandy 4-1961)  
**Purch. Agent & Head-Sales:** Vernon W. Haas
- ENGRG. DEVELOPMENTS, INC.**  
 P. O. Box 149, Newport, R. I. (Tel. VIKing 6-9100)  
**Pres.:** J. H. Miller  
**V. P.:** L. F. Gill
- \*ENGS EQUIPMENT CO.**  
 431 S. Dearborn St., Chicago 5, Ill. (Tel. HARrison 7-3223)  
**Treas.:** Mrs. C. L. Maston  
**V. P.:** E. J. Schneider  
**GS, GE**  
 \*(See Page 4 for Advertisement)
- ENSCD, INC.**  
 3100 E. dredge St., Salt Lake, Utah (Tel. HUInter 5-9162)  
**Gen. Mgr.:** Frank W. Longson  
**TS**
- ENSGN-BICKFORD CO., THE**  
 P. O. Box 308, Simsbury, Conn. (Tel. DLfield 8-4411)  
**Dir.-Mktg.:** William S. Sherman  
**MF, R&D**
- ENTERPRISE TOOL & GEAR CORP.**  
 8320 E. McNichols Rd., Detroit 36, Mich. (Tel. TW 1-5780)  
**Purch. Agent:** Bruce F. Rogers  
**Sales Mgr.:** George R. Alschbach  
**GS**
- ENTRON, INC.**  
 P. O. Box 287, Bladensburg, Md. (Tel. APpleton 7-9585)  
**Purch. Agent:** Carl D. Jones  
**V. P.-Sales:** Robert J. McGeehan
- ENVIRONMENTAL EQUIPMENT CO.**  
 369 Linden St., Brooklyn 27, N. Y. (Tel. HEgeman 3-9872)  
**Purch. Agent:** V. Botalin  
**Chief Engr.-Purch.:** A. Hershey  
**Head-Sales:** L. W. McDaniel  
**GS, TS**
- EPIC, INC.**  
 154 Nassau St., New York 38, N. Y. (Tel. Olgby 9-2470)  
**Head-Purch. Dept.:** O. Nicolitch  
**Head-Sales:** Peter Letica  
**GS, GE, TS, TR**
- EPPELY LABORATORY, INC., THE**  
 12 Sheffield Ave., Newport, R. I. (Tel. VIKing 7-1020)  
**Mgr.-Purch. & Sales:** Roy Anderson  
**GE, TR**
- EPOXY PRODUCTS, INC., DIV.-JOSEPH WALDMAN & SONS**  
 133 Coit St., Irvington, N. J. (Tel. ESsex 5-6000)  
**Purch. Agent:** Edward Sagerman  
**MF, WN, PS, GE**
- EPSCO INC.**  
 588 Commonwealth Ave., Boston 15, Mass. (Tel. COpley 7-8100)  
**Purch. Dir.:** George R. Herring  
**Buyer:** Robert R. Doucette  
**Expediter:** Richard A. Nichols  
**GS, GE, CO, TS, TR**
- ERA ELECTRIC CORP.**  
 67 E. Centre St., Nutley, N. J. (Tel. NUtley 2-5811)
- ERA ENGRG. INC.**  
 1009 Montana Ave., Santa Monica, Calif. (Tel. EX 5-9995)  
**Pres.:** H. Hutchinson  
**Dir.-Sales & Contracts:** M. Cramer  
**WN, CO, TS, R&D**
- ERDCO ENGRG. CORP.**  
 Addison, Ill. (Tel. Kingswood 3-6733)  
**Purch. Agent:** William E. Huntsha  
**Sales Mgr.:** Milton H. Goemann  
**PS**
- ERICSDN MFG. CO., THE**  
 1660 Hayden Ave., Cleveland 12, Ohio (Tel. GLenville 1-2030)  
**V. P.-Purch.:** J. E. Ericson  
**Asst. Purch. Agent:** M. L. Parker  
**Dir.-Sales:** E. O. Ericson
- ERIE INSTRUMENT DIV.-ERIE RESISTOR CORP.**  
 12932 S. Weber Way, Hawthorne, Calif. (Tel. OREGon 8-5418)  
**Mgr.-Purch.:** Joseph Simmons  
**Gen. Mgr.:** George H. Osborn  
**CO, TS, TR**
- ERIE RESISTOR CORP.**  
 640 W. 12th St., Erie, Pa. (Tel. 2-1481 - after July 1, GLendale 6-8592)  
**Dir.-Purch.:** George T. Griswold  
**Buyer-Electro-Mechanical Div.:** M. Mikoda  
**Mgr.-Govt. Contracts & Spec.:** J. C. Van Arsdell  
**GE, CO, TS, TR**
- ERIEZ MFG. CO.**  
 1945 Grove Or., Erie, Pa. (Tel. 4-0133)  
**Purch. Agent:** G. A. Amidon  
**Asst. to Pres.:** D. E. Dunne  
**MM**
- ERWIN-NEWMAN CO., THE**  
 P. O. Box 1308, Houston 1, Tex. (Tel. JACKson 4-8186)  
**Partners:** R. J. Newman, C. P. Erwin  
**Chief Engr.:** J. F. Irvine  
**GS**
- ESCAMBA CHEMICAL CORP.**  
 261 Madison Ave., New York 16, N. Y. (Tel. OX 7-4315)  
**Purch. Agent:** G. F. Jones, P. O. Box 467, Pensacola, Fla. (Tel. Milron, Fla.—2293)  
**Pres.:** R. U. Haslinger  
**PS**
- ESSEX MFG. CO., INC.**  
 8213 Gravois, St. Louis 23, Mo. (Tel. VERnon 2-4500)  
**Purch. Agent & Oir.-Sales:** Harold Guller  
**PS, GS, GH, R&D**
- ESSEX WIRE CORP.**  
 1601 Wall St., Fort Wayne, Ind. (Tel. E-0311)  
**Purch.:** G. Brown  
**V. P.-Sales:** J. W. Stewart  
**MF, PS, GS, TR**
- ESSEX WIRE CORP., MAGNET WIRE DIV.**  
 1601 Wall St., Ft. Wayne, Ind. (Tel. EAstbrook 0311)  
**Oir.-Purch.:** G. Kohlmeier  
**V. P.-Sales:** J. W. Stewart  
**MF, TR**
- ESSO STANDARD OIL CO.**  
 15 W. 51st St., New York 19, N. Y. (Tel. PL 7-1200)  
**Mgr.-Purch.:** A. J. Kelly  
**Gen. Mgr.-Mktg.:** R. O. Goodykoontz  
**MM**
- ESTERLINE-ANGUS CO., INC., THE**  
 P. O. Box 596, Indianapolis, Ind. (Tel. CHapel 4-3318)  
**Purch. Agent:** J. T. Casbourne  
**Sales Operation Mgr.:** James Gall  
**Sales Promotions:** Lewis Meier, Jr.
- ETCHED PRODUCTS CORP.**  
 39-01 Queens Blvd., Long Island City 4, N. Y. (Tel. STilwell 4-5900)  
**Purch. Agent:** Michael Lome

V. P.-Purch.: Leonard D. Kiechel  
MF, PS, GE, CO, TS, TR, MM

**ETS-HOKIN & GALVIN**  
551 Mission St., San Francisco, Calif. (Tel. EXbrook 2-0432); 218 N. Avalon Blvd., Wilmington, Calif. (Tel. TErminal 5-5601); 2295 E. Belt St., San Diego, Calif. (Tel. BElmont 4-6301)  
Chief Purch. Agent: Fred Oakley  
V. P.-Sales: Jerry Ets-Hokin GS, TS, TR, R&D  
(See Page 54 for Advertisement)

**EVERLUBE CORP.**  
6940 Formdale Ave., North Hollywood, Calif. (Tel. ST 7-7101)  
Sales Dir.: Roy Smith MF, PS, GS, GH

**EWALD INSTRUMENTS**  
Rt. 7-G, Kent, Conn. (Tel. WAlker 7-3278)  
Gen. Mgr.: L. H. Ewald TS

**EXACT ENGRG. & MFG. INC.**  
2375 Canyon Dr., P. O. Box 668, Oceanside, Calif. (Tel. SAratoga 2-2144)  
Purch. Agent: Frank Pendleton  
Dir.-Sales: George A. Brusich MF, GS, GE, TR

**EX-CELL-O CORP.**  
1200 Dakman Blvd., Detroit 32, Mich. (Tel. TOWNSEND 8-3900)  
Dir.-Purch.: F. D. Sicklesteel  
Purch. Agent: F. Grimm MF, PS, GS, GE  
V. P.-Indst. Sales: D. H. McIver MF, PS, GS, GE

**EXCELSSION LEATHER WASHER MFG. CO. INC.**  
720-730 Chestnut St., Rockford, Ill. (Tel. WOODLAND 8-2203)  
Pres.: C. E. Duclon  
Treas.: W. E. Duclon MF, PS

**EXECUTONE, INC.**  
415 Lexington Ave., New York 17, N. Y. (Tel. MURRAY Hill 7-7440)  
Purch. Agent: Bernard Loew, 47-37 Austell Place, Long Island City 1, N. Y. (Tel. RAvenswood 9-7031)  
Nat. Sales Mgr.: Ed Brody GS, GE, TR

**EXIDE INDUSTRIAL DIV.-THE ELECTRIC STORAGE BATTERY CO.**  
Rising Sun & Adams Ave., Philadelphia 20, Pa. (Tel. Fidelity 2-8000)  
Purch. Agent: H. S. Stevenson  
Sales: C. J. Moore GS, GH, GE, TS

**EYELT TOOL CO. INC.**  
2366 Broadway, Cambridge 39, Mass. (Tel. UN 4-8170) MF, GS, TS

**WD CORP.**  
Clintonville, Wisc. (Tel. 2241)  
Dir.-Purch.: Lloyd Pinkowsky  
Asst. Dir.-Purch.: Leroy Hughes  
Buyers: C. Pederson, M. N. Nordwig, N. Hansen, A. Hill, C. Chandler & C. Weck GS, GH

**XR, INC.**  
2612 Borough Pl., Woodside 77, N. Y. (AS 8-2800)  
Purch. Agent: Lou Eskanozy  
Prod.-Co-ordinator: John H. Wendt  
V. P.-Sales: William D. Marshall TS, R&D

**ABER PENCIL CO., EBERHARD**  
Crestwood-Wilkes-Barre, Pa. (Tel. GRonire 4-6711)  
Dir.-Purch.: A. H. Dietze  
Sales Mgr.: C. P. Mailloux

**ABRI-FORM CO., THE**  
258 W. Main Ave., Byesville, O. (Tel. 5416)  
Purch. Agent: E. E. Wray  
V. P.-Sales Mgr.: R. L. Baker

**AE INSTRUMENT CORP.**  
42-61 Hunter St., L. I., N. Y. (Tel. STillwell 6-4959)  
Purch. Agent: Joseph Voros GE, TR, R&D

**AFNR BEARING CO., THE**  
37 Booth St., New Britain, Conn. (Tel. BAldwin 5-5151)  
Purch. Agent: H. P. Knowles  
V. P.-Sales: R. W. Powell PS, GS, GH, GE, CO, TS, TR, R&D

**AIRBANKS CO., THE**  
393 Lafayette St., New York 3, N. Y. (Tel. SPring 7-8800)  
V. P.-Sales: E. T. Flanagan GS

**AIRBANKS MORSE**  
600 S. Michigan Ave., Chicago 5, Ill.

**AIRCHILD ASTRONICS DIV., FAIRCHILD ENGINE & AIRPLANE CORP.**  
Straight Path Rd., Wyandanch, L. I., N. Y. (Tel. Midland 3-7171)  
Materials Mgr.: B. B. Kimball GS, GE, R&D

**AIRCHILD CAMERA & INSTRUMENT CORP., INDUSTRIAL CAMERA DIV.**  
Aerial Way, Syosset, N. Y. (Tel. WElls 1-4500)  
Purch. Agent: Wm. Crocker  
Mktg. Mgr.: C. Cherry CO, TS, TR

**FAIRCHILD CONTROLS CORP., COMPONENTS DIV.**  
255 Park Ave., Hicksville, L. I., N. Y. (Tel. WElls 8-5600)  
Purch. Agent: Robert Crockett  
Nat. Contracts Admin.: T. F. D'Andrade  
WN, GS, GE, CO, TS, TR

**FAIRCHILD DATA DEVICES CORP.**  
580 Midland Ave., Yonkers, N. Y. (Tel. GRGreenleaf 6-0201)  
Prod. Mgr.: Kenneth LiDonnici  
Sales Mgr.: Charles E. Cherry, Jr. TR

**FAIRFIELD ENGINEERING CORP.**  
934 Hope St., Springdale, Conn. (Tel. DAVIS 5-1561)  
Purch. Agent: Katherine Kiniry  
Dir.-Sales: Arthur Gutterman R&D

**FALSTROM CO.**  
75 Felstrom Ct., Passaic, N. J. (Tel. PRescott 7-0013)  
Purch. Agent: P. W. Kievit  
Asst. Purch. Agent: R. L. Chapman  
Sales & Adv. Mgr.: R. E. Hill MF, GS, GH, R&D

**FANSTEEL METALLURGICAL CORP.**  
North Chicago, Ill. (Tel. DEXter 6-4900)  
Dir.-Purch.: J. A. Tebbe  
Purch. Agent: G. E. Powell  
Buyers: L. W. Carter, W. Lasher & E. A. Weidman  
Asst. Purch. Agent: G. Conner MF, WN, PS, GS, GH, GE, CO, TS, TR

**FARLEY & LOETSCHER MFG. CO., PLASTICS DIV.**  
7th & White St., Dubuque, Iowa (Tel. 2-5451)  
Purch. Agent: L. J. Streinz  
Div. Mgr.-Purch.: F. R. Loetscher  
Asst. Div. Mgr.-Purch.: C. E. Walz MM

**FARMER ELECTRIC PRODUCTS CO., INC**  
2300 Wash. St., Newton Lower Falls, Mass. (Tel. DEcatur 2-8383)  
Purch. Agent: T. L. Parker  
Pres.-Sales: E. B. Farmer TS

**FARMINGDALE MFG. CORP.**  
40 Potter St., Farmingdale, L. I., N. Y. (Tel. CHapel 9-7200)  
Exec. V. P.: R. W. Craig  
Buyer: F. S. Davis PS, GS, TS

**FARREL BIRMINGHAM CO., INC.**  
25 Main St., Ansonia, Conn. (Tel. REgent 4-3331)  
Purch. Agent: H. F. Williams  
Sales Mgr.: P. H. Dreissgacker  
Mgr.-Spec. Prod.: R. J. Swett, Jr. GH

**FARWELL METAL FABRICATING**  
75 W. Fairfield Ave., St. Paul 7, Minn. (Tel. CApital 4-5318)  
Purch. Agent: Arnold Portugal  
Asst. Purch. Agent: Mike Daddario  
Sales Mgr.: W. J. Marzolf MF, WN, GH, MM

**FASTENERS, INC.**  
198 Columbus Ave., Pittsfield, Mass. (Tel. HILLcrest 3-9105)  
Purch. Agent: Robert G. Schneider  
Pres.-Sales: C. M. Cambern  
V. P. & Dir.-Sales: Ben Sprague  
V. P.-Sales: Louis A. Cummo MF, WN, PS, GS, GH, GE, R&D

**FAULTLESS CASTER CORP.**  
1427 N. Garvin St., Evansville 7, Ind. (Tel. HARRISON 5-9041)  
V. P.-Purch.: Elmer H. Noeltling  
Purch. Agent: Pats. Roy C. Lockyer  
Purch. Agent, Raw Material: George L. Wood  
Gen. Sales Mgr.: C. Bernard Noeltling GS

**J. W. FECKER, INC.**  
6592 Hamilton Ave., Pittsburgh 6, Pa. (Tel. EMerson 1-7617)  
Purch. Agent: Bert DeMorco  
Pres.-Sales: Joseph Kalla GS, GH, CO, TS, TR

**FEDERAL BEARINGS CO. INC., THE**  
Fairview Ave., Poughkeepsie, N. Y. (Tel. GL 2-6000)  
Dir.-Purch.: E. Wallin  
Dir.-Sales: E. Sweeney GS, GH

**FEDERAL MACHINE CO. INC.**  
341 Garfield Ave., Jersey City, N. J. (Tel. HENDERSON 5-1500)  
Purch. Agent: H. Shapiro  
Pres.: Harold H. Burle MM

**FEDERAL MACHINE TOOL CO.**  
626 Dorchester Ave., South Boston 27, Mass. (Tel. ANDrew 8-8380)  
Purch. Agent: George W. Kenty  
Sales Mgr.: Walter J. Murphy WN, PS, MM

**FEDERAL MFG. & ENGRG. CORP.**  
1055 Stewart Ave., Garden City, N. Y. (Tel. PLowner 2-7400)  
Purch. Agent: Harry Levin  
V. P.-Sales: Robert S. Schlanger GS, GE, CO, TS, R&D

**FEDERAL METAL HOSE CORP.**  
277 Military Rd., Buffalo 7, N. Y. (Tel. DE 4893)  
Pres.: Harry C. Neff  
Purch.: K. E. Lehr MF, PS, GS

**FEDERAL PRODUCTS CORP.**  
1144 Eddy St., Providence 1, R. I. (Tel. STUART 1-9300)  
Asst. Adv. Mgr.: G. H. Wilson

**FEDERAL SCIENTIFIC CORP.**  
615 W. 131st St., N. Y., N. Y. (Tel. AU 6-4400)  
Purch. Agent: Murray Wiener R&D

**FEDERAL SCREW PRODUCTS INC.**  
3917 N. Kedzie Ave., Chicago 18, Ill. (Tel. IRving 8-5744)  
Purch. Agent: Ted Eisman  
Sales Mgr.: L. L. Harris MF, WN, PS, GS, GH, GE

**FEDERAL SHOCK MOUNT CORP., DIV.-THE KORFUND CO., INC.**  
1060 Washington Ave., New York 56, N. Y. (Tel. WYandotte 3-0400)  
Purch. Agent: J. Silverman  
Sales Mgr.: J. I. Hammond  
Sales Prom. Mgr.: S. L. Perlow GS, TR, MM, R&D

**FEDERAL TELECOMMUNICATIONS LABS.**  
500 Washington Ave., Nutley, N. J.

**FEDERAL TELEPHONE & RADIO CO.**  
100 Kingsland Rd., Clifton, N. J. (Tel. NUTLEY 2-3600)  
Purch. Mgr.: H. P. Sammerer  
V. P.-Sales: T. M. Douglas

**FEDERAL TOOL ENGRG. CO.**  
1384 Pompton Ave., Cedar Grove, N. J. (Tel. CLifford 6-5300)  
Purch. Agent: Mrs. E. Lindenfield  
Sales Mgr.: Robert H. Pityo

**FEEDBACK CONTROLS, INC.**  
599 Main St., Waltham 54, Mass. (Tel. TWINbrook 4-0200)  
Purch. Agent: Stanley W. Block  
Sales Mgr.: John J. Fensler GE, CO, TS, TR, R&D

**FEILER ENGRG. & MFG. CO.**  
8026 N. Monticello Ave., Skokie, Ill. (Tel. CDnelia 7-8280)  
Purch. Agent: G. Wolf  
Sales Mgr.: Elwood Tolan GE, TS

**FELKER MFG. CO.**  
1128 Border Ave., Torrance, Calif. (Tel. FAirfax 8-4704)  
Purch. Agent: George Mittl  
Purch. Dept.: Helen Sutor  
Sales Mgr.: Fred K. Ryan MM, R&D

**FELTERS CO., THE**  
210 South St., Boston 11, Mass. (Tel. LIBerty 2-7021)  
V. P.-Purch.: J. G. Bowden, 22 W. St., Millbury, Mass. (Tel. UNion 5-4404)  
V. P.-Sales: G. C. Howe  
Asst. Sales Mgr.: G. J. Harrington MM

**FENVAL ELECTRONICS, INC.**  
Mellen St., Frammingham, Mass. (Tel. TRinity 3-7455)  
Pres.-Purch.: R. S. Goodyear  
Sales Mgr.: H. J. Andrews

**FENVAL INC.**  
Pleasant St., Ashland, Mass. (Tel. TRinity 5-6111)  
Purch. Agent: F. Stockwell  
Buyers: J. Mahoney & R. Thorne  
Gen. Sales Mgr.: S. Edgerly MF, WN, PS, GS, GE, CO, TS, TR

**FERRANTI ELECTRIC INC.**  
30 Rockefeller Plaza, New York 20, N. Y. (Tel. CIRCLE 7-0911)  
Purch. Agent: P. C. Pope  
Dir.-Sales: D. G. Pacy GS, GE, TS, TR

**FERRIS-MFG. CO., THE**  
45 Seymour St., Stratford, Conn. (Tel. DRexel 8-0120)  
Purch. Agent: S. McDonough  
Pres.-Sales: Stanley Dulski MF

**CODING**

Missile Frame MF  
Warhead & Nose Cone WN  
Propulsion System PS  
Ground Support GS  
Ground Handling GH  
Guidance Equipment GE  
Checkout Equipment CO  
Test Equipment TS  
Tracking & Telemetering TR  
Research & Development R&D  
Materials & Metals MM

# ... purchasing directory fer—gen

- FERROTHERM CO., THE**  
1861 E. 65th St., Cleveland 3, Ohio (Tel. EN 1-0745)  
Asst. Secy.-Purch.: Clem Gross  
Sales Mgr.: Max Korb
- FERROTRAN ELECTRONICS CO., INC.**  
673 Broadway, New York 12, N. Y. (Tel. ALgonquin 4-5810)  
Sales Mgr.: H. King  
Gen. Mgr.: Edward A. Abbot TR, R&D
- FERROXCUBE CORP. OF AMERICA**  
129 E. Bridge St., Saugerties, N. Y. (Tel. CHerry 6-2811)  
Purch. Agent: J. P. O'Reilly  
Sales Adm.: W. J. Crosby MF, PS, GS
- FIDELITY AMPLIFIER CO.**  
1633 N. Halsted St., Chicago 14, Ill. (Tel. MOhawk 4-3515)  
Purch. Agent: W. Stanton Martin GE
- FIDELITY CHEMICAL PRODUCTS CORP.**  
470 Frelinghuysen Ave., Newark 12, N. J. (Tel. BI 2-4118)  
Gen. Mgr.-Purch.: Maurice Bick  
Head-Sales: S. B. Lonyoi MF, WN, PS, GS, GH, TR
- FIDELITY INSTRUMENT CORP.**  
1000 E. Boundry Ave., York, Pa. (Tel. 7675)  
Purch. Agent: George Dietz  
Pres.-Sales: A. A. Wolf GS, GE, TR
- FILMOHM CORP.**  
48 W. 25th St., New York 10, N. Y. (Tel. WATkins 4-3244)  
Purch. Agent: Bob Latin  
Buyer: M. Rosten  
V. P.-Sales: J. N. Popper TS, TR
- \*FILTERS, INC.**  
30 Sagamore Hill Dr., Port Washington, N. Y. (Tel. 7-8220)  
Purch. Agent: D. Bachiocchio  
V. P. Sales: C. G. Barker GE, TR  
\*(See Page 6 for Advertisement)
- FILTRON CO., INC.**  
131-15 Fowler Ave., Flushing 55, N. Y. (Tel. HICKory 5-7000)  
Dir.-Purch.: Lou Kerestury  
Gen. Sales Mgr.: Samuel I. Perry TS
- FINE ORGANICS, INC.**  
211 E. 19th St., New York 3, N. Y. (Tel. GRamercy 5-1030)  
Purch. Agent: Miss Agnes Guidice  
Asst. to the Pres.: Emanuel Rosenblat
- FINN AERONAUTICAL DIV., T. R. FINN & CO., INC.**  
275 Goffle Rd., Hawthorne, N. J. (Tel. HA 7-7123)  
Purch. Engr.: T. B. Malloy  
Sales: William Grimm PS
- FINNELL SYSTEM, INC.**  
500 East St., Elkhart, Ind. (Tel. 2-0586)  
V. P.-Purch.: W. S. Finnell, Jr.  
V. P.-Sales: James E. Bates
- FINNEY CO., THE**  
34 W. Interstate St., Bedford, Ohio (Tel. Bedford 2-6161)  
Pres.-Purch.: L. H. Finneburgh  
V. P.-Purch.: M. L. Finneburgh, Sr.  
Sales Mgr.: M. L. Finney, Jr.  
Gen. Sales Mgr.: M. L. Finney, Sr. GE, TR, MM
- FIRESTONE TIRE & RUBBER CO., THE, GUIDED MISSILE DIV.**  
2525 Firestone Blvd., Los Angeles 54, Calif. (Tel. LUDlow 3-4411)  
Purch. Agent-Coast Div.: J. D. Esterly  
Mgr., Purch. Dept.-Guided Missile Div.: N. H. Peterson  
Buyers: Fred Jewett, W. F. Koehne, Leo L. Lawrence, M. I. Deles, R. B. Harop, T. W. Dunford, C. W. Smith, & C. A. Giboney  
Sales Engr.: F. W. Thompson MF, WN, PS, GS, GH, CO, TS, TR, R&D
- FIREWEL CO., INC., THE**  
3685 Broadway, Buffalo 25, N. Y. (Tel. REgent 0-440)  
Purch. Agent: A. DiMiceli  
V. P.-Aviation Products: John C. Goodell GS, R&D
- FIRST ELECTRONICS CORP., THE**  
117 Blue Hill Ave., Boston 19, Mass. (Tel. HI 5-5900)  
Purch. Agent: A. Miller MF, PS, GS, GH, GE, CO, TS, TR
- FIRTH STERLING INC.**  
3113 Forbes, Pittsburgh, Pa. (Tel. MUseum 2-4500)  
Purch. Agent: Harry K. Stern, McKeesport, Pa. (Tel. HOmestead 1-4776)
- Asst. Purch. Agent: George L. Miller, McKeesport, Pa.  
V. P.-Sales: Thomas G. Barnes MF, WN, PS, GS
- FISCHER & PORTER CO.**  
6 Westminster Rd., Harboro, Pa. (Tel. OSborne 5-6000)  
Purch. Agent: Danjel Steelman  
V. P.-Sales: Robert L. Rice PS, GS, GH, GE, CO, TS, TR
- FISHER & CROME**  
109 N. Camac St., Philadelphia, Pa. (Tel. LOcust 4-5054)  
Buyer: John C. Bucher GS, GH
- FISHER GOVERNOR CO.**  
Box 307, Marshalltown, Iowa (Tel. 5561)  
Purch. Agent: A. M. Chard  
Sales Mgr.: Bruce Price GH
- FISHER RESEARCH LAB., INC.**  
1975 University Ave., Palo Alto, Calif. (Tel. DAVenport 2-4646)  
Purch. Agent: James G. Rafferty  
V. P.-Sales: Irwin Feichtmeier TR, R&D
- FISHER SCIENTIFIC CO.**  
711 Forbes Ave., Pittsburgh 19, Pa. (Tel. EXpress 1-1330)  
Sales Mgr.: J. Cramer TS, R&D
- FISH-SCHURMAN CORP.**  
70 Portman Rd., New Rochelle, N. Y. (Tel. New Rochelle 6-1300)  
Purch. Agent: E. A. Eyeran  
Pres.-Sales: Murray Yawitz
- FLEETWOOD LABS., INC.**  
300 Victory Blvd., New Rochelle, N. Y. (Tel. BEverly 5-0831)  
Sales Mgr.: W. A. Scism CO, TS
- FLETCHER MFG. CO., INC., THE**  
10th & Missouri Sts., Oklahoma City 17, Okla. (Tel. FOrest 5-9232)  
V. P.-Purch. & Sales: C. F. Fletcher  
Plant Supt.: Kenneth P. Kerr MF, WN, PS, GS, GE, TS, TR
- FLEXAUST CO., THE**  
100 Park Ave., New York, N. Y. (Tel. OREGon 9-1300)  
Supt.-Purch.: T. Burbank, Chestnut St., Amesbury, Mass. (Tel. 1396)  
Adv. Mgr.: T. G. May PS, GS, GH
- FLEXIBLE METAL HOSE MFG. CO.**  
777 W. 16th St., Costa Mesa, Calif. (Tel. LIBerty 8-6252)  
Pres.: Elton Hallett MF, PS, GS, GH, GE
- FLEXIBLE TUBING CORP.**  
New Whitfield St., Guilford, Conn. (Tel. GLEndale 3-2777)  
Purch. Agent: Robert F. Moran  
Asst. Mgr.-Aircraft & Missile Sales: John D. Kohler MF, GS, GE, CO
- \*FLEXONICS CORP., AERONAUTICAL DIV.**  
1414 S. Third Ave., Maywood, Ill. (Tel. FILLmore 3-8000)  
Purch. Agent: R. Ferguson  
Gen. Mgr.-Aeronautical Div.: R. R. Muller  
Systems Mgr.: William C. Gage  
Mktg. Mgr.: Dale Ankeney TS, MM, R&D  
\*(See Page 41 for Advertisement)
- FLEXROCK CO.**  
3609 Filbert St., Philadelphia, Pa. (Tel. BARIng 2-5500)  
Mech. Engr.-Purch.: H. Schmidt  
Sales Mgr.: H. Himbert MF, PS, MM
- FLIGHT REFUELING, INC.**  
P. O. Box 1701, Baltimore 3, Md. (Tel. SOuthfield 6-5000)  
Treas.-Purch.: Albert Roeper  
Buyers: Rudolph Borke, Lloyd Lilly, Jr. & John Kucher  
Asst. to Pres.: Richard C. Oickinson GS, TS, R&D
- FLIGHT RESEARCH, INC.**  
P. O. Box 1-F, Richmond 1, Va. (Tel. REpublic 7-4163)  
Purch. Agent: William J. Waymack, Jr.  
Sales Mgr.: John C. Pennock R&D
- FLIGHT SCIENCES LAB.**  
1963 Sheridan Dr., Buffalo, N. Y. (Tel. VI 7166)  
Purch. Agent: Mrs. Mary Bacon R&D
- FLOCK PROCESS CO. INC.**  
375 Main Ave., Norwalk, Conn. (Tel. VICTor 7-4586)  
Head-Purch. Dept.: R. J. Leff  
Head-Sales: H. A. Leff MF, PS, GS, TS, TR
- FLORI PIPE CO., THE**  
601 E. Red Bud Ave., St. Louis 15, Mo. (Tel. EVERgreen 1-3800)  
Purch. Agent: Dwight Ketring  
Sales Mgr.: Robert D. Flori
- FLOW CORP.**  
85 Mystic St., Arlington 74, Mass. (Tel. MIssion 8-3185)  
Admin. Asst.-Purch.: R. J. McIlveen  
Mgr.-Sales: H. P. Grant
- FLOW MEASUREMENTS CORP.**  
10506 Wheatley St., Kensington, Md. (Tel. LLockwood 4-0122)  
Purch. Agent: Joseph H. West  
Sales Mgr.: Don Pardue
- FLUID REGULATORS CORP.**  
313 Gillette St., Painesville, Ohio (Tel. ELMwood 2-3319)  
Purch. Agent: Ray W. Honeywell  
Sales Mgr.: Ralph W. Barnes PS, GS, GH, GE, R&D
- JOHN FLUKE MFG. CO., INC.**  
1111 W. Nickerson St., Seattle 99, Wash. (Tel. AT 2-5700)  
Plant Mgr.: R. M. Nicholas  
Sales Mgr.: Robert E. Florence GS, GE, CO, TS, T
- FLUOROCARBON CO. INC., THE**  
1206 E. Ash Ave., Fullerton, Calif. (Tel. MA 6-9369)  
Purch. Agent: Frank Willey  
Sales Mgr.: Sandy Potet MM, R&D
- FLUORULON LABS., INC.**  
Box 305, Caldwell, N. J. (Tel. CA 6-8228)  
Pres.-Purch.: F. B. DuVall  
Sales Mgr.: W. P. Hemmel PS, M
- FLUSH WALL RADIO CO.**  
1012 Cleveland St., Clearwater, Fla. (Tel. 34-6061)  
Pres.: L. R. Schenck
- FONDA GAGE CO., INC.**  
Box 1050, 200 Henry St., Stamford, Conn. (Tel. DA 4-5787)  
Office Mgr.: O. A. Romaniello  
Gen. Mgr.-Purch.: H. Wunsell  
Sales Mgr.: A. J. Erickson TS, R&D
- FOOD MACHINERY & CHEMICAL CORP., CHEMICAL DIVISIONS**  
161 E. 42nd St., New York 17, N. Y. (Tel. MURray Hill 7-7400)  
Purch. Dir.-Chemical Divs.: J. A. Mooney WN, PS, GH, R&D
- FOOD MACHINERY & CHEMICAL CORP., ORDANANCE DIV.**  
1105 Coleman Ave., San Jose, Calif. (Tel. CYpres 4-8124)  
Procurement Mgr.: H. L. Hall  
Purch. Agent: H. V. Rogers  
Asst. Purch. Agent: F. P. Gorenz  
Sales: H. R. Hammond MF, PS, GS, GH, CO
- FOOTE BROS. GEAR & MACHINE CORP.**  
4545 So. Western Blvd., Chicago 9, Ill. (Tel. Virginia 7-4200)  
V. P.-Mktg.: R. W. Johnson MF, T
- FOOTE MINERAL CO.**  
18 W. Chelton Ave., Philadelphia 44, Pa. (Tel. VICTor 8-4000)  
Dir.-Purch.: W. M. Raynor  
Asst. Dir.-Purch.: W. J. Brooking  
Purch. Agent: H. H. Apper  
Gen. Sales Mgr.: James Fentress
- FORBES, GEORGE F., INDUSTRIAL MATHEMATICIAN**  
13745 Eldridge Ave., Sylmar (San Fernando), Calif. (Tel. EMpire 7-1219)
- FORBES & WAGNER, INC.**  
345 Central Ave., Silver Creek, N. Y. (Tel. 650)  
Purch. Agent: R. L. Hollowood  
V. P.-Sales & Engrg.: John C. Pontius GE, T
- M. A. FORD MFG. CO., INC.**  
1545 Rockingham St., Davenport, Iowa (Tel. 7-3251)  
Secy.: Stanley Hill  
Sales Mgr.: L. E. Schumann
- FORD INSTRUMENT CO., DIV.-SPERRY RAND CORP.**  
31-10 Thomson Ave., Long Island City 1, N. Y. (Tel. STillwell 4-9000)  
V. P.-Sales: A. L. Coulson  
Purch. Agent: S. J. Nasri WN, GS, GE, CO, TS, TR, F
- FORD RADIO & MICA CORP.**  
536 63rd St., Brooklyn 20, N. Y. (Tel. GEdney 9-8300)  
Purch. Agent: Alan J. Long  
Sales Mgr.: Delos Maynard GS, TS

**FOREDOM ELECTRIC CO., INC.**  
Bethel, Conn. (Tel. Pioneer 8-3521)  
Purch. Agent: Henry Holmes  
Sales Mgr.: Douglas E. Kellag **MM**

**FOREST ELECTRIC CO., THE**  
7216 Circle Ave., Forest Park, Ill. (Tel. FP 6-4100)  
Dir.-Purch.: Louis Picchietti  
Dir.-Sales: Charles F. King

**FORMED STEEL TUBE INSTITUTE**  
850-52 Hanna Bldg., Cleveland 15, Ohio (Tel. MAin 1-4012)  
Exec. Secy.-Treas.: Jehu R. Derricksan  
MF, WN, PS, TS, TR, MM, R&D

**ORMICA CORP.**  
4614 Spring Grove Ave., Cincinnati 32, Ohio (Tel. Kirby 1-3670)  
Purch. Agent: H. Heitbrink  
Prod. Mgr.: F. H. Hamilton **MM**

**ORM-IT PRODUCTS, INC.**  
1619 W. Walnut St., Chicago 12, Ill. (Tel. HAYmarket 1-7337)  
V. P.-Purch.: E. S. Jamison **MM**

**ORMSPRAG CO.**  
23601 Hoaver Rd., Warren, Mich. (Tel. JEFFerson 6-9000)  
Purch. Agent: E. D. Mackie  
Buyer: R. F. Agnelly  
V. P.-Sales: Charles F. Trapp, Jr.

**ORSBERG MFG. CO., THE**  
125 Seaview Ave., Bridgeport 1, Conn. (Tel. EDison 4-9469)  
Plant Mgr.: John W. Nystram  
Sales Mgr.: H. S. Forsberg

**ORT HILL PLASTIC LETTERS CORP.**  
40 Hanover St., Boston 8, Mass. (Tel. RIchmond 2-2570)  
V. P.: Dswald W. Gregson

**ORT WAYNE METALS, INC.**  
3211 MacArthur Dr., Ft. Wayne 6, Ind. (Tel. SHERwood 3181)  
V. P.-Purch.: Frank B. Didier  
Pres.: Ardelle Glaze **MM, R&D**

**OSTER TRANSFORMER CO.**  
3820 Colerain Ave., Cincinnati, D. (Tel. MULberry 1-2420)  
Purch. Agent: A. L. Janas  
Sales Mgr.: S. D. Haffey **MM**

**TO-VIDEO LABS., INC.**  
46 Commerce Rd., Cedar Grove, N. J. (Tel. CEnter 9-6100)  
Purch. Agent: James Palmere  
Sales Mgr.: John Mahler **GS, GE, TR, R&D**

**OUR WHEEL DRIVE AUTO CO., THE**  
2th & Auto Sts., Clintanville, Wisc.

**AM CORP.**  
105 Pawtucket Ave., Providence 16, R. I. (Tel. GENEva 4-7000)  
Dir.-Purch.: H. Keough  
V. P.-Sales: H. R. Robinson  
Mgr., Aviation Div.: John J. McKee  
PS, GH, TS, MM, R&D

**FANKLIN FIBRE-LAMITEX CORP.**  
18th St., P.R.R. Siding, Wilmington, Del. (Tel. DL 8-5269)  
Purch.: A. R. Campbell  
MF, WN, PS, GS, GE, TS, TR

**FEBANK CO.**  
11 W. Broadway, Glendale 4, Calif. (Tel. CHapman 5-6558)  
Purch. Agent: R. L. Harris  
Sales Mgr.: J. G. Tillery **GS, GE, R&D**

**FIED TRANSFORMER CO., INC.**  
718 Weirfield St., Brooklyn 27, N. Y. (Tel. EVergreen 6-1300)  
Purch. Agent: G. Lesser  
Sales Mgr.: M. Solzberg **GE, TR**

**FEMAN CO., THE**  
18th & Walnut Sts., Yankton, S. Dak. (Tel. North 5-2829)  
Purch.: E. W. Freeman  
Dir.-Sales: S. H. Byquist  
MF, WN, PS, GS, GH, GE, TR, MM

**FENCHTOWN PORCELAIN CO.**  
Frisson & 8th Sts., Frenchtown, N. J. (Tel. 480)  
Gen. Development Engr.: C. L. Seversike  
Dir.-Mktg. & Engr.: J. E. Camefaro **MM**

**FICK GALLAGHER MFG. CO., THE**  
10 S. Michigan Ave., Wellston, Ohio (Tel. WELLston 4-2121)  
Purch. Agent: D. A. Dobbins

**FAYSON DRBAN CO., INC.**  
1 Madison Ave., New York 16, N. Y. (Tel. URray Hill 7-0920) **MM**

**FRUEHAUF TRAILER CO., MILITARY EQUIPMENT DIV.**  
10940 Harper Ave., Detroit 32, Mich. (Tel. WA 1-2410)  
Dir.-Purch.: Bruce M. Kirsten  
Purch. Agent: H. E. Vermillion  
Purch.: Robert Liggert, Delphos, D. (Tel. 2-6015)  
Dir.-Military Equip.: E. R. Neumann **GS, GH, R&D**

**FUGLE-MILLER LABS. INC.**  
301 Central Ave., Clark, N. J. (Tel. FUlton 1-2727)  
Purch. Agent: F. L. Fugle, Jr.  
Sales Mgr.: Conrad Miller **TR**

**FULLER CO.**  
124 Bridge St., Catasauqua, Pa. (Tel. CDngress 4-2841)  
Purch. Agent: J. A. Nark  
Sales Mgr.: C. C. Kaesemeyer **GH**

**FULTON-IRGON CORP., THE**  
P. D. Box 591, Dover, N. J. (Tel. FDxcraft 6-7474)  
Purch. Agent: John D. Black  
Sales Mgr.: David Fulton **PS, GS, GH, MM**

**FURANE PLASTICS, INC.**  
4516 Brazil St., Los Angeles 39, Calif. (Tel. CHopman 5-5763)  
Purch. Agent: B. Halbrook  
Sales Mgr., Tooling: B. J. Bryan **TS, MM, R&D**

**FURNAS ELECTRIC CO.**  
1000 McKee St., Batavia, Ill. (Tel. 3410)  
Purch. Agent: C. R. Mead  
V. P.-Sales & Engr.: W. F. Lisman

**FUSITE CORP.**  
6000 Fernview Ave., Cincinnati 13, D. (Tel. REdwood 1-2020)  
Purch. Agent: J. Fox  
V. P.-Sales: J. H. Marsh, Jr. **MF, PS, GS, GE**

**FUTURECRAFT CORP.**  
1717 N. Chico Ave., El Monte, Calif. (Tel. CLumberland 3-2113)  
Purch. Agent: Wesley Jones  
Buyer: Claude Knight  
Prod. Control: Ray Curtis  
Supt.: Aage Hansen  
Chief Test Engr.: Richard Fewell  
Sales Mgr.: Robert Burke **MF, PS, GS, GE**

**GAR MFG. CORP.**  
73 Park St., Beverly, Mass. (Tel. WA 2-1626)  
Purch. Agent: Arthur D. Stone  
Asst. Purch. Agent: Francis F. Perry  
Dir.-Sales: Jerome B. Bates **MM**

**GAR PRECISION PARTS, INC.**  
190 Henry St., Stamford, Conn. (Tel. FI 8-2671)  
Purch. Agent: Albert D. Palmer **GE**

**G-L ELECTRONICS CO., INC.**  
2921 Admiral Wilson Blvd., Camden 5, N. J. (Tel. WDaclaw 6-2780)  
Purch. Agent: Boyd F. Beatty  
Dir.-Sales: Stephen G. Lax **PS, TR**

**G-M LABS. INC.**  
4300 N. Knox Ave., Chicago 34, Ill. (Tel. PEnsacola 6-1800)  
Purch. Agent: Irving M. Temen  
Sales Mgr., Components Div.: A. G. Bradt **GE**

**GPS INSTRUMENT CO., INC.**  
180 Needham St., Newton 64, Mass. (Tel. DEcatur 2-8110)  
Purch. Agent: Samuel Giser  
Sales Mgr.: Strain Sutton **GE, TR**

**G-V CONTRDLS INC.**  
Dkner Pkwy., Livingston, N. J. (Tel. WYman 2-6200)  
Gen. Sales Mgr.: Robert F. Stockton, III  
Buyer: Richard Maloney  
Production Mgr.: Ray Weckstein **GS, GH, GE, CO**

**GABRIEL CO., THE, GABRIEL ELECTRONICS DIV.**  
135 Crescent Rd., Needham Heights 94, Mass. (Tel. Hillcrest 4-0005)  
Purch. Agent: Charles Nalan  
Dir.-Sales: Steven Galagan  
V. P.-Electronics: Stanton L. Yarbraugh **GS, GE, TR**

**GABRIEL CO., THE, TALCO ENGRG. CO. DIV.**  
Falcon Field, Mesa, Ariz. (Tel. WD 4-1711)  
Purch. Agent: Edward Loh  
Dir.-Sales: A. E. Ehlberger **PS, GS, GH, GE**

**GAERTNER SCIENTIFIC CORP., THE**  
1262 Wrightwood Ave., Chicago 14, Ill. (Tel. BUCKingham 1-5335)  
Purch. Agent: L. V. Masbarger  
Sales Mgr.: Lyman W. Higgins **CD, TS**

**GAHAGAN INC.**  
Waterman Ave., Esmond 17, R. I. (Tel. CEnterdale 1-4000)  
Purch. Agent: E. Johnson  
Sales: E. S. Holland

**GALLAND-HENNING NOPAK DIV.**  
2753 S. 31st St., Milwaukee 46, Wisc. (Tel. MITchell 5-6000)  
Sales Mgr.: R. W. Peterman  
Dir.-Purch.: R. J. White

**G. W. GALLDWAY CO.**  
220 S. 1st Ave., Arcadia, Calif. (Tel. RYan 1-4961)  
Purch. Agent: M. J. Carlow  
V. P.-Sales: M. E. Tait

**GAMEWELL CO., THE**  
1238 Chestnut St., Newton Upper Falls, Mass. (Tel. BElglow 4-1240)  
Purch. Agent: E. D'Hollaran  
Sales Mgr., Potentiometer Div.: J. Manning  
GE, CO, TS, TR, R&D

**GARDEN CITY FAN CO.**  
801 N. Eighth St., Niles, Mich. (MUtual 3-1150)  
Asst. Treas.-Purch. Agent: J. Gertz  
Sales Engr.: E. E. Falkers  
Pres.: G. E. Bauer

**GARDNER-DENVER CO.**  
Front St., Quincy, Ill. (Tel. BAldwin 2-S400)  
Dir.-Purch.: E. E. Graves  
Gen. Sales Mgr.: G. W. Gutekunst **MF, GH**

**GARDE MFG. CO.**  
53 John St., Cumberland, R. I. (Tel. PAwtucket 6-4200)  
Purch. Agent: Charles H. D'Kaonian  
Pres.: A. C. Demurjian

**GARDNER LABORATORY, INC.**  
P. D. Box 5728, Bethesda 14, Md. (Tel. DL 6-3600)  
Head-Purch. Dept.: W. J. Furmage  
Head-Sales: Henry A. Gardner, Jr. **TS**

**GEORGE K. GARRETT CO., INC.**  
Torresdale Ave. at Talbot St., Philadelphia 36, Pa. (Tel. DEVanshire 2-6000)  
Purch. Agent: Joseph Armstrong  
Sales Mgr.: Walter G. Johnson **MM**

**GARRETT CORP., THE, AIR CRUISERS DIV.**  
Rt. 34, Wall Township, N. J.; P. O. Box 180, Belmar, N. J. (Tel. MUtual 1-3527)  
Purch. Agent: W. Howard Trowbridge  
Dir. Mgr.: Walter L. Clark  
Mgr., Contract Admin.: Earl E. Dix **MF, PS**

**GAS APPLIANCE STORES, INC.**  
Box 5057, Columbia, S. C. (Tel. ALPine 2-7248)  
Pres.: J. C. Beatty

**GASKET MFG. CO. INC.**  
319 W. 17th St., Los Angeles 15, Calif. (Tel. RIchmond 9-4063)  
Purch.: C. Lane  
Sales: D. W. Goddin **MF, WN, PS**

**GATKE CRDP.**  
248 N. LaSalle St., Chicago 1, Ill. (Tel. STate 2-0081)  
Purch. Agent: W. R. Berngen  
Buyer: J. Call  
V. P.-Sales: F. T. Gotke **MF, WN, PS, MM**

**GENALEX DIV.-BRITISH INDUSTRIES CORP.**  
80 Share Rd., Part Washington, N. Y. (Tel. PO 7-7700)  
Dir.-Sales: Ed Canfield

**GENERAL ALLDYS CO.**  
367-405 W. First St., Boston, Mass. (Tel. ANDrew 8-1710)  
Purch. Agent: John Barnes  
Asst. Sales Mgr.: Allyn S. Crawford  
V. P.-Sales Mgr.: Thomas E. Franks **MM**

**GENERAL AMERICAN TRANSPORTATION CRDP.**  
135 S. LaSalle St., Chicago 90, Ill. (Tel. Financial 6-4100)  
Dir.-Purch.: C. Ingraham  
Asst. Dir.-Purch.: W. Graham  
Purch. Agent: E. Rothenbaum

CODING	
Missile Frame	MF
Warhead & Nose Cone	WN
Propulsion System	PS
Ground Support	GS
Ground Handling	GH
Guidance Equipment	GE
Checkout Equipment	CO
Test Equipment	TS
Tracking & Telemetering	TR
Research & Development	R&D
Materials & Metals	MM

# ... purchasing directory gen—gra

- GENERAL AUTOMATIC CORP.**  
12 Carlton Ave., Mountain View, Wayne, N. J. (Tel. CLHford 6-2756)  
Sales Mgr.: Mort D. Barron **GS, CO, TS, TR**
- GENERAL BOX CO.**  
1825 Miner St., Des Plaines, Ill. (Tel. VAnderbilt 4-4181)  
V. P. & Dir.-Purch.: C. Claude Watkins  
V. P. & Sales Mgr.: David B. Forrester
- GENERAL CABLE CORP.**  
420 Lexington Ave., New York 17, N. Y. (Tel. LEXington 2-2920)  
V. P.-Purch.: E. B. McGrew  
V. P.-Sales: H. G. Richardson  
MF, WN, PS, GS, GH, GE, CO, TS, TR, MM
- GENERAL CEMENT MFG. CO., DIV.-TEXTRON INC.**  
400 S. Wyman St., Rockford, Ill. (Tel. WOODland 8-9661)  
Purch. Agent: George Kampeir  
V. P.-Sales: R. D. Gawne  
MF, WN, PS, GS, GH, GE
- GENERAL COIL PRODUCTS CORP.**  
147-12 Liberty Ave., Jamaica 35, N. Y.  
Pres.: J. F. Siegel
- GENERAL COMMUNICATION CO.**  
677 Beacon St., Boston 15, Mass. (Tel. COpley 7-6030)  
Purch. Agent: J. M. Orsillo  
Buyers: B. E. Johnston & D. A. Collignon  
Dir.-Sales: J. L. Weis  
Sales: C. E. Roche **GS, CO, TS, TR, MM**
- GENERAL COMPONENTS INC.**  
225 E. 144th St., New York 31, N. Y. (Tel. WOHlhaven 5-0740)  
Purch. Agent: Michael Meala  
Chief Engr.: Sal De Ianni  
Sales Mgr.: Henry Meala  
MF, WN, PS, GS, GH, GE, TR
- GENERAL CRYSTAL CO., INC.**  
372 Wilmat Ave., Burlington, Wisc. (Tel. ROckwell 3-2425)  
Treas.: J. H. Larimer  
Sales Mgr.: Norden Haus **TR**
- GENERAL DESIGN**  
631 30th St., San Diego, Calif. (Tel. BE 4-2090)  
Dir.-Purch.: L. M. Foss  
Sales Engr.: J. C. Pemberton **TS, R&O**
- GENERAL DEVICES, INC.**  
P. O. Box 253, Princeton, N. J. (Tel. DAVIS 9-2323)  
Purch. Agent: J. B. Schmidt  
Buyers: R. Torgeson & L. Irvine  
Contract Mgr.: Murray Medvin **GE, TR, R&O**
- GENERAL ELECTRIC CO., APPARATUS SALES DIV.**  
1 River Rd., Schenectady 5, N. Y. (Tel. FRanklin 4-2111)  
Mgr.-Material: H. F. Conway  
Buyer: F. J. Sullivan  
Mgr.-Mil. Pwr. Supply Sales: J. R. Topper  
WN, PS, GS, GE, CO, TR, R&O
- GENERAL ELECTRIC CO., CATHODE RAY TUBE DEPT.**  
Bldg. 6, Electronics Park, Syracuse, N. Y. (Tel. GR 6-4411)  
Purch. Agent: D. R. Coffman  
WN, PS, GS, GH, GE, CO, TS, TR, MM, R&O
- GENERAL ELECTRIC CO., COMPUTER DEPT.**  
13430 N. Black Canyon Hwy., Box 270, Phoenix, Ariz. (Tel. WI 3-2351)  
Purch. Mgr.: J. P. Barford  
Purch., Sheet Metal Parts: S. T. Brown  
Purch., Electromechanical Assemblies: S. Korp  
Purch., Electrical Components: W. Adams  
Mgr.-Mktg.: G. A. Hagerty **GS, CO, TS, R&O**
- GENERAL ELECTRIC CO., DEFENSE SYSTEMS DEPT.**  
Bldg. 1, Electronics Park, Syracuse, N. Y. (Tel. GRanite 6-4411)  
Purch. Agent: J. M. Parmelee  
Buyers: J. E. Gaitley, G. P. Dittmar & J. R. Hanson  
Sr. Buyer: C. F. Moore  
Mktg. Mgr.: Warner R. Simback  
MF, WN, PS, GS, GH, GE, CO, TS, TR, MM, R&O
- GENERAL ELECTRIC CO., HEAVY MILITARY ELECTRONICS DEPT.**  
Court St., Syracuse, N. Y. (Tel. GRanite 6-4411)  
Purch. Agent: R. H. Pickett  
Sales Mgr.: R. J. Brown  
GS, GH, GE, CO, TS, TR, R&O
- GENERAL ELECTRIC CO., INSULATOR DEPT.**  
S. Charles & Cromwell Sts., Baltimore, Md. (Tel. PLaza 2-8020)  
Mgr.-Materials: K. W. Ashman
- Buyers: R. J. Myrke & E. H. Rickels**  
**Mgr.-Headquarters Sales: C. B. Vaughn**
- GENERAL ELECTRIC CO., LAMP GLASS DEPT.**  
Nela Park, Cleveland, Ohio (Tel. IVanho 6-3000)  
Mktg. Mgr.: W. R. Becker
- GENERAL ELECTRIC CO., LAMP METALS & COMPONENTS DEPT.**  
21800 Tungsten Rd., Cleveland 17, Ohio (Tel. KENmore 1-3050)  
Purch. Mgr.: F. P. Nemeo, Nela Park 12, O. (Tel. GLenville 1-6600)  
Mktg. Mgr.: J. W. Forbes **MM**
- GENERAL ELECTRIC CO., METALLURGICAL PRODUCTS DEPT.**  
11177 E. 8 Mile Rd., Detroit 32, Mich. (Tel. JEFFerson 6-9100)  
Purch. Mgr.: H. Millar  
Mgr.-Specialty Alloy Mfg.: J. D. Benedict  
Mgr.-Sales, Specialty Alloys: J. Stevenson **MM**
- GENERAL ELECTRIC CO., MISSILE & SPACE VEHICLE DEPT.**  
Lakeside Ave., Burlington, Vt. (Tel. UNiversity 3-3411)  
Mgr.-Materials: G. W. Curry  
Purch. Agent: J. H. Drury  
Mktg. Mgr.: R. G. Loecherer  
MF, WN, GS, GH, CO, TS, MM
- GENERAL ELECTRIC CO., MISSILE & SPACE VEHICLE DEPT. (PA.)**  
3198 Chestnut St., Philadelphia 4, Pa. (Tel. EVergreen 2-7800)  
Purch. Mgr.: J. P. Benzie  
Mgr., Sub-contracting: K. N. Thompson  
Mgr.-Mktg.: R. M. Fritz  
WN, GS, GH, CO, TS, TR, MM, R&O
- GENERAL ELECTRIC CO., TECHNICAL PRODUCTS DEPT.**  
Electronics Park, Bldg. 6, Syracuse, N. Y. (Tel. GRanite 6-4411)  
Purch. Agent: F. M. Brown  
Sales Mgr.: C. S. Simon  
Mgr., Mktg. Dev.: C. W. Michaels **TS, TR, R&O**
- GENERAL ELECTRIC CO., WIRE & CABLE DEPT.**  
1285 Boston Ave., Bridgeport 2, Conn. (Tel. EDison 4-1012)  
Mgr.-Materials: R. H. Merrill  
Mgr.-Mktg.: J. S. Overstreet **MM**
- GENERAL ELECTRIC CO., X-RAY DEPT.**  
4855 Electric Ave., Milwaukee 1, Wisc. (Tel. EVergreen 3-3211)  
Mgr.-Materials: S. D. Hayward  
Mgr.-Indsl. Sales: J. W. Webster **TS, TR, MM**
- GENERAL ELECTRODYNAMICS CORP.**  
4430 Forest Lane, P. O. Box 517, Garland, Texas (Tel. BRoadway 6-1161)  
Purch. Agent: Joe A. Matthews  
Exec. V. P.: Francis J. Solgo  
Mgr., Tube Div.: Herman Albertine, Jr.  
Mgr., Equipment Div.: B. W. Griffith **GE, TR, R&D**
- GENERAL ELECTRO-MECHANICAL CORP.**  
785 Hertel Ave., Buffalo 7, N. Y. (Tel. BE 9685)  
Purch. Agent: S. Kurtz  
Sales Mgr.: E. B. Butler **GS, GH**
- GENERAL FILTERS, INC.**  
43800 Grand River Ave., Novi, Mich. (Tel. FIEldbrook 9-2481)  
V. P.-Purch.: Roland A. Redner  
Pres.: Mrs. Grace Redner **GS, GH**
- GENERAL FIRE EXTINGUISHER CORP., THE**  
8740 Washington Blvd., Culver City, Calif. (Tel. TEXas 0-6644)  
Purch. Agent: T. L. Windsor  
V. P.-Sales: E. K. Payne **GS**
- GENERAL GASKET INC.**  
Middletown, Conn. (Tel. DIamond 6-6203)  
V. P.-Purch.: E. London  
V. P.-Sales: D. London **MF, WN, PS, GE, TR**
- GENERAL INSULATED WIRE WORKS**  
69 Gordon Ave., Providence 5, R. I. (Tel. HOpkins 1-2100)  
Purch. Agent: M. Fargnoli  
Sales Mgr.: C. J. Craig, Jr.
- GENERAL KINETICS, INC.**  
555 23rd St., S., Arlington 2, Va. (Tel. OTis 4-7555)  
Purch. Agent: S. P. Vanderslice  
V. P.-Sales: W. L. Anderson **TS**
- GENERAL LABORATORY ASSOCIATES, INC.**  
17 E. Railroad St., Norwich, N. Y. (Tel. 4-3264)  
Purch. Agent: Harold H. Horton  
Dir.-Sales & Service: L. A. DeMellier **PS**
- GENERAL LOGISTICS DIV., AEROGROUP CORP.**  
2929 Floyd St., Burbank, Calif. (Tel. VIctoria
- 9-5831)  
Sales Mgr.: Dick Mosher  
Eastern Sales Mgr.: L. S. Haynes, Jr., Jackson, Mich. (Tel. STate 2-0361) **GH, MM**
- GENERAL MAGNETICS, INC.**  
135 Bloomfield Ave., Bloomfield, N. J. (Tel. PIlgrim 8-2400)  
V. P.-Sales: M. G. Tekosky  
Secy.-Treas.: Ralph W. Froese **GE, TR, R&I**
- GENERAL MOTORS CORP., ALLISON DIV.**  
Main & 13th Speedway, Indianapolis, Ind.
- GENERAL PHONES CORP.**  
5711 Howe St., Pittsburgh 32, Pa. (Tel. EMerson 1-7970)  
V. P.-Purch.: L. McClure Lanning **TI**
- GENERAL PHOTO PRODUCTS CO., INC.**  
15 Summit Ave., Chatham, N. J. (Tel. ME 5-5200)  
Mgr.: R. J. Paulos **G**
- GENERAL PLASTICS CORP. OF NEW JERSEY**  
165 3rd Ave., Paterson, N. J. (Tel. ARmory 4-4710)  
Purch. Agent: H. Barto  
Sales: E. W. Davidson
- GENERAL PRECISION LAB. INC.**  
63 Bedford Rd., Pleasantville, N. Y. (Tel. ROgers 9-5000)  
Dir.-Purch.: A. C. Schreiber  
V. P.-Avionic Sales: W. J. Tull  
V. P.-Ind. Sales: B. Foulds **GE, TR, R&O**
- GENERAL PRODUCTS CORP.**  
Salem St., Union Springs, N. Y. (Tel. 7-7367)  
Purch. Agent: D. L. Webb  
Sales Mgr.: C. Howard Leaf **GS, GE, CO, TS, T**
- GENERAL RADIO CO.**  
275 Massachusetts Ave., Cambridge 39, Mass. (Tel. TRowbridge 6-4400)  
Purch. Mgr.: Colby E. Kelly, 22 Baker Ave., West Concord, Mass. (Tel. EMerson 9-4400, Ext. 202)  
Sales Mgr.: Myron T. Smith
- GENERAL R-F FITTINGS, INC.**  
702 Beacon St., Boston, Mass. (Tel. KENmor 6-2290)  
Purch. Agent: Robert J. Hoff  
V. P.-Engrg.: Owen L. Cook  
MF, PS, GS, GH, GE, CO, TS, T
- GENERAL SCIENTIFIC EQUIPMENT CO.**  
7516 Limekiln Pike, Philadelphia 50, Pa. (Tel. HANcock 4-1550)  
Purch. Agent: J. Q. Kline  
Head-Sales: M. Kline **PS, GS, GH, GE, CO, TS, T**
- GENERAL TESTING LABS, INC.**  
580 Washington Ave., Carlstadt, N. J. (WEbster 9-6933)  
Dir.-Purch.: R. F. Furlong  
Sales Engr.: A. N. Purdy **TS, R&O**
- GENERAL TRANSISTOR CORP.**  
91-27 138th Pl., Jamaica 35, N. Y. (Tel. HICKory 1-1000)  
Purch. Agent: John Grillo **T**
- GENERAL TRANSISTOR WESTERN CORP.**  
6110 Venice Blvd., Los Angeles 34, Calif. (Tel. WEbster 3-5867)  
Purch. Agent: Hugh Aspinwall  
V. P.-Sales: Martin Braude **GE, R&O**
- GENERAL VACUUM CORP.**  
400 Border St., E. Boston 28, Mass. (Tel. LOGan 7-8800)  
Purch. Agent: D. J. Tobin  
Dir.-Sales: W. G. Overacker
- GENISCO, INC.**  
2233 Federal Ave., Los Angeles 64, Calif. (Tel. BRadshaw 2-2706)  
Purch. Agent: G. F. Coyle  
Sales Mgr., Instrument Div.: Leon Glazerman  
Sales Mgr., Mechanical Div.: M. A. White **GE, TS, R&O**
- GENISCO, INC., INSTRUMENT DIV.**  
2209 Barry St., Los Angeles 64, Calif. (Tel. GRanite 8-1276)  
Purch. Agent: Gerry Coyle  
Sales Mgr.: Leon J. Glazerman **GE, TS**
- GENISTRON, INC.**  
2301 Federal Ave., Los Angeles 64, Calif. (Tel. BRadshaw 2-0189)  
Purch. Agent: John Brunskill  
Sales Mgr.: John F. Harrison **TS, I**
- GENTEX CORP.**  
450 Seventh Ave., New York 1, N. Y. (Tel. CHickering 4-6400)  
Purch. Agent: Elmer Kugler, Carbondale, Pa. (Tel. CARbondale 1840)
- GEORATOR CORP.**  
315 Tudor St., Manassas, Va. (Tel. EMpire 8-2101



Pres.: Shelley Krasnow  
Purch. Agent: Worth Hatch GS, TS

**GEOTRONIC LABS. INC.**  
1314 Cedar Hill Ave., Dallas 8, Texas (Tel. WH 6-9123)  
Dir.-Purch.: D. B. Renner GE, CO, TS, TR, R&D

**GERBET HAIRSPRING CO.**  
Bridge St., Thomaston, Conn. (Tel. ATlas 3-4857)  
Partner: Jack Weiss

**GERING PRODUCTS, INC.**  
N. 7th St. & Monroe Ave., Kenilworth, N. J. (Tel. New York City - CDrtland 7-3583; N. J. - BRidge 6-2900)  
Purch. Agent: M. J. Malik  
Dir.-Sales: Horton Conrad MM

**G. M. GIANNINI & CO., INC.**  
918 E. Green St., Pasadena, Calif. (Tel. RYan 1-7152)  
V. P. & Gen. Mgr.: D. R. Gero GE, TR, R&D

**GIANNINI PLASMADYNE CORP.**  
3839 S. Main St., Santa Ana, Calif. (Tel. Kimberley 5-7171)  
Head Buyer: Murray Sturmer  
Dir.-Sales: R. D. Webb PS, R&D

**GIBSON ELECTRIC CO.**  
Box 559, Delmont, Pa. (Tel. HOward 8-7701)  
Purch. Agent: Raymond C. Honnegan  
Buyer & Asst. Purch. Agent: Miss Addie Glaub  
Sales Mgr.: Frederick R. Farnham MF, WN, GH, GE, TR, MM

**ILFILLAN BROS. INC.**  
1815 Venice Blvd., Los Angeles, Calif. (Tel. DUlnkirk 1-3441)  
Purch. Agent: John L. Forrest  
Asst. Purch. Agent, Electrical Parts: George Steil  
Asst. Purch. Agent, Outside Production-Machined Parts: William Chew  
Asst. Purch. Agent, Outside Production-Sheet Metal: Joseph Copeland  
V. P.-Sales: A. Jennings Brown GS, GE, CO, TS, TR, R&D

**LL ELECTRIC MFG. CORP.**  
624 W. Citrus Ave., Redlands, Calif. (Tel. PYramid 3-3131)  
Purch. Agent: V. D. Wilson

**JNCAN M. GILLIES CO. INC.**  
66 Central, West Boylston, Mass. (Tel. TEmple 5-4445)  
Pres.: Duncan M. Gillies

**JRTY GILMAN, INC.**  
Gilman, Conn. (Tel. TUrner 7-4945)  
Pres.: Martin J. Gilman

**JLMAN BROTHERS CO., THE**  
Gilman, Conn. (Tel. TUrner 9-8444)  
Pres.: Lawrence M. Gilman  
Sales Mgr.: Rose Tangori MM

**JLMORE INDUSTRIES, INC.**  
3015 Woodland Ave., Cleveland 20, O. (Tel. RA 1-6400)  
Purch. Agent: M. Nager  
V. P.-Sales: L. S. Winston GS, CO, TS, R&D

**JCS BROTHERS MFG. CO.**  
846 S. Kilbourn Ave., Chicago 23, Ill. (Tel. LAwndale 1-3554)  
Purch. Agent: R. Sherman  
Sales: R. W. Barz PS, GS, TS

**JGDDING, McBEAN & CO.**  
701 Los Feliz Blvd., Los Angeles 39, Calif. (Tel. NOrmandy 3-3361)  
Purch. Agent: Boyd Moon  
Sales: S. V. Soginor WN, MM, R&D

**JSS ENGRG. DIV., BRAUN-KNECHT-HEIMANN CO.**  
11 O'Niell Ave., Belmont, Calif. (Tel. LYell 3-8276)  
Purch. Agent: H. M. Worden  
Sales Mgr.: H. Hutchings R&D

**JSSCO INSTRUMENT CD.**  
10 S. Fair Oaks Ave., Pasadena 2, Calif. (Tel. SYcamore 5-3278)  
Factory Supt.: George Northrop  
V. P.-Sales: C. W. Froude PS, GE, CO, TS

**JSSSEAL PRODUCTS CO., INC.**  
11 E. Elizabeth Ave., Linden, N.J. (Tel. HU 5-2067)  
Purch. Dept.: J. Groham  
Sales Mgr.: Alexander Anderson MM

**JLBAR PLANT, REFRACTORIES DIV.-THE CARBORUNDUM CD.**  
Borgo Falls, N. Y. (Tel. 5715)  
Sales Mgr.: D. S. Bowman MM, R&D

**JLBE AUTOMATIC SPRINKLER DIV., THE FRY-FYTER CO.**  
11, Box 750, Newark 1, N. J. (Tel. BiGelow 8-2200)  
V. P.: C. T. Mallory MM

**GLOBE ELECTRICAL MFG. CO.**  
1729 W. 134th St., Gardena, Calif. (Tel. FAcultry 1-3311)  
Purch. Agent: William Ostendorf  
V. P.-Sales: Joe A. Gamache GS, GH, TR

**GLDBE HOIST CO.**  
1000 E. Mermaid Lane, Philadelphia 18, Pa. (Tel. CHEstnut Hill 7-3575)  
Purch. Agent: William Craig  
V. P.-Sales: Argus Leidy GH

**GLOBE INDUSTRIES, INC.**  
1784 Stanley Ave., Dayton, O. (Tel. BALdwin 2-3741)  
Purch. Agent: John Trostle  
Purch.: Lester Zartman & Robert McRose  
Sales Mgr.: Yale J. Holt PS, GS, GE

**GLOBE INDUSTRIES, INC., SUPERMET DIV.**  
1460 Cincinnati St., Dayton, O.

**GDE ENGRG. CD.**  
219 S. Medink Ave., Los Angeles 22, Calif. (Tel. ANGEles 1-2183)  
Purch. & Sales: Jack Goergl  
Purch.: Bob Relly  
Secy.: Kay Glen MF, WN, PS, GS, GE, TS, TR

**JDHN GOMBOS CO., INC.**  
Webro Rd., Clifton, N. J. (Tel. PRescott 3-6633)  
Buyer: J. M. Fuller  
Production Control Dept.: M. Levitch  
Methods Engr.: J. Marcell  
Sales Mgr.: Harold J. Schatz GE

**GOOD ELECTRONIC DRP.**  
P. O. Box 2406, West Palm Beach, Fla. (Tel. VICTor 8-3241)  
Pres.: Lewis F. Good, Sr. TS, R&D

**GDOD-ALL ELECTRIC MFG. CO.**  
112 W. First St., Ogallala, Nebr. (Tel. 900)  
Purch. Agent: Frank Pincheon  
Chief Engr.: Loren Kolster  
Sales Mgr.: E. M. Sheridan GS, GE, CO, TS, TR, R&D

**B. F. GOODRICH AVIATION PRODUCTS**  
500 S. Main St., Akron, O. (Tel. BLackstone 3-1171)  
Gen. Mgr.-Sales: E. H. Fitch WN, PS, MM, R&D

**B. F. GOODRICH CO., THE**  
Shelton, Conn. (Tel. REgent 5-4661)  
Purch. Agent: Robert Nicol  
Asst. Purch. Agent: Edward Grant  
Buyers: Alfred Fisher & Samuel Goodman  
Sales Mgr.: J. I. Gillis

**B. F. GOODRICH INDUSTRIAL PRODUCTS CO.**  
500 S. Main St., Akron 18, O. (Tel. BLackstone 3-1171)  
Dir.-Adv.: H. E. Van Petten

**GODDYEAR AIRCRAFT DRP.**  
1210 Massillon Rd., Akron 15, O. (Tel. REpublic 3-6361)  
Purch. Agent: H. A. Delaney  
Mgr.-Material Purch.: A. L. Grovesmuhl  
Mgr.-Subcontract Purch.: W. R. Reed

**GOODYEAR TIRE & RUBBER CD., THE, AVIATION PRODUCTS DIV.**  
1144 E. Market St., Akron, Ohio (Tel. FRanklin 6-1411)  
Dir.-Purch.: I. S. Ghorky  
Buyer: A. J. Bortee  
Gen. Mgr., Aviation Products Div.: E. M. Eickmann GS, GH, MM, R&D

**CLAUD S. GORDON CO.**  
3000 S. Wallace St., Chicago 16, Ill. (Tel. VICTory 2-6525)  
Purch. Agent: M. J. McDonagh  
Sales Mgr.: F. C. Collins TS

**GORDON ENTERPRISES**  
5362 N. Cahuena Blvd., N. Hollywood, Calif. (Tel. POplar 6-3725)  
Dir.-Purch.: D. M. Stern  
Purch. Agents: R. Cohen & N. Powell  
Sales Mgr.: G. W. Sutphin CD, TS, TR, R&D

**GORDDS CORP.**  
250 Glenwood Ave., Bloomfield, N. J. (Tel. PIlgrim 3-6800)  
Purch. Agent: G. B. Marcheve GE, TS, TR

**GORMAN-RUPP CO., THE**  
305 Bowman St., Mansfield, D. (Tel. LAfayette 4-2111)  
Dir.-Purch.: C. R. Rupp  
Purch. Agent: C. R. Frederick  
Government Sales: R. E. Dwens  
Sales Mgr.: James C. Gorman GS, GH

**GDRRELL & GORRELL**  
336 Old Hook Rd., Westwood, N. J. (Tel. NOrth 4-7575)

Dir.-Purch.: John Gorrell  
Plant Mgr.-Purch.: Bert Back  
Chief Engr.-Purch.: Orvis Scudder TS

**GORE GORTDN MACHINE CD.**  
1321 Racine St., Racine, Wisc. (Tel. MEIrose 4-6644)  
Purch. Agent: Paul Paulson  
Dir.-Sales: Kenneth Christopherson

**GOSHEN RUBBER CD., INC.**  
641 E. Iowa St., Goshen, Ind. (Tel. 3-1111)  
Purch. Agent: C. N. Everingham  
Sales Mgr.: Joseph L. Lantz

**GOSLIN ELECTRIC & MFG. CO.**  
2921 W. Olive Ave., Burbank, Calif. (Tel. VICToria 9-3025)  
Purch. Agent: A. M. Galbraith GE, TS, TR, R&D

**GOULDS PUMPS INC.**  
300 Fall St., Seneca Falls, N. Y. (Tel. LOGan 8-5811)  
Purch. Agent: C. H. Kissel  
V. P. & Sales Mgr.: E. E. Backlund GS

**GOW-MAC INSTRUMENT CD.**  
100 Kings Rd., Madison, N. J. (Tel. FRontier 7-3450)  
Pres.: James L. McFadden TS, R&D

**GRAFLEX, INC.**  
3750 Monroe Ave., Rochester 3, N. Y. (Tel. LIdlow 6-2020)  
Purch. Agent: C. S. Krembel  
Asst. Purch. Agent: H. W. Griffith  
Puyer-Expediter: A. M. McGovern  
Contract Sales Mgr.: G. W. Lehman GE, TR

**GRAFO COLLOIDS DRP.**  
310 Wilkes Place, Sharon, Pa. (Tel. DI 6-5023)  
Asst. Secy.-Purch.: D. M. Zarella  
Sales Mgr.: E. W. Willson PS, GS

**GRAMM TRAILER DRP.**  
425 E. O'Connor Ave., Lima, Ohio (Tel. CA 9-7015)  
Purch. Agent: W. D. Buchanan  
Sales Mgr., Military Products: William J. Saelzler GS, GH, GE, CO, TR

**GRAND CENTRAL ROCKET CO.**  
Box 111, Redlands, Calif. (Tel. PYramid 3-2211)  
Dir.-Material: C. Dean Currier  
Dir.-Mfg. & Test.: Angus Scott  
Dir.-Tech. Services: Kenneth H. Jacobs  
V. P. & Gen. Mgr.: Dr. Clede Brunetti PS, TS, R&D

**GRANT CHEMICAL CO., INC.**  
1911 N. 4th St., Baton Rouge, La. (Tel. DI 4-5633)  
V. P.-Sales: Edward D. Grant, Jr.  
Mgr., Resin Sales: Paul Edgar MM

**GRANT GEAR WORKS, INC.**  
161 W. 2nd St., Boston, Mass. (Tel. AN 8-4408)  
Purch. Agent: J. F. Gramwell  
Sales & Adv. Mgr.: F. E. Emery PS, GS

**GRANT MFG. & MACHINE CD., THE**  
90 Missile Ave., Bridgeport 5, Conn. (Tel. FOrest 6-4557)  
Purch. Dept.: 90 Silliman Ave., Bridgeport 5, Conn. (Tel. FOrest 6-4557)

**GRANT PULLEY & HARDWARE DRP.**  
High St., West Nyack, N. Y. (Tel. NYack 7-4400)  
Purch. Mgr.: Mrs. Kay Saller  
Sales: Jack Vissman

**GRAPHITE METALLIZING DRP.**  
1038 Nepperhan Ave., Yonkers, N. Y. (Tel. YONkers 8-8400)  
V. P.-Purch. & Factory Mgr.: Edward E. Williams  
Gen. Mgr.-Sales: Warren W. Walker MF, WN, PS, GS, GE, CO, TS, TR

**GRAY CO., INC.**  
60 11th Ave., N. E., Minneapolis 13, Minn. (Tel. FEderal 6-9331)  
Purch. Agent: W. F. Bloodow  
Asst. Purch. Agent: L. Wandel  
Ind. Sales Mgr.: E. L. Niederloh PS, GS

**GRAY INSTRUMENT CD.**  
200 E. Church Lane, Philadelphia 44, Pa. (Tel. GE 8-3168)

	CODING
	Missile Frame MF
	Warhead & Nose Cone WN
	Propulsion System PS
	Ground Support GS
	Ground Handling GH
	Guidance Equipment GE
	Checkout Equipment CO
	Test Equipment TS
	Tracking & Telemetering TR
	Research & Development R&D
	Materials & Metals MM

# ... purchasing directory gre—haz

- Treas.:** Tom Mather  
**V. P.-Sales:** A. R. Bechtel **TS**
- GREAT EASTERN METAL PRODUCTS CO.**  
22 Woodworth Ave., Yonkers, N. Y. (Tel. GRenlead 6-7300)  
**Pres.:** Lester Weinberg **MM, R&D**
- GREAT LAKES CARBDN CDRP., ELECTRODE DIV.**  
18 E. 48th St., New York 17, N. Y. (Tel. ELdorado 5-6200)  
**Gen. Sales Mgr.:** Samuel H. Reynolds  
**Purch. Dept.:** P. D. Box 637, Pine Ave., at 58th St., Niogara Falls, N. Y. (Tel. BUtler 3-7611)  
**Purch.-Dir.:** George H. Corney **MM**
- GREAT LAKES MFG. CDRP.**  
4223 Monticello Blvd., Cleveland 21, Ohio (Tel. EVergreen 2-5500)  
**Purch. Agent:** R. A. Swanson  
**Buyer:** S. E. Baginski  
**Pres.:** J. A. Kanuch **MF, WN, PS, GS, GH, GE, TS**
- GREEN INSTRUMENT CO.**  
385 Putnam Ave., Cambridge 39, Mass. (Tel. ELiot 4-2989)  
**Purch. Agent:** Lynd F. Tillyer  
**Sales Mgr.:** W. Franklin Fullerton **GS**
- GREEN RECTIFIER CO.**  
1-10 30th St., Fairlawn, N. J. (Tel. SWarthmore 7-8100)  
**Dir.-Purch.:** I. Green  
**MF, WN, PS, GS, GH, GE, CO, TS, TR**
- GREENBRIER INSTRUMENTS INC.**  
Roncerverte, W. Va. (Tel. Midway 7-4358)  
**Office Mgr.:** R. L. Weikle  
**Sales:** Dr. D. N. Campbell **PS, GS, CO, TS, TR**
- ARNOLD GREENE TESTING LABS., INC**  
122 Hampshire St., Cambridge 39, Mass. (Tel. UNiversity 4-8800)  
**V. P.:** Robert Halliday  
**Sales Mgr.:** Ted Mongeau **TS**
- GREENE, TWEED & CO.**  
340 Elm Ave., North Wales, Pa. (Tel. DXbow 9-4821)  
**Asst. Purch. Agent:** Dorothy M. Segall  
**Purch. & Sales:** Walter S. Josephson
- GREENFIELD TAP & DIE, DIV.-UNITED-GREEN-FIELD CORP.**  
Sanderson St., Greenfield, Mass. (Tel. PR 3-3611)  
**Purch. Agent:** Avery Bates  
**Sales:** W. J. Eberlein **MF**
- GREENLEAF MFG. DIV., THE, MANDREL IND. INC.**  
7814 Maplewood Ind. Ct., St. Louis 17, Mo. (Tel. STerling 1-9888)  
**Purch. Agent:** P. J. Mahony  
**Sales Mgr.:** J. L. Wimpey **GE**
- GREER HYDRAULICS, INC.**  
New York International Airport, Jamaica 30, N. Y. (Tel. OL 9-9700)  
**Purch. Mgr.:** Ralph Betschort  
**Gen. Sales Mgr.:** Edward M. Greer  
**MF, PS, GS, GH, CO, TS, R&D**
- GREIBACH INSTRUMENTS CORP.**  
315 North Ave., New Rochelle, N. Y. (Tel. New Rochelle 3-7900)  
**Dir.-Purch.:** Lester Kanarfogel  
**Dir.-Sales:** Gunther Bielefeld **TS**
- GREMCO, INC.**  
P. O. Box 7115, 3535 N. Sylvania, Ft. Worth, Tex. (Tel. TErminal 4-2836)  
**Purch. Agent:** A. Krsak  
**Sales Mgr.:** J. D. Taliaferro **GS, GH, R&D**
- GRIEVE-HENDRY CO., INC.**  
1401 W. Carroll Ave., Chicago, Ill. (Tel. TAYlor 9-0200)  
**Pres.:** G. P. Grieve  
**V. P.-Sales:** P. J. Calabrese **TS**
- GRIMES MFG. CO.**  
515 N. Russell St., Urbana, D. (Tel. 3-5221)  
**Purch. Agent:** John Davis  
**Asst. Purch. Agent:** Paul Roles  
**V. P.-Sales:** L. B. Moore  
**MF, GS, GE, CO, TS, TR**
- GRIMSON COLD R., INC.**  
381 Fourth Ave., New York 16, N. Y. (Tel. ORegon 9-9088)  
**Sales Mgr.:** Pierre Boucheron
- GRINNELL CO.**  
227 W. Exchange St., Providence 1, R. I. (Tel. TEmple 1-7000)  
**Purch. Agent:** W. J. Duggan  
**Mgr., Saunders Valves Div.:** A. G. Smith  
**Mgr., Fire Protection Div.:** D. L. Swats **GH**
- GRIP NUT CO.**  
Brood & Maple, South Whitney, Ind. (Tel. S. W. 112)  
**Purch. Agent:** M. H. Rudd  
**V. P.-Sales:** G. A. Bovenkerk **MM**
- GRISCOM-RUSSELL CO., THE**  
Massillon, Ohio (Tel. TE 2-7421)  
**Dir.-Purch.:** J. A. O'Neill  
**Buyer:** A. D. Miller  
**Sales Engr.:** L. H. Bradley  
**V. P.-Sales:** C. D. Steffens  
**Contract Engr.:** F. V. Huber **PS, GS, GH**
- GRDOV-PIN CDRP.**  
1125 Hendricks Causeway, Ridgefield, N. J. (Tel. WHitney 5-6780)  
**Purch. Agent:** H. Bernlohr  
**Sales Mgr.:** R. G. Cummings **MF, GS, GH**
- GRDTNES MACHINE WRKRS, INC.**  
5454 N. Walcott Ave., Chicago 40, Ill. (Tel. LDngbeach 1-7693)  
**Purch. Agent:** George C. Cuttner  
**Sales Mgr.:** J. F. Coleman
- GROVE VALVE & REGULATOR CO.**  
6529 Hollis St., Oakland 8, Calif. (Tel. OLYmpic 5-7700)  
**Purch. Agent:** Roy West  
**V. P.-Gen. Sales Mgr.:** George Doty **GS, GH, TS**
- GRUMMAN AIRCRAFT ENGINEERING CORP.**  
Bethpage, L. I., N. Y. (Tel. WElls 1-1550)  
**Mgr.-Proc.:** William N. Robertson  
**Purch. Agent:** Norman J. Egloff  
**Chief Buyer, R&D:** Charles Nouss  
**V. P.-Contracts:** George F. Titterton **MF, R&D**
- GUARDIAN ELECTRIC MFG. CO.**  
1621 W. Walnut St., Chicago 12, Ill. (Tel. CHesapeake 3-1100)  
**Purch. Agent:** W. A. Rowell  
**Gen. Sales Mgr.:** G. G. Rowell **CO, TS**
- GUARDITE CO., DIV.-AMERICAN-MARIETTA CO.**  
Box 188, Wheeling, Ill. (Tel. LEhigh 7-1000)  
**Purch. Agent:** O. L. Carter  
**Sales Mgr., Environmental Equip.:** S. P. Vook **TS**
- GUDEBROD BROS. SILK CO., INC.**  
225 W. 34th St., New York 1, N. Y. (Tel. LAkawona 4-5858)  
**Purch. Dept.:** 12 S. 12th St., Philadelphia 7, Pa. (Tel. WALnut 2-1212)  
**Dir.-Purch.:** Fred Hooven  
**Dir.-Sales:** F. W. Krupp **MM**
- GUDEMAN CO., THE**  
340 W. Huron St., Chicago 10, Ill. (Tel. DELaware 7-7400)  
**Purch. Agent:** Robert Eggersted  
**V. P.-Sales:** D. A. Fillmore **GE, TS, TR**
- GUDEMAN CO. OF CALIFORNIA, INC., THE, MONROVIA DIV.**  
2669 S. Myrtle Ave., Monrovia, Calif. (Tel. Hillcrest 6-3101)  
**Dir.-Sales:** Keith R. Clark
- GUIDED MISSILE DIV.-DE HAVILLAND AIRCRAFT OF CANADA, LTD.**  
Downsview, Ontario, Canada (Tel. MEIrose 3-5230)  
**Purch. Agent:** S. M. Gilbert  
**Contracts Admin.:** L. D. Clarke  
**Sales & Research Engr.:** D. B. Cannon  
**GS, GE, CO, TS, R&D**
- GULTON INDUSTRIES, INC.**  
212 Durham Ave., Metuchen, N. J. (Tel. LIBerty 9-3038)  
**Purch. Agent:** Julius Furchheimer  
**Sales Coordinator:** Edward Cohen **GE, TS, R&D**
- GUNNAR LABS.**  
3003 26th St., W., Bradenton, Fla. (Tel. 5-2751)  
**Purch.:** Dr. Gunnar Knos **GS, TS, TR**
- GUSTIN-BACDN MFG. CO.**  
210 W. 10th St., Kansas City 5, Mo. (Tel. HArrison 1-7788)  
**V. P. & Dir.-Purch.:** M. Shields  
**Purch. Dept.:** T. L. Fairfax, George Crowl, Ken Klann  
**V. P.-Sales:** F. W. Muller **MM**
- WILLIAM CO., THE**  
370 Furman St., Brooklyn 1, N. Y. (Tel. MAIn 4-2644)  
**Purch. Agent:** Johannes E. Howay  
**Dir.-Sales:** Mark R. M. Gwilliam  
**MF, WN, PS, GS, GH, GE, CO, TS, TR, MM, R&D**
- GYREX CORP., THE**  
3003 Pennsylvania Ave., Santa Monica, Calif. (Tel. EXbrook 3-0462)  
**Purch. Agent:** W. J. Underwood, Jr.  
**Dir.-Sales:** W. A. Borton **GS, GE, CO, TR, R&D**
- HPL MFG. CO.**  
15210 Miles Ave., Cleveland 28, Ohio (Tel. WYoming 1-5000)  
**Purch. Agent:** J. Yasenka  
**Sales Mgr.:** M. Lorentz **MM**
- HABERSTROH STUDIOS, INC.**  
9 W. 19th St., New York 11, N. Y. (Tel. AL 5-1827)  
**Dir.-Purch.:** Alex Haberstroh
- HADDAM MFG. CO., THE**  
Rt. 9, Haddam, Conn. (Tel. DImond 5-2303)  
**Purch. Agent:** Mrs. K. G. Alderman  
**Sales Mgr.:** E. T. Buxton
- B. H. HADLEY, INC.**  
1427 S. Garey Ave., Pomona, Calif. (Tel. NAtional 9-5075)  
**Purch. Agent:** T. R. McCoun  
**Dir.-Mkt.:** J. J. Teilly **PS, GS, TS, R&D**
- HAGAN CHEMICALS & CONTROLS, INC.**  
Box 1346, Pittsburgh 30, Pa. (Tel. WA 2-3737)  
**Head-Purch.:** C. E. Kaufman  
**Sales Mgr.:** T. M. Nourse **TS**
- HAHN & CLAY**  
5100 Clinton Dr., Houston, Tex. (Tel. ORchard 2-1671)  
**Mgr.-Purch.:** Billie Sommers  
**V. P. Purch.:** Walter Clay  
**Gen. Mgr.-Fob. Steel:** Lawrence F. Megow  
**V. P.-Sales:** Gene Clay **MF, WN, PS, GS**
- HALEDY ELECTRONICS CO.**  
57 William St., New York 5, N. Y. (Tel. WHITEhall 3-3140)  
**Dir.-Purch.:** V. Spierer  
**Dir.-Sales:** T. Careri **TS**
- HALLAMORE ELECTRONICS CO.**  
714 N. Brookhurst St., Anaheim, Calif. (Tel. PRospect 4-1010)  
**Purch. Agent:** Donald D. Knapp  
**V. P.-Contracts:** John R. Frost **GS, GE, CO, TS, TR**
- HALLER, RAYMOND & BRDWN INC., DIV.-SINGER MFG. CO.**  
Science Park, State College, Pa. (Tel. ADams 7-7611)  
**Purch. Agent:** James H. Smith  
**Mgr.-Sales:** L. D. Rexroat **GE, CO, TR, R&D**
- HALLETT MFG. CO.**  
5910 Bowcroft St., Los Angeles 16, Calif. (Tel. TE 0-7094)  
**Mgr.-Prac.:** Robert D. Leeseaman  
**V. P.-Sales:** Stanley E. Estes **PS, GS, GT**
- HALLIBURTON, INC., MFG. DIV.**  
4724 S. Boyle Ave., Los Angeles 58, Calif. (Tel. LUdlow 8-3181)  
**Purch. Agent:** E. V. Kampschmidt  
**Sales Mgr.:** J. W. Murphy **GS, GH, TS, TR, R&D**
- HALLCRAFTERS**  
4401 W. Fifth Ave., Chicago 24, Ill. (Tel. VA 6-6300)  
**Dir.-Purch.:** Cliff Matthews  
**Asst. to Pres.:** W. E. Peugh **GS, GE, CO, TR**
- HALLIKAINEN INSTRUMENTS**  
1341 7th St., Berkeley 10, Calif. (Tel. LAndscape 4-1757)  
**Purch. Agent:** W. C. Bagot  
**V. P. & Sales Mgr.:** E. F. Schimbor **TS, R&D**
- HALOGEN INSULATOR & SEAL CORP.**  
9960 Pacific Ave., Franklin Park, Ill. (Tel. GLadstone 5-9000)  
**Purch. Agent:** Walter Lucos  
**Head-Sales:** H. L. Asp **MF, P**
- HAMER VALVES, INC.**  
2919 Gardena Ave., Box 1851, Long Beach 1, Calif. (Tel. GArdfield 7-5491)  
**Purch. Agent:** Lloyd Sheneberger  
**Sales Mgr.:** Cleo P. Williamson
- HAMILTON FOUNDRY & MACHINE CO., THE**  
1551 Lincoln Ave., Hamilton, Ohio
- HAMILTON KENT MFG. CO.**  
427 W. Grant St., Kent, D. (Tel. ORchard 3-9555)  
**Dir.-Purch.:** David Green  
**Dir.-Sales:** E. J. Mulcahey **GS, G**
- HAMILTON STANDARD, DIV.-UNITED AIRCRAFT CORP.**  
Windsor Locks, Conn. (Tel. NAtional 3-1621)  
**Purch. Mgr.:** John Spade  
**Asst. Purch. Mgr.:** Wendell W. Suydam  
**Sales Mgr.:** John Burrige **MF, PS, GS, CO, TS, R&D**
- HAMILTON WATCH CO.**  
Lafayette, Pa. (Tel. EXpress 4-7161)  
**Purch. Agent:** C. S. Reese  
**Asst. Purch. Agent:** J. H. Leaman  
**Mgr.-Indsl. Sales:** G. White **GE, TS, R&D**

**HAMILTON WATCH CO., HATHAWAY INSTRUMENT DIV.**  
5800 E. Jewell, Denver 22, Colo. (Tel. SKyline 6-8301)  
Purch. Agent: F. J. Knofelec  
Gen. Sales Mgr.: R. A. Miller **CO, TS, R&D**

**AMILTON WATCH CO.-INDUSTRIAL DIV.**  
Columbia Ave., Lancaster, Pa. (Tel. EXpress 4-7161)  
Purch. Dir.: J. H. Leaman  
Dir.-Sales: Geo. C. White **GE, TR, MM, R&D**

**MILTON WATCH CO., MILITARY PRODUCTS DIV.**  
Lancaster, Pa. (Tel. EXpress 4-7161)  
Purch. Agent: Clarence S. Reese  
Asst. Purch. Agent: J. H. Leaman  
Agr.-Customer Engr. Military Prods. Div.: George F. Roberts  
**MF, WN, PS, GS, GE, CD, TS, TR**

**MLIN, INC.**  
316 Sherman Ave., Evanston, Ill. (Tel. GRenleaf 5-8244)  
Dir.-Purch.: Ronald Ferguson **GE**

**MMARLUND MFG. CO., INC.**  
60 W. 34th, New York 1, N. Y. (Tel. LOngacre 5-1300)  
Lead-Purch.: Wm. Griffen  
Gen. Sales Mgr.: H. A. McCloskey  
**GS, GE, CO, TS, TR, R&D**

**MMEL-DAHL DIV.-GENERAL CONTROLS CO.**  
Warwick Industrial Park, Warwick, R. I. (Tel. STuart 1-6200)  
Purch. & Prod. Coordinator: Forrest G. Brown  
Sales Mgr.: William R. Kennedy  
Buyer: Eugene E. Collins **PS, TS**

**MIDEN BRASS & ALUMINUM CO.**  
52 Liberty St., Springfield 1, Mass. (Tel. REpublic 6-1808)  
Purch. Agent: Richard A. Wallace

**MIDEN MFG. CO., INC.**  
Edge St., Three Rivers, Mass. (Tel. PALmer 353)  
Tech. Agent: T. H. Lasares **GE, TS**

**MIDICRAFT TOOLS, INC., DIV.-X-ACTO, INC.**  
41 Van Dam St., Long Island City 1, N. Y. (Tel. EXeter 2-3333)  
Tech. Agent: Mrs. Agnes Tinkler

**MIDY & HARMAN**  
Fulton St., New York 38, N. Y. (Tel. BEekman 2-2460)  
Sales: Paul G. Feld **MM**

**MILON & WILSON CO., THE**  
Harrisburg 21, Pa. (Tel. PE 1-1250)  
Tech. Agent: H. Cleveley  
Chief Engr.: S. J. Hannan  
Sales Mgr.: W. G. Weill **PS, MM, R&D**

**MILFIN CO., DIV.-PARKER-HANNIFIN CORP.**  
4-D S. Wolf Rd., Des Plaines, Ill. (Tel. ANDerbilt 7-1171)  
Tech. Secy.: M. R. Gault  
Tech. Agent: Chester A. Miller  
Buyer: W. W. Herrmann  
Sales: O. J. Moha **GS, GH**

**MILLEN ELECTRONICS CO.**  
77 Santa Monica Blvd., Los Angeles 46, Calif. (Tel. HO 9-3052)  
Tech. Mgr.: E. K. Stokes **GE, TR**

**MILNEN MFG. CO., THE**  
41 W. 150th St., Cleveland 35, Ohio (Tel. LEarwater 2-3880)  
Tech. Agent: W. A. Drexler  
VP. & Gen. Sales Mgr.: L. J. Hansen **GS**

**MILNEN MFG. CO., INC.**  
11 S. Hart St., Princeton, Ind. (Tel. FULTon 3415)  
Tech. Sales: A. C. Rothert **PS, GE**

**MILNEN-CORRILL-BRIAN, INC.**  
8 Hazelt St., Glen Cove, N. Y. (Tel. ORiale 7-3000)  
Tech. Agent: J. S. Truesdell  
Sales Engr.: W. K. Burlingame **GS, CO, TS, TR**

**MILNEN CONVEYORS, INC.**  
65 Gibson St., Kalamazoo, Mich. (Tel. FLsilde 1-675)  
Buyer: James Hollis  
Dir-Sales: L. J. Riege **MM**

**MILNEN CONTAINERS DIV.-HARBOR OAT BUILDING CO.**  
290 Cannery St., Terminal Island, Calif. (Tel. TERMINal 2-5381)  
Purch. Mgr.: Roy Rinderknecht, Sr.  
Sales Mgr.: A. W. Wall **GS**  
(See page 55 for Advertisement)

**HARCO LABS., INC.**  
77 Olive St., New Haven, Conn. (Tel. STate 7-6701)  
Purch. Agent: Michael M. Gagliardi  
Sales Mgr.: M. B. Marshall **PS, GS, CO, TS**

**HARC-CONN CHROME CD.**  
603 New Park Ave., West Hartford 10, Conn. (Tel. AD 3-6225)  
Gen. Mgr. & Purch. Agent: V. C. Hickey  
Secy. & Sales Mgr.: T. J. O'Brien  
**MF, WN, PS, GS, GH, GE, TR, MM, R&D**

**PAUL HARDEMAN, INC.**  
11558 Tennessee Ave., Los Angeles, Calif. (Tel. BRadshaw 2-7861)  
Purch. Dept. Mgr.: E. J. Lull  
Admin. V. P.: H. J. Coil **GS, TS**

**HARDING BROTHERS, INC.**  
1420 College Ave., Elmira, N. Y. (Tel. REgent 4-6256)  
Purch. Agent: C. R. Bauman  
V. P.-Sales: H. A. Lundy

**HARDMAN TOOL & ENGRG. CD.**  
1845 S. Bundy Dr., West Los Angeles 25, Calif. (Tel. BRadshaw 2-0266)  
Dir.-Purch.: A. C. Richardson  
Sales & Adv. Mgr.: Douglas D'Neal **GH**

**HARMAN EQUIPMENT CO.**  
3605 E. Olympic Blvd., Los Angeles 23, Calif. (Tel. ANgeles 1-4113)  
Purch. Agent: F. Ven Zant  
Sales Mgr., Filter Div.: G. J. Horman, Jr. **PS, GS, GH**

**H. M. HARPER CO.**  
8200 Lehigh Ave., Morton Grove, Ill. (Tel. OR 4-3000)  
V. P.-Purch.: Theodore Wickman  
V. P.-Sales: E. A. Chonner  
Purch. Agent: James Fairbairn **MM**

**HARPER ENGRG. CO.**  
3308 Airport Ave., Santa Monica, Calif. (Tel. EXmont 1-6244)  
Dir.-Purch.: Robert L. Voehringer  
V. P.-Sales: Donald L. Cox  
**MF, WN, PS, GS, GH, GE, CO, TS, TR, R&D**

**HARPER-LEADER, INC.**  
1046 S. Main St., Waterbury 20, Conn. (Tel. PLaza 6-8164)  
Pres.: P. J. Sloane  
Secy.-Treas.: I. Cross **MF, WN, PS, GE, TR**

**HARRIS REFRIGERATION CO.**  
308 River St., Cambridge 39, Mass. (Tel. UNiversity 4-4000)  
Chief Engr.: Charles W. J. Harris  
Sales Mgr.: Ralland S. Jamison **TS**

**HARRISBURG STEEL CD.**  
Herr St., Harrisburg, Pa. (Tel. CEdar 4-8021)  
Dir.-Purch.: Lee Muth  
V. P.-Sales: H. M. Reeser **MF, WN, PS, GS, GH**

**HARRISON LABS., INC.**  
45 Industrial Rd., Berkeley Hts, N. J. (Tel. CR 3-9123)  
Purch. Agent: M. Barbour  
Sales & Adv. Mgr.: A. M. Darbie **GS, GE, CO, TS, TR**

**HART MFG. CO., THE**  
147 Bartholomew Ave., Hartford, Conn. (Tel. JACKson 5-3491)  
Pres.: G. H. Hart  
Purch. Agent: R. W. James  
Chief Engr.: H. R. Dahmer  
Sales Mgr.: R. E. McIntosh **WN, GS, GE, TR, R&D**

**\*HARTFORD MACHINE SCREW CO., DIV.-STANDARD SCREW CO.**  
Box 1440, Hartford 2, Conn. (Tel. JACKson 5-0821)  
Purch. Agent: D. T. Bacon  
Asst. Purch. Agent: M. R. Derrick  
Buyers: J. Braine & R. Mallowney  
Gen. Sales Mgr.: J. F. Miller **MS, WN, PS, GS**  
(See Pages 35, 46, 54, & 76 for Advertisement)

**HARTMAN ELECTRICAL MFG. CO., THE**  
175 N. Diamond St., Mansfield, O. (Tel. LAfayette 4-1411)  
Purch. Agent: W. M. Locke  
Buyer: T. Roehm  
Sales Mgr.: M. Trbovich **GS, GH, GE**

**HARVEY ALUMINUM**  
19200 S. Western Ave., Torrance, Calif. (Tel. NEvada 6-2111)  
Purch.: Dorsey Smith **MF, PS, GS, GH, MM, R&D**

**HARVEY-WELLS ELECTRONICS INC.**  
North St., Southbridge, Mass. (Tel. PORTer 4-4361)  
Purch. Agent: Mario D. Angelis  
Dir.-Sales: A. Carl Westomb **GS, GE, CD, TS, R&D**

**HASKEL ENGRG. & SUPPLY CO.**  
1236 S. Central Ave., Glendale 4, Calif. (Tel. CHopman 5-6811); 225 11th St., San Francisco 3, Calif. (Tel. UNderhill 3-1489)  
Dir.-Purch.: Carter Pierce  
Sales Mgr.: Ralph W. Moss **GS, CO, TS**

**HASKELITE MFG. CORP.**  
701 Ann St., N. W., Grand Rapids, Mich. (Tel. GL 8-1331)  
Dir.-Purch.: F. W. Mitchell  
Buyer: R. J. Willemssen  
Sales Mgr.-Indsl. Div.: D. G. Slawson, Jr. **MM**

**JOHN HASSALL, INC.**  
Box 2179, Westbury, L. I., N. Y. (Tel. EDgewood 4-6200)  
Purch.: W. W. Smith  
Sales: E. F. Karnes **MM**

**HASTINGS PLASTICS, INC.**  
1551 12th St., Santa Monica, Calif. (Tel. EXbrook 3-7702)  
Gen. Mgr.: Norry M. Hastings  
Purch. Agent: Frank Lundstrom  
**MF, WN, PS, GS, GH, GE, MM, R&D**

**HAVEG INDUSTRIES, INC.**  
900 Greenbank Rd., Wilmington 8, Del. (Tel. WYman 8-2271)  
Purch. Agent: P. L. Reynier  
Asst. Purch. Agents: C. Wall & Dayton Simpson  
Gen. Mgr.: John B. Mackenzie **MF, WN, MM, R&D**

**\*HAWKS DRINKING FAUCET CO.**  
4th & Page Sts., Berkeley 10, Calif. (Tel. LANDscape 5-3341)  
Gen. Mgr.: J. E. Traynor  
Sales Mgr.: T. R. Haws **PS, GS, GH, TS, R&D**  
(See Page 70 for Advertisement)

**\*A. W. HAYDON CO., THE**  
231-D N. Elm St., Waterbury, Conn. (Tel. PLaza 6-4481)  
Purch. Agent: Roy E. Ahlberg  
Buyers: Fred Lawton, D. Roberts, J. Thompson  
Sales Mgr.: R. J. Harrart  
**WN, PS, GS, GH, GE, CO, TS, TR**  
(See Page 74 for Advertisement)

**HAYDON DIV.-GENERAL TIME CORP.**  
245 E. Elm St., Torrington, Conn. (Tel. HUunter 9-3158)  
Purch. Agent: J. E. Nicholas  
Gen. Mgr.: C. H. Cummings

**HAYDON SWITCH, INC.**  
536 S. Leonard St., Waterbury, Conn. (Tel. PLaza 6-7441)  
Purch. Agent: John J. Leugminas  
Sales Mgr.: Arthur N. Milliken **WN, PS, GS, CO**

**C. I. HAYES, INC.**  
800 Wellington Ave., Cranston 10, R. I. (Tel. HOpkins 1-3400)  
Purch. Agent: Roy C. Arnold  
Gen. Sales Mgr.: James R. Elliott **MM, R&D**

**HAYNES STELLITE CD., DIV.-UNION CARBIDE CORP.**  
1020 W. Park Ave., Kokomo, Ind. (Tel. GLadstone 2-5421)  
Purch. Agent: J. H. Wallsmith  
Buyers: R. S. Rees, R. M. Tudor, H. M. Wolf, J. R. Clawson  
V. P.-Sales: R. L. Lerch  
Gen. Sales Mgr.: C. G. Chisholm **MM**

**HAYS CDRP, THE**  
743 E. 8th St., Michigan City, Ind. (Tel. TRiangle 2-5561)  
Purch. Agent: William Wagner  
Mgr.-Sales: H. M. Twible

**HAYS MFG. CD.**  
803 W. 12th St., Erie, Pa. (Tel. 2-3225)  
Purch. Agent: P. N. Christensen  
Sales Mgr.: H. H. Clemens **MM**

**HAYWARD SCIENTIFIC GLASS CORP.**  
217 Magnolia Ave., Whittier, Calif. (Tel. HOX 5-8213)  
Secy.: Henry D. Shaw  
V. P.-Sales: James L. Wood **GE**

**HAZELTINE ELECTRONICS DIV.-HAZELTINE CDRP.**

**CODING**

Missile Frame **MF**  
Warhead & Nose Case **WN**  
Propulsion System **PS**  
Ground Support **GS**  
Ground Handling **GH**  
Guidance Equipment **GE**  
Checkout Equipment **CO**  
Test Equipment **TS**  
Tracking & Telemetering **TR**  
Research & Development **R&D**  
Materials & Metals **MM**

# ... purchasing directory hei—hup

- 59-25 Little Neck Pkwy., Little Neck 62, N. Y. (Tel. F.Lushing 7-8700)  
Asst. V. P.-Purch.: B. H. Rogers  
Purch.: J. J. Kelly, E. L. Roseberry  
V. P.-Sales: S. M. Thomas GS, GE, R&D
- HEILAND DIV.-MINNEAPOLIS-HONEYWELL**  
5200 E. Evans Ave., Denver 22, Colo. (Tel. Skyline 6-3681)  
Purch. Agent: R. V. Bertram  
Asst. Purch. Agents: Warren Lindross & Phyllis Giffin  
Mgr.-Instrument Sales: Lloyd J. Moyer CO, TS
- HEINEMANN ELECTRIC CO.**  
Pennsylvania Ave. & Plum St., Trenton, N. J. (Tel. E Xport 4-1191)  
Purch. Agent: James E. Shugars  
Sales Mgr.: Edgor Bromberg
- HEINTZ MFG. CO.**  
Front St. & Dlnay Ave., Philadelphia, Pa.
- HEIN-WERNER CORP.**  
1200 National Ave., Waukesha, Wisc. (Tel. Liberty 2-6611)  
Purch. Agent: M. L. Lumb  
Sales Mgr.: H. J. Scullin MF, GS
- HELDOR MFG. CO., INC.**  
238 Lewis St., Paterson, N. J. (Tel. ARmory 1-0900)  
V. P.-Purch.: Donald Wilson  
Sales Mgr.: Ray Walker MF, WN
- HELI-COIL CORP.**  
Shelter Rock Lane, Danbury, Conn. (Tel. Pioneer 3-7651)  
Purch. Agent: Ted C. Gorman  
Dir.-Sales: John E. Fosano MF, GH, MM
- HELIPOT DIV.-BECKMAN INSTRUMENTS, INC.**  
2500 Fullerton Rd., Fullerton, Calif. (Tel. T Rojan 1-4848)  
Purch. Agent: Ed Schreiber  
Mktg. Mgr.: Karl Heller PS, GS, GE, CO, TS, TR
- HELWIG CARBON PRODUCTS, INC.**  
2550 N. 30th St., Milwaukee 10, Wisc. (Tel. Hilltop 2-7755)  
Purch. Agent: N. E. Joers  
V. P.-Sales: J. E. Koentzner GE
- HEMINGWAY & BARTLETT MFG. CO., THE**  
500 Fifth Ave., New York 36, N. Y. (Tel. L Ongoore 4-0880)  
Sales Mgr.: C. Duane Houk MM
- HENLOPEN MFG. CO., INC.**  
178 Cook St., Brooklyn 6, N. Y. (Tel. GL 6-4461)  
Purch. Agent: Allan Costa  
Gen. Mgr.: H. Elosua
- HEPPENSTALL CO.**  
3000 Shelby St., Indianapolis, Ind. (Tel. ST 6-9261)  
Purch. Agent & Mgr.-Ring Sales: V. H. Lanahan
- HERCULES POWDER CO.**  
900 Market St., Wilmington 99, Del. (Tel. O Lympia 8-7211)  
Dir.-Purch.: Edwin S. Ladley  
Dir.-Sales, Explosives Dept.: C. W. Ballard PS, R&D
- HERLO ENGRG. CORP.**  
549 N. Prairie Ave., Hawthorne, Calif. (Tel. DS 5-4456)  
Pres. & Gen. Mgr.: R. E. Cole PS, GS
- HERTNER ELECTRIC CO., THE**  
12690 Elmwood Ave., Cleveland 11, D. (Tel. C LEarwater 2-4242)  
Purch. Agent: A. G. Lindrose  
Buyer: R. E. Giersey  
Dir.-Sales: T. R. Mahoney GS, GE, CO, TS
- HERZOG MINIATURE LAMP WORKS, INC.**  
50-17 Fifth St., Long Island City 1, N. Y. (Tel. ST 4-2275)  
Pres.: Charles Perrenod  
Buyer: Luke Perrenod  
Asst. Buyer: William Dwyer GS, GH, GE, CO, TS, TR, R&D
- HESCO ENGRG.**  
322 E. Beach Ave., Inglewood 3, Calif. (Tel. DR 8-4178)  
Purch. Agent: A. T. Herring  
Sales Mgr.: G. F. Wilson GS, GH, TS, TR
- HEVI-DUTY ELECTRIC CO.**  
2040 W. Wisconsin Ave., Milwaukee Wis. (Tel. WEst 3-9339)  
Purch. Agent: G. J. Bethke  
V. P.-Sales: E. E. Staples MM, R&D
- HEWITT-ROBINS, INC.**  
666 Glenbrook Rd., Stamford, Conn. (Tel. DAVIS 4-1151)
- Dir.-Purch.: C. W. Mottinger**  
V. P.-Sales: F. L. Griffith MF, PS, GS, GH
- HEWLETT-PACKARD CO.**  
275 Page Mill Rd., Palo Alto, Calif. (Tel. DAVenport 5-14531)  
Purch. Agent: Robert Sundberg  
Asst. Purch. Agent: Donald Anderson  
V. P.-Mktg.: W. N. Eldred TS
- HEXCEL PRODUCTS INC.**  
2332 Fourth St., Berkeley 10, Calif. (Tel. THornwall 3-4664)  
Purch. Agent: R. J. Hughes  
V. P.-Sales: R. T. Wedemeyer  
Gen. Mgr.-Aircraft: A. C. Marshall  
Gen. Mgr.-Indsl.: D. P. Boyley MM, R&D
- HEYMAN MFG. CO.**  
Kenilworth, N. J. (Tel. CHEstnut 5-2345)  
Purch. Agent: K. E. Fahnestock  
Sales Mgr.: J. L. Holder
- HICKS CORP., THE**  
1671 Hyde Park Ave., Boston 36, Mass. (Tel. HY 3-2720)  
Exec. V. P.-Purch.: Frank T. Majewski  
Purch. Agent: John B. Sullivan  
Purch. Agent, Asheville, N. C. Plt.: Leo Lyons (Tel. ALPine 3-5335)  
Sales Mgr.: John D. Wagner WN, PS, R&D
- HIG-G, INC.**  
Bradley Field, Windsor Locks, Conn. (Tel. NATIONAL 3-3308)  
Prod. Mgr.: A. Molava  
V. P.-Sales: R. H. Wood GE, TR
- HIGH SPEED HAMMER CO., INC., THE**  
313 Norton St., Rochester 21, N. Y. (Tel. CDngress 6-6740)  
Purch. Agent: G. W. Texter
- HIGH VACUUM EQUIPMENT CORP.**  
2 Churchhill Rd., Hingham, Mass. (Tel. Riverview 9-2430)  
Purch. Agent: Walter Albaugh  
Sales Admin.: William B. White MF, PS, MM
- HIGH VOLTAGE ENGRG. CORP.**  
S. Bedford St., Burlington, Mass. (Tel. BR 2-1313)  
Purch. Agent: Richard Chase  
V. P. & Sales Mgr.: E. Alfred Burrill TS, R&D
- HIGHLAND RIM MACHINE WORKS INC.**  
E. Walnut St., P. O. Box 282, Dickson, Tenn. (Tel. Hlckory 6-6326)  
Foreman: Spydell Davidson  
Secy. & Treas.: Ralph Taylor MF, GS, GH
- E. VERNON HILL & CO.**  
P. O. Box 189, Lake Geneva, Wisc. (Tel. CHEstnut 8-3729)  
Pres.: N. Peterson MF, PS, GS, GE, CO, TS, TR
- HILL ELECTRONICS, INC.**  
300 N. Chestnut St., Mechanicsburg, Pa. (Tel. P Oplar 6-7611)  
Purch. Agent: Michael Filepas  
Sales Mgr.: James A. Nickerson
- HILLBURN ELECTRONIC PRODS. CO.**  
55 Nossau Ave., Brooklyn 22, N. Y. (Tel. STAgg 2-3875)  
Purch.: B. S. Gilman  
Sales: S. A. Shaw GE
- HILLS-McCANN CO.**  
3641 W. Touhy Ave., Chicago, Ill. (Tel. ORchard 4-7080)  
Purch. Agent: R. Schmidt  
Sales Mgr.-Foundry Div.: R. I. Allen MF, PS, GS
- HI-LO MANUFACTURING CORP.**  
1122-26 W. Newport Ave., Chicago 13, Ill. (Tel. GRoceland 7-1890)  
Pres.: F. J. Klonecnik  
Gen. Mgr.-Sales: E. A. Goncoe GS, GH, GE, TS, TR
- HINOE & DAUCH DIV.-WEST VIRGINIA PULP & PAPER CO.**  
407 Decatur St., Sandusky, Ohio (Tel. MA 5-6610)  
Dir.-Purch.: Gerald Swank  
Asst. Purch. Agent: Harold Sortorius  
Dir.-Sales: Paul Roberts MM
- HINOLE TRANSFORMER CO. INC.**  
Woods Church Rd., R. D. 3, Flemington, N. J. (Tel. Flemington 836)  
Purch. Agent: Mrs. Anne Schrimpe GS, GH, TR
- CARL HIRSCHMANN CO., INC.**  
30 Park Ave., Manhasset, L. I., N. Y. (Tel. MA 7-5300)  
Purch. & Sales: M. H. Koefler TS
- HI-SHEAR RIVET TOOL CO.**  
2600 W. 247th St., Torrance, Calif. (Tel. NEvada 6-9861); Molling Address: P. O. Box 90545,
- Airport Station, Los Angeles 45, Calif.  
Purch. Agent: Stirling Souder, 8924 Bellanca Ave., Los Angeles 45, Calif. (Tel. DRegon 8-4361)  
V. P.-Sales: Guy Nash MM, R&D
- HI-SPEC ELECTRONICS CORP.**  
7328 Ethel Ave., North Hollywood, Calif. (Tel. PDIor 5-5075)  
Pres.: John H. Mattson  
V. P.-Mfg.: Chet R. Jones  
V. P.-Engrg.: R. Y. Patterson GE, TI
- HI-SPEED EQUIPMENT, INC.**  
63 Pond St., Waltham, Mass. (Tel. TWINbrook 3-6800)  
Dir.-Sales: H. J. Cedrone T
- HITCHNER MFG. CO. INC.**  
P. O. Box 370, Milford, N. H. (Tel. Milford 635)  
Purch. Agent: Ralph Bodwell  
Plant Engr.: L. Guertin  
Gen. Mgr.: David Hoodley  
Sales Mgr.: William H. Shumon MF, P
- HITEMP WIRES, INC.**  
1200 Shames Dr., Westbury, N. Y. (Tel. EDgewood 3-4600)  
Purch. Agent: Patrick Hoode  
V. P.-Sales: Walter Merck M
- HOBBART BROTHERS CO.**  
Hobart Sq., Troy, Ohio (Tel. FEderal 2-1223)  
Dir.-Purch.: B. A. Lutz  
Sales Mgr.: E. C. Galbreath MF, WN, F
- JOHN W. HOBBS CORP., DIV.-STEWART-WARNER CORP.**  
P. D. Box 358, Springfield, Ill. (Tel. 8-7533)  
Purch. Agent: P. W. Redeske  
Gen. Sales Mgr.: B. D. Booth
- HOBBS MFG. CO.**  
26 Salisbury St., Worcester, Mass. (Tel. PLessant 6-8361)  
Purch. Agent: F. J. Woodberry  
Gen. Sales Mgr.: H. K. Lambert R
- HOBSON BROTHERS, INC.**  
4940 W. Lawrence Ave., Chicago 30, Ill. (Tel. Avenue 3-3600)  
Purch. Agent: H. L. Behm  
Sales: Roy L. Hobson
- HOCKS LABS.**  
935 N. E. Couch St., Portland 14, Ore. (Tel. BE 4-1388)  
Dir.-Purch.: Art Austin  
Sales Mgr.: W. G. Hocks
- HOEFNER CORP.**  
9720 Rush St., El Monte, Calif. (Tel. CUmberland 3-4138)  
Purch. Agent: Arnold E. Tapie  
V. P.-Sales: Grant W. Fredericks GH, PS
- P. R. HOFFMAN CO.**  
321 Cherry St., Corlisle, Pa. (Tel. 1090)  
Purch. Agent: Ralph J. Loury  
Chemist: Warren J. Hunt  
V. P.-Sales: Leon W. McGinnes
- HOFFMAN ELECTRONICS CORP., SEMICONDUCTOR DIV.**  
930 Pinner Ave., Evanston, Ill. (Tel. University 9-9850)  
Dir.-Purch.: Mrs. Dorothy Perkins  
V. P.-Mktg.: G. W. DeSousa GS, GE, CO
- HOFFMAN ENGRG. CORP.**  
9th & Tyler, Anoka, Minn. (Tel. HA 1-2240)  
Supt.: Philip DeJarlais  
Gen. Mgr.: Reuben C. Krouik
- HOFFMAN LABS. DIV., HOFFMAN ELECTRONIC CORP.**  
3740 S. Grand Ave., Los Angeles 7, Calif. (Tel. Richmond 7-4488)  
Dir.-Materials: R. A. Gingrich  
Dir.-Military Mktg.: J. G. Anderson GS, GE, CO, TS, TR
- HOFFMAN LABS., INC.**  
5 Evans Terminal, Hillside, N. J. (Tel. ELizabe 4-4016)  
Exec. V. P.: James Cox  
Purch. Agent: Bernard Alperstein
- ALFREO HOFFMANN & CO.**  
635 59th St., West New York, N. J. (Tel. UNion 3-1300)  
Purch. Agent: J. Meehan  
Sales Mgr.: E. Weikert MF, WN, PS, GS
- HOGAN LABORATORIES, INC.**  
155 Perry St., New York 14, N. Y. (Tel. CHelse 2-7855)  
Purch. Agent: Garrett Moore  
Exec. V. P.-Sales: Raymond W. Bristol
- C. G. HOKANSON CO., INC.**  
2140 Pontius Ave., Los Angeles 25, Calif. (Tel. GR 7-4231)  
GS, GE, CO, TS

**OKE INC.**  
#1 Tenakill Park, Cresskill, N. J. (Tel. LOwell 8-9100)  
Dir.-Purch.: R. MacLallen  
Sales Mgr.: R. J. Moody  
GS

**F. HOLDEN CO., THE**  
14341 Schofer Hwy., Detroit 27, Mich. (Tel. BRoadway 3-5405)  
V. P.-Purch.: J. B. Carey  
Pres.: A. F. Holden

**OLEX, INC.**  
2751 Son Juan Rd., Hollister, Calif. (Tel. MErcury 7-5306)  
V. P.-Operations: George H. Anderson  
Dir.-Sales: J. W. Jones  
MF, WN, PS, GS, GH

**OLLAND HITCH CO.**  
430 W. 18th St., Holland, Mich. (Tel. EX 6-6501)  
Gen. Mgr.: W. F. Beebe  
Purch. Agent: L. J. Poole  
Sales Mgr.: C. N. Bouman  
GH

**OLLEY CARBURETOR CO.**  
11955 E. Nine Mile Rd., Warren, Mich. (Tel. JEfferson 6-1900)  
Dir.-Purch.: N. J. Oann  
Sr. Buyer: E. J. Masor  
V. P. & Dir.-Sales: J. C. Holley  
PS, R&D

**M. HOLLINGSHEAD CORP.**  
340 Cooper St., Camden 2, N. J. (Tel. WOODLawn 4-7000)  
Purch. Agent: Orville Timms  
Dir.-Sales & Purch.: Charles W. Griffiths  
GS, MM, R&D

**OLLINGSWORTH CO., SOLDERLESS TERMINAL DIV.**  
Jutt & French Creek Rds., Phoenixville, Pa. (Tel. WELlington 3-8947)  
Purch. Agent: John J. Gress  
Sales Mgr.: J. C. Ludwick

**OLTZER-CABOT DIV., NATIONAL PNEUMATIC CO., INC.**  
25 Amory St., Boston 19, Mass. (Tel. JAMAica 4-7000)  
Purch. Agent: S. Coven  
Sales Mgr.: E. B. Selig  
GS, TS, TR

**OLUB INDUSTRIES, INC.**  
13 Oakleaf Ave., Sycamore, Ill. (Tel. 2161)  
Secy.-Treas.: A. R. Linden  
V. P. & Sales Mgr.: Gordon W. Wetzel  
MF, PS, GS, GH

**OLYOKE WIRE & CABLE CORP.**  
20 Main St., Holyoke, Mass. (Tel. JEfferson 3-3961)  
Purch. Agent: Robert J. O'Connor  
Sr.-Sales: G. T. Miles

**OMALITE CORP., THE**  
1-13 Brooks Dr., Wilmington, Del. (Tel. OL 2-6641)  
Pres.: W. R. Hoover  
Secy. & Foreman: Harold Wilson  
V.-Sales: Thomas J. Christeson

**OMELITE DIV., TETRON INC.**  
Verdale Ave., Part Chester, N. Y. (Tel. WEstmore 9-3400)  
Purch. Agent: John Clork  
Sales Mgr.: R. P. Straetz  
GS

**OMKEYCOMB CO. OF AMERICA, INC.**  
25 Connecticut Ave., Bridgeport, Conn. (Tel. EOlson 4-3155)  
Purch. Agent: Louis L. LoCroce  
V.-Sales: F. J. Quinlan  
GH, MM

**OMLIG HONOLD MFG. CO.**  
Gester Pike & Falcroft Ave., Falcroft, Pa. (Tel. LUDlow 3-6800)  
Purch. Agent: Robert Stabb  
Buyer-Row Materials: Roy Jackson  
Buyer-Subcontract Parts: Elise Vonwhy  
V. P.-Sales: Norman J. Burke  
MF, GS, GH

**OMOD PRODUCTS CO.**  
63 S. Laramie Ave., Chicago 38, Ill. (Tel. POrtsmouth 7-6330)  
Purch. Agent: Roy Swoik  
E-Sales: Carl E. Vaughn  
GS

**OMOR TARPULIN & CANVAS GOODS CO., INC.**  
P.O. Box 574, Indianapolis 6, Ind. (Tel. Elrose 2-9451)  
V.-Sales: Robert T. Goldberg  
MM

**OMOR ELECTRIC CO.**  
20 S. Stoner Ave., Los Angeles 25, Calif. (Tel. GRanite 8-7747)  
Dir.-Purch.: Lennart Rinne, 2041-2045 S. Borington Ave., Los Angeles 25, Calif. (Tel. BRodshaw 3-125)  
G. Mgr.: Paul Cedwood  
MF, WN, PS, GS, GH, GE

**OMOR ELECTRONICS CO.**  
11 W. Titanium Rd., Titanium, Md. (Tel. VALley

5-5200)  
Purch. Agent: John W. Yewell  
Sales Mgr.: Thomas B. Schillo  
WN, PS, GS, GH, GE, TR

**HORIZONS INC.**  
2905 E. 79th St., Cleveland 4, Ohio (Tel. BRoadway 1-1600)  
Dir.-Sales: Stuart S. Corlton  
R&D

**HORKEY-MOORE ASSOCIATES**  
24660 S. Crenshaw Blvd., Torrance, Calif. (Tel. SPruce 5-1211)  
Purch. Agent: Len Henrickson  
V. P.-Dev. Planning: R. C. Chilton  
Mgr.-Customer Relations: W. J. Glover  
MF, GH, TS, R&D

**HOSKINS MFG. CO.**  
4445 Lawton Ave., Detroit 8, Mich. (Tel. TYler 5-2860)  
Purch. Agent: R. J. Stefanoc  
V. P.-Mktg.: R. I. Cratch  
MM

**\*HOUDAILE INDUSTRIES, INC., BUFFALO HYDRAULICS DIV.**  
537 E. Oelovan Ave., Buffalo, N. Y. (Tel. FIlmore 8000)  
Purch. Agent: V. E. Lasker  
Buyer: W. E. Thompson  
Gen. Mgr. & Dir.-Sales: E. L. Spencer  
\*(See Page 28 for Advertisement)  
MF, GH

**E. F. HOUGHTON & CO.**  
303 W. Lehigh Ave., Philadelphia 33, Pa. (Tel. RE 9-7100)  
Dir.-Purch.: H. B. Fox  
Purch. Agent: C. F. Kalmboch  
V. P.-Sales: Frank Ross  
GH, MM

**HOUGHTON LABORATORIES, INC.**  
322 Houghton Ave., Olean, N. Y. (Tel. 2-2176)  
Purch. Agent: Tom Quinn  
Field Sales Mgr.: J. M. Jewell  
MM

**T. J. HOULIHAN CO.**  
2510 W. Lawrence St., Chicago 25, Ill. (Tel. LO 1-0580)  
Dir.-Purch.: T. J. Houlihan  
GS, GE, TS, TR

**HOUSTON FEARLESS CORP.**  
11801 W. Olympic Blvd., Los Angeles 64, Calif. (Tel. BRadshaw 2-4331)  
Dir.-Prod. & Material: William Katona  
Purch. Agent: F. J. Garcia  
Sales Mgr.: A. J. Kijontvedt  
PS, GS, GH, TR

**HOYT ELECTRICAL INSTRUMENT WORKS, BURTON ROGERS CO.**  
42 Corleton St., Cambridge 42, Mass. (Tel. ELliot 4-1643)  
GE, CO, TS, TR, MM, R&D

**HUBER INDUSTRIES, INC.**  
4974 Hillside Ave., Cincinnati, Ohio (Tel. Willow 1-1800)  
Purch. Agent: K. P. Huber  
Buyer: Russell R. Roeder, Jr.  
Sales Mgr.: J. E. Huber  
TS, TR, R&D

**HUCK MFG. CO.**  
2480 Bellevue Ave., Detroit 7, Mich. (Tel. WAlnut 1-6207)  
Purch. Agent: Leland W. Fox  
Order Dept. Mgr.: W. J. Westrick  
V. P.-Sales: George Q. Mathews  
MF, WN, PS

**HUDSON CUSHION CORP.**  
70-25 Cypress Hills St., Ridgewood 27, L. I., N. Y. (Tel. EVergreen 6-3593)  
Sales Mgr.: E. Minor  
R&D

**HUDSON LAMP CO.**  
528 Elm St., Kearny, N. J. (Tel. WYman 1-4834)  
V. P.: Philip S. Rust  
GS, TR

**HUDSON WIRE CO.**  
62 Walter St., Ossining, N. Y. (Tel. WIlson 1-8500)  
Plant Mgr.-Ossining Div.: R. R. Thompson  
Purch. Agent-Winsted Div.: E. O. Goodrow,  
Winsted, Conn. (Tel. FRontier 9-3341)  
Gen. Sales Mgr.: William H. Elliott, Jr.  
MF, PS, GS, TR

**HUFFORD CORP., THE**  
1700 E. Grand Ave., El Segundo, Calif. (Tel. ORegon 8-6221)  
Purch. Agent: A. H. Knight  
Buyers: Frank Frazee & Maurice Hagberg  
GS, GH, CO, TS, MM, R&D

**HUGGINS LABS., INC.**  
999 E. Arques Ave., Sunnyvale, Calif. (Tel. RE 6-9330)  
Purch. Agent: H. O. Horting  
Sales Mgr.: V. D. Vorenhorst

**HUGHES AIRCRAFT CO.**  
Culver City, Calif. (Tel. TExas 0-7111)  
Missile Mfg. Div.: P. O. Box 5555 Tucson, Ariz. (Tel. MAln 4-2711)

**HUGHES PRODUCTS GROUP, HUGHES AIRCRAFT CO., SEMICONDUCTOR DIV.**  
International Airport Sta., Los Angeles 45, Calif. (Tel. ORchard 2-5011)  
Sales Mgr.: H. K. Mann  
GE

**HUGHES TOOL CO., AIRCRAFT DIV.**  
Florence & Teale Sts., Culver City, Calif. (Tel. TExas 0-7111)  
Dir.-Material: Milton E. Taylor  
Purch. Agent: C. H. Winter  
Prod. Senior Buyer: C. E. Ingalls  
Non-Prod. Senior Buyer: R. L. Jones  
Experimental Procurement: H. L. Rodgers, Jr.  
Dir.-Contracts Admin.: Fred C. Mehner  
Senior Buyer, Dir.-Contracts Admin.: Fred C. Mehner  
MF, PS, GS, GH, CO, R&D

**HUGHEY & PHILLIPS, INC.**  
3200 N. San Fernando Blvd., Burbank, Calif. (Tel. VICTORIA 9-1104)  
Purch. Agent: Larry K. Craddock  
V. P. & Gen. Mgr.: J. H. Ganzenhuber  
GS

**HULL CORP.**  
Harbor, Pa. (Tel. OSborne 5-0000)  
Chief Engr.-Vacuum: Karl Wiegman  
Chief Engr.-Hydraulics: Jack Smith  
V. P.-Sales: Frank Cramton

**HUMAN SCIENCES RESEARCH, INC.**  
1408 N. Fillmore St., The Clarendon Bldg., Arlington 1, Va. (Tel. JACkson 4-3606)  
V. P.: Dr. William A. Lybrand  
Bus. Adminstr.: Mrs. Charlotte L. Brewer

**HUMPHREY, INC.**  
2805 Canon St., San Diego 6, Calif. (Tel. ACADEmy 3-1654)  
Purch. Agent: R. T. Rutherford  
Chief Design Engr.: Onold G. Baker  
V. P.-Sales Mgr.: John H. Bender  
GE, TR

**PHILIP A HUNT CO.**  
Roosevelt Pl., Palisades Park, N. J. (Tel. WIndsor 4-4000)  
Dir.-Adv.: R. A. Root

**RODNEY HUNT MACHINE CO.**  
Orange, Mass. (Tel. KIngsole 4-2511)  
Purch. Agent: L. M. Phillips  
Asst. Purch. Agent: J. F. Hart  
V. P.-Sales & Mktg.: J. W. Rembe  
MF

**HUNT CORP., THE**  
453 Lincoln St., Carlisle, Pa. (Tel. 1486)  
Gen. Mgr.: Samuel Ryesky  
Treas.: M. E. Cochrane  
Sales Mgr.: Ronald Keorns  
GS, GE, TR, R&D

**HUNTER MFG. CO.**  
30525 Aurora Rd., Solon, Ohio (Tel. CHurchill 8-6111)  
Purch. Agent: J. C. Wolfe  
Sales Mgr.: Warren A. Miller  
GS, GH, GE, CO, TS, R&D

**HUNTER SPRING CO., DIV.-AMERICAN MACHINE & METALS, INC.**  
One Spring Ave., Lonsdale, Pa. (Tel. Ulysses 5-6815)  
Purch. Agent: Horace Machado  
Sales Mgr.: G. O. Bennett  
MF, PS, GS, CO, TS

**HUNTER TOOL CO.**  
9851 Albutis Ave., Santo Fe Springs, Calif. (Tel. OX 2-7231)  
Purch. Agent: V. L. Allison  
V. P.-Sales: R. N. Hunter, Jr.

**HUNTER-DOUGLAS ALUMINUM CORP.**  
3017 Kansas Ave., Riverside, Calif.

**HUNTINGTON RUBBER MILLS**  
7100 S. W. Macadam Ave., Portland, Ore. (Tel. CHEF 4-7535)  
Chief Purch. Agent: Mrs. Agnes Imel  
Dir.-Sales: J. S. DuVol

**HUPP AVIATION CO.**  
6633 W. 65th St., Chicago 38, Ill. (Tel. POrtsmouth 7-2100)  
Purch. Mgr.: James Bovis  
Gen. Sales Mgr.: John W. Painter  
MF, WN, PS, GS, GE

CODING	
Missile Frame	MF
Warhead & Nose Cone	WN
Propulsion System	PS
Ground Support	GS
Ground Handling	GH
Guidance Equipment	GE
Checkout Equipment	CO
Test Equipment	TS
Tracking & Telemetering	TR
Research & Development	R&D
Materials & Metals	MM

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**HUPPERT, K. H., CO.**  
6830 Cottage Grove Ave., Chicago 37, Ill. (Tel. Midway 3-4770)  
Plant Mgr.: James Marias  
Sales Mgr.: R. A. Hastings

**HUSSMANN AIRCRAFT DIV.**  
819 E. Taylor Ave., St. Louis 15, Mo. (Tel. EVergreen 2-9660)  
Purch. Agent: F. A. Biller  
Supvr.-Contracts Admin.: R. O. Lakin  
Asst. Sales Mgr.: L. H. Daerr MF, GS, GH, R&D

**HUTCHENS & SON METAL PRODUCTS, INC.**  
1355 S. S. Springfield, Mo. (Tel. UN 6-1979)  
Purch. Agent: B. G. King  
V. P.-Sales: Lewis G. Hutchens MM, R&D

**WALTER J. HYATT CO., THE**  
P. O. Box 943, Beverly Hills, Calif. (Tel. BRadshaw 2-2844)  
Sales: Walter J. Hyatt MF, GS, GH, GE, TR, R&D

**HYATT BEARINGS DIV., GENERAL MOTORS CORP.**  
Harrison, N. J. (Tel. HUmboldt 4-4000)  
Purch. Agent: L. V. Farrel  
Sales Mgr.: J. R. Gilmartin

**HYCON EASTERN INC.**  
75 Cambridge Pkwy., Cambridge 42, Mass. (Tel. UNiversity 4-7200)  
Purch. Agent: W. Senior  
V. P.-Operations-Sales: J. R. Martin  
WN, GS, GE, CO, TS, TR

**HYCON MFG. CO.**  
1030 S. Arroyo Pkwy., Pasadena, Calif. (Tel. SYcamore 9-4171)  
Mgr.-Prac.: Al Curry  
Mgr.-Customer Rel.: M. J. Leonard  
Buyers: F. Szinski, Chuck Schultz & Harold Held  
GS, CO, TS, TR, R&D

**HYDRA-POWER CORP.**  
10 Pine Court, New Rochelle, N. Y. (Tel. NE 2-2200)  
Purch. Agent: J. Trancas  
V. P.-Sales: E. O. Holland GS, GE, TS, R&D

**HYDRAULIC PRESS MFG. CO., THE, DIV.-KOEHRING CO.**  
Marion Rd., Mt. Gilead, O. (Tel. 9351)  
Dir.-Purch.: Carl A. Fisher  
V. P.-Sales: E. L. Oehling GS, GE

**HYDRO MOLDING CO. INC.**  
100 Sharran Ave., Plattsburgh, N. Y. (Tel. 2598)  
V. P.-Purch.: M. A. Rabin MF, PS, GS, GE, TR

**\*HYDRO-AIRE CO., DIV.-CRANE CO.**  
3000 Winano Ave., Burbank, Calif. (Tel. Victoria 9-1331)  
Purch. Agent: C. E. Lenax  
V. P.-Sales & Engng.: Frank Cooper  
PS, GS, GH, GE, CO, TS, R&D

\*(See Page 3 for Advertisement)

**HYDRODYNE CORP., SKINNER SEAL DIV.**  
7350 Coldwater Canyon Ave., North Hollywood, Calif. (Tel. POplar 5-8001)  
Purch. Agent: P. W. Wurtz  
Pres.: Robert T. Skinner

**HYDROMATICS, INC.**  
70 Okner Pkwy., Livingston, N. J. (Tel. WYman 2-4900)  
Purch. Agent: Dan Moran  
Sales Mgr.: Joseph Perrin PS, GS, GH, TS

**HYSTER CO.**  
2902 N. E. Clockamas St., Portland 8, Ore. (Tel. ATLantic 8-5011)  
Dir.-Sales: J. A. Cairns GH

**I. D. E. A., INC.**  
7900 Pendleton Pike, Indianapolis, Ind. (Tel. LIBerty 7-3581)  
Purch. Agent: R. E. Cox  
Buyer: R. Weritt  
Gen. Sales Mgr.: A. C. Elles GS, GE, R&D

**ILG ELECTRIC VENTILATING CO.**  
2850 N. Pulaski Rd., Chicago 41, Ill. (Tel. Kildare 5-1520)  
V. P. 1/C Purch.: S. E. Heyerick  
Exec. V. P.: J. J. Friedler, Jr. GS, GH, TS

**I-L-S INSTRUMENT DIV., THE MERIAM INSTRUMENT CO.**  
4525 W. 160th St., Cleveland 35, O. (Tel. CLearwater 2-3850)  
Purch. Agent: M. E. Saltsgaver  
Sales & Gen. Mgr.: R. B. Loule GS, CO, TS

**I-T-E CIRCUIT BREAKER CO.**  
601 E. Erie Ave., Phila. 34, Pa. (Tel. GARfield 6-5700)  
Purch. Agent: W. Manning TR

**ITT FEDERAL DIV., INTERNATIONAL TELEPHONE & TELEGRAPH CORP.**  
100 Kingsland Rd., Clifton, N. J. (Tel. NUtley 2-3600)  
Purch. Mgr.: H. P. Sammerer  
V. P.-Sales: T. M. Douglas GS, GE, CO, TR, R&D

**ITT LABS.**  
500 Washington Ave., Nutley, N. J. (Tel. NOrth 1-1100)  
Dir.-Purch.: L. C. Mercier  
Dir.-Sales: J. A. Haber  
WN, GS, GH, GE, CO, TS, TR, R&D

**ITT LABS., FORT WAYNE**  
3702 Pontiac St., Fort Wayne, Ind. (Tel. E 7571)  
Mgr.-Purch.: Walter Plitts R&D

**ITT-KELLOGG**  
6650 South Cicero Ave., Chicago 38, Ill. (Tel. PO 7-6900)  
Dir.-Purch.: H. O. Nordberg  
V. P. & Gen. Sales Mgr.: O. C. Bailey  
GS, CO, TS, TR, R&D

**IDEAL-AEROSMITH, INC.**  
3913 Evans Ave., Cheyenne, Wyo. (Tel. 7-7715)  
Purch. Agent: F. E. Wheelhouse  
Sales Mgr.: Neil Royce PS, GS, GH, GE, CO, TS

**IDEAL INDUSTRIES, INC.**  
1427 Park Ave., Sycamore, Ill. (Tel. 2114)  
Purch. Agent: Robert O. Voss  
Buyer: E. W. Whitaker  
Gen. Sales Mgr.: Gordon B. Koch GE, TS, TR

**IDEAL PRECISION METER CO., INC.**  
126 Greenpoint Ave., Brooklyn 22, N. Y. (Tel. EVergreen 3-6904)  
V. P.: Charles Bernstein  
Pres.: Harry Leiderman

**ILLINOIS CONDENSER CO.**  
1616 N. Throop St., Chicago, Ill. (Tel. EV 4-1300)  
Purch. Agent: Ted Senelick  
Sales Mgr.: L. W. Coleman TR

**ILLINOIS TESTING LABORATORIES, INC.**  
420 N. LaSalle St., Chicago 10, Ill. (Tel. Whitehall 3-1331)  
Purch. Agent: J. M. Lajka  
V. P.-Sales: M. J. Rauscher MF, PS, CO, TS

**ILLINOIS ZINC CO.**  
2959 W. 47th St., Chicago 32, Ill. (Tel. LAFayette 9-1600)  
V. P.-Purch.: L. F. Johnson  
V. P.-Sales: W. F. Synnatt MF, PS

**ILLUMITRONIC ENGRG. CO.**  
680 E. Taylor, Sunnyvale, Calif. (Tel. REgent 9-2395)  
Purch.: Wm. W. Smith  
Sales Mgr.: Joe O. Giulie MF, PS, GS, GH, GE, TR

**IMPACT-O-GRAPH CORP., THE**  
1900 Euclid Ave., Cleveland, O. (Tel. CHerry 1-5838)  
Pres.: W. S. Mielziner PS, TS

**IMPERIAL BRASS MFG. CO., THE**  
6300 W. Howard St., Chicago 31, Ill. (Tel. SPring 4-1700)  
Purch. Agent: W. B. Burnett  
V. P.-Sales Mgr., Distributor Div.: C. H. Benson  
V. P.-Sales Mgr., O.E.M. Div.: J. T. Greenlee MF, PS, GS, GE, TS

**IMTRA CORP.**  
11 University Rd., Cambridge 38, Mass. (Tel. UN 4-4350)  
Pres.-Sales: William H. Farnham

**INDIANA STEEL PRODUCTS CO., THE**  
Valparaiso, Ind. (Tel. VALparaiso 2-5601)  
Purch. Agent: W. F. Eckert  
V. P.: I. A. Dickey MM

**INDIKON CO., INC., THE**  
76 Coolidge Hill Rd., Watertown 72, Mass. (Tel. WAtertown 4-2198)  
Purch. Agent: Warren Robertson  
Sales Mgr.: Haskell Ginns TS

**INDIUM CORP. OF AMERICA, THE**  
1676 Lincoln Ave., Utica, N. Y. (Tel. SWift 7-1630)  
V. P.-Sales: J. R. Dyer, Jr. MM

**INDUCTION HEATING CORP.**  
181 Wythe Ave., Brooklyn 11, N. Y. (Tel. EVergreen 4-3110)  
Dir.-Purch.: Arthur J. Slobin  
Sales: Thomas J. Stanton PS, GS, GH, GE

**INDUCTION MOTORS CORP.**  
570 Main St., Westbury, L. I., N. Y. (Tel. EGewood 4-7070)

V. P.-Purch.: J. Wahryzek  
Purch. Agent: M. Cuffiori TR, R&D

**INDUSTRIAL ACOUSTICS CO., INC.**  
341 Jackson Ave., New York, N. Y. (Tel. CY 2-0180)  
Purch. Agent: Les Braverman  
Buyers: Albert Dembiyer, James Forester, C. Spitalnic  
V. P.-Sales: S. M. Patter, A. C. Howharne MM, R&D

**INDUSTRIAL CONTROL CO.**  
805 Albin Ave., Lindenhurst, L. I., N. Y. (Tel. MOhawk 1-6060)  
PS, GE, CO, TS, TR

**INDUSTRIAL DEVELOPMENT LABS., INC.**  
982 River Road, Edgewater, N. J. (Tel. WHitney 3-4084)  
Purch. Agent: George E. Mesnick  
Sales Mgr.: N. J. Seiden R&D

**INDUSTRIAL ELECTRICAL WORKS, INC.**  
1509 Chicago St., Omaha, Neb. (Tel. ATLantic 4600)  
Purch. & Sales Mgr., Reel Div.: J. C. Costello  
GS, GH, CO, TS

**INDUSTRIAL ENGRG. CORP.**  
525 East Waabine, Louisville 8, Ky. (Tel. MEIrose 4-3601)  
Project Engr.: Floyd B. Simpson  
Pres.: John Oavenport GS, TS

**INDUSTRIAL ENGRAVERS INC.**  
2212 McOonald Ave., Brooklyn 23, N. Y. (Tel. HICKory 9-3200)  
Pres.: J. Zatzkin MF, WN, PS, GE, CO, TS, TR

**INDUSTRIAL INSTRUMENTS INC.**  
89 Commerce Rd., Cedar Grove, N. J. (Tel. CEnter 9-6200)  
Purch. Agent: H. Steinfeld  
Sales Mgr.: J. H. Williamson T

**INDUSTRIAL METAL PROTECTIVES, INC.**  
401 Homestead Ave., Dayton 8, Ohio (Tel. BALwin 2-6747)  
V. P.-Engrng.: F. R. Fisher, Jr. M

**INDSL. PROD.-DANBURY KNUDSEN DIV.-AMPHENOL-BORG ELECTRONICS CORP.**  
Danbury, Conn. (Tel. PIONEer 3-9271)  
Mgr.-Prod. Control: Albert A. Marvin  
Buyers: Walter Loesch, Theadore Davis  
Sales Mgr.: Norman Cresci WN, GE, CO, TS, TR

**INDUSTRIAL RETAINING RING CO.**  
57 Cordier St., Irvington, N. J. (Tel. WAverly 6-5000)  
Purch. Agent: V. A. Stabile MF, PS

**INDUSTRIAL TECTONICS, INC.**  
3686 Jackson Ave., Ann Arbor, Mich. (Tel. NOrmandy 3-2451)  
Dir.-Purch.: H. Fleischman  
Sales Mgr.: K. W. McKenzie MF, PS, GS, GH, GE, TS, TR, R

**INDUSTRIAL TELEVISION INC.**  
369 Lexington Ave., Clifton, N. J. (Tel. GRegory 3-0900)  
Purch. Agent: Joseph Weinberg  
Sales Mgr.: Robert J. Harrington GS, GE, CO

**INDUSTRIAL TEST EQUIPMENT CO.**  
55 E. 11th St., New York, N. Y. (Tel. GR 3-4684)  
Purch. Agent: Walter Meyer  
Sales Mgr.: Melvin Schreibman

**INDUSTRIAL TIMER CORP.**  
1407 McCarter Hwy., Newark, N. J. (Tel. HUmboldt 4-5600)  
Purch. Agent: J. M. Ravelle  
Sales Mgr.: R. A. Rosnyne GS, CO

**INDUSTRIAL TOOLS MFG. CORP., SUB.-PENDLETON TOOL INDUSTRIES, INC.**  
8150 Marbrisa Ave., Huntington Pk., Calif. (Tel. LUdlow 3-4301)  
Purch. Agent: H. O. Grass  
Sales Engr.: G. M. Fishing  
Sales Engr.: S. K. Simpson  
Sales Mgr.: H. O. Norton GS

**INDUSTRIAL TRANSFORMER CORP.**  
Gouldsboro, Penna. (Tel. VI 2-2111)  
Purch. Agent: A. Kelly  
Sales Mgr.: S. Lundy

**INDUSTRIAL WINDING MACHINERY CORP.**  
Suite 3410, 120 Wall St., New York 5, N. Y. (Tel. WHitehall 3-1754)  
Dir.-Purch.: R. Horvst  
Dir.-Sales: H. W. Roehrig

**INDUSTRO TRANSISTOR CORP.**  
35-10 36th Ave., Long Island City 6, N. Y. (Tel. EXeter 2-8000)  
V. P.-Sales: Archie MacDougal  
Sales Mgr.: Seymour Ostfeld GE

**ERTIA SWITCH DIV., SAFE LIGHTING INC.**  
527 Lexington Ave., New York 17, N. Y. (Tel. PLaza 5-1583)  
Purch. Agent: Donald C. Wilson  
Sales: Oana A. Griffin

**ERTIA SWITCH, INC.**  
311 West 43rd St., New York 36, N. Y. (Tel. JUDson 6-5890)  
Purch. Agent: John A. M. Peck  
Sales Mgr.: Eugene Magul  
WN, GH, GE, CO, TS, TR, R&D

**FRAREO INDUSTRIES, INC.**  
62 Fourth Ave., Waltham 54, Mass. (Tel. TWinbrook 3-5400)  
Gen. Sales Mgr.: E. O. Reddan  
GE, TS

**GERSSOL KALAMAZOO DIV., BORG-WARNER CORP.**  
1810 N. Picher St., Kalamazoo, Mich. (Tel. Flreside 5-3501)  
Dir.-Proc.: Harry E. Morse, 760 E. Vine St., Kalamazoo, Mich. (Tel. Flreside 2-0136)  
Purch. Agents: L. A. Potratz & E. M. Anderson, 760 E. Vine St.  
Buyers: E. J. Ries & L. D. Payne, 760 E. Vine St.  
V. P. & Dir.-Defense Sales: A. S. Mrozek

**GRAHAM CO., THE**  
392 North Main St., Bristol, Conn. (Tel. LUDlow 2-6321)  
Purch. Agent: B. I. Downs  
Asst.-Purch. Agent: W. Preston  
V. P.-Sales: Allen W. Rork  
WN, GE

**LAND ELECTRONICS CORP.**  
100 Rathbone Ave., Aurora, Ill. (Tel. 6-7744)  
V. P.-Prod.: J. J. Pfeiffer  
Materials Dept.: R. Juncueu  
Dir.-Sales: E. A. Thompson  
CO, TS

**ICO CO. DIV.-BARRY CONTROLS INC.**  
11015 St., Groton, Mass. (Tel. Gilbert 8-6358)  
Gen. Mgr.: David L. Ammen  
PS, GS, TS

**IRU-LEC CORP.**  
200 Homestead Ave., Mt. Vernon, N. Y. (Tel. MOUNT Vernon 3-3754)  
res.: Russell Hobert  
GE

**TRUMENT CORP. OF FLA.**  
P. O. Box 1226, Melbourne, Fla. (Tel. PArkway 3-8112)  
Buyer: A. O. Ashley  
Contract Adm.: Charles W. Cairnes  
TR, R&D

**TRUMENT DEVELOPMENT LABS., INC.**  
Mechanic St., Attleboro, Mass. (Tel. Attleboro 1-3880)  
Purch. Agent: William Pendergost  
Buyer: Robert Costock  
Gen. Sales Mgr.: George P. Bentley  
GE, TS, TR, R&D

**TRUMENT LABS.**  
5 W. Walton Place, Chicago 10, Ill. (Tel. Michigan 2-0123)  
V. P.-Purch.: John R. Fouser  
V. P.-Sales: H. Taylor  
TS, R&D

**TRUMENT MOTORS**  
555 5th St., Irvington, N. J. (Tel. ESsex 4-9880)  
Int. Supr.: Anthony Gaus  
Sales Mgr.: O. Winston  
PS, GS, GE, TS, TR

**TRUMENT RESISTORS CO.**  
86 Commerce Ave., Union, N. J. (Tel. MURdock 4-4363)  
Vice Mgr.: P. Bargerstock  
Mnt Mgr.: Howard G. Melick

**TRUMENTATION DIV.-AMPEX CORP.**  
4 Charter St., Redwood City, Calif. (Tel. EMerson 9-1481)  
Purch. Agent: Frank C. Masi  
Buyers: Harold Nelsen, R. Glenn Zieber, William C. Haack  
Vg. Mgr.: Paul Weber  
WN, GS, CO, TS, TR, R&D

**TRUMENTS CORP., THE**  
Central Ave., Baltimore 2, Md. (Tel. Dickens 4-2626)  
Tech. Agent: Ed. Morton  
Sales Mgr.: A. E. Clark, Jr.  
PS, GS, GE, CO, TS, TR

**TRUMENTS DIV.-PHILIPS ELECTRONICS, INC.**  
7 S. Fulton Ave., Mt. Vernon, N. Y. (Tel. MO 4-4500)  
Tech. Agent: Jack Hemphill  
Sales Mgr.: C. J. Woods  
TS, R&D

**TRUMENTS FOR INDUSTRY, INC.**  
1, New South Rd., Hicksville, N. Y. (Tel. VErbrook 1-7100)  
Tech. Agent: John T. Oaley  
V. P.-Sales: Robert C. Lockwood  
R&D

**TRUMENTAL CORP.**  
1 Frank Road, Hicksville L. I., N. Y. (Tel. EILs 1-4099)

V. P.-Purch.: H. Gittleson  
V. P.-Sales: J. Kendall  
MF, WN, PS, GS, GH, TS

**INTEGRATED MICA CORP.**  
202 Franklin Place, Woodmere, L. I., New York (Tel. FRanklin 4-2350)  
Purch. Agent: Moses O. Heyman  
MM, R&D

**INTERCONTINENTAL DYNAMICS CORP.**  
170 Coolidge Ave., Englewood, N. J. (Tel. LOWell 7-3600)  
Purch. Agent: Harold White  
Sales Mgr.: F. M. Winnai  
GS, GE, TS, R&O

**INTERCONTINENTAL MFG. CO., INC.**  
Amundsen Road, P. O. Box 578, Garland, Texas (Tel. BRoadway 6-5131)  
Dir.-Purch.: L. O. Barnhill  
Mgr., Contract Admin.: R. E. Torpley  
MF, WN, PS, GH, MM, R&D

**INTERELECTRONICS CORP.**  
2432 Grand Concourse St., New York 58, N. Y. (Tel. LUDlow 4-6200)  
Purch. Agent: M. L. Lewis  
Sales Mgr.: M. H. Pintell  
PS, GS, GH, GE, CO, TS, TR

**INTERFERENCE MEASUREMENT LABORATORY, INC.**  
907 E. 51st St., Brooklyn 3, N. Y. (Tel. INgersoll 9-1765)  
Purch. Agent: E. N. Sands  
GE, TS, R&D

**INTERLAKE STAMPING CORP.**  
12415 Euclid Ave., Cleveland 6, Ohio (Tel. Sweetbriar 1-7101)  
Pres.: Wayne Groenstein  
MF

**INTERNATIONAL AEROACOUSTICS CORP.**  
341 Jackson Ave., New York 54, N. Y. (Tel. CYpress 2-0180)  
Purch. Agent: Les Broverman  
Buyers: C. Spitalnik, B. Horowitz, A. De Angelis  
Sales: M. Hirschorn  
PS, GS, GH, TS

**INTERNATIONAL BALSAL CORP.**  
86 Boyd Ave., Jersey City 4, N. J. (Tel. HENDERSON 4-2044)  
V. P.-Purch.: Samuel Greenhouse  
Exec. V. P.-Sales: Prem Gary  
MM

**INTERNATIONAL BUSINESS MACHINES CORP.-MILITARY PRODUCTS DIV.**  
590 Madison Ave., New York 22, N. Y. (Tel. PLaza 3-1900)

**INTERNATIONAL ELECTRIC INDUSTRIES, INC.**  
468 Grand Ave., Brooklyn 38, N. Y. (Tel. NEVins 6-0211)  
Purch. Agent: William Auslander  
Chief Engr.-Purch.: John H. Tonges, Jr.  
Sales Mgr.: Leo Margold  
MF, PS, GS, GH, GE, CO, TS, TR

**INTERNATIONAL ELECTRONIC INDUSTRIES, INC.**  
Corner Berry & Fessy Roads (P. O. Box 1368)  
Nashville, Tennessee (Tel. CYpress 8-4411)  
Purch. Agent: W. W. Oick  
National Sales Mgr.: A. M. Rowley  
MM

**INTERNATIONAL ELECTRONIC RESEARCH CORP.**  
145 W. Magnolia Blvd., Burbank, Calif. (Tel. Victoria 9-2481)  
Purch. Agent: Philip Solomon  
Exec. V. P. & Sales Mgr.: John E. Markley, Jr.  
PS, GE, TS

**INTERNATIONAL EQUIPMENT CO.**  
1284 Soldiers Field Rd., Boston, Mass. (Tel. STadium 2-7900)  
Purch. Agent: Walter Morrison  
V. P.-Sales: R. W. Schmoder  
TS

**INTERNATIONAL FERMONT MACHINERY CO., INC.**  
Ramapo, N. Y. (Tel. SLOatsburg 3-2791)  
Purch. Dir.: M. Breen  
V. P.-Purch.: D. Rohr  
Dir.-Sales: C. Sugarman  
GS

**INTERNATIONAL INSTRUMENTS INC.**  
Box 2954, New Haven 15, Conn. (Tel. FULTon 7-2515)  
Sales Mgr.: R. C. Livingston

**INTERNATIONAL NICKEL CO., THE**  
67 Wall St., New York 5, N. Y. (Tel. Whitehall 4-1000)  
V. P.-Sales: J. A. Marsh  
MM

**INTERNATIONAL PUMP & MACHINE WORKS**  
81 Dorsa Ave., Livingston, N. J. (Tel. WYman 2-5900)  
Pres.: T. J. Scala  
Purch.: M. D. Warchol  
Ch. Engr.: F. E. Roth  
GS, GH, R&O

**INTERNATIONAL RADIANT CORP.**  
111 New York Ave., Westbury, N. Y. (Tel. EDgewood 4-8820)  
Mfg. Mgr.: P. Stanger

Purch. Agent: Mrs. K. LaGrego  
Sales Mgr.: Karl O. Klein  
TS, MM

**INTERNATIONAL RECTIFIER CORP.**  
1521 E. Grand Ave., El Segundo, Calif. (Tel. OREGon 8-6281)  
Dir.-Purch.: Claire Behar  
Purch. Agent: Larry Dudley  
V. P.-Sales: J. T. Cataldo  
MM

**INTERNATIONAL REGISTER CO.**  
2620 W. Washington Blvd., Chicago 12, Ill. (Tel. VA 6-4242)  
Dir.-Purch.: H. H. Shellberg  
Gen. Sales Mgr.: H. H. Rosenheim

**INTERNATIONAL RESEARCH ASSOCIATES**  
2221 Warwick Ave., Santa Monica, Calif. (Tel. TEXas 0-4415)  
Pres.: L. E. Brown  
Purch.: T. Reynolds  
GS, GE, CO, TS, R&O

**INTERNATIONAL RESEARCH & DEVELOPMENT CORP.**  
P. O. Box 55, 6150 Huntley Rd., Worthington, Ohio (Tel. TU 5-5376)  
V. P.-Engr.: T. Ongaro  
Sr. Engineers: G. H. Thomas & Paul Ryan  
Sales Mgr.: O. L. Bernhard  
GS, TS

**INTERNATIONAL RESISTANCE CO.**  
401 N. Broad St., Philadelphia 8, Pa. (Tel. WALnut 2-2166)  
Mgr.-Purch.: Henry Zaccaria  
Buyers: Irene Smith & John H. Cummings  
Dir.-Sales: George O. Butler  
TS, MM, R&D

**INTERNATIONAL WAX REFINING CO.**  
99 E. Hawthorne Ave., Valley Stream, N. Y. (Tel. LUCust 1-2500)  
Purch.: Frank W. Clarke  
MF, WN, PS

**INTERNATIONAL WIRE & CABLE CO.**  
1665 N. Milwaukee Ave., Chicago, Ill. (Tel. BR 8-2362)  
Sales Mgr.: Sidney Gracen

**INTERSTATE ELECTRONICS CORP.**  
707 E. Vermont Ave., Anaheim, Calif. (Tel. PERSpect 4-6540)  
Purch. Agent: Hugh F. Maguire  
Mgr., Engr. Liaison: John P. Hastings  
PS, GS, CO, TR

**INTERSTATE ENGRG. CORP.**  
600 East Vermont Ave., Anaheim, Calif. (Tel. PERSpect 4-6540)  
Prod. Mgr.: G. McMaster  
Buyers: R. Basting, M. Hodkin, P. Rutledge  
Dir.-Sales & Contracts: E. Ed Williams  
MF, GS, GH, TS, R&D

**INTERSTATE MFG. CORP., THE**  
190 Boston Post Rd., Orange, Conn. (Tel. SYcamore 9-2339)  
V. P.-Purch.: L. J. Paffumi  
Pres.: A. A. Espari  
MF, WN, PS, GS, GH, GE, R&D

**INVESTMENT CASTING CO.**  
60 Brown Ave., Springfield, N. J. (Tel. ORexel 6-6260)  
Purch. Agent: Edwin Schoffman  
Sales Mgr.: E. H. Parris  
MF, PS

**INVINCIBLE VACUUM CLEANER MFG. CO.**  
14th & Davis Streets, Dover, Ohio. (Tel. 42191)  
Purch. Agent: Charles Wenger  
Dir.-Sales: L. M. Thomas

**IRON FIREMAN MFG. CO., ELECTRONICS DIV.**  
2838 S. E. 9th Ave., Portland 2, Ore. (Tel. BELmont 4-6551)  
Purch. Agent: A. O. Rolfe  
Asst. Purch. Agent: Harold Walker  
Mil. Sales Coordinator: Henry Oes Georges  
GS, GH, GE, CO

**ISOLANTITE MFG. CORP.**  
175 Warren Ave., Stirling, N. J. (Tel. MILLington 7-0385)  
Pres. & Dir.-Sales: Frank J. Stevens  
MM

**ITEK CORP.**  
1566 Trapelo Road, Waltham, Mass. (Tel. TWinbrook 3-8700)

**CODING**

Missile Frame	MF
Warhead & Nose Cone	WN
Propulsion System	PS
Ground Support	GS
Ground Handling	GH
Guidance Equipment	GE
Checkout Equipment	CO
Test Equipment	TS
Tracking & Telemetering	TR
Research & Development	R&D
Materials & Metals	MM

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- Purch. Agent:** J. J. Kistner  
**Prod. Sales Mgr.:** B. J. Warren **GS, CD, R&D**
- ITEMCD, INC.**  
4 Manhasset Ave., Port Washington, N. Y. (Tel. POrt Washington 7-8330)  
**Purch. Agent:** Julius Rosen  
**Sales Mgr.:** Albert J. Deeb
- JEM ELECTRONICS CORP.**  
743 Circle Ave., Forest Park, Ill. (Tel. PResident 1-8242)  
**Purch. Agent:** C. F. Amberg **TS**
- JFD ELECTRONICS CORP.**  
1462 62nd St., Brooklyn, N. Y. (Tel. OEwey 1-1000)  
**Mgr.-Purch. & Sales:** Jack Goodman  
**GS, GE, CO, TS, TR, R&D**
- J-Y-M MICROWAVE CO.**  
9300 W. 47th St., Brookfield, Ill. (Tel. HUnter 5-2000)  
**Buyer:** L. Rzeminski  
**Sales Mgr.:** E. J. Jurcy
- JACK & HEINTZ, INC.**  
17600 Broadway, Maple Heights, O.  
Mailing: Cleveland 1, O. (Tel. MOntrorse 2-1000)  
**Purch. Agent:** Hugh W. Lloyd  
**V. P.-Sales:** R. J. Eschborn  
**V. P.-Operations:** C. F. Herbold **GS, GH, TS, R&D**
- JACBDSN NUT MFG. CORP.**  
Box 177, Kenilworth, N. J. (Tel. MURdock 6-2000)  
**Purch. Agent:** Joe Marone  
**Sales Mgr.:** C. W. Aogard **MF, PS**
- JAIDINGER MFG. CO., INC.**  
1921 W. Hubbard St., Chicago 22, Ill. (Tel. HA 1-1090)  
**Purch. Agent:** Robert Krajei  
**Chief Engr.:** William Krieg  
**Sales:** J. H. Jaidinger **GS, GH, CO**
- JALBERT AERLDG LAB.**  
40 N. W. 20th St., P. O. Box 155, Boca Raton, Fla. (Tel. 9094)  
**Dir.-Purch.:** Oamina C. Jalbert
- JAMES, PDND & CLARK, INC.**  
2181 E. Foathill Blvd., Pasadena, Calif. (Tel. SYcamore 3-9195)  
**Purch. Agent:** William Olsen  
**Sales Mgr.:** P. F. Shepherd  
**MF, WN, PS, GS, GH, CD, TS**
- JAMESBURY CORP.**  
45 New St., Worcester, Mass. (Tel. SWift 9-4166)  
**Trees.-Purch.:** Saul I. Reck  
**Sales:** Julian S. Freeman **PS**
- JAMISDN COLD STORAGE DDDR CD.**  
Box 70, Hagerstown, Md. (Tel. RE 3-3100)  
**Gen. Sales Mgr.:** P. J. Ouffy
- JAN HARDWARE MFG. CO., INC.**  
38-01 Queens Blvd., Lang Island City 1, N. Y. (Tel. EMpire 1-0800)  
**Chief Purch. Agent:** M. Weiss  
**Dir.-Sales & Gen. Mgr.:** Arthur Z. Rowe  
**GS, CD, TS, MM, R&D**
- JANCD CORP.**  
3111 Winona Ave., Burbank, Calif. (Tel. THarnwall 8-5792)  
**Purch. Agent:** Lester James  
**V. P.-Sales:** J. T. Petersen, Jr. **GS, GE, CO, TS, TR**
- \*JANITROL AIRCRAFT DIV., SURFACE COMBUSTION CORP.**  
4200 Surface Rd., Columbus 4, Ohio (Tel. BRoadway 6-3561)  
**Dir.-Prac.:** R. H. Rupp  
**Buyers:** John Huntley, Jerry Roberts, William Higgins  
**Gen. Sales Mgr.:** J. W. Ashby **GS, GH, MM, R&D**  
\*(See Page 84 for Advertisement)
- JANSKY & BAILEY, INC.**  
1339 Wisconsin Ave., Washington 7, D. C. (Tel. FEderal 3-4800)  
**Purch. Agent:** M. Bell  
**V. P.-Sales:** O. C. Ports **CD, TS, TR, R&D**
- JARDUR AVIATION CD.**  
874 Broadway, New York 3, N. Y. (Tel. ALgonquin 4-2238)  
**Dir.-Purch.:** Samuel Klepper  
**Dir.-Sales:** Herman H. Klepper
- JARDUR IMPDRT CD.**  
874 Broadway, New York 3, N. Y. (Tel. ALgonquin 4-2239)  
**Dir.-Purch.:** Samuel Klepper  
**Dir.-Sales:** Herman H. Klepper
- JARRELL-ASH CD.**  
26 Farwell St., Newtonville 60, Mass. (Tel. OEatur 2-2130)  
**Purch. Agent:** W. Jakinen **TS**
- JARVIS CDRP.**  
10 Glastanbury Tpke., Portland, Conn. (Tel. OLamond 7-3381)  
**Purch. Agent:** John Harvey  
**Gen. Mgr.:** Edward G. Sharp  
**Asst. to Gen. Mgr.:** S. Peter Barry **MF, WN, PS, MM**
- JAVELIN AIRCRAFT CO., INC.**  
1405 S. Oliver, Wichita 17, Kans. (Tel. MU 2-0111)  
**Pres. & Chief Engr.:** O. D. Blanton **MF, GS, GH**
- JAVEX ELECTRONICS**  
P. O. Box 646, Redlands, Calif. (Tel. PYramid 3-5752)  
**V. P.-Sales:** C. J. Reimuller
- JEFFERSON ELECTRONIC PRODUCTS CDRP.**  
322 State St., Santa Barbara, Calif. (Tel. WEdland 5-8505)  
**Purch. Agent:** William Bedford  
**Buyer:** Frank E. Brackett  
**Mgr., Customer Relations Div.:** Donald F. Barr  
**GS, CO, TS, TR, R&D**
- JEFFERSON WIRE & CABLE CDRP.**  
Pleasant Valley Rd., Sutton, Mass. (Tel. UNION 5-4447)  
**Gen. Mgr.:** Michael Friedman **R&D**
- JEFFREY MFG. CO., THE**  
843 N. 4th St., Columbus 16, Ohio (Tel. AX 4-3331)  
**Dir.-Purch.:** H. J. Halliday  
**V. P.-Sales:** J. E. M. Wilson
- JENNINGS MACHINE CDRP.**  
3452 Ludlow St., Philadelphia 4, Pa. (Tel. EV 6-2420)  
**Purch. Agent:** J. P. McIntyre  
**Sales Engr.:** J. Robert Peace **MM**
- JENNINGS RADIO MFG. CORP.**  
970 McLaughlin Ave., San Jose, Calif. (Tel. CYpress 2-4025)  
**Purch. Agent:** Howard A. Caan  
**V. P.-Sales:** Calvin K. Townsend **GE, TS, TR**
- JENSEN MFG. CO.**  
6601 S. Laramie Ave., Chicago 38, Ill. (Tel. POrtsmouth 7-7600)  
**Purch. Agent:** Edmund B. McGuckin  
**Indst. Sales Mgr.:** Horace L. White  
**Asst. Sales Mgr., Distributor Div.:** Frank O. Lintner  
**GH, CD, TS**
- JERGUSDN GAGE & VALVE CO.**  
Adams St., Burlington, Mass. (Tel. BRawning 2-3600)  
**Purch. Agent:** H. M. Rixan  
**V. P.-Sales:** James A. Ford
- JESSALL PLASTICS**  
900 Farmington Ave., Kensington, Conn. (Tel. New Britain, VAIlley 8-3526)  
**Purch. Agent:** J. B. Smith  
**Sales Mgr.:** E. J. McDonald **MM**
- JET ELECTRONICS CDRP.**  
4426 San Fernando Rd., Glendale 4, Calif. (Tel. Citrus 1-2689)  
**Purch. Agent:** E. A. Braga  
**Sales Mgr.:** Jaime Baluga **TR**
- JET TDOL CDRP.**  
7952 North Ave., Lemon Grove, Calif. (Tel. HOpkins 6-0471)  
**Pres.:** Grant Hadley **MF, WN, PS, GS**
- JETA, INC.**  
957 Saw Mill River Rd., Yonkers 2, N. Y. (Tel. YAnkers 9-4400)  
**Dir.-Purch.:** O. Lavker  
**Purch. Agent:** L. Balletto  
**Comm. Sales Mgr.:** R. Calhoun **GS, GH, MM**
- JET-HEET, INC.**  
152 S. Van Brunt St., Englewood, N. J. (Tel. L OWell 9-0420)  
**Purch. Agent:** P. M. Jaachim  
**Sales Engr.:** J. J. Oiekmann  
**Pres.:** C. O. MacCracken **R&D**
- JETTRON PRODUCTS, INC.**  
56 Route 10, P. O. Box 274, Hanover, N. J. (Tel. TLUcker 7-0571)  
**Pres.:** Kenneth Johnson  
**V. P.:** Carlton P. Werner  
**Elec. Engr.:** Frank J. Strassner **R&D**
- JOCLIN MFG. CO., THE**  
Lufbery Ave., Wallingford, Conn. (Tel. COLany 9-8708)  
**Purch. Agent:** S. F. DiGiorgi  
**Sales Mgr.:** Oovid R. Lurie **WN, PS, MM**
- JDDEE PLASTICS CD.**  
36 Crescent St., Brooklyn 8, N. Y. (Tel. AP 7-4774)  
**Pres.:** Nicholas Meglino  
**Purch. Agent:** Mrs. Josephine Meglino
- JDHNS-MANVILLE**  
22 E. 40th St., New York 16, N. Y. (Tel. L EXington 2-7600)  
**Mgr.-Purch. Dept.:** O. H. Lyons  
**Gen. Sales Mgr., Equipment:** E. O. Flavin **MM**
- JDHNS-MANVILLE SALES CDRP.**  
22 E. 40th St., New York 16, N. Y. (Tel. L EXington 2-7600)  
**Dir.-Purch.:** D. H. Lyons  
**V. P.-Sales:** J. A. O'Brien **MF, WN, PS, GS, MM, R&O**
- E. F. JDHNSON CO.**  
206 2nd Ave. S. W. Waseca, Minn. (Tel. 990)  
**Purch. Agent:** M. L. Johnson  
**Gen. Sales Mgr.:** E. T. Herbig **MM**
- K. W. JDHNSON & CO., INC.**  
1825 Webster St., Dayton, O. (Tel. BA 4-1078)  
**Dir.-Purch.:** Richard M. Wilcox  
**Sales Mgr.:** R. O. Tobey **MF, GS, GH, TS, R&D**
- JDHNSON ELECTRONICS INC.**  
P. O. Box 1675, Casselberry, Fla. (Tel. Midway 4-3311)  
**Purch. Agent:** Merlin Baudina  
**Sales Mgr.:** E. S. Johnson **GS, R&D**
- JDHNSON MFG. CO., INC.**  
616 First Ave. N., Mt. Vernon, Iowa (Tel. 3651)  
**Mgr.-Sales:** R. H. Thompson  
**Asst. Mgr.-Sales:** O. F. James **MM**
- JDHNSON-WILLIAMS, INC.**  
2625 Park Blvd., Pala Alta, Calif. (Tel. O AVenpart 3-4131)  
**Mgr.:** P. L. Williams  
**Chief Engr.:** K. W. Johnson **GS, CO, T**
- JDHNSTDN & FUNK TITANIUM CDRP.**  
Kemraw Ave., Waaster, O. (Tel. H OWard 2-7050)  
**Purch. Agent:** Oon Gaad  
**Sales Coordinator:** Robert Knight **MF, P**
- HERRICK L. JDHNSTDN, INC.**  
659 Marian Rd., Columbus 7, Ohio (Tel. KICKary 3-7434)  
**Purch. Agent:** John W. Dalgarn  
**Dir.-Mfg.:** G. A. Wright **MF, PS, GS, GH, T**
- JOLINE TOOLS, INC.**  
8442 Otis St., South Gate, Calif. (Tel. L ORain 7-1489)  
**Prod. Mgr.:** R. Glen Waads  
**V. P.-Sales:** William S. Waads **G**
- JOMA INC.**  
Town Line Rd., Walcott, Conn. (Tel. PLazo 7-0040)  
**Pres.:** Joseph M. Mccary **M**
- HDWARD B. JDNES DIV.-CINCH MFG. CDRP.**  
1026 S. Hamon Ave., Chicago 24, Ill. (Tel. NEVada 2-2000)  
**Purch. Agent:** Tam Hopkins  
**Sales Mgr.:** C. W. Neilson **GS, GH, GE, T**
- JDNES & LAMSON MACHINE CO.**  
160 Rocket St., Springfield, Vt. (Tel. TUrner 5-2121)  
**Purch. Agent:** E. F. St. Mary  
**Asst. Purch. Agent:** Frank Barter  
**Mgr.-Marketing:** H. A. Finch **MF, WN, PS, GS, GH, TS, T**
- JDNES & LAUGHLIN STEEL CDRP., STAINLESS & STRIP DIV.**  
Box 4606, Detroit 34, Mich. (Tel. JE 6-7200) **M**
- JDNESVILLE PAPER TUBE CDRP.**  
474 Beck Rd., Jonesville, Mich. (Tel. VI 9-7141)  
**Dir.-Purch.:** A. G. Schaefer  
**Dir.-Sales:** W. W. Schray
- JDRDAN CD., INC., THE**  
3235 W. Hampton Ave., Milwaukee, Wisc. (Tel. U Ptown 1-3200)  
**Purch. Agent:** Ethel Janke  
**Acting Sales Mgr.:** Arthur Scammell
- JDRDAN ELECTRONICS, DIV.-VICTOREAN INSTRUMENT CO.**  
3025 W. Mission Rd., Alhambra, Calif. (Tel. CLumberland 3-6425)  
**Purch. Agent:** Louis Kraat  
**Sales Mgr.:** George W. Egan **GS, GE, CD, TR, R&D**
- EARLE M. JDRGENSEN CD.**  
10650 S. Alameda St., Los Angeles 54, Calif. (Tel. L ORain 7-1122)  
**Mdse. Mgr.:** W. R. Lindman  
**Mgr.-Sales:** Charles Scriber
- JDY MFG. CD.**  
Henry W. Oliver Bldg., Pittsburgh 22, Pa. (Tel. GRant 1-2140)



Dir.-Purch.: K. Warmbein  
V. P., Ind. Div.: J. P. Cartwright GS

**JALL GEAR CO., INC.**  
1108 Goffie Rd., Hawthorne, N. J. (Tel. HA 7-4220)  
Pres.: C. Juall

**ULIE RESEARCH LABS., INC.**  
556 W. 168th St., New York City, N. Y. (Tel. Lorraine 8-8700)  
Dir.-Purch.: Lucille McCulley CO, TS, TR, R&D

**W ENGRG. WORKS**  
15920 Pin Oak Court (P.O.) Butler, Wisc. (Tel. Milwaukee) SUnset 1-8616  
Purch. Agent: H. Charles Kaetel

**WAR ENGRG. CORP.**  
2995 Middlefield Rd., Palo Alto, Calif. (Tel. OAvenport 4-5050)  
Purch. Agent: John F. Lombardi  
Sales Mgr.: Frank Genocha

**W. E. KAERCHER CO.**  
1911 36th Ave., S., Minneapolis 17, Minn. (Tel. Parkway 4-4986)  
Purch.: Don Kaercher & Geo. Kaercher

**WH & CO., INC.**  
41 Windsor St., Hartford, Conn. (Tel. CHapel 6-7431)  
P.-Purch.: Kenneth O. Jacobs  
Asst. Purch. Agent: James Melo  
Expediter: Richard Metcalf  
Sales Mgr.: Robert Hamerschlag GS, TS, R&D

**WH RESEARCH LABS., INC.**  
2 Pine St., Freeport, N. Y. (Tel. FReeport 9-8800)  
Asst. Purch.: Judy Wisner  
P.-Sales: Kenneth B. Boothe GS, TR, R&D

**WISER AIRCRAFT & ELECTRONICS, DIV.-KAISER INDUSTRIES CORP.**  
P. O. Box 1828, Oakland 4, Calif. (Tel. San Leandro, Calif.—LOckhaven 2-2456)  
Material Mgr.—Richmond Machining Plt.: James Tollman (Tel. Richmond, Calif.—Landscape 6-4688)  
Purch. Agent—Richmond & San Leandro Plts.: J. R. Anderson (Tel. Richmond, Calif.—Landscape 6-4688)  
Purch. Agent—Toledo Electronics Plt.: R. W. Gibson (Tel. Toledo, O.—RAndolph 6-1591)  
Purch. Agent—Phoenix Electronics Plt.: Ralph Musbach (Tel. Phoenix, Ariz.—WIndsor 3-3431)  
Sales & Contract Rep.—Phoenix Electronics Plt.: Robert N. O'Hara (Tel. Phoenix, Ariz.—WIndsor 3-3431)  
Sales Mgr.—Weapons Systems Mktg. Dept.: A. L. Mopes (Tel. San Leandro, Calif.—LOckhaven 2-2456)  
MF, WN, PS, GS, GH, GE, CO, TS, TR, MM, R&D

**WISER ALUMINUM & CHEMICAL SALES, INC.**  
9 N. Michigan Ave., Chicago 11, Ill. (Tel. MOhawk 4-6900) MF, PS, GH

**WISER METAL PRODUCTS, INC., FLEETWINGS DIV.**  
Pittsford, Pa. (Tel. STillwell 8-8431)  
Loc. Mgr.: W. C. Heilbrun  
P. & Gen. Mgr.: S. D. Hackley  
P. & Asst. Gen. Mgr.: F. H. Bechill  
Tech. Mgr.: W. K. Palmer  
Sales Mgr.: O. E. Egan MF, WN, PS, MM, R&D

**WISER STEEL CORP., FABRICATING DIV.**  
101 Telegraph Rd., Los Angeles 22, Calif. (Tel. RAYmond 3-5411)  
Purch. Agent: Frank E. Cooper  
P.-Gen. Mgr.: Jack J. Carlson GS, GH, TS

**WJARR CORP.**  
7 Market St., Kingston, Penno. (Tel. BUtler 7-2151)  
Purch. Agent: Clinton O. Smith  
Sales Mgr.: John H. Uhl MF, WN, PS, GS, GH

**WKAJ LABS.**  
100 S. Thompson Lane, Nashville, Tenn. (Tel. ALPine 4-3519)  
Purch.: Thomas J. O'Kane  
Sales Mgr.: C. G. Montgomery MF, WN, PS, GS

**WKAJ LATH CORP., THE**  
Melba Place, Stamford, Conn. (Tel. OAVis 5-2206)  
(Tel. Engr.: F. J. Barrio)  
Sales Mgr.: G. W. Eisenbeis

**WKAJ LIGHT CORP.**  
151 Ave. & Chestnut St., Mankato, Minn. (Tel. 956)  
Purch. Agent: Norval Biggs  
Sales Mgr.: Stan F. Neubert GS

**WLAIE & CO.**  
12 Euclid St., Santa Monica, Calif. (Tel. EXbrook 5246)  
Purch. Agent: Robert Sable  
Sales: John R. Kauke TR

**C. B. KAUPP & SONS, INC.**  
6-10 & 32 Newark Way, Moplewood N. J. (Tel. South Orange 3-2490)  
Pres.: Carl B. Kaupp, Jr.  
Sec. Treas.: Clem N. Kaupp  
Sales Rep.: John M. Hogan WN, PS, GE, TS, TR, MM

**KAUSTINE FURNACE & TANK CORP.**  
1937 Thomas St., Perry, N. Y.

**KAY ELECTRIC CO.**  
Maple Ave., Pine Brook, N. J. (Tel. CApital 6-4000)  
Purch. Agent: Marsden Shaw  
Gen. Sales Mgr.: John Gilmore TS

**KAYDON ENGRG. CORP., THE**  
McCracken St., Muskegon, Mich. (Tel. 5-1641)  
Dir.-Purch.: W. J. Pierre  
Buyers: John Peterson, Jim Obermiller  
Dir.-Sales: J. F. Oehlhoffen GS, GH, GE, TS, TR, R&D

**JOSEPH KAYE & CO.**  
49 Hampshire St., Cambridge 39, Mass. (Tel. UNIVERSITY 4-1386)  
Joseph Kaye MF, WN, PS, GS, GE, TR

**KAYNAR MFG. CO., INC.**  
Box 2001, Terminal Annex, Los Angeles 54, Calif. (Tel. SPruce 3-3070)  
Purch. Agent: Geo. Mooers  
Gen. Mgr.: R. H. Randall  
Sales Mgr.: K. O. Davis MF, PS, GE, R&D

**\*KEARFOTT CO., INC.**  
1500 Main Ave., Clifton, N. J. (Tel. GRegory 2-1000)  
Purch. Agent: K. Soper (Tel. CLifford 6-4000)  
Dir.-Sales: W. S. Smith GS, GE, TS, MM, R&D  
(See Page 7 for Advertisement)

**\*KEARFOTT CO., INC., MICROWAVE DIV.**  
14844 Oxnard St., Van Nuys, Calif. (Tel. SState 6-1760)  
Prod. Mgr.: A. L. Lisle  
Purch. Agent: R. E. MacMillan  
Buyer: Loren Maxfield  
Sales Mgr.: Walter K. Oau GE  
(See Page 7 for Advertisement)

**KEIL ENGRG. PRODUCTS**  
4356 Ouncan St., St. Louis 10, Mo. (Tel. OLIve 2-7005)  
Gen. Mgr.: R. Steedman, 6833 Manchester (Tel. STerling 1-3209)  
Sales Mgr.: Norman W. Kathrinus MM

**KEITHLEY INSTRUMENTS, INC.**  
12415 Euclid Ave., Cleveland, Ohio (Tel. SWEetbriar 5-2666)  
Works Mgr.: C. G. Stevens  
V. P.—Research: Julius Praglin  
V. P.—Engrg.: W. E. Koebnitz TS, R&D

**KEITEL CORP.**  
1250 N. Main St., Los Angeles 12, Calif. (Tel. CApital 2-0201)  
V. P., and Tech. Oir.: Louis McDonald  
V. P.—Sales: W. Sorenson MF, GH

**HUGO P. KELLER, JR.**  
50 East 42nd St., New York 17, N. Y. (Tel. MUrrayhill 2-8450)  
Pres.: Hugo P. Keller, Jr.  
Sales Mgr.: R. M. Wolff MM

**M. W. KELLOGG CO., THE**  
P. O. Box 469, Jersey City, N. J. (Tel. OELaware 3-3100)  
Mgr.—Plant Purch.: T. B. Rees  
Buyers: J. E. Wallis, J. O. Oalstrom, H. F. Perkins, T. F. Oriscoll  
Sales Engr., Racket Oiv.: F. H. Menke MF, WN, PS

**KELSEY-HAYES CO.**  
3600 Military Ave., Detroit 32, Mich. (Tel. TAshmoor 5-5500)  
Dir.-Purch. & Planning: W. L. Trouffetter  
Gen. Mgr., Aviation Oiv.: Leslie G. Taylor  
Heintz Oiv.  
Front St. & Olney Ave., Philadelphia 20, Pa. (Tel. LIVINGston 8-1000)  
V. P.—Sales: J. M. Ward  
Oir.—Purch.: W. Miller  
Metals Oiv.  
Middle Settlement Rd., New Hartford, N. Y. (Tel. REDwood 5-6411, Utica, N. Y.)  
Purch. Agent: Robert J. Goodman  
Mgr.—Sales & Mktg.: Paul W. Beamer MM  
Steel Products Engrg. Div.  
1205 W. Columbia St., Columbus, Ohio (Tel. FAirfax 5-1541)  
Purch. Agent: J. K. Brannan  
Sales Mgr.: J. S. Wilkerson  
Utico Metals Div.  
2415 Whitesboro St., Utica 4, N. Y. (Tel. REDwood 5-6411)  
Purch. Agent: Russell W. Jones  
Sales Mgr.: P. W. Beamer  
Utico Turbine Parts Div.  
2415 Whitesboro St., Utica 4, N. Y. (Tel. REDwood 5-6411)

Purch. Agent: RusseTT W. Jones  
Sales Mgr.: Walter D. Hart  
MF, WN, PS, GS, GH, GE, TS, TR, MM, R&D

**KEMLITE LABORATORIES, INC.**  
1819 W. Grand Ave., Chicago 22, Ill. (Tel. TAYlor 9-6050)  
Purch. Agent: J. V. Daniels MF, WN, PS, GS, GE, TS, TR

**KEMP AERO PRODUCTS**  
Marshall Hill Rd., West Milford, N. J. (Tel. PARKway 8-3149)  
Dir. of Purch.: J. L. Bishop  
Buyer: L. Cocks  
V. P.—Sales & Engrg.: J. Harrington PS, GS, GH, GE, R&O

**KENTRON ELECTRON PRODUCTS, INC.**  
14 Prince Pl., Newburyport, Mass. (Tel. HO 2-4464)  
Purch. Agent: A. N. Ougar  
Gen. Mgr.: E. T. Cosellini GE

**KENCO MFG. CO.**  
5211 Telegraph Rd., Los Angeles 22, Calif. (Tel. ANgelus 8-1201)  
V. P.—Purch.: T. Thornburgh  
V. P.—Sales: Bob Linville

**KENHOS CORP. DIV.**  
P. O. Box 2, Noroton Heights Station, Darien, Conn. (Tel. OARien OLiver 5-1504)  
Pres. and Sales Mgr.: G. H. Kendall

**KENNAMETAL INC.**  
Lloyd Ave., Latrobe, Penna. (Tel. KEystone 7-3311)  
Purch. Agent: Oale R. Versaw  
Sales Mgr.: Bennett Burgoon, Jr.

**D. S. KENNEDY & CO.**  
Cohasset, Mass. (Tel. EVERgreen 3-1200)  
Purch. Agent: Robert Fisher  
V. P.—Sales: C. W. Creaser TR, R&D

**KENNEDY AIRCRAFT SUPPLY CO.**  
43-10, 162 St., Flushing 58, N. Y. (Tel. HICKory 5-3500)  
Gen. Mgr.: Chris Kennedy  
Supervisor of Sales: K. O. Shanley

**KENNEDY VAN SAUN MFG. & ENGRG. CORP.**  
405 Park Ave., New York 22, N. Y. (Tel. PLaza 3-2200)  
Oir.—Purch. Dept.: R. K. May  
Asst. V. P.: H. W. Bodlaender  
Mgr.—Defense Prod. Div.: F. Irving, Jr.  
Asst. Mgr.—Def. Prod.: J. Cannon PS, R&D

**KENSICO TUBE CO. INC.**  
Mount Kisco, N. Y. (Tel. MOUNT Kisco 6-8046)  
Pres.: Thomas Nast  
V. Pres.: Gordon W. Edwards  
Treas.: Philip Genussa  
Plant Engr.: Arthur L. Mortenson MM

**KENT-MOORE ORGANIZATION INC.**  
1501 S. Jackson St., Jackson, Mich. (Tel. SState 4-8561)  
Prod. & Purch. Mgr.: A. L. Schultz  
Purch. Agent: D. G. Clarke  
Dir.-Mfg.: L. C. Krieser R&D

**KENTUCKY METAL PRODUCTS CO.**  
3104 S. Preston St., Louisville 13, Ky. (Tel. MEltrose 4-9421)  
Purch. Agent: G. Burton  
Dir.-Sales: J. L. Covert  
Sales: C. Blackshear MF, WN, MM

**KERN INSTRUMENTS, INC.**  
120 Grand St., P. O. Box 727, White Plains, N. Y. (Tel. WHITE Plains 9-0101)  
Exec. V. P.: F. E. Oavotz  
Serv. Mgr.: Hans T. Wehrli GS, GE, TS, R&O

**KERNS MFG. CORP.**  
45-18 Court Sq., Long Island City 1, N. Y. (Tel. STillwell 6-2550)  
Purch. Agent: Arnold Novak  
Gen. Mgr.: R. J. Auman MF, WN, PS

**KERCO PRODUCTS**  
P. O. Box 228, Havelock Sta., Lincoln 7, Nebr. (Tel. 6-5105)

		CODING	
	Missile Frame	MF	
	Warhead & Nose Cone	WN	
	Propulsion System	PS	
	Ground Support	GS	
	Ground Handling	GH	
	Guidance Equipment	GE	
	Checkout Equipment	CO	
	Test Equipment	TS	
	Tracking & Telemetering	TR	
	Research & Development	R&D	
	Materials & Metals	MM	

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Pres.: R. W. Kerr  
Sales Mgr.: D. W. Hemphill

**KETAY OEP.T., NOROEN OIV., UNITEO AIRCRAFT CORP.**  
Jericho Turnpike, Commack, N. Y. (Tel. FDrest 8-5500)  
Purch. Agent: S. Schiener  
Buyer: M. Gibber  
Sales Mgr.: H. M. Winton

**KEY RESISTOR CORP.**  
321 W. Redondo Beach Blvd., Gardena, Calif. (Tel. DAVIS 3-5000)  
Purch. Agent: J. L. Golfarth  
Gen. Mgr.: W. Peddie MM

**KEYSTONE CARBON CO.**  
1935 State St., St. Marys, Penna. (Tel. TE 41-591)  
Purch. Agent: L. H. Schaut  
Thermistor Sales: F. A. Brennan

**KEYSTONE ELECTRONICS CORP.**  
49 Blecker St., New York 12, N. Y. (Tel. GRamercy 5-4600)  
Purch.: I. Rosen MF, PS, GS, GH, GE, TS, TR

**KEYSTONE PRODUCTS CO.**  
904-6 23rd St., Union City, N. J. (Tel. UNION 6-5400)  
Purch. Agent: James A. Dillick  
Sales Coordinator: E. Holewski GS, GE, TS

**KICKHAEFER MFG. CO.**  
901 S. Secand St., Milwaukee 4, Wisc. (Tel. Mitchell 5-1630)  
Pres.: Edward A. Kickhaefer  
V. P.-Purch.: Ernest Davis PS, GH, TS, TR

**WALTER KIDDE & CO., INC., AVIATION DIV.**  
1320 Main St., Belleville 9, N. J. (Tel. PLymouth 9-5000)  
Oir.-Purch.: E. R. Randall  
Purch. Agents: John P. Blake, G. Lukacs  
Asst. Purch. Agents: J. D. Tamburro, H. S. Kilianski  
Buyers: S. Stefans, S. Eckhouse, W. Weber, A. Greifenhain, M. Corio, H. Griffith, C. McCarthy MF, PS, GS, GH, GE, CO, TS

**KIELEY & MUELLER, INC.**  
64 Genung St., Middletown, N. Y. (Tel. Diamond 2-2526)  
Oir.-Purch.: Rex Palmer  
Oir.-Sales: Joseph P. D'Conner, Jr.

**KILGEN AIRCRAFT DIV.**  
P. D. Box 94, 8008 Carandolet Ave., Clayton (St. Louis) 5, Mo. (Tel. Parkview 7-8920)  
Oir.-Sales: Eugene R. Kilgen GS

**KILGORE, INC., INTERNATIONAL FLARE-SIGNAL OIV.**  
200 E. Broadway, P. D. Box 31, Westerville, D. (Tel. TUXedo 2-2341)  
Purch. Agent: W. D. Watkins  
Asst. Purch. Agent: H. L. Zwick  
Sales Mgr.-International Flare-Signal Oiv.: G. J. Bishop PS

**KIN TEL OIV.-COHU ELECTRONICS, INC.**  
5725 Kearny Villo Rd., San Diego 12, Calif. (Tel. BROWning 7-6700)  
Purch. Agent: Robert J. Just  
Pres.: R. T. Silberman TS, R&O

**KINEVOX OIV.-ELECTROMATION CO.**  
1646 18th St., Santa Monica, Calif. (Tel. EXbrook 5-9975)  
Chief-Purch.: G. B. Blockwell  
Sales Mgr.: William S. Williams GE, TR, R&O

**KINNEY MFG. OIV., THE NEW YORK AIR BRAKE CO.**  
3529 Washington St., Boston 30, Mass. (Tel. JAmoica 4-3220)  
Purch. Agents: P. E. Bott  
Buyers: R. P. Dstrand  
Gen. Sales Mgr.: W. B. Mills

**KING FIFTH WHEEL CO.**  
P. D. Box 759, Wilkes-Barre, Penna. (Tel. GRanite 4-6371)  
Purch. Agent: J. J. Gatti  
V. P.-Sales: J. E. Gibbons MF, PS

**KINGSTON ELECTRONICS — OIV.-KINGSTON INDUSTRIES INC.**  
North St., Medfield, Mass. (Tel. FLeetwood 9-4347)  
Purch. Agent: N. H. Peterson  
Sales Mgr.: R. W. Moulton TS

**KIP ELECTRONICS CORP.**  
29 Holly Place, Stamford, Conn. (Tel. DAVIS 5-1551)  
Supvr.-Purch.: Graydon Cochrane  
V. P.-Sales: John N. Higgins

**M. KIRCHBERGER & CO., INC.**  
250 Humphry St., Englewood, N. J. (Tel. LDwell 8-4555)  
Purch. Agent: A. Kent  
Sales Mgr.: T. H. Church MM

**KIRK & BLUM MFG. CO., THE**  
3120 Forrer St., Cincinnati 9, Ohio (Tel. ELMhurst 1-1400)  
Purch. Agent: F. G. Weber  
Asst. Purch. Agent: Fred Herrle  
Oir.-Sales: W. R. Meuttman MM

**H. R. KIRKLAND CO., THE**  
10 King St., Morristown, N. J. (Tel. JE 8-2777)  
Dept. Mgrs.: Brule Kirkland, Harry P. Anson  
Oir.-Sales: H. R. Kirkland

**KLINCHER LOCKNUT CORP.**  
2153 Hillside Ave., Indianapolis 18, Ind. (Tel. WAlnut 5-9284)  
Purch. Agent: Mrs. Jean Groseclose  
Engr.-Purch.: E. W. Pummill  
Sales Mgr.: I. J. Dienhart MF, PS

**KLING METAL SPINNING & STAMPING CO.**  
247 Centre St., New York, N. Y. (Tel. CAnal 6-5580)  
Owner: Philip Kling WN, MM

**KLOCK CORP.**  
1272 Tolland Tpke., Monchester, Conn. (Tel. Mitchell 9-5291)  
Pres.: F. S. Klock MM

**KNAPIC ELECTRO-PHYSICS**  
936 Industrial Ave., Palo Alto, Calif. (Tel. Davenport 1-5544)  
Purch. Agent: Alvin G. Pretzer  
Dir.-Sales: George M. MacLeon MM

**KNOPP INC.**  
1307 66th St., Dakland 8, Calif. (Tel. Dlympic 3-1661)  
Sales Mgr.: Henry N. Muller

**KOBE INC.**  
3040 East Slauson Ave., Huntington Park, Calif. (Tel. LLJalou 8-1271)  
Purch. Agent: R. W. Warfield  
Aircraft Sales Mgr.: P. H. Jamison GH, TS, R&O

**H. KOCH & SONS**  
P. D. Box 125, Corte Modera, Calif. (Tel. WABash 4-3510)  
Purch. Agent: H. Salkin  
Gen. Mgr.: M. P. Koch PS, GS

**KOEHLER AIRCRAFT PRODUCTS CO.**  
409 Leo St., Dayton 59, D. (Tel. Baldwin 6-1821)  
Purch. Agent: Betty Jackowitz  
Gen. Sales Mgr.: R. T. McCauley PS, GS

**KOHLER CO.**  
Kohler, Wisc. (Tel. GLencour 7-4441)  
V. P. & Sales Mgr.: A. G. Zibell  
Sales Rep.: W. C. Voight PS, GS, GH

**KOILEO KOROS INC.**  
1565 Dixwell Ave., New Haven 14, Conn. (Tel. CHestnut 8-5515)  
Purch. Agent: D. C. McKean  
V. P.-Sales: E. L. Love MF

**KOLCAST INDUSTRIES — OIV. THOMPSON RAMO WOOLRIDGE INC.**  
P. D. Box 250, Minervo, Ohio (Tel. 725)  
Purch. Agent: A. M. Peiley  
Sales Mgr.: R. C. Kramer MM, R&O

**KOLLMORGEN OPTICAL CORP.**  
347 King St., Northampton, Mass. (Tel. JUstice 4-0280)  
Purch. Agent: Richard G. Walsh  
Asst. Purch. Agent: George Dudley  
Sales Mgr.: William C. D'Donnell GS, TS, TR, R&D

**KOLLSMAN INSTRUMENT CORP., SUB-STANDARD COIL PRODUCTS CO. INC.**  
80-08 45th Ave., Elmhurst 73, N. Y. (Tel. TWining 9-5600)  
Purch. Agent: J. Goodrich  
Gen. Sales Mgr.: Henry N. Drage

**E. KONIGSLOW STAMPING & TOOL CO.**  
450-1-N, 9th St., Elwood, Indiana (Tel. FE 2-5342)

**\*KOONTZ-WAGNER ELECTRIC CO. INC.**  
516 N. Michigan St., South Bend 1, Ind. (Tel. Central 3-8251)  
Procurement Mgr.: A. W. Koehnke  
Gen. Mgr.: C. D. Hills  
Production Mgr.: C. H. Bill  
V. P.-Sales: B. Kumm PS, GE

**KOPP GLASS, INC.**  
Swissvale, Pittsburgh 18, Pa. (Tel. BRandywine 1-0190)

Purch. Agent: Charles Rudek  
V. P.-Sales: J. L. Newton GS, GE

**KOPPERS CO., INC.**  
Koppers Bldg., Pittsburgh, Pa. (Tel. EXpress 1-3300)  
V. P.-Purch.: P. D. Shollar  
Sales Mgr.-Chem. Div.: J. W. Pool  
Sales Mgr.-Metal Products Oiv.: Harry Neher

**KOPPERS CO., INC., METAL PRODUCTS OIV.**  
200 Scott St., Baltimore 30, Md. (Tel. SARatoga 7-2500)  
Dir.-Procurement: B. K. Shoner  
Mktg. Mgr.: H. P. Neher MF, PS, TS

**KORA INDUSTRIES**  
20 W. 46th St., New York 36, N. Y. (Tel. JU 2-1078)  
Purch. Agent: Ruth B. Speaker  
Sales Mgr.: George Edrich MF, PS, GE, CO

**KORRY MFG. CO.**  
223 8th Ave. North, Seattle 9, Wash. (Tel. MAIn 4-4066)  
Sales Mgr.: J. D. White  
Chief Engr.: H. K. Wilson GS, CO, TS

**KRAEUTER & CO., INC.**  
583-585 Eighteenth Ave., Newark 3, N. J. (Tel. ESsex 3-4000)  
Buyer: F. M. McCudden  
V. P.-Sales: Joseph E. Buhler

**KRAMER FABRICATING CO., THE**  
920 Fisher Bldg., Detroit 2, Mich. (Tel. TRinity 1-1800)  
Sales Mgr.: Charles R. Sterritt PS, GS, TR, MM

**HERB KRECKMAN CO.**  
Cresco, Pa. (Tel. 2212)  
Herb Kreckman GS

**KRESSLIK PRODUCTS, INC.**  
713 Murray St., New York, N. Y. (Tel. BA 7-2492)  
V. P.: Roland Tobler  
V. P.-Sales: S. A. Catone MM, R&D

**HAROLD KRUGER INSTRUMENTS**  
313 W. Valley Blvd., San Gabriel, Calif. (Tel. ATLantic 4-3541)  
Purch. Agent: Ronald D. Rossiter  
Owner: Harold Kruger TS

**KRYLON, INC.**  
Ford & Washington Sts., Norristown, Pa. (Tel. BRoadway 9-1950)  
Dir.-Purch.: William Sionsale  
V. P.-Sales: Richard C. Newbold MF, GS, GH, MM

**KULKA ELECTRIC CORP.**  
633-643 S. Fulton Ave., Mt. Vernon, N. Y. (Tel. Mt. Vernon 4-4024)  
Treas.: William Kulka  
Purch. Agent: Harry Melzer  
Sales Mgr.: Elliott Edelman MF, WN, PS, GS, GH, GE, CO, TS, TR

**KURMAN ELECTRIC CO., DIV.-NORBURTE CORP.**  
191 Newell St., Brooklyn 22, N. Y. (Tel. EVergreen 3-8000)  
V. P.-Purch.: Julian Goodstein  
Purch. Agent: Jim Barry  
Sales Mgr.: Wallace Green GS, GH, GE, CO, TS, R&D

**KURZ-KASCH, INC.**  
1421 S. Broadway, Dayton, D. (Tel. Baldwin 3-8161)  
Purch. Agent: I. H. Naas  
Asst. Purch. Agent: David Dohner  
V. P.-Sales: R. L. Davidson WN, GS, GH, CO

**L. A. B. CORP.**  
Skaneateles 1, N. Y. (Tel. SKaneateles 1161)  
Purch. Agent: H. B. Mantz  
Sales Mgr.: J. T. Hubbard

**L. O. F. GLASS FIBERS CO.**  
3116 Van Dwen Blvd., Burbank, Calif. (Tel. VICTorio 9-2331)  
Purch. Agent: Robert D. Eisdell  
Sales Mgr.: Wm. Worcester MF, WN, PS, GS, GE, TR

**L. S. M. MFG. CO.**  
202 N. Elm, Waterbury, Conn. (Tel. PLaza 4-4136)  
Oir.-Purch. & Sales Mgr.: P. J. Ciarleglio

**LABELON TAPE CO., INC.**  
450 Atlantic Ave., Rochester 9, N. Y. (Tel. HUbbard 2-3460)  
Purch. Mgr.: Kurt Baum  
Gen. Sales Mgr.: D. L. Allen

**LAB. FOR ELECTRONICS, INC.**  
75 Pitts St., Boston, Mass. (Tel. RIchmond 2-3200)  
Purch. Agent: W. J. Stanton  
Asst. Purch. Agent: H. E. Nilson  
Chief Mech. Buyer: B. P. D'Sullivan  
Chief Electrical Buyer: H. Wiltoy  
Chief Mill Supply Buyer: H. Tungate  
Oir.-Sales: R. K. Mosher TS

**ACONIA MALLEABLE IRON CO., INC.**  
71 Water St., Lacomia, N. H. (Tel. 53)  
Supt.: Bernard P. Brisse  
Treas.: W. C. Brisse  
GS

**ADISH CO.**  
5481 S. Packard Ave., Cudahy, Wisc. (Tel. Humboldt 1-1500)  
Purch. Agent: J. F. Wachs  
Sales Mgr.-Forging Div.: R. F. Starz  
MF, WN, PS, GS, R&D

**AMB ELECTRIC CO., THE., DIV.-AMERICAN MACHINE & METALS, INC.**  
Lake St., Kent, Ohio (Tel. ORchard 3-3451)  
Purch. Agent: S. E. Campbell  
Gen. Sales Mgr.: E. L. McIntyre

**AMBDA ELECTRONICS CORP.**  
11-11 131st St., Colledge Point, N. Y. (Tel. Independence 1-8500)  
Purch. Agent: E. Botuck  
Exec. V. P.-Sales: Simeon Weston  
GS

**LAMINATED SHM CO.**  
9304 Union St., Glenbrook, Conn. (Tel. DAVIS 5-2631)  
Purch. Agent: Frederick J. Thomas  
V. P.-Sales: M. L. Lockwood  
MF, WN, PS, MM  
See Pages 58 & 59 for Advertisement)

**WPKIN LABS., INC., MR DIV.**  
Bradenton, Fla. (Tel. 6-1906)  
Purch. Agent & Sales Mgr.: George C. Craig  
TS

**AMSON & SESSIONS CO., THE**  
5000 Tiedeman Rd., Cleveland 9, O. (Tel. Clearwater 2-3700)  
Dir.-Purch.: Frank J. DeCrane  
Asst. Mgr.-Aircraft Sales: Don H. Kluth  
V. P.-Sales: J. G. Rayburn  
MM

**MTX INDUSTRIES, INC.**  
66 Brooklyn Ave., Westbury, N. Y. (Tel. EDgewood 3-5000)  
Buyers: Irving Griman  
V. P. & Sales Mgr.: Hsing Liu  
MM, R&D

**INCASTER GLASS CORP.**  
Lancaster, Ohio (Tel. OLive 3-0311)  
Purch. Agent: Hamer Echard  
Sales Mgr.: M. R. Hoover

**IND-AIR INC.**  
444 W. Wilson Ave., Chicago 31, Ill. (Tel. UNderhill 7-7550)  
Purch. Agent: C. D. Mitchell  
Mgr.-Field Mktg.: Rodney A. Stevens  
MF, GS, GH, GE, CO, TS, TR, R&D

**INDIS & GYR, INC.**  
15 W. 45th St., New York 36, N. Y. (Tel. JUdsan 6-4644)  
Exec. V. P.: M. Wiesendanger  
Sales Mgr.: John J. McNiff  
CO, TS

**INDSVERK ELECTROMETER CO., THE**  
41 Sonora Ave., Glendale, Calif. (Tel. CHapman 5-6687)  
Purch. Agent: Paul Giebelman  
P.-Sales: D. L. Collins  
gr., Comm. Div.: D. L. Merriner  
gr., Contract Div.: J. Larson  
gr., Metal Prod. Div.: W. Miller  
gr., Micrograph: Fred Hale  
GE, CO, TS

**IE ELECTRONICS MFG. CORP.**  
254 Arall Ave., North Hollywood, Calif. (Tel. ST 7-3267)  
Purch. Agent: Philip A. Mattala  
Sales Mgr.: Ray E. Enter  
CO, TS, R&D

**LIGEVIN DIV., THE W. L. MAXSON CORP.**  
7-37 Austell Pl., Long Island City 1, N. Y. (Tel. RAvenswood 9-1850)  
Purch. Agent: Daniel Ryan  
Sales Mgr.: Albert Schneider  
MM

**LHAM HICKEY STEEL CORP.**  
33 W. 47th Pl., Chicago 32, Ill. (Tel. VI 7-0822)  
r.-Sales: J. W. Davis

**LPONTE INDUSTRIES INC.**  
Rockville, Conn. (Tel. TRemont 5-3351)  
Purch.: E. Evans  
Sales: Y. H. Stillbach  
MF, WN, GS, GH, GE, CO, TR, R&D

**LPONTE MACHINE TOOL CO., THE**  
Tower St., Hudson, Mass. (Tel. HUdsan 850)  
Purch. Agent: Ira J. Habeshian  
P.-Sales: Joseph P. Crosby  
PS, MM

**LRUE INSTRUMENTS, INC.**  
D9B E. Montgomery Ave., Rockville, Md. (Tel. HAZelwood 7-7455)  
Purch. Agent: R. L. Taylor  
Sales: William A. Linton, Jr.  
GE, CO, TR

**CHARLES E. LARSON & SONS, INC.**  
15-65 N. Keeler Ave., Chicago 39, Ill. (Tel.

SP 2-9700)  
Purch. & Sales: Charles M. Larson  
MM

**\*LAVELLE AIRCRAFT CORP.**  
Sterling St., Newtown, Bucks County, Pa. (Tel. WOrrh 8-3838)  
V. P. & Purch. Agent: H. A. Liese  
Contracts Mgr.: Frank V. Kieler  
Chief Engr.: Adolph Herzog  
MF, WN, PS  
\*(See Page 98 for Advertisement)

**\*LAVEZZI MACHINE WORKS**  
4635 W. Lake St., Chicago 44, Ill. (Tel. ESterbrook 8-1636)  
Purch. Agent: Jerome J. Kremer  
Sales Mgr.: Worth Baird  
GS, GE, TR, R&D  
\*(See Page 80 for Advertisement)

**LAVOIE LABS., INC.**  
Matawan-Freehold Rd., Morganville, N. J. (Tel. LOwell 6-2600)  
Purch. Agent: G. F. Craddock  
Buyers: N. Robinson & J. Higgins  
Sales Admin.: J. D. Capeland  
GS

**LAWRENCE PUMPS INC.**  
371 Market St., Lawrence, Mass. (Tel. MURdock 2-5249)  
V. J. Mill, Jr.  
GS

**LEACH CORP.**  
Leach Inet Div.  
18435 Susana Rd., Compton, Calif. (Tel. NEvada 6-1061)  
Purch. Agent: Rudy Jantz  
Buyers: C. M. Riddell, J. Paar  
Gen. Sales Mgr.: V. Kastuck  
V. P.-Sales: J. K. Dysart  
Leach Relay Div.  
5915 Avalon Blvd., Los Angeles 3, Calif. (Tel. ADams 2-8221)  
Purch. Agent: A. E. Rose  
Buyers: Harry Sawyer, Allan Sapp  
GS, CO, TS

**LEAMING ENGRG., INC.**  
3743 Cahuenga Blvd., North Hollywood, Calif. (Tel. STanley 7-3223)  
Purch. Agent: Freda S. Kraft  
TR, R&D

**LEAR, INC.**  
3171 S. Bundy Dr., Santa Monica, Calif. (Tel. EXmont 8-6211)  
Astronics Div.: 3171 S. Bundy Dr., Santa Monica, Calif. (Tel. EXmont 8-6211)  
Head-Purch. Dept.: Robert H. Laamis  
Leair Cal. Div.: 2171 S. Bundy Dr., Santa Monica, Calif. (Tel. EXmont 8-6211)  
Head-Purch. Dept.: Ray Fisher  
Leair, Inc.: 100 Ionia, N. W., Grand Rapids 2, Mich. (Tel. GLendale 1-1555)  
Purch. Agent: Robert S. Thies  
Leair-Romec Div.: Abbe Rd., Elyria, Ohio  
GS, GE, CO

**LEAR, INC., GRAND RAPIDS DIV.**  
110 Ionia Ave., N. W., Grand Rapids, Mich. (Tel. GLendale 1-1555)  
Purch. Agent: R. S. Thies  
V. P. & Dir.-Military Mktg. Serv.: K. R. Hahn  
WN, PS, GS, GE, CO, TS, TR

**LEAR INC., LEAR-ROMEC DIV.**  
Abbe Rd., Elyria, Ohio (Tel. FAirfax 3-3211)  
Purch. Agent: W. W. Wilber  
Contracts Mgr.: J. E. McKeighan  
PS, GS, GH

**LEBANON STEEL FOUNDRY**  
1st Ave. & E. Lehman St., Lebanon, Pa. (Tel. CR 3-1611)  
Dir.-Purch.: C. R. Mease  
Sales Mgr.-Spec. Products: R. W. Patridge  
Gen. Sales Mgr.: John H. Boyd  
MM

**LEBEC CHEMICAL CORP.**  
14066 S. Garfield Blvd., Paramount, Calif. (Tel. NEvada 6-3381)  
Purch. Agent: George Wolf  
Pres.: John C. Plummer  
MM, R&D

**R. K. LEBLOND MACHINE TOOL CO.**  
Madison & Edwards Rds., Cincinnati, O. (Tel. JEFFerson 1-0910)  
Purch. Agent: Wm. McK. Reis  
V. P.-Sales: B. N. Brackman  
MF

**LECTROHM, INC.**  
5560 Northwest Hwy., Chicago 30, Ill. (Tel. RODney 3-1700)  
Head-Purch. Dept.: I. H. Adair  
Head-Sales: J. Rinaldi  
MM

**LEDEEN INC.**  
3350 N. Gilman Rd., El Monte, Calif. (Tel. CLumberland 3-3163)  
Purch. Agent: E. J. Hay  
Sales Mgr.: Harold Rosoff  
GH

**LEE CO., THE**  
Wesley Ave., Westbrook, Conn. (Tel. SAYbrook, Conn. EXport 9-6228)  
Pres.-Research & Dev.: Leighton Lee, II  
Office Mgr.: Eleanor Shields  
R&D

**LEECRAFT MFG. CO., INC.**  
60 Greene St., New York 12, N. Y. (Tel. WOrth 6-2855)  
Dir.-Purch.: N. R. Sherwin  
Dir.-Sales: R. S. Nelson  
MM

**LEEDS & NORTHRUP CO.**  
4907 Stenton Ave., Philadelphia 44, Pa. (Tel. DAVenport 9-4900)  
Mgr.-Purch. Dept.: J. E. Jennings  
Sales Mgr.-Engrg. Div.: H. L. Scutt  
CO, TS

**LEETRONICS, INC.**  
30 Main St., Brooklyn 1, N. Y. (Tel. ULster 5-7163)  
Purch. Agent: T. Dalton  
Gen. Mgr.-Sales: O. M. Lertz, Jr.  
PS, GS, GH, TS, R&D

**LEFFINGWELL CHEMICAL CO.**  
P. O. Box 1187, Perry Annex, Whittier, Calif. (Tel. EDgewood 6-5774)  
Purch. Agent: J. W. Kinsman  
MF, GS, MM

**LEGRIS CO.**  
391 Riverdale Ave., Yonkers 5, N. Y. (Tel. YONkers 9-6000)  
RS, TR, R&D

**LEIMAN BROTHERS, INC.**  
P. O. Box 1339, 146-181 Christie St., Newark 1, N. J.  
Purch. Agent: Frank Crista  
PS, GS

**LEITCH-HUARD CORP.**  
Stark & Commercial Sts., Manchester, N. H. (Tel. NAtional 3-4773)  
Pres.: A. J. Huard  
Electronics Buyer: H. E. Newell  
V. P.-Sales: D. Robert Leitch  
TS

**L E L, INC.**  
380 Oak St., Copiague, L. I., N. Y. (Tel. AM 4-2200)  
Purch. Agent: D. Dady  
Sales: C. A. Nuebling  
GE, TR

**LELAND AIRBORNE PRODUCTS, DIV.-AMERICAN MACHINE & FOUNDRY CO.**  
P. O. Box 128, 740 E. National Hwy., Vandalia, O. (Tel. TWIn Oaks 8-5881)  
Purch. Agent: Walter Stump  
Buyers: D. Bechtal & M. Baohar  
Sales Mgr.: E. C. Johns  
GS, R&D

**G. H. LELAND, INC.**  
123 Webster St., Dayton 2, O. (Tel. BAldwin 4-9891)  
Purch. Agent: Marris M. Wright  
Asst. Purch. Agent: H. E. Jacobs  
Sales Mgr.: Hans G. Belitz  
GS, GE

**LEMERT ENGRG. CO., INC.**  
1313 Western Ave., Plymouth, Ind. (Tel. WEbster 6-3430)  
Head-Purch. Dept.: E. R. Lemert  
Head-Sales: J. F. Sherrill  
WN, MM

**LENKURT ELECTRIC CO., INC.**  
1105 County Rd., San Carlos, Calif. (Tel. LYtell 1-8461)  
Military Purch. Mgr.: David Steinberg  
Military Mktg. Mgr.: Joseph R. Sherman

**LENOX INSTRUMENT CO.**  
2010 Chancellor St., Phila, Pa. (Tel. RIttchenhouse 6-6633)  
Dir.-Purch.: John W. Lang

**LENZ ELECTRIC MFG. CO.**  
1751 N. Western Ave., Chicago 47, Ill. (Tel. ARmitage 6-4454)  
Purch. Agent: Charles M. Wilkins  
Exec. V. P.: R. G. Zender  
GS, GE, TR, R&D

**\*WALLACE O. LEONARD, INC.**  
373 S. Fair Oaks Ave., Pasadena, Calif. (Tel. RYan 1-4446)  
Purch. Agent: Arthur W. Foster  
Purch. Expediter: Robert L. Todd  
Sales Admin.: Kenneth I. Stubbs  
MF, PS, GS, GH, GE, CO, TS, TR  
\*(See Page 186 for Advertisement)

**LERCO ELECTRONICS, INC.**  
501 S. Varney St., Burbank, Calif. (Tel. VICToria 9-5556)

	CODING
	Missile Frame MF
	Warhead & Nose Cone WN
	Propulsion System PS
	Ground Support GS
	Ground Handling GH
	Guidance Equipment GE
	Checkout Equipment CO
	Test Equipment TS
	Tracking & Telemetry TR
	Research & Development R&D
	Materials & Metals MM

# ... purchasing directory les—mag

- Purch. Agent:** Sylvia Garmang  
**V. P.-Sales:** Harold J. Wittmeyer  
**GS, GE, TS, TR, MM**
- LESLIE CO.**  
321 Leslie Bldg., Lyndhurst, N. J. (Tel. GENEve 8-8000)  
**Sales:** James R. Grabill **GS**
- R. G. LETDURNEAU, INC.**  
2399 S. MacArthur, Langview, Texas (Tel. PLaza 3-4411)  
**Dir.-Purch.:** Clair Weller  
**Asst. Dir.-Purch.:** John Williamson  
**Defense Proj. Section:** H. V. Anderson  
**V. P.-Sales:** R. L. LeTourneau **GH**
- LOUIS LEVIN & SON, INC.**  
3610 S. Broadway, Los Angeles 7, Calif. (Tel. ADams 3-7169)  
**Mgr.-Purch. & Sales:** Samuel Levin
- LEVINTHAL ELECTRONIC PRODUCTS, INC.**  
3180 Hanover St., Stanford Industrial Park, Palo Alto, Calif. (Tel. DAVenport 6-1640)  
**Purch. Agent:** Robert H. Shimer  
**PS, GS, GE, CO, TS, TR**
- E. B. LEWIS CO., INC.**  
11 Bragg St., E. Hartford, Conn. (Tel. JACkson 8-0830)  
**Pres.:** Ernest B. Lewis **GS, GE**
- \*LEWIS ENGRG. CO., THE**  
339 Church St., Naugatuck, Conn. (Tel. PARk 9-5253)  
**Purch. Agent:** M. N. Forde  
**Chief Field Engr.:** H. D. Alexander  
**\*(See Page 5 for Advertisement)** **GS, CO, TS, TR**
- WARNER LEWIS CO., DIV.-FRAM CORP.**  
817 N. Lewis Pl., Tulsa, Okla. (Tel. WEbster 9-6386)  
**Purch. Agent:** R. P. Leedy  
**Sales Mgr.:** T. R. Bradley **GS**
- LEWIS & SAUNDERS**  
20 Bayside St., Lakeport, N. H. (Tel. LAKeside 4-2064)  
**Gen. Mgr.-Purch.:** W. W. Saunders **PS**
- LIBERTY MIRROR DIV., LIBBEY-OWENS-FORD GLASS CO.**  
851 Third Ave., Brackenridge, Pa. (Tel. ACADEmy 4-1800)  
**Purch. Agent:** C. R. MacDonald  
**Gen. Mgr.:** J. C. Ogie, Jr. **GE, CO, TR**
- LIBRASCOPE INC.**  
808 Western Ave., Glendale, Calif. (Tel. CITrus 4-6541)  
**Purch. Agent:** M. L. Cowen  
**Purch.-Components:** A. N. Nelson  
**MF, WN, PS, GS, GE, CO, TS, TR, R&D**
- LICON SWITCH & CONTROL DIV., ILLINDIS TOOL WORKS**  
6606 W. Dakin St., Chicago 34, Ill. (Tel. AVenue 2-4040)  
**Buyer:** R. J. Solners  
**Dir.-Sales & Engrg.:** J. D. Roesser **WN, GS**
- LIECD, INC.**  
3610 Deanside Rd., Oceanside, N. Y. (Tel. RO 6-7620)  
**Purch. Agent:** J. Mackey  
**Dir.-Sales:** A. Zeitz **GE, TR**
- LIGGETT SUPPLY & EQUIPMENT CO.**  
2030 S. Main St., Elkhart, Ind. (Tel. 3-2930)  
**Dir.-Purch.:** H. K. Skinner  
**Mgr., Special Products Div.:** W. L. Lichtenberger  
**Chief Engr.:** A. S. Kratz  
**Gen. Mgr.:** F. O'Brien **GS, GH**
- LIGHT METALS, INC.**  
1100 E. 24th St., Indianapolis 5, Ind. (Tel. WALnut 6-4591)  
**Purch. Agent:** Kenneth R. Goodwin  
**V. P.-Sales:** Thomas H. Hargitt **MF, WN, PS, GH, MM, \***
- LINCOLN ELECTRIC CO., THE**  
22801 St. Clair Ave., Cleveland 17, D. (Tel. IVanhoe 1-8100)  
**Dir.-Purch.:** H. A. Burnip  
**Exec. V. P.-Sales:** J. S. Rascoe **GS, GH**
- LINDBERG ENGRG. CO.**  
2450 W. Hubbard St., Chicago 12, Ill. (Tel. MDInroe 6-3443)  
**Purch. Agent:** E. A. Griebel  
**Sales Mgr.:** C. F. Burling  
**MF, WN, PS, GS, GH, GE, CO, TS, TR, MM, R&D**
- LINDE CO., DIV.-UNIDIN CARBIDE**  
30 E. 42nd St., New York, N. Y. (Tel. MU 7-8000)  
**Mgr.-Mkt. Research & Prom.:** S. Hahn **MF, WN, PS**
- LINDGREN FOUNDRY CO.**  
717 Main St., Batavia, Ill. (Tel. 1800)  
**Purch. Agent:** John E. Lindgren  
**Asst. to Pres.:** William J. Meinhard **MM**
- LINEAR, INC.**  
State Rd. & Leveck St., Philadelphia 35, Pa. (Tel. MA 4-4700)  
**Purch. Agent:** F. Murphy, Dallas, Pa. (Tel. ORchard 4-1541)  
**V. P.-Sales:** F. A. Lewis
- LING ELECTRONICS, INC.**  
9927 W. Jefferson Blvd., Culver City, Calif. (Tel. TEXas 0-7711)  
**Purch. Agent:** Frank Burke  
**Dir.-Sales:** Charles Theodore **GS, CO, TS**
- LINK AVIATION, INC.**  
Hillcrest, Binghamton, N. Y. (Tel. 3-6311)  
**Purch. Agent:** M. B. Bird  
**Buyers:** N. Toitch, F. J. Sabrow & J. F. Clark  
**V. P.-Sales:** L. L. Kelly
- LINK-BELT CO.**  
Prudential Plaza, Chicago 1, Ill. (Tel. RANDolph 6-7790)  
**V. P.-Sales:** David E. Davidson  
**Purch. Agent:** Dan E. Cobb  
Los Angeles 22, Calif. (Mail Address, Box 22056, 1200 Sycamore St., Mantebello, Calif.)  
**Purch. Agent:** George Samps  
400 Paul Ave., San Francisco 24, Calif.  
**Purch. Agent:** James T. McDonald  
Box 10514, Sta. A., 1116 Murphy Ave., S. W., Atlanta 10, Ga.  
**Purch. Agent:** Andrew K. Kalar  
(Pershing Rd. Pl.) 300 W. Pershing Rd., Chicago 9, Ill.  
**Purch. Agent:** Albert W. Weldon  
(Caldwell Pl.) 2410 W. 18th St., Chicago 8, Ill.  
**Purch. Agent:** Richard J. Joyce  
220 S. Belmont Ave., Indianapolis, Ind.  
**Purch. Agent:** Marvin H. Cramer  
200 Lyndale Ave., N., Minneapolis 5, Minn.  
**Purch. Agent:** Albert W. Baegner, Colmar, Pa.  
**Purch. Agent:** F. Walter Skerrett  
2045 W. Hunting Park Ave., Philadelphia 40, Pa.  
**Purch. Agent:** William A. Cameron  
Box 2563, 3203 South Wayside, Houston 1, Texas  
**Purch. Agent:** Charles Percich  
3405 Sixth Ave., S., Seattle 4, Wash. **GS, GH**
- LION FASTENER CO., INC.**  
Lester, Pa. (Tel. LEhigh 4-9600)  
**Plant Supt.-Purch.:** Harold Dilerenshaw  
**Sales:** T. R. Dunlevy **MF**
- EDWIN A. LIPPS ENGRG.**  
1511 Colorado Ave., Santa Monica, Calif. (Tel. EX 3-0449)  
**Purch. Agent:** Ray E. Honey  
**Prod. Suprvsr.:** T. F. Adams  
**Gen. Mgr.:** B. D. Lipps **TR**
- LIQUIDOMETER CDRP., THE**  
41-03 36th St., Long Island City 1, N. Y. (Tel. STIllwell 4-1440)  
**Purch. Agent:** Richard H. Hagan  
**V. P.-Sales:** Harry T. Cullinan **GS, TS, R&D**
- G. W. LISK CO., INC.**  
Clifton Springs, N. Y. (Tel. HOWard 2-2611)  
**Dir.-Sales:** I. A. Morris **PS, GS, GH, GE**
- LISLE CDRP.**  
807 Main St., Clarinda, Iowa (Tel. LIBerty 2-2156)  
**Treas.:** Earl Thompson  
**Asst. Purch. Agent:** Harry Rubin  
**V. P.-Sales:** Edwin Lisle
- LISS PRODUCTS, INC.**  
1050 Second St., Manchester, N. H. (Tel. NA 3-5711)  
**V. P.-Purch.:** Mark Strickland  
**Pres.:** John C. Stanhope **WN, MM, R&D**
- LITHIUM CDRP. OF AMERICA, INC.**  
1100 Title Ins. Bldg., Minneapolis 1, Minn. (Tel. FEderal 2-7541)  
**Dir.-Purch. & Traffic:** J. W. Douglas  
**Mgr. Sales Dept.:** J. D. Campbell **MM, R&D**
- LITTLEFUSE, INC.**  
1865 Miner St., Des Plaines, Ill. (Tel. VANDerbilt 4-1188)  
**Purch. Agent:** Oave Shean  
**Dist. Sales Mgr.:** Walter A. Clements
- LITTON ENGRG. LABS.**  
P. O. Box 949, Grass Valley, Calif. (Tel. GRass Valley 1730)  
**Purch. Agent:** Mrs. Grace Martz  
**Gen. Mgr.:** F. L. Towne
- LITTON INDUSTRIES, INC.**  
336 N. Foothill Rd., Beverly Hills, Calif. (Tel. CRestview 4-7411)  
**Public Relations:** Claude Mecanis **GE, TR, R&D**
- LITTON INDUSTRIES, COMPONENTS DIV.**  
5873 Rodeo Rd., Los Angeles 16, Calif. (Tel. VErmont 7-1228)  
**Purch. Agent:** Jack Brophy  
**Dir.-Sales:** R. W. Griffiths
- LITTON INDUSTRIES, MARYLAND DIV.**  
4900 Calvert Rd., College Park, Md. (Tel. UNion 4-5678)  
**Dir.-Purch.:** Earl Ahern  
**Dir.-Sales:** George Tinker **GE, CD, TS, TR**
- LITTON INDUSTRIES, U. S. ENGRG. CO. DIV.**  
5073 Rodeo Rd., Los Angeles, Calif. (Tel. VE 7-1228)  
**Purch. Agent:** Richard J. Lee  
**Sales:** Paul J. Robichand **MM**
- LIVERMONT, INC.**  
Myrtle & Maple Aves., Manrovia, Calif. (Tel. ELIott 9-2555)  
**Purch. Agent:** J. F. Hubbard  
**Sales Mgr.:** M. McLean
- LIVINGSTON ELECTRONIC CORP.**  
27 Runnymede Rd., Essex Fells, N. J. (Tel. CApital 6-3333)  
**Prod.:** Charles L. Nalte  
**Engrg.:** C. E. Smiley **GE, R&D**
- LOCKHEED AIRCRAFT CORP., MISSILES & SPACE DIV.**  
1122 Jagels Rd., P. O. Box 504, Sunnyvale, Calif. (Tel. REdwood 9-9611)  
**Gen. Purch. Agent:** L. G. Sinning  
**Dir.-Military Sales:** G. H. Putt  
**MF, WN, PS, GS, GH, GE, CO, TS, TR, MM, R&D**
- LOCKREY CO., THE**  
P. O. Box J, Southampton, N. Y. (Tel. SOUThampton 1-0278)  
**Purch. Agent:** J. Davis  
**Sales Mgr.:** O. I. McMeekan **MM**
- LODGE & SHIPLEY CO., THE**  
3055 Colerain Ave., Cincinnati 25, Ohio (Tel. KIRby 1-4774)  
**Purch. Agent:** John Bates  
**Gen. Sales Mgr.:** Donald D. Edwards  
**Sales Prom. Mgr.:** Arthur V. Baumann
- LOEWY-HYDROSPONG, DIV.-BALDWIN-LIMA-HAMILTON CORP.**  
111 Fifth Ave., New York 3, N. Y. (Tel. DREGan 7-5030)  
**Purch. Mgr.:** John Swanberg  
**Sales:** Frederick F. Fielder & Paul Mayer **MF, PS, GS, GH, T**
- LOFSTRAND CO., THE**  
Southlawn Lane, Rockville, Md. (Tel. HAZlewood 7-7280)  
**Purch. Agent:** G. M. Chadwick  
**V. P.-Sales:** Henry Clark **GS, G**
- J. M. LOGE, SOUND ENGINEERS**  
2171 W. Washington Blvd., Los Angeles 18, Calif. (Tel. REPUBLIC 4-9176)  
**Purch. Agent:** Marie Adkins  
**Dir.-Sales:** J. M. Loge
- LOGETRONICS INC.**  
500 E. Monroe Ave., Alexandria, Va. (Tel. TE 6-5180)  
**Purch. Agent:** Arthur Hall, Jr.  
**Dir.-Sales:** Gordon O. F. Johnson **G**
- LDNDD CHEMICAL CO., INC.**  
1535 N. 31st Ave., Melrose Park, Ill. (Tel. AUstin 7-9495)  
**Purch. Agent:** R. I. Schub  
**Sales Mgr.:** K. W. Anderson **MF, PS, GS, G**
- LONE STAR PLASTICS CO. INC.**  
124 Roberts Cut Off Rd., P. O. Box 9817, Fort Worth, Texas (Tel. PE 2-1437)  
**Purch. Agent:** Mrs. Catherine Hare  
**Sales Mgr.:** W. P. Frolia **M**
- THOMAS J. LDNG, INC.**  
215 Stonehenge Lane, Carle Place, L. I., N. Y. (Tel. EDgewood 4-2300)  
**Asst. to V. P.:** John J. Skelly  
**Sales Mgr.:** Norman A. Terry **MM**
- LDNGREN AIRCRAFT CD., INC.**  
24751 Crenshaw Blvd., Torrance, Calif. (Tel. NEvada 6-0241)  
**Mgr.-Customer Relations:** D. N. Ninteman  
**Purch. Agent:** James M. Crawford **MF, GS, GH, R&D**
- LRDR MFG. CO.**  
1635 W. 12th St., Erie, Pa. (Tel. 62-911)  
**Adv. Mgr.:** J. P. Caoney
- LOUTHAN MFG. CO., THE, DIV.-FERR CORP.**  
2000 Harvey Ave., East Liverpool, Ohio (Tel. ULian 5-1538)  
**Supt.-Purch.:** Leonard Kupchinsky  
**Works Mgr.:** Fred A. Loyne **PS, R**

**DVEJOY FLEXIBLE COUPLING CO.**  
4949 W. Lake St., Chicago 44, Ill. (Tel. ES 9-3010)  
V. P.-Purch.: C. P. Hennessy  
Purch. Agent: Fred Spaulding  
V. P.-Sales: W. B. Briggs  
GS, GH

**DVEJOY TODL CO., INC.**  
Springfield, Vt. (Tel. Turner 5-2195)  
Sales: C. Jenness Cameron

**UCAS AIRCRAFT SUPPLY CO.**  
17311 S. Main St., Gardena, Calif. (Tel. Faculty 1-0080)  
Gen. Mgr.: Frank E. Briney  
Purch. Agent: M. A. Abata  
MF, WN, PS, GS, GH, GE, CO, TS, TR, MM, R&D

**JKENS STEEL CO.**  
1st Ave., Coatesville, Pa. (Tel. 2000)  
Purch. Agent: Albert Gudal  
Dir.-Purch.: Edmund Pfeifer  
Supvr.-Stores & Material: Thomas A. O'Hara  
Buyers: Wilmer Montgomery, John M. Davis & Donald Davis  
MM

**JMATRON ELECTRONICS, INC.**  
68 Urban Ave., Westbury, L. I., N. Y. (Tel. Edgewood 4-3100)  
Purch. Agent: Frank Ruggiere  
Sales: Gerard G. Leeds  
TS, R&D

**JMINDUS RESINS INC.**  
166 W. Washington St., Chicago, Ill. (Tel. DE 2-4667)  
Pres.: W. A. McCallum  
CO, R&D

**JNDEY ASSOCIATES INC.**  
594 Main St., Waltham 54, Mass. (Tel. TWinbrook 3-6064)  
Purch. Agent: E. J. W. Grenda  
PS, GE, TR

**INDY MFG. CORP.**  
Blen Head, L. I., N. Y. (Tel. Oriole 6-1440)  
Purch. Agent: Joseph A. Barbato  
Buyers: Durell Piersall & Thomas Rogers  
Pres.: R. C. Barbato  
GS, GH, R&D

**NN LAMINATES, INC.**  
Oakwood Rd. & W. 11th St., Huntington Station, N. Y. (Tel. HAmilton 3-7200)  
Purch. Agent: Edward W. Kirchner  
Pres.: James S. Lunn  
MF, PS, GS, GH, GE, TS, TR

**IRIA ENGRG. CO.**  
1010 Vermont Ave., N. W., Washington 5, D. C.  
Purch. Dept.: P. O. Box 800, Main Office, Bethlehem, Pa. (Tel. UNiversity 7-4651)  
Dir.-Purch.: Earl Woolley  
V. P.-Sales: Charles H. Ketcham, Jr.  
GS

**IRIA ENGRG. CO.**  
745 Eaton Ave., Bethlehem, Pa. (Tel. UNiversity 7-4651)  
Purch. Agent: C. E. Topping  
Asst. to Purch. Agent: R. R. Bergenstock  
Buyers: C. A. Moyer & D. S. Luria  
V. P.-Sales: E. G. Ball  
MF, WN, PS, GS, GH, TS

**LTHER MFG. CO.**  
312 Varo Ave., North Hollywood, Calif. (Tel. POplar 5-4265)  
Purch. Agent: Russell H. Reid  
Chief Engr.: Neil Curry

**LK CLOCK MFG. CO., INC.**  
5 Johnson St., Waterbury, Conn. (Tel. PL 6-3661)  
Purch. Agent: Arthur Kunkel, Jr.  
Asst. Purch. Agent: Carl Hungerford  
Dist. Sales Mgr.: Eugene T. Crandall

**LZERNE RUBBER CO.**  
Vinehead Ave., Trenton, N. J. (Tel. EXport 2-4131)  
Purch. Agent: William Gummere, Jr.  
Asst. Mgr.: M. J. Kearney, Jr.  
MM

**COMING DIV., AVCO MFG. CORP.**  
10 S. Main St., Stratford, Conn. (Tel. DRexel 8-8211)  
In.-Materials: Frank Larkins  
Tech. Mgr.: George Rapuano  
V. P.-Sales: H. Webster Crum  
(See 3rd Cover for Advertisement)

**RL LYNCH MFG. CO.**  
31 E. Arroyo Dr., South San Gabriel, Calif. (Tel. AT 0-3810)  
Asst.: R. H. Lynch  
Sales: J. W. Lynch

**LICH CARRIER SYSTEMS INC.**  
15 Bryant St., San Francisco 7, Calif. (Tel. EXBook 7-1471)  
Purch. Agent: J. E. Gilchrist  
Sales Mgr.: E. B. Stone

**LICCACH & TRUCK CO. INC.**  
3 Chestnut, Oneonta, N. Y. (Tel. 1257)  
Purch. Agent: Royce Strait  
Sales: James Friery  
Sales Mgr.: Charles MacLean  
GS, GH

**LYNDON AIRCRAFT, INC.**  
140 Clifford St., Newark 5, N. J. (Tel. MI 2-4090)  
Purch. Agent: Wm. O'Neill  
Pres.: Arthur MacArthur  
MF, WN, PS, GS, GH, GE, TS, TR

**LYON VAN & STORAGE CO., AIRCRAFT DIV.**  
2701 N. Ontario St., Burbank, Calif. (Tel. Victoria 9-3317)  
Prod. Mgr.: William F. McCann  
Gen. Mgr.: Ralph C. Butler

**LYTLE ENGRG. & MFG. CO.**  
1404 San Mateo, S. E., Albuquerque, N. Mex. (Tel. ALpine 5-1671)  
Purch. Agent: Perry Weaver  
Div. Mgr.-Sales: L. V. Juhlin  
MF, WN, PS, GS, GH, GE, CO, TS, TR

**MB MFG. CO.**  
781 Whalley Ave., New Haven 8, Conn. (Tel. Fullton 9-1511)  
Mgr.-Purch.: Carl Verderame  
Aircraft Sales Mgr.: T. MacDonald  
Sales Mgr.-Vibration Test Equip.: A. C. Deichmiller  
MF, PS, CO, TS, TR

**M. C. MFG. CO.**  
P. O. Box 126, 118 Indianwood Rd., Lake Orion, Mich. (Tel. MYrtle 2-2711)  
Buyer: R. Rhodes  
Sales: H. P. Ott  
WN, PS, GE

**MF ELECTRONICS CO.**  
122 E. 25th St., New York 10, N. Y. (Tel. GRamercy 3-5899)  
Chief Engr.: Martin J. Finkelstein  
GH, GE, CO, TS, TR

**MPM, INC.**  
9110 George Ave., Cleveland 5, O. (Tel. Broadway 1-4456)  
V. P.-Purch.: A. B. Cook  
Purch. Agent: F. K. Lawton  
Sales Engr.: J. M. Van Walschaer

**M & Q PLASTIC PRDDUCTS**  
Bannard St., Freehold, N. J. (Tel. FReehold 8-6664)  
V. P.-Purch.: William Menges  
Pres.: Frank Dunn  
MM

**MSA RESEARCH CORP.**  
Galery, Pa. (Tel. EVans City 3510)  
Buyer: E. L. Oviatt  
Dir.-Mkts.: C. H. Staub  
MM, R&D

**M-W LABS., INC.**  
1824 N. Milwaukee Ave., Chicago, Ill. (Tel. Dickens 2-4020)  
Plant Supt.: Narbert Sajdera  
Sales Mgr.: George W. Halstan  
MF, WN

**MAAS & WALDSTEIN CO.**  
2121 McCarter Hwy., Newark 4, N. J. (Tel. HUmbolt 4-1600)  
Sales Mgr.: Don Volino  
MM

**MACCARR, INC.**  
2543-45 Boston Rd., New York 67, N. Y. (Tel. OL 3-3306)  
Purch. Agent: Phil Bruno  
GS

**MACHINE PRODUCTS DIV., NEW HAVEN TRAP ROCK CO.**  
Route 80, N. Branford, Conn. (Tel. HUbbard 8-1692)  
Purch. Agent: S. J. Barcansky  
Div. Sales Mgr.: D. A. Briggs  
MF, PS, GH

**MACHINERY SALES & ENGRG. CO.**  
422 Empire Bldg., Pittsburgh 22, Pa. (Tel. ATlantic 1-5586)  
Engr.: Carl Anders

**MACK TRUCKS, INC., GOV'T DIV.**  
1825 Conn. Ave., N. W., Washington 9, D. C. (Tel. HUDson 3-6200)  
Mgr.-Gov't Div.: Richard H. McMahon

**MACKAY RESEARCH LABS.**  
P. O. Box 738, Benson, Ariz.  
Dir.-Purch.: Diane MacKay  
Dir.-Sales: Sanders MacKay  
R&D

**MACLEOD & HANOPOL, INC.**  
10 Roland St., Charlestown 29, Mass. (Tel. DR 6-2171)  
Pres.: A. D. MacLeod  
TS

**MACWHYTE WIRE ROPE CO.**  
2906 14th Ave., Kenosha, Wisc. (Tel. OLYmpic 4-5381)  
Purch. Agent: John Goodwin  
V. P.-Sales: F. D. Holden  
MM

**MAGEE-BRALLA & ASSOCIATES**  
3361 National Ave., San Diego 13, Calif. (Tel. BE 3-7769)  
Partners: Robert C. Bralla & J. Rodgers Magee  
GS, R&D

**MAGLINE INC.**  
1802 Mercer St., Pinconning, Mich. (Tel. TRiangle 9-2411)  
Purch. Agent: R. A. Austin  
Sales Mgr.: F. A. Reger  
MF, WN, PS, GS, MM

**MAGNAFLUX CORP.**  
7300 W. Lawrence Ave., Chicago 31, Ill. (Tel. Underhill 7-8000)  
Purch. Agent: C. D. Ceske  
Asst. Purch. Agent: L. Ondacek  
V. P.-Sales & Mkts.: R. O. Schiebel  
TS

**MAGNASYNC MFG. CO., LTD.**  
5546 Satsuma Ave., N. Hollywood, Calif. (Tel. Stanley 7-5493)  
Electronics Purch.: George Duerr  
Mechanical Purch.: Louis Schirm  
Sales Mgr.: Howard V. Auchtstetter  
MF, PS, GS, GH, GE, CO, TS, TR

**MAGNAVOX CO., THE**  
712 Bueter Rd., Ft. Wayne, Ind. (Tel. E3967)  
Dir.-Purch.: Warren Friebe (Tel. E9721)  
Mgr.-Gov't Div.-Sales: David W. Martin  
GE, CO, TS, R&D

**MAGNECRAFT ELECTRIC CO.**  
3352 W. Grand Ave., Chicago 51, Ill. (Tel. EVerglade 4-6868)  
Buyer: R. D. Split  
Sales: H. D. Steinback  
GE, TR

**MAGNETIC CONTROLS CO.**  
6405 Cambridge St., Minneapolis 26, Minn. (Tel. WE 9-4691)  
Purch. Agent: T. D. O'Fallon  
Buyer: LaVerne Rogers  
Sales Mgr.: G. R. Stoltenberg  
GS, GE

**MAGNETIC CDRE CORP.**  
John & Lawrence Sts., Newburgh, N. Y. (Tel. NEwburgh 5116)  
Purch. Agent: R. G. Burdick  
Sales: Robert Webb  
GE, MM

**MAGNETIC DEVICES, INC.**  
712 East St., Frederick, Md. (Tel. MO 2-2144)  
Purch. & Sales Dept.: F. J. Cook  
GS, GH

**MAGNETIC INSTRUMENT CO., INC.**  
546 Commerce St., Thornwood, N. Y. (Tel. ROgers 9-5312)  
Purch. Agent: Richard D. Levine  
Sales Mgr.: Robert J. Levine  
GH, TS, R&D

**MAGNETIC RESEARCH CORP.**  
3160 W. El Segundo Blvd., Hawthorne, Calif. (Tel. OSborne 5-1171)  
Purch. Agent: James Wirosko  
Sales Mgr.: William E. Brown  
GS, TR, R&D

**MAGNETIC SEAL CORP.**  
301 Sowams Rd., Barrington, R. I. (Tel. CHerry 5-4800)  
Purch. Agent: Everett E. Comey  
(Tel. CHerry 5-4801)  
Pres.-Sales: George E. Colby  
MF, PS, GS

**MAGNETIC SHIELD DIV.-PERFECTION MICA CO.**  
1322 N. Elston Ave., Chicago 22, Ill. (Tel. EVerglade 4-2122)  
Purch. Agent: Henry Hucksold  
MF, WN, PS, GS, GE, CO, TS, TR

**MAGNETICO, INC.**  
6 Richter Ct., E. Northport, L. I., N. Y. (Tel. ANDrew 1-4502)  
V. P.: Mark A. Barry  
Mgr.-Amplifier Div.: E. Daparma  
GE, TS, TR

**MAGNETICS, INC.**  
Butler, Pa. (Tel. 7-3787)  
Purch. Agent: W. J. Allen (Tel. 7-1745)  
Dir.-Mkts.: R. W. Olmsted  
Sales Prom. Mgr.: James W. Graham  
TR, MM

**MAGNETICS, INC., CONTROL DIV.**  
Butler, Pa. (Tel. 7-3787)  
Purch. Agent: W. J. Allen (Tel. 7-1745)  
Dir.-Sales Mktg.: R. W. Olmsted  
TR, MM

**MAGNETROL, INC.**  
2110 S. Marshall Blvd., Chicago 23, Ill. (Tel. Blshop 7-4000)

**CODING**

Missile Frame	MF
Warhead & Nose Cone	WN
Propulsion System	PS
Ground Support	GS
Ground Handling	GH
Guidance Equipment	GE
Checkout Equipment	CO
Test Equipment	TS
Tracking & Telemetering	TR
Research & Development	R&D
Materials & Metals	MM

# ... purchasing directory mag—mey

- Purch. Agent: C. F. Sopinski  
Sales Mgr.: Lester E. Stybr PS, GE
- MAGTROL, INC.**  
240 Seneca St., Buffalo 4, N. Y. (Tel. MDhawk 7451)  
Purch. Agent: James Loughlin  
Sales Mgr.: John E. Traise GE, CO, TS
- MAICO ELECTRONICS, INC.**  
21 N. 3rd St., Minneapolis 1, Minn. (Tel. Federal 9-7041)  
V. P.-Purch. & Industrial Sales: J. T. Uine  
Purch. Agent: John M. Wheeler  
Asst. Purch. Agent: William E. Cunningham GS, TR, R&O
- MAIDA DEVELOPMENT CO.**  
214 Academy St., Hampton, Va. (Tel. PARk 3-0785)  
Purch. Agent: R. J. Clapton  
Pres.: F. X. Maida
- MALCO MANUFACTURING CO.**  
4025 W. Lake St., Chicago 24, Ill. (Tel. Van Buren 6-9300)  
Purch. Agent: Walter J. Kulins  
Sales Mgr.: Anthony Doidone MM, R&O
- P. R. MALLORY & CO. INC.**  
3037 E. Washington St., Indianapolis 6, Ind. (Tel. MELrose 6-3353)  
Dir.-Purch.: George C. Mercer  
Capacitor Dept. Purch. Agent: C. A. Rieman  
Purch. Mgr.-Metallurgical Div.: W. J. Topmiller  
V. P.-Marketing: H. C. Buell MF, WN, PS, GS, GH, GE, CO, TS, TR
- \*MALLORY-SHARON METALS CORP.**  
980 Warren Ave., Niles, D. (Tel. DL 2-9951)  
V. P.: G. B. Brown  
Dir.-Purch. & Traffic: B. E. Marquis MF, MM  
(See Page 8 for Advertisement)
- MANGER ELECTRIC CO.**  
Miller St., Stamford, Conn. (Tel. FLireside 8-7761)  
Purch. Agent: Richard Keeler  
Sales Mgr.: B. L. Manger MF, PS, GS, TR
- MANSFELD FABRICATORS, INC.**  
541 Grant Ave., Mansfield, Ohio  
V. P.-Sales: S. F. Bird
- MANSON LABORATORIES, INC.**  
375 Fairfield Ave., Stamford, Conn. (Tel. OAVis 5-1391)  
M. Leray CO, TS, TR, R&O
- MARATHON BATTERY CO.**  
840 Henrietta St., Wausau, Wisc. (Tel. 2-1071)  
Purch. Agent: C. W. Piehl  
Asst. Sales Mgr.: A. H. McEachron  
Secy.-Treas.: E. D. McEachron TR
- MARBLETT CORP., THE**  
37-31 30th St., Long Island City 1, N. Y. (Tel. STillwell 4-8100)  
Research Oir.: Mox Hilrich MF
- MARBON CHEMICAL DIV.-BORG-WARNER CORP.**  
P. D. Box 68, Washington, W. Va. (Tel. GARfield 2-5401)  
Oir.-Purch.: Rhoda M. Stewart  
V. P. & Sales Mgr.: O. M. Pratt  
Sales Mgr.: W. A. Sultzer MF
- MARCO INDUSTRIES CO.**  
207 S. Helena St., Anaheim, Calif. (Tel. KEystone 5-6037)  
Purch. Agent & Prod. Supt.: F. C. Loehning  
Sales Mgr.: W. W. Bowles MF, PS, GS, GH, GE, TS, TR
- MARCONI INSTRUMENTS**  
111 Cedar Lane, Englewood, N. J. (Tel. LQwell 7-0607)  
Mgr.-Purch.: R. J. Bailey  
Sales Mgr.: W. A. Buck TR
- MARGINATOR CO.**  
1121 W. Magnolia Blvd., Burbank, Calif. (Tel. VICToria 9-2877)  
Pres.: Stanley Runyan  
V. P.-Sales: Harold R. Foy TS
- MARION INSTRUMENT DIV.-MINNEAPOLIS-HONEYWELL REGULATOR CO.**  
Manchester, N. H. (Tel. NAtional 5-6971)  
Purch. Agent: C. Heath  
Buyer: R. Mahoney  
V. P.-Sales: E. S. Maury GS, GE, CO, TS, TR
- MARK PRODUCTS CO.**  
6412 W. Lincoln Ave., Morton Grove, Ill. (Tel. ORchard 5-4999)  
E. F. Harris GS, TR
- MARKEM MACHINE CO.**  
150 Congress St., Keene, N. H. (Tel. ELmwood 2-1130)
- Purch. Agent: C. E. Titcomb  
Gen. Sales Mgr.: Robert Mensel
- MARKITE CORP.**  
155 Waverly Pl., New York 14, N. Y. (Tel. DRegion 5-1384)  
Purch. Agent: Jules Livingston  
V. P.-Sales: Herbert A. Gottschall GS, GE, CO, TS, TR, R&O
- MARLIN-ROCKWELL CORP.**  
402 Chandler St., Jamestown, N. Y. (Tel. 61-541)  
Oir.-Purch.: C. A. Berg  
Purch. Agent: G. J. Poquin  
Asst. Purch. Agent: J. C. Slagle  
V. P. & Gen. Sales Mgr.: B. J. Shallow PS, GE, R&O
- MARLO COIL CO.**  
7100 S. Grand Ave., St. Louis 11, Mo. (Tel. VE 2-5000)  
Purch. Agent: K. Guillemin  
V. P.-Sales: L. C. Pellegrini
- MARMAN DIV., AEROSQUIP CORP.**  
11214 Exposition Blvd., Los Angeles 64, Calif. (Tel. BRadsho 2-8511)  
Purch. Agent: W. E. Flaherty  
Aircraft Sales Mgr.: Ted J. Josolle MF, GS, GH, MM, R&D
- MAROTTA VALVE CORP.**  
Boonton Ave., Boonton, N. J. (Tel. OEerfield 4-2791)  
Purch. Agent: Harold Richards  
Sales Mgr.: Oel Dison GE, TS
- MARQUARDT AIRCRAFT CO.**  
16555 Saticoy St., Van Nuys, Calif. (SState 1-2121)  
Mgr.-Material: R. G. Francis  
Mgr.-Material: P. C. Taylor (Dgden Div., Dgden, Utah, Tel. EXport 4-5111)  
Purch. Agent: Wayne Jordan (Pomona Div., Pomona, Calif., Tel. LYcoming 3-1311) PS, GS, CO, TS, R&O
- JAS. P. MARSH CORP.**  
3501 Howard St., Skokie, Ill. (Tel. DRchard 3-4300)  
Purch. Agent: P. Keppeler  
Asst. Purch. Agent: M. Kinnison  
V. P.-Sales: R. E. Barnett GS, GH, TS
- MARTIN CO., THE**  
Middle River Plant, Baltimore 3, Md. (Tel. MURdock 7-3800)  
Oir.-Procurement: H. B. Gunther  
Oir.-Sales: C. H. Welling  
V. P.-Sales & Service: Jess W. Sweetser MF, WN, PS, GS, GH, GE, CO, TS, TR, R&D
- MARTIN CO., THE, OENVER DIV.**  
P. O. Box 179, Denver 1, Colo. (Tel. PYramid 4-5211)  
Dir.-Proc. Div.: C. E. Bloomer  
Oir.-Sales Div.: G. J. Rauschenboch MF, GS, GH, CO, TS, R&O
- MARTIN CO., THE, ORLANOO DIV.**  
P. D. Box 5837, Orlando, Fla. (Tel. CHerry 1-2411)  
Oir.-Procurement: Edward R. McDonald  
Oir.-Sales & Weapon System Support: C. D. Wingate MF, WN, PS, GS, GH, GE, CO, TS, TR, MM, R&O
- MARVEL ENGRG. CO.**  
7227 N. Hamlin Ave., Chicago 45, Ill. (Tel. JUNiper 8-6023)  
Head-Sales: R. T. Sochor PS, GS
- MARYLANO ETCHING CO., INC.**  
Eudowood Lane, P. O. Box 6737, Towson 4, Md. (Tel. VALley 5-0700)  
V. P. & Secy.: C. A. Anderson  
Sales Mgr.: H. J. McCaughin
- MARYLANO LAVA CO.**  
Box 127-MOG, Bel Air, Md. (Tel. BEL Air 1441)  
Head-Purch.: J. B. Dinning MF, WN, PS, GE, TR
- MASON-NEILAN**  
Nahatan St., Norwood, Mass. (Tel. NORwood 7-4600)  
Purch. Agent: F. J. Kenney  
Asst. Purch. Agent: L. Rocheleau  
Sales Mgr.: A. B. Powell  
V. P.-Sales: C. W. Gram (Tel. ELdorado 5-1525)  
New York City GS
- MASSA DIV.-COHU ELECTRONICS, INC.**  
5 Fother Rd., Hingham, Mass. (Tel. RIVerview 9-4800)  
Purch. Agent: Robert R. Thomas  
V. P. & Gen. Mgr.: Ernest A. Mossa  
Buyer: Herbert Phillips WN, GS, GH, GE, CO, TS, TR, R&O
- MASSACHUSETTS GEAR & TOOL CO., DIV.-GEARTRONICS CORP.**  
918 Main St., W. Concord, Mass. (Tel. TWinoaks 7-2971)
- Purch. Agent: G. Reid  
Sales Mgr.: F. H. Keen
- MAST DEVELOPMENT CO., INC.**  
2212 E. 12th St., Davenport 26, Iowa (Tel. 3-9729)  
Pres.: Gifford M. Mast  
Purch. Agent: Vernon W. Fier  
Asst. Gen. Mgr.-Sales: Leo E. Hubner GS, GH, CO, TS, TR, R&D
- MASTER PRODUCTS CORP., THE**  
1100 Norwood St., P. O. Box 9757, Ft. Worth 7, Tex. (Tel. EDison 2-7101)  
Sales Mgr.: Jess Fotherree MF, WN, PS, GS, GH, GE, R&D
- MASTER SPECIALTIES CO.**  
956 E. 108th St., Los Angeles 59, Calif. (Tel. LORain 4-4481)  
Purch. Agent: William Smith  
Head-Sales: T. W. Hallenberg GS, CO, TS
- MASTER TAPE PRINTERS**  
3400 N. Holsted St., Chicago 13, Ill. (Tel. EAstgate 7-3322)  
Gen. Mgr.: Louis J. Dorfmeister  
Head-Sales: Ruth G. Dorfmeister MF, PS, TS, TR, MM
- MATHESON CO., INC., THE**  
932 Paterson Plank Rd., E. Rutherford, N. J. (Tel. WEBster 3-2400)  
Purch. Agent: A. Gerold  
Oir.-Engrg.: A. Mossman  
V. P.-Sales: H. R. Pearce PS, MM, R&D
- JAS. H. MATTHEWS & CO.**  
3764 Forbes Ave., Pittsburgh 13, Pa. (Tel. MUSEum 1-8500)  
Purch. Agent: G. Grcy, 3942 Forbes Ave., Pittsburgh 13, Pa.  
V. P.-Sales: T. J. Miers MM
- W. L. MAXSON CORP., THE**  
475 10th Ave., New York 18, N. Y. (Tel. LDngacre 5-1900)  
Purch. Mgr.: C. E. Panzica  
Sales Mgr.: W. P. McNally MF, WN, PS, GS, GH, GE, CO, TS, TR, R&D
- \*MCCORMICK SELPH ASSOCIATES, INC.**  
Hollister Airport, Hollister, Calif. (Tel. MERYcury 7-3731)  
Purch. Agent: Jim McConnell  
Oir.-Applications Engrg.: Hubert J. Bennett MF, WN, PS, GS, R&D  
(See 4th Cover for Advertisement)
- McCOY ELECTRONICS CO.**  
Mount Holly Springs, Pa. (Tel. HUNter 6-3411)  
Purch. Agent: Erwin C. Hess  
Sales Mgr.: David B. Jacoby GS, GE, TS, TR
- McCULLOCH MOTORS CORP.**  
6101 W. Century, Los Angeles 45, Calif.
- JULIAN A. McERMOTT CORP.**  
1639 Stephen St., Ridgewood, L. I. 27, N. Y. (Tel. GL 6-3606)  
Purch. Agent: R. Wilke  
Head-Sales: R. Stevens GH
- McDONNELL AIRCRAFT CORP.**  
Lambert - St. Louis Airport, Box 516, St. Louis 66, Mo. (Tel. FLerhing 1-2121)  
V. P.-Procurement & Quality Control: Lloyd Harrison  
Mgr.-Purch.: W. J. Gamewell  
Mgr.-Subcontracts: W. P. Becker  
V. P.-Customer Service: J. F. Aldridge
- McDOWELL-WELLMAN COMPANIES, THE**  
113 St. Clair Ave., N. E., Cleveland 14, D. (Tel. MAln 1-9934)  
Oir.-Purch.: S. R. McKinnon  
Asst. to Pres.: J. R. Perkins GH
- McGILL MFG. CO., INC., BEARING DIV.**  
600 N. Lafayette St., Valparaiso, Ind. (Tel. 2-6401)  
Sales Mgr.: M. L. Brody
- McKENNA LABS.**  
2503 Main St., Santa Monica, Calif. (Tel. EXbrook 9-8846)  
Pres.: A. G. McKenna  
Sales Engr.: Wolt McHenry GS, GE, TS, TR
- McLEAN DEVELOPMENT LABS., INC.**  
P. D. Box 206, Strong Ave., Copiague, L. I., N. Y. (Tel. LIndenhour 5-4300)  
Mfg. Mgr.: Joseph A. Borile  
Pres.: H. P. Dolan TS, R&D
- McLEAN ENGRG. LABORATORIES**  
P. D. Box 228, 70 Washington Rd., Princeton, N. J. (Tel. WALnut 4-4440)  
Purch.: A. Oonold Hay  
Sales: W. B. Eckenhoff PS, TR
- McMILLAN INDUSTRIAL CORP.**  
Brownville Ave., Ipswich, Mass. (Tel. ELmwood 6-2926)  
Purch. Agent: Brian Abbott  
V. P.-Sales: Arthur M. Brink GE, TS, MM

**McPHERSON CORP.**  
1361 S. Broadway St., Denver, Colo. (Tel. PE 3-2481)  
V. P.-Purch.: E. Byron McPherson  
Sales Mgr.: W. H. Fronz, Jr. **MM**

**MEASUREMENTS DIV., McGRAW EDISON CO.**  
Boonton, N. J. (Tel. Deerfield 4-2131)  
Purch. Agent: H. P. Irving  
Div. Sales Mgr.: Carl M. Milner **TS**

**MECHANICAL AIR CONTROLS, INC.**  
10030 Capital Ave., (Oak Park) Detroit 37, Mich. (Tel. JOrdan 4-6858)  
Purch. Agent: Larry Newton  
Sales Mgr.: Arthur R. Schiefelbusch **PS, GS, GH, TS, R&D**

**MECHANICAL DIV.-GENERAL MILLS, INC.**  
1620 Central Ave., Minneapolis 13, Minn. (Tel. STerling 9-8811)  
Mgr.-Purch.: A. E. Wickmon  
Dir.-Sales: E. F. Coy **MF, WN, PS, GS, GE, CO, TS, TR**

**MECHANICAL PRODUCTS, INC.**  
1824 River St., Jackson, Mich. (Tel. STote 2-0391)  
Purch. Agent: C. C. Frost  
Sales Engr.: P. R. Watson **GS, CO, TS, TR**

**MECHANICS RESEARCH DEPT., AMERICAN MACHINE & FOUNDRY CO.**  
2510 S. Wobash Ave., Chicago 5, Ill. (Tel. WEbster 9-5385)  
Dir.: P. Rosenberg

**MECHANICS UNIVERSAL JOINT DIV., BORG-WARNER CORP.**  
2020 Harrison Ave., Rockford, Ill. (Tel. WOODland 3-0431)  
Dir.-Purch.: E. O. Von Dusen  
Asst. Dir.-Purch.: G. R. Fuehrer  
Pres. & Gen. Mgr.: F. W. Rickord **GH**

**MEDICAL SUPPLY CO.**  
1027 W. State St., Rockford, Ill. (Tel. WOODland 3-9697)  
Purch. Agent: C. Fred Avery  
V. P.-Sales: Richard G. Babbitt

**ELETRON CORP.**  
950 N. Highland Ave., Los Angeles 38, Calif. (Tel. HOLLYwood 3-4841)  
Purch. Agent: Don Britton  
Dir.-Market Research: Jack Nelson **MF, WN, PS, GS, GH, GE, CO, TS**

**ENASCO MFG. CO.**  
805 S. San Fernando Blvd., Burbank, Calif. (Tel. VICTorio 9-3261)  
Dir.-Material Div.: Thomas E. Merrick  
Purch. Agent: William Caprine  
Purch. Dept. (Tex. Div.): Edward Gibson, Box 7397 Sylvonia Sta., Ft. Worth (Tel. ATlOs 4-3471)  
V. P.-Sales: Jack I. Hamilton (Burbank) **WN, PS**

**E. MENAUGH CO.**  
4555 N. Broadway, Chicago 40, Ill. (Tel. UPTown 8-2343)  
Purch.: M. M. Maher  
Sales: D. A. MacIntyre **PS**

**ENLO RESEARCH LABORATORY**  
P. O. Box 522, Menlo Park, Calif. (Tel. DA 1-0280)  
Dir.-Purch. & Sales: Charles Weeks **MF, GH, CO, MM**

**EPCO, INC.**  
37 Abnett Ave., Morristown, N. J. (Tel. JEFFerson 9-2000)  
Purch. Agent: J. Brozek  
Sales Mgr.: E. L. Beoudry, Jr. **GE**

**ERCAST MFG. CORP.**  
2620 1st St., Lo Verne, Calif. (Tel. LYcoming 3-4521)  
Purch. Agent: P. L. Cunningham  
Sales Mgr.: Stan Harding **MF, PS**

**ERCK & CO., INC., ELECTRONIC CHEMICALS DIV.**  
Central Ave., Rohway, N. J. (Tel. FULTon 1-5000)  
Dir.-Electronic Chem. Div.: Dr. George Kresk  
Sales Mgr.: C. A. Gray **MM**

**ERCURY AIR PARTS CO., INC.**  
P. O. Box 135, 9310 W. Jefferson Blvd., Culver City, Calif. (Tel. FE 0-5923)  
Purch. Agent: I. A. Cole  
Sales Mgr.: R. Cohen **MF, GS, GH, MM**

**ERCURY TOOL & MFG. CORP.**  
124 Marine St., P. O. Box 95, Fomingdale, N. Y. (Tel. CHOpel 9-1820)  
V. P.-Purch.: Frank J. Fitterer (Tel. CHOpel 9-1821)  
Sales: Seri S. LoDato **MF, WN, PS, GS, GH, MM**

**ERGENTHALER LINDTYPE CO.**  
29 Ryerson St., Brooklyn 5, N. Y. (Tel. ULster 5-0300)

Purch.: C. Aiso  
Mgr., Systems Engrg. Dept.: W. O. Grube  
GS, GE, CO, R&D

**MERIAM INSTRUMENT CO.**  
10920 Madison Ave., Cleveland 2, Ohio (Tel. ATLantic 1-1100)  
Purch. Agent: A. Sousy  
Dir.-Sales: Leroy Rogers

**MERIDIAN METALCRAFT, INC.**  
8739 S. Millergrove Dr., Whittier, Calif. (Tel. OXford 2-3761)  
Purch. Agent: D. W. Willis  
Sales Mgr.: C. M. Peterson **GE, CO, TR, MM, R&D**

**MERIT COIL & TRANSFORMER CORP.**  
2027 Sherman St., Hollywood, Fla. (Tel. WObosh 3-1536)  
Purch. Agent: Walter Hendrickson (Tel. WObosh 3-4651)  
Sales Mgr.: Charles C. Koch  
Asst. Sales Mgr.: Fred Holland **MM, R&D**

**MERIX CHEMICAL CO.**  
2234 E. 75th St., Chicago 49, Ill. (Tel. BAyport 1-8242)  
Gen. Mgr.-Purch.: Eric O. Sonneman  
Sales Mgr.: E. Arshock **MM, R&D**

**MERZ ENGRG., INC.**  
200 S. Harding St., Indianapolis, Ind. (Tel. ME 2-7431)  
Purch. Agent: Murray Davidson  
Buyer: Carl Pfeifer  
Sales Mgr.: L. B. Vanderhorst **PS, GS**

**METAL CARBIDES CORP.**  
6001 Southern Blvd., Youngstown 12, O. (Tel. STerling 8-6541)  
Purch. Agent: H. L. Sprinkel  
V. P.-Sales: R. T. Beeghly **MM, R&D**

**METAL EDGE INDUSTRIES**  
Gloucester Pike, Barrington, N. J. (Tel. LINcoln 7-9000)  
V. P.-Sales: E. F. Collins **GH**

**METAL FABRICATORS CORP.**  
63 Pond St., Waltham, Mass. (Tel. TWInbrook 3-6800)  
Dir.-Sales: Horry Ferguson **MF, GS, GE, TS**

**METAL HYDRIDES, INC.**  
12-24 Congress St., Beverly, Mass. (Tel. WALKer 2-1875)  
Purch. Agent: J. A. Crowell  
Asst. Purch. Agent: H. J. McLaughlin  
Buyer: Sylvio Burke  
Mgr.-Tech. Services: H. W. Kuschwitz, Jr.  
Engr.-Tech. Service: R. E. Miner **MM, R&D**

**METAL SPINNERS, INC.**  
5015 N. 33rd St., Milwaukee 9, Wisc. (Tel. Hilltop 5-7343)  
Purch. Agent: LeRoy E. Mueller  
Works Mgr.: D. W. Lawrence  
Sales Mgr.: George Lauth **WN, PS, GE, TR**

**METAL TEXTILE CORP., ELECTRONICS DIV.**  
647 E. First Ave., Roselle, N. J. (Tel. CHEstnut 5-3000)  
Purch. Agent: Minford S. Smith  
Prod. Mgr.: A. R. Burghord  
Sales Mgr.: William Luke, Jr. **MM**

**METAL TREATING INSTITUTE**  
271 North Ave., New Rochelle, N. Y. (Tel. NEw Rochelle 6-6382)  
C. E. Herington **MF, WN, MM, R&D**

**METALECTRO LAB.**  
11423 Vanowen St., N. Hollywood, Calif. (Tel. POplar 5-2430)  
Purch. Agent: P. E. Peoch **MF, WN, PS, GS, GH, GE, TR, R&D**

**METAL-GLASS PRODUCTS CO.**  
3333 Hammond Ave., Elkhart, Ind. (Tel. 2-5510)  
Purch. Agent: D. P. Gill  
V. P.-Sales: Jay A. Ridgdon **MM**

**METALLIZING CO. OF LOS ANGELES INC.**  
1233 S. Boyle Ave., Los Angeles 23, Calif. (Tel. ANGelus 8-7108)  
Asst. Mgr.-Purch.: Ray White  
Pres.: Richard S. Jensen **MF, MM**

**METALLIZING ENGRG. CO., INC.**  
1101 Prospect Ave., Westbury, N. Y.  
Purch. Agent: R. M. Dwyer  
Sales Mgr.: R. J. McWaters **MM**

**METALLO GASKET CO.**  
16 Bethany St., New Brunswick, N. J. (Tel. KILLmer 5-7223)  
Purch. Agent: S. S. Geipel  
Asst. Purch. Agent: S. W. Geipel  
Sales Mgr.-Secy.: G. K. Mordas **MF, PS**

**METALLURGICAL, INC.**  
900 E. Hennepin Ave., Minneapolis, Minn. (Tel. FEderal 3-4581)

Controller: M. P. Paulson  
Dir.-Sales: Ralph E. Mueller **MF**

**METALPHOTO CORP.**  
6811 Superior Ave., Cleveland 3, Ohio (Tel. UTah 1-7575)  
Purch. Agent: Mrs. D. J. Weston  
Sales Mgr.: Roger Ferryman **MM**

**METALS & CONTROLS CORP.**  
55 Forest St., Attleboro, Mass. (Tel. 1-2800)  
Dir.-Purch.: E. B. Carpenter  
Asst. Dir.-Purch.: Rocco Fantaccione  
Buyers: William Gorman & Ralph Berry  
V. P.-Sales: John Wilson **MF, WN, PS, GS, GH, GE, CO, TS, TR**

**METALS & CONTROLS CORP., GEN. PLATE DIV.**  
5565 Forest St., Attleboro, Mass. (Tel. Attleboro 1-2800)  
Purch. Agent: E. B. Carpenter  
Sales Mgr.: John Wilson **GS, MM**

**METALS & CONTROLS CORP., SPENCER DIV.**  
5565 Forest St., Attleboro, Mass. (Tel. Attleboro 1-2800)  
Purch. Agent: E. B. Carpenter  
Sales Mgr.: John Wilson **GS, MM**

**METAPLAST CO., INC.**  
34-51 56th St., Woodside 77, N. Y. (Tel. HA 9-0843)  
Manager: J. Lester

**METAPLAST CORP.**  
Harboro, Pa. (Tel. OSborne 5-2416)  
Purch. Agent: M. B. Guenther  
Plant Mgr.: Wilfred Loblely  
V. P.-Sales: Lewis W. Hull **WN, MM, R&D**

**METAVAC, INC.**  
45-68 162nd St., Flushing 58, N. Y. (Tel. FLushing 9-8838)  
Purch. Agent: R. Finnegan  
Gen. Mgr.-Sales: G. H. Fodel **GE, CD, TS, TR**

**METEOR PRODUCTION ENGRG., INC.**  
1465 S. Vandeventer Ave., St. Louis 10, Mo. (Tel. JEFFerson 5-3210)  
Chief Engr.: D. Gers  
Pres.: Horvey S. Gershenson **GS, CO, TS, R&D**

**METERS INC.**  
5353 N. Keystone Ave., Indianapolis 20, Ind. (Tel. CLifford 5-3570)  
Purch. & Sales: F. R. Finehout **GE, CO, TS, TR**

**METHODE MFG. CORP.**  
7447 W. Wilson Ave., Chicago 47, Ill. (Tel. UNderhill 7-9600)  
Purch. Agent: A. J. Dudle **MM**

**MET-L-WOOD CORP.**  
6755 W. 65th St., Chicago 38, Ill. (Tel. LUDlow 5-7575)  
Purch. Agent: John S. Allen  
Sales Mgr.: Dwight O. Williamson **MM**

**R. I. METPRO, INC.**  
230 Toronto Ave., Providence 5, R. I. (Tel. STuart 1-3050)  
Pres.: James C. Murphy **MF, PS, TS, TR**

**METRDN INSTRUMENT CO.**  
432 Lincoln St., Denver 3, Colo. (Tel. PEarl 3-3764)  
Purch. Agent: H. N. Corothers  
Sales Mgr.: Edward Pike **GS, CD, TS, R&D**

**METRONIX, INC., SUB-ASSEMBLY PRODUCTS, INC.**  
75 Wilson Mills Rd., Chesterland, Ohio (Tel. 3-4436)  
V. P.-Purch.: Ivan Bezugloff  
Pres. & Sales Mgr.: John Saint-Amour **GS, GH, CO, TS**

**MEYERCORD CO., THE**  
5323 W. Lake St., Chicago 44, Ill. (Tel. ESTerbrook 8-3700)  
Purch. Agent: William A. Ortlep  
Sales Mgr.: R. A. Knopf

**MEYERCORD CO., THE, AMC DIV.**  
2915 S. Vail Ave., Los Angeles, Calif. (Tel. RAYmond 3-8661)

**CODING**  
Missile Frame **MF**  
Warhead & Nose Cone **WN**  
Propulsion System **PS**  
Ground Support **GS**  
Ground Handling **GH**  
Guidance Equipment **GE**  
Checkout Equipment **CO**  
Test Equipment **TS**  
Tracking & Telemetering **TR**  
Research & Development **R&D**  
Materials & Metals **MM**

# . . . purchasing directory mic—mos

- Purch.:** Robert Bell  
**Div. Mgr.-Sales:** John A. Cargill MF
- MICA CDRP.**  
4031 Elendia, Culver City, Calif. (Tel. VE 9-5283)  
**Purch.:** Ed Kazarian  
**Dir.-Mktg.:** Milton B. Grossman MF, GE, TS, TR
- MICA FABRICATING CO.**  
53 Central Ave., Rochelle Park, N. J. (Tel. HJbbard 7-5717)  
**Purch.:** M. H. Cymbberg  
**Sales:** J. W. Canter MF, WN, PS, GE, TR
- MICA INSULATOR DIV.-MINNESOTA MINING & MFG. CO.**  
797 Broadway, Schenectady 1, N. Y. (Tel. FRanklin 4-4191)  
**Purch. Agent:** Q. F. Jardine  
**Asst. Purch. Agent:** H. Culp  
**Gen. Mgr.:** D. E. Horstford  
**Sales Mgr.:** D. R. Coleman, Jr. MM
- MICACRAFT PRODUCTS INC.**  
701 McCarter Hwy., Newark, N. J. (Tel. MArket 3-6921)  
**Purch. Agent:** N. A. Pomar (Tel. MArket 3-4074)  
**Sales:** C. E. Garneau, Jr. MM
- MICHIGAN WIRE CLOTH CO.**  
2100 Howard St., Detroit 16, Mich. (Tel. TAshmoo 6-6500)  
**Purch. Agent:** Myles Bradley  
**V. P.-Sales:** W. H. Blodgett PS, GS
- MICO INSTRUMENT CO.**  
80 Trowbridge St., Cambridge 38, Mass. (Tel. KIrkland 7-8660)  
**Purch. Agent:** Miss F. E. Beede  
**Sales Mgr.:** R. F. Walker MM
- MICRO BALANCING, INC.**  
191 Herricks Rd., Garden City Park, L. I., N. Y. (Tel. PLeazer 6-0851)  
**Dir.-Purch.:** Leon Santora  
**V. P.-Sales:** D. A. Francis GS
- MICRO GEE PRODUCTS, INC.**  
6319 W. Slausen Ave., P. O. Box 1055, Culver City, Calif. (Tel. EXmont 1-1716)  
**Chief Engr.:** B. W. McCadden GS, GE, CO, R&D
- MICRO SWITCH, DIV.-MINNEAPOLIS-HONEYWELL REG. CO.**  
11 W. Spring St., Freeport, Ill. (Tel. ADams 2-1122)  
**Purch. Agent:** W. L. Young  
**Sales Mgr.:** F. E. Wilsey
- MICRO-CIRCUITS CO.**  
New Buffalo, Mich. (Tel. 272 WI)  
**Purch. Agent:** M. Bradley  
**Pres.:** R. F. Bradley MM
- MICRODOT INC.**  
220 Pasadena Ave., South Pasadena, Calif. (Tel. RYan 1-3351)  
**Purch. Agent:** Robert Botton  
**Buyer:** James Gillis  
**Asst. Sales Mgr.:** George Wedemeyer  
**V. P.-Sales:** Guy M. Martin, Jr. WN, GS, R&D
- MICROLAB**  
71 Okner Pkwy., Livingston, N. J. (Tel. WYman 2-5700)  
**Purch.:** A. Alexander  
**Sales:** Richard C. Hess GE, TR
- MICROMETRICAL MFG. CO.**  
345 S. Main St., Ann Arbor 20, Mich. (Tel. NOrmandy 2-5626)  
**Purch. Agent:** Herman OeMarco  
**Chief Engr.:** Donald Parkes  
**Exec. V. P.:** Fritz A. Zander  
**Sales Mgr.:** Frank W. Kobat TS, R&D
- MICRON GEAR CO., INC.**  
73 Rushmore St., Westbury, L. I., N. Y. (Tel. EOGwood 4-8980)  
**Purch. Agent:** Bill Benjamin  
**Mgr.-Sales:** Milo Amorosio  
**Gen. Mgr.:** Paul Masera
- MICROSONICS, INC.**  
Hingham Ind. Ctr., 349 Lincoln St., Rt. 3A, Hingham, Mass. (Tel. Rlviewier 9-3100)  
**Pres.:** T. J. Geoghegan  
**Sales Mgr.:** B. P. O'Sullivan GS, GE, TR, R&D
- MICROTECH CDRP., SUB. FEDERAL-MOGUL-BOWER BEARINGS, INC.**  
1201 N. Arden Dr., El Monte, Calif. (Tel. Gilber 3-3081)  
**Gen. Mgr.:** Ralph H. OuBois  
**Comptrollers:** Carl H. Sjoberg  
**Mgr.-Sales:** Frank M. Mosier MM
- MICROTRAN CO., INC.**  
145 E. Mineola Ave., Valley Stream, N. Y. (Tel. LO 1-6050)
- Purch. Agent:** B. Bell  
**V. P.-Sales:** Albert J. Eisenberg GS, TS, TR
- MICROWAVE ASSOCIATES, INC.**  
South Ave., Burlington, Mass. (Tel. BRowning 2-3000)  
**Purch. Agent:** Harry Merchont  
**V. P.-Mktg.:** George S. Karliotis GE, TR
- MICROWAVE DEVELOPMENT LABS., INC.**  
92 Broad St., Babson Park 57, Mass. (Tel. CEdar 5-6252)  
**Purch. Agent:** Abraham Bahm  
**Buyers:** Philip Carson & Harold Lemer  
**Sales Engr.:** John O. Hall MM
- MICROWAVE ELECTRONICS DIV., SPERRY GYROSCOPE CO.**  
Great Neck, N. Y. (Tel. Fieldstone 7-3600)  
**Purch. Agent:** G. C. Hees  
**Sales Mgr.:** George W. Lober
- MICRO-WIRE TUNGSTEN & MOLYBDENUM PRODUCTS**  
301 Crooks Ave., Clifton, N. J. (Tel. PRescott 9-0819)  
**Stephen H. Meninger MF, WN, PS, GS, GH, GE**
- MID-CENTURY INSTRUMATIC CORP.**  
611 Broadway, New York, N. Y. (Tel. SPring 7-4016)  
**Purch. Agent:** E. Nawrocki  
**Sales Engr. Mgr.:** Charles B. Husick
- MIDGET LOUVER CO.**  
6-R Wall St., Norwalk, Conn. (Tel. VOLunteer 6-2342)  
**Purch.:** Miller Mfg. Co., Stratford, Conn.  
**Sales:** Frank J. Scallon
- MIDLAND INDUSTRIAL FINISHES CO.**  
E. Water St., Waukegan, Ill. (Tel. MAJestic 3-4200)  
**Purch. Agent:** W. J. Edwards  
**Buyer:** John Whitaker  
**Pres.:** Edwin O. Robson  
**V. P. & Gen. Mgr.:** G. E. Batzel MM
- MIDLAND MFG. CO., INC.**  
3155 Fiberglas Rd., Kansas City, Kans. (Tel. Finley 2-7950)  
**Purch. Agent:** Harlan F. Ellis  
**V. P.-Sales:** H. G. Humann GE, TR
- MIDLAND PAINT & VARNISH CO., THE**  
3803 E. 91st St., Cleveland 5, O. (Tel. BR 1-4050)  
**Purch. Agent:** Frank S. Glueck MF, PS, GE, TR
- MIDVALE-HEPPENSTALL CO.**  
Nictown, Philadelphia 40, Pa. (Tel. BALdwin 5-5000)  
**Gen. Sales Mgr.:** Oerek G. R. Brigg  
**Asst. Gen. Sales Mgr.:** Kenneth O. Cole MM
- MIDWEST GAGE LAB.-METROLOGY SERVICES**  
2500 W. Washington Blvd., Chicago 12, Ill. (Tel. MO 6-6710)  
**Purch. Mgr.:** R. Miller  
**Sales Mgr.:** E. E. Olds MM
- MID-WEST METAL PRODUCTS, INC.**  
450 E. Donovan Rd., Kansas City 15, Kans. (Tel. MAyfair 1-1980)  
**Asst. Mgr.-Purch.:** H. W. Sanders  
**Mgr.-Sales:** T. H. Minzet GE, TR, R&D
- MIDWEST RESEARCH INSTITUTE**  
425 Volker Blvd., Kansas City 10, Mo. (Tel. LOGan 1-0202)  
**V. P. & Tech. Dir.:** Dr. Max H. Thornton  
**Admin. Officer:** Perry L. Bidstrup  
**Mgr.-Program Dev.:** Richard W. Kunkle R&D
- MID-WEST SPRING MFG. CO.**  
4632-40 S. Western Ave., Chicago 9, Ill. (Tel. LAfayette 3-1743)  
**Purch. Agent-Chicago Plant:** James J. Ounne, Jr.  
**Purch. Agent-St. Paul Plant:** Cliff Reger (Tel. HU 8-2521)  
**Purch. Agent-Mentone, Ind., Plant:** Richard E. Middleton (Tel. EL 3-2415)  
**Sales:** L. J. Castaldi MF, PS
- MIDWESTERN INSTRUMENTS, INC.**  
41st & Sheridan Rd., Tulsa, Okla. (Tel. Rlverside 7-1331)  
**Purch. Agent:** B. M. Kennedy  
**V. P.-Sales:** D. M. Holloway CO, TS, TR, R&D
- MILAM ELECTRIC MFG. CO.**  
1100 Elmwood Ave., Providence 7, R. I. (Tel. STuart 1-2284)  
**V. P.-Purch.:** F. B. Foster  
**Sales:** J. A. Ruby MM
- MILES REPRODUCER CO., INC.**  
812 Broadway, New York 3, N. Y. (Tel. SPring 7-7670)  
**Purch.:** J. M. Kuhlik  
**Sales:** H. B. Kuhlik TR
- MILGO ELECTRONIC CORP.**  
7601 N. W. 37th Ave., Miami 35, Fla. (Oxford 1-1220)  
**Purch. Agent:** William Krenzel  
**Buyers:** Walter Koth, Ronald Zoll, Herman Farer & James Kivett  
**Gen. Mgr.-Sales:** William L. Rose GS, CO, TS, TR, R&D
- FRANKLIN P. MILLER & SON, INC.**  
36 Meadow St., East Orange, N. J. (Tel. ORange 3-4522)  
**Purch. Agent:** H. Preyer  
**Sales:** H. Galanty
- J. W. MILLER CO.**  
5917 S. Main St., Los Angeles 3, Calif. (Tel. ADams 3-4294)  
**Purch.:** L. G. Crawford, Jr.  
**Sales:** J. R. Hummes
- SANFORD MILLER CO.**  
11 Lynch St., Brooklyn 11, N. Y. (Tel. ULster 8-2817)
- MILLER ASSOCIATES**  
P. O. Box 369, Lakeville, Conn.  
**Owner:** R. R. Miller  
**Dir.-Sales:** H. M. Miller R&D
- MILLER DIAL & NAMEPLATE CO.**  
4400 N. Temple City Blvd., El Monte, Calif. (Tel. Gilber 4-4555)  
**Purch. Agent:** Gus Bloomquist  
**Sales Mgr.:** Richard Stevens M
- MILLER ELECTRO-RESEARCH LABS.**  
5529 S. 5th St., Milwaukee 7, Wisc. (Tel. HUmboldt 3-6303)  
**A. W. Miller GE, CO**
- MILLER-ROBINSON CO.**  
7007 Avalon Blvd., Los Angeles 3, Calif. (Tel. PLeasant 2-6141)  
**Purch. Agent:** J. B. Leavell  
**Sales Mgr.:** Myron B. Adler PS, GS, T
- MILLIPORE FILTER CORP.**  
Bedford, Mass. (Tel. CRestview 4-8800)  
**V. P.-Purch.:** Walter W. Kenyon  
**Sales Mgr.:** David B. Porter  
**Office Mgr.:** Clifford J. Hughes CO, T
- MILLITEST CORP.**  
88 Madison Ave., Hempstead, N. Y. (Tel. IVanhoe 9-9672)  
**Purch. Agent:** I. Clinton  
**Sales Mgr.:** J. Herman TS, R&D
- MILMAN ENGRG. CO.**  
1831 Pontius Ave., Los Angeles 25, Calif. (Tel. GRanite 3-0616)  
**Partners:** Wesley B. Miller & E. I. Bruckman G
- MILMANCO**  
620 7th Ave., Renton, Wash. (Tel. ALPine S-8656)  
**Co-Mgr., Purch. & Sales:** Philip B. Lundstrom  
**Co-Mgr., Purch.:** Thomas H. Cooke  
**Supt.:** Robert W. Burman
- MILRD CONTROLS CO.**  
Hawthorne Ave., Park Ridge, N. J. (Tel. Park Ridge 6-2595)  
**Purch.:** Milton Rasen  
**Sales Mgr.:** E. O. Burdi
- MINATRON CORP.**  
61 Cliveden St., Belle Mead, N. J. (Tel. FLanders 9-6400)  
**Gen. Mgr.:** C. W. Pressey TS, TI
- MINCD PRODUCTS, INC.**  
740 Washington Ave., N., Minneapolis 1, Minn. (Tel. FEderal 8-4753)  
**Purch. Agent:** Robert B. Anderson  
**V. P.-Sales:** Karl Schurr GS, GE, CO, TS, TI
- MINCOM DIV., MINNESOTA MINING & MFG. CO.**  
2049 S. Barrington Ave., Los Angeles, Calif. (Tel. GRanite 9-3751)  
**Purch. Agent:** Ray Hunt  
**Sales Mgr.:** Robert J. Brown TS, TI
- MINE SAFETY APPLIANCES CO.**  
201 N. Braddock Ave., Pittsburgh 8, Pa. (Tel. CH 1-5900)  
**Purch. Agent (Safety Prod.):** J. P. Curran  
**Purch. Agent (Tech. Prod.):** F. J. Guenther  
**Sales Mgr. (Safety Prod.):** F. A. King  
**Sales Mgr. (Tech. Prod.):** N. W. Hartz T
- MINIATURE PRECISION BEARINGS, INC.**  
Precision Pk., Keene, N. H. (Tel. ELmwood 2-0310)  
**Purch. Agent:** Robert N. Whitney  
**Sales Mgr.:** K. G. Broman WN, GE, TR, R&D
- MINICORD CORP. OF AMERICA**  
1915 Atlantic Ave., Atlantic City, N. J. (Tel. 2-0488)  
**Dir.-Purch.:** William C. Redding, Jr.  
**V. P.-Sales:** William A. Juhrs, Sr. G!



**MINNEAPOLIS-HONEYWELL REGULATOR CO., AERONAUTICAL DIV.**  
2600 Ridgeway Rd., Minneapolis 13, Minn. (Tel. Sterling 1-801)  
Dir.-Prac.: R. B. Foster  
Dir.-Prac.: S. E. Puffer, Inertial Guidance Cntr., St. Petersburg, Fla. (Tel. HEMlock 5-1151)  
Purch. Agent: Matt Mehan, Missile Dev. Lab., W. Los Angeles, Calif. (Tel. BRadshaw 2-8667)  
Mktg. Mgr.: R. E. Clifford  
GS, GH, GE, CO, TS, R&D

**MINNEAPOLIS-HONEYWELL REGULATOR CO., BOSTON OIV.**  
40 Life St., Boston 35, Mass. (Tel. ALgonquin 4-5200)  
Purch. Agent: E. L. Hanscom  
Mktg. Mgr.: C. B. Harrison  
GS, GE, TR

**MINNEAPOLIS-HONEYWELL REGULATOR CO., DAVIES LABS. OIV.**  
10721 Hanna St., Beltsville, Md. (Tel. WEbster 5-2700)  
Purch. Agent: John Spazkiet  
Sales Mgr.: N. S. Bassett  
TS, TR

**MINNEAPOLIS-HONEYWELL REGULATOR CO., INDUSTRIAL OIV.**  
Wayne & Windrim Aves., Philadelphia 44, Pa. (Tel. OAvenport 9-8300)  
Purch. Agent: J. Tows  
Sales Mgr.: J. A. Robinson  
GH, CO, TS, R&D

**MINNEAPOLIS-HONEYWELL REGULATOR CO., INDUSTRIAL PRODUCT GROUP**  
Wayne & Windrim Aves., Philadelphia 44, Pa. (Tel. OAvenport 9-8300)  
Purch. Agent: J. H. Tows  
Sales Mgr.: J. A. Robinson  
TS

**MINNEAPOLIS-HONEYWELL REGULATOR CO., ORDNANCE DIV.**  
600 2nd St., N., Hopkins, Minn. (Tel. WEstport 8-3571)  
Mgr.-Prac.: J. F. Barrett  
Purch. Agent: Clifford Swisher, Minneapolis-Honeywell Ordnance Missile Engrg. Ctr., Ouarie, Calif. (Tel. ELIott 9-5311)  
Dir.-Serv. Engrg.: L. E. Sheehan  
MF, WN, GS, CO, TE, TR, R&D

**MINNEAPOLIS-HONEYWELL REGULATOR CO., SEMICONDUCTOR PRODUCTS OIV.**  
2753 4th Ave., S., Minneapolis, Minn. (Tel. FEderal 2-5225)  
Mgr.-Prac.: M. E. Knutson  
Asst. Purch. Agent-Raw Materials: Wilbur Smisek  
Sales Mgr.: R. O. Anderson

**MINNESOTA MINING & MFG. CO.**  
900 Bush Ave., St. Paul 1, Minn. (Tel. PRospect 6-8511)  
Sales Mgr.: J. M. Rogers  
Prod. Mgr.: John M. Thompson  
MM

**MINNESOTA MINING & MFG. CO.-ADHESIVES, COATINGS & SEALERS DIV.**  
900 Bush Ave., St. Paul, Minn. (Tel. PRospect 6-8511)  
Sales Mgr.-Aircraft Prods.: A. O. Fuhrmann  
Gen. Sales Mgr.: C. A. Kelley

**MINNESOTA RUBBER CO.**  
3630 Wooddale Ave., Minneapolis 16, Minn. (Tel. WEst 9-6781)  
Purch. Agent: H. L. Stacking  
Dir.-Sales: Richard G. Wells  
MM

**RATEL, INC.**  
1080 Oianne St., St. Paul 13, Minn. (Tel. HUmboldt 9-7417)  
Purch. Agent: N. C. Ritter  
Sales Mgr.: H. E. Kurzweg  
GE, TR, R&D

**IRAX CHEM. PROD. CORP., ELECTRO-MECH. DIV.; METAL CONTAINER DIV.**  
1999 Fyler Ave., St. Louis 9, Mo. (Tel. PLateau 2-1500)  
Dir.-Purch.: Oliver C. Clerc  
V. P.-Engrg.: Harvey M. Gilleman  
WN, PS, GS, GH, GE, TS, R&D  
(See Page 79 for Advertisement)

**CO PRECISION CASTING CO.**  
16 W. Gibbs St., White Hall, Mich. (Tel. 2-1515)  
Purch. Agent: Howard Bartholomew  
Purch. Agent-Muskegon, Mich.: M. Simms (Tel. 6-3541)  
V. P.-Sales: K. Yanker  
PS, MM

**KELLA INFRA-RED CO., THE**  
73rd & Grand Ave., Cleveland 4, O. (Tel. HENDERSON 1-2210)  
Purch. Agent: F. Zitek  
PS, GS, R&D

**SILE DIV., NORTH AMERICAN AVIATION, INC.**  
2214 Lakewood Blvd., Downey, Calif. (Tel. SPRuce 3-0610)  
Dir.-Material: Mark Starr  
Purch. Agent: N. C. Oopheid  
MF, GS, GH, CO, R&D

**MISSILE ENGRG. PRODUCTS, INC.**  
9th & Guava, Eau Gallie, Fla. (Tel. 4622)  
V. P.-Purch.: Jack K. Van Hook  
Prod. Mgr.: Oan Lathrup PS, GS, GH, GE, TS, TR

**MISSILES & SPACE SYSTEMS, DIV.-UNITED AIRCRAFT CORP.**  
Main St., E. Hartford, Conn. (Tel. JACKSON 8-8111)  
Sales Mgr.: Boone T. Guyton  
Supvr.-Sales Services: Richard T. Allen

**MISSIMERS, INC.**  
3206 Los Feliz Blvd., Los Angeles 39, Calif. (Tel. NORMandy 5-4261)  
V. P.: Dale J. Missimer  
Engr.-Buyers: H. C. Faris & S. E. Askew  
Parts Buyer: C. Lanphear

**MISSOURI RESEARCH LABS., INC.**  
2109 Locust St., St. Louis 3, Mo. (Tel. CHestnut 1-7875)  
Purch. Agent: Weber L. Ley  
Exec. V. P.: Albert H. Eichler  
GS

**E. C. MITCHELL CO.**  
Boston St., Middleton, Mass. (Tel. SPRING 4-1191)  
Everett W. Mitchell

**MITCHELL CAMERA CORP.**  
666 W. Harvard St., Glendale 4, Calif. (Tel. CHapman 5-1086)  
Purch. Agent: M. Kruescher  
V. P.-Sales: J. O. McCall

**MITRONICS, INC.**  
1290 Central Ave., Hillside, N. J. (Tel. WAverly 6-2250)  
Purch. Agent: Harvey Pensack  
Sales Mgr.: Benjamin Friedman  
MM, R&D

**MODEL RECTIFIER CORP.**  
1675 Urica Ave., Brooklyn 34, N. Y. (Tel. CLoverdale 6-8800)  
Purch. Agent: Anthony Iati  
Sales Mgr.: Samuel Gelber  
GS

**MODELECTRIC PRODUCTS CORP.**  
1500 Bangs Ave., Asbury Park, N. J. (Tel. PR 4-2519)  
Purch.: Chas. S. Nadler  
PS, GS, GE

**MOHAWK WIRE & CABLE CORP.**  
320 River St., Fitchburg, Mass. (Tel. OI 3-3569)  
Sales Mgr.: J. W. Resseguie  
GS, TR

**JOHN MOHR & SONS**  
3200 E. 96th St., Chicago 17, Ill.  
Purch. Agent: A. O. Armstrong  
Sales Mgr.: R. C. Mohr  
GS

**MOLDING CORP. OF AMERICA**  
40 Church St., Pawtucket, R. I. (Tel. PAwtucket 6-2100)  
Purch. Agent: Sturgis Green  
Sales Mgr.: Stephen Kalarian  
GS, GE, TR, R&D

**MONA INDUSTRIES, INC.**  
P. O. Box 1786, Paterson 17, N. J. (Tel. ARmary 4-8220)  
Dir.-Purch.: W. O. Schlimbach  
Purch. Agent: Harry H. Schar  
V. P.-Sales: R. H. Sommer  
MF, GS

**MONADNOCK MILLS, SUB.-UNITED-CARR FASTENER CORP.**  
1977 1st Ave., San Leandro, Calif. (Tel. ELgin 7-3700)  
Purch. Agent: George MacLaughlin  
Sales Mgr.: George Giannandrea  
MF, WN, PS, GS, GH, TS, TR

**J. J. MONAGHAN CO., INC.**  
500 Alcott St., Denver 4, Colo. (Tel. AC 2-3558)  
V. P.: Moses Taylor  
MM, R&D

**MONARCH BEARING CO. INC.**  
4435 Santa Fe Ave., Los Angeles 58, Calif. (Tel. LUDlow 2-8322)  
Purch. Agent: Walter Arendell  
V. P.-Sales: R. E. Browning  
PS, R&D

**MONODE, INC.**  
3751 Prospect Ave., Cleveland 15, Ohio (Tel. ENDicott 1-3872)  
V. P.: Ralph Lindsay  
Sales Mgr.: Gordon K. Lanese

**MONOGRAM PRECISION INDUSTRIES**  
8557 Hipuera St., Culver City, Calif. (Tel. TEXas 0-6531)  
Purch. Agent: John Cargyle  
Sr. Buyer: Eugene Hiatt (Tel. CH 5-8625)  
Buyer: William Pike  
MF, GS, GH, GE, CO, MM, R&D

**MONROVIA AVIATION CORP.**  
801 Royal Oaks Dr., Monrovia, Calif. (Tel. ELIot 8-3211)  
Dir.-Purch.: Luke Gallagher  
Sales Mgr.: J. L. Payne  
MF, GS

**MONSANTO CHEMICAL CO.**  
800 N. Lindbergh Blvd., St. Louis 66, Mo. (Tel. WYdawn 3-1000)  
PS

**MONTGOMERY ENGRG. CO.**  
11111 French Rd., Detroit 34, Mich. (Tel. WAInur 5-1170)  
Mgr.: Max Wender

**MOODY MACHINE PRODUCTS CO., INC.**  
42-46 Oudley St., Providence 5, R. I. (Tel. GASpee 1-3317)  
Sales Mgr.: J. H. Moody  
MF, WN, PS, GS, GE

**MOOG VALVE CO., INC.**  
Prater Airport, East Aurora, N. Y. (Tel. CY 2000)  
Purch. Agent: Raymond Hawick  
Sales Mgr.: Harry White  
GE

**MOORE ASSOCIATES, INC.**  
2600 Spring St., Redwood City, Calif. (Tel. EM 9-0204)  
Purch. Agent: Dan Sully  
Sales Mgr.: James B. Bullock  
GS, CO, TR

**MORAN CO.**  
115 Main St., El Segundo, Calif. (Tel. OR 8-3444)  
Owner: Tom Moran  
MF, PS, GE, MM, R&D

**MORAN INSTRUMENT CORP.**  
170 E. Orange Grove Ave., Pasadena, Calif. (Tel. SY 6-7158)  
Prod. Foreman: A. W. Junkunc  
Sales Mgr.: R. L. Marshall  
GS, CO, TE, TR, R&D

**MORGANITE, INC.**  
33-02 48th Ave., Long Island City 1, N. Y. (Tel. SStillwell 4-3222)  
Gen. Sales Mgr.: W. C. Hass  
Dir.-Purch.: M. A. OeRosa  
MF, WN, PS, GS, GE, TR

**MORNINGSTAR-PAISLEY, INC.**  
630 W. 51st St., New York 19, N. Y. (Tel. JUdson 2-3790)  
Purch. Agent: N. Oentschman  
V. P.-Sales: E. C. Leuz  
Mgr.-Mkt. Oev.: T. L. Bonnitt  
MM

**J. I. MORRIS CO.**  
378 Elm St., Southbridge, Mass. (Tel. POrter 4-4394)  
Asst. Mgr.: J. B. Oirlam  
MF, WN, PS

**ROBERT E. MORRIS CO., THE**  
5000 Farmington Ave., P. O. Box 41, West Hartford 7, Conn. (Tel. ADams 3-3663)  
Pres.: Robert E. Morris

**FRANK W. MORSE CO.**  
354 Congress St., Box 10, Mass. (Tel. HANcock 6-5398)  
Purch. Agent: Prescott B. Morse  
Sales Mgr.: Richard W. Morse  
MM

**MORSE INSTRUMENT CO., THE**  
21 Clinton St., Hudson, Ohio (Tel. OLYmpic 3-5141)  
Purch. Agent: Edward C. Kenyan  
V. P.-Sales: Otis E. Burgess

**F. L. MOSELEY CO.**  
409 N. Fair Oaks Ave., Pasadena, Calif. (Tel. RYan 1-0208)  
Purch. Agent: Robert Taylor  
Sales: F. L. Moseley

**MOSER JEWEL CO.**  
544 Fayette St., Perth Amboy, N. J. (Tel. HILlcrest 2-3434)  
V. P.-Sales: C. H. Kalquist

**MOSINEE PAPER MILLS CO.**  
Mosinee, Wisc. (Tel. OXBow 3-2111)  
Purch. Agent: H. L. Voss  
Sales Mgr.: John R. Diggs

**MOSLEY ELECTRONICS, INC.**  
8622 St. Charles Rock Rd., St. Louis 14, Mo. (Tel. HARRison 7-4400)  
Dir.-Purch.: Eugene L. Masley  
V. P.-Sales & Adv.: George E. Mobus  
TR

**DONALD P. MOSSMAN, INC.**  
P. O. Box 265, Brewster, N. Y. (Tel. BRewster 9-3725)  
Purch. Agent: William Cox  
Sales Mgr.: Ben W. Rist  
GS, TS

**CODING**

Missile Frame	MF
Warhead & Nose Cone	WN
Propulsion System	PS
Ground Support	GS
Ground Handling	GH
Guidance Equipment	GE
Cheekout Equipment	CO
Test Equipment	TS
Tracking & Telemetering	TR
Research & Development	R&D
Materials & Metals	MM

# ... purchasing directory mot—nic

- MOTCH & MERRYWEATHER MACHINERY CO., THE, AVEY DIV.**  
25 E. Third St., Covington, Ky.
- MOTOR APPLIANCE CORP.**  
5737 W. Park, St. Louis 10, Mo. (Tel. MI 7-1138)  
Purch. Agent: Fred D'Doy  
Dir.-Sales: M. F. Duerkob GS, GH
- \*MOTOR GENERATOR CORP.**  
Jackson at Water Sts., Troy, D. (Tel. FE 2-1227)  
Dir.-Purch.: B. A. Lutz  
Buyers: Robert Miller & L. D. Isenberger  
V. P.-Sales: D. W. Baker PS, GS, GH, GE, TR  
\*(See Page 90 for Advertisement)
- MOTORDYNE INC.**  
2661 S. Myrtle Ave., Monrovia, Calif. (Tel. RYan 1-6132)  
Purch. Agent: D. Hartle  
Asst. Purch. Agent: Gayle Ross GS, GE, TR, R&D
- MOTDRESEARCH CO.**  
1600 Junction Ave., Racine, Wisc. (Tel. MEIrose 2-5131)  
Purch. Agent: L. J. Novak  
Mgr. Gvnt. Sales: J. G. Hiatt GS, R&D
- MOTOROLA INC., MILITARY ELECTRONICS DIV.**  
8201 E. McDowell Rd., Phoenix, Ariz. (Tel. WH 5-4311)  
Western Military Purch. Mgr.: Paul Stancik  
Chicago Military Purch. Mgr.: John O'Donnell  
Chicago Military Purchasing Dept., 1450 N. Cicero Ave., Chicago 51, Ill. (Tel. ESterbrook 9-6700) GS, GE, CO, TS, TR, MM, R&D
- MOTROLA INC., MILITARY MARKETING DIV.**  
8201 E. McDowell, Phoenix, Ariz. (Tel. WH 5-4311)  
Purch. Agent: Paul Stancik  
Asst. Purch. Agent: Paul Leinheiser
- MOTOROLA SEMICONDUCTOR PRODUCTS DIV.**  
5005 E. McDowell Rd., Phoenix, Ariz. (Tel. BRIDGE 5-4411)  
Mgr.-Purch.: R. S. Nelson  
Buyer: A. Porstman  
Gen. Mgr.-Sales: J. T. Hickey GE, TS, TR
- MUCKLE MFG. CO.**  
Box 119, Owatonna, Minn. (Tel. 7249)  
Purch. Agent: Robert Doyle  
Sales Mgr.: S. A. Muckle
- MUCON CDRP.**  
9 St. Francis St., Newark 5, N. J. (Tel. MI 2-1476)  
Purch. Agent: B. Berkman  
Sales Mgr.: M. A. Prince GE
- HEINZ MUELLER ENG. CO. INC.**  
1906 N. Cicero Ave., Chicago 39, Ill. (Tel. NAtional 2-8977)  
Purch. Agents: Henry Egert & Mrs. K. Mueller  
V. P.-Sales: Milton Hoffman GE, MM, R&D
- MUELLER BRASS CO.**  
1925 Lapeer Ave., Port Huron, Mich. (Tel. YUkon 5-5111)  
Dir.-Purch.: H. F. Lewis  
Asst. Purch. Agents: G. D. Postill & H. McFadden  
Buyers: William Wastell, Archie Sams & Kenneth Robbins  
Gen. Sales Mgr.: R. L. Gibbs
- MUELLER ELECTRIC CO.**  
1583 E. 31st St., Cleveland 14, O. (Tel. PRospect 1-5225)  
Purch. Agent: E. H. deConingh  
Sales: Scott Mueller GS, GE, CO, TS, TR
- MULLENBACH DIV.-ELECTRIC MACHINERY MFG. CO.**  
2100 E. 27th St., Los Angeles 58, Calif. (Tel. LUdlow 2-8331)  
Purch. Agent: James F. Lewis  
Gen. Mgr.: Wayne M. Bitting GS, GH, CO
- MULTI-AMP CDRP.**  
465 Lehigh Ave., Union, N. J. (Tel. MURdock 8-7112)  
Purch. Agent: Jim Bates  
Prod. Mgr.: E. R. Redhammer GS, CO, TS
- MULTICORE SALES CORP.**  
80 Shore Rd., Port Washington, N. Y. (Tel. PD 7-7700)  
Dir.-Sales: Melvin Zalkin
- CHARLES MUNDT & SDNS**  
53 Fairmount Ave., Jersey City 4, N. J. (Tel. DElaware 3-6200)  
Purch. Buyer & Gen. Mgr.: Richard D. Powers MM
- MUNSTON MFG. & SERVICE, INC.**  
Bech St., Islip, N. Y. (Tel. JUniper 1-3900)  
Purch. Agent: Robert Kuhn  
Sales Mgr.: Theodore Whildin GE, TR, R&D
- MURPHY & MILLER, INC.**  
610 W. Taylor St., Chicago 7, Ill. (Tel. HARRison 7-8900)  
Purch. Agent: John Petruska  
Sales Mgr.: N. E. Miller TS
- MUTRON CORP.**  
125 Perkins Ave., Brockton, Mass. (Tel. JUniper 3-0033)  
Purch. Agent: Richard F. Anderson  
Sales Mgr.: Hilbert T. Forsberg GS, GE, TS, TR
- MYCALEX CDRP. OF AMERICA**  
125 Clifton Blvd., Clifton, N. J. (Tel. PRescott 9-8866)  
Purch.: H. C. Westervelt  
Sales: J. H. DuBois MF, WN, PS, GH, GE, CO, TS, TR
- NJE CORP.**  
345 Carnegie Ave., Kenilworth, N. J. (Tel. CHestnut 1-1500)  
Purch. Agent: Robert Schrage  
Sales Mgr.: A. Lawrence Karp GS, CO, TS, TR, R&D
- NRC EQUIPMENT CORP.**  
160 Charlemont St., Newton 61, Mass. (Tel. DEcatur 2-5800)  
Purch. Agent: Loring Raymond  
Asst. Purch. Agent: Norman Resnich  
Sales Mgr.: Harry D. Stone PS, GS, GH, GE, CO, TS, TR
- N. R. K. MFG. & ENGRG. CO.**  
4601 W. Addison St., Chicago 41, Ill. (Tel. SPring 7-2970)  
Dir.-Purch.: Peter Koppenberger  
Purch. Agent: M. R. Warren  
Sales Engr.: Ed Dervishian GE, TR
- NYT ELECTRONICS, INC.**  
2979 N. Ontario St., Burbank, Calif. (Tel. VICTorio 9-2414)  
Purch. Agent: G. Graham  
V. P.-Sales: R. L. Hyder GS, GE, TS, TR
- \*NADELLA**  
66-68 Solothurnstrasse, Biel, Switzerland  
\*(See Page 33 for Advertisement)
- GEORGE L. NANKERVIS CO.**  
15300 Fullerton, Detroit 27, Mich. (Tel. VERmont 8-5780)  
Purch. Agent: R. I. Pieti  
V. P.-Sales: H. W. Grikschiet GS, GH, GE, CO, TS, R&D
- NAPOLEON PRODUCTS CO., THE**  
410 Filmore St., Napoleon, O. (Tel. 5361)  
Pres. & Gen. Mgr.: G. M. Small  
Exec. V. P.-Purch.: E. N. Yeager MF, PS
- NARDA MICROWAVE CORP., THE**  
118-160 Herricks Rd., Mineola, N. Y. (Tel. PIONEER 6-4650)  
Purch. Agent: James Orehosky  
V. P.-Sales: William A. Bourke PS, GH, GE, CO, TS, TR, R&D
- NARDA ULTRASONICS CORP., THE**  
625 Main St., Westbury, N. Y. (Tel. EDgewood 3-5400)  
Purch. Agent: Philip McKay  
Head-Sales: Paul W. Steen GS
- NARMCO MFG. CO.**  
5159 Baltimore Dr., La Mesa, Calif. (Tel. HOpkins 9-0171)  
Dir.-Purch.: R. M. Ewbank  
Dir.-Sales & Engrg.: D. H. Black  
Mgr.-Sales & Contracts: D. C. Price MF, WN, TR, MM, R&D
- NARMCO RESINS & COATINGS CO.**  
600 Victoria St., Costa Mesa, Calif. (Tel. LIberty 8-1144)  
Purch. Agent: Mrs. Maxine Hutchins  
Asst. Buyer: Marion Edkins  
Gen. Sales Mgr.: Wm. D. Rainey MM, R&D
- NARROW FABRIC CO., THE**  
P. D. Box 742, Reading, Pa. (Tel. FRanklin 6-2891)  
Dir.-Purch.: C. E. Hoffmaster  
Gen. Sales Mgr.: F. S. Pierce
- NASH ENGRG. CO., THE**  
Wilson Ave., S. Norwalk, Conn. (Tel. VOlunteer 6-3351) PS
- NATIONAL AIROIL BURNER CO.**  
1345 E. Sedgley Ave., Philadelphia 34, Pa. (Tel. PIONEER 3-5300)  
Purch. Agent: Edward P. Bailey, Jr. GS, TS
- NATIONAL BERYLLIA CDRP.**  
4501 Dell Ave., North Bergen, N. J. (Tel. N.Y.C.-DXford 5-1860; N. J. — UNION 5-1600)
- Purch. Dept.: First & Haskell Aves., Haskeil, N. J. (Tel. TEmple 9-1600)**  
Purch. Agent: George B. Carlisle  
Mgr., Sales Div.: Don de Gruchy MF, WN, PS, MM, R&
- NATIONAL CASH REGISTER CO., THE, ELECTRONICS DIV.**  
1401 E. El Segundo Blvd., Hawthorne, Calif. (Tel. PLYmouth 7-1811)  
Purch. Agent: A. G. Krumm  
Buyer: A. Lloyd  
Jr. Buyer: A. Wood R&
- NATIONAL CERAMIC CO.**  
500 Southard St., Trenton 2, N. J. (Tel. EXport 4-5373)  
Prod. Mgr.: J. G. Wallis GE, CO, T
- NATIONAL COIL CO.**  
P. D. Box 1237, Sheridan, Wyo. (Tel. DR 4-7644)  
Purch. Agent: Harold Demple  
Sales Mgr.: Joe Demple GE, TS, TR, R&
- NATIONAL ELECTRONICS**  
P. O. Box 1237, Sheridan, Wyo. (Tel. DR 4-7644)  
Gen. Mgr. & Purch. Agent: Harold Demple  
Sales Mgr.: John Bullinga GS, GH, GE, CO, TS, TR, R&
- NATIONAL ENGRG. PRODUCTS, INC.**  
435 Washington Bldg., Washington 5, D. C. (Tel. REpublic 7-4473)  
V. P.-Purch.: Clinton Rector MF, WN, G
- NATIONAL FELT CO.**  
76 Summer St., Boston 10, Mass. (Tel. LIberty 2-6590) M
- NATIONAL FOAM SYSTEM, INC.**  
Union & Adams Sts., West Chester, Pa. (Tel. DW 6-3600)  
Purch. Agent: A. D. Holmes  
V. P.: L. W. Boerner GH, T
- NATIONAL FORGE CO.**  
Irvine, Warren Co., Pa. (Tel. Youngsville — LDgon 3-7522)  
Purch. Agent: Willis Cooney  
Asst. Purch. Agent: Paul Broderick  
Dir.-Sales: James H. Kannen M
- NATIONAL INSTRUMENT LABORATORIES, INC.**  
834 Everts St., N. E., Washington, D. C. (Tel. NDRth 7-7582)  
Purch. Agent: A. Bloom  
Sales & Adv. Mgr.: D. I. Steele
- NATIONAL LEAD CO.**  
111 Broadway, New York 6, N. Y. (Tel. REctor 2-9400)  
V. P.-Sales: William J. Welch R&I
- NATIONAL LOCK CO.**  
1902 Seventh St., Rockford, Ill. (Tel. WD 2-4455) MF, WN, PS, G
- NATIONAL METALLURGICAL CDRP.**  
P. O. Box 656, Springfield, Ore. (Tel. RIVERSide 6-3233)  
V. P. & Works Mgr.: W. E. Platte  
Secy.-Treas.: A. H. Nelson M
- NATIONAL MOLDITE CO.**  
250 South St., Newark, N. J. (Tel. MITchell 2-6860)  
Partners: Manuel Miller & Sidney Lowenberg MM, R&I
- NATIONAL PNEUMATIC CO., INC., HOLTZER-CABOT DIVS.**  
125 Amory St., Boston, Mass. (Tel. JAmica 4-7000)  
Dir.-Purch.: Sidney Coven  
Purch. Agent: Thomas Furlong  
Gen. Sales Mgr.: J. J. Anderson PS, GE, TS, TR
- NATIONAL RESEARCH CORP.**  
70 Memorial Dr., Cambridge, Mass. (Tel. ELiot 4-5400)  
Dir.-Purch.: James R. Caudill  
Buyers: R. T. Davis, G. E. Ryan & B. M. Sandock  
Contracts Mgr.: J. V. E. Hansen PS, GS, MM, R&D
- NATIONAL RESEARCH & DEVELOPMENT CORP.**  
15 Sixteenth St., N. E., Atlanta, Ga. (Tel. TRinity 3-2536)  
Pres.: Carsbie C. Adams R&D
- NATIONAL SCREW & MFG. CO., THE**  
2440 E. 75th St., Cleveland 4, Ohio. (Tel. ENdicott 1-2650); 3423 S. Garfield Ave., Los Angeles 22, Calif.  
Purch. Agent: J. O'Neill  
Asst. Purch. Agent: Paul Frederick  
Gen. Sales Mgr.: R. E. Black MF, WN, GS, GH, GE
- NATIONAL SPECIALTIES CO., INC.**  
1902 Howell St., Ft. Wayne 7, Ind. (Tel. ANTHONY 2341)  
Asst. Gen. Mgr.: Edward C. Doell GS
- NATIONAL SPECTRGRAPHIC LABS., INC.**  
6300 Euclid Ave., Cleveland 3, Ohio (Tel. UTah 1-4664)

Purch. Agent: Mrs. Lydia Milite  
V. P.-Sales: Donald R. Moore, Miami, Fla. (Tel. TXcdo 5-1691) TS, MM, R&O

ATIDNAL TEL-TRDNICS CRDP.  
52 St. Casimir Ave., Yonkers, N. Y. (Tel. YOnkers 8-6400)  
Purch. Agent: William Jarvis  
Sales Mgr.: Charles J. Siebert GE, TR

ATIDNAL TUBE OIV.-UNITED STATES STEEL CORP.  
525 William Penn Pl., Pittsburgh 30, Pa. (Tel. Express 1-2345) GS, MM

ATIDNAL ULTRASONIC CRDP.  
111 Montgomery Ave., Irvington 11, N. J. (Tel. ESsex 1-0550)  
V. P.-Purch.: Gilbert Tint  
Pres. & Gen. Mgr.: L. R. Jeffrey, Jr. MM, R&O

ATIDNAL UNIDN ELECTRIC CRDP.  
1201 E. Bell St., Bloomington, Ill. (Tel. 7-6041)  
Chief-Purch.: C. Hoover  
Sales Mgr.: H. B. Graham GE, TS, TR

ATIDNAL UTILITY CRDP.  
285 S. Arroyo Parkway, Pasadena 2, Calif. (Tel. SYcamore 3-6663)  
Purch. Agent: R. Kleeman  
Sales Mgr.: Miles Abbott MF, PS, GS, GH, TS

ATIDNAL VULCANIZED FIBRE CO.  
Maryland Ave. & Beech Sts., Wilmington, Del. (Tel. OL 5-6371)  
Dir.-Purch.: L. R. Clinton  
Buyer: R. L. Jackson  
Sales Mgr.: J. L. Kallahaer MF, WN, PS, GE, TR, MM

ATIDNAL WATER LIFT CO., OIV.-CLEVELAND PNEUMATIC INDUSTRIES, INC.  
2220 Palmer Ave., Kalamazoo, Mich. (Tel. FIlreside 5-8641)  
Purch. Agent: Edwin W. Rector  
Buyers: Harry Pindell, Richard Haaye, Joseph Krause, Fred Weissert & Jerry Hicks  
Chief, Contracts Admin.: M. E. Schnurr MF, R&O

ATIDNAL WELDING EQUIPMENT CO.  
218 Fremont St., San Francisco 5, Calif. (Tel. YUkon 6-2868)  
Pres. & Gen. Mgr.: E. L. Mathy

ATIDNAL-STANDARD CO.  
Howard & 8th Sts., Niles, Mich. (Tel. MUtual 3-8100)  
V. P.-Purch.: J. A. Mogle  
V. P.-Sales: R. W. Elder MF, PS, GS, TR, MM

ATYVAR CORP.  
211 Randolph Ave., Woodbridge, N. J. (Tel. FULTon 8-8800)

AVIGATION COMPUTER CORP.  
1621 Snyder Ave., Philadelphia 45, Pa. (Tel. Hlward 5-7700)  
Purch. Agent: J. Concordia  
Sales Mgr.: D. M. Biberman GE, CO, TS, TR

V. NAYBOR LABS., INC.  
26 Manarhaven Blvd., Port Washington, N. Y. (Tel. Port Washington 7-4300)  
Pres.: E. V. Naylor GS, GE, TR

Z-DAR CO.  
461 Milwaukee Ave., Chicago 10, Ill. (Tel. CHesapeake 3-1630)  
Purch.: Seymour Reiger  
Sales: R. E. Oron MF, PS, GS, GE, TS, TR

ZBEL MACHINE TOOL CORP.  
3401 Central Pkwy., Cincinnati 25, Ohio (Tel. LLiberty 2-3500)  
Purch. Agent: Jack D. Smith  
V. P.-Sales: Warren G. Rosendahl MF, WN, GS, GH

ZFF INSTRUMENT CORP.  
2211 E. Foothill Blvd., Pasadena, Calif. (Tel. RYan 1-5121)  
Purch. Agent & Prod. Mgr.: William P. Shaw  
Sales Mgr.: Donald B. Schneider GS, TS, TR

ZLSON LABS., INC.  
4718 Mason Ave., Hyattsville, Md. (Tel. WArfield 7-1116)  
Purch. Agent: Charles E. Barker  
Dir.-Sales: Ralph S. Baer GH

ZLSON STUD WELDING, OIV.-GREGORY INDUSTRIES, INC.  
Teledo Ave. at E. 28th St., Lorain, Ohio (Tel. Clifty 5-6931)  
Dir.-Purch.: Howard P. Nalley  
Dir.-Sales: R. E. McCinnis MM

ZLSON VACUUM PUMP CO.  
133 4th St., Berkeley 10, Calif. (Tel. ASHberry 3-2277)  
Agr.-Purch.: O. B. Webb  
Sales Mgr.: B. J. McClary GH, TS

ZMS CLARKE CO., OIV.-VITRO CORP. OF AMERICA  
19 Jesup-Blair Dr., Silver Spring, Md. (Tel. JUiniper

S-1000)  
Purch. Agent: D. E. Lanham  
Dir.-Sales: J. F. Whitehead TR

NESOR ALLOY PRODUCTS CO.  
282-4 Halsey St., Newark 2, N. J. (Tel. MITchell 2-1682)  
Purch.: Herbert Jacobsen & Marvin Feldman  
Dir.-Sales: Marvin Feldman MM, R&O

NETWORKS ELECTRONIC CORP.  
14806 Oxnard St., Van Nuys, Calif. (Tel. ST 2-3114)  
Purch. Agent: Mrs. Caroline Porter  
Buyer: Miss Sarah McCall TS, TR, R&D

NEUMAID PRODUCTS CORP.  
250 W. 57th St., New York 19, N. Y. (Tel. JUdson 6-5810)  
Exec. V. P.-Purch.: L. E. Jones

NEUTRONIC ASSOCIATES  
93-14 101st Ave., Ozone Park 17, N. Y. (Tel. VI 7-7703)  
Chief Engr.: Jose Hernandez GE, R&O

NEW BRITAIN MACHINE CO., THE, PRECISION PRODUCTS OIV.  
South St., New Britain, Conn. (Tel. BALdwin 9-1641)  
Dir.-Purch.: R. Hulbert  
Purch. Agent: J. Devokaitis  
Buyer: L. Bourquin  
Asst. Purch. Agent: E. Johnson  
Sales Mgr.: W. R. Knowles

NEW DEPARTURE DIV., GENERAL MOTORS CORP.  
269 N. Main St., Bristol, Conn. (Tel. LUDlow 2-6371)  
Dir.-Purch.: William J. Ryan  
Gen. Sales Mgr.: Leonard F. Swoyer MF, GE, TR, R&O

NEW ENGLANO ELECTRICAL WORKS, INC.  
365 Main St., Lisbon, N. H. (Tel. 8-6620)  
Exec. Asst.-Purch.: W. W. Jessemann  
Treos.: L. H. Dumdey GE, TR

NEW ENGLAND ETCHING & PLATING CO., INC.  
Spring St., Holyoke, Mass. (Tel. JE 2-9482)  
V. P.-Sales: Walter W. Morris MM

NEW ENGLAND INSTRUMENT CO.  
320 Main St., Woonsocket, R. I. (Tel. POplar 2-6232)  
V. P.-Purch.: Donald McGee  
Pres.: Paul Hines

NEW ENGLANO LAMINATES CO., INC.  
481 Canal St., Stamford, Conn. (Tel. DAVis 4-4181)  
Tech. Dir.-Purch.: Dr. D. E. Edgar  
Sales Mgr.: Bruce B. Greenfield GE, MM, R&O

NEW ENGLAND SCIENTIFIC INSTRUMENTS CO.  
238 Main St., Cambridge 42, Mass. (Tel. KI 7-1997)  
Gen. Mgr.: Or. Geoffrey Knight, Jr. PS, GE, CO, TS, TR

NEW ENGLANO TAPE CO., OIV.-UNITED-CARR FASTENER CORP.  
30 Tower St., Hudson, Mass. (Tel. HUDson 965)  
Purch. Agent: F. A. Keay  
Sales: H. M. Wilkoff MM

NEW ENGLANO TRANSFORMER CO., INC.  
47 McGrath Hwy., Somerville 43, Mass. (Tel. SOrmerst 6-6100)  
Pres. & Gen. Mgr.: H. F. S. Morris

NEW HAMPSHIRE BALL BEARINGS, INC.  
Peterborough, N. H. (Tel. WALnut 4-3311)  
Purch. Agent: W. R. Reekie  
Buyer: Marvin Hamper  
Sales Mgr.: George Hampton GS, GE, TR

NEW PROCESS METALS, INC.  
45-65 Manufacturers Place, Newark 5, N. J. (Tel. MArket 4-1380)  
V. P.-Gen. Mgr.: I. S. Hirschhorn  
Sales Mgr.: B. M. Berzon MM

NEW YORK AIR BRAKE CO., THE, WATERTOWN OIV.  
Starbuck Ave., Watertown, N. Y. (Tel. WATertown 7700)  
Dir.-Purch.: R. R. Petersen  
Purch. Asst.: H. A. Hardman  
Buyers: P. F. Hoag & R. H. Madden  
Gen. Sales Mgr.: H. R. Doughty, Jr. MF, PS, GS, GE

NEW YORK COIL CO., INC.  
48 Second Ave., Phoenixville, Pa. (Tel. WELlington 3-3114)  
Purch. Agent: Miss Ooris I. Oarlington  
Pres. & Sales Mgr.: J. R. Zirkmund GE, CO, TS, TR

NEW YORK & NEW JERSEY LUBRICANT CO.  
292 Madison Ave., New York, N. Y. (Tel. LEXington 2-2851)  
Purch. Agent: F. Roettinger PS

NEW YDRK RUBBER CORP.  
100 Park Ave., New York 17, N. Y. (Tel. OR 9-1300)  
Purch. Agent: H. J. Baxter  
V. P.-Sales: C. B. Allen R&O

NEW YORK SOLDER CD., INC.  
684 E. 133rd St., New York 54, N. Y. (Tel. CYpress 2-3740)  
Purch.: B. Gottlieb MF, PS, TR

NEW YDRK TESTING LABS., INC.  
47 West St., New York, N. Y. (Tel. BD 9-6220)  
Purch. Agent: J. Cassidy  
Tech. Dir.: G. J. Harvey TS

NEW YORK TRANSFORMER CO. INC.  
3rd Ave., Alpha, N. J. (Tel. GLencourt 4-1143)  
Purch. Agent: A. Micci GS, GE, TS, TR

NEW YORK TWIST ORILL CO., INC.  
276 Lafayette St., New York 12, N. Y. (Tel. WOrth 6-0551)  
Purch. Agent: Ernest Lazarus  
Exec. V. P.-Sales: Raymond M. Greenfield MM

NEWARK CDNTROLS CO.  
15 Ward St., Bloomfield, N. J. (Tel. PIlgrim 8-2971)  
Purch. Agent: O. Hess  
Pres.: B. A. Hicks

NEWARK WIRE CLDTH CO.  
351 Verona Ave., Newark, N. J. (Tel. HUmiboldt 3-7700)  
Purch. Agent: E. J. Korn  
V. P.-Sales: J. L. Campbell MF, PS, GS, GH, GE, TR

\*NEWAY EQUIPMENT CO.  
P. D. Box 425, 1183 E. Laketon Ave., Muskegon, Mich. (Tel. 6-2134)  
Purch. Agent: Fred Tuttle  
V. P.-Sales: George Bartlett GS, GH  
\*(See Page 56 for Advertisement)

NEWBROOK MACHINE CRDP.  
16 Mechanic St., Silver Creek, N. Y. (Tel. 44)  
Purch. Agent: J. P. Shaw  
Dir.-Sales: Gordon Kurtis MF, WN, PS, GS, GH, R&O

M. M. NEWMAN CORP.  
79 Clifton Ave., Marblehead, Mass. (Tel. NEptune 2-0637)  
Pres.: M. M. Newman MM

NEWTH RUBBER CO.  
County Rd., Barrington, R. I. (Tel. CHerry 5-8050)  
Purch. Agent: Charles F. Gladding  
Sales Mgr.: Richard T. Shortle MM

NEWTON CO., THE  
55 Elm St., Manchester, Conn. (Tel. MI 3-1543)  
Purch. Agent: Ernest Ehlers  
V. P.-Sales: Norman Neslon GS, GE

NEWTON HYDRAULIC TOOLING CO.  
P. O. Box 278, Auburn, Mass. (Tel. PLeasant 6-4695)  
Purch. Agent: A. Pratt  
Dir.-Sales: Gerald P. Welman

J. M. NEY CO., THE  
Box 990, Hartford 1, Conn. (Tel. CHapel 2-2281)  
Purch. Agent: Ralph Fothergill  
Buyer: Sharline Singleton  
Head-Sales: Fred I. Kent  
Mgr., Industrial Sales Office: John Boyle MM

NICAD OIV., GOULO-NATIONAL BATTERIES, INC.  
172 Pleasant St., Easthampton, Mass. (Tel. EAsthampton 1200)  
Purch. Agent: A. R. DUBY  
Gen. Sales Mgr.: L. R. Mannheim GS, GE, R&O

NICE BALL BEARING CO.  
30th & Hunting Park Ave., Philadelphia 40, Pa. (Tel. BALdwin 3-6000)  
Purch. Agent: F. P. H. Dimond  
V. P.-Sales: Theo E. Spilker

W. H. NICHOLS CO.  
48 Woerd Ave., Waltham 54, Mass. (Tel. TWInbrook 4-0650)  
Dir.-Purch.: W. E. Neese

CODING  
Missile Frame MF  
Warhead & Nose Cone WN  
Propulsion System PS  
Ground Support GS  
Ground Handling GH  
Guidance Equipment GE  
Checkout Equipment CO  
Test Equipment TS  
Tracking & Telemetering TR  
Research & Development R&D  
Materials & Metals MM

# ... purchasing directory nip—pac

- Asst. Dir.-Purch.:** R. H. Stearns  
**Sales Mgr.:** John Freeto PS, GS, GH
- NIPPERT ELECTRIC PRODUCTS CO., THE**  
1759 W. Mound St., Columbus 23, Ohio (Tel. 836-2444)  
V. P.-Purch.: J. E. Nippert MM
- NOBLE & WESTBROOK MFG., CO., THE**  
Westbrook St., East Hartford 8, Conn. (Tel. BU 9-2717)  
Secy.: R. H. Gunther
- NON-LINEAR SYSTEMS, INC.**  
Del Mar, Calif. (Tel. SKyline 5-1134)  
Purch. Agent: W. Clemens  
Dir.-Sales: R. C. Wynne CO, TS
- NOOTER CORP.**  
1400 S. 2nd St., St. Louis 4, Mo. (Tel. MAIN 1-6000)  
Dir.-Purch.: H. H. Lurtz  
V. P.-Sales: Arthur Schwarz PS, GS
- NOPO CHEMICAL CO.**  
60 Park Place, Newark, N. J. (Tel. HUMBoldt 3-6200)  
V. P.: G. G. Stier  
Purch. Agent: Foster Jones MF, WN, PS, GS, MM
- \*NORD AVIATION**  
12 bis, av. Bosquet, Paris (7e)  
Factory: 12/18 rue Beranger-CHATILLON-sous-BAGNEUX (Seine)  
Pres.: P. Mozer  
\*(See Page 7 for Advertisement)
- NORBERG MFG. CO.**  
3073 S. Chase Ave., Milwaukee, Wisc. (Tel. SHeridon 4-2345)  
Gen. Purch. Agent: F. T. Finley  
Mgr.-Sales: C. D. Friend GS, MM
- NOROEN KETAY CORP.**  
99 Park Ave., New York, N. Y.
- NORMANOV ELECTRIC WIRE CORP.**  
125 Second St., Brooklyn 31, N. Y. (Tel. TRiangle 5-9863)  
Mktg. Expediter: Lester W. Goody  
Purch. Dept.: Milton Imbey MF, GS, GH, CO, TS, TR
- NORRICH PLASTICS CORP.**  
107-109 W. 18th St., New York 11, N. Y. (Tel. WA 4-8360)  
Purch.: Norman L. Thaw  
Tech. Sales Mgr.: Richard E. Thaw
- NORRIS-THERMAOOR CORP.**  
5215 S. Boyle Ave., Los Angeles 58, Calif. (Tel. LUJalow 8-7111)  
Dir.-Purch.: R. R. Stoddard  
V. P.-Sales, Military Products: D. P. White MF, WN, R&O
- ERNST NORRMAN LABORATORIES**  
Lake Geneva, Wisc. (Tel. Circle 5-5516)  
Ernst Norrman GE, TS, TR, R&O
- NORSIO MFG. CO., INC., THE**  
33 Prospect St., Yonkers, N. Y. (Tel. YONkers 5-8145)  
Purch.: Jack Deutsch  
Sales: Harold Deutsch MF
- NORTH AMERICAN AVIATION, INC.**  
(See Autonetics Div., Missile Development Div., Rocketdyne Div.)
- NORTH AMERICAN ELECTRONICS, INC.**  
212 Broad St., Lynn, Mass. (Tel. LYnn 8-2835)  
Purch. Agent: Mario S. Bruno  
Sales Mgr.: Raymond W. Smith
- NORTH ATLANTIC INDUSTRIES, INC.**  
603 Main St., Westbury, N. Y. (Tel. EDgewood 4-1122)  
Purch. Agent: Walter Lipkin  
Sales Mgr.: John A. Gregorio GS, CO, TS
- NORTH ELECTRIC CO.**  
553 S. Market St., Gallion, D. (Tel. HDward 8-2420)  
Dir.-Mfg.: Joseph Dolland  
Purch. Agent: Col Snyder  
Chief Field Engr.-Sales: Howard Brewer GS
- NORTH HILLS ELECTRIC CO., INC.**  
402 Sagamore Ave., Mineola, N. Y. (Tel. Pioneer 7-0555)  
Pres.: S. Cramer  
Buyer: S. Nuchtern TS, TR, R&O
- NORTH SHORE NAMEPLATE INC.**  
214-27 Northern Blvd., Bayside, N. Y. (Tel. BAyside 4-4000)  
Pres.: E. T. Turney, Jr.  
Head-Sales: Margaret S. Turney MM
- NORTHEAST ELECTRONICS CORP.**  
P. O. Box 425, Airport Rd., Concord, N. H. (Tel. Capitol 5-6641)  
Purch.: R. L. Lincoln  
Sales: J. J. Dwyer TS, TR, R&D
- NORTHEAST SCIENTIFIC CORP.**  
617 Concord Ave., Cambridge 38, Mass. (Tel. UNiversity 4-2350)  
Pres.: Clement Moritz
- NORTHEASTERN ENGR. INC.**  
25 S. Bedford St., Manchester, N. H. (Tel. NATIONAL 2-6485)  
Buyer: R. Harris  
Head-Sales: C. N. Chagaris CO, TS
- NORTHERN ENGR. LABORATORIES, INC.**  
372 Wilmet Ave., Burlington, Wisc. (Tel. RDckwell 3-7155)  
Pres. & Sales Mgr.: John D. Holmbeck GE, TR, R&O
- NORTHERN ORNANCE INC., SUB-NORTHERN PUMP CO.**  
Columbia Heights, Minneapolis 21, Minn. (Tel. SUNset 8-8601)  
Purch. Mgr.: W. H. Bauer  
Purchasing: Vern Kinney & Tony Petrangolo  
Sales Mgr.: A. J. Bryant
- NORTHERN PLASTICS CORP.**  
2nd & Market St., La Crosse, Wisc. (Tel. 4-6070)  
Purch. Agent: S. L. Noe  
Head-Sales: G. C. Kroening MM
- NORTHPROP CORP.**  
9744 Wilshire Blvd., Beverly Hills, Calif. (Tel. CRestview 4-8061)  
Mgr.-Purch.: J. W. Hinchliffe MF, GS, GH, GE, CO, TS, TR, MM, R&O
- NORTHROP CORP., NORTRONICS DIV.**  
Electronic Systems & Equipment Dept., 222 N. Prairie Ave., Hawthorne, Calif. (Tel. DRegion 8-9111)  
Dir.-Materials: R. M. Cooper  
Chief Applications Engr.: T. J. Venator  
Purchasing Dept.: 2031 E. Moriposa, El Segundo, Calif. (Tel. DRegion 8-0411)  
Systems Support Dept.: 500 E. Orangethorpe, Anaheim, Calif. (Tel. LAmbert 3-4771)  
Dir.-Materials: C. W. Hood  
Chief Applications Engr.: E. W. Warnshuis MF, WN, GS, GH, GE, CO, TS, TR, R&O
- NORTHWESTERN ELECTRIC CO.**  
1750 N. Springfield Ave., Chicago 47, Ill. (Tel. DICKens 2-4400)  
Purch. Agent: Paul Christiansen  
Gen. Sales Mgr.: George D. Craig, Jr. GS, GH
- NORTON ASSOCIATES, INC.**  
P. O. Box 96, Garden City, N. Y. (Tel. IV 3-2968)  
V. P.-Sales: R. S. Norton GE, TR
- NORTON CO.**  
New Bond St., Worcester 6, Mass. (Tel. SWift 8-2511)  
Gen. Purch. Agent: G. D. Seguin  
Chief Buyer: H. H. Anderson MM, R&O
- NORTON CO., NEW PRODUCTS DEPT.**  
Worcester 6, Mass. (Tel. SW 8-2511)  
WN, PS, GS, TS, MM, R&O
- NORWALK CUTTER SHARPENING CO.**  
356 Ely Ave., South Norwalk, Conn. (Tel. VD 6-0560)  
Dir.-Sales: Harold W. Nadin
- NORWOOD CONTROLS UNIT, DETROIT CONTROLS DIV.**  
934 Washington St., Norwood, Mass. (Tel. NDRwood 7-4010)  
Purch. Agent: N. T. Ross  
Dir.-Sales: J. M. Devine GS, GH, TS
- NU STEEL CO.**  
1714 S. Ashland Ave., Chicago 8, Ill. (Tel. HAYmarket 1-5760)  
Pres.: Lew W. Cleminson MM
- NUCLEAR CORP. OF AMERICA, INC.**  
2 Richmond Pl., Denver, N. J. (Tel. OAKwood 7-4200)  
Purch. Agent: Michael Buff  
Sales Mgr.: David Silverstein TS, R&D
- NUCLEAR MEASUREMENTS CORP.**  
2464 N. Arlington Ave., Indianapolis 18, Ind. (Tel. LIBerty 6-2415)  
Purch. Agent: James L. Sommerville  
Chief Engr.: Herbert S. Fall  
Gen. Sales Mgr.: Carl L. Kegley
- NUCLEAR PRODUCTS-ERCO DIV.-ACF INDUSTRIES, INC.**  
Riverdale, Md. (Tel. WARfield 7-4444)  
Purch. Agent: R. C. Nill
- Sr. Buyers:** E. T. Wagner & H. L. Blaylock  
**Mktg. Mgr., Defense Products:** Conan J. Doyle  
GS, GH, CO, TS, R&I
- NUCLEAR-CHICAGO CORP.**  
223 W. Erie, Chicago, Ill. (Tel. DE 7-3060)  
Purch. Agent: Robert Young  
Sales Mgr.: Mel Shephard MM
- NUGENT ELECTRONICS CO., INC.**  
802 E. Eighth St., New Albany, Ind. (Tel. WHirehall 5-0211)  
V. P.-Purch.: J. D. Robinson
- PAUL NURCHES CO.**  
3250 Rido St., Pasadena, Calif. (Tel. SYcamore 6-5844)  
Mgr.-Purch. & Sales: Paul Nurches GS, CO, TS, R&I
- NUTRON MFG. CO. INC.**  
67 Monroe Ave., Staten Island 1, N. Y. (Tel. GIBralter 7-3229)  
Secy.-Treas.: Henry Scian GS, CO, TS
- NUTT-SHEL CO.**  
2701 S. Harbor Blvd., Santa Ana, Calif. (Tel. KIMberly 5-9311)  
Purch. Agent: P. Welsh  
Chief Sales Engr.: R. C. Poucher MF, P.
- OPW-JORDAN**  
6013 Wiehe Rd., Cincinnati 13, Ohio (Tel. EL 1-1352)  
Asst. Plant Mgr.: M. H. Hott  
Chief Sales Engr.: P. H. Coleman  
Sales Engr.: R. J. Peters  
Gen. Mgr.: G. B. Richards, Jr. GS, G
- O & S RESEARCH, INC.**  
1811 Bonnard St., East Riverport, N. J. (Tel. TALmage 9-2800)  
Purch. Agent: Edward R. Sanders  
Sales Mgr.: Donald G. Wright WN, TS, TR
- OAKITE PRODUCTS, INC.**  
19 Rector St., New York 6, N. Y. (Tel. WHirehall 3-0940)  
Purch. Agent: R. R. Burns  
Sales Mgr.: William A. Baltzell MF, WN, PS, GS, G
- OERLIKON TOOL & ARMS CORP. OF AMERICA**  
P. O. Box 3049, Asheville, N. C. (Tel. ALpine 3-6464)  
Chief-Procurement: William L. Hayes  
Research Engr.: R. L. Hoch WN, PS, R&I
- OFFNER ELECTRONICS INC.**  
3900 River Rd., Schiller Park, Ill. (Tel. GLadstone 1-0050)  
Purch. Agent: H. Lewis  
Sales Mgr.: G. W. Little TS, TR
- OHIO CARBON CO., THE**  
12508 Berea Rd., Cleveland 11, O. (Tel. CL 2-6100)  
Purch. Agent: R. Hawrylak  
V. P.-Sales: F. C. Aurand MU
- OHIO PRECISION CASTINGS, INC.**  
109 Webb St., Dayton 3, O. (Tel. CLearwater 3-4183)  
Pres.-Treas.: W. J. Prestel  
Dir.-Purch.: Mrs. Jeanette Diener MU
- OHIO SEAMLESS TUBE DIV.-COPPERWELO STEEL CO.**  
Shelby, O. (Tel. 3-1010)  
Purch. Agent: R. R. Underhill  
Asst. Purch. Agent: R. W. Winck  
Mgr.-Sales: J. E. Horner MU
- OHIO SEMICONDUCTORS, INC.**  
1035 W. Third Ave., Columbus 8, Ohio (Tel. AXminster 4-4938)  
Pres.: Dr. W. E. Bulman  
Treas.: L. A. Denton  
Dir.-Marketing: H. C. Dale  
Sales & Applications Mgr.: A. Jerencsik MM, R&I
- OHMART CORP., THE**  
2236 Bogen St., Cincinnati, Ohio
- OIL-DYNE, INC.**  
2115 W. Marquette Rd., Chicago 36, Ill. (Tel. HElock 4-2300)  
Purch. Agent: Andrew Poppas  
Dir.-Sales: John Warren G
- OIL-RITE CORP.**  
2318 Waldo Blvd., Manitowoc, Wisc. (Tel. MURray 2-2428)  
Purch. Agent: Gus Lukas  
Sales Mgr.: Merwin R. Scheider G
- OKONITE CO., THE, SUB-KENNECOTT COPPER CORP.**  
220 Passaic St., Passaic, N. J. (Tel. PRescott 7-0400)  
Purch. Agent: T. B. Woodcock  
V. P.-Mktg.: C. M. Kirkland MF, GS, GH, CO, TS, T

**LIN MATHIESON CHEMICAL CORP., ENERGY DIV.**  
460 Park Ave., New York, N. Y. (Tel. MU 8-0500)  
Branch Offices:  
Niagara Falls, N. Y. (Tel. BUtler 4-7811)  
Purch. Agent: J. C. Pfisterer  
Product Mgr.: J. H. Heck  
New Haven, Conn. (Tel. SPruce 7-7911)  
Purch. Agent: F. E. Plumley  
Product Mgr.: J. Jacox  
East Alton, Ill. (Tel. WOODriver 4-7311)  
Purch. Agent: W. A. Oakley  
Product Mgr.: W. P. Turner  
Washington, O. C. (Tel. OIstrict 7-2911)  
V. P.-Sales: Harry A. Sosnoski PS, R&D

**LIVER CORP., THE**  
400 W. Madison St., Chicago 6, Ill. (Tel. FRanklin 2-6969)  
V. P., Dir.-Purchases: L. P. Richie  
Dir.-Defense Operations: J. Hoynes  
V. P.-Sales: O. W. Koegle GS

**LIVER CORP., THE, A. B. FARQUHAR DIV.**  
142 N. Duke St., York, Penna. (Tel. 7801)  
Spec. Machinery & Ord. Sales Mgr.: J. Kugle  
Mech. & Hydraulic Press Sales Mgr.: P. Dunlop  
Conveyor Sales Mgr.: C. W. King  
Mgr.-Purch: Lester B. Hibner

**LYMPIC RADIO & TELEVISION, INC.**  
34-01 38th Ave., Long Island City, N. Y.

**EGA ELECTRONIC CORP.**  
Haverhill St., Rowley, Mass. (Tel. WHitney 8-3401)  
Treas.: H. B. Ribbel  
Sales: P. S. Huston

**EGA LABS, INC.**  
Haverhill St., Rowley, Mass. (Tel. WHitney 8-7757)  
Treas.: H. B. Ribbel GE, CO, TS, TR

**MARK COUPLINGS, INC.**  
4440 York Blvd., Los Angeles 41, Calif. (Tel. CLinton 4-2278)  
Purch. Agent: Kenneth Palmer  
Pres.: Barry B. Willis  
Chief Engr.: H. A. OeCenzo  
Sales Mgr.: Howard Sherman PS, GS, GH, CO, TS, R&D

**W. ONAN & SONS INC.**  
2515 University Ave., S. E., Minneapolis 14, Minn. (Tel. FE 2-1155)  
Dir.-Procurement: H. P. Richter  
Agr.-Purch. Dept.: L. V. Moen  
Gen. Sales Mgr.: R. E. Mullin GS

**HEIL-IRWIN MFG. CO.**  
751 Eighth Ave., Lake City, Minn. (Tel. 6301)  
Purch. Agent: L. C. Wickstrom  
Sales Mgr.: R. B. Malond

**SRUD CUTTER MFG. CO., INC.**  
100 E. Broadway, Libertyville, Ill. (Tel. 2-1560)  
Purch. Agent: Norbert Vess  
Sales Mgr.: Arthur R. Johnson MM

**SRUD MACHINE WORKS, INC.**  
720 N. Lehigh Ave., Niles 48, Ill. (Tel. Niles 7-8700)  
Purch. Agent: Frank Mascarello  
P.-Machine Tool Sales: Albert L. Breuer MF, WN, PS, GS

**CAD ELECTRIC CO.**  
3 Walker St., New York 13, N. Y. (Tel. WOrth 6-0380)  
Purch. Agent: J. McShay  
Ir.-Sales: H. L. Opad GS, TS

**CELIKA WELDING, MACHINE & SUPPLY INC.**  
200 Steel St., Opelika, Ala. (Tel. SHERwood 5-3524)  
Purch. Agent: J. P. Byrd  
Mgr.-Purch.: Wm. S. Harris  
P.-Sales: C. Foster MF, GS, GH, TS

**ICAL COATING LAB, INC.**  
17 Sebastopol Rd., Sonto Rosa, Calif. (Tel. LIBerty 5-6440)  
Administrative Mgr.: John McCullough  
Customer Liaison Mgr.: L. Vance Fisher  
Sales Mgr.: Ralf F. Hilsley  
Ad. Mgr.: G. Eugene Michel GE, TR, R&D

**OMIMIZED DEVICES, INC.**  
4 Franklin Ave., Thornwood, N. Y. (Tel. ROgers 9-6110)  
Ad. Mgr.: J. Murtha  
Sales Mgr.: A. Zuch GH, GE, CO, TS, R&D

**OMECHANISMS INC.**  
6 E. 2nd St., Mineola, N. Y. (Tel. Pioneer 6-5576)  
Purch. Agent: John Ferrante  
Sales Engrg. Mgr.: Roy T. Smith R&D

**OMETRIC TOOLS, INC.**  
17 Varick St., New York 13, N. Y. (Tel. ORegon 5-9076)

**Sales Mgr.: A. A. Crystle**  
**Gen. Mgr.: F. Koenig** GS, GE, CO, TS, TR

**ORANGE PRODUCTS, INC.**  
554 Mitchell St., Orange, N. J. (Tel. ORange 7-0900)  
Pres.: L. W. Schaper  
V. P. & Treas.: C. J. Gentile MM

**ORANGE ROLLER BEARING CO., INC.**  
557 Main St., Orange, N. J. (Tel. ORange 3-6161)  
Dir.-Purch.: James McGraw  
Dir.-Sales: T. E. Cushing PS

**ORBIT INSTRUMENT CORP.**  
656 Main St., Westbury, N. Y. (Tel. ED 4-8380)  
Purch. Agent: R. Schneider  
Sales Mgr.: H. Silberman GS, GE, CO, TS, TR, R&D

**ORBITRAN CO., INC.**  
11487 Woodside Ave., Lakeside, Calif. (Tel. HICKory 3-6832)  
Gen. Mgr.: E. W. Fischer GE, TR

**ORCHARD INDUSTRIES, INC., ACTIONFLEX DIV.**  
912 West State St., Hastings, Mich. (Tel. WIndsor 5-3404)  
Mgr.: Ernest H. Jacoby

**ORDNANCE DIV.-FOOD MACHINERY & CHEMICAL CORP.**  
1105 Coleman Ave., San Jose, Calif. (Tel. CYpress 4-8124)  
Mgr., Procurement: H. L. Hall  
Purchasing: H. V. Rogers  
Exp. Procurement: T. R. Johnson  
Mgr., Application Engrs.: H. Hammond GS, GH, R&D

**ORGANIC PRODUCTS CO.**  
2000 E. Irving Blvd., Irving, Tex. (Tel. BL 4-4342)  
Gen. Mgr.: Bert Wilson  
Plant Mgr.: S. S. Montgomery MM

**ORRADIO INDUSTRIES, INC.**  
Shomrock Circle, Opelika, Ala. (Tel. SHERwood 5-5771)  
Purch. Agent: Thad McEochin  
V. P.-Sales: Nat Welch

**ORTHO FILTER CORP.**  
196 Albion Ave., Paterson 2, N. J. (Tel. MUlberry 4-5858)  
Purch. Agent: William Levine  
Buyer: William McGrovey

**ORTMAN-MILLER MACHINE CO. INC.**  
19 143rd St., Hammond, Ind. (Tel. WEStmore 1-1710)  
Dir.-Purch.: A. H. Ortman  
Dir.-Sales: N. H. Ortman GS, GH, R&D

**ORYX CO.**  
9015 Wilshire Blvd., Beverly Hills, Calif. (Tel. BRAdshaw 2-6635)

**OSBORNE ELECTRONIC SALES CORP.**  
712 S. E. Hawthorne Blvd., Portland, Ore. (Tel. BELmont 2-0161)  
Purch. Agent: C. E. Stonecipher  
Sales Mgr.: T. E. Murphy GE, CO, TS, MM

**JOHN OSTER MFG. CO., AVIONIC DIV.**  
One Main St., Racine, Wisc. (Tel. MEIrose 3-6331)  
Purch. Agent: Roy Arcand  
Asst. Purch. Agent: Robert Stratman  
Buyers: Ray Carlson, Anthony Methenitis, Roy Woods, Pernell Bjerke & Hugo Zerbe  
Eastern Sales Mgr.: Irving G. Epstein  
Western Sales Mgr.: Ward S. Carlson PS, GS, GE, TS

**OTIS ELEVATOR CO., ELECTRONIC DIV.**  
35 Ryerson St., Brooklyn 5, N. Y. (Tel. ULster 5-6800)  
Purch. Agent: B. Katz  
Mgr., Customer Relations Dept.: J. B. McKinley GS, GH, CO, TS

**OVERLOAD CONTROL CO.**  
151 Pennsylvania Ave., Island Park, N. Y. (Tel. General 2-1431)  
Purch.: R. Ronnie  
Sales: Earl Elwyn Smith PS, GS, TS

**OWATONNA TOOL CO.**  
Owatonna, Minn. (Tel. 5591)  
Purch. Agent: Clarence P. Kaplan  
Dir.-Sales: J. A. Mullenmaster

**OXFORD COMPONENTS, INC.**  
556 W. Monroe St., Chicago, Ill. (Tel. FInancial 6-3623)  
Gen. Mgr.: T. Brown GE

**OXYGEN EQUIPMENT & SERVICE CO.**  
8335 S. Halsted St., Chicago 20, Ill. (Tel. HUdson 3-3800)  
Pres.: Albert E. McKee  
Purch. Agent: Donald J. Freeburg

**OZONE METAL PRODUCTS CORP.**  
101-32 101st St., Ozone Park 16, N. Y. (Tel. Virginia 6-3300)  
Pres.: Phillip Wiebel  
Purch. Agent: E. Kulick  
V. P.-Sales: W. E. Criley PS, GS

**PCA ELECTRONICS INC.**  
16799 Schoenborn St., Sepulveda, Calif. (Tel. EMpire 2-0761)  
Purch. Agent: Paul Kliebert  
Sales Mgr.: Charles Rubin GS, GH, GE, CO, TS

**PIC DESIGN CORP., SUB.-BENRUS WATCH CO., INC.**  
477 Atlantic Ave., E. Rockaway, L. I., N. Y. (Tel. LYnbrook 3-6470)  
Purch. Agent: Mrs. T. Bolzer  
Sales: P. Wellenberger MF, WN, PS, GS, GH, GE, CO, TS, TR, MM, R&D

**P.S.P. ENGRG. CO., DIV.-INDUCTION MOTORS CORP.**  
6058 Walker Ave., Maywood, Calif. (Tel. LUdlow 3-4785)  
Dir.-Purch.: Robert Morris  
Sales Mgr.: Lee Lambert GS, GE, CO, TS

**PACE ELECTRICAL INSTRUMENTS CO., INC.**  
70-31 84th St., Glendale 27, L. I., N. Y. (Tel. OVerport 6-3982)  
Dir.-Purch.: A. S. Weingast  
Industrial Sales Mgr.: G. N. Goldberger

**PACE ENGRG. CO.**  
13035 Saticoy St., N. Hollywood, Calif. (Tel. PO 5-0453)  
Purch. Agent: Sid Becker CO, TS, TR, R&D

**PACIFIC AUTOMATION PRODUCTS, INC.**  
1000 Air Way, Glendale, Calif. (Tel. CHApman 5-6871)  
Purch. Agent: Roland Eatrom  
Chief Liaison Engr.-Sales: William W. Buckley GS, GH, TR

**PACIFIC COAST ENGRG. CO.**  
Oak & Clement Sts., P. O. Orover "E", Alameda, Calif. (Tel. LA 2-6100)  
Purch. Agent: M. H. LaRue  
Gen. Sales Mgr.: J. P. Topley

**PACIFIC CUT WASHER CO.**  
2501 E. 56th St., Huntington Park, Calif. (Tel. LUdlow 3-6781)  
Gen. Mgr.: J. R. Bougher  
Sales Mgr.: John Remmers MM

**PACIFIC MAGNETIC CORP.**  
Electronic Center, Romoland, Calif. (Tel. Perris Exchange, OLYmpio 7-2637)  
Purch. Agent: J. A. Thomas  
Pres.: H. L. Mills  
Dir.-Engrg.: Gordon W. Johnson  
Dir.-Sales: J. A. Thomas GS, CO, TS

**PACIFIC MOULDED PRODUCTS CO.**  
905 E. 59th St., Los Angeles 1, Calif. (Tel. ADams 1-1151)  
Purch. Agent: William Okroy  
V. P.-Sales: C. E. Wilson MF, WN, PS, GE, MM

**PACIFIC OPTICAL CORP.**  
120 Glasgow, Inglewood, Calif. (Tel. ORegon 8-1139)  
Purch. Agent: Fred Hansen  
Pres.: John Ryde TR

**PACIFIC RADIONICS**  
2586 E. 67th St., Long Beach 5, Calif. (Tel. NEVado 6-0545)  
Purch. Agent: M. Binkley  
Dir.-Sales: C. C. Moore MF, WN, PS, GS, GH, GE, CO, TS, TR, MM, R&D

**PACIFIC RESISTOR & CABLE CO.**  
2186 Colorado Ave., Santa Monica, Calif. (Tel. EX 3-0531)  
Pres.: H. Guinness GS, GH, GE

**PACIFIC SCIENTIFIC CO.**  
P. O. Box 22019, Los Angeles 22, Calif. (Tel. SPruce 3-2020)  
Dir.-Sales & Serv.: Andre W. Reichel

**CODING**  
Missile Frame MF  
Warhead & Nose Cone WN  
Propulsion System PS  
Ground Support GS  
Ground Handling GH  
Guidance Equipment GE  
Checkout Equipment CO  
Test Equipment TS  
Tracking & Telemetry TR  
Research & Development R&D  
Materials & Metals MM

**... purchasing directory pac—pion**

Purch. Mgr.: M. R. Hartigan  
Buyers: Tim Tapping, L. B. Herr, Lee Marshek

**PACIFIC SEMICONDUCTORS, INC.**  
10451 W. Jefferson Blvd., Culver City, Calif.  
(Tel. TE 480-4881)

Purch. Agent: Harry Rosen  
Sales Mgr.: S. L. Spiegel **GE, TR**

**PACIFIC TUBE CO.**  
5710 Smithway St., Los Angeles 22, Calif. (Tel. Raymond 3-1331)  
Purch. Agent: W. H. Kepp  
Sales Mgr.: M. P. Armstrong **MF**

**PACIFIC UNIVERSAL PRODUCTS CORP.**  
168 Vista Ave., Pasadena, Calif. (Tel. RYan 1-7646)  
Mgr.: Charles Chopnick  
**MF, PS, GS, GH, GE, CO, TS, TR**

**PACIFIC VALVES, INC.**  
3201 Walnut Ave., Long Beach, Calif. (Tel. GARfield 7-5451; NEVada 6-9811)  
Dir.-Sales: Robert C. Macaulay **TS**

**PACKARD ELECTRIC DIV.-GENERAL MOTORS CORP.**  
Dano St., Warren, D. (Tel. 3250-1)  
Procurement Mgr.: D. E. Tritten  
Buyers: L. Raymond Clutter, K. F. Dymond, G. E. Gibbons, H. H. Grebe  
Dir.-Sales & Engrs.: L. C. Wolcott  
**MF, PS, GS, GH, GE, TS, TR, MM**

**\*PACKARD-BELL ELECTRONICS CORP.**  
12333 W. Olympic Blvd., Los Angeles 64, Calif. (Tel. BRadshaw 2-2171)  
Mgr.-Material: Wm. Winckler  
Purch. Agent: H. S. Crawford  
Dir.-Sales & Admin.: Hugh L. Vick  
**GS, GH, CO, TR, R&D**

*\*(See Page 64 for Advertisement)*

**PACO ELECTRONICS CO., INC.**  
70-31 84th St., Glendale 27, L. I., N. Y. (Tel. DAVenport 6-3982)  
Dir.-Purch.: A. S. Weingast  
Sales Mgr.: S. S. Sparer

**PALMER THERMOTERS, INC.**  
2501 Norwood Ave., Cincinnati, D. (Tel. ME 1-1500)  
Purch. Agent: S. Rolfsen  
Sales & Adv. Mgr.: Douglas H. Hitt  
**PS, GE, CO, TS, TR**

**PALD ALTO ENGRG. CO.**  
620 Page Mill Rd., Palo Alto, Calif. (Tel. DA 6-5360)  
Purch. Agent: Roger Earley  
Sales Engr.: Lloyd Burkhardt **GE, TR**

**\*PAN AMERICAN WORLD AIRWAYS, INC., GUIDED MISSILES RANGE DIV.**  
135 E. 42nd St., New York 17, N. Y. (Tel. OXFord 7-6300)  
Pres.: Juan T. Trippie  
V. P.'s: Samuel F. Pryor, John C. Leslie & Richard S. Mitchell

*\*(See Page 44 for Advertisement)*

**PANDUIT CORP.**  
14461 Waverly Ave., Midlothian, Ill. (Tel. Hilltop 5-3134) (Chicago)  
Sales Mgr.: J. E. Caveney

**PANEL ENGRG. CORP.**  
222 W. Huron St., Chicago 10, Ill. (Tel. SUperior 7-8461)  
Pres.: Robert K. Cameron **GE, TR, R&D**

**PANORAMIC RADIO PRODUCTS, INC.**  
520 S. Fulton Ave., Mt. Vernon, N. Y. (Tel. DWens 9-4600)  
V. P.-Purch.: Samuel Kleinman  
**MF, PS, GS, GE, CO, TS, TR**

**PAPER MFRS. CO.**  
9800 Bustleton Ave., Philadelphia 15, Pa. (Tel. DRchard 3-4500)  
Dir.-Purch.: J. Walker  
Chicago Fld. Sales Reps.: Robert J. Moore & Samuel Du Bois, 510 N. Dearborn St., Chicago, Ill.  
N. Y. State (Northern) Fld. Sales Rep.: Don Carroll, 308 Collins Ave., Fayetteville, N. Y.  
N. Y. & N. J. Fld. Sales Rep.: Joseph I. Shields (Tel. N. Y. C.—DLgby 9-3720)  
N. Y. C. & New England Fld. Sales Rep.: Charles R. Weber, Philadelphia office **TR**

**PAPESCH & KOLSTAD, INC.**  
P. D. Box 3726, 10703 Capital Ave., Dok Park 37, Mich. (Tel. Lincoln 7-6400)  
V. P.-Purch.: M. R. Papesch **MF, WN, PS, GS, TS**

**PARGON ELECTRIC CO.**  
1600 12th St., Two Rivers, Wisc. (Tel. 303)

Purch. Agent: G. J. Powalish  
V. P.-Sales: Read W. Eldred **CO**

**PARAGON-REVOLUTE CORP.**  
77 South Ave., Rochester 4, N. Y. (Tel. BAKER 5-2480)

Purch. Agent: W. T. Nurse  
Asst. Purch. Agent: Helen Schaefer  
Sales Mgr.: B. W. Johnson

**PARAMETERS, INC.**  
195 Harricks Rd., New Hyde Park, N. Y. (Tel. Pioneer 6-0155)  
Sales Mgr.: John R. Crawford **MF, PS, GS, GE, TS**

**PARAMOUNT DESIGNS CO.**  
408 Jay St., Brooklyn 1, N. Y. (Tel. UL 5-6161)  
Dir.-Tech. Services: Bert K. Graham  
Supvr.-Field Services: S. Davidowitz  
Sales Mgr.: William Varley (Tel. DVerbrook 1-1700)  
**GS, GE, TR, R&D**

**PARAMOUNT PAPER TUBE CORP.**  
614 S. Lafayette St., Ft. Wayne 2, Ind. (Tel. A-4197)  
Gen. Mgr.: R. R. Weimer **MF, PS**

**PARAPLEGICS MFG. CO., INC.**  
10066 Franklin Ave., Franklin Park, Ill. (Tel. GLadstone 5-1697)  
Purch. Agent: Alvin F. Engel  
Dir.-Sales: Harry G. Bendtsen **GS, CO**

**PARISH PRESSED STEEL, DIV.-DANA CORP.**  
Box 1422, Robeson & Weiser Sts., Reading, Pa. (Tel. FRanklin 3-2111)  
Dir.-Purch.: E. R. Kohl  
Purch. Agent: W. H. Fahnstock  
Buyers: C. R. Kline & E. Hartman  
Sales Mgr.: S. L. Whitehall **MF, WN, PS, GS, GH**

**PARK NAMEPLATE CO., INC.**  
34-10 Linden Pl., Flushing 54, N. Y. (Tel. FLushing 9-7000)  
Purch. Agent: Charles Birnback  
V. P.-Sales: David Kend **MM**

**PARKER AIRCRAFT CO.**  
5827 W. Century Blvd., Los Angeles 45, Calif. (Tel. SP 6-1221)  
Purch. Agent, Hydraulic Div.: E. Hillock  
Purch. Agent, Air & Gas Div.: W. Parker  
Purch. Agent, Missile Fittings Div.: T. James  
V. P.-Sales: A. V. Zukas **GS, GH, MM, R&D**

**PARKER FITTINGS & HOSE DIV., PARKER-HANNIFIN CORP.**  
17325 Euclid Ave., Cleveland 12, Ohio (Tel. KE 1-3000)  
Purch. Agent: F. A. Jenkins  
Gen. Sales Mgr.: D. A. Cameron  
Div. Sales Mgr.: W. D. Wynant **PS, GS, GH**

**PARKER HYDRAULICS DIV., PARKER-HANNIFIN CORP.**  
17325 Euclid Ave., Cleveland 12, Ohio (KE 1-3000)  
Purch. Agent: E. J. Anderson  
Gen. Sales Mgr.: D. A. Cameron  
Div. Sales Mgr.: E. C. Davis **GS, GH**

**PARKER SEAL CO., DIV.-PARKER-HANNIFIN CORP.**  
10567 Jefferson Blvd., Culver City, Calif. (Tel. VERmont 9-1161)  
Purch. Agent: Paul Glasford  
V. P.-Sales: T. J. McCuiston  
**MF, WN, PS, GS, GH, GE, CO, TS, TR, MM, R&D**

**PARKER-HARTFORD CORP., THE**  
Franklin Ave., Hartford, Conn. (Tel. CHapel 6-1651)  
V. P.-Purch.: Tom Daly  
Sales Mgr.: Wesson Miller **GE, TR**

**RALPH M. PARSDNS CD., THE, ELECTRONICS DIV.**  
151 S. De Lacey Ave., Pasadena, Calif. (Tel. Los Angeles—RYan 1-0461)  
Mgr.-Prac.: Daniel M. Dgden  
Mgr.-Bus. Dev.: Edson C. Lee **GS, CO, TS, TR**

**PARSONS DIAMOND PRODUCTS, INC.**  
22 Grassmore Ave., West Hartford 10, Conn. (Tel. ADams 6-2303)

**PARTS ENGRG. CO., INC.**  
760 N. Marshall Ave., El Cajon, Calif. (Tel. HILckory 4-9481)  
Purch. Agent: Charles W. Sandlin  
Dir.-Sales: James J. Kinsella **MF, PS, GH, R&D**

**PATTERSON MDOS DIV.-UNIVERSAL WINDING CO., INC.**  
90-28 Van Wyck Expressway, Jamaica 18, N. Y. (Tel. AXtel 7-4400)  
Purch. Agent: Howard L. Abeel  
V. P.-Sales: Dr. Anthony M. Moos  
**WN, PS, GS, GH, GE, CO, TS, TR, R&D**

**PATWIN, DIV.-PATENT BUTTDN CO.**  
41 Brown St., Waterbury 20, Conn. (Tel. PLaza

6-3636)  
Purch. Agent: W. A. Carpenter  
Sales Mgr.: F. D. Stratton

**F. H. PAUL & STEIN BROTHERS, INC.**  
235 5th Ave., New York 16, N. Y. (Tel. MU 4-6370)

**PAUL & BEEKMAN, INC.**  
1801 Courtland St., Philadelphia 40, Pa. (Tel. DAVenport 9-9050)  
Works Mgr.: David R. Barnhart  
V. P.-Sales: J. E. Schmidt  
**MF, WN, PS, GS, GH, GS, TS**

**HOWARD E. PAYNE**  
56 Beaverbrook Dr., Dayton 32, Ohio (Tel. CHapel 4-5600)  
Consultant & Representative

**PEARSON ELECTRONICS, INC.**  
707 Urban Lane, Palo Alto, Calif. (Tel. DA 5-3147)  
Pres.: Dr. Paul A. Pearson

**PECK & HARVEY MFG. CORP.**  
5650 N. Western Ave., Chicago 45, Ill. (Tel. EDgewater 4-2200)  
Purch. Agent: Bert Kemp  
Sales Mgr.: S. A. Harvey **R8**

**PEE CEE TAPE & LABEL CO.**  
521 N. La Brea Ave., Los Angeles 36, Calif. (Tel. WEbster 8-2134)  
Purch. Agent: C. W. Richardson  
Gen. Mgr.: Sydney Gevritz  
Sales Mgr.: Don Gevritz

**PEER, INC.**  
1220 Milton St., Benton Harbor, Mich. (Tel. WALnut 5-8828)  
Mgr.: Alton B. Parratt

**PEERLESS ELECTRIC CO., THE**  
1401 W. Market St., Warren, Ohio (Tel. EXpress 3-1551)  
Purch. Agent: R. C. Isler  
Mgr., Fan & Blower Div.: Walter A. Curtis

**PEERLESS ELECTRONICS, INC.**  
5338 Alhambra Ave., Los Angeles 32, Calif. (Tel. CApital 1-5196)  
Sales: Robert Monroe  
Purch. Agent: E. N. Hough **GS, GH, GE, R&D**

**PEERLESS MACHINE CO.**  
5338 Alhambra Ave., Los Angeles 32, Calif. (CApital 1-5196)  
Office Mgr.: E. N. Hough  
Sales Mgr.: E. A. Pierson

**PEERLESS PATTERN WORKS**  
29 Clinton Ave., Middletown, Conn.  
Alfred P. Schultze

**PEERLESS PHOTO PRODUCTS INC.**  
Tesla Rd., Shoreham, N. Y. (Tel. 4-2817)  
Purch. Agent: Pat Hajek  
Sales: Arthur Toder

**PEERLESS TOBACCO INDUSTRIES**  
812 N. Pulaski Rd., Chicago 51, Ill. (Tel. BElmont 6-9883)  
Buyers: Walt Griffing  
Sales Mgr.: V. Mathews **MF, WN, PS, GS, GE, T**

**PEERLESS PUMP DIV., FOOD MACHINERY & CHEMICAL CORP.**  
301 West Ave. 26, Los Angeles 31, Calif. (Tel. CApital 1-3151)  
Purch. Agent: W. I. Nye  
Sales Mgr.: E. W. Lundy **PS, GS, GH, T**

**PEIRCE DICTATION SYSTEMS**  
5900 N. Northwest Hwy., Chicago 31, Ill. (Tel. RDney 3-3220)  
V. P.-Purch.: Emil C. Steinbach  
Purch. Agent: Stanley L. Domin **R8**

**PENBERTHY MFG. CO.**  
1242 Holden St., Detroit 2, Mich. (Tel. TRinity 5-0900)  
Sales Mgr.: A. N. Lindeman **GS, GH, CO**

**PENETONE CO., THE**  
Tenafly, N. J. (Tel. LDwell 7-3000)  
Purch. Mgr.: H. R. Horskell  
Purch. Agent: C. Goldberg  
Dir.-Sales: H. E. Roberts **WN, PS, GS, G**

**PENFIELD MFG. CO., INC.**  
19 High School Ave., Meriden, Conn. (Tel. BE 5-1694)  
Gen. Mgr.: Edward H. Clohessy

**PENN FIBRE & SPECIALTY CO., INC.**  
2024 El Westmoreland St., Philadelphia 34, Pa. (Tel. REgent 9-5642)  
V. P.-Sales: William K. Davis  
Purch. Agent: William H. Frey  
Asst. Purch. Agent: J. P. Dwyer, Jr.  
**MF, WN, PS, GE, T**

**ENN KEYSTONE CORP.**  
100 Hawkins St., P. D. Box 350, Derby, Conn.  
(Tel. REgent 4-3301)  
Purch. Agent: Robert A. Nagel  
Dir.-Engrg. & Sales: Rollin D. Vanderbeek  
WN, GS, CO, R&D

**ENN-MICHIGAN MFG. CORP.**  
220 S. Kirk St., West Lafayette, Ohio (Tel. Lincoln 5-6311)  
Purch. Agent: L. F. Hawbert  
Asst. Purch. Agent: William Lilja  
Sales Mgr.: J. S. Hall  
MM

**ENNSALT CHEMICALS CORP.**  
3 Penn Center, Philadelphia 2, Pa. (Tel. LDcuster 4-4700)  
Mgr., Commercial Dev. Dept.: R. W. Slaan  
PS, MM, R&D

**ENNSYLVANIA PUMP & COMPRESSOR CO.**  
Easton, Pa. (Tel. 3-4276)  
Purch. Agent: R. Beadle  
Sales Mgr.: W. E. Anderson  
GS, GH

**ENN-TRAN CORP.**  
E. Bishop St., Ext., Bellefonte, Pa. (Tel. ELgin 5-4747)  
Purch. Agent: E. E. Grine  
Secy.-Treas.: N. H. Krauss

**ENTA LABS., INC.**  
312 N. Napa St., Santa Barbara, Calif. (Tel. Wdadland 5-4581)  
Purch. Agent: J. D. Thwing  
Sales Mgr.: R. L. Norton  
GS, CO, TS, R&D

**PERFECTION INDUSTRIES, DIV.-HUPP CORP.**  
1135 Ivanhoe Rd., Cleveland 10, D. (Tel. ULster 1-6200)  
Purch. Agent: J. S. Zarn  
V. P., Mobile Products: F. W. Hattenrath  
Mgr., Specialty Sales, Mobile Products: W. E. Hamilton  
Mgr., Heater Sales, Mobile Products: H. C. Gerbath  
Buyers: D. Fetzer & H. H. Holdeman  
GS, GH, R&D

**REFLECTO CAST**  
5660 Kearney Villa Rd., San Diego 11, Calif. (Tel. BRawning 7-6711)  
Plant Mgr.: Ralph F. Carlson  
Pres.: George Wilson  
MM, R&D

**PERFORMANCE MEASUREMENTS CO.**  
5301 W. McNichols Rd., Detroit 35, Mich. (Tel. VEment 8-7879)  
Purch. Agent: Harry Edwards  
Sales Mgr.: Lous H. Larime  
CO, TS

**IRKIN ENGRG. CORP.**  
145 Kansas St., El Segundo, Calif. (Tel. DR 8-7215)  
Purch. Agent: Pat Cereilo  
Sales Mgr.: George W. Mousel  
GS, CO, TS, TR, R&D

**RKIN-ELMER CORP.**  
Main Ave., Norwalk, Conn. (Tel. VICTOR 7-2422)  
Dir.-Purch.: Patrick D'Garman  
Asst. Purch. Agent: George Hodge  
Electronic Buyer: Arthur Cummings  
Buyers: William Duda, David Fournier, Lew Jason  
Sales-Electro-Optical Div.: C. B. Hazard  
Sales-Instrument Div.: John H. Rhoads  
Sales-Vernistrot Div.: Eugene W. Dunstan  
GS, CO, TS, TR

**IRKINS MACHINE & GEAR CO.**  
Circuit Ave., West Springfield, Mass. (Tel. REpublic 7-4751)  
Sales Mgr.: Philip O'Shan  
GS, GE

**IRMACEL**  
J. S. Hwy. #1, New Brunswick, N. J. (Tel. CHarter 7-7900)  
Purch. Agent: J. S. Babby  
Buyers: J. E. Graver & G. Radcliffe  
V. P.-Sales: G. A. Fitzgerald

**IRMANENT FILTER CORP.**  
800 W. Washington Blvd., Los Angeles 7, Calif. (Tel. REpublic 1-7381)  
Chief Purch. Agent: Gardner Reynolds  
Sales Mgr.: Charles Schoefer  
PS, GS, GH, GE, TS

**IRMATAX CO., INC.**  
400 Broadway, Huntington Sta., N. Y. (Tel. HAMILTON 1-3800)  
Purch. Agent: C. Carpenter, Jr.  
Sales Mgr., Indst. Div.: Frank P. Reggio  
GS, MM

**IRMAX PRODUCTS DIV., CHISHOLM-RYDER CO., INC.**  
Highland & College Ave., Niagara Falls, N. Y. (Tel. BUHer 5-9186)  
Dir.-Purch.: Larry Fischer  
Mgr.-Permax Div.: B. B. Mitchell

**IRMAXFLUX PRODUCTS CO.**  
101 San Fernando Rd., Glendale 4, Calif. (Tel. CHapman 55-135)  
Purch. Agent: S. H. Ise

Dir.-Sales: L. M. Heineman  
GS, GH, GE, CO, TS, TR

**PERRY PLASTICS, INC.**  
3409 W. 14th St., Erie, Pa. (Tel. 6-2961)  
Purch. Agent: Harold K. Siegmund  
Dir.-Sales & Defense Contract Officer: Lincoln S. Lave

**PESCHEL ELECTRONICS, INC.**  
R.F.D. 1, Patterson, N. Y. (Tel. TRinity 8-3251)  
Pres.: Stephen S. Peschel  
GS, GE, CO, TS, TR

**PESCO PRODUCTS DIV.-BORG-WARNER CORP.**  
24700 N. Miles Rd., Bedford, Ohio (Tel. MONtrase 2-2100)  
Mgr.-Purch.: H. L. Sanders  
Purch. Agent, Non-Prod.: G. T. Weidinger  
Purch. Agent, Prod.: W. C. Erwin  
V. P.-Sales: M. W. Nesbitt  
PS, GS, GE, R&D

**PETITBONE MULLIKEN CORP.**  
4700 W. Division St., Chicago, Ill. (Tel. SPaulding 2-9300)  
Purch. Agent: T. M. Cavender  
Asst. Purch. Agent: H. T. Samuels  
Steel Buyer: C. R. Slacum  
Fabricated Parts Buyers: L. Knopp, A. J. Salman, W. C. Hinz  
Sales: J. M. Hume  
MF, WN, GS

**PHALD PLASTICS CORP.**  
530 Boston Tpke., Shrewsbury, Mass. (Tel. VIKING 4-4021)  
Purch. Agent: H. A. Werme  
V. P.-Sales: A. N. Averill

**PHASTRON INSTRUMENT & ELECTRONIC CO.**  
151 Pasadena Ave., S. Pasadena, Calif. (Tel. CLinton 5-1471)  
Purch. Agent: Al Lowenstein  
V. P.-Sales: H. J. Veitch  
WN, PS, GS, GE, CO, TS, TR

**PHELPS DODGE COPPER PRODUCTS CORP.**  
300 Park Ave., New York, N. Y. (Tel. PLaza 1-3200)  
Purch. Agent: P. G. Lee  
Mgr.-Stryflex Cable Div.-Sales: F. W. Lemly  
GS, GH, CO, TS

**PHILADELPHIA GEAR WORKS, INC.**  
Erie Ave. & G St., Philadelphia, Pa. (Tel. GA 6-9400)  
Purch. Agent: Mr. Morts  
Sales Mgr.: Howard Murray  
PS, GS

**PHILADELPHIA INSULATED WIRE CO.**  
200 N. 3rd St., Philadelphia 6, Pa. (Tel. MARKET 7-0456)  
Purch. Agent: E. B. Sheridan, Sr.  
Sales Mgr.: Robert W. Campbell  
GE, CO, TS, TR, MM, R&D

**GERGE A. PHILBRICK RESEARCHES, INC.**  
285 Columbus Ave., Boston 16, Mass. (Tel. CD 6-5375)  
Gen. Mgr.: John F. Dawd  
Sales & Appl. Engrg.: Daniel H. Sheingold  
R&D

**PHILCO CORP., GOVERNMENT & INDUSTRIAL DIV.**  
4700 Wissahickan Ave., Philadelphia 44, Pa. (Tel. VICTOR 3-4000)  
Purch. Mgr.: John R. McAllister  
Mktg. Mgr.-Govt. Prods.: Frank D. Langstroth  
GS, GH, GE, CO, TS, TR, R&D

**PHILCO CORP., LANSDALE TUBE CO. DIV.**  
Church Rd., Lansdale, Pa. (Tel. ULysses 5-4681)  
Purch. Agent: A. G. McIlvaine  
Buyers: Alan Dayton, W. R. Lewis, R. Haughs, E. C. Lutz, B. Carroll, C. Cressman  
Asst. Buyer: Mary Barhalehem  
Gen. Sales Mgr.: Cyrus H. Warshaw  
R&D

**PHILIPS & DAVIES INC.**  
1030 Steiner Ave., Kenton, O. (Tel. 2-1120)  
Purch. Agent: G. R. Leaffert  
V. P.-Sales: J. W. Stuckey  
MF, WN, GS, GH, TS

**PHILLIPS AVIATION CO.-MARPLES GEARS**  
1525 Monterey Rd., S. Pasadena, Calif. (Tel. RYan 1-1161)  
Dir.-Purch.: George Bentz  
Dir.-Sales: H. David McRoe  
GS, GH, GE

**PHENIX PRODUCTS CO.**  
4715 N. 27th St., Milwaukee, Wis. (Tel. UP 1-1680)  
Purch. Agent: H. W. Heard  
Asst. Mgr., Metal Spinning Div.: Edwin Weiss  
MF, WN, PS, GS, GE

**PHOTOBELL CO., INC.**  
43 Vesey St., New York 7, N. Y. (Tel. WORth 2-6739)  
Purch. Agent: S. Faber  
Gen. Mgr.: A. Edelman  
MF, GH, GE, CO, TS, TR

**PHOTODN RESEARCH PRODUCTS**  
421 N. Altadena Dr., Pasadena, Calif. (Tel. SYcamore 2-4131)

Purch. Agent: Jean Hicks (Tel. RYan 1-6752)  
Dir.-Sales: P. C. Ganzell  
CD, R&D

**PHOTO-CRYSTALS, INC.**  
15 S. First St., Geneva, Ill. (Tel. GENEva 7150)  
Purch. Agent: W. A. Bailey  
Secy.-Treas.: J. J. Bailey  
TS, R&D

**PHOTODRAMMETRY, INC.**  
922 Burlington Dr., Silver Spring, Md. (Tel. UNiper 5-4600)  
Purch. Agent: H. B. Miracle  
R&D

**PHOTODMATIDN, INC.**  
96 S. Washington Ave., Bergenfield, N. J. (Tel. DUmat 4-3411)  
Dir.-Purch.: H. Sarube

**PHOTOVDLT CORP.**  
95 Madison Ave., New York 16, N. Y. (Tel. MURray Hill 6-3350)  
Purch. Agent: H. W. Lindemann  
V. P.-Sales: B. A. Silard  
CD, TS, R&D

**PHOTRON INSTRUMENT CO.**  
6516 Detroit Ave., Cleveland 2, D. (Tel. ATLantic 1-7020)  
Sales: N. H. Fayerweather  
TS

**PHYSICS RESEARCH LABORATORIES, INC.**  
P. D. Box 555, Hempstead, N. Y. (Tel. IVanhoe 3-8299)  
Tech. Dir.: J. B. Kelley  
Mgr.: J. G. Goward  
TS, R&D

**PIASECKI AIRCRAFT CORP.**  
Island Rd., International Airport, Philadelphia 42, Pa. (Tel. SARatoga 7-9750)  
Acting Purch. Agent: William M. Collins  
Treas.: J. J. Hensel  
Pres.-Sales: F. N. Piasecki  
MF, WN, GS, GH, R&D

**PICKER X-RAY CORP.**  
25 S. Broadway, White Plains, N. Y. (WH 8-0080)  
TS, R&D

**PICKERING & CO., INC.**  
Sunnyside Blvd., Plainview, L. I., N. Y. (Tel. OVerbrook 1-0200)  
Purch.: Richard Neuffer  
GS, GE, CD

**PIEZD CRYSTAL CO.**  
265 E. Pomfret St., Carlisle, Pa. (Tel. 1495)  
Dir.-Purch. & Sales: Herman Shall  
V. P.: Wallace Samuelson  
GE, TR

**PILGRIM PRODUCTS INC.**  
277 Central St., West Acton, Mass. (Tel. Acton, CDlanial 3-7368)  
Purch. Agent: Marie E. Houghton  
Gen. Mgr.: L. P. Wilder  
MM

**PILDT CHEMICALS, INC.**  
36 Pleasant St., Watertown 72, Mass. (Tel. WATertown 4-7775)  
Business Mgr.: M. A. Sigal  
MM, R&D

**PINES ENGRG. CO. INC.**  
601 Walnut St., Aurora, Ill. (Tel. TW 6-7701)  
Purch. Agent: W. J. Carlson  
Asst. Purch. Agent: J. J. McKeogee  
Sales Mgr.: J. E. Hawking

**PIONEER ALUMINUM INC.**  
5251 W. Imperial Hwy., Los Angeles 45, Calif. (Tel. DREGan 8-7621)  
Purch. Agent: K. R. Cannon  
V. P.-Sales: Vern Ammerman  
MF, PS, GH

**PIONEER INDUSTRIES DIV., ALMAR-YDRK CD. INC.**  
3455 W. Vickery, Fort Worth 7, Tex. (Tel. ED 2-7387)  
Pres.: A. W. Stubbeman, Sr.  
V. P.-Sales: Frank B. Self  
TS, MM, R&D

**PIONEER PARACHUTE CO., INC.**  
168 Forrest St., Manchester, Conn. (Tel. MITchell 9-5211)  
Pres.: Lyman H. Ford

**PIONEER TOOL & ENGRG. CO.**  
7401 W. Lawrence Ave., Chicago 31, Ill. (Tel. UNDERhill 7-7500)

CODING	
Missile Frame	MF
Warhead & Nose Cone	WN
Propulsion System	PS
Ground Support	GS
Ground Handling	GH
Guidance Equipment	GE
Checkout Equipment	CO
Test Equipment	TS
Tracking & Telemetering	TR
Research & Development	R&D
Materials & Metals	MM

# ... purchasing directory pit—rad

- Purch. Agent:** Harry Kaminski  
**Sales Engr.:** M. W. Punch      **WN, GS, GE, CO, TS**
- PITTSBURGH CORNING CORP.**  
1 Gateway Center, Pittsburgh 22, Pa. (Tel. COurt 1-2900)  
**V. P.-Sales:** R. E. Buckley  
**Purch. Agent:** B. B. Caffo, P. O. Box 39, Port Allegany, Pa. (Tel. Port Allegany 2-2552)  
**Purch. Agent:** G. E. Gibbs, P. O. Box 72, Sedalia, Mo. (Tel. Taylor 6-4660)      **MM, R&O**
- PITTSBURGH OES MOINES STEEL CO.**  
3476 Neville Island, Pittsburgh 25, Pa. (Tel. FE 1-3000)  
**Purch. Agent:** G. L. Bader  
**V. P. & Sales Mgr.:** T. W. Fautleroy      **GS, GH, TS, R&D**
- PLASTECK, INC.**  
P. O. Box 551, Poteau, Okla. (Tel. 705)  
**Purch. Agent:** J. Roy Farley  
**Pres.:** E. A. Neugass      **MM**
- PLASTIC AGE SALES, INC.**  
14300 Davenport Rd., Saugus, Calif. (Tel. NEWhall 1530)  
**Purch. Agent:** Adolf Kramer  
**Sales Engr. Coordinator:** Edward M. Commeford      **MF, WN, PS, MM, R&O**
- PLASTIC FILM CO., INC.**  
Plainfield, Conn. (Tel. Moosup, Conn., L0gan 4-2741)  
**Contrallor:** George E. Hogert  
**V. P.-Mgr., Indsl. Sales:** T. A. Lancaster
- PLASTOID CORP.**  
42-61 24th St., Long Island City 1, N. Y. (Tel. STIllwell 6-6200)  
**Purch. Agent:** Ernest Brown  
**Asst. Purch. Agent:** Abe Rosenberg  
**Sales-Serv. Mgr.:** Don J. Nichols, Hamburg, N. J. (Tel. Van Dyck 7-7141)      **MF, PS, GS, GH, CO, TS, TR**
- PNEU-HYDRO VALVE CORP.**  
364 Glenwood Ave., East Orange, N. J. (Tel. ORange 7-1200)  
**Purch. Agent:** Robert Demmert  
**Pres.:** George T. Stern      **WN, PS, GS, GH, GE, CO, TS**
- PNEUMAFIL CORP.**  
2516 Wilkinson Blvd., Charlotte, N. C. (Tel. EXpress 9-7441)  
**Purch. Agent:** Thomas H. Lasley  
**Mechanics Sales Mgr.:** J. B. Deyton, Jr. V. P.-Sales: J. Walter Barr      **MM, R&D**
- JOSEPH E. POGGER CO., INC.**  
16 S. Marshall St., Philadelphia 6, Pa. (Tel. WALnut 5-7878)  
**Sales Mgr.:** Willard A. Lees
- POLARAO ELECTRONICS CORP.**  
43-20 34th St., Long Island City 1, N. Y. (Tel. EXeter 2-4500)  
**Dir.-Purch.:** L. Lieberman  
**Buyers:** Jack Marks, B. Flax, I. Wasserman & D. Rosenbloom  
**Sales Mgr.:** A. A. Goldberg      **CO, TS, TR, R&O**
- POLAROID CORP.**  
119 Windsor St., Cambridge 39, Mass. (Tel. UNiversity 4-6000)  
**Dir.-Purch.:** P. E. Sullivan  
**Asst. Dir.-Purch.:** H. R. Pickering  
**Purch. Engr.:** G. W. Bramhall  
**Sales Mgr., Polarizer Div.:** J. H. Mulhall
- JOSEPH POLLAK CORP.**  
85 Freeport St., Boston 25, Mass. (Tel. AVenue 2-9550)  
**V. P.-Purch.:** Henry Brandt  
**Purch. Agent:** James Burns  
**Sales Mgr.:** H. A. MacOdonald      **R&O**
- POLYKEN SALES DIV., THE KENOALL CO.**  
309 W. Jackson Blvd., Chicago, Ill. (Tel. WEbster 9-7100)  
**Dir.-Purch.:** J. F. Karl  
**Gen. Sales Mgr.:** W. J. Hodges      **MM**
- POLYMER CORP., THE**  
2120 Fairmont Ave., Reading, Pa. (Tel. FRanklin 6-7241)  
**Purch. Agent:** Alvin S. Mollatrat  
**Sales Mgr.:** Robert E. Barhold      **MF, WN, PS, GS, GE, TR, MM**
- POLYPHASE INSTRUMENT CO.**  
E. 4th St., Bridgeport, Montgomery Co., Pa. (Tel. BRoadway 9-4660)  
**Purch. Agent:** D. C. Morris  
**Sales Mgr.:** D. J. Seifert      **GE, CO, TS**
- POLY-SCIENTIFIC CORP.**  
Callege Ave., Blacksburg, Va. (Tel. PR 2-8212)
- Purch. Agent:** Herbert H. Albert  
**V. P.-Sales:** A. S. Hackley      **GE, R&O**
- POLYTECHNIC RESEARCH & DEVELOPMENT CO., INC.**  
202 Tillary St., Brooklyn 1, N. Y. (Tel. ULster 2-6800)  
**Dir.-Purch.:** Walter A. Cuskie  
**Electronic Buyer:** Frank H. Roberts & James J. Alfieri  
**Subcontract Buyers:** Alphonse Pristupa & A. C. Heidman  
**Misc. Buyer:** John La Scala  
**Expeditors:** Walter Ezoch & Frank Sidoti  
**Sales Mgr.:** Harry C. Nelson      **TS**
- POMONA ELECTRONICS CO., INC.**  
1126 W. 5th Ave., Pomona, Calif. (Tel. NAtional 9-9549)  
**Purch. & Sales Mgr.:** Carl Wm. Musarro      **GE, R&D**
- POROLOY EQUIPMENT, INC.**  
14943 Califa St., Van Nuys, Calif. (Tel. STate 6-2670)  
**Purch. Agent:** D. S. Draves  
**Dir.-Sales & Engr.:** W. N. Caldwell      **PS, GS, GH**
- PORTCHESTER INSTRUMENT CORP.**  
114 Wilkins Ave., Port Chester, N. Y. (Tel. WEstmore 9-4092)  
**Buyer:** Mrs. Frances B. O'Brien  
**Pres.:** Irving M. Gross      **GE**
- H. K. PORTER CO., INC.**  
74 Foley, Somerville 43, Mass. (Tel. PRospect 6-8200)  
**Purch. Agent:** W. E. Coffey  
**V. P.-Sales:** H. M. Webster      **MF, WN, PS, GS, TS**
- H. K. PORTER CO., INC., FORGE & FITTINGS DIV., CLEVELAND FORGE WORKS**  
3270 E. 79th St., Cleveland 4, Ohio (Tel. MI 1-5200)  
**Purch. Agent:** P. A. Heideman  
**Sales Mgr.:** E. M. Smith      **GS, GH**
- H. K. PORTER CO., INC., NATIONAL ELECTRIC DIV.**  
Porter Bldg., Pittsburgh, Pa. (Tel. EXpress 1-1800)  
**Purch. Agent:** George L. Davis  
**Gen. Mgr.:** R. C. Bennett, Jr.
- H. K. PORTER CO., INC., THERMO OIV.**  
Tacony & Comly Sts., Philadelphia 24, Pa. (Tel. JEHerson 3-4800)  
**Dir.-Purch.:** T. J. Gorman  
**Gen. Sales Mgr.:** E. G. Counselman      **PS, GS**
- PORTLAND COPPER & TANK WORKS INC.**  
80 2nd St., S. Portland, Me. (Tel. SPRuce 9-3341)  
**Purch. Agent:** Willard James  
**Buyer-Special Prods. Div.:** John Curran  
**Sales Mgr.:** Harry Higgins      **MF, WN, PS, GS, GH, R&D**
- POSITIVE LOCK WASHER CO., THE**  
181 Vanderpool St., Newark 5, N. J. (Tel. BIGelow 3-8460)  
**Gen. Mgr.:** Fred J. Goll
- L. POTTER, INC.**  
4040 Hempstead Tpke., Bethpage, N. Y. (Tel. PE 5-7000)  
**Asst. Treas.:** O. P. Oeffenbach  
**Secy.:** John Potter      **GH**
- POTTER AERONAUTICAL CORP.**  
U. S. Rt. 22, Union, N. J. (Tel. MIdrdoek 6-3010)  
**Purch. Agent:** Harry Carlson  
**Gen. Sales Mgr.:** Irving Hirsch      **PS, GS, CO, TS**
- POTTER & BRUMFIELO INC.**  
Princeton, Ind. (Tel. FULTon 5-5251)  
**Purch. Agent:** Charles Schrader  
**Asst. Purch. Agent:** Everett Cox  
**Gen. Sales Mgr.:** Nelson Havill      **GE**
- POTTER CO., THE**  
1950 Sheridan Rd., N. Chicago, Ill. (Tel. DEXeter 6-4350)  
**Dir.-Purch.:** Richard Glogovsky  
**Sales Mgr.:** William L. Miller      **PS, GS, GE, TR**
- POTTER INSTRUMENTS CO., INC.**  
Cutter Mill Rd. at Ipswich, Great Neck, N. Y.
- HAROLO H. POWELL CO.**  
2102 Market St., Philadelphia 3, Pa. (Tel. L0cust 7-5285)  
**Purch. Agent:** Joseph Harris  
**V. P.:** J. Lewis Powell      **PS, GS, GE, CO, TS, TR**
- POWER DESIGNS INC.**  
89-25 130th St., Richmond Hill, N. Y. (Tel. VIRginia 9-3675)  
**Purch. Agent:** Irwin Wald  
**Chief Engr.:** Milton Geller  
**Pres.:** Herb Roth      **TS, TR**
- POWER SOURCES, INC.**  
South Ave., Burlington, Mass. (Tel. BRowning 2-3000)  
**Buyer:** Bob Stetson  
**Sales Mgr.:** Jon B. Jolly      **GS, GE, T**
- POWER SUPPLIES INC.**  
Rt. 143, P. O. Box 169, Highland, Ill. (Tel. 2139)  
**Purch. Agent:** Dale Rutz  
**Sales Mgr.:** Dorsey Roerj      **GS, C**
- POWERS REGULATOR CO., THE**  
3400 Oakton St., Skokie 66, Ill. (Tel. OR 3-6700)  
**Purch. Agent:** R. C. Guhr  
**Asst. Purch. Agents:** R. Bennett & V. Wiland
- POWER-TRONIC SYSTEMS INC.**  
10 Pine Ct., New Rochelle, N. Y. (Tel. NE 2-2200)  
**Purch. Agent:** J. Tranos  
**V. P.-Sales:** Edmund D. Holland      **GE, TR, R&D**
- PRATT & WHITNEY AIRCRAFT DIV., UNITED AIRCRAFT CORP.**  
400 Main St., East Hartford 8, Conn.
- PRECISE DEVELOPMENT CORP.**  
2 Neil Ct., Oceanaside, N. Y. (Tel. Rockville Centre 6-0171)  
**Dir.-Sales:** Melville Byron  
**Dir.-Purch.:** Charles Rollings      **GS, GE, CO, T**
- PRECISION APPARATUS CO., INC.**  
70-31 84th St., Glendale 27, L. I., N. Y. (Tel. DAVenport 6-3982)  
**Dir.-Purch.:** A. S. Weingast  
**Sales Mgr.:** S. S. Sparer
- PRECISION CASTINGS, INC.**  
1550 Superior Ave., Costa Mesa, Calif. (Tel. LIBerty 8-2278)  
**V. P.-Prod.:** Charles R. Salmon  
**Dir.-Sales:** John J. Hall      **MF, GH, MM**
- PRECISION CASTPARTS CORP.**  
4600 S. E. Harney Dr., Portland 6, Ore. (Tel. PRospect 5-4391)  
**Admin. Asst. for Purch.:** Miss E. G. Graham  
**V. P. & Sales Mgr.:** K. H. Pierce      **MM, R&D**
- PRECISION CIRCUITS, INC.**  
705 S. Fulton Ave., Mt. Vernon, N. Y. (Tel. MOUNT Vernon 4-3737)  
**V. P.-Purch.:** Herbert L. Schwartz  
**Dir.-Sales:** Charles Sabel      **GS, GE, CO, TS, TR, R&I**
- PRECISION ELECTROPLATING CO.**  
519 S. Oakley Blvd., Chicago 12, Ill. (Tel. SEeley 3-5855)  
**Dir.-Purch.:** James Zacharias  
**Dir.-Sales:** Richard Zacharias      **MF, WN, PS, G**
- PRECISION EQUIPMENT CO., INC.**  
1740 Crenshaw Blvd., Torrance, Calif. (Tel. NEVada 6-5701)  
**Production Coordinator:** John Pavack  
**Pres.:** Richard Gilman      **G**
- PRECISION, INC.**  
4748 France Ave. N., Minneapolis, Minn. (Tel. JU 8-9441)  
**Pres.:** A. H. Benner  
**V. P.-Sales:** D. G. Benner      **GE**
- PRECISION LINE INC.**  
63 Main St., Maynard, Mass. (Tel. TWIn Oaks 7-2451)  
**Gen. Mgr.:** L. M. Burgess  
**Sales Mgr.:** Paul Hokanson      **MF, GS, GE, TS, TR, R&D**
- PRECISION METALSMITHS, INC.**  
1081 E. 200 St., Cleveland 17, Ohio (Tel. IVanhoe 1-8900)  
**Purch. Agent:** E. K. Hutchinson  
**Sales Mgr.:** W. W. Lamb      **GE**
- PRECISION METHODS & MACHINES DIV.-TEXTRON INC.**  
Cumberland Dr., Waterbury 20, Conn. (Tel. PLaza 6-3651)  
**Dir.-Purch.:** Edward Jankowski  
**Buyers-Proj. Engr.:** Thomas Kepinski & Ross Upton  
**Sales Engr.:** K. T. Starkweather      **GS, GF**
- PRECISION PLATING CO., INC., THE**  
Field Rd., Somers, Conn. (Tel. THompsonville, RI 9-8337)  
**Pres.:** Theodore M. Bauer  
**Office Mgr.:** Richard H. Bauer      **PS, GE, R&D**
- PRECISION RESTOR CO. INC.**  
109 U. S. Hwy. No. 22, Hillside, N. J. (Tel. BIGelow 3-3890)  
**L. E. Wright, Jr.**      **GE, TR**
- PRECISION SHAPES, INC.**  
15 Washington Ave., Suffern, N. Y. (Tel. SUFFern 5-0226)  
**Procurement Mgr.:** Ronald Lockyer  
**Sales Mgr.:** Norman M. Oickson      **MF, MM**



**REVISION SHEET METAL, INC.**  
5235 W. 104th St., Los Angeles 45, Calif. (Tel. 5Spring 6-2620)  
Sales Mgr.: Frank Csupak  
Material Mgr.: Russ Manning MF, GS, GH, R&D

**REVISION THERMOMETER & INSTRUMENT CO.**  
1434 Brandywine St., Philadelphia 30, Pa. (Tel. 4Rittenhouse 6-6671)  
Purch. Agent: I. H. Shubin  
Sales Mgr.: Carl H. Waser

**REVISION TUBE CO., INC.**  
Church Rd. & Wissachick Ave., North Wales, Pa. (Tel. OXbow 9-4806)  
Purch. Agent: Otto Chvoka  
V. P.-Sales: Matthew F. Balch, Jr. MF, PS, GS, GH, CO, MM

**RE-FLITE INDUSTRIES CORP.-SUB.-AVCO MFG. CORP.**  
16706 S. Garfield Ave., Paramount, Calif. (Tel. NEvada 6-0292)  
Purch. Agent: Bruce Green  
V. P.-Engng. & Sales: A. J. Dillon, Jr. GS, GH, TS

**R. P. PREIS ENGRAVING MACHINE CO.**  
651 U. S. Highway 22, Hillside 5, N. J. (Tel. MU 6-7736)  
Purch.: M. H. Preis  
Prod. Mgr.: J. A. Hoffmann GS

**REMIER METAL PRODUCTS CO.**  
337 Manida St., New York 59, N. Y. (Tel. WYandotte 1-6600)  
V. P.-Purch.: Mayer Faynberg  
Sales Mgr.: E. Kossoy MF, GS, GH, GE, TR

**REMIER RESEARCH LABORATORIES, INC.**  
79-85 7th Ave., New York 11, N. Y. (Tel. ALgonquin 5-0700)  
Purch. Agent: W. J. Gutman  
Sales Mgr.: M. H. Proelsdorfer GS, GE, TR

**REGG MFG. INC.**  
11 Market St., Stamford, Conn. (Tel. DA 5-1301)  
Pres.: John Stambaugh

**RESSED STEEL TANK CO.**  
1445 S. 66th St., Milwaukee 14, Wisc. (Tel. GReenfield 6-0500)  
Purch. Agent: R. E. Holmes  
Mfr.-Industrial Prods. Div.: T. V. Montgomery MF, WN, PS, GS, R&D

**RESSTITE DIV., AMERICAN-MARIETTA**  
39th & Chouteau, St. Louis 10, Mo. (Tel. MOhawk 4-6000)  
Purch. Agent: G. C. Weston  
Mfr., Indsl. Sales: R. H. Knight MM

**REWITT AIRCRAFT CO.**  
Holly & Madison Aves., Clifton Heights, Pa. (Tel. MADison 6-6500)  
Purch. Agent: F. Edwin Davis  
Engr.-Sales: David F. Thompson WN, GE, R&D

**R. W. PRICE CORP.**  
1161 W. Pico Blvd., Los Angeles 64, Calif. (Tel. GRanite 6-7911)  
Dir.-Sales: Russ C. Bremner MF, GS, GH

**RICE ELECTRIC CORP.**  
E. Church & 2nd Sts., Frederick, Md. (Tel. MONument 3-5141)  
Purch. Agent: Robert H. Haines  
Sales Mgr.: Don C. Leith GS, GE, CO, TR

**RINTED ELECTRONICS CORP.**  
North Ave., Natick, Mass. (Tel. OLYmpic 5-0070)  
Purch. Agent: Gilman N. Fernald  
V. P.-Sales: Richard G. Zens

**RINTRONICS CORP.**  
127 El Camino Real, Palo Alto, Calif. (Tel. DA 6-7446)  
Business Mgr.: Otto J. Feucht, Jr.  
V. P.-Sales: Maury Russ GS, GE, CO, TS

**R. F. PRITCHARD & CO. OF CALIFORNIA, DIV.-J. F. PRITCHARD & CO.**  
625 Roanoke Pkwy., Kansas City, Mo.  
Gen. Sales Mgr.: W. R. Roeyer

**ROBESCOPE CO. INC.**  
Sagamore Hill Dr., Port Washington, N. Y. (Tel. PO 7-8150)  
TS, TR, R&D

**ROCESS & INSTRUMENTS**  
5 Stone Ave., Brooklyn 33, N. Y. (Tel. GLEnmore 2-8380)  
Dir.-Purch.: L. Peimer MF, PS, GS, CO, TS, R&D

**RODELIN INC.**  
407 Bergen Ave., Kearny, N. J. (Tel. WYman 1-8600)  
Purch.: G. D. Higgins & R. Munley  
Purch. Agent: G. H. Higgins TR

**RODUCT & INDUSTRIAL ENGRG. CORP.**  
806 S. Four Mile Run Dr., Arlington 6, Va. (Tel. JACKson 4-6565)  
V. P., Secy. & Treas.: C. J. Ritchie, Jr. R&D

**RODUCTION SERVICES CORP. THE**  
81 Market Sq., Newington 11, Conn. (Tel. MOhawk 6-3363)  
Pres.: R. H. Whitney MF, WN, GS, GH, R&D

**RODUCTS RESEARCH CO.**  
3126 Los Feliz Blvd., Los Angeles 39, Calif. (Tel. NORmandy 5-5951)  
Material Mgr.: R. Brooks Parker  
Sales Mgr., Aircraft, Missile & Allied Electrical Products: W. L. Smith MM, R&D

**ROJECT FABRICATION CORP.**  
112-20 14th Ave., College Point 56, N. Y. (Tel. FLushing 9-2122)  
Dir.-Purch.: T. R. Scandura  
Dir.-Govt. Cust. Relations: Karl E. Heden GS

**ROJECTS UNLIMITED INC.**  
1926 E. Siebenthaler Ave., Dayton 14, Ohio (Tel. CR 8-4244)  
Pres.: D. S. Wyse  
Asst.-Purch.: Bus Mason GS, CO, TS

**\*ROPELLEX CHEMICAL DIV., CHROMALLOY CORP.**  
Box 187, Edwardsville, Ill. (Tel. 3400)  
Purch. Agent: S. J. Meister  
Dir.-Customer Relations: A. M. Zollars MF, PS, R&D  
\*(See Page 81 for Advertisement)

**ROSPECT SCREW MACHINE PRODUCTS**  
Rek Lane, Prospect, Conn. (Tel. Waterbury, Conn., PLaza 9-9460)  
Owner: M. A. Pugliese PS, GE, CO, TR, R&D

**ROTAIR CORP.**  
4086 Del Rey Ave., Venice, Calif. (Tel. EXmont 1-6241; TEXas 0-4807)  
V. P.-Purch.: John D. Goldson  
Sales Mgr.: H. Lacock

**ROTECTIVE COATINGS, INC.**  
Box 3985, Detroit 27, Mich. (Tel. VE 6-4664)  
H. Tom Colford

**ROTEX-A-COTE, INC.**  
161 Delancy St., Newark 5, N. J. (Tel. MITchell 2-8292)  
Pres.: Ira Zeitlin  
V. P.-Sales: David R. Minkoff MM

**ROY WELDING & MFG. INC.**  
Modena, Pa. (Tel. COatesville 2442)  
Secy.-Treas.: Gilbert H. Pry GS, GH

**ROYOR MARKING PRODUCTS**  
434 S. Wabash Ave., Chicago 5, Ill. (Tel. HA 7-0495)  
Gen. Mgr.: D. J. Wilken GS

**PSYCHOLOGICAL RESEARCH ASSOCIATES, INC.**  
(West Coast) 15537 Ventura Blvd., Encino, Calif. (Tel. STate 8-2700); (East Coast) 507 18th St., S., Arlington 2, Va. (Tel. OTis 4-6600)  
West Coast Repres.: Harold E. Price  
East Coast Repres.: James F. Parker R&D

**PUBLIC INFORMATION PROGRAMS, INC.**  
6047 Hollywood Blvd., Hollywood 28, Calif. (Tel. HOLlywood 2-7377)  
Business Mgr.: James H. Flint  
Gen. Mgr.: David R. Showalter

**PULSE ENGRG. INC.**  
2657 Spring St., Redwood City, Calif. (Tel. EMerson 8-3331)  
Purch. Agent: John Devine GE, TR

**PURE CARBON CO. INC.**  
441 Hall Ave., St. Marys, Pa. (Tel. TE 4-1578)  
Purch. Agent: H. W. McGeehin  
V. P.-Sales & Engrg.: M. C. Burr MF, PS, GE, TS

**PURITAN COMPRESSED GAS CORP., AVIATION DIV.**  
2012 Grand Ave., Kansas City 8, Mo. (Tel. HARRison 1-2122)  
Aviation Sales Mgr.: F. C. Stebbins MF, PS, GS, GH

**PURULATOR PRODUCTS INC.**  
970 New Brunswick Ave., Rahway, N. J. (Tel. FLitton 8-4000)  
Purch. Agent: John T. Gaffney  
Gen. Sales Mgr.: R. T. Karr GS

**PYLE-NATIONAL CO., THE**  
1334 N. Kosnier Ave., Chicago 51, Ill. (Tel. DIckens 2-6300)  
Purch. Agent: Carl Mackprang  
Asst. Purch. Agents: Charles Skobel & William Sheridan  
V. P.-Mktg.: E. M. Nesvig  
Mgr.-Connector Div. (Missile Prod. Sales): J. Shearer GS

**PYLES INDUSTRIES, INC.**  
20855 Telegraph Rd., Detroit 41, Mich. (Tel. KE 4-3820)  
Purch. Agent: H. T. Gerald

**V. P.-Sales: C. M. Singleton  
Gen. Sales Mgr.: Clifford G. Davis GS**

**PYRAMID ELECTRIC CO.**  
507 26th St., Union City, N. J. (Tel. UNION 5-1776)  
Distributor Sales Mgr.: J. Poff  
Purch. Agent: Joseph Poitras, Orange St., Darlington, S. C. (Tel. DARlington 1983)  
Indsl. Sales Mgr.: J. Starr (Tel. DARlington 1983)

**PYROFILM RESISTOR CO., INC.**  
U. S. Highway 46, Parsippany, N. J. (Tel. DEerfield 4-8282)  
Pres.: John M. Hinkle GE, TR

**PYROMETER INSTRUMENT CO., INC.**  
92 Portland Ave., Bergenfield, N. J. (Tel. DUMont 4-5140)  
Purch. Agent: J. Crystall  
Sales: A. Bollerman TS

**Q. O. S. CORP.**  
Bronx Blvd. at 216th St., New York 67, N. Y. (Tel. OLInville 4-3930)  
Purch. Agent: Elliott Reiss GE, CO, TS, TR

**Q. Y. S. INC.**  
20 N. 15th St., E. Orange, N. J. (Tel. ORange 3-3996)  
Pres.: M. E. Fogle

**Q-CIRCUITS, DIV.-ETCHING CO. OF CALIF.**  
1208 Howard St., San Francisco 3, Calif. (Tel. MArket 1-7670)  
Gen. Mgr.: Sterling Call  
Dir.-Sales: Harry Scott GE, CO, TS, TR

**QUAN-TECH LABS.**  
236 Mt. Kemble Ave., Box 505, Morristown, N. J. (Tel. JEfferson 8-4350)  
Bus. Mgr.: Fred R. Stampfli  
Sales Mgr.: Ronald C. Pittenger R&D

**QUIETROLE CO.**  
395 St. John St., Spartanburg, S. C. (Tel. 8996)  
Gen. Mgr.: Robert O. Monk  
Dir.-Sales: Ralph M. Rouse MM

**QUINCY COMPRESSOR CO.**  
217 Maine St., Quincy, Ill. (Tel. BA 2-7700)  
Purch. Agent: Richard Busch  
Sales Mgr.: Loren Gillhouse GS

**QUTRONIC SEMI CONDUCTOR CORP.**  
525 Broadway, New York 12, N. Y. (Tel. WAlker 5-3424)  
Purch. Agent: E. H. Loganoff  
Engr.: M. S. Luck  
V. P. & Plant Mgr.: Peter Toong MF, WN, PS, GE, TS, TR, R&D

**QUTRONIC TRANSFORMER CORP.**  
525 Broadway, New York, N. Y. (Tel. WORth 2-3639)  
Dir.-Purch.: E. H. Loganoff  
Purch. Agent: Angelo Losmosco  
Gen. Mgr.: Louis L. Weintraub MF, WN, PS, GS, GH, GE, CO, TS, TR, R&D

**R. C. L. MFG. CO.**  
New Jersey Ave., Riverside, Burlington Co., N. J. (Tel. HObert 1-1003)  
Pres.: Charles T. Gamble

**R & R ENGRG. CO.**  
25 Fernwood Ave., New Castle, Del. (Tel. OLYmpic 6-0531)  
Dir.-Purch.: Richard A. Weber  
Dir.-Sales: Robert R. Gulick PS, GS, R&D

**RS ELECTRONICS CORP.**  
435 Portage Ave., P. O. Box 368, Station A, Palo Alto, Calif. (Tel. DAVenport 3-1130)  
Mgr.-Material: Frank C. Kerr TR, R&D

**RACINE HYDRAULICS & MACHINERY INC.**  
2000 Albert St., Racine, Wisc. (Tel. MEIrose 3-3561)  
Purch. Agent: G. Fritchen  
Sales Mgr. Cont. Sales: Robert Veraar

**RADAR DESIGN CORP.**  
P. O. Box 38, Pickard Dr., Syracuse 11, N. Y. (Tel. GLEnview 4-4418)  
Pres.: Glyn Bostick

CODING	
Missile Frame	MF
Warhead & Nose Cone	WN
Propulsion System	PS
Ground Support	GS
Ground Handling	GH
Guidance Equipment	GE
Checkout Equipment	CO
Test Equipment	TS
Tracking & Telemetry	TR
Research & Development	R&D
Materials & Metals	MM

# ... purchasing directory rad—rim

- RAOAR RELAY, INC.**  
2322 Michigan Ave., Santa Monica, Calif. (Tel. EXbrook 4-2230; TEXas 0-1526)  
Chief Engr.: Kurt W. Kuhn  
Pres. & Gen. Mgr.: Wm. C. Arrasmith  
GE, CO
- RADEX CORP.**  
2076 Elston Ave., Chicago 14, Ill. (Tel. ARmitage 6-6900)  
Purch. Agent: R. R. Cook  
GE, TS
- RADIAL BEARING CORP.**  
Taylor St., Danbury, Conn. (Tel. Pioneer 8-2577)  
Pres.: Leo Papiash  
Mgr.: M. Krouots  
MF, GE
- RADIAL CUTTER MFG. CORP.**  
831 Bond St., Elizabeth, N. J. (Tel. ELizabeth 5-9000)  
Purch.: Lucien Revol  
Sales: George S. Mackrin
- RAOIJANT LAMP CORP.**  
300 Jelliff Ave., Newark, N. J. (Tel. Bigelow 3-6850)  
Purch.: L. Mocerino  
Sales Mgr.: Carl L. Krueger  
GS, GE
- RAOIAPHONE CO. INC.**  
600 E. Evergreen St., Monrovia, Calif. (Tel. Elliott 8-2585)  
Purch. Agent: H. E. Adams, Jr.  
Mgr.-Contracts Dept.: W. H. Schetter  
GS, CO, TS, TR, R&O
- RAOIATION DYNAMICS, INC.**  
1800 Shames Drive, Westbury, L. I., N. Y. (Tel. EOGewood 4-3990)  
V. P.: Marshall R. Cleland  
Prod. Mgr.: Don C. Reynolds  
Engr.: Howard F. Malone  
R&O
- RAOIATION, INC.**  
Melbourne, Fla. (Parkway 3-1511)  
Purch. Agent: W. R. Pierpont  
Sr. Buyer: J. I. Markham  
Electronics Buyer: L. R. Helsler  
Industrial Buyer: O. L. Campbell  
Mechanical Buyer: G. S. Vandegriff  
V. P.-Contracts: W. W. Oodgson, Jr.  
GS, GH, GE, CO, TS, TR, R&O
- RAOIATION INSTRUMENT DEVELOPMENT LAB., INC.**  
5737 S. Halsted, Chicago 21, Ill. (Tel. TRIangle 3-2345)  
Purch. Agent: J. F. Miller  
Sales Mgr.: W. J. Buffer
- RAOIATION RESEARCH CORP.**  
1114 First Ave., New York, N. Y. (Tel. TEmpleton 8-2513)  
Purch. Agent: Stanley Grand  
Sales Mgr.: Maury Ray  
R&O
- RAOIATRONICS, INC.**  
5956 Kester Ave., Van Nuys, Calif. (Tel. State 2-1461; Stanley 3-2736)  
Pres.: G. E. Hewitt  
V. P.-Sales: E. H. Lockhart  
GE, CO, TE, TR
- RADIO CORES, INC.**  
9540 Tulley Ave., Oak Lawn, Ill. (Tel. GARden 2-3353)  
V. P.-Sales: Arthur J. Mark  
TR
- RAOIIO CORPORATION OF AMERICA, OFFENSE ELECTRONICS PRODUCTS**  
Front & Cooper Sts., Camden 2, N. J. (Tel. WOODlawn 3-8000)  
V. P.-Mktg.: J. M. Hertzberg  
GS, GE, CO, TR
- RADIO FREQUENCY CO., INC.**  
Medfield, Mass. (Tel. NORwood 7-4900)  
Pres.: J. G. Manwaring
- RAOIIO INDUSTRIES, INC.**  
666 Garland Pl., Des Plaines, Ill. (Tel. VANDerbilt 7-4402)  
Purch. Agent: Roy Sielisch  
V. P.-Sales: Joh T. Driscoll  
GE, TS, TR
- RAOIIO SPECIALTY MFG. CO.**  
2023 S. E. 6th Ave., Portland 14, Ore. (Tel. BE 2-8123)  
Purch. Agent: Ellis R. Schlusser  
Dir.-Sales: Kenneth C. Johnson
- RAOIIONICS, INC.**  
76 Cambridge St., Burlington, Mass. (Tel. BRowning 2-1233)  
Gen. Mgr.: B. S. Cosman  
R&O
- RAE MOTOR CORP.**  
2009 Kewaunee St., Racine, Wis. (Tel. MEIrose 3-7741)  
Purch. Agent: J. Costabile  
V. P.: E. K. Hansen  
PS, GS, GH, GE
- RAHM INSTRUMENTS, DIV.-AMERICAN MACHINE METALS, INC.**  
65 Rushmore St., Westbury, N. Y. (Tel. EOGewood 3-4840)  
Purch. Agent: John E. Sullivan  
Sales Mgr.: G. Roger Preisick  
GS, GE, TS, TR
- RAILWAY COMMUNICATIONS, INC.**  
9351 E. 59th St., Raytown 33, Mo. (Tel. FLeming 3-2100)  
Sales: E. E. Tuel  
GS, CO, TS
- RAM ELECTRONICS, INC.**  
600 Industrial Ave., Paramus, N. J. (Tel. CO]fax 1-6900)  
Purch. Agent: R. Rubin  
V. P.-Sales: M. Mayersohn  
GS, GE, TS, TR
- RAMO WOOLDRIDGE, DIV.-THOMPSON RAMO WOOLDRIDGE, INC.**  
4800 Ramo-Wooldrige Rd., P. O. Box 5037, Terminal Annex Sta., Denver 17, Colo. (Tel. PYramid 4-4311)  
Mgr.-Purch.: F. LaRiviere  
Admin. Asst.: Les Ortman  
Buyers: M. Z. Williams, M. J. Spencer, M. E. Leonetti, L. J. Michels, Larry Mack  
Mgr.-Mktg.: Warren Harmon  
TS, TR, R&D
- RAMO WOOLDRIDGE DIV., THOMPSON RAMO WOOLDRIDGE, INC. OF CALIF.**  
5500 W. El Segundo Blvd., P. O. Box 90534 Airport Sta., Los Angeles 45, Calif. (Tel. OREGon 8-0511)  
Mgr.-Material: Joseph N. Ceello  
Purch. Agent: Charles G. Locke  
R&O
- RAOUGLAS RANDALL, INC.**  
6 Pawcatuck Ave., Westerly, R. I. (Tel. LYric 5-5757)  
Purch. Agent: R. Stokes  
Material Control: K. Walsh  
V. P.-Sales: R. Parnigoni  
CO, TS
- RANOALL ENGRG. CORP.**  
5933 Bowcroft St., Los Angeles 16, Calif. (Tel. TEXas 0-8533)  
Dir.-Material: Bob Banks  
V. P.-Sales: Rex Oberbeck
- RANDALL GRAPHITE BEARINGS, INC.**  
Box 839, Greenlawn & Lake Sts., Lima, Ohio (Tel. CAPItol 3-1075)  
Purch. Agent: Frank O. Burnette  
Sales Mgr.: Roy Chaney  
WN, PS, GH, GE
- RANSOHFF CO.**  
N. 5th St. & Ford Blvd., Hamilton, Ohio (Tel. TW 3-5813)  
Purch. Agent: C. V. Noonan  
V. P.: R. C. Wigger  
GS, MM, R&D
- RAPID ELECTRIC CO.**  
2881 Middletown Road, Bronx 61, N. Y. (Tel. TALmadge 8-2200)  
Dir. Purch.: Paul Puccerelli  
Dir.-Sales: Robert Tedeschi  
GS, TS
- RAPIDS-STANDARD CO., INC., THE**  
Rapistan Bldg., Grand Rapids 2, Mich. (Tel. GL 9-0281)  
Dir.-Purch.: W. Pipe  
Dir.-Sales: H. M. Rasmussen
- RATTAN MFG. CO., THE**  
P. O. Box 1745, 10 Wall St., New Haven, Conn. (Tel. UNIVERSITY 5-2141)  
V. P.: G. H. Keith Miller  
Sales: George L. Hatheway  
MF, WN, PS, GS, GH
- GEORGE RATRAY & CO.**  
116-08 Myrtle Ave., Richmond Hill 18, N. Y. (Tel. VIRginia 6-8250)  
Purch. Agent: Robert Mandel  
Gen. Mgr.: Harold C. Pasini  
Sales Mgr.: Irwin Hansen  
GE, TR
- RAULANO CORP., THE**  
4245 North Knox Ave., Chicago 41, Ill. (Tel. MULberry S-5000)  
Dir.-Purch.: J. Loibl  
Asst. Purch. Agent: J. Nee  
Sales Mgr.: H. Wunderlich  
Military Sales: G. M. Snow  
R&O
- RAVENNA METAL PRODUCTS, DIV.-STANOARD SCREW CO.**  
6518 Ravenna Ave., Seattle 15, Wash. (Tel. LAkeview S-5555)  
Purch. Agent: L. O. Johnson  
Gen. Mgr.: I. K. Schlamp  
Sales Mgr.: G. E. Earsley  
MF, PS, GS, GH, CO
- RAWAY BEARING CO., INC.**  
4 Forsyth St., New York 2, N. Y. (Tel. WALKer 5-8150)  
Purch.: Rubin Yarmush  
Sales: Aharon Boskin  
GE, TS, TR
- RAWSON ELECTRICAL INSTRUMENT CO.**  
128 Potter St., Cambridge 42, Mass. (Tel. Kirkland 7-4041)  
Chief Engr.: M. J. Lush  
Office Mgr.: G. C. Henderson  
RI
- RAY PROOF CORP.**  
843 Canal St., Stamford, Conn. (Tel. DAVIS 5-2201)  
Pres.: S. A. Barnett  
Gen. Mgr.: G. R. Brownridge  
Chief Engr.: R. Aronson  
MM, RI
- RAYBESTOS-MANHATTAN, INC.**  
Passaic, N. J. (Tel. GREGory 3-2000)  
MF, WN, PS, GS, GH, I
- RAYBESTOS-MANHATTAN, INC., PA.**  
Manheim, Pa. (Tel. MICHawk S-2111)  
Purch. Agent: F. R. Bitzer  
Adv. Mgr.: S. R. Robinson
- RAYMOND ENGRG. LAB., INC.**  
Smith St., Middletown, Conn. (Tel. OLamond 6-7745)  
Purch. Agent: Herbert E. Cruickshanks  
Subcontract Rep.: Volmore J. Labbe  
Liaison Coord.: Joseph G. Lombardo  
RE
- RAY-O-VAC CO., DIV.-ELECTRIC STORAGE BATTERY CO.**  
212 E. Washington Ave., Madison 10, Wisc. (Tel. ALPine 5-7201)  
Purch.: O. B. Wynn  
V. P.-Mktg.: O. R. Slauson  
GS, I
- RAYTHEON MFG. CO.**  
Waltham, Mass. (Tel. TWINbrook 3-5860)  
Dir.-Procurement: Paul Wilson  
Act. Dir.-Mktg. (Commercial): C. R. Hammond
- RAYTHEON MFG. CO., GOVERNMENT EQUIPMENT DIV.**  
Wayland, Mass. (Tel. TWINbrook 3-5860)  
Gen. Purch. Agent: David M. Nasson  
Sales Mgr.: Clark C. Rodimon  
GS, GE, TR, RE
- RAYTHEON MFG. CO., MISSILE SYSTEMS HEAD-QUARTERS DIV.**  
520 Winter St., Waltham, Mass. (Tel. TWINbrook 4-0910)  
Gen. Purch. Agent: Bruce T. Brace  
Purch. Agent: Andover, Mass.: Frank Samuel  
Purch. Agent: Lowell, Mass.: Vincent Sorrentino  
Purch. Agent: Bedford, Mass.: Robert H. Pohl  
Purch. Agent, Bristol, Tenn.: Theodore Shelton  
Purch. Agent, Oxnard, Calif.: Charles A. Wisenbaker  
Purch. Agent, White Sands, N. M.: Harry Leiper  
MF, WN, PS, GS, GH, GE, CO, TS, TR, MM, RE
- REACTION MOTORS DIV., THIOKOL CHEMICAL CORP.**  
Denville, N. J. (Tel. OAKwood 7-7000)  
Purch. Agent: Ernest DeRome  
Purch. Suprs.: Laurence Levy & J. Young  
Supr.-Expediting: C. Birkholtz  
Purch. Coordinator: J. Ooley  
Dir.-Sales: R. Frazee  
MF, PS, GS, G
- RECTICO, INC.**  
963 Frelinghuysen Ave., Newark, N. J. (Tel. Bigelow 3-8739)  
Purch. Agent: F. Fertell  
G
- RED DEVIL MFG. CO.**  
1412 N. Ogden Ave., Chicago 10, Ill. (Tel. Michigan 2-5161)  
Pres.: Matthew Kassnel  
M
- RED LION CABINET CO., REDCO TOOL DIV.**  
Red Lion, Pa. (Tel. 3-3211)  
Purch. Agent: O. W. Royston  
Buyers: H. Q. Fishel, K. Worley and R. W. Keller  
Sales Mgr.: F. A. Bowles  
PS, GS, G
- REO POINT CORP.**  
1907 Riverside Dr., Glendale 1, Calif. (Tel. THornwall 2-4895)  
Gen. Mgr.: Ralph P. Craig  
GS, GI
- \*REDEL INC.**  
220 N. Atchison St., Anaheim, Calif. (Tel. PROspect 4-3624)  
Purch. Agent: Edward Carlson  
Buyer: Cliff Young  
Sales Mgr.: Jay W. Oedapper  
\*(See Page 46 for Advertisement)
- REDMAN ELECTRONICS CORP.**  
92 Prospect St., Thompsonville, Conn. (Tel. RIVerview 5-8024)  
Purch. Agent: David Engleman  
GS, GE, TS, TI
- REOMOND CO., INC., SUB-CONTROLS CO. OF AMERICA**  
201 Monroe St., Owosso, Mich. (Tel. SARatoga 5-5151)  
Dir.-Purch.: Glen Baumhardt  
Buyers: R. Kircher, B. Wiegell, R. Muehlberger, & M. Carson  
Gen. Sales Mgr.: M. J. Koenig  
GI
- REOSTONE ARSENAL RESEARCH DIV., ROHM & HAAS CO.**  
Huntsville, Ala. (Tel. JE 6-4411)  
Purch.: Alton H. Belcher  
Asst. Purch. Agent: Clarence R. Lumpkin  
PI

**EED MFG. CO.**  
1045 Main St., Waltham 54, Mass. (Tel. TW 4-1464)  
Pres.: H. F. Stewart MM

**EED RESEARCH INC.**  
1048 Potomac St., N. W., Washington 7, D. C. (Tel. F. Federal 3-7000)  
Dir.-Purch.: Fred Mozingo  
Dir.-Sales: Edward R. Redding  
GS, GH, CO, TS, R&D

**EVE ELECTRONICS, INC.**  
509 W. Lake St., Chicago 6, Ill. (Tel. R. Randolph 6-9755)  
Purch. Agent: E. F. Steichmann  
Sales Engr.: I. R. Wayne MF, PS, GS

**EVES INSTRUMENT CORP.**  
Roosevelt Field, Garden City, N. Y. (Tel. P. Pioneer 6-8100)  
Purch. Mgr.: A. J. Rutherford  
V. P.-Mktg.: D. B. Nason GS, GE, TR, R&D

**EVES SOUNDCRAFT CORP.**  
Great Pastures Rd., Danbury, Conn. (Tel. Pioneer 3-7601)  
Purch. Agent: Guy Bonham  
Sales Mgr.: Audio Products: George Bassett  
Sales Mgr.: Instrumentation Products: William A. Morrison  
V. P.-Sales, Film Products: W. H. Deacy  
GE, TS, TR

**EVES-HOFFMAN DIV.**  
45 Cherry St., Carlisle, Pa. (Tel. 2480)  
Purch. Agent: Helen Sheaffer  
Sales Mgr.: C. M. Rahn GE, TS, TR

**FLEETONE CORP., THE**  
Post Rd. & Myno Lane, Stamford, Conn. (Tel. D. Davis 5-2251)  
Purch. Agent: Frank G. Hill  
Purch. Expediter: Miss SaraLee Swift  
Asst. Purch.-Buyer: Merrill Burchard  
Sales Mgr.: John B. Thaler GH, R&D

**GENT JACK MFG. CO., INC.**  
1905 Regentview Ave., Downey, Calif. (Tel. S. Pruce 3-0103)  
Purch. Agents: John Keber & Don Norton  
V. P.-Sales: O. A. McPeck GH

**GICH BROTHERS MFG. CO., INC.**  
439 Ash St., Terre Haute, Ind. (Tel. C. Rowford 9638)  
Purch. Agent: Clarence C. Loy  
V. P.-Sales: George T. Davis GH

**GICHHOLD CHEMICALS, INC.**  
ICI Bldg., White Plains, N. Y. (Tel. White Plains 8-6200)  
V. P.-Purch.: G. C. Sweet  
V. P.-Sales: R. T. Ulrich MF, WN, MM

**GID METAL PRODUCTS, INC.**  
021 N. Lincoln St., Burbank, Calif. (Tel. Victoria 9-1284)  
V. P.-Purch.: Steve Radick  
V. P.-Gen. Mgr.: John Bogue  
V. P.-Sales: George G. Gault MF, PS, GS, GH, GE

**GINHOLD ENGRG. AND PLASTICS CO.**  
2827 E. Imperial Hwy., Norwalk, Calif. (Tel. OXbow 3-3781)  
Purch. Agent: Paul Hendrix  
Buyers: Harmon Price  
Pres. & Gen. Mgr.: J. P. Gruettner WN, PS, MM

**GLAY SALES INC.**  
Box 186 MM, W. Chicago, Ill. (Tel. West Chicago 1100)  
V. P.-Sales: A. Scandora  
Sales Mgr.: R. O. Welch  
Pres.: E. E. Rullman, Jr.  
GS, GH, GE, CO, TS, TR, R&D

**GLAYS, INC.**  
62 W. 83rd St., New York 24, N. Y. (Tel. TRafalgar 3-4500)  
Chief Engr.: S. H. Hartley GS

**GLIABLE SPRING & WIRE FORMS CO., THE**  
167 Fulton Rd., Cleveland 9, D. (Tel. MEIrose 1-2800)  
Purch. Agent: Gilbert Gnewotta  
V. P.-Sales: Ronald F. Pond MF, WN, PS, TS, TR, MM

**GLIANCE MFG. CO. - INDUSTRIAL PRODUCTS & PARACHUTE DIV.**  
50 Fifth Ave., New York 1, N. Y. (Tel. DX 5-4900)  
V. P.: Michael Kagan  
Chief Engr.: William Bell

**GLINGTON RAND UNIVAC DIV.-SPERRY RAND CORP.**  
15 Fourth Ave., New York, N. Y. (Tel. SPring 7-8000)  
V. P.-Procurement: W. R. Gerhardt  
V. P.-Univac Sales: H. V. Widoes GE, TR, R&D

**RENBRANDT, INC.**  
6 Parmelee St., Boston 18, Mass. (Tel. Highlands 5-8910)  
Sales: M. Rogers PS, GS, GH

**EDW. RENNEBURG & SONS CO.**  
2639 Boston St., Baltimore 24, Md. (Tel. PE 2-1665)  
V. P.: Paul E. Kiefer  
Dir.-Sales: E. J. Leister MF, GS

**RENWELL CORP.**  
1 W. Main St., South Hadley Falls, Mass. (Tel. JEFerson 4-3577)  
Dir.-Purch. & Sales: F. T. Renkowitz

**REON RESISTOR CORP.**  
117 Stanley Ave., Yonkers, N. Y. (Tel. YOnkers 5-9850)  
Sales Mgr.: J. J. McCann  
Purch. Agent: J. Schuldreifer GS, GE, TS, TR, R&D

**REPUBLIC AVIATION CORP.**  
Farmingdale, L. I., N. Y. (Tel. CH 9-1100)  
Dir.-Materials: E. I. Little  
V. P.: J. Murray MF, WN, GS, CO, TS, TR, R&D

**REPUBLIC AVIATION CORP., GUIDED MISSILES DIV.**  
Jericho Turnpike, Mineola, L. I., N. Y. (Tel. P. Pioneer 2-4013)  
Purch. Mgr.: R. Moore  
Mil. Contracts: J. Shea MF, WN, PS, GS, GH, GE, TS, TR

**REPUBLIC LENS CO., INC.**  
31 E. 169th St., New York 52, N. Y. (Tel. CYPress 3-2790)  
Purch. Agent: M. Mathewson  
Sales Mgr.: Jack Lurie R&D

**REPUBLIC MFG. CO.**  
15655 Brookpark Rd., Cleveland 35, O. (Tel. CLEwater 2-1800)  
Purch. Agent: R. Riley  
V. P.-Sales: L. J. Henderson MF, PS, GS, TS

**REPUBLIC STEEL CORP.**  
Republic Bldg., Cleveland 1, D. (Tel. P. Prospect 1-1400)  
Mgr.-Purch. & Raw Materials: W. T. Adams  
Asst. Mgr.-Purch.: L. H. Ransom  
V. P.-Chg. Sales: Norman W. Foy MM

**RESELD CORP.**  
Cape May Co. Airport, Wildwood, N. J. Mailing Add.: P. D. Box 217, Rio Grande, N. J. (Tel. WILwood 2-5643)  
Office Mgr./Secy.-Treas.: John F. Dieffenderfer MF, PS, GS, GH, GE, TS

**RESELD ENGRG. CORP.**  
330 S. Fair Oaks Ave., Pasadena, Calif. (Tel. MURray 1-7689)  
Purch. Agent: J. Demarest  
V. P.-Mfg. & Sales: Alfred J. Siegmeth PS, GS, GH, GE, CO, TS, TR, R&D

**RESE ENGRG., INC.**  
731 Arch St., Philadelphia 6, Pa. (Tel. WALnut 2-5841)  
Chief Purch. Agent: John Newton GS, CO, TS, TR

**\*RESEARCH & ADVANCED DEVELOPMENT DIV., AVCO MFG. CORP.**  
20 S. Union St., Lawrence, Mass. (Tel. MURdock 8-6011)  
Mgr.: Glenn W. Inman  
Mgr.-Mktg.: R. D. Davis MF, WN, PS, GS, GH, GE, CO, TS, TR  
\*(See 3rd Cover for Advertisement)

**RESEARCH APPLIANCE CO.**  
Rt. 8 & Craighead Rd., Allison Park, Pa. (Tel. STerling 2-2622)  
Purch. Agent: C. W. Thomas PS, GS, GH, GE, CO, TS, TR

**RESEARCH CONTROLS**  
7902 E. 11th St., Tulsa, Okla. (Tel. TEmple 5-7163)  
Sales: Roy Horton MF, PS, GS, GH, GE, TS

**RESEARCH DEVELOPMENT MFG. INC.**  
429 E. Collom St., Philadelphia, Pa. (Tel. GLadstone 5-9700)  
Purch. Agent: A. G. Kamm  
Asst. Purch. Agent: Frank Wm. Doll  
Treas.: L. Kossvan MF, WN, PS, GS

**RESEARCH, INC.**  
115 N. Buchanan Ave., Hopkins, Minn. (Tel. Minneapolis West 5-2156)  
Purch. Agent: G. N. Butzow CO, TS

**RESEARCH PRODUCTS CORP.**  
1015 E. Washington Ave., Madison 1, Wisc. (Tel. ALpine 6-0621)  
V. P.-Sales: A. W. Brown  
V. P.-Purch.: E. B. Schlatter, Jr.  
Asst. Purch. Agent: Howard E. Hoveland PS, GS, R&D

**RESEARCH WELDING & ENGRG. CO., INC.**  
18201 S. Santa Fe, Compton, Calif. (Tel. NE 6-9761)

**RESISTOFLEX CORP.**  
Roseland, N. J. (Tel. CApital 6-7700)  
Mgr.-Purch.: R. Arkins  
Sr. V. P.-Sales: H. E. Krebs TS, MF, WN, PS, GS, GH, CO

**RESISTORS, INC.**  
5226 W. 26th St., Chicago 50, Ill. (Tel. OL 2-7555)  
Purch. Agent: Marian Kliemer  
Sales Mgr.: Myrtle J. Bryans R&D

**REVERE COPPER & BRASS INC.**  
230 Park Ave., New York 17, N. Y. (Tel. MU 9-6800)  
V. P.-Gen. Sales Mgr.: R. P. Winberg MF, PS, GS, GH

**REVERE CORP. OF AMERICA**  
North Colony Rd., Wallingford, Conn. (Tel. COLony 9-7701)  
Buyers: K. Barse & L. Bradford  
Sales Mgrs.: C. W. Silver & G. W. Grace PS, GS, GE, CO

**REVOLVATOR CO.**  
2000 86th St., North Bergen, N. J. (Tel. UNION 9-1220)  
Purch. Agent: J. F. Taylor  
Sales: H. S. Germond III

**REX CORP., THE, SUB-AMERICAN ENKA**  
Hoyward Rd., West Acton, Mass. (Tel. COLonial 3-7721)  
Buyer: S. M. Coyne GS, MM

**REYNOLDS METALS CO.**  
Reynolds Metals Bldg., Richmond, Va. (Tel. AT 2-2311)  
V. P.-Purch.: M. W. Henry  
Exec. V. P.-Sales: D. P. Reynolds MM

**REZ-COAT OF CALIFORNIA**  
690 N. Lemon St., Orange, Calif. (Tel. KELLogg 8-1197)  
Prod. Mgr.: F. P. McGowan  
Sales: Bruce Brown MF, WN, PS, MM

**\*RHEEM MFG. CO., DEFENSE & TECHNICAL PRODUCTS DIV.**  
11711 Woodruff Ave., Downey, Calif. (Tel. TOPaz 1-9711)  
Mgr.-Material: Robert W. Lassman  
Sales Mgr.: John H. Tittle  
V. P.-Sales: Alexander Black MF, WN, PS, GS, GH, CO, TR, R&D  
\*(See 2nd Cover for Advertisement)

**RHEEM MFG. CO., ELECTRONICS DIV.**  
7777 Industry Ave., Rivera, Calif. (Tel. TOPaz 1-9271)  
Dir.-Purch.: Roy Smith  
Div. Sales Mgr.: Hugh C. Bream GS, GH, GE, CO, TS, TR

**M. H. RHODES, INC.**  
30 Batholomew Ave., Hartford 6, Conn. (Tel. JACKson 2-4265)  
Dir.-Purch.: Miss E. M. Sonderson  
V. P.-Sales: E. J. Doyle GE, R&D

**RICHARDSON SCALE CO.**  
668 Van Houten Ave., Clifton, N. J. (Tel. GRegory 1-3400)  
Purch. Agent: Andrew A. Fisher  
Dir.-Sales: Walter M. Young GH

**RICHARDS-WILCOX MFG. CO.**  
Aurora, Ill.  
Mgr.-Advertising: C. A. Rasey

**RIGGS NUCLEONICS CORP.**  
177 W. Magnolia Blvd., Burbank, Calif. (Tel. VICTORIA 9-2481)  
Purch. Agent: Philip Solomon  
Sales Mgr.: John R. Foster PS, GE, TS

**RIMAK, INC.**  
10929 Vanowen St., North Hollywood, Calif. (Tel. TRIangle 7-5526)  
Purch. Agent: Richard H. Flint (Tel. PDPular 1-2377)  
Sales Mgr.: William S. Bowers GS, GE, TR, R&D

	CODING
	Missile Frame MF
	Warhead & Nose Can WN
	Propulsion System PS
	Ground Support GS
	Ground Handling GH
	Guidance Equipment GE
	Checkout Equipment CO
	Test Equipment TS
	Tracking & Telemetering TR
	Research & Development R&D
	Materials & Metals MM

# ... purchasing directory rin—schul

- RINCO, INC.**  
7962 S. E. Powell Blvd., Portland 6, Ore. (Tel. PRespect 4-3259)  
Purch. Agent: Jesse L. Brown  
Buyer: Lee Patterson  
Sales Mgr.: Franklin M. Brown CO, TS, TR
- RIPLEY CO., INC.**  
Flactory St., Middletown, Conn. (Tel. Olamond 6-6679)  
Purch. Agent: H. I. Thayer  
Sales Mgr.: P. J. Riniocci GS, GH, TS
- RIVERBANK LABS., DEPT.-ENGRG.**  
P. O. Box 65, Geneva, Ill. (Tel. Geneva 2207)  
Buyer: R. J. Eisenhour  
Chief Engr.: B. E. Eisenhour, Jr. GE, TS, TR
- RIVETT LATHE & GRINDER INC.**  
P. O. Box 7, Brighton 35, Mass. (Tel. STadium 2-4530)  
Purch. Agent: W. C. Woodworth  
Sales Mgr.-Hydraulic Div.: J. A. Marsh MF, PS, GS
- RIXON ELECTRONICS, INC.**  
2414 Resdie Dr., Silver Spring, Md. (Tel. LLockwood 5-4578)  
Purch. Agent: Nevin Price  
Dir.-Sales: Dean Perry GS, GE, TR, R&D
- ROANWELL CORP.**  
180 Varick St., New York, N. Y. (Tel. YUkon 9-1090)  
Dir.-Purch.: H. Schmidt  
Asst. Sales Mgr.: J. I. Nevins, Jr. GS, TR
- C. F. ROARK WELDING & ENGRG. CO., INC.**  
Brownsburg, Ind. (Tel. ULrick 2-2224)  
Purch. Agent: Glenn Seeds  
Asst. Purch. Agent: W. S. Schenck  
Sales Mgr.: M. E. Mann PS, MM
- ROBBINS AVIATION, INC.**  
2350 E. 38th St., Los Angeles 58, Calif. (Tel. LUDlow 9-5221)  
Dir.-Material: R. E. Bixler  
V. P.-Sales: H. N. Mabery GS, GH
- ROBBINS & MEYERS, INC., HOIST & CRANE DIV.**  
Springfield, Ohio
- FRED T. ROBERTS & CO.**  
Oanbury Rd., Wilton, Conn. (Tel. POrter 2-7002)  
V. P.: R. E. Roberts  
Pres.: Fred T. Roberts MF, GS, GH, MM, R&D
- ROBERTS INDUSTRIES, INC.**  
Box 71, Branford, Conn. (Tel. HU 8-1671)  
Pres.: H. W. Wallace  
V. P.: B. V. Harrison, III MM
- ROBERTS TOLEDO RUBBER CO., THE**  
4143 Monroe St., Toledo 13, O. (Tel. GRenwood 9-4466)  
Pres.: Robert Roberts MF, PS, GS, GE
- ROBINS INDUSTRIES CORP.**  
36-27 Prince St., Flushing 54, N. Y. (Tel. Hlckory 5-7200)  
Purch. Agent: E. DiCarlo TR
- ROBINSON TECHNICAL PRODUCTS, INC.**  
Teterboro Air Terminal, Teterboro, N. J. (Tel. ATlases 8-2500)  
Sr. Buyer: Harold Adler  
Buyers: Merle Oarragh, James Eames, Charles Preuss  
V. P.-Proj. Dev.: H. Erich Nietsch GH, GE, TR, R&D
- ROBOT INDUSTRIES INC.**  
7041 Orchard St., Dearborn, Mich. (Tel. Tliffany 6-2623)  
Purch. Agent: K. Krake MF, PS, GS, GH, GE, TR
- ROCHESTER MFG. CO. INC.**  
113 Rockwood St., Rochester 10, N. Y. (Tel. BRowning 1-2020)  
Purch. Agent: L. A. Mumford  
Sales Mgr.: David McEwen MF, GS, GH, CO, R&D
- ROCKBESTOS PRODUCTS CORP.**  
Nicoll & Conner Sts., New Haven 4, Conn. (Tel. STate 7-1141)  
Dir.-Purch.: C. A. Berlepsch  
Purch. Agent: R. B. Minitter  
Buyer: C. F. Connerton  
V. P.-Sales: H. O. Anderson PS, GS, GH, TS, TR, MM
- ROCKETDYNE DIV., NORTH AMERICAN AVIATION, INC.**  
6633 Canoga Ave., Canoga Park, Calif. (Tel. DIamond 7-5651)  
Gen. Purch. Agent: M. J. Dubuc  
Purch. Agents: V. L. Butterbaugh, S. C. Schultz, G. J. Cheek  
Dir.-Plans & Programs: E. F. Brown PS, R&D
- ROCKWELL-STANDARD CORP.**  
843 Fourth Ave., Coropopolis, Pa. (Tel. SPalding 1-1800)  
V. P. & Dir.-Purch.: V. E. Gumbleton  
Exec. V. P.-Sales, Mktg.: C. B. Black GS, GH
- ROCKWELL-STANDARD CORP.**  
Ashtabula, Ohio  
Gen. Sales Mgr.: O. M. Heath GS
- RODNEY METALS INC.**  
1357 Rodney French Blvd., New Bedford, Mass. (Tel. WY 6-5691)  
V. P.: C. W. Smith  
Purch. Agent: L. A. Oobson MF, PS, GS, GH
- JOHN A. ROEBLING'S SONS CORP.**  
640 S. Broad St., Trenton, N. J. (Tel. EXport 6-6311)  
Dir.-Purch.: R. K. Spofford  
Asst. Dir.-Purch.: K. S. Dickel  
Buyers: J. G. Hottinger, C. G. Bennighoff, J. R. Nemeth, W. P. Strohauser & P. S. Toth  
V. P.-Sales: E. George Hartmann MF, PS, GS, GH, MM
- ROGERS CORP.**  
Rogers, Conn. (Tel. PRescott 4-9605)  
Purch. Agent: Austin R. Schillinger  
Dir.-Mktg.: N. L. Greenman MF, WN, PS, GE, TR, MM
- ROHM & HAAS CO. - REDSTONE ARSENAL RESEARCH DIV.**  
Huntsville, Ala. (Tel. JEFFerson 6-4411)  
Supvr.-Purch.: A. H. Belcher  
Asst. Supvr.-Purch.: C. R. Lumpkin  
Gen. Mgr.: A. R. Deschere R&D
- ROHR AIRCRAFT CORP.**  
Foot of H St., Chula Vista, Calif. (Tel. GARfield 2-7111)  
Material Mgr.: C. R. Campbell  
Mgr.-Purch.: R. J. Rucci  
Purch. Agents: J. W. O'Reilly, E. T. Elvin  
Contracts Mgr.: A. R. Campbell MF, PS, R&D
- ROLL FORMED PRODUCTS CO.**  
3760 Oakwood Ave., Youngstown, O. (Tel. SWestbri 9-3223)  
Purch. Agent: S. Kalkish  
Sales Mgr.: L. C. Coleran MF, WN, PS, GS, TS, TR
- ROLLAN ELECTRIC CO.**  
8233 S. Princeton Ave., Chicago 20, Ill. (Tel. RAycliffe 3-4000)  
Purch. Agent: William Pterucci  
Sales Mgr.: C. E. Schneider
- ROLLE-MFG. CO.**  
3rd & Cannon Ave., Lansdale, Pa. (Tel. UL 5-1171)  
Purch. Agent: H. Wardle  
Sales Mgr.: W. F. Trakat MF, GS
- ROLLER BEARING CO. OF AMERICA**  
Sullivan Way, W. Trenton, N. J. (Tel. EX 3-7191)  
Purch. Agent: R. J. McCoy  
Sales Mgr.: Robert R. Voorhees PS, GH, GE
- ROLLWAY BEARING CO., INC.**  
541 Seymour St., Syracuse 4, N. Y. (Tel. GR 5-2121)  
Purch. Agent: William R. Bowes  
Gen. Sales Mgr.: Alfons Alven GE
- ROLOCK INC.**  
1350 Kings Hwy., Fairfield, Conn. (Tel. FO 7-8611)  
Purch. Agent: Robert L. Larkin  
V. P.-Sales: Robert Platt MM
- ROME CABLE CORP., SUB-ALUMINUM CO. OF AMERICA**  
421 Ridge St., Rome, N. Y. (Tel. Rome 3000)  
Purch. Agent: S. O. Williams  
Asst. Purch. Agent: J. H. McCann  
V. P. & Dir.-Mktg.: G. E. Rolston TR, MM
- ROME-TURNEY RADIATOR CO., THE**  
109 Canal St., Rome, N. Y. (Tel. 2200 and 2201) MM
- RONAN & KUNZL, INC.**  
502 S. Kalamazoo Ave., Marshall, Mich. (Tel. STory 1-2861)  
Purch. Agent: Jack Lawler  
Cryogenic Sales Engr.: Herbert A. Eischstaedt MF, PS, GS, GH
- RONAN & KUNZL, INC., CRYOGENIC DIV.**  
Marshall, Mich. (Tel. STory 1-2861)  
Purch. Agent: Jack Lawler  
Sales: H. E. Eischstaedt WN, PS, GS
- RONSON HYDRAULIC UNITS CORP.**  
1313 Lincoln Ave., Pasadena, Calif. (Tel. RYan 1-0221)  
Purch. Agent: M. E. Boltz  
Dir.-Sales: R. K. Boltz GS, GH, GE
- ROOVERS-LOTSCH CORP.**  
3611 14th Ave., Brooklyn 18, N. Y. (Tel. GEdney 5-0004)  
Chief Engr. & Gen. Mgr.: Charles F. Lotsch  
Plant Supt.: Paul O. Payne MF, PS, GI
- ROSAN, INC.**  
2901 W. Coast Hwy., Newport Beach, Calif. (Tel. LIBerty 8-5533)  
Purch. Agent: Robert A. Carr  
Mfg. Mgr.: L. F. Barth  
Gen. Sales Mgr.: E. G. Miller MF, WN, PS
- ROSE MFG. CO.**  
2700 W. Borberry Place, Denver 4, Colo. (Tel. AC 2-7847)  
V. P.: J. E. Sharp GS, GH
- ROSEUMONT ENGRG. CO.**  
4900 W. 78th St., Minneapolis 24, Minn. (Tel. WALnut 7-7711)  
Secy.-Treas.: Vernon H. Heath  
Buyer: Harry Quaiust  
Sales Mgr.: B. L. Sadler TS, TR, R&D
- CHARLES ROSS & SON CO., INC.**  
148-156 Classon Ave., Brooklyn 3, N. Y. (Tel. MAin 2-8400)  
Purch. Agent: Richard M. Ross  
Asst. to Pres.: Charles K. Ross PS, R&D
- MILTON ROSS METALS CO., THE**  
237 Jacksonville Rd., Hatboro, Pa. (Tel. OSborne 2-0550)  
V. P.: E. D. Ross  
Pres.: M. I. Ross MF, WN, PS, GS, GH, GE, CO, TS, TR
- ROTARY LIFT CO., DIV.-DOVER CORP.**  
1054 Kansas St., Memphis 2, Tenn. (Tel. WHitehall 8-8561)  
V. P.-Purch.: W. E. Rier  
Sales Mgr.-Elevator Div.: H. G. Sanders  
Sales Mgr.-Insl. Div.: H. T. Hamm
- ROTEX PUNCH CO., INC.**  
2350 Alvarado St., San Leandro, Calif. (Tel. LOKkaven 9-8180)  
Prod. Mgr.: Mark Hamlin  
Sales Mgr.: John B. Sweeney GS
- ROTO-FINISH CO.**  
3700 Milham Rd., Kalamazoo, Mich. (Tel. FResida 3-5578)  
V. P. & Secy.: John W. Sercasas  
Sales Mgr.: Wm. J. Walther
- ROTTEST LABS., INC.**  
2803 Los Flores Blvd., Lynwood, Calif. (Tel. NEvada 6-9238)  
Purch. Agent: Mrs. Tim Taylor  
V. P.-Sales: J. R. Duncan TS
- ROTRON MFG. CO.**  
Schoonmaker Lane, Woodstock, N. Y. (Tel. ORiole 9-2401)  
Purch. Agent: A. J. Gibson, Jr.  
Dir.-Sales: Paul M. Beard  
Asst. Sales Mgr.: W. W. Blelack, Jr. WN, GS, GE, CO, TS, TR
- ROWE INDUSTRIES**  
1702 Wayne St., Toledo 9, Ohio (Tel. EVERgreen 2-5666)  
Asst. Purch. Agent: Howard B. Lang  
Gen. Mgr.: Harold M. Kloppping GS
- MILTON ROY CO.**  
1300 E. Mermaid Lane, Philadelphia 18, Pa. (Tel. CHestnut Hill 7-8000)  
Purch. Agent: E. W. Brook  
Sales Mgr.: John Procopi PS, GS, GH, CO, TS
- ROYAL ELECTRIC CORP.**  
95 Grand Ave., Pawtucket, R. I. (Tel. PAwtucket 2-8600)  
Purch. Agent: H. Spanglet  
Asst. Purch. Agent: W. Slack  
V. P.-Sales Operations: S. B. Algerin MF, WN, PS, GS, GH, CO, TS, TR
- ROYAL INDUSTRIES, INC.**  
1035 Westminster Ave., Alhambra, Calif. (Tel. ATLantic 9-5101)  
Purch. Agent: Victor Kail  
V. P.-Sales: R. T. Lowrie MF, GS, GH, CO, TS, TR, R&D
- ROYCO INSTRUMENTS, INC.**  
123 Santa Maria Ave., Portola Valley, Calif. (Tel. ULmar 1-7263)  
Dir.-Purch.: F. Roy Gustavson  
Sales Mgr.: Emil Wachtel PS, CO, TS
- ROYLYN INC.**  
620 Pauley Ave., Glendale 1, Calif. (Tel. CHapman 5-8521)  
Purch. Agent: Jack Schroeder  
Asst. Purch. Agent: Harold Conley  
Buyer: Alice Coty  
V. P.-Sales: Donald E. Butler GS, GH, TS, R&D

UBATEX DIV., GREAT AMERICAN INDUSTRIES INC.  
Bedford, Va. (Tel. JUstice 6-2611)  
Purch. Agent: Mary B. Dean  
Sales Mgr.: W. C. Walters MF, PS, GE, TR

UBBER & ASBESTOS CORP.  
225 Belleville Ave., Bloomfield, N. J. (Tel. Pilgrim 8-1300)  
Purch. Agent: Mrs. A. Golden  
Gen. Sales Mgr.: Harold Greene MF, WN, PS, GE

UBBER TECK INC.  
19115 S. Hamilton St., Gardena, Calif. (Tel. Faculty 11669)  
Purch. Agent: E. D. Rogers  
Dir.-Sales: Nat Feldman MM

UBBERCRAFT CORP. OF CALIFORNIA  
1800 W. 220th St., Torrance, Calif. (Tel. FAirfax 8-5402)  
V. P.-Sales: Robert N. Merralls  
MF, WN, PS, GS, GH, GE, CO, TS, TR

UCKER CO., THE  
4700 San Pablo Ave., Oakland 8, Calif. (Tel. OLympic 3-5221)  
V. P.-Gen. Mgr.: Clarence J. Woodard  
GS, GH, CO, TS, R&D

RTHUR C. RUGE ASSOCIATES, INC.  
Hudson, N. H. (Tel. TUxedo 2-5195)  
Pres.: Paul W. Kach  
Chief Engr.: Warren E. Jackson  
Prod. Mgr.: Hugh R. Roinge  
Dir.-Sales: W. E. Jackson & H. R. Roinge TR

JSELL MFG. CO., THE  
Middletown, Conn. (Tel. Diamond 6-7721)  
Purch. Agent: Henry Fischer, Jr.  
Dir.-Automotive Research & Mfg.: H. C. Marton  
Dir.-Research, Textile Div.: T. I. Read  
V. P.-Sales: L. S. Sullivan

JSELL REINFORCED PLASTICS CORP.  
521 W. Haffman Ave., Lindenhurst, N. Y. (Tel. Lindenhurst 5-1700)  
Gen. Mgr.: Warren R. Amendala  
Exec. V. P.: Ernest C. Schultz

JHERFORD ELECTRONICS CO.  
8944 Lindblade St., Culver City, Calif. (Tel. TEXas 0-7393)  
Purch. Agent: S. Cooper  
Sales: N. T. Holzer CO, TS

JTHMAN MACHINERY CO., THE  
1813 Reading Rd., Cincinnati 2, O. (Tel. MA 1-5462)  
V. P.-Purch.: A. H. Ruthman

AN AERONAUTICAL CO.  
2701 Harbor Dr., San Diego 12, Calif. (Tel. CYpress 6-6681)  
Dir.-Materials: M. K. Smith  
Gen. Supvr.-Purch.: J. H. Stramberg  
Gen. Supvr.-Outside Prod.: R. W. Carr  
MF, WN, PS, GE, TS, MM, R&D

AN INDUSTRIES, INC.  
888 E. 70th St., Cleveland 3, Ohio (Tel. UT 1-6878)  
Purch. Agent: C. P. Breitmayer  
V. P.-Engr. & Sales: R. M. Haas

SEPH T. RYERSON & SON, INC.  
16th & Rockwell Sts., Chicago 8, Ill. (Tel. ROKewell 2-2121)  
V. P.-Proc.: J. M. Mead  
V. P.-Sales: T. Z. Hayward MM

TRON CO., INC.  
303 Lankershim Blvd., N. Hollywood, Calif. (Tel. POPlar 5-0756)  
Purch. Agent: Jack Kennedy  
Dir.-Engr.: Robert E. Schlegel  
Chief Engr., Filters: Carl Nelson  
Chief Engr., Mag. Amplifier: Ralph Halanov  
Sales Mgr.: Maurice Foster PS, GE, CO, TS, TR

INDUSTRIES, INC.  
Front St. & Erie Ave., Philadelphia 32, Pa. (Tel. GARfield 6-6400)  
Purch. Agent: F. E. Whyte  
Purch. Agent: J. R. Bremer  
Supvs.: W. R. Sine  
Supvs.: B. F. Maurer, J. A. McCarron, W. R. Canlogue & J. A. Chaman  
Expditer: O. P. Haggerty PS, GE

S MFG. CORP., THE  
2021 Aurora Rd., Salon, Ohio (Tel. CHurchill 8-6141)  
Purch. Agent: A. W. Fisher  
Sales Mgr.: R. E. Sutherland MM

ETY ELECTRICAL EQUIPMENT CORP.  
87 Dixwell Ave., New Haven 14, Conn. (Tel. UN 5-3171)  
Purch. Agent: Joseph Prestianni  
Sales Mgr.: Charles Pierce  
V. P.-Sales: J. J. Kennedy GS, TS

SAFEBAY HEAT ELEMENTS, INC.  
680 Newfield St., Middletown, Conn. (Tel. Diamond 6-6601)  
Secy.-Asst. Treas.: Joseph F. O'Rourke  
Dir.-Sales: T. A. Dissel PS, GS, R&D

SAGE ELECTRONICS CORP.  
Country Club Road, East Rochester, N. Y. (Tel. LU 6-8010)  
Treas.: A. B. Mills  
Pres.: F. D. Sage GE, TR

SAGE EQUIPMENT CO. INC.  
30 Essex St., Buffalo, N. Y. (Tel. ELMwood 5242)  
Purch.: A. Sperduti  
Dir.-Sales: John Haynes GH

SAGE LABS., INC.  
159 Linden St., Wellesley 81, Mass. (Tel. CEDar 5-4760)  
Admin. Supvr.: William S. Patsos  
GS, GH, GE, CO, TS, TR, R&D

SAGE-CRAFT, INC.  
Narwich, N. Y. (Tel. 4-6118)  
Pres.: Earle R. Sage GS, GE, R&D

SAGINAW BEARING CO.  
967 S. Water St., Saginaw, Mich. (Tel. PLeasant 2-3169)  
Dir.-Purch.: Robert L. Pieschke  
Dir.-Sales: John Truer MM

ST. JOHN X-RAY LABORATORY  
Califon, N. J. (Tel. Califon 49)  
Pres.: Herbert R. Isenburger

ST. MARYS CARBON CO.  
W. State St., St. Marys, Pa. (Tel. TErminol 4-2844)  
Dir.-Purch.: C. J. Ehrensberger  
V. P.-Sales: L. W. Eberl MM

ST. REGIS PAPER CO., PANELYTE DIV.  
Enterprise Ave., Trenton, N. J. (Tel. EXport 2-2181)  
Purch. Agent: Frank P. Yaccarino, Sr.  
Indsl. Sales Mgr.: John M. Zeter

SAN FERNANDO ELECTRIC MFG. CO.  
1509 1st St., San Fernando, Calif. (Tel. EMpire 1-8681)  
Purch. Agent: Richard A. Griffin  
Gen. Sales Mgr.: Lyle R. Smith

SANBORN CO.  
175 Wyman St., Waltham 54, Mass. (Tel. TW 4-6300)  
Purch. Dir.: E. A. Craddock  
V. P.-Sales: A. E. Lannberg TS

SANCOR CORP.  
1661 Franklin Ave., El Segundo, Calif. (Tel. OREGon 8-5069)  
Purch. Agent: A. H. Knight  
V. P.-Sales: L. H. Sanderfer GS, GH

SANDBERG-SERRELL CORP.  
2550 E. Faathill Blvd., Pasadena, Calif. (Tel. SYcamore 6-0281)  
V. P.-Sales: Peter V. H. Serrell GH, TS, R&D

SANDERS ASSOCIATES, INC.  
95 Canal St., Nashua, N. H. (Tel. TUxedo 3-3321)  
Purch. Agent: Chandler Galdswaine  
Sales Mgr.: W. B. Wilkens GS, GE, TR, MM, R&D

SANFORD PLASTICS CORP.  
New Brunswick Ave. & Charles St., Matawan, N. J. (Tel. LOWell 6-1923)  
V. P.-Purch.: John B. Anderson  
Pres.: Warren L. Schnur MM

SANGAMO ELECTRIC CO.  
11th & Converse, Springfield, Ill. (Tel. 4-6411)  
Purch. Agent-Springfield, Ill.: H. C. Chambers  
Purch. Agent-Pickens Div., Pickens, S. C.: R. W. Kreppert (Tel. 6311)  
Purch. Agent-Ordill Oiv., Marion, Ill.: Rex McCluskey (Tel. 231)  
V. P.-Sales: R. C. Lanphier, Jr. MM

SANTA ANITA ENGRG. CO.  
2451 E. Colorado St., Pasadena 8, Calif. (Tel. RYan 1-7441)  
Prod. Mgr.: Robert Blyth  
Purch. Agent: Kent Felker  
V. P.-Sales: L. O. Bonham MF

SANTA BARBARA RESEARCH CENTER  
Bldg. 316, Santa Barbara Airport, Goleta, Calif. (Tel. WOODland 7-2331)  
Purch. Agent: William J. Cartledge  
Asst. Chief-Admin.: O. T. Shiffman GE, R&D

SARGEANT & WILBUR HEAT TREATING CORP.  
170 York Ave., Pawtucket, R. I. (Tel. PA 3-5900)  
Pres.: Irvin M. Sargeant  
Asst. to Pres.: Joseph T. McDevitt MM, R&D

SARGENT ENGRG. CORP.  
2533 E. 56th St., Huntington Park, Calif. (Tel. LUDlow 3-4161)  
Purch. Agent: C. A. Brack

Dir.-Sales, Aircraft Div.: S. B. Sargent, Sr.  
GS, GH, GE, CO, R&D

SARKES TARZIAN, INC., RECTIFIER DIV.  
415 N. College Ave., Bloomington, Ind. (Tel. EDison 2-1435)  
Purch. Agent: Max Robertson GS, GE, TS, TR

SATELLITE-KENNEDY, INC. OF CALIFORNIA  
P. O. Box 1711, Monterey, Calif. (Tel. FRantier 3-2461)  
Controller: M. E. Mawer  
Engrg. Mgr.: C. M. Brawn R&D

SAUERREISEN CEMENTS CO.  
1045 N. Canal St., Pittsburgh 15, Pa. (Tel. STerling 1-2323)  
Purch. Agent: G. W. Read  
V. P.-Sales: P. F. Sauerreisen MM

SAVAGE-ROWE PLATING CO., INC.  
2152 Partage St., Kalamazoo, Mich. (Tel. FLEside 5-0532)  
Pres.: Frank K. Savage  
V. P.-Sales: A. K. Graham MM

SAYLOR ELECTRIC PRODUCTS CORP.  
277 Pierce, Birmingham, Mich. (Tel. JORDan 6-7122)  
Purch.: W. R. Saylor  
Sales: B. F. Stiles MF, PS

SCAICO CONTROLS, INC.  
P. O. Box 41, Cooper St., Delanca, N. J. (Tel. HObart 1-4717)  
Secy.: J. S. Cooper GS, TS, R&D

SCAIFE CO., DIV.-WILSON BROTHERS  
26 Ann St., Oakmont, Pittsburgh, Pa. (Tel. EMerson 2-2100)  
Purch. Agent: J. M. McClure  
Mgr.-Defence Sales: R. S. Townend MF, GH, R&D

SCALA RADIO CO.  
2814 19th St., San Francisco 10, Calif. (Tel. VA 6-2898)  
Purch. Agent: E. M. O'Neill  
Owner: Bruno Zuccani

SCAM INSTRUMENT CORP., THE  
1811 Irving Park Rd., Chicago 13, Ill. (Tel. GRoceland 7-7850)  
Purch. Agent: Wayne Miller  
Sales Mgr.: Roscoe Garrett GS, CO, TS

SCHAEVITZ ENGRG.  
U. S. Rr. 130 & Schaevitz Blvd., Pennsauken, N. J. (Tel. NORmandy 2-8000)  
Purch. Agent: Helen Tarr  
Coordinator-Sales: Russell C. Spera GE, CO, R&D

SCHAFFER AIR INDUSTRIES, INC.  
290 N. Henry St., Brooklyn 22, N. Y. (Tel. EYEvergreen 3-5300)  
Purch.: Bernard Schaffer GS, GH, CO, TS

RAY A. SCHARER & CO.  
17411 E. Warren, Detroit 2, Mich. (Tel. TUxedo 2-7172)  
Purch.: M. A. Davis  
Sales: R. A. Scharer

SCHAUER MFG. CORP.  
4500 Alpine Ave., Cincinnati 42, O. (Tel. SYcamore 1-3030)  
Purch. Agent: David T. Face  
V. P.-Sales: S. E. Wright GS, GH, GE, TR

SCHELLENS-TRUE CORP.  
Pondmeadow Rd., Ivoryton, Conn. (Tel. ESSEX-South 7-8248)  
V. P.: E. Peter Schellens  
Pres.: E. L. Schellens PS

SCHLEGEL MFG. CO.  
1555 Jefferson Rd., P. O. Box 197, Rochester 1, N. Y. (Tel. HILLside 5-5110)  
Dir.-Purch.: James Doris  
Asst. Purch. Agent: Donald Nesbitt  
Sales Mgr.: William K. Sittig MF, MM

D. A. SCHULTZ CO.  
801 S. E. 8th St., Minneapolis 14, Minn. (Tel. FEDERAL 9-7701)

CODING  
Missile Frame MF  
Warhead & Nose Case WN  
Propulsion System PS  
Ground Support GS  
Ground Handling GH  
Guidance Equipment GE  
Checkout Equipment CO  
Test Equipment TS  
Tracking & Telemetering TR  
Research & Development R&D  
Materials & Metals MM

# . . . purchasing directory schut—smi

- Purch. Agent:** Morge Knight  
**Sales Engr.:** Burton Dahlsen  
**MF, TS**
- SCUTTIE & KDERTING CO.**  
Cornwells Hts., Bucks Co., Pa. (Tel. MEcury 9-0900)  
**Purch. Agent:** C. Alsentzer  
**V. P.-Sales:** F. L. Seibold  
**GH**
- SCHWEBER ELECTRONICS**  
60 Herricks Rd., Mineola, L. I., N. Y. (Tel. Pioneer 6-620)  
**Buyer:** George P. Heller  
**Sales:** Jack Loskin  
**GE**
- PETER J. SCHWEITZER DIV.**  
261 Madison Ave., New York 16, N. Y. (Tel. MUroy Hill 2-8400)  
**Dir.-Purch.:** J. B. Tropp  
**Sales Mgr.:** Duke Kohl (Lee, Moss.)  
**MM**
- SCIAKY BROTHERS, INC.**  
4915 W. 67th St., Chicago 38, Ill. (Tel. POrtsmouth 7-5600)  
**Purch. Agent:** John Bilik  
**V. P.-Sales:** Maurice Scieky  
**MF, PS, GH, MM**
- SCIENTIFIC ENGRG. CO.**  
653 11th Ave., New York 36, N. Y. (Tel. COlumbus 5-7286)  
**Purch. Agent:** Gilbert Goadgion  
**Owner:** F. Feinfrank  
**TS, R&D**
- SCIENTIFIC ENGRG. LABS., INC.**  
1510 Sixth St., Berkeley 10, Calif. (Tel. LA 6-2772)  
**Purch. Agent:** Mrs. Alberto Proteau  
**S. W. Mgr.:** J. R. Hafstrom, La Jolla, Calif. (Tel. GL 4-1185)  
**Pres.:** G. C. McFarland  
**GS, TS, R&D**
- SCIENTIFIC INSTRUMENT CD.**  
1041 2nd Ave., Detroit 26, Mich. (Tel. WOODward 2-9060)  
**Pres.:** Harold Warr  
**V. P.-Sales:** John E. Peterson  
**GS, GH, CO, TS, R&D**
- SCIENTIFIC RADID PRODUCTS, INC.**  
2303 W. 8th St., Loveland, Colo. (Tel. NDrmandy 7-2261)  
**Treas. & Purch. Agent:** G. E. Ulfers  
**V. P. & Sales Mgr.:** G. C. Follmer
- SCIENTIFIC-ATLANTA, INC.**  
2162 Piedmont Rd., N. E., Atlanta 9, Ga. (Tel. TRinity 5-7291)  
**Buyer:** George Ray  
**Chief Mechn. Engr.:** S. F. Hutchins  
**Chief Elect. Engr.:** C. H. Currie  
**Sales Mgr.:** William H. Bradley  
**TS, R&D**
- SCIDTD SIGN CD.**  
370 Vine St., Kenton, O. (Tel. 2-1146)  
**Pres.:** Collins M. Shaw  
**Purch. Agent:** K. Buck  
**Sales Mgr.:** B. Deardorff
- SCDPES CD., INC., THE**  
P. O. Box 56, Monsey, N. Y. (Tel. ELMwood 6-6339)  
**Dir.-Purch.:** M. Silver (Diamond 3-3070)  
**Pres.:** M. Rickard  
**TS**
- H. H. SCDTT, INC.**  
111 Powder Mill Rd., Maynard, Mass. (Tel. TWIn Oaks 7-8801)  
**Sales Mgr.-Instr. Div.:** E. G. Dyett, Jr.  
**CO, TS, TR**
- SCDDT AVIATION CORP.**  
Erie St., Lancaster, N. Y. (Tel. REgent 5100)  
**Purch. Agent:** K. J. Albrecht  
**V. P.-Sales & Finance:** R. D. Pollock  
**GS, GH, R&D**
- SCOVILL MFG. CO.**  
99 Mill St., Waterbury, Conn. (Tel. PLoza 4-1171)  
**V. P. & Gen. Mgr.:** P. E. Fenton  
**Sales:** R. Woodacre  
**MM**
- SCREW CDRP.**  
157 N. Rivergrade Rd., City of Industry, Calif. (Tel. EDgewood 8-5501)  
**Treas.:** H. Wechsler  
**Secy.:** K. R. Brooks
- SCREW PRODUCTS CORP. OF AMERICA**  
5211 Southern Ave., South Gate, Calif. (Tel. LDRAIN 6-5141)  
**Purch. Agent:** Albert Jenkins  
**Sales Mgr.:** Walter Cleary  
**MF, WN, PS**
- SEAL ELECTRIC SWITCH & RELAY CDRP.**  
6025 N. Keystone Ave., Chicago 46, Ill. (Tel. KEystone 9-7502)  
**Purch. Agent:** J. C. Miller  
**Sales Mgr.:** E. M. Paradise  
**PS, GS, GH, GE, TS, TR**
- SEALMASTER BEARING DIV., STEPHENS-ADAMSON MFG. CO.**  
Ridgeway Ave., Aurora, Ill. (Tel. AUrora 2-4311)  
**Purch. Agent:** K. L. Johnson  
**V. P.:** C. B. Hurd, Bearing Div.  
**Sales Mgr.:** J. W. Todd, Engrg. Div.  
**GH, GE**
- SEALOL CORP.**  
460 Post Rd., Providence 5, R. I. (Tel. STUart 1-4700)  
**Purch. Agent:** Nathaniel Burnham  
**Pres.:** Clement W. Williamson  
**PS, GS, GH, R&D**
- SEAL-PEEL, INC.**  
775 Stephenson Hwy., Royal Oak 3, Mich. (Tel. UNiper 8-1055)  
**V. P. & Purch. Agent:** Frank Evans  
**Pres.:** Arthur Aaron
- SEAMLESS PRDDUCTS CO., INC.**  
126 11th Ave., New York 11, N. Y. (Tel. ALgonquin 5-2152)  
**MF, WN, PS, GS, GH, GE**
- SECO MFG. CO.**  
5015 Penn Ave. S., Minneapolis 19, Minn. (Tel. WALnut 6-4545)  
**Pres. & Chief Engr.:** E. A. Bramsen  
**Sales Mgr.:** L. P. Henaman  
**TS**
- SECON METALS CORP.**  
7 Intervale St., White Plains, N. Y. (Tel. WHitePlains 9-4757)  
**Pres.:** Eugene Cohn  
**MF, PS, GS, TR**
- SEEBURG CORP., THE**  
1500-38 N. Dayton St., Chicago 22, Ill. (Tel. MICHigan 2-0800)  
**Purch. Agents:** Walter Metcalf & Ritchie Tredwell  
**Buyers:** Walter Korzun, Daniel Dolce & George Keller  
**Contract Adm.:** W. Cummins  
**GS, GE, TR**
- SEELEY ELECTRONICS**  
1060 S. La Brea Ave., Los Angeles 19, Calif. (Tel. WEster 3-1183)  
**Warren M. Seeley**  
**TR**
- EDWARD SEGAL**  
132 Lafayette St., New York 13, N. Y. (Tel. WOrth 6-3935)  
**Dir.-Purch.:** I. Pollevo  
**Sales Mgr.:** E. Segal  
**MM**
- SEISCOR MFG. CORP.**  
P. O. Box 1590, 6200 E. 41st St., Tulsa, Okla. (Tel. RIVERSide 3-1381)  
**Purch. Agent:** M. G. Steil  
**Sales Mgr.:** Clyde V. Hussey  
**GS, GE, CO, TS, R&D**
- SELAS CORP. OF AMERICA**  
Dresher, Pa. (Tel. MITchell 6-6600)  
**Pres.:** F. O. Hess  
**Purch. Agent:** J. E. Kerns  
**R&D**
- SEL-REX CDRP.**  
75 River Rd., Nutley 10, N. J. (Tel. NUTley 2-5200)  
**Branch Offices:** 5875 N. Lincoln, Chicago, Ill. (Tel. Long Beach 3-1183); 1168 Santa Monica Blvd., Los Angeles 25, Calif. (Tel. GRANite 7-4206)  
**Purch. Agent:** J. R. Ezzo  
**V. P.-Sales:** S. S. Wilson  
**MM, R&D**
- SEQUIA WIRE & CABLE CD., DIV.-MANDREL INDUSTRIES, INC.**  
2950 N. Ontario St., Burbank, Calif. (Tel. VICTORIA 9-2341)  
**Purch. Agent:** John W. De Brennan  
**Gen. Sales Mgr.:** Edward J. Stephens  
**MF, PS, GS, GE, CO, TS, TR, R&D**
- SEQUIA WIRE CO.**  
2201 Bay Rd., Redwood City, Calif. (Tel. EMerson 9-0331)  
**Buyer:** Ruth Pasco  
**Gen. Sales Mgr.:** M. C. Jafferries  
**MF, PS, GS, GH, CO, TS, TR**
- SERVY CDRP. OF AMERICA**  
2020 Jericho Turnpike, New Hyde Park, L. I., N. Y. (Tel. FIEldstone 3-4100)  
**Purch. Agent:** R. Montag  
**Mktg. Mgr.:** A. Freed  
**Govt. Sales Mgr.:** S. S. Levine  
**Systems Sales Mgr.:** Jules Cardon  
**GS, GE, CO, TS, TR**
- SERVOMECHANISMS, INC.**  
12500 Aviation Blvd., Hawthorne, Calif. (Tel. OREGON 8-7841)  
**Purch. Agent:** H. Muller  
**Pr. Buyer:** E. Mason  
**Buying Supv.:** R. Womack  
**Buyers:** L. Meyer, T. Butler & S. Jordan  
**Dir.-Customer Liaison:** G. S. Robinson  
**GS, GH, GE, CO, TS, R&D**
- SERVOMECHANISMS, INC., MECHATRD L DIV.**  
1200 Prospect Ave., Westbury, L. I., N. Y. (Tel. EDgewood 3-6000)  
**Purch. Agent:** James Dwens  
**Buyer:** Louis Addazio  
**Sales Mgr.:** T. Cataldo  
**PS, GS, GH, GE, TS, TR**
- SERVWELL PRODUCTS CO.**  
6541 Euclid Ave., Cleveland 3, Ohio (Tel. EXpress 1-0497)  
**Dir.-Purch.:** I. W. McCulley  
**Sales Mgr.:** R. McCulley  
**GH**
- SESCO MFG., INC.**  
4th & Prospect St., Bridgeport, Pa. (Tel. BRoadway 9-4350)  
**Pres.:** S. E. Slaymaker, 3rd  
**MF, WN, PS, GS, GE, TS**
- J. H. SESSIONS & SON**  
Riverside Ave., Bristol, Conn. (Tel. LUDlow 2-3127)  
**Pres.:** Paul B. Sessions  
**Dir.-Sales:** Ray Alcott  
**MM**
- SETCHELL-CARLSON, INC.**  
New Brighton, St. Paul 12, Minn. (Tel. MErose 3-3131)  
**Pres. & Gen. Mgr.:** B. T. Setchell  
**Secy.-Treas.:** C. Donald Carlson  
**V. P.:** Alice Chermak  
**Natl. Sales Dir.:** Col. Karnstedt
- SHAFFER BEARINGS, CHAIN BELT CO.**  
Belmont at Curtiss St., Downers Grove, Ill. (Tel. WOODland 9-1770)  
**Purch. Agent:** Robert L. Kaiser  
**GS, GH, GE**
- SHALLCROSS MFG. CO.**  
Preston St., Selma, N. C. (Tel. WOODlawn 5-2341)  
**Purch. Agent:** J. C. Scanlon  
**V. P.-Sales:** D. M. O'Halloran  
**WN, CH, GH**
- SHALLITE, INC.**  
128 W. First Ave., Roselle, N. J. (Tel. CHEstnut 5-9800)  
**Purch. Agent:** S. H. Dlszewski  
**Pres. & Sales Mgr.:** C. K. Krouse  
**TI**
- W. S. SHAMBAN & CO.**  
11617 W. Jefferson Blvd., Culver City, Calif. (Tel. TEXAS 0-6877); also Box 176, Meyer Rd., Ft. Wayne, Ind. (Tel. ANthony 6491)  
**Purch. Agent:** Howard Drake  
**Sales Mgr.:** Carl Wolff  
**WN, MM, R&I**
- SHANNON LUMINOUS MATERIALS CO.**  
7356 Santa Monica Blvd., Hollywood 46, Calif. (Tel. HDIllywood 7-5509)  
**Owner:** James R. Alburger  
**Purch. (Gen.):** Iris M. Guider  
**MF, GS, GE, CO, TI**
- SHARON STEEL CORP.**  
Sharon, Pa. (Tel. DI 6-4141)  
**V. P. & Purch.:** J. D. Neuman  
**Purch. Agent:** G. R. McQuiston  
**V. P.-Comm.:** W. J. McCune  
**MA**
- SHARPLES CORP., THE**  
2300 Westmoreland St., Philadelphia 40, Pa. (Tel. BALDwin 8-9100)  
**Dir.-Purch.:** William Neill  
**Sales Mgr.:** Allen R. Greenlaw  
**MM, R&I**
- SHAW BELTING CO., THE**  
150 William St., Middletown, Conn. (Tel. DI 6-8793)  
**Pres.:** Ralph H. Shaw  
**Gen. Mgr.:** Ralph H. Shaw, II  
**GH**
- SHAW METAL PRODUCTS CORP.**  
101 Third Ave., Garden City Park, L. I., N. Y. (Tel. PIONEER 6-6650)  
**Purch. Agent:** E. Morton  
**MF, PS, GS, GH, GE, CO, T**
- SHEFFIELD CORP., THE, SUB-BENDIX AVIATION CORP.**  
Box 893, 721 Springfield St., Dayton 1, D. (Tel. CLEARwater 4-5377)  
**Purch. Agent:** Joseph Geyer  
**MF, PS, GS, GH, GE, CO, TS, TI**
- SHELL CHEMICAL CORP., INDUSTRIAL CHEMICAL DIV.**  
380 Madison Ave., New York 17, N. Y. (Tel. OXFord 7-3311)  
**Sales Mgr.:** W. Q. Mooney  
**Gen. Mgr.-Purch.:** W. H. Bratches  
**MF, PS, MM**
- SHELL CHEMICAL CORP., PLASTICS & RESINS DIV.**  
50 W. 50th St., New York 20, N. Y. (Tel. JUdson 6-5000)  
**Gen. Mgr.-Purch.:** W. H. Bratches  
**Sales Mgr.:** D. P. Jones
- SHELTERED WORKSHOPS**  
2521 5th St., Santa Monica, Calif. (Tel. EXbrook 9-7741)  
**Factories:** Plant #1, 2521 5th St., Santa Monica, Calif.; Plant #2, 10835 Hawthorne Blvd., Inglewood 2, Calif.  
**Gen. Mgr.:** J. E. Anthony  
**MF, PS, GS, GH, T**

ENANGO FURNANCE CO., THE,  
CENTRIFUGALLY CAST PRODUCTS DIV.  
Third St., Dover, O. (Tel. 4-2114)  
Purch. Agent: William Hague  
Sales Mgr.: K. L. Jansen

EPARD LABORATORIES, INC.  
Broad St. at Park Ave., Summit, N. J. (Tel. CRestview 3-5255)  
Purch. Agent: Enach Jones  
Product Mgr.: E. J. Quinby GS, R&D

W. & C. B. SHERIDAN CO.  
4701 Crenshaw Blvd., Torrance, Calif. (Tel. DA 6-6702)  
P. P.-Gen. Mgr.-West Coast Div.: Landon R. Gray  
P. P.-Sales Mgr.: Wm. E. Seaman, Sr. (Tel. Dlgby 9-4090)  
Dir.-Sales, Aircraft: Charles Frazee MF, GS

GERMAN INDUSTRIAL ELECTRONICS, DIV.-  
ENGRG. DESIGN INC.  
501 W. College Ave., Box 813, State College, Pa. (Tel. ADams 8-0061)  
Office Mgr.: A. Lynn McIlloaine  
Gen. Mgr.: A. R. Farrell R&D

GLDING INC.  
Box 59, Riverton, N. J. (Tel. TAlmadge 9-1433)  
Gen. Mgr.-Purch.: J. W. Ryan  
Chief Engr.: A. J. Dicciano  
P. P.-Sales: T. P. Reath GS, TS

GOCKLEY TRANSISTOR CORP.  
117 California Ave., Pala Alta, Calif. (Tel. DAVenpart 1-2121)  
Mktg. Mgr.: Frank Newman  
Purch. Agent: Jack Carlson, 391 S. San Antonio Rd., Mountain View, Calif. (Tel. DAVenpart 6-1300) MM, R&D

GRIFFIN BROTHERS, INC.  
22 Hartrey Ave., Evanston, Ill. (Tel. DAVIS 8-9000)  
P. P.-Purch.: M. A. Cape  
Buyers: L. Elkin & B. Farber  
P. P.-Sales: V. Machin GS, GE, TS, TR

GRIFFIN-LOK CORP.  
79 S. East St., Anaheim, Calif. (Tel. PRAspect 4-2773)  
Pres.: F. W. Rahe  
Purch. Agent: W. A. Livingstone  
Chief Engr.: D. B. Kreider MF, PS

GRINDING MACHINE & FOUNDRY CORP.  
36 E. Tutt St., South Bend 23, Ind. (Tel. AT 8-4611)  
Purch. Agent: E. A. Evans  
Sales Mgr.: William H. Voll WN

GUNBATH GEAR & PUMP CO., INC.  
152 Hudson Blvd., N. Bergen, N. J. (Tel. UNION 9-3000)  
Purch. Agent: Martin Nocleria  
Sales Mgr.: J. A. Glaser PS, GS, GH, TS

HEPRA ENGRG. CO.  
3 E. Mantecita Ave., Siero Madre, Calif. (Tel. ELgin 5-3318)  
Purch. Agent: Eugene Toms  
Sales: F. A. Rittersath

HILACIN CORP., THE  
3 N. Victory Blvd., Burbank, Calif. (Tel. VICTORIA 9-2421)  
Purch. Agent: Miss Helen Tyle  
P. P.-Sales: J. E. Slattery MM

HILMASTER CORP.  
Aleppe St., Providence, R. I. (Tel. TEMple 1-6200)  
Purch. Agent: Lawrence Arnott  
Sales Mgr.: Gilbert Glass WN, PS, GE, CO, TR

HIL INSTRUMENTS, INC.  
10 Pearl St., S. Braintree, Mass. (Tel. VICTOR 3-5000)  
Purch. Mgr.: Alfred E. Foley  
Sales: Kjell Pehrson  
Sales Mgr.: R. B. Wolf GE

HILAMOTOR, INC.  
41 Main St., Middleport, N. Y. (Tel. RE 5-3611)  
Asst.: Van G. Hungerford  
Gen. Mgr.: Phillip J. Slattery R&D

HIL TRANSFORMER CO.  
51 McDonald Ave., Brooklyn 30, N. Y. (Tel. ESplanade 6-0615)  
Purch. Agent: E. Hirsch  
Buyer: H. Apatheka  
Sales Mgr.: Wm. J. Brinkley, Jr. GS, GH, GE

HILALITE INC.  
41 Neptune Hwy., Neptune, N. J. (Tel. PRAspect 5-2490)  
P. P.-Sales: Alvin W. Gershan GS, GE, TS, TR

HIL HOIST & CRANE CO.  
63rd St., Brooklyn 20, N. Y. (Tel. BEAchview 4-2525)

Purch. Agent: Anthony Yuzzolino  
Sales: M. M. Bonnick MO 6-6710  
Sales Mgr.: E. E. Olds WN, TS, MM, R&D

SILICON TRANSISTOR CORP.  
150 Glen Cove Rd., Carle Pl., Long Island, N. Y. (Tel. Pioneer 2-4101)  
Purch. Agent: Joseph Zack  
Sales Mgr.: Robert L. Ashley

SILICONE INSULATION, INC.  
1383 Seabury Ave., Bronx 61, N. Y. (Tel. SYcamore 2-4400)  
Dir.-Purch.: G. Greck  
Dir.-Sales: W. Elsfelder WN

SILICONE PRODUCTS DEPT., GENERAL ELECTRIC CO.  
Waterford, N. Y. (Tel. ADams 8-3330)  
Purch. Agent: Paul Megan  
Mgr.-Mktg.: Jerome T. Cae MF, PS, WN

SILICONE SEALS, INC.  
3694 Milwaukee Ave., Chicago 41, Ill. (Tel. AVENue 2-3787)  
Secy.: Robert Shattaw  
Sales: Leonard E. Brown MF, GS, GE

SILICONES DIV.-UNION CARBIDE CORP.  
30 E. 42nd St., New York 17, N. Y. (Tel. MUrray Hill 6-1700)  
Purch. Agent: J. W. Gordon, Long Reach Silicanes Plant, P. O. Box 180, Sistersville, W. Va. (Tel. OLdfield 2-3211)  
Asst. Purch. Agent: R. Ankrum, Sistersville  
Gen. Sales Mgr.: L. J. Sinnatt MM

SIMMONDS AEROCESSORIES, INC.  
105 White Plains Rd., Tarrytown, N. Y. (Tel. MEdford 1-7500)  
Purch. Agent: T. McAdams  
Gen. Contracts Mgr.: H. C. Pringle MF, PS, TR, MM, R&D

SIMMONS FASTENER CORP.  
N. Broadway, Albany 1, N. Y. (Tel. 62-5431)  
V. P.-Gen. Mgr.: Harry H. Rose MF, GS, GH, GE, CO, TS, TR, R&D

SIMONDS SAW & STEEL CO.  
470 Main St., Fitchburg, Mass. (Tel. DIamond 3-3731)  
Purch. Agent: Louis A. Little, Intervale Rd., Fitchburg, Mass.  
Gen. Sales Mgr.: Clyde N. Mansur MM

SIMPLEX PISTON RING MFG. CO.  
12301 Bennington Ave., Cleveland 11, O. (Tel. CLEARwater 2-2205) MF, PS

SIMPLEX WIRE & CABLE CO.  
79 Sidney St., Cambridge 39, Mass. (Tel. KIRkland 7-9000)  
Adv. Mgr.: T. H. Marsh

SIMPSON ELECTRIC CO.  
5200-18 W. Kinzie St., Chicago 44, Ill. (Tel. ESTeaback 9-1121)  
Purch. Agent: James Werner  
Sales Mgr.: M. O. Buehring TS

SINCLAIR MFG. CO.  
S. Worcester St., P. O. Box 398, Chertley, Mass. (Tel. ATLeboro 1-2627)  
Pres. & Treas.: John C. Sinclair  
Sales Mgr.: Haward C. Brownell MF, WN, PS, GS

SINCLAIR-COLLINS VALVE CO., DIV.-IBEC  
454 Morgan Ave., Akron, Ohio (Tel. PR 3-6623)  
Dir.-Purch.: R. R. Stull  
Sales Mgr.: D. R. Branaka GH, TS

SINGER MFG. CO., THE, MILITARY PRODUCTS DIV.  
149 Broadway, New York 6, N. Y. (Tel. 9-1200)  
Mgr., Military Products Div.: F. W. Howells GS, GE, CO, TR, MM, R&D

SIoux OIL CO.  
P. O. Box 811, Newcastle, Wya. (Tel. SHERwood 6-4445)  
Purch. Agent: G. R. Kaul  
Sales Mgr.: Lea Nelson

SIRNARD SIROTTA CD.  
624 Smith St., Brooklyn 31, N. Y. (Tel. TRIangle 5-3897) MM

SIRVALCD SYSTEMS CORP.  
43 Kendrick St., Wrentham, Mass. (Tel. EVergreen 4-3121)  
Dir.-Purch.: James Mahaney  
Dir.-Sales: E. Richard Bagarazy, New York, N. Y. (Tel. PLaza 3-3855)  
V. P.: Vincent F. Siravo PS, GH

SITTLER CORP.  
18 N. Ada St., Chicago 7, Ill. (Tel. SEeley 3-4616)  
V. P.-Purch.: S. J. Lanasa MF, GS, GH, TS, TR

SIZE CDNTRDL CO., DIV.-AMERICAN GAGE & MACHINE CD.  
2500 W. Washington Blvd., Chicago 12, Ill. (Tel. MO 6-6710)

C. SJOBBERG & SON  
415 Station St., Cranston 10, R. I. (Tel. HO 1-8220)  
Owner: C. Sjobberg, Sr.

SKIATRON ELECTRONICS & TELEVISION CORP.  
180 Varick St., New York, N. Y. (Tel. TWatkins 4-7050)  
Purch. Agent: N. J. Ackerman  
Prod. Mgr.: Albert Caputo  
Sales: Frank V. Quigley GS, GE, CO, TR, R&D

SKIDMORE-WILHELM MFG. CO.  
442 Green Rd., Cleveland, Ohio (Tel. IVanhoa 1-4774)  
Pres.: J. W. Wilhelm

SKINNER ELECTRIC VALVE DIV.  
95 Edgewood Ave., New Britain, Conn. (Tel. BALDwin 9-4826)  
Purch. Agent: Clifford Nelson  
V. P.-Sales: D. M. Stevenson PS, GS, GH, GE, TS

SKINNER PRECISION PRODUCTS  
600 San Christopher St., Duneedin, Fla. (Tel. 81-5311)  
Partners: Ben Skinner & B. C. Skinner MF, PS, GS, GH

SKINNER SEAL CO.  
3001 Sutter St., Santa Ana, Calif. (Tel. KI 5-5571)  
Purch. Agent: Bill Philipson  
Gen. Mgr.: Robert T. Skinner MF, PS, GS, GE

SKYCRAFT TOOL ENGRG. CO.  
11940 Bray St., Culver City, Calif. (Tel. LI 8-3265)  
Purch. Agent: D. Harrison  
Pres.: R. M. Harrison

SKYDYNE, INC.  
River Rd., Part Jervis, N. Y. (Tel. 3-2241)  
Dir.-Purch.: W. F. Maccallum  
Buyer: B. E. Marchant  
V. P. & Sales Mgr.: Robert L. Weill MM, R&D

SKYLINE ELECTRIC & MFG. CO.  
203 W. Thomas St., Seattle 99, Wash. (Tel. ATwater 4-8420)  
Project Engr.: Benna Persitz (Tel. ATwater 3-6941) GS, GH, GE, TR, R&D

SKYLINE PRODUCTS, INC.  
819 Grand Blvd., Deer Park, N. Y. (Tel. DEer Park 2-8644)  
V. P.-Sales: Thomas A. Perry  
Buyer: John Canning  
Pres.: Morris Herberg MF, GS, GH

SKYVALVE INC.  
2308 Washington Blvd., Venice, Calif. (Tel. EXbrook 6-3733); also 831 W. Fayette St., Syracuse 4, N. Y.  
Purch. Agent: Anthony Vespa  
Gen. Mgr.: Robert Schaller PS, GS

SLAUGHTER CO., INC.  
Piqua 18, O. (Tel. PRAspect 3-5936) TS

SLIP RING CO. OF AMERICA  
(Plant) 3612 W. Jefferson Blvd., Las Angeles 16, Calif. (Tel. Republic 5-0253)  
Purch. Agent: Larry Jacobsen  
Sales Mgr.: Robert A. Felburg (Engrg. & Sales)  
5456 W. Washington Blvd., Las Angeles 16, Calif. (Tel. WEbster 1-8156) GS, GE, CO, TS, TR

SLOAN CO., THE  
4029 W. Burbank Blvd., Burbank, Calif. (Tel. VICTORIA 9-4667)  
Purch. Agent: B. K. Panzer  
Gen. Mgr.: Paul N. Zazanis GS, GH, GE, CO, TS, TR

SMALL MOTORS INC.  
2076 Elston Ave., Chicago 14, Ill. (Tel. ARMitage 6-6900)  
Pres.: R. R. Cook PS, GS, GE, TS

A. O. SMITH CORP.  
P. O. Box 584, 3533 N. 27th St., Milwaukee, Wisc. (Tel. UPTown 3-3000)  
V. P.-Purch.: M. E. Morgan  
Purch. Dept.: J. E. Borchert, A. J. Riedel, T. J.

	CODING
	Missile Frame MF
	Warhead & Nose Cone WN
	Propulsion System PS
	Ground Support GS
	Ground Handling GH
	Guidance Equipment GE
	Checkout Equipment CO
	Test Equipment TS
	Tracking & Telemetry TR
	Research & Development R&D
	Materials & Metals MM

# ... purchasing directory smi—step

- Pas & L. H. Lennort  
Dir.-Defense Products: H. D. Barnes MF, PS, R&D
- A. O. SMITH CORP., SMITH-ERIE DIV.**  
250 Park Ave., New York 17, N. Y. (Tel. YUkon 6-7400)  
Purch. Agent: A. B. Madjeski, 5715 Smithway St., Los Angeles 22, Calif. (Tel. RAYmond 3-3361)  
Gen. Sales Mgr.: H. D. Leisenring
- E. C. SMITH MFG. CO.**  
Forrest & Hector Sts., Conshohocken, Pa. (Tel. TAYlor 8-4790)  
Dir.-Sales: Earl C. Smith
- G. W. SMITH & SONS, INC.**  
1700 Spaulding Rd., Dayton, Ohio
- L. B. SMITH AIRCRAFT CORP.**  
P. O. Box 456, International Airport Br., Miami 48, Fla. (Tel. TUxedo 8-8481)  
Mgr.-Materials: Lloyd G. Culbertson  
Purch. Agent: George Caglar  
V. P.-Aerosmith Prod.: W. Peckham  
V. P.-Aircraft Sales & Serv.: George R. Dutton
- SMITH-MORRIS CORP.**  
825 Myrtle St., Ferndale, Mich. (Tel. JORdon 6-3124)  
Purch. Agent: L. Gnich  
Sales Mgr.: G. W. Smith MF, WN, PS, GS, GH, GE
- SMOOTH-ON MFG. CO.**  
572 Communipaw Ave., Jersey City 4, N. J. (Tel. HENDERSON 3-0076)  
Gen. Mgr.: H. M. Silver  
Sales Mgr.: G. T. Morse MM
- SNAP-ON-TOOLS CORP.**  
8154 28th Ave., Kenosha, Wisc. (Tel. OL 4-8681)  
Dir.-Purch.: Frank A. Tetzloff  
Dir.-Sales: Rogers Palmer
- SNAP-TITE, INC.**  
201 Titusville Rd., Union City, Pa. (Tel. 497)  
V. P.-Purch.: Myron W. Shafer  
V. P.-Sales: Leonard M. Clark PS, GS, GH
- SODERBERG MFG. CO., INC.**  
628 S. Palm Ave., Alhambra, Calif. (Tel. CUMberland 3-3822)  
Purch. Agent: W. G. Lee  
Sales Mgr.: W. W. Hulke MF, GS, GH, TS, TR
- SOLAR AIRCRAFT CO.**  
2200 Pacific Hwy., San Diego 17, Calif. (Tel. BELmont 3-8241)  
Mgr.-Purch.: William L. Vaughan  
Supvr.-Buying: C. E. Powers  
V. P.-Sales: Lynn D. Richardson MF, WN, GS, GE, MM, R&D
- SOLARTRON INC.**  
10761 Burbank Blvd., N. Hollywood, Calif. (Tel. ST 7-5081)  
Office Mgr.: J. A. Hughes  
Sales Mgr.: F. J. Steward GS, GE, CO, TS
- SOLON FOUNDRY, INC.**  
6370 SOM Ctr. Rd., Solon, O. (Tel. CHURchill 8-5304)  
Purch. Agent: H. A. Lucas  
Dir.-Sales: George N. Wright MF, WN
- SOMERS BRASS CO. INC.**  
94 Baldwin Ave., Waterbury, Conn. (Tel. PLaza 6-8321)  
Purch. Agent: William Jay  
Sales Mgr.: Claude S. Speicher MM
- SONOTONE CORP.**  
Elmsford, N. Y. (Tel. LY 2-6400)  
Dir.-Purch.: John J. Downs  
Battery Sales Mgr.: Eugene F. Murphy PS, R&D
- SORENSEN & CO., INC.**  
Richards Ave., S. Norwalk, Conn. (Tel. TE 8-6571)  
Purch. Mgr.: C. Boylan  
Chief Purch. Agent: N. Grosso  
Buyers: M. J. Ruddock, J. Horwood & R. Kassnoff  
Mgr.-Mkting: P. J. Deery GS, CO, R&D
- SOROBAN ENGRG., INC.**  
Box 1717, Melbourne, Fla. (Tel. PA 3-7221)  
Purch. Agent: Albert George  
Pres.: C. F. West GE, CO, TS, TR
- SOUND APPARATUS CO.**  
Morris St., Stirling, N. J. (Tel. MILLington 7-0600)  
Purch.: H. Niemann TS
- SOUTH RIVER METAL PRODUCTS CO., INC.**  
377 Turnpike, S. River, N. J. (Tel. CLifford 4-5253)  
Gen. Mgr.: J. Cohn  
Sales Mgr.: Martin L. Roth MF, WN, PS, GH
- SOUTH WIND DIV., STEWART WARNER CORP.**  
1514 Dwyer St., Indianapolis, Ind. (Tel. MEIrose 2-8411)
- Dir.-Purch.:** Paul Ostler  
**Purch. Agent:** George Leidencker  
**Buyer:** Sam Salatch  
**Prod. Mgr.:** L. E. Boss  
**Mgr.-Field Repres.:** J. O. Coffey MF, PS, GS, TR, R&D
- SOUTHCO DIV., SOUTH CHESTER CORP.**  
Lester, Pa. (Tel. LEHigh 4-1800)  
Purch. Agent: C. R. Hirzel  
Gen. Mgr.-Sales: T. R. Ounley MF
- SOUTHERN CALIF. COOPERATIVE WIND TUNNEL-CALIF. INST. OF TECH.**  
950 S. Raymond Ave., Pasadena, Calif. (Tel. SYcomore 9-4117)  
Associate Dir.: Fred H. Felberg  
Chief Operations Dept.: Paul F. Keller TS
- SOUTHERN ELECTRONICS CORP.**  
150 W. Cypress Ave., Burbank, Calif. (Tel. VICTORIA 9-1923)  
Purch. Agent: R. D. Hirst  
Sales Mgr.: George E. Gansell GE, TS, TR
- SOUTHWEST PRODUCTS CO.**  
1705 S. Mountain Ave., Monrovia, Calif. (Tel. ELIott 8-0181)  
Pres. & Gen. Mgr.: K. V. Hackman MF, WN, PS, GS, GH, GE
- SOUTHWEST PRODUCTS, INC.**  
Rt. 4, Box 90, San Antonio, Tex. (Tel. GENeral 2-5266)  
Purch. Agent: Robert Collsen CO, TS
- SOUTHWESTERN INDUSTRIAL ELECTRONICS CO.**  
10201 Westheimer Rd., P. O. Box 13058, Houston 19, Tex. (Tel. HOmestead 5-3471)  
Purch. Agent: W. T. Wooddell  
Buyer-Electronic: G. Knower  
Buyer-Mechanical & Misc.: C. Brock  
V. P.-Sales: R. H. Parker  
Gen. Sales Mgr.: W. C. Dunn GS, GH, GE, CO, TS, TR, R&D
- SOUTHWESTERN INDUSTRIES, INC.**  
5880 Centinelo Ave., Los Angeles 45, Calif. (Tel. ORegon 8-8915)  
Purch. Agent: Dean F. Oirkson  
Pres.: F. P. Jenks PS, GS, GE, CO
- SOUTHWIRE CO.**  
14 Fertilla St., Carrollton, Go. (Tel. TErrace 2-6311)  
Purch. Agent: James A. Hatley  
Sales Mgr.: J. H. Griffin MM
- SPACE CORP.**  
P. O. Box 5172, Dallas 22, Tex. (Tel. BR 6-5121)  
Dir.-Purch.: James J. Nelson  
Asst. Dir.-Purch.: Jay Horne  
Buyers: Earl Grunwald, Gene Grubbs, Ken Gracy & George Beardsley  
V. P.-Sales: Ellie Jones GS, GH, CO, TS, TR, R&D
- SPACE TECHNOLOGY LAB.**  
5740 Arbor Vitae, Inglewood, Calif.
- SPACEFLIGHT FILM**  
9 W. 19th St., New York 11, N. Y. (Tel. AL 5-1827)  
Dir.-Purch.: Alex Haberstroh
- SPARKLER-FILTRON CORP.**  
24th & Commonwealth, North Chicago, Ill. (Tel. DExter 6-4050)  
V. P.-Res. & Dev.: Robert Blevitzky  
Pres.: Fred H. Horne
- SPARTA MFG. CO., DIV.-U. S. CERAMIC TILE CO.**  
Dover, O. (Tel. DOVer 4-2380)  
Plant Mgr.: C. M. Starkey  
Sales Mgr.: Myron L. Bailey MF, WN, PS, GE, TR
- SPARTAN MARKING CORP.**  
222 W. Huron St., Chicago 10, Ill. (Tel. SUperior 7-6630)  
Sales Mgr.: J. V. Galloway MF, WN, PS, GS, GE, CO, TS, TR
- SPAULDING FIBRE CO., INC.**  
310 Wheeler St., Tonawanda, N. Y. (Tel. JACkson 2000)  
Purch. Agent: W. L. Grieser  
Gen. Sales Mgr.: W. R. Gilsdorf MM
- SPEC TOOL CO.**  
9626 E. Beverly Rd., Pico Rivera, Calif. (Tel. OX 5-9117)  
Purch. Agent: R. J. Snider  
Sales Mgr.: J. M. Caulfield GS, GH
- SPECIAL INSTRUMENTS DIV., BRITISH INDUSTRIES CORP.**  
80 Shore Rd., Port Washington, N. Y. (Tel. PO 7-7700)  
Dir.-Sales: S. Bosworth
- SPECIAL PROJECTS LAB., FOOD MACHINERY & CHEMICAL CORP.**
- Box 58, Station G, Buffalo 13, N. Y. (Tel. GARfield 6320)  
Purch. Agent: Edwin Folts  
Operating Mgr.: John Keeffe PS, GH, TS, R&D
- SPECIALTIES, INC.**  
Skunkts Misery Rd., Syosset, N. Y. (Tel. WALnut 1-2345)  
Purch. Agent: George Chadwick  
V. P.-Sales: John C. Sloum GS, GE, R&D
- SPECIALTIES MFG. CO., INC.**  
125 Bruce Ave., Stratford, Conn. (Tel. EDison 7-4429)  
Purch. Agent: J. J. Zimmer  
Sales Mgr.: A. I. Zimmer
- SPECIALTY ENGRG. & ELECTRONICS CO.**  
79 Clifton Pl., Brooklyn 38, N. Y. (Tel. ULster 7-4760)  
Chief Purch. Agent: J. Ross  
Purch. Agent, Electronic: D. Alster  
Purch. Agent, Factory Supply: W. Prichep  
Purch. Agent, Mech. Parts: M. Friedlander  
Sales Mgr.: H. R. Camner G
- SPECIALTY PLUG & CAP CO.**  
5422 Fairlaw Ave., Baltimore 15, Md.  
Dir.-Sales: H. E. Foxman GH, T
- SPECIALTY PRODUCTS CORP.**  
29980 Lakeland Blvd., Wickliffe, O. (Tel. WHitney 3-3040)  
Purch. Agent: Howard Seebek  
Dir.-Sales: J. J. Skelly MF, GS, GH, GE, CO, T
- SPECTRA-STRIP WIRE & CABLE CORP.**  
P. O. Box 415, 10052 Larson Ave., Garden Grove, Calif. (Tel. JEHerson 7-4530)  
Purch. Agent: Donald D. Long  
Sales Mgr.: John Ford GS, GE, T
- SPECTROL ELECTRONICS CORP.**  
1704 S. Del Mor Ave., San Gabriel, Calif. (Tel. ATLantic 7-9761)  
Purch. Agent: H. J. Fedora  
Sales Mgr.: Robert K. Burtner GS, GE, R&I
- SPECTRONIC PLATING CO., INC., DIV-SPEC-TRANOME PLATING CO., INC.**  
330 W. 13th St., New York 14, N. Y. (Tel. ALgonquin 5-8677)  
Purch. Agent: K. Philipps  
Sales Mgr.: E. J. Brennan MM, R&I
- SPECTRUM INSTRUMENTS, INC.**  
Box 61 Steinway Sta., Long Island City 3, N. Y. (Tel. AStorio 8-8033)  
Purch. Agent: J. F. McClean TS, R&I
- SPENCER DIV.-METALS & CONTROLS CORP.**  
34 Forest St., Attleboro, Mass. (Tel. ATTleboro 1-2800)  
Purch. Agent: E. B. Carpenter  
V. P.-Mkting: J. F. Wilson GS, GH, GE
- SPENCER-SAFFORD**  
Augusta, Kans.
- SPERRY ELECTRONIC TUBE DIV.-SPERRY RAND CORP.**  
Gainesville, Fla. (Tel. FRonklin 2-0411)  
Sales Mgr.: J. R. Whitford GS, GE, CO, TS, TR, R&I
- SPERRY FARRAGUT CO., DIV.-SPERRY RAND CORP.**  
Bristol, Tenn. (Tel. WOODland 8-1151)  
Purch. Agent: S. J. Nastro  
Buyer, Subcontractors: J. V. Wilson  
Buyers: C. R. Keith, H. W. Peters, T. R. Rutledge & W. R. McCracken  
Sales Mgr.: C. W. Brown GE, R&D
- SPERRY GYROSCOPE CO., MARINE DIV.-SPERRY RAND CORP.**  
Roosevelt Field, Garden City, L. I., N. Y. (Tel. Pioneer 2-4400)  
Sales Mgr.: C. W. Whell  
Chief Buyer: L. S. Wichser, 3 Aerial Way, Syosset, L. I., N. Y. (Tel. WELLS 8-8000) GE, CO, TS, R&D
- SPERRY MICROWAVE ELECTRONICS CO., DIV.-SPERRY RAND CORP.**  
Clearwater, Fla. (Tel. REDwood 6-4161)  
Sales Mgr.: E. C. Best GS, CO, TS, R&D
- SPERRY PIEDMONT CO., DIV.-SPERRY RAND CORP.**  
Rt. 29, Charlottesville, Va. (Tel. 3-6111)  
Chief Buyer: E. Hopkins  
Chief Buyer-Comm. Prods.: T. McCartin  
Sales Mgr.: L. W. Gibson GE, CO, R&D
- SPERRY PRODUCTS, INC.**  
Shelter Rock Rd., Danbury, Conn. (Tel. Pioneer 8-3581)  
Purch. Agent: C. W. Penque  
Asst. Sales Mgr.: R. Y. Neiley TS



**ERRY RAND CORP.**  
30 Rockefeller Plaza, New York 20, N. Y. (Tel. Circle 6-4800)

**ERRY SEMICONDUCTOR DIV.-SPERRY RAND CORP.**  
South Norwalk, Conn. (Tel. VOLunteer 6-1641)  
Sales Mgr.: A. M. Varnum GE, TR, R&D

**HERE CO. INC., THE**  
25 Amity St., Little Falls, N. J. (Tel. CLifford 6-2550)  
Pres.: C. E. Beronio  
Sales Mgr.: A. D. Trovis

**HINX-AMERICAN CO.**  
12 Cherry Lane, Floral Park, L. I., N. Y. (Tel. HUnter 8-2600)  
Dir.-Purch: Herman H. Botie  
Dir.-Sales: Henry Nomburg MM

**INCRRAFT, INC.**  
158-C W. State St., Milwaukee 8, Wisc. (Tel. Division 2-0730)  
Purch. Agent: Anthony Brinavec, 4122 W. State St., Milwaukee 8, Wisc.  
P.-Sales: George F. Farley MF, WN, MM, R&D

**SROID DIV.-ILLINOIS TOOL WORKS**  
501 N. Keeler Ave., Chicago, Ill. (Tel. CA 7-2200)  
urch. Agent: Arthur Fraehlich  
iv. Mgr.: F. Bahle

**S.IT BALLBEARING, DIV.-MPB**  
ebanon, N. H. (Tel. 800)  
urch. Agent: R. E. Tinkham  
ales Mgr.: A. J. Renz PS, GE

**SLAYING SYSTEMS CO.**  
201 W. Randolph St., Bellwood, Ill. (Tel. LInden 4-0380)  
urch. Agent: W. C. Bloomer  
ales Mgr.: Joseph Pelej GS

**SPRUCÉ CO.**  
n Affiliate of American Aviation Publications, Inc.,  
608 S. Dearborn St., Chicago 5, Ill. (Tel. WAbosh 2-1279)  
grs: Robert E. Tynan & Paul W. Higgins TP

**SUCE PINE MICA CO.**  
D. Box 456, Spruce Pine, N. C. (Tel. POplar 5-4241)  
res: S. A. Montague  
P.-Sales: E. H. Farnam MM

**SERS GAGE CO.**  
784 W. 11 Mile Road, Berkley, Mich. (Tel. JO 4-5980)  
urch. Agent: C. F. McDonald  
es: R. D. Squiers GS, GH, TS

**CKPOLE CARBON CO.**  
42 Stackpole St., St. Marys, Pa. (Tel. TE 4-1521)  
urch. Agent: O. R. Hagan  
arbon Sales: W. E. Clancy GE, TR, MM

**NLESS INC.**  
rth Wales, Pa. (Tel. Oxbow 9-4871)  
urch. Agent: R. F. Farington  
prg. Sales Mgr.: John F. Guzewicz MF, GS, GH, TS, TR, R&D

**NLESS STEEL PRODUCTS, INC.**  
80 N. San Fernando Blvd., Burbank, Calif. (Tel. VI 9-3283)  
urch. Agent: E. A. Moore  
ntract Admin.: Wm. Van Oen Akker MF, PS, GS, GH, GE

**CKER CORP., THE**  
1 Woodside Ave., Essexville, Mich. (Tel. TWinbrook 3-7562)  
urch. Agent: R. A. Bluhm PS, R&D  
es Mgr.: W. W. Dempsey

**HAT MFG. CO., INC.**  
5 Shames Dr., Westbury, L. I., N. Y. (Tel. EDgewood 4-8700)  
urch. Agent: John Vanderwoude MF, WN, PS, GS

**ICHL-HOFFMAN CORP., THE**  
1 N. Highland Ave., Hollywood 38, Calif. (Tel. HDllywood 4-7461)  
urch. Agent: J. V. Kelly  
es Mgr.: R. H. Stensby GE, TS, TR

**TDARD CABINET CO.**  
Washington Ave., Carlstadt, N. J. (Tel. GEneva 6-1500)  
es: E. S. Brown  
es Mgr.: R. O. Nartan GS, TS

**TDARD COILS PRODUCTS CO., INC., DIV.-KOLLSMAN INSTRUMENT CORP.**  
08 45th Ave., Elmhurst, N. J.

**TDARD CONTROLS, INC.**  
30 Poplar Pl., Seattle 44, Wash. (Tel. KA 1-8888)  
es: W. A. Paine, II

**Buyer: R. Helmick**  
**Sales Mgr.: W. E. Forland PS, GS, GE, CO, TS**

**STANDARD ELECTRIC CO., INC.**  
P. D. Box 6356, 3016 Austin Hwy., San Antonio 9, Tex. (Tel. TA 2-3341)  
Pres.: Lea Dubinski

**STANDARD ELECTRIC TIME CO., THE**  
89 Lagan St., Springfield, Mass. (Tel. REpublic 6-7237)  
V. P.-Purch.: L. P. Marshall  
Dir.-Sales: R. M. Warren CO, TR, R&D

**STANDARD ELECTROMAGNETICS, INC.**  
Walkersville, Md. (Tel. VInewood 5-3041)  
Pres.: E. J. Baland  
Dir.-Sales & Engrg.: R. P. Bennett GS, TS, TR

**STANDARD ELECTRONICS DIV., RADIO ENGRG. LABS. INC.**  
29-01 Bordon Ave., Long Island City, N. Y. (Tel. 5Tillwell 6-2100)  
Purch. Agent: Wm. Dunwe  
V. P.-Sales: Wm. H. Zillger

**STANDARD FELT CO.**  
29-115 S. Palm Ave., Alhambra, Calif. (Tel. ATLantic 2-5166)  
Purch. Agent: K. Brunk MF, PS

**STANDARD GAGE CO., INC.**  
70 Parker Ave., Paughkeepsie, N. Y. (Tel. GROver 1-3100)  
Purch. Agent: J. Phillips  
Sales Mgr.: D. C. Cunningham

**STANDARD LOCKNUT & LOCKWASHER INC.**  
2250 Valley Ave., Indianapolis 18, Ind. (Tel. ME 2-9505)  
Office Mgr.: R. E. Ramage  
V. P.-Sales: T. D. Donohue MM

**STANDARD METALS CORP.**  
262 Broad St., N. Attleboro, Mass. (Tel. MYrtle 5-9395)  
Purch.: Lloyd W. Chase, Jr.  
Sales: Donald Kingman MF, WN, PS, GS, GE, TS, TR

**STANDARD OIL CO. OF INDIANA**  
910 S. Michigan Ave., Chicago 80, Ill. (Tel. HArrison 7-9200)  
Dir.-Sales: John D. Neesley PS

**STANDARD PRESSED STEEL CO.**  
Box 1105, Jenkintown, Pa. (Tel. TUmmer 4-7300)  
Dir.-Purch.: J. P. Moorhouse  
Asst. Dir.-Purch.: R. C. Gibbs  
Gen. Mgr., Aircraft/Missile Div.: J. P. Villa MM, R&D

**STANDARD STEEL CORP.**  
5001 Boyle Ave., Los Angeles 58, Calif. (Tel. LU 5-1231)  
Dir.-Purch.: Claude M. Turner GS

**STANDARD-THOMSON CORP., CLIFFORD MFG. CO. DIV.**  
152 Grave St., Waltham 54, Mass. (Tel. TWinbrook 4-7310)  
Dir.-Purch.: Elmer F. Wilcox  
Sales Mgr., Aircraft Div.: Gunnar G. Karlson MF, PS

**STANFORD RESEARCH INSTITUTE**  
333 Ravenwood, Menlo Park, Calif. (Tel. OAVenport 6-6200)  
Purch. Agent: Lenora Whitman R&D

**WILLIAM W. STANLEY CO. INC.**  
401 Broadway, New York, N. Y. (Tel. CA 6-5420)  
V. P.-Purch.: A. R. Peer  
Treas.: S. H. Doggett, Jr.

**STANLEY AVIATION CORP.**  
2501 Dallos St., Denver 8, Colo. (Tel. EMpire 6-3581)  
Dir.-Purch.: R. Fuller  
Purch. Agent: C. Besemann  
Buyers: A. Buschback, T. Wright  
V. P.-Sales: R. H. Frost MF, GS, GH, CO, TS, TR, R&D

**STANLEY-JUDD DIV.-THE STANLEY WORKS**  
42 S. Cherry St., Wallingford, Conn. (Tel. CDlany 9-3353)  
Purch. Agent: Frank Karolshak  
Comm. Sales Mgr.: Bradford M. Scatt  
Asst. Sales Mgr.: Warren H. Torrant  
Gen. Mgr.: H. Henry Martens WN, GS, GE

**STANWYCK WINDING CO., INC.**  
137-151 Wolsh Ave., Newburgh, N. Y. (Tel. NEwburgh 3360)  
V. P.-Purch.: Nicholas Stanwyck  
Pres.: Wm. J. Stanwyck

**STAR EXPANSION**  
Mountainville, N. Y. (Tel. COrnwall 3-3755)  
Purch. Agent: Robert Schneider  
Buyers: Donald Cracker & Jules Yanez  
V. P.-Sales: Harry Fax

**STAR STAINLESS SCREW CO.**  
655 Union Blvd., Paterson, N. J. (Tel. CLifford 6-2300)

**STARK TOOL CO.**  
Box 288, Ann Arbor, Mich. (Tel. HUnter 3-4233)  
Purch. Agent: James V. Wood  
Sales Mgr.: Harold Stark

**L. S. STARRETT CO., THE**  
121 Crescent St., Athol, Mass. (Tel. CHurchill 9-3551)  
Purch. Agent: C. B. McMillan  
V. P.-Sales: C. D. Newton GS

**STATE TESTING LABORATORY INC.**  
226 Knowlton St., Bridgeport, Conn. (Tel. ED 4-4079)  
Secy. & Treas.: E. B. Pickman TS, R&D

**STATES CO., THE**  
19 New Park Ave., Hartford 6, Conn. (Tel. ADams 3-6232)  
Purch. Agent: William Steidel  
Sales Mgr.: Howard N. Porter TS, R&D

**STATHAM INSTRUMENTS, INC.**  
12401 W. Dlympic Blvd., Los Angeles, Calif. (Tel. BR 2-0371)  
Purch. Agent: Robert Moore  
Dir.-Mktg.: Robert Lent MF, WN, PS, GS, GE, TS, TR, R&D

**STATIKIL, INC.**  
1220 W. 6th St., Cleveland 13, D. (Tel. CHerry 1-3939)  
V. P.-Purch.: Donald J. Doyle GS, TR

**STATOR ELECTRIC CORP.**  
46-25 58th St., Woodside 77, N. Y. (Tel. HLckary 6-9092)  
Pres.: Martin Blumenthal

**STAYER CO., INC., THE**  
47 N. Saxon Ave., Bay Shore, N. Y. (Tel. 7-3620)  
Secy.: R. W. Collins  
V. P.: J. B. Lazarus MF, WN, PS, GS, GE, CO, TS, TR

**STAVID ENGRG., INC.**  
U. S. Hwy. 22, Plainfield, N. J. (Tel. PLainfield 7-1600)  
Purch. Agent: J. H. Tcharni  
Dir.-Contracts & Sales: H. J. Bradfield GE, CO, TS, TR, R&D

**STEARNS-ROGER MFG. CO., THE**  
P. O. Box 5370, Denver 17, Colo. (Tel. AComa 2-8484)  
Chief Purch. Engr.: R. W. Graeber  
Asst. Chief Purch. Engr.: J. G. Constantine  
Purch. Engrs.: J. H. Carr & O. E. Froid  
Div. Mgr.: R. W. Akerlaw PS, GS, GH, TS, R&D

**HERMAN D. STEEL CO.**  
Lofayette Bldg., Philadelphia 6, Pa. (Tel. WA 5-1990)  
Head-Purch. Dept.: P. N. Steel, Jr.  
Head-Sales: W. W. Woolfard MF, WN, PS, GS, GE

**STEEL CITY TESTING MACHINES, INC.**  
8817 Lyndon Ave., Detroit 38, Mich. (Tel. WEbster 3-3500)  
Purch. Agent: Jos. D'Brien  
Pres.: Louis A. Welt TS

**STEEL IMPROVEMENT & FORGE CO., THE**  
970 E. 64th St., Cleveland 3, Ohio (Tel. UTah 2-8600)  
Purch. Agent: Ford Parkes  
Steel Buyer: George Mahon  
V. P.-Sales: H. A. Zimmerman MM

**STEIN SEAL CO.**  
20th St. & Indiana Ave., Philadelphia 32, Pa. (Tel. BALdwin 3-3513)  
Asst. Gen. Mgr.-Purch.: Lawrence Goldschmidt  
Gen. Mgr.-Sales: P. C. Stein PS

**STEPHENS ADAMSON MFG. CO., SEAL MASTER BEARING DIV.**  
Ridgeway Ave., Aurora, Ill. (Tel. AUrara 2-4311)  
Purch. Agent: K. Johnson  
V. P.-Bearing Div.: C. B. Hurd PS, GH, R&D

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Missile Frame	MF
Warhead & Nose Cone	WN
Propulsion System	PS
Ground Support	GS
Ground Handling	GH
Guidance Equipment	GE
Checkout Equipment	CO
Test Equipment	TS
Tracking & Telemetering	TR
Research & Development	R&D
Materials & Metals	MM

# ... purchasing directory ster—tel

- STERLING GLASS CORP.**  
304 E. 116th St., Chicago, Ill. (Tel. PU 5-7462)  
V. P.-Purch.: Bloss Lazzara  
Pres.: R. L. Cunningham  
GE, TR, MM, R&D
- STERLING PRECISION CORP., INSTRUMENT DIV.**  
17 Matinecock Ave., Port Washington, N. Y. (Tel. PO 7-7200)  
Purch. Agent: J. Cassota  
Purch. Agent, Res. & Dev.: Arthur Chirkis  
Gen. Sales Mgr.: H. J. Hannan  
GS, GH, GE, CO, TS, R&D
- STERLING TRANSFORMER CORP.**  
297 N. 7th St., Brooklyn 11, N. Y. (Tel. STagg 2-4200)  
Purch. Agent: Coleman Sanders  
Sales Mgr.: E. Martoccia  
GS, GE, TS, TR
- STERLING-HWARD CORP.**  
561 E. Tremont Ave., New York 57, N. Y. (Tel. CYpress 9-6400)  
V. P.-Purch.: Irving M. Carr  
Sales Mgr.: Harry Astor
- A. T. STEVENS CO.**  
118 E. 28th St., New York 16, N. Y. (Tel. MUrray Hill 5-1877)  
Purch. Agent: R. Ouke Powell, Jr.  
MF, WN, PS, GS, CO, TS
- STEVENS MFG. CO., INC.**  
P. O. Box 1007, Mansfield, O. (Tel. TUxedo 4-1311)  
Dir.-Purch.: L. C. Frasher  
V. P.-Sales: G. H. Rouse  
V. P.-Engrg.: C. S. Mertler  
MM
- STEVENS PRODUCTS, INC.**  
86 Main St., E. Orange, N. J. (Tel. OR 2-2140)  
V. P.: Ross S. Stevens  
Sales Mgr.: John Thomson  
MM
- M. C. STEWART**  
Ashburnham, Mass. (TA 7-5840)  
Pres.: M. C. Stewart  
GS, R&D
- F. W. STEWART CORP.**  
4311-13 N. Ravenswood Ave., Chicago 13, Ill. (Tel. GRaceland 2-6600)  
Gen. Mgr.: J. H. Jacobsen  
Purch. Agent: G. O. Talley  
Sales Mgr.: R. A. Thies  
Chief Engr.: J. Hrouda  
GH, GS, GE, TR
- STEWART-WARNER CORP.**  
1826 Diversey Pkwy., Chicago, Ill. (Tel. LAkeview 5-6000)  
Dir.-Purch.: Stewart-Warner Corp., 1826 Pkwy., Chicago 14, Ill.: E. N. Osterberg  
Dir.-Purch.: Stewart-Warner Electronics, 1300 N. Kostner Ave., Chicago, Ill.: I. Blackberg (Tel. AL 2-1000)  
Purch. Agent, Stewart-Die Casting Co., 4535 Fullerton Ave., Chicago, Ill.: R. C. Olsen (Tel. AL 2-5308)  
Purch. Agent, Stewart-Warner Corp., 1514 Draver, Indianapolis, Ind.: P. Ostler  
Purch. Agent, The Bassick Co., Bridgeport, Conn.: G. Roisellis  
MF, WN, PS, GS, GE, TS, TR
- STICK-LEP MFG. CO.**  
180 Regent St., Cambridge 40, Mass. (Tel. UNIVERSITY 4-6260)  
Gen. Mgr.: G. N. Maloney  
MM
- EDWIN B. STIMPSON CO., INC.**  
70 Franklin Ave., Brooklyn, N. Y. (Tel. ULster 5-3131)  
Dir.-Purch.: Mr. Schumacher  
Dir.-Sales: Mr. Larson  
MM
- STODDART AIRCRAFT RADID CO., INC.**  
6644 Santa Monica Blvd., Hollywood 38, Calif. (Tel. HOLLYWOOD 4-9292)  
Purch. Agent: Glenn Faggi  
Sales Mgr.: John R. Stevenson  
GS, TS, R&D
- F. J. STOKES CORP.**  
5500 Tabor Rd., Philadelphia, Pa. (Tel. CLumberland 9-0100)  
Mgr.-Materials & Prod. Planning Dept.: W. T. Minnick  
Buyers: D. Low, C. Roney, W. Schmucker & F. Urban  
V. P.-Sales: A. A. Hutchings  
PS, GS, GH
- A. U. STONE & CO., INC.**  
17 W. 60th St., New York, N. Y. (Tel. COlumbus 5-1350)  
Purch. Agent: H. Grant  
Pres.: Allan Stone  
MF, WN, PS, GS
- STONE CITY PRODUCTS CO.**  
1206 7th St., P. O. Box 351, Bedford, Ind. (Tel. BRowning 5-3370)  
Owner: O. H. Roriden
- STRAND ENGRG. CO.**  
1354 N. Main St., Ann Arbor, Mich. (Tel. NOrmandy 2-3127)
- Controller: K. L. Leighton  
V. P.-Engrg.: R. E. Miller  
GE, CO, TS, TR, R&D
- STRATDFLEX, INC.**  
220 Roberts Cut-Off, Ft. Worth, Tex. (Tel. PErshing 8-6543)  
Purch. Agents: E. E. Bradley & B. W. Harper  
Buyer: James Clayton  
Pres.: C. A. Thomas  
MF, PS, GS, GH, CD, TS, MM, R&D
- STRATOS, DIV.-FAIRCHILD ENGINE & AIR-PLANE CORP.**  
Orinoco Or., Bay Shore, L. I., N. Y. (Tel. MOhawk 5-0100)  
Purch. Agent: John A. L'Hommedieu  
Gen. Sales Mgr.-Aviation Prods.: W. Thomas Stark  
Western Branch: 1800 Rosecrans Ave., Manhattan Beach, Calif. (Tel. OSborne 5-9111)  
Purch. Agent: F. S. Lakin  
WN, PS, GS, GH, R&D
- STRAT-O-SEAL MFG. CO.**  
3039 W. Fullerton, Chicago 47, Ill. (Tel. HUmboldt 9-1282)  
Plant Mgr.: Howard O. Walsh  
GS
- STRDMBERG-CARLSON DIV.-GENERAL DYNAMICS CORP.**  
100 Carlsan Rd., Rochester, N. Y. (Tel. HUbbard 2-2200)  
Gen. Purch. Agent: John W. Averill  
Purch. Agent, Electronics Div.: Miles G. Agan (Tel. ELLmore 2-8000)  
Purch. Agent, Telecommunications Div.: Donald G. Rosin  
CO, TS, TR
- STRONG SCOTT MFG. CO., THE**  
451 Taft St. N. E., Minneapolis 13, Minn. (Tel. STerling 1-7461)  
Purch. Agent: B. H. Hollen  
Mgr., Contract Div.: M. G. Mutch  
WN, PS, GH, R&D
- STRUTHERS-DUNN, INC.**  
Lamb's Rd., Pitman, N. J. (Tel. LUther 9-7500)  
Purch. Agent: G. M. Herb  
V. P.-Sales: G. B. Conger, Jr.
- W. WHITNEY STUECK, INC.**  
Box 355 MR, Old Saybrook, Conn. (Tel. EV 8-9309)  
Pres.: W. Whitney Stueck
- P. A. STURTEVANT CO.**  
Addison, Ill. (Tel. ELMhurst, Ill.-TErrace 4-2000)  
Purch. Agent: Joe Esposito  
Sales Mgr.: Lee A. Sturtevant  
TS
- STURTEVANT MILL CO.**  
103 Clayton St., Dorchester, Boston 22, Mass. (Tel. TALbot 5-6500)  
Purch. Agent: Walter Masuret  
Pres.: G. P. Towle  
GS, GH
- SUFFOLK PRODUCTS CORP.**  
Woodbine & Scudder Aves., Northport, N. Y. (Tel. ANDrew 1-7000)  
Head-Purch. Dept.: Fred Marin  
Sales Engr.: C. J. Dvorak  
MF, TR
- H. W. SULLIVAN, LTD.**  
80 Shore Rd., Port Washington, N. Y. (Tel. PO 7-7700)  
Dir.-Sales: Si Bosworth
- SUMMERS GYRSDSCPE CO.**  
2500 Broadway St., Santa Monica, Calif. (Tel. EXbrook 3-6711)  
Dir.-Purch.: Ray Williams  
Dir.-Sales: Charles Z. Becker  
GS, GE, CD, TS
- SUN DIAL CORP.**  
P. O. Box 326, Passaic Ave., Caldwell, N. J. (Tel. CAPITAL 6-4334)  
Office Mgr.: George J. Martin  
Sales Mgr.: Cornelius Laker  
GS, GE, CO, TS
- SUN ELECTRIC CORP., AERONAUTICAL DIV.**  
Harlem & Avondales Aves., Chicago 31, Ill. (Tel. NEwcastle 1-6000)  
Dir.-Purch.: R. E. Kane  
V. P.-Dir., Aeronautical Div.: F. E. Draper  
GS, CO, TS, R&D
- SUNSTRAND AVIATION, DIV.-SUNSTRAND MACHINE TOOL CO.**  
2421 11th St., Rockford, Ill. (Tel. 8-6811)  
Dir.-Prod. & Purch.: Quin Bowen  
Purch. Mgr.: Don Bredahl  
Contracts Mgr.: P. A. Anderson  
MF, PS, GS, GH, GE
- SUNSTRAND TURBID**  
2480 W. 70th Ave., Denver 21, Colo. (Tel. HA 9-1561); Pacoima, Calif. (Tel. EM 6-8121)  
Mgr.-Purch., Denver: William Hammond  
Sr. Buyer, Denver: Lou Harder  
Purch. Agent, Pacoima: Robert Meyersan  
Mgr.-Sales, Pacoima: Robert Holzl  
Chief Appl. Engr., Denver: R. Bruce Foster  
MF, WN, PS, GS, GH, GE
- SUPEREX ELECTRONICS CORP.**  
4-12 Radford Pl., Yonkers, N. Y. (Tel. YOnkers 5-6908)  
Purch. Agent: O. Schulman  
Asst. Purch. Agent: F. Gold  
Sales Mgr.: Marvin L. Bucholter  
GS, GH, GE, T
- SUPERIOR AIR PRODUCTS CO.**  
132 Malvern St., Newark 5, N. J. (Tel. MArket 3-5715)  
Chief Engr.: L. E. Putman  
GS, GH, R&D
- SUPERIOR CABLE CORP.**  
Box 480A, Hickory, N. C. (Tel. OJ 5-4161)  
Purch. Agents: Montley Fuller & Brack Johnson  
V. P.-Sales: J. H. Bowman  
GS, GH, GE, T
- SUPERIOR CARBON PRODUCTS, INC.**  
9115 George Ave., Cleveland 5, O. (Tel. VULcan 3-4880)  
Purch. Agent: Raymond H. Kling  
Sales Mgr.: Ted Liebert  
MF, WN, PS, GS, GE, T
- SUPERIOR ELECTRIC CO., THE**  
83 Laurel St., Bristol, Conn. (Tel. LUdlow 2-9561)  
Purch. Agent: A. Greger  
Sales Mgr.: J. Loudon  
GS, T
- SUPERIOR ELECTRONICS CORP.**  
208 Piaget Ave., Clifton, N. J. (Tel. GRegory 2-2500)  
Purch. Agent: Donald Mabey  
Asst. Purch. Agent: John Witterschein  
Sales Mgr.: Michael Hogan  
GE, R&D
- SUPERIOR FLUX & MFG. CO., THE**  
1536 St. Clair Ave., Cleveland 14, O. (Tel. SUperior 1-9373)  
Pres.: Robert R. Mendelson  
V. P.-Purch.: R. E. Handler  
MF, MA
- SUPERIOR PNEUMATIC & MFG. INC.**  
4758 Warner Rd., Cleveland 25, O. (Tel. BRoadway 1-1522)  
V. P. & Gen. Mgr.: W. I. Krewson, Jr.  
GS
- SUPERIOR SPINNING & STAMPING CO.**  
4057-63 Fitch Rd., Toledo 13, O. (Tel. GReenwood 2-2175)  
Secy.: L. G. Avery  
Pres.: W. H. Schomburg  
MA
- SUPERIOR STEATITE & CERAMIC CORP.**  
83-91 W. Forest Ave., Englewood, N. J. (Tel. LOwell 8-4555)  
Purch. Agent: T. H. Church  
MA
- SUPERIOR TUBE CO.**  
Box 191, Norristown, Pa. (Tel. BRoadway 5-2070)  
Dir.-Purch.: Elmer W. Hayes  
Purch. Agent: Leroy Buckwalter  
Buyers: Ralph Esner, Stanley Fretz, William Schlutz, Gerald Claycomb  
Gen. Mgr.-Sales: Henry B. Brown  
MA
- SURFACE CDMBUSTION CORP.**  
2375 Dorr St., Toledo 1, Ohio
- SURPRENANT MFG. CO.**  
172 Sterling St., Clinton, Mass. (Tel. 2180)  
Gen. Mgr.: G. E. Forsberg  
Sales: P. V. Tessier  
MF, WN, PS, GS, GH, GE, TS, TR
- SWAN RUBBER CO.**  
436 E. Mansfield St., Bucyrus, Ohio (Tel. 3-1015)  
Purch. Agent: R. L. Stoneburner  
Asst. Purch. Agent: T. W. Painter  
Gen. Sales Mgr.: H. A. Loewy  
GS
- SWARTWUDT CO., THE**  
P. O. Box 2468, Cleveland 12, Ohio (Tel. IVanhoe 1-0780)  
Dir.-Sales: John Weber
- SWAYNE, RDBINSON & CO.**  
200 Main St., Richmond, Ind. (Tel. 2-4071)  
Purch. Agent: Jo Sickingmann  
V. P.-Sales: C. K. Robinson, Jr.  
MF, GS, MM
- SWEDLDW INC.**  
6986 Bandini Blvd., Los Angeles, Calif.; 394 N. Meridian Rd., Youngstown, Ohio (Tel. RAYmond 3-3211)  
Dir.-Purch.: R. H. Affeld  
Buyer: J. Ruth  
Dir.-Contracts: W. H. Face  
MM, R&D
- B. K. SWEENEY MFG. CO.**  
6300 E. 44th Ave., Denver 16, Colo. (Tel. FLorida 5-2355)  
Purch. Agent: E. Salwasser  
Pres.: John F. Sweeney  
V. P.-Sales: A. C. Linburg  
GS, TS, R&D
- SWISS JEWEL CO.**  
Lafayette Bldg., Philadelphia 6, Pa. (Tel. WA 5-1990)  
Purch.: P. N. Steel, Jr.  
Sales Mgr.: W. W. Woolford  
MM
- SWITCHCRAFT, INC.**  
5555 N. Elston Ave., Chicago, Ill. (Tel.

Spring 4-1515)  
Purch.: Bjorn Hestad  
Sales: W. L. Larson GS, GE, TS, TR

**LVANIA ELECTRIC PRODUCTS INC., CHEMICAL & METALLURGICAL DIV.**  
P. D. Box 70, Tawanda, Pa. (Tel. Andrew 5-2121)  
Purch. Agent: T. R. Coyle  
Buyers: W. F. Heatwave & D. D. Stallford  
Gen. Sales Mgr.: R. Beatty MM

**LVANIA ELECTRIC PRODUCTS INC., ELECTRONIC TUBES-REC. TUBES DIV.**  
Emporium, Pa. (Tel. Emporium 301)  
Purch. Agent: James M. Parish  
Gen. Sales Mgr.: D. W. Gunn, 1740 Broadway, New York, N. Y. (Tel. JU 6-2424)

**LVANIA ELECTRIC PRODUCTS INC., PARTS DIV.**  
Warren, Pa. (Tel. Warren 3220)  
Purch. Agent: Robert F. Marlin  
Gen. Sales Mgr.: Fred A. Martin MM

**LVANIA ELECTRIC PRODUCTS INC., SEMICONDUCTOR DIV.**  
Woburn, Mass. (Tel. Woburn 2-3500)  
Purch. Agent: John Taylor  
Gen. Sales Mgr.: Ernest Ulm MM, R&D

**LVANIA ELECTRIC PRODUCTS INC., SPECIAL TUBE OPERATIONS**  
800 Evelyn Ave., Mt. View, Calif. (Tel. Yorkshire 8-6211)  
Purch. Agent: A. F. Beazel  
Mktg. Mgr.: Thomas D. Fuller, 1891 E. Third St., Williamsport, Pa. (Tel. Williamsport 3-4691)  
Dir.-Purch.: Edward J. Millen  
Buyer: Fred Andrews GE, TR, R&D

**LVANIA ELECTRIC PRODUCTS INC., SYLVANIA ELECTRONIC TUBES DIV.**  
Seneca Falls, N. Y. (Tel. L. Ogan 8-5881)  
Purch. Agent: Glen W. Victoria  
Gen. Sales Mgr.: D. W. Gunn, 1740 Broadway, New York, N. Y. (JU 6-2424) MM, R&D

**LVANIA ELECTRIC PRODUCTS INC., SYLVANIA ELECTRIC PRODUCTS INC.**  
001 1st Ave., Waltham, Mass. (Tel. Twinbrook 3-9200)  
Purch. Agent: Waltham Labs.: W. L. Hanson  
Purch. Agent-Buffalo Ops.: C. A. Roe (Tel. Buffalo, N. Y.-Victoria 7100)  
Purch. Agent-Williamsport Systems Plant: D. E. D'Shea (Tel. Williamsport, Pa.-Williamsport 3-4641)  
Purch. Agent-Mountain View Ops.: W. A. Jones (Tel. Mountain View, Calif.-Yorkshire 8-0051)  
Dir.-Customer Relations, Sylvania Electronic Systems: J. H. Brewster, III (Tel. New York, N. Y.-Judson 6-2424) MF, GS, GE, GH, TS, TR

**STRON CO.**  
59 Lexington Ave., Hamer City, Pa. (Tel. GRidley 9-8011)  
Purch. Agent: S. A. Dick  
P.-Sales: D. G. Black MF, WN, PS, GS, GH, GE, TR

**ITEMS INCORPORATED**  
P. D. Box 7726, 2326 Diversified Way, Orlando, Fla. (Tel. Garden 4-6338)  
Purch. Agent: B. B. Moss  
Pres.: S. M. Kaplan GE, CO, TS, TR, R&D

**ITEMS LABS. CDRP.**  
852 Ventura Blvd., Sherman Oaks, Calif. (Tel. State 9-0501)  
Purch. Agent: Arthur Peterson  
Corp. Secy.: A. J. F. Clement R&D

**STRDN CORP.**  
10 Galindo St., Concord, Calif. (Tel. MULberry 2-3650)  
Purch. Agent: Mrs. Doris Torpacka  
P.-Sales: James R. Cunningham GS, GH, CO, TS

**T.MFG. CORP.**  
107 Alger St., Los Angeles 39, Calif. (Tel. Chapman 5-5768)  
Purch. Agent: R. E. Felton  
P.-Sales: R. Clyde Jordan GH, TS

**T. DIV., DYNA-EMPIRE, INC.**  
75 Stewart Ave., Garden City, L. I., N. Y. (Tel. Planeer 1-2700)  
Purch. Agent: Charles Biasi  
Pres.: John J. Norgi PS, GS, CO, TS

**T. ELECTRIC CORP.**  
10 Linden Ave., Rochester 10, N. Y. (Tel. LUdlow 5-8000)  
Purch. Agent: R. A. Taylor  
Pres.: A. B. Treman

**AIR VALVE DIV.-AIRCRAFT PRODUCTS CO.**  
4 Church Rd., Bridgeport, Pa. (Tel. BRoadway 1-1000)  
Purch. Agent: T. M. Clemmency  
Sis Mgr.: Frank Higgins GS, GH, GE, CO, TS

**TAFT-PEIRCE MFG. CO., THE**  
32 Mechanic Ave., Woonsocket, R. I. (Tel. POplar 2-1000)  
Purch. Agent: A. M. Robinson  
Gen. Sales Mgr.: W. F. Carney

**TALCO ENGRG. CO., THE**  
2685 State St., Hamden, Conn. (Tel. ATwater 8-1634)  
Purch. Agent: F. DeMarco  
Buyer: D. Pantera MF, WN, PS, GS, GH, GE  
Dir.-Sales: A. E. Ehlenberger

**TALK-A-PHONE CO.**  
1512 S. Pulaski Rd., Chicago 23, Ill. (Tel. LAwndale 1-8414)  
Sales Mgr.: Dan F. Kagan GS

**TALLEY CORP., THE**  
101 Highway & Canejo Rd., Newbury Park, Calif. (Tel. HUDson 5-2121)  
Purch. Agent: Meade Davis  
V. P.-Sales: Norman Nicholson  
Business Mgr.: Wayne Wilson  
Pres.: F. H. Talley  
V. P.-Engrg.: W. J. Forcey GS, GH, GE, CO, TS, TR, R&D

**TALLY REGISTER CORP.**  
5300 14th Ave., N. W., Seattle 77, Wash. (Tel. SUNset 4-5500)  
Purch. Agent: W. I. Stephenson  
V. P.-Sales: M. R. Dilling GS, TS, R&D

**TALDN, INC.**  
626 Arch St., Meadville, Pa. (Tel. 4-1281)  
Mgr.-Purch.: F. W. Hanaway  
Asst. Mgr.-Purch.: A. R. Young  
V. P.-Sales: R. M. Evans GS, CO, TR, R&D

**TAMAR ELECTRONICS, INC.**  
1805 Colorado Ave., Santa Monica, Calif. (Tel. EX 3-9834)  
Mgr.-Material: Walt Smith  
V. P. & Gen. Mgr.: Vern Landis GS, CO, TR, R&D

**TANSITOR ELECTRONICS, INC.**  
West Road, Bennington, Vt. (Tel. 5473-5474)  
V. P.-Purch.: Gilbert E. Green  
Pres.-Sales: Alfred F. Torrist R&D

**TAP-A-LINE MFG. CO.**  
31 S. W. 5th Court, P. O. Box 563, Pompano Beach, Fla. (Tel. WE 3-3262)  
Sales: Robert W. McFarlin

**TAPCD GROUP, THOMPSON RAMO WOLDDRIDGE INC.**  
23555 Euclid Ave., Cleveland 17, Ohio (Tel. IV 1-7500)  
Dir.-Purch.: K. C. White  
Dir.-Sales & Mktg.: J. H. Shaffer MF, WN, PS, GS, GH, CO, TR, MM, R&D

**TAPE CABLE CDRP.**  
790 Linden Ave., Rochester 10, N. Y. (Tel. LUdlow 6-0330)  
Purch: G. E. Smith  
Sales Mgr.: Bob Smith MM

**TAPERED AIR PRODUCTS CORP.**  
10890 Stanford Ave., Lynwood, Calif. (Tel. NEVada 6-9851)  
Purch. Agent: Walter Fagen  
Sales Mgr.: James I. Carpenter MF, PS

**TASK CORP.**  
1009 E. Vermont Ave., Anaheim, Calif. (Tel. PROspect 4-3100)  
Purch. Agent: Carl M. Berg  
Sales Mgr.: Joe A. Fryer, Jr. TR, R&D

**W. A. TAYLOR & CO.**  
7300 York Rd., Baltimore 4, Md. (Tel. VALley 3-1573)  
Gen. Purch. & Sales Mgr.: J. A. Lambrecht  
Asst. Purch. Mgr.: J. C. Kirk, Jr.  
Chief Chemist: F. R. McCrumb TS

**TAYLOR DEVICES, INC.**  
188 Main St., N. Tonawanda, N. Y. (Tel. JACKson 3603)  
Pres: Paul H. Taylor  
V. P.-Sales: Charles S. Shanks MF, GH, R&D

**TAYLOR ELECTRIC INC.**  
15400 Dale Ave., Detroit 23, Mich. (Tel. KENwood 5-2500)  
Sales: Bruce R. D. Taylor GS, GE, CD, TS, TR

**TAYLDR FIBRE CD.**  
Norristown, Pa. (Tel. GLendale 2-2811)  
Purch. Agent: H. Fifer  
V. P.-Sales: E. H. DaCosta MM

**TAYLDR-WINFIELD CDRP.**  
1052 Mahoning Ave., N. W., Warren, Ohio (Tel. EX 2-2521)  
Purch. Agent: H. Martin  
Asst. Purch. Agent: G. Walchok  
Chief Sales Engr.: J. H. Caaper MM

**TECHALLOY CO. INC.**  
Route 113, Rahns, Pa. (Tel. Norristown HUxley 9-7211)  
Pres.: D. M. Schmid MF, WN, PS

**TECHNICAL APPARATUS BUILDERS**  
109 Liberty St., New York 6, N. Y. (Tel. REctor 2-6249)  
Purch. Agent: R. A. Lyons  
Sales Mgr.: R. Bernstein GS, GH, CO, TS

**TECHNICAL APPLIANCE CORP.**  
1 Toca St., Sherburne, N. Y. (Tel. SHerburne 7-2211)  
V. P. & Dir.-Purch.: Harold Senkel  
V. P. & Dir.-Sales: Tore Lundahl  
Asst. V. P. & Sales Mgr., Commercial Div.: Albert K. Fowler TR

**TECHNICAL SERVICE CORP.**  
1404 W. Market St., Louisville 3, Ky. (Tel. JUNiper 7-8476)  
Buyer: L. H. Jones  
Sales Dept.: Mary Rose Snead GS

**TECHNICAL TAPE CORP.**  
240 North Ave., New Rochelle, N. Y. (Tel. BEverly 5-1000)  
V. P. Dir.-Disbursements: Max Pearce  
Purch. Agent: B. McGuire  
Asst. Purch. Agent: Mrs. D. Steinen  
V. P. Gen. Sales Mgr.: M. I. Stool

**TECHNI-CAST CORP.**  
11455 Check Ave., Lynwood, Calif. (Tel. NEVada 6-0678)  
Purch. & Sales Mgr.: Jack Seibert GS, GH

**TECHNIQUE ASSOCIATES DIV., DUNCAN ELECTRIC CO., INC.**  
1413 North Cornell Ave., Indianapolis 2, Ind. (Tel. MElrose 1-4904)  
Purch.: T. K. Millholland  
Sales: Edward C. Finlay TS, R&D

**TECHNITROL ENGRG. CO.**  
1952 E. Allegheny Ave., Philadelphia 34, Pa. (Tel. GARfield 6-9105)  
Purch. Agent: James H. Kennedy  
Buyer: David Adam  
V. P.-Sales: T. Kite Sharpless GS, GE

**TECHNOGRAPH PRINTED ELECTRONICS, INC.**  
920 Northwest Blvd., Winston-Salem, N. C. (Tel. PARK 3-0767)  
Purch. Agent: R. G. Vance TR

**TECHNOLOGY INSTRUMENT CORP.**  
531 Main St., Acton, Mass. (Tel. CDlanial 3-7711)  
Purch. Agent: David M. Donaldson  
V. P.-Sales: H. L. Gray, Jr. GH, GS, GE, CO, TS, R&D

**TECHRON CORP.**  
81 Washington St., Boston 8, Mass. (Tel. CAPitol 7-7484)  
Purch. Agent: Thomas Fahey GE

**ROLAND TEINER CO. INC.**  
134 Tremont St., Everett 49, Mass. (Tel. DUNKirk 7-7800)  
Purch.: R. Tenaglia  
V. P.-Sales: K. Sowdan MF, WN, MM, R&D

**TEINER ENGRG. CDRP.**  
115 Madison St., Malden, Mass. (Tel. DA 4-7440)  
Purch. Agent: Mrs. Berg  
V. P.-Sales: Eric Sandquist  
Plant Mgr.: Edward J. McKeon MF, WN, MM, R&D

**TELECHROME MFG. CDRP.**  
23 Ranick Dr., Amityville, N. Y. (Tel. LINcoln 1-3600)  
Purch. Agent: B. Trimbl  
V. P.-Sales: H. Charles Riker TR

**TELE COIL CO.**  
2733 Saunders St., Camden 5, N. J. (Tel. EMerson 5-7528)  
Pres.: Samuel Feldman GE, TS, TR, R&D

**TELECTRO INDUSTRIES CDRP.**  
35-16 37th St., Long Island City 1, N. Y. (Tel. YELlowstone 2-8600)

**CODING**  
Missile Frame MF  
Warhead & Nose Cone WN  
Propulsion System PS  
Ground Support GS  
Ground Handling GH  
Guidance Equipment GE  
Checkout Equipment CO  
Test Equipment TS  
Tracking & Telemetering TR  
Research & Development R&D  
Materials & Metals MM

# ... purchasing directory tel—tri

- Purch. Agent:** M. I. Ross  
**Pres.:** Harry Sussman
- TELE-DYNAMICS INC.**  
5000 Parkside Ave., Philadelphia 31, Pa. (Tel. TRinity 8-3000)  
**Purch. Agent:** Walter S. Longbottom  
**Buyers:** Howard S. Messick, William A. Parch, Philip Marder  
**Dir.-Mktg.:** Edward H. Rosen  
GS, GH, GE, CO, TS, TR, R&O
- TELEFLEX INC.**  
N. Wales, Pa. (Tel. OXbow 9-4861)  
**Purch. Agent:** T. Walton  
**Chief Buyer:** W. Taylor  
**Sales:** M. C. C. Chisholm, Jr. GS, GH
- TELEMETER MAGNETICS, INC.**  
2245 Pontius Ave., Los Angeles 64, Calif. (Tel. BRadshaw 2-0991)  
**Purch. Agent:** J. D. Hoffman  
**Buyers:** Leonard Stevenson, Irene Taraba, Frank Butteri  
**V. P.-Sales:** Trude C. Taylor R&O
- TELERAO MFG. CORP.**  
1440 Broadway, New York 18, N. Y. (Tel. BRyant 9-0892)  
**Purch. Agent:** B. Buffone  
**Expediter:** C. Young  
**Pres.:** Charles George GS, GE, TS, TR
- TELETRONICS LABORATORY INC.**  
54 Kinkel St., Westbury, L. I., N. Y. (Tel. EDgewood 3-1027)  
**Purch. Mgr.:** Art Zink  
**Sales Mgr.:** Raymond L. Johnson GS, TS, R&D
- TELEVISION UTILITIES CORP.**  
112-33 Colonial Ave., Corona 68, L. I., N. Y. (Tel. TW 8-1000)  
**Gen. Mgr.:** Abe E. Siegel  
**V. P.-Sales:** Miles Breger TR, R&D
- TELEVISION ZOOMAR CORP.**  
500 Fifth Ave., New York, N. Y. (Tel. BRyant 9-5835)  
**Sales Mgr.:** Bill Pegler
- TEL-INSTRUMENT ELECTRONICS CORP.**  
728 Garden St., Carlstadt, N. J. (Tel. WEbster 3-1600)  
**Purch. Agent:** A. J. Paret  
**Sales Mgr.:** E. W. Brinkerhoff GS, CO, TS, TR
- TEL-LABS, INC.**  
1050 Second St., Manchester, N. H. (Tel. NA 3-5711)  
**Gen. Mgr.:** J. Henry Izart GE, TS, TR
- TELEONIC INDUSTRIES, INC.**  
75 N. 2nd Ave., Beech Grove, Ind. (Tel. 5Tate 6-9239)  
**Purch. Agent:** Jean Robinett  
**Engrs. Sales Dir.:** C. R. Wainwright (Laguna Beach, Calif., Tel. HYatt 4-7581) GS
- TEMCO AIRCRAFT CORP.**  
P. O. Box 6191, Dallas 22, Tex. (Tel. BRoadway 6-7111)  
**Material Mgr.:** C. D. Collier  
**Purch. Agent:** J. A. Pendleton  
**Mgr. Contracts & Sales:** R. L. Lewis  
MF, WN, PS, GS, GH, GE, CO, TS, TR, MM, R&D
- TEMPERATURE ENGRG. CORP.**  
1700 Union Landing Rd., Riverton, N. J. (Tel. TALmador 9-3880)  
**Pres.:** S. H. Perlman  
**Sales Mgr.:** Norman Bustein
- TEMPIL CORP.**  
132 W. 22nd St., New York 11, N. Y. (Tel. DRegon 5-6610)  
**Purch. Agent:** M. Lacks  
**Dir.-Sales:** M. Lefkoe  
**Order Supvr.:** E. Lee TS, MM, R&D
- TEMPLETON, KENLY & CO.**  
16th & Gardner Rd., Broadview, Ill. (Tel. AUstin 7-0695)  
**Buyer:** Donald Bertaut GS
- TEMPO INSTRUMENT INC.**  
Commercial St., P. D. Box 338, Hicksville, N. Y. (Tel. DVerbrook 1-2280)  
**Purch. Agent:** George J. Sbardone  
**Sales Mgr.:** F. Meyer WN, GS, GE, CO, TS, TR
- G. H. TENNANT CO.**  
701 N. Lilac Dr., Minneapolis 22, Minn. (Tel. LI 5-3771)  
**Purch. Agent:** Gilbert J.kehr  
**V. P.-Mktg. & Engrg.:** Drville C. Hoglander  
**Sales Mgr.:** Joseph T. Lyon GS, GH
- TENNEY ENGRG. INC.**  
1090 Springfield Rd., Union, N. J. (Tel. MURdock 6-7870)
- Purch. Agent:** Robert Hak  
**V. P.-Sales:** Robert H. Brown GS, TS
- TENSITRON, INC.**  
P. D. Box 185, Harvard, Mass. (Tel. GLadstone 6-3511)  
**Pres. & Gen. Mgr.:** Dr. Erwin J. Saxl TS, R&D
- TENSOLITE INSULATED WIRE CO., INC.**  
West Main St., Tarrytown, N. Y. (Tel. Medford 1-2300)  
**Dir.-Purch.:** D. G. Keough  
**Purch. Asst.:** G. O'Neill  
**V. P.-Sales:** G. W. Heller
- TENSOR ELECTRIC DEVELOPMENT CO., INC.**  
1873 Eastern Pkwy., Brooklyn 33, N. Y. (Tel. HY 5-9200)  
**Purch. Agent:** Mrs. P. McFarland  
MF, PS, GS, GH, GE, TS, TR
- TEPRO ELECTRIC CORP.**  
408A Burke Bldg., 5 St. Paul St., Rochester 4, N. Y. (Tel. BAKER 5-0478)  
**Pres.:** M. A. Thom
- TERADO CO.**  
1068 Raymond Ave., St. Paul 8, Minn. (Tel. Midway 6-2514)  
**Gen. Mgr.:** D. G. Munson  
**Purch.:** George Huff  
**Sales Mgr.:** John J. Kaul GS, GE
- TERMINAL RADIO CORP.**  
85 Cortlandt St., New York, N. Y. (Tel. WDrth 4-3311)  
**Purch. Agents:** M. Blumberg, R. Corenthal & M. Filler  
**V. P.-Sales:** Frank Miller PS, GS, GH, GE, CO, TS, TR
- GEORGE A. TERRY CO.**  
356 S. Elmwood Ave., Buffalo 1, N. Y. (Tel. WA 0633)  
**Mgr.:** George A. Terry  
**Sales Mgr.:** Harold A. Dodge
- TEXAS CAPACITOR CO., DIV.-K-C-K CORP.**  
922 S. 75th St., Houston, Tex. (Tel. WAInut 6-5727)  
**Pres.:** George S. Chaffin  
**Prod. Mgr.:** Mrs. A. Holligan
- TEXAS METAL & MFG. CO., INC.**  
6114 Forest Park Rd., Dallas, Tex. (Tel. FLeetwood 1-3771)  
**Purch. Agent:** Don Hamilton  
**V. P.:** George C. Kershaw GH, GS, R&D
- TEXTRAN CORP.**  
P. D. Box 9207, 8500 Research Rd., Austin, Tex. (Tel. GL 3-8378)  
**Bus. Mgr.:** George E. Strandmann  
**V. P.-Sales:** Charles Zabolcki R&D
- THAYER SCALE CORP.**  
1 Thayer Park, Pembroke, Mass. (Tel. TAYlor 6-2373) GS, GH
- THERM, INC.**  
Hudson St., Ithaca, N. Y. (Tel. Ithaca 4-9501)  
**V. P.-Purch.:** John E. Paige  
**V. P.-Sales:** Harry A. Davis, Jr.  
**V. P.-Research:** Alfred Ritter PS, R&D
- THERMAL AMERICAN FUSED QUARTZ CO., INC.**  
18-20 Salem St., Dover, N. J. (Tel. FDXcroft 6-2807)  
**Purch. Agent:** R. Doornam  
**Sales Mgr.:** John F. von Sternberg MF, PS
- THERMAL REFRACTORIES CORP.**  
4501 Dell Ave., North Bergen, N. J. (Tel. UNion 5-1600)  
**Purch. Agent:** W. C. Karsten  
**Sales:** C. E. Nelson WN, PS, MM, R&D
- THERMAL WIRE OF AMERICA**  
Keeler's Bay, South Hero, Vt. (Tel. 241)  
**Pres.:** Horace W. Corbin, Jr.  
**Sales Mgr.:** Michael G. Ziter WN, PS, GE
- THERMAX WIRE CORP.**  
304 E. 45th St., New York 17, N. Y. (Tel. MURray Hill 9-7120)  
**Purch. Dept.:** R. W. Coombs  
**Buyer:** J. May  
**Sales Mgr.:** John E. Rattinger
- THERMECH ENGRG. CORP.**  
1773 Lincoln Ave., Anaheim, Calif. (Tel. KEystone 3-3183)  
**Gen. Mgr.:** C. P. Ripley  
**Sales Mgr.:** R. L. Harris MF, PS, GS, GH, MM
- THERMO ELECTRIC CO., INC.**  
109 5th St., Saddle Brook, N. J. (Tel. HUBbard 9-5800)  
**Treas.:** J. P. McKeon  
**Purch. Agents:** C. McColgan, A. Allee  
**Sales Mgr.:** J. H. Collins GS, CO, TS, R&D
- THERMO KING CORP.**  
314 W. 90th St., Minneapolis 20, Minn. (Tel. TUXedo 1-2601)  
**Dir.-Purch.:** E. J. Brown  
**Mgr.-Govt. Sales:** Miles Harvey GS
- THERMO-LAB CORP.**  
6940 Farmdale Ave., N. Hollywood, Calif. (Tel. 5Tanley 7-7105)  
**Sales Dir.:** Roy Smith MF, PS, GS, GH, GE, CO, R&O
- THERMOSEN INC.**  
375 Fairfield Ave., Stamford, Conn., (Tel. DAVIS 5-1324)  
**Sales Mgr.:** R. S. Schenck
- THETA INSTRUMENT CORP.**  
48 Pine St., E. Paterson, N. J. (Tel. 5Warthmore 7-7700)  
**Purch. Agent:** Ralph Rinaldi  
**Sales Mgr.:** Stanley Handelman GS, CO, TS
- THIEBLOT AIRCRAFT CO., DIV.-VITRO CORP. OF AMERICA**  
Martinsburg, W. Va. (Tel. AMHerst 3-3385)  
**Dir.-Purch.:** Art Williams  
**V. P.-Sales:** W. P. Maloney MF, WN, PS, GS, GH, GE, CO, TS, TR
- THIOKOL CHEMICAL CORP.**  
P. O. Box 27, Bristol, Pa. (Tel. WInsdor 6-9150)  
**Purch. Agent (Redstone Div.):** J. Lutz, (Huntsville, Ala.)  
**Purch. Agent (Langhorn Div.):** W. L. Teutsch (Marshall, Tex.)  
**Dept. Mgr. (Reaction Motors Div.):** E. M. DeRame (Denville, N. J.)  
**Section Head (Elkton Div.):** T. King (Elkton, Md.)  
**Dept. Head (Utah Div.):** D. Young (Brigham City, Utah) PS, GS, GH, CO, TS, MM, R&D
- THIOKOL CHEMICAL CORP., HUNTER-BRISTOL DIV.**  
P. D. Box 27, Bristol, Pa. (Tel. WInsdor 6-9150)  
**Asst. Gen. Mgr.:** Raymond R. Wiese  
**Mgr. Contracts & Sales:** John W. Miller PS, GS, GH, R&D
- THIOKOL CHEMICAL CORP., REDSTONE DIV.**  
Huntsville, Ala. (Tel. JE 6-4411)  
**Purch. Agent:** F. L. Quinn  
**Purch.:** Joe Todd & Russ Fowler
- THOMAS ELECTRONICS, INC.**  
118 Ninth St., Passaic, N. J. (Tel. GRegory 3-4040)  
**Mgr.-Purch.:** Carl Tepel  
**Mgr. Special Product Sales:** Peter V. Nuccio GS, CO, TS
- THOMAS INSTRUMENT CO.**  
41 Silver Rock, Phoenix, N. Y. (Tel. OWen 5-5134)  
**Sales & Prod. Mgr.:** S. M. Thomas PS
- THOMPSON ENGRG. CO., THE, MISSILE PRODUCTS DIV.**  
Box 2097, 2292 S. Normandie Ave., Torrance, Calif. (Tel. FAirfax 8-5315)  
**Mgr.-Purch.:** David A. Anderson  
**Dir.-Sales:** William A. Thompson GS, GH, R&D
- H. I. THOMPSON FIBER GLASS CO.**  
1733 Cordova St., Los Angeles 7, Calif. (Tel. REpublic 3-9161)  
**Purch. Agent:** Dean Welsh  
**Buyer:** E. Titus  
**V. P.-Sales:** W. E. Benke WN, MM, R&D
- THOMPSON PRODUCTS, INC.**  
23555 Euclid Ave., Cleveland 17, O. (Tel. IVanhoe 1-7500)  
**Staff Dir.-Purch.:** G. N. Hackett  
**V. P.-Sales:** G. R. Moore
- THOMPSON-BREMER & CO.**  
228 N. La Salle St., Chicago 1, Ill. (Tel. FRanklin 2-6858)  
**Sales Mgr.:** Gail M. Rutledge MF, PS
- THOMPSON-RAMO-WOOLORIDGE PRODUCTS CO., THE**  
P. D. Box 00067, Airport Station, Los Angeles 45, Calif. (Tel. DSBarne 4-5601)  
**Controller:** Robert J. Barrett, Jr.  
**Dir.-Mktg.:** Raymond E. Jacobson GS, CO, TS, R&D
- THWING-ALBERT INSTRUMENT CO.**  
Penn St. & Pulaski Ave., Philadelphia 44, Pa. (Tel. GERmantown 8-5719)  
**Purch. Agent:** Driscoll Nina  
**Treas.:** Edward J. Albert  
**Prod. Mgr.:** John Facht TS
- ARTHUR TICKLE ENGRG. WORKS, INC.**  
21 Delevan St., Brooklyn 31, N. Y. (Tel. MAin 5-4200)  
**Purch. Agent:** Andrew Posser  
**Buyer:** Frank Petito  
**Indsl. Sales Mgr.:** Nicholas P. Harvey MF, WN, PS

**MES WIRE & CABLE CO., INC.**  
358 Hall Ave., Wallingford, Conn. (Tel. COlony 9-3811)  
Purch.: Henry Dobris  
V. P.-Sales: Lawrence J. DeGeorge  
MF, PS, GS, GH, TS, TR

**MKEN ROLLER BEARING CO., THE**  
1835 Deuber Ave., S. W., Canton, O. (Tel. GL 3-4511)  
Dir.-Purch.: Paul Young  
V. P.-Sales: P. J. Reeves MF, PS, GH, GE, MM

**NGSTOL CO.**  
1461 W. Grand Ave., Chicago 22, Ill. (Tel. CAnal 6-1520)  
Purch. Agent: J. Machina  
V. P.-Sales: John P. Zopp GE

**NERMAN PRODUCTS, INC.**  
Dept. 16, P. O. Box 6688, Cleveland 1, O. (Tel. SHadyside 1-9300)  
Dir.-Purch.: R. F. Merriam  
Dir.-Sales: L. H. Flora MF

**NSLEY LABS., INC.**  
256 Grove St., Berkeley, Calif. (Tel. THarnwall 3-6836)  
Purch. Agent: Robert J. Johnson  
Pres: Harvey L. Morton GE, TR, R&D

**TAN METAL MFG. CO.**  
Bellafonte, Pa. (Tel. EL 5-4712) (Also Newark, Calif.)  
P. P.-Purch.: M. J. Rathrack  
Gen. Purch. Agent: B. R. Tinguie  
Tech. Asst. to Gen. Purch. Agent: R. H. Eiser  
Purch. Agent-Raw Material: O. T. Lambert  
V. P.-Sales: R. H. Lightner MM

**TANIUM METALS CORP. OF AMERICA**  
33 Broadway, New York 7, N. Y. (Tel. WORth 4-7620)  
Dir.-Mktg.: T. W. Lippert  
Sales Mgr.: Robert S. Nycum MF, WN, MM

**TEFLEX, INC.**  
Andee St., Springfield 4, Moss. (Tel. REPublic 9-5631)  
Purch. Dir.: S. J. Souis  
Buyers: R. Brennan, M. Raichelson  
V. P.-Sales & Adv.: D. H. Arthur  
PS, GS, GH, GE, R&D

**THE DEUTSCHMANN CORP.**  
Revidence Hwy., Norwood, Mass. (Tel. NORwood 7-2620)  
Purch. Agent: Henry P. Shopneck  
Sales Mgr.: Thomas A. Crawford

**TRACO DIV., THE OHIO CRANKSHAFT CO.**  
800 Harvard Ave., Cleveland 5, Ohio (Tel. DIamond 1-2300)  
Tr.-Purch.: B. Seidel  
Asst. Gen. Mgr.: L. S. Schweitzer

**TRATRON, INC.**  
12 E. Ojai Ave., Ojai, Calif., (Tel. MILton 6-1600)  
Purch. Agent: S. E. Brown  
Sales Mgr.: L. H. Appleman GS, CO, TS, R&D

**TRIFLIGHT CORP.**  
10 E. 9th Ave., York, Pa. (Tel. 8-1541)  
Purch. Agent: R. O. Thomas  
Sales Dir.: R. M. Dent MF, PS

**TRIPER MFG. CO., INC.**  
7-12 Liberty Ave., Jamaica 35, N. Y. (Tel. AXtel 7-5742)  
Sales Mgr.: Fred Greil GE, MM

**TRIT MFG. CO.**  
92 Walnut St., St. Paul, Minn. (Tel. CAPital 2-4419)  
Purch. Agent: George Huna  
V. P.-Sales: Frank Chase

**TRORNGREN CO., INC.**  
6 Pearl St., Somerville 45, Mass. (Tel. MONmouth 6-3250)  
Purch. Agent: Wm. DeCain  
V. P.-Sales: Kenneth A. Casavant MF, WN, PS, GS

**TRUQUE CONTROLS INC.**  
5 E. Broadway, San Gabriel, Calif. (Tel. CUMberland 3-4182)  
Purch. Agent: F. M. Sheehy GS

**TARRANTING CO., THE**  
1 Field St., Tarranting, Conn. (Tel. HUNter 2-4441)  
Tr.-Purch.: W. V. Viering  
Sales Mgr.: R. G. O'Connell MF, WN, PS, GS, GH, GE

**TARRANTING MFG. CO. INC., THE SPECIALTY BLOWER DIV.**  
10 Franklin Drive, Tarranting, Conn. (Tel. HUNter 2-4422)  
Purch. Agent: R. J. Geiger  
Sales: A. M. Wilczenski GS, GH, CO, TS, TR

**TORSION BALANCE CO., THE**  
35 Manhegan St., Clifton, N. J. (Tel. GREgory 3-6900)  
Purch. Agent: C. Wesley  
Div. Sales Mgr.: E. H. Enberg TS

**TORWICO ELECTRONICS, INC.**  
1090 Morris Ave., Union, N. J. (Tel. ELizabeth 4-5650)  
Purch. Agent: H. G. Riche GS, GE, TR, R&D

**TOWACO ELECTRONICS**  
Pine Brook Rd., Towaco, N. J. (Tel. DE 4-4443)  
Pres.: Samuel I. Cory, Jr.

**TOWER CONSTRUCTION CO.**  
2700 Hawkeye Drive, Sioux City, Iowa (Tel. 5-7653)  
Purch. Agent: J. R. Edwards  
Asst. Sales Mgr.: G. S. Chesen  
Gen. Mgr.: C. A. Wright GS, GH

**TOWER MFG. CORP.**  
158 Pine St., Providence, R. I. (Tel. GASpee 1-2061)  
Gen. Mgr.: Louis J. Shatkin

**\*TOWNSEND CO., CHERRY RIVET DIV.**  
1224 E. Delhi Rd., Santa Ana, Calif. (Tel. KI 5-5511)  
Purch. Agent: Ralph E. Herndon  
Buyers: Leroy F. Levers  
Mgr., Aircraft Sales: John H. Ray MF, WN, PS, MM  
\*(See Page 36 for Advertisement)

**TRAID CORP.**  
17136 Ventura Blvd., Encino, Calif. (Tel. STanley 3-3373)  
Purch. Agent: Anthony De Marca  
Merchandising: Mark MacIntosh TS, TR

**TRAILMOBILE INC.**  
31st & Robertson Sts., Cincinnati 9, O. (Tel. REDwood 1-2323)  
Dir.-Purch.: Wm. H. French  
V. P.-Sales: Harry Elyer GS, GH

**TRANE CO., THE**  
2nd & Cameron Ave., La Crosse, Wisc. (Tel. 2-8000)  
V. P.-Purch.: R. H. Pearse  
Exec. V. P.-Sales: Thomas Hancock GS, GH, GE, TS, TR

**TRANS ELECTRONICS, INC.**  
7349 Canoga Ave., Canoga Park, Calif. (Tel. DIamond 0-3334)  
Purch. Agent: J. Y. Ritener  
Dir.-Sales: William J. Miller CO, TS

**TRANSCO PRODUCTS, INC.**  
12210 Nebraska Ave., Los Angeles 25, Calif. (Tel. BRadshaw 2-5687)  
Purch.: Hugh P. Rice  
Buyer: William Woakey  
Sales: E. M. Cleland

**TRANSYDNE CORP.**  
5815 57th Drive, Maspeh 78, N. Y. (Tel. TW 4-6881)  
Dir.-Purch.: E. Braun GS, GE, CO, TS

**TRANSFORMER DESIGN, INC. OF MILWAUKEE**  
7377 North 76th St., Milwaukee 18, Wisc. (Tel. FLogstone 3-8017)  
Pres.: Howard S. Knapow  
V. P.: Rubin B. Lesgold GS, GE, TR, R&D

**TRANSFORMER SPECIALTY CO.**  
221 Rockhill Rd., Bala-Cynwyd, Pa. (Tel. MOhawk 4-5770)  
Pres.: H. D. Hosier

**TRANSISTOR ELECTRONICS CORP.**  
3357 Republic Ave., Minneapolis 26, Minn. (Tel. WESt 9-6754)  
Dir.-Purch.: Raymond P. Deeney  
Sales Mgr.: R. C. Skae GE, CO, TS, TR

**TRANSITRON ELECTRONIC CORP.**  
168 Albion St., Wakefield, Mass. (Tel. CRYstal 9-4500)  
Purch. Agent: Ralph Young  
Sales Mgr.: H. T. Neavitt GE

**TRANSHARES CORP.**  
15 William St., New York 5, N. Y. (Tel. HANnover 2-6156)  
V. P.: Alfans A. Jakob TR

**TRANSONIC, INC.**  
808 16th St., Bakersfield, Calif. (Tel. FA 7-5701)  
Dir.-Purch.: Harvey A. Lipp  
Gen. Sales Mgr.: C. P. Cushway GS, GE, TS, TR

**TRANS-SIL CORP.**  
55 Hancock Street, Englewood, N. J. (Tel. LOWell 7-1720)  
Gen. Mgr. Purch.: L. J. Grennell  
Sales Mgr.: I. Weinstein WN, GS, CO, TS

**TRANS-SONICS, INC.**  
P. O. Box 328, Lexington 73, Moss. (Tel.

BRowning 2-1000)  
Purch. Agent: Robert L. Meader  
Gen. Sales Mgr.: Sheldon W. Kennedy GS, TS, TR

**TRANSUE & WILLIAMS STEEL FORGING CORP.**  
1300 Ely, Alliance, O. (Tel. TALbar 1-5741)  
Purch. Agent: H. C. Martin  
Asst. Purch. Agent: R. H. Cast  
Sales Mgr.-Stamping Div.: C. J. Brunn  
Sales Mgr.-Forge Div.: J. W. Ament MF, WN, PS

**TRANS-WESTERN ELECTRONICS**  
P. O. Box 1473 Ventura, Calif. (Tel. MILLer 2-4219)  
Purch. Agent: G. Reins  
Sales Mgr.: M. M. Neer TS

**TRANTRER MFG., INC.**  
735 E. Hazel, Lansing, Mich. (Tel. IV 4-4531)  
Purch. Agent: M. C. Nolen  
Sales Mgr.: S. J. Stowell SP, MM

**TRESCO, INC.**  
3824 Terrace St., Philadelphia 28, Pa. (Tel. IV 3-1383)  
Purch. Agent: Stanley Fisher  
Sales: Stan Auerbach MF, PS, GS, GE, TS, TR

**TRIAD TRANSFORMER CORP.**  
4055 Redwood Ave., Venice, Calif. (Tel. EXmout 7-2145)  
Purch. Agent: G. L. Howard  
Sales Mgr.-Jobber: Ernest Clover  
Sales Mgr.-Industrial: Edmund Shimmel  
GE, CO, TS, TR

**TRICRAFT PRODUCTS CORP.**  
1124 W. Newport Ave., Chicago 13, Ill. (Tel. WELLington 5-5383)  
Sales Mgr.: Bud Nylen  
Gen. Mgr.: E. A. Gancoc GS, GH, GE, TS, TR

**TRIDEX CO.**  
P. O. Box 1207, Lindsay, Calif. (Tel. LINDsay 2-4051)  
K. B. Howard MF, WN, PS, GS, GH, GE, CO, TS, TR

**TRIMOUNT INSTRUMENT CO.**  
3119 W. Lake St., Chicago 12, Ill. (Tel. NEVada 2-3747)  
Purch.: F. R. Arens  
Sales Mgr.: D. E. Haines GS, TS

**TRINDL PRODUCTS, LTD.**  
1807-11 S. Clark St., Chicago 16, Ill. (Tel. VICTory 2-7716)  
V. P.-Purch.: Joseph H. Trindl, Jr. PS, GS

**TRIO CHEMICAL WORKS, INC.**  
341 Scholes St., Brooklyn 6, N. Y. (Tel. HYacinth 7-3595)  
Purch.: Harold Blank  
Sales: M. M. Blank MF, WN, PS, GS, GH

**TRIO LABORATORIES, INC.**  
Plainview, L. I., N. Y. (Tel. OVerbrook 1-0400)  
Purch. Agent: Thomas M. Curry  
Sales Mgr.: Jay S. Salz GS, TS

**TRION, INC.**  
1000 Island Ave., McKees Racks, Pa. (Tel. FEderal 1-3300)  
Purch. Agent: John L. Hergenraeder  
Dir.-Sales: R. R. Pryor

**TRIONICS CORP.**  
P. O. Box 548, Madison 1, Wisc. (Tel. CEDar 8-2616)  
Treas. & Sr. Chem.: Stanley E. Rahawetz  
Pres.: Robert L. Slater, Jr. MM, R&D

**TRIPLETT & BARTON, INC.**  
831 N. Lake St., P. O. Box 3128, Burbank, Calif. (Tel. VICToria 9-1291)  
Asst. Gen. Mgr.-Purch.: Chas. W. Sexton  
Pres. & Gen. Mgr.-Sales: Tam A. Triplett TS, R&D

**TRIPLETT ELECTRICAL INSTRUMENT CO.**  
Harman Rd., Bluffton, Ohio (Tel. 323-W)  
Purch. Agent: P. W. Strauffer  
V. P.-Sales: N. A. Triplett

**TRI-POINT PLASTICS INC.**  
175 I. U. Willerts Rd., Albertson, L. I., N. Y. (Tel.

**CODING**  
Missile Frame MF  
Warhead & Nose Cone WN  
Propulsion System PS  
Ground Support GS  
Ground Handling GH  
Guidance Equipment GE  
Checkout Equipment CO  
Test Equipment TS  
Tracking & Telemetering TR  
Research & Development R&D  
Materials & Metals MM

# ... purchasing directory tro—var

- Mayfair 1-5800)  
**Purch. Agent:** Sid Kipnes  
**Dir.-Sales:** Pat Ruggieri  
 PS, GS, GE, TS, TR, R&D
- TROMBETTA SLENOID CORP.**  
 329 N. Milwaukee St., Milwaukee, Wisc. (Tel. Broadway 1-8347)  
**Gen. Mgr.:** Panfilo Trombetta GH
- TRU-CONNECTOR CORP.**  
 416 Union St., Lynn, Mass., (Tel. LY 8-9379)  
**Gen. Mgr.:** James J. O'Neil, Jr.
- TRUE ALLOYS INC.**  
 284 S. Summit St., Detroit 9, Mich. (Tel. Vinewood 2-8686)  
**Pres.:** J. P. Carritte MF, WN, PS, GE, MM
- TUBE DISTRIBUTORS CO., INC.**  
 1415 Kellum Place, Garden City, N. Y. (Tel. Pioneer 7-5000)  
**Head-Purch.:** Sam Warren  
**Purch. Agent:** Sam J. Sinacore  
**Sr. Buyer:** Albert Salis  
**Sales Mgr.:** David Reeves  
**Sales Prom. Mgr.:** Joseph D. Shipman MM
- TUBE METHODS INC.**  
 Deper & Rambo Sts., Bridgeport, Montg. Co., Pa. (Tel. BRoadway 9-7700)  
**Exec. V. P.:** Paul V. Fly  
**Sales Mgr.:** John E. MacNamara PS, GS, GE, TS, TR, MM
- TUBE REDUCING CORP.**  
 520 Main Ave., Wallington, N. J. (Tel. PRescott 7-3700)  
**Purch. Agent:** E. P. McMahon  
**V. P.-Sales:** R. L. Tannehill MF, WN, PS, MM
- TUBE-TURNS DIV., CHEMETRON CORP.**  
 224 E. Broadway, Louisville, Ky. (Tel. JUniper 7-7551)  
**Purch. Agent:** R. J. Dilger  
**Buyer:** Robert Love  
**Sales Mgr.:** Charles F. Morris WN, PS, GH
- TUCSON INSTRUMENT CORP.**  
 1050 E. Valencia Rd., P. O. Box 11247, Tucson 2, Ariz. (Tel. MAin 2-1092)  
**Pres.:** F. R. Perier  
**V. P.-Sales:** Louis A. Wilson, Jr. MF, WN, PS, GS, GH, GE, CD, TS, TR
- TURBO MACHINE CO.**  
 840 W. Main St., Lonsdale, Pa. (Tel. ULyesses 5-5131)  
**Purch. Agent:** Alfred S. Karcewski WN, MM
- TURBO PRODUCTS, INC.**  
 12177 Montague St., Pacoima, Calif. (Tel. Empire 9-5252)  
**Purch. Agent:** Howard Wade  
**V. P.-Sales & Engrg.:** J. H. Overholser MF, PS, GS, GH, MM
- TURCO PRODUCTS, INC.**  
 6135 S. Central Ave., Los Angeles, Calif. (Tel. Adams 2-6111)  
**Dir.-Purch.:** A. H. Dekker  
**Los Angeles Purch.:** D. W. Eckrood  
**V. P.-Mktg.:** Dan T. Buist MF, WN, PS, GS, GH, CO, TS
- TWENTY-FIRST CENTURY ELECTRONICS, INC.**  
 6227 Columbus Ave., P. D. Box 2326, Riverside, Calif. (Tel. Overland 8-0780)  
**Purch. Agent:** J. W. MacDonald  
**V. P.-Sales:** C. R. Springer GE, R&D
- TWIGG INDUSTRIES**  
 1827 E. National, Brazil, Ind. (Tel. 2293)  
**Purch. Agent:** B. Siwik  
**Buyer:** J. Bateman  
**Sales Mgr.:** W. L. Hahn MF, WN, PS, GS, GH
- TWIN COACH CO., AIRCRAFT-MISSILES**  
 Buffalo 25, N. Y. (Tel. PLaza 5150)  
**Materials Mgr.:** E. E. Rhoads  
**V. P.-Contracts Admin.:** G. R. Hecht MF, GS, GH, R&D
- E. F. TWOMEY CO., INC.**  
 728 W. 10th Pl., Los Angeles 15, Calif. (Tel. RI 9-9451)  
**Secy.-Treas.:** E. F. Twomey, Jr. MF, GS
- TYPHOON AIR CONDITIONING CO., DIV.-HUPP CORP.**  
 505 Carroll St., Brooklyn 15, N. Y. (Tel. ULster 8-0800)  
**Purch. Agent:** George W. Weinberg  
**Asst. Purch. Agent:** T. E. Krawetz  
**V. P.-Sales:** John A. Gilbreath MF, GS, GE
- UCINITE CO., THE, DIV.-UNITED-CARR FASTENER CDRP.**  
 459 Watertown St., Newtonville 60, Mass. (Tel. LAsall 7-8400)
- Purch. Agent:** T. J. Costello  
**V. P.-Sales:** G. V. Sweetnam MF, WN, PS, GS, GH, GE, TR
- UEHLING INSTRUMENT CO.**  
 473 Getty Ave., Paterson, N. J. (Tel. SHerwood 2-8710)  
**Purch. Agent:** J. W. Riccobene  
**Sales Mgr.:** F. F. Riccobene
- GEDRGE ULANET CO.**  
 413 Market St., Newark 5, N. J. (Tel. MArket 2-4876)  
**Sales:** H. Ulanet
- ULLMAN DEVICES CORP.**  
 Danbury Rd., Ridgefield, Conn. (Tel. Idlewood 8-6577)
- ULTRA ELECTROFORMING & MFG. CO.**  
 110 Cedar Ave., Pitman, N. J. (Tel. LUther 9-7666)  
**Treas.:** E. P. Carter MM
- ULTRADYNE, INC.**  
 2624 San Mateo, N. E., Albuquerque, N. M. (Tel. AMherst 8-2431)  
**Mgr.-Tech. Sales:** Edward L. Amonette TR, R&D
- \*ULTRA-VIOLET PRODUCTS, INC.**  
 5114 Walnut Grove Ave., San Gabriel, Calif. (Tel. CUmberland 3-3193)  
**Factory Supt.:** Melvin D. Hershey  
**Sales Mgr.:** T. S. Warren MF, WN, PS, GS, CO, TS, TR  
 \*(See Page 79 for Advertisement)
- UNDERWOOD ELECTRIC & MFG. CO., INC.**  
 4926 W. Grand Ave., Chicago, Ill. (Tel. NAtional 2-9450)  
**Purch.:** Edward J. Meier  
**Sales:** Robert G. Futterer
- UNGAR ELECTRIC TOOLS, INC.**  
 4101 Redwood Ave., Los Angeles 66, Calif. (Tel. EXmont 8-5718)  
**Purch. Mgr.:** Frank Hurd  
**Sales Mgr.:** William L. Nehrenz MM
- UNIFLOW VALVE CORP.**  
 19 Quine St., Cranford, N. J. (Tel. BRidge 6-8300)  
**Dir.-Purch.:** Mary Hummel  
**Dir.-Sales:** Kenneth Grosse PS, R&D
- UNIFORM TUBES, INC.**  
 Level Rd., Collegeville, Pa. (Tel. HUxley 9-7276)  
**Purch. Agent:** Gordon Hattersley  
**Sales Mgr.:** D. T. MacNair MM
- UNIMAX SWITCH DIV., THE W. L. MAXSON CORP.**  
 Ives Rd., Wallingford, Conn. (Tel. COlony 9-8701)  
**Purch. Agent:** J. Dsias  
**Sales Mgr.:** J. Martinez GE
- UNION ASBESTOS & RUBBER CO.**  
 1111 W. Perry St., Bloomington, Ill. (Tel. 3-8081)  
**Purch. Agent:** L. Vicha  
**Sales Mgr.:** E. T. Plummer MM, MF, WN, PS, TR
- UNION CARBIDE METALS CO., DIV.-UNION CARBIDE CORP.**  
 30 E. 42nd St., New York 17, N. Y. MM
- UNION SWITCH & SIGNAL, DIV.-WESTINGHOUSE AIR BRAKE CO.**  
 Braddock Ave., Pittsburgh 18, Pa. (Tel. CHurchill 2-5000)  
**Mgr.-Purch.:** H. I. McKeever  
**Sr. Buyer:** C. S. Poxon  
**Supvr.-Purch. Research:** R. J. Cook  
**Mgr.-Gen. Apparatus:** P. K. Eckhardt PS, GS, GE, CO, TS, TR
- UNISON PRODUCTS, INC.**  
 705 W. Savidge St., Spring Lake, Mich. (Tel. VIKing 2-1349)  
**Buyer:** M. Bekels  
**Sales Mgr.:** Raymond Berwald GE, TR
- UNIT CRANE & SHOVEL CORP.**  
 6411 W. Burnham St., Milwaukee, Wisc. (Tel. MITchell 5-8840)  
**Asst. to Pres. & Works Mgr.:** A. B. Py  
**Purch. Agent:** W. F. Ellingson  
**V. P.-Sales:** A. R. Corbett  
**Sales Mgr.:** J. Lenahan GH
- UNIT PROCESS ASSEMBLIES, INC.**  
 61 E. 4th St., New York 3, N. Y. (Tel. SPring 7-1398)  
**Purch.:** C. Cirilli  
**Sales Mgr.:** S. U. Lieber TS
- UNITED AIRCRAFT PRODUCTS, INC.**  
 1116 Bolander Ave., Oayton, O. (Tel. BALdwin 4-3841)  
**Dir.-Purch.:** John Shroyer  
**Asst. V. P.-Contractual Engrg. Mgr.:** F. A. Ryan GS, GH, MM, R&D
- UNITED CARBON PRODUCTS CO.**  
 1318 N. Madison St., Bay City, Mich. (Tel. TWInbrook 3-4575)  
**Purch. Agent:** M. D. Sordyl  
**Sales Mgr.:** E. J. Musinski MA
- UNITED CONTROL CORP.**  
 4540 Union Bay Pl., Seattle 5, Wash. (Tel. LAkeview 5-9200)  
**Purch. Dir.:** Martin K. Lilleberg  
**Asst. Purch. Dir.:** Hugh LaVillie  
**Engrg. Sales Mgr.:** Robert L. Hancock MF, PS, GS, GH, GE, CO, TS, TR
- UNITED ELECTRIC CONTROLS CO.**  
 85 School St., Watertown, Mass. (Tel. Walnut 6-1000)  
**V. P.-Purch.:** G. McNally  
**Purch. Agent:** R. Rando  
**Asst. Purch. Agent:** M. Tutunjian PS, JS, GH, GE, TS, R&D
- UNITED ELECTRODYNAMICS, INC.**  
 200 Allendale Rd., Posadena, Calif. (Tel. SY 9-7161)  
**Purch. Agent:** E. H. Lemke  
**Buyers:** W. G. Martin, C. D. Morrison  
**Sales Mgr.:** Frank A. Fleck CO, TS, TR, R&D
- UNITED MFG. CO., THE**  
 5250 Dobeckmeyer Ave., Cleveland 2, O. (Tel. DLympic 1-6310)  
**Purch. Agent:** Harold L. Murphy  
**Sales Mgr.:** W. R. Albrecht MF, WN, PS, GS, GH, GE, TS, TR
- UNITED MFG. CO. DIV., THE W. L. MAXSON CORP.**  
 41 Haig St., Hamden 14, Conn. (Tel. New Haven-CH 8-4491)  
**Purch. Agent:** C. W. Redmond  
**V. P.-Sales:** V. A. Stancliff GS, CO, T
- UNITED MINERAL & CHEMICAL CDRP.**  
 16 Hudson St., New York 13, N. Y. (Tel. Beekman 3-8870)  
**Purch. Agent:** Terry D. Kancellic  
**Sales:** Herbert M. Rosenthal MF, PS, GS, GE, TR
- UNITED PLATING WORKS**  
 4118 N. Mingo Rd., Tulsa, Okla. (Tel. TEmple 5-4683)  
**Purch.:** S. A. Bergman  
**Sales:** Meredith L. Sutton W
- UNITED SHOE MACHINERY CORP.**  
 140 Federal St., Boston 7, Mass. (Tel. Liberty 2-9100)  
**Mgr.-Purch. Dept.:** H. F. Pfaff  
**Purch.:** R. J. Carroll, George E. Bowen & E. McCoo  
**V. P.-Sales:** C. R. Todd MF, WN, PS, G
- UNITED SHOE MACHINERY CORP., ORDNANCE CORP.**  
 Balch St., Beverly, Mass. (Tel. WAlker 2-0160)  
**Mgr.-Ordnance Dept.:** D. Hall
- UNITED SMELTING & ALUMINUM CO., INC.**  
 P. O. Box 1910, New Haven, Conn. (Tel. MA 4-2181)  
**Gen. Supt.:** F. A. Merliss  
**Exec. V. P.-Sales:** Milton E. Rosenthal W
- U. S. A. C. TRANSPORT, INC.**  
 457 W. Fort St., Detroit, Mich. (Tel. WDodward 3-7913)  
**Dir.-Cust. Rel.-Sales:** J. Wade Jacobson  
**MF, WN, PS, GS, GH, GE, CO, TS, TR, MM, R&D**
- U. S. COMPONENTS INC.**  
 454 E. 148th St., New York 55, N. Y. (Tel. CYpress 2-6525)  
**V. P.-Purch.:** B. A. Jackson  
**Sales:** H. Nalbanjian PS, GS, GH, GE, CO, TS, T
- U. S. ELECTRICAL TOOL CO.**  
 3640 Llewellyn St., Cincinnati, Ohio (Tel. Mulberry 1-3410)  
**V. P.-Purch.:** G. D. Behlen  
**Dir.-Sales:** P. D. Schneider
- U. S. FIBER & PLASTICS CORP.**  
 Union St., Stirling, N. J. (Tel. Millington 7-0514)  
**Purch. Agent:** Earle Oall  
**Sales Mgr.:** Robert A. Goodfellow
- U. S. FLEXIBLE METALLIC TUBING CO.**  
 454 E. Third St., Los Angeles, Calif. (Tel. MADison 4-2121)  
**Purch.:** E. Almonor; E. O. Mohring  
**Sales Mgr.:** Wm. H. Tice PS, GS, G
- U. S. GAUGE DIV.-AMERICAN MACHINE & METALS, INC.**  
 Sellersville, Pa. (Tel. ALPine 7-6531)  
**Dir.-Prac.:** Clayton Kirkpatrick  
**Purch. Agent:** M. H. Blackwell  
**Mgr.-Aircraft Sales:** David A. Winer PS, GE, CO, TS, T
- U. S. GEAR CDRP.**  
 81 Bay State Rd., Wakefield, Mass. (Tel. CRystal

6-4900)  
Engr.-Purch.: A. P. Cotreau  
Purch. Expediting: Alex Comaro  
Sales Mgr.: David M. Abbot GS, GE, TR, R&D

**S. HAMMERED PISTON RING CO., INC.**  
Roil Road Ave., Sizzling, N. J. (Tel. Millington  
7-0100)  
P. -Purch.: A. A. Wenzel  
Purch.: R. Bossmann & A. Thoms MF, WN, PS, GS

**S. INDUSTRIES, INC.**  
50 Pork Ave., New York, N. Y. (Tel. Oxford  
7-4141)  
Sales: T. Petrides MF, GS, GH, GE, CO, TS, R&D

**S. RELAY CO.**  
17 N. Coney Ave., Azusa, Calif. (Tel. Cumberlond  
3-8241) or Edgewood 4-8206)  
Pres.: Louis Fox  
P. -Purch.: Harold Fox  
Purch. Agent: S. J. Astricon  
Sales Mgr.: Lyle D. Bunce MF, PS, GS, GH, GE, CO, TS, TR, R&D

**S. SCIENCE CORP., DIV.-TOPP INDUSTRIES,  
INC.**  
221 W. 102nd St., Los Angeles, Calif. (Tel.  
Spring 6-0450)  
Purch.: W. B. Miller  
Asst. Purch. Agent: W. J. Chonter  
Ingr.: J. D. Blake, W. J. Steffy, G. H. Wood  
Cust. Rel.: M. A. Pahlavon GS, GH, GE, TR

**S. SEMICONDUCTOR PRODUCTS, INC.**  
450 W. Osborn Rd., Phoenix, Arizona (Tel. AP  
8-5591)  
Purch. Agent: Raymond W. DeLor  
Sales: Joseph C. Worth GS, GE, CO, TS

**S. STEEL SUPPLY DIV., UNITED STATES  
STEEL CORP.**  
25 S. LaSalle St., Chicago, Ill. (Tel. CEntrol  
6-9200)  
Purch. Agent: J. E. Grant  
Sales: K. P. Rindfleisch MM

**STATED STATES CHEMICAL MILLING CORP.**  
700 Rosacrons Ave., Manhattan Beach, Calif.  
(Tel. ORegan 8-4041)  
Purch. Agents: R. V. McCullach, J. H. Vincent  
Contracts: M. L. Johnson MF, WN, GS, GH, MM, R&D

**STATED STATES DYNAMICS CORP.**  
250 Columbus Ave., Boston 20, Mass. (Tel. HI  
6-3850)  
Pres.: Walter E. Strimling  
Sales Mgr.: Button D. Lenk GH, GE, TR

**STATED STATES PLYWOOD CORP.**  
6 W. 44th St., New York 36, N. Y. (Tel. MU  
2-1900) GS

**STATED STATES RADIUM CORP.**  
O. Box 246, Morrisstown, N. J. (Tel. JEfferson  
9-4000)  
Purch. Agent: R. Von Epps  
Sales: D. Weaver  
Sales: C. W. Wallhouse MF, WN, GH, GE, CO, TS, TR

**STATED STATES RUBBER CO.**  
30 Ave. of the Americas, New York, N. Y. (Tel.  
Circle 7-5000)  
Purch.: S. W. MacKenzie  
Asst. Dir.-Purch.: W. H. Sprouting  
Dir. Dept.-Sales: Douglas K. Bonn, Mgr., 1700 K  
Street, N. W., Washington, D. C. PS, MM, R&D

**STATED STATES STEEL CORP.**  
5 William Penn Pl., Pittsburgh 30, Pa.  
Sales: A. F. Berliner MF, PS

**STATED STATES TIME CORP.**  
Merbury 20, Conn. (Tel. Plozo 8-2444)  
Sales Mgr.: H. D. Armstrong, 375 Pork Ave.,  
New York 22, N. Y. (Tel. PLozo 9-5665)  
Sales Mgr.: R. Loncoster, 346 Tejon Pl.,  
Palos Verdes Estates, Calif. (Tel. FRontier  
9-9526) GE, TR, R&D

**STATED STATES VARNISH CO.**  
O. Box 2, #625 Franklin Ave., Hosbrouck Hts.,  
N. J. (Tel. ATlOs 8-0373)  
Purch.: Henry G. Hase

**STATED SUPPLY CO.**  
76 S. Broodway Pl., Los Angeles 7, Calif. (Tel.  
ADoms 3-4384)  
Purch. Agent: Horry L. Guss  
Sales Mgr.: Morris C. Guss MF, WN, PS, GS, GH, GE, MM

**STATED TRANSFORMER CORP.**  
1 Vorick St., New York 13, N. Y. (Tel. ALgonquin  
4-3500)  
Purch. Agent: J. Kromer  
Sales Mgr.: H. Russell GS, GE, CO, TS, TR

**STATED WIRE & SUPPLY CORP.**  
17 Elmwood Ave., Providence, R. I. (Tel.

STUART 1-3000)  
Gen. Sales Mgr.: J. G. Londrigan MM

**UNITED-CARR FASTENER CORP.**  
31 Ames St., Cambridge 42, Mass. (Tel. Klrlklond  
7-4900)  
Purch. Agent: F. J. Ross  
Asst. Purch. Agent: David Erb  
Sales: Arthur W. Rice, Jr. MF, WN, PS, GS, GH, GE, TR

**UNIVERSAL CIRCUIT CONTROLS CORP.**  
3610 Ookton St., Skokie, Ill. (Tel. ORchord 5-2620)  
Chief Engr. & Gen. Mgr.: Sander B. Friedman  
Sales Mgr.: Eorl R. Soyre GE, TR

**UNIVERSAL DRAFTING MACHINE CORP.**  
7960 Lorain Ave., Cleveland 2, O. (Tel. OL  
1-4747)  
Purch. Agent: R. F. Bornes  
Asst. Purch. Agent: D. DeVito  
V. P.-Sales: S. W. Hoover

**UNIVERSAL DYNAMICS CORP.**  
P. O. Box 9814, 1441 N. 19th St., Arlington 9, Va.  
(Tel. JAckson 5-4541)  
Purch. Agent: David L. Watson  
Sales Mgr.: Kirk L. Burns GS, GH, TS

**UNIVERSAL ELECTRIC CO.**  
300 E. Main St., Owosso, Mich. (Tel. SARotoga  
5-7174)  
Dir.-Purch.: Gerald Haddy  
Dir.-Sales: A. E. Kerscher PS

**UNIVERSAL FIBER CO.**  
1720 22nd St., Santa Monica, Calif. (Tel. EXbrook  
3-7707)  
Purch. Agent: P. A. McGreevey  
Sales Mgr.: Richard Landis (Tel. CRestview  
4-8185) PS, GS, GE

**UNIVERSAL MFG. CO., INC.**  
1168 Grove St., Irvington 11, N. J. (Tel. ESsex  
4-9800)  
Sales Engr.: Anthony O. Vicori

**UNIVERSAL METAL PRODUCTS INC.**  
331 Vineland Ave., Puente, Calif. (Tel.  
EDgewood 6-4561)  
Purch. Agent: M. G. Miller  
Sales Mgr.: O. J. Miller MF, GS, GH

**UNIVERSAL MICROPHONE CO.**  
Box 55, Inglewood, Calif. (Tel. EX 8-6898)  
Purch. Agent: D. Harrison  
Sales Mgr.: R. Harrison GS

**UNIVERSAL MOULDED PRODUCTS CORP.**  
Commonwealth Ave., Bristol, Va. (Tel. NO 9-1181)  
Purch. Agent: J. G. Barnes  
Dir.-Sales: C. L. Meter MF, WN, PS, GS, MM, R&D

**UNIVERSAL TOROID COIL WINDING, INC.**  
171 Coit St., Irvington 11, N. J. (Tel. ESsex  
4-9800)  
Purch. Agent: William E. Arends  
Sales Engr.: Anthony O. Vicori

**UNIVERSAL TRANSISTOR PRODUCTS CORP.**  
17 Brooklyn Ave., Westbury, N. Y. (Tel.  
EDgewood 3-3304)  
Purch. Agent: I. R. Zeller GS, GH, GE, CO, TS, TR

**UNIVERSAL UNLIMITED, INC.**  
Prott Oval, Glen Cove, N. Y. (Tel. ORiole  
6-4600)  
Purch. Agent: Henry J. Belmont  
Sales Mgr.: Mork L. Steiner MF, GE, TS, TR

**UNIVERSAL-CYCLOPS STEEL CORP.**  
Bridgeville, Pa. (Tel. CANol 1-8000)  
Plant Mgr.-Purch.: F. E. Gorrah  
V. P.-Sales: W. J. Long MM

**UNIVERSITY LOUDSPEAKERS, INC.**  
80 S. Kenisco Ave., White Plains, N. Y. (Tel.  
WHite Plains 6-7700)  
Purch. Agent: Rocco Di Rico  
Sales Mgr.: Charles Roy GS, R&D

**UTICA DROP FORGE & TOOL DIV.-KELSEY  
HAYES CO.**  
2415 Whitesboro St., Utrico 4, N. Y. (Tel. 5-6411)  
Purch. Agent: Russell Jones  
Asst. Purch. Agent: E. Kern  
Mgr.-Missile Div.-Sales: W. K. Norris MF, WN, PS, GS

**UTRAD CORP.**  
305 N. Briant St., Huntington, Ind. (Tel. 4088 &  
4089)  
Purch. Agent: Norbert A. Miller  
Pres.-Sales: A. R. Koufmon

**VACAP CORP.**  
1905 Summit Ave., Union City, N. J. (Tel. UNION  
7-6699)  
V. P.-Purch. & Sales: L. Dolinko GH, TR

**VACUUM METALS CORP., DIV.-CRUCIBLE  
STEEL CO. OF AMERICA**  
P. O. Box 977, Syracuse 1, N. Y. (Tel. HOword  
8-2571)  
Dir.-Purch.: R. O. Bridge, Crucible Steel Co. of  
America, Oliver Bldg., Pittsburgh 30, Pa. (Tel.  
ATlontic 1-3800)  
Head-Purch. Dept.—Syracuse: F. G. Hefti  
Sales Mgr.—Syracuse: F. J. Coates MF, WN, PS

**VACUUM RESEARCH CO.**  
420 Market St., San Francisco 11, Calif. (Tel. YUkon  
2-3565)  
Purch.: H. F. Perzone, 1929 Williams St., San  
Leandro, Calif. (Tel. LOckhoven 8-1252)  
Sales: Lorry Wright, San Francisco PS, GS, GH, GE

**VACUUM TUBE PRODUCTS, DIV.-HUGHES  
AIRCRAFT CO.**  
2020 Short St., Oceanside, Calif. (Tel. SARotoga  
2-7648)  
Purch. Agent: L. J. Huking  
Mgr.-Sales: J. J. Sutherland GS, GH, R&D

**VALCOR ENGRG. CORP.**  
Carnegie Ave., Kenilworth, N. J. (Tel. CHestnut  
5-1665)  
Purch. Agent: M. A. Kreitchmon  
Buyer: Anthony Pias  
Gen. Sales Mgr.: Murray Moslow PS, GS, GH, GE, CO

**VALPEY CRYSTAL CORP.**  
1244 Highland St., Holliston, Mass. (Tel. GARden  
9-4851)  
V. P.-Purch.: T. S. Volpey, Jr.  
Sales Engr.: Nelson B. Piper, Jr. GE, TS, TR

**VAN DER HORST CORP. OF AMERICA**  
1645 East State Rd., Oleon, N. Y. (Tel. 3173)  
Purch. Agent: A. B. Roop  
Sales Mgr.: Frank Jorsted WN, MM, R&D

**VAN KEUREN CO.**  
176 Waltham St., Watertown 72, Mass. (Tel.  
WAtertown 4-4394)  
Pres.: R. T. Parsons  
Sales Mgr.: William Mark

**VAN ZELM ASSOCIATES, INC.**  
7803 Puloski Hwy., Baltimore 6, Md. (Tel.  
MURdock 7-1414)  
Purch. Agent: Mr. Robert Henning  
Business Mgr.-Sales: Gerald McBride GS, GH, R&D

**VANADIUM CORP. OF AMERICA**  
420 Lexington Ave., New York, N. Y. (Tel. LE  
2-3580)  
Dir.-Purch.: F. W. Thomas  
V. P.: R. H. Filsinger, Jr. MM

**VANADIUM-ALLOYS STEEL CO.**  
Lotrobe, Pa. (Tel. KEYstone 7-5551)  
Purch. Agent: Lewis M. Potter  
Asst. Purch. Agent: Alex B. Smith  
V. P.-Sales: R. Burns George MM

**VANGUARD ELECTRONICS CO.**  
3384 Motor Ave., Los Angeles 34, Calif. (Tel.  
TEXas 0-7344)  
Pres.-Purch.: Simon A. Golbert GS, GE, TS  
Sales Mgr.: Fred Finoly

**VAP-AIR AERONAUTICAL PRODUCTS DIV.,  
VAPOR HEATING CORP.**  
6444 Howard St., Chicago, Ill. (Tel. NEWcastle  
1-9200)  
Purch. Agent: Robert W. Currier  
Buyers: Ronald R. Krenek & Frank Slopak  
V. P.-Sales: L. H. Gillick GS, R&D

**VAPOR BLAST MFG. CO.**  
3025 W. Atkinson Ave., Milwaukee 9, Wis. (Tel.  
CUSTer 3-6500)  
Purch. Agent: A. Odehnol  
Sales Mgr.: H. F. Potin MF, WN, GS, GH, GE, TS, MM, R&D

**VARD INC.**  
2981 E. Colorado St., Posodeno, Calif. (Tel.  
SYcamore 6-9281)  
Purch. Mgr.: Gordon Withall  
Buyers: Jim Gilbert, John Allen

**CODING**  
Missile Frame MF  
Warhead & Nose Cane WN  
Propulsion System PS  
Ground Support GS  
Ground Handling GH  
Guidance Equipment GE  
Checkout Equipment CO  
Test Equipment TS  
Tracking & Telemetering TR  
Research & Development R&D  
Materials & Metals MM

# ... purchasing directory var—wes

- Sales Administrator:** G. L. Gillespie  
**Exec. V. P.-Sales:** Phillip R. Heim
- VARIFLEX CORP.**  
512 W. Court St., Rome, N. Y. (Tel. 7200)  
**Purch.:** Merrick Ormond  
**Sales:** J. H. Finnegan MF, WN, PS
- VARIAN ASSOCIATES**  
611 Hansen Way, Palo Alto, Calif. (Tel. OAvenport 6-4000)  
**Chief-Purch.:** Hamilton Shutts  
**Sales Mgr.:** W. M. Silhavy, Tube Div.  
**Sales Mgr.:** Emery Rogers, Instrument Div.  
**Sales Mgr.:** Paul I. Corbell, Radiation Div.  
GE, CO, TS, TR, R&D
- VARIETY AIRCRAFT CORP.**  
2901 W. 3rd St., Dayton, Ohio (Tel. AM 3-2664)  
**Gen. Mgr.:** C. A. Coppock MF, GS, GH  
**Ch. Engr.:** W. H. Kuntz
- VARIL CO., INC.**  
432 Fairfield Ave., Stamford, Conn. (Tel. Flreside 8-0091)  
**Pres.:** J. L. Kiser GS, TS, TR
- VARO MFG. CO.**  
2201 Walnut St., Garland, Tex. (Tel. BRoadway 6-6141)  
**Purch. Agent:** Brad Riggs  
**Buyer:** Al Armstrong  
**Sales Mgr.:** J. R. Gilmer GS, GE, CO, TS, TR, R&D
- VASCOLOY-RAMET CORP.**  
800 Market St., Waukegan, Ill. (Tel. ON 2-5220)  
**Purch. Agent:** L. P. Paluska  
**Sales Mgr.:** B. F. Naden MM
- VECTOR ELECTRONIC CO.**  
1100 Flower St., Glendale 1, Calif. (Tel. CHapman 5-1076)  
**Purch. Agent:** Jerry Strickland MF, GE, TS, TR  
**Gen. Mgr.:** R. R. Scoville
- VEECO VACUUM CORP.**  
86 Oenton Ave., New Hyde Park, L. I., N. Y. (Tel. Plioneer 6-1161)  
**Purch. Agent:** E. Potter  
**V. P.-Sales:** A. Nerken PS, GS, GH, GE, CO, TS, TR
- VEEDER-ROOT INC.**  
70 Sergeant St., Hartford 2, Conn. (Tel. JAckson 7-7201)  
**Purch. Agent:** R. I. Bond  
**Sales Mgr.:** G. L. Logan CO, TS, TR
- VEET INDUSTRIES**  
25753 Greesbeck Hwy., E. Detroit, Mich. (Tel. PRescott 6-3000)  
**Purch. Agent:** A. Stewart PS  
**Sales Mgr.:** W. Clyde Nav
- VELAMINE PRODUCTS CO.**  
P. O. Box 222, Hawthorne, N. J. (Tel. MUlberry 4-4688)  
**Purch. Agent:** Wm. Venema MF, WN, PS, GS, GH, GE, CO, TR
- VENDORLATOR MFG. CO.**  
2550 S. Railroad Ave., Fresno, Calif. (Tel. AlMhert 6-9401)  
**Purch. Agent:** O. J. McMillin  
**Asst. Purch. Agent:** Howard Henry  
**Sales:** E. E. Brown (West Coast), Bert Schwarz (East Coast) GH
- VERNISTAT DIV., THE PERKIN-ELMER CORP.**  
772 Main Ave., Norwalk, Conn. (Tel. VICTor 7-2441)  
**Sales Mgr.:** Lionel Robbins GS, GE, TS
- VERSON ALLSTEEL PRESS CO.**  
9300 Kenwood Ave., Chicago 19, Ill. (Tel. REgent 4-8200)  
**Purch. Agent:** H. Wiggins MF, WN, MM, R&D
- VICKERS INC., DIV.-SPERRY RAND**  
Administrative & Engrg. Ctr., Detroit 32, Mich. (Tel. Royal Oak—Liberty 9-1122)  
**Gen. Purch. Agent:** R. V. Sharkey  
**Gen. Sales Mgr.:** J. T. Burns GS, GH, GE, CO, TS, R&D
- VICKERS INC., MARINE & ORDNANCE DEPT., MACHINERY HYDRAULICS DIV.**  
172 E. Aurora St., Meriden, Conn., (Tel. PL 6-3684)  
**Purch. Agent:** Harold Corberry  
**Sales Mgr.:** R. J. Mitchell
- VICON CORP.**  
1369 Industrial Rd., San Carlos, Calif. (Tel. LYell 3-9003)  
**Purch. Agent:** O. Scofield GS, TS, TR  
**V. P.-Sales:** H. Johnston
- VICTOR ADDING MACHINE CO.**  
3900 N. Rockwell St., Chicago 18, Ill. (Tel. KEystone 9-8210)  
**Dir. Purch.:** L. E. Covey  
**Purch. Agent:** J. E. Jasch  
**V. P.-Sales:** A. F. Bakewell  
**Buyers:** G. A. Moeller, Richard Bergman, John Mickey  
**V. P.-Electronic Sales:** A. C. Buehler, Jr. GS, GH, CO, TS, R&D
- VICTOR MFG. & GASKET CO.**  
5750 W. Roosevelt Rd., Chicago 50, Ill. (Tel. AUstin 7-6180)  
**Gen. Purch. Agent:** Harold G. North MF, PS  
**V. P.-Insl. Sales:** Albert J. Auwers
- VICTOR R. F. & MICROWAVE CO.**  
36 W. Water St., Wakefield, Mass. (Tel. CRystal 9-4472)  
**Gen. Mgr.:** George P. Victor TS, MM, R&D
- VICTORY ENGRG. CORP.**  
Springfield Rd., Union, N. J. (Tel. MURdock 8-7150)  
**Purch. Agent:** R. W. Blimm  
**Sales:** W. B. Huston PS, GS, GE, CO, TS, TR
- VIDEO INSTRUMENTS CO., INC.**  
3002 Pennsylvania Ave., Santa Monica, Calif. (Tel. EXbrook 3-1244)  
**Purch. Agent:** Richard Brommer  
**Prod. Mgr.:** Bob Cobery  
**V. P. & Gen. Mgr.:** Peter Pohl
- VIDEON ELECTRONIC CORP.**  
902 E. Michigan St., Indianapolis 2, Ind. (Tel. MElrose 6-5461)  
**Purch. Agent:** Charles Gallagher  
**Sales Mgr.:** Arthur J. Schultz GE, TS, TR
- VILTER MFG. CO., THE**  
2217 S. First St., Milwaukee 7, Wisc. (Tel. SHeridan 4-0111)  
**V. P.-Purch.:** L. E. Loss R&D  
**V. P.-Sales:** A. O. Vogel
- VINCO CORP.**  
9111 Schaefer Hwy., Detroit 28, Mich. (Tel. WEbster 3-4350)  
**Purch. Agent:** E. L. Camen  
**Buyer:** E. St. Onge  
**Asst. Buyer:** J. Davis  
**Asst. Sales Mgr.:** J. J. Kessel GS, GE, TS
- VINSON MFG. CO. INC.**  
8044 Woodley Ave., Van Nuys, Calif. (Tel. STanley 3-3510)  
**Factory Mgr.:** F. Gallagher  
**Sales:** William A. Goodman MF, WN, PS, GS, GH, GE, TS, TR
- VIRGINIA ELECTRONICS CO., INC.**  
River Rd. & B & O R. R., Washington 16, O. C. (Tel. OLiver 4-6660)  
**Purch. Agent:** Edward Schwartz  
**V. P.-Sales:** Millard Nachtwey GE, CO, TS, TR, R&D
- VIRGINIA PLAK CO.**  
270 Madison Ave., New York 16, N. Y. (Tel. MURray Hill 3-9516)  
**Gen. Mgr.:** S. N. Weis MF, WN, GE, CO, TS, TR
- VITRO CORP. OF AMERICA**  
261 Madison Ave., New York, N. Y. (Tel. MURray Hill 2-5700)  
**Purch. Agent:** E. S. Fowler GS, GH, TR, R&D  
**Exec. V. P.-Sales:** W. A. Bain
- VITRO LABS.**  
200 Pleasant Valley Way, West Orange, N. J. (Tel. REdwood 1-3400)  
**Procurement Mgr.:** J. E. Eaton  
**New Proj. Mgr.-Sales:** W. L. Slover GS, GH, CO, TS, TR, MM, R&D
- VLCHKEK TOOL CO., THE**  
3001 E. 87th St., Cleveland 4, O. (Tel. GA 1-2480)  
**Purch. Agent:** F. J. Tkach MF  
**V. P.-Sales:** L. F. Storie
- VOI-SHAN MFG. CO., DIV.-PHEOLL MFG. CO.**  
8463 Figueroa St., Culver City, Calif. (Tel. TExas 0-5321)  
**Purch. Agent:** Miss Glory Fields MF
- VORAC CO., THE**  
147 Meadow Rd., Rutherford, N. J. (Tel. WEbster 3-1000)  
**Dir.-Purch.:** Robert Geist MF, WN, PS, GS, GE, TS
- VOUGHT CO.**  
8907 Melrose Ave., Los Angeles 46, Calif. (Tel. Beverly Hills, Calif. (Tel. CRestview 6-1131)  
**Contract Officer:** W. E. Lanctot  
**Mgr.-Sales:** A. O. Fraser GS, GE, TR
- WJZ GAGE & TOOL CORP.**  
Hyde Park, N. Y. (Tel. CApital 9-2929)  
**Sales Mgr.:** Jed Oaly
- W.S. FITTINGS WORKS, FORGE & FITTINGS DIV., H. K. PORTER CO. INC.**  
P. O. Box #95 Aldene Rd., Dept. 359, Roselle, N. J. (Tel. CH 1-1600)  
**Purch. Agent:** Walter Lewis  
**Sales Mgr.:** James H. Wyres PS, GH, CO, TS, R&I
- WAAGE ELECTRIC, INC.**  
720 Colfax Ave., Kenilworth, N. J. (Tel. CHEstnut 5-9363)  
**Curtis Frantz** G
- WACLINE, INC.**  
35 S. St. Clair St., Dayton 2, O. (Tel. BALdwin 8-5161)  
**Purch. Agent:** R. G. Swanson  
**V. P.-Sales:** M. E. Goll PS, GS, GE, CO, TS, TR
- H. A. WAGNER CO.**  
14707 Keswick St., Van Nuys, Calif. (Tel. ST 3-1260)
- WAIMET ALLOYS CO., DIV.-CONSOLIDATED FOUNDRIES AND MFG. CORP.**  
1999 Guoin St., Detroit, Mich. (Tel. LORain 7-1545)  
**Tech. Dir.:** W. P. James  
**Purch. Agent:** Opal Koanter  
**Sales Mgr.:** R. J. Metzler MU
- WAKEFIELD ENGRG. CO.**  
P. O. Box 471, Coeur d'Alene, Idaho (Tel. MURray 5-5541)  
**V. P.:** O. Bresnan G
- WAKMANN WATCH CO. INC.**  
15 W. 47th St., New York, N. Y. (Tel. JU 6-1750)  
**V. P.:** Jack Waller GS, GH, GE, CO, TS, R&I
- WALBAM MACHINE PRODUCTS INC.**  
74 Maple St., Stoneham, Mass. (Tel. Stoneham 6-3035)  
**Purch. Agent:** James E. Gallagher  
**Sales Mgr.:** T. J. Caveney P
- WALDES KOHINOOR, INC.**  
47-16 Austel Place, Long Island City 1, N. Y. (Tel. EXeter 2-3100)  
**Purch. Agent:** H. M. VanCleaf  
**V. P.-Sales:** George Waldes  
**Asst. to V. P.-Sales:** Gordon A. Moos M
- WALDOM ELECTRONICS INC.**  
4625 W. 53rd St., Chicago 32, Ill. (Tel. LUdlow 5-1212)  
**MF, WN, PS, GS, GH, GE, CO, TS, TR**
- WALDORF ELECTRONICS. DIV.-F.C. HUYCK & SONS**  
Park Ave., Huntington, L. I., N. Y. (Tel. HA 7-5800)  
**Purch. Dir.:** Nick Schwetz  
**Buyers:** Al Fritz, Donald Greenberg, Rudulf Hoch  
**Dir.-Sales:** Norbert E. Andres, Jr. GS, GE, CO, TS, TR, R&I
- WALDORF FLUID SYSTEMS, DIV.-F. C. HUYCK & SONS**  
Wolf Hill Rd., Huntington Station, L. I., N. Y. (Tel. HAMilton 7-7500)  
**Dir.-Purch.:** Nicholas Schwetz  
**Sr. Buyer:** Edward M. Stockus  
**Sub-Contract Buyer:** Harold V. Isaksen  
WN, PS, GS, GH, CO, TS, R&I
- WALES STRIPPIT INC., UNIT OF HOUDAILLE INDUSTRIES, INC.**  
Buell Rd., Akron, N. Y. (Tel. 9441)  
**Purch. Agent:** George MacFayden MF, G  
**Gen. Sales Mgr.:** Russell A. Johnson
- WALKIRT CO.**  
141 W. Hazel St., Inglewood 3, Calif. (Tel. ORgan 8-4814)  
**Purch.:** L. Wilgus  
**Gen. Mgr.-Sales:** Wes L. Kirchoff GS, GE, CO, TS, TR
- P. WALL MFG. CO.**  
Erie St., Grove City, Pa. (Tel. 910)  
**Purch. Agent:** Paul Northcott GS, G  
**V. P.-Sales:** M. A. Silverman
- \*WALL COLMONOY CORP., STAINLESS PROCESSING DIV.**  
19345 John R St., Detroit 3, Mich. (Tel. TWinbrook 3-3800)  
**Office Mgr.:** D. Hunter MF, WN, F  
**Sales Mgr.:** F. Cruise  
\*(See Page 72 for Advertisement)
- WALL TUBE & METAL PRODUCTS CO.**  
P. O. Box 330, Newport, Tenn. (Tel. T2391)  
**Purch. Agent:** James P. Masters  
**V. P. & Gen. Sales Mgr.:** Frank L. Dempsey M
- WALLACE & TIERNAN INC.**  
25 Main St., Belleville 9, N. J. (Tel. PLymouth 9-8000)  
**Purch. Agent:** I. Gordon  
**Asst. Purch. Agent:** T. A. Moore  
**V. P.-Sales:** T. T. Quigley CO, TR, R&I
- WALLINGFORD STEEL CO.**  
Valley St., Wallingford, Conn. (Tel. COlony 9-3361)



Purch. Agent: D. Norton Williams  
Asst. Purch. Agent: William Dennison  
V. P.-Chg. Sales: G. J. Griffin MF, PS, MM

**ALTHAM ELECTRONICS CORP.**  
751 Main St., Waltham 54, Mass. (Tel. TWinbrook 4-6048)  
Purch. Agent: Irving Kodesh TS, TR, R&D

**ALTHAM ENGRG. CORP., SUB.-WALTHAM PRECISION INSTRUMENT CO.**  
221 Crescent St., Waltham 54, Mass. (Tel. TWinbrook 3-4000)  
V. P.-Sales: Fred Konn

**ALTHAM HOROLOGICAL CORP.**  
395 Lynnway, Lynn, Mass. (Tel. LY 8-4750)  
Purch. Agent: Eugene Decareou  
Sales Dept.: E. J. Arnold

**ALTHAM PRECISION INSTRUMENT CO.**  
221 Crescent St., Waltham, Mass. (Tel. TWinbrook 3-4000)  
Purch. Agent: Donald Lyons  
Pres.: Louis R. Ripley  
Gen. Sales Mgr.: Fred M. Burmann GE, R&D

**ALTHAM SCREW CO.**  
77 Rumford Ave., Waltham 54, Mass. (Tel. TWinbrook 3-5830)  
Purch. Agent: Lyman Viles MF, WN, PS, MM

**LWORTH CO.**  
50 3rd Ave., New York 17, N. Y.

**LWORTH CO., ELECTRONICS DIV.**  
9 Union St., Mineola, L. I., N. Y. (Tel. Ploneer 2-1010) GE, TR

**MG LABS., INC.**  
7 Hurley St., Cambridge 41, Mass. (Tel. UIniversity 4-8380)  
Pres.: A. Wang R&D

**MER ELECTRIC BRAKE & CLUTCH CO.**  
eloit, Wisc., (Tel. Dunkirk 9-2211)  
Purch. Mgr.: Hugh Kays  
P.-Sales: N. K. Anderson MM

**MERRETT COMPONENTS, DIV.-ELTRONICS, INC.**  
1 Irvine St., Warren, Pa. (Tel. 4630)  
Purch. Agent: Richard Swanson  
Material Central: Harry Anderson  
Sales Mgr.: MacBoin Sears

**MERRETT TRANSFORMER CO., INC.**  
63 Warren St., Tunkhannock, Pa. (Tel. Terrace 6-8411)  
Gen. Mgr.: G. W. Moslin MF, GS, GE, TS, TR

**MERRETT WIRE CO.**  
Lowell, Vt. (Tel. VA 3-7321); 1601 Chestnut St., Alhambra, Calif. (Tel. A.Tlantic 9-5081)  
Purch. Agent: John Borber  
P.-Sales: F. W. Kunzelmann MM

**METALWORKS ALUMINUM CO., INC.**  
Pennsylvania RR & Knecht Ave., Baltimore 29, Md. (Tel. Circle 2-1000)  
Purch. Agent: Bruner Dicus  
P.-Sales: Robert S. Sanford MF, GH, GE, TR, R&D

**METALWORKS MACHINE & TOOL WORKS, INC.**  
111 Woyzata Blvd., Minneapolis, Minn. (Tel. Liberty 5-5611)  
Purch. Agent: B. C. Lysio  
Pres.: R. S. Lanier  
P.-Prod.: H. B. Merrell GE, GS

**METALWORKS STEEL CORP.**  
Woodland & Griffith Ave., Washington, Pa., (Tel. Baldwin 2-8000)  
Purch. Agent: R. O. Fulton  
Sales Mgr.: John C. Richards MM

**METALWORKS TECHNOLOGICAL ASSOCIATES, INC.**  
9 Rollins Ave., Rockville, Md. (Tel. HAZelwood 7-7550)  
Chief Purch. Agent: Ernest Tingle  
Asst. Purch. Agent: John McPherson GS, GH, GE, CO, TS, TR, R&D

**METALWORKS PRODUCTS, INC.**  
Hedge Highway, Plainville, Conn. (Tel. SHERwood 7-2784)  
P.-Purch. & Sales: A. Justin Wasley MM, R&D

**METALWORKS ELECTRIC PRODUCTS CORP.**  
32 2nd Ave., S., St. Petersburg 12, Fla., (Tel. DRchard 1-2948)  
Pres.: Henry G. Wasserlein

**METALWORKS KING CORP., TECHNICAL PRODUCTS DIV.**  
50 Harbor St., Los Angeles 22, Calif. (Tel. RAYmond 3-9601)  
P.-Mfg. Services: Robert L. Potter  
P.-Engrg. Program Development: Frank L. Spencer PS, GS, GE, CO, TS, R&D

**METALWORKS COMPANY, INC.**  
6 S. Main St., Waterbury, Conn. (Tel. PL 6-5551)

Purch. Agent: F. Johnson  
V. P.-Sales: W. F. Reibold MF, WN, PS, GS, TR

**METALWORKS WATERBURY PRESSED METAL CO., THE**  
300 Chase Ave., Waterbury, Conn. (Tel. PLaza 6-8891)  
Purch. Agent: H. R. Morrow  
Sales Mgr.: Miss Merle Munson MF

**METALWORKS WATERMAN PRODUCTS CO., INC.**  
2445 Emerald St., Philadelphia, Pa. (Tel. GARfield 6-8600)  
Purch. Agent: S. Morritz  
Buyer: J. Nathan  
Field Engr.-Mgr.: J. M. Boyle  
Product Mgr.: I. P. Plotkin GS, CO, TS, R&D

**METALWORKS WATERS MFG., INC.**  
Boston Post Rd., Woyland, Mass. (Tel. ELnwood 8-2777)  
Purch. Agent: M. P. Brown  
Gen. Sales Mgr.: W. W. Bartell

**METALWORKS WATERTOWN DIV., THE NEW YORK AIR BRAKE CO.**  
Starbuck Ave., Watertown, N. Y. (Tel. SUNset 2-7000)  
Dir.-Purch.: R. R. Peterson  
Purch. Asst.: H. A. Hardman  
Buyers: P. F. Hoag & R. H. Madden  
Gen. Mgr.-STRATOPOWER, Aircraft Equipment  
Sales: H. R. Doughty R&D

**METALWORKS WATSON MFG. CO., INC.**  
5000 Taylor St., Jamestown, N. Y. (Tel. 7-191)  
Purch. Agent: M. L. Adams  
Buyer: H. O. A. Johnson  
Metal Specialties Div.-Sales: L. P. Blanchard MM

**METALWORKS WAUGH ENGRG. CO.**  
7842 Burnet Ave., Van Nuys, Calif. (Tel. ST 3-1055)  
Purch. Agent: Allan L. Grotzky  
Sales Mgr.: Reuel H. Smither WN, PS, GS, TS, R&D

**METALWORKS WAUKESHA FOUNDRY CO.**  
Lincoln Ave., Waukesha, Wisc. (Tel. Liberty 2-6657)  
Purch. Agent: Joseph C. Kehoss  
V. P. & Gen. Mgr.: John W. Weaver MM, R&D

**METALWORKS WAVEGUIDE, INC.**  
1769 Placentia, Costa Mesa, Calif. (Tel. MADison 8-7786)  
Purch. Agent: N. C. Glass  
Sales Mgr.: John J. Bodley WN, GS, CO, TS, TR, MM

**METALWORKS WAVELINE, INC.**  
Passaic Ave., Caldwell, N. J. (Tel. CAPitol 6-9100)  
Purch. Agent: Walter Specht  
Gen. Mgr.: Robert H. Koenig  
Sales Mgr.: Robert H. Morris GE, TR

**METALWORKS WAYNE FOUNDRY & STAMPING CO.**  
3100 Hubbard, Detroit 10, Mich. (Tel. TASHmoo 5-8226)  
Purch. Agent: C. D. MacPherson  
Sales Mgr.: C. D. Todd, Jr. MF, WN, PS

**METALWORKS WAYNE MFG. CO.**  
1275 E. Lexington Ave., Dept. E, Pomona, Calif. (Tel. National 9-4071)  
Purch.: R. M. Peddicord  
Sales: W. G. Wiley

**METALWORKS WAYNE PUMP CO., THE, DIV.-SYMINGTON WAYNE CORP.**  
Herbert, Riverbend & Griffin Sts., Ft. Wayne 4, Ind. (Tel. EASTbrook 4664)  
Purch. Agent: V. O. Pontius  
Dir.-Sales: R. L. Burke, Jr. MF, WN, PS, GS, GH, GE, MM, R&D

**METALWORKS WAYNE-GEORGE CORP.**  
1117 Commonwealth Ave., Boston 15, Mass. (Tel. STadium 2-3737)  
Purch. Agent: Walter Bohmer  
Mgr.-Contracts: George F. George GE, TS, TR, R&D

**METALWORKS \*WEATHERHEAD CO., THE**  
300 E. 131st St., Cleveland 8, O. (Tel. GLenville 1-5200)  
Purch. Agent: J. A. Fanning  
Gen. Sales Mgr.-Aviation & Ord. Div.: J. W. Wolcott MF, PS, GS  
\*(See Page 60 for Advertisement)

**METALWORKS WEAVER MFG. CO.**  
2171 S. 9th St., Springfield, Ill. (Tel. 2-8861)  
Purch. Agent: O. W. Ellis  
Purch. Dept.: Anno M. Dowell  
V. P.-Sales: Ruel Logan GS, GH, R&D

**METALWORKS WEBBER ENGRG. CORP.**  
P. O. Box 217, Indianapolis 6, Ind. (Tel. MELrose 2-1378)  
Purch. Agent: V. L. Fagin  
Pres. & Sales Mgr.: Robert C. Webber TS

**METALWORKS WEBCOR, INC., GOVERNMENT DIV.**  
816 N. Kedzie Ave., Chicago 51, Ill. (Tel. NEvada 2-3425)  
Dir.-Purch.: C. S. Wybron  
Buyers: G. L. Scheel, P. S. Kibler & J. F. Frisby MF, WN, PS, GS, GH, GE, TS, TR

**METALWORKS WEBER AIRCRAFT CORP.**  
2820 Ontario St., Burbank, Calif. (Tel. VICToria 9-1181)  
Dir.-Material: Fred Good  
Purch. Supvs.: R. G. Askev, R. E. Fulbright & J. W. Culbertson  
Dir.-Sales: Harold G. Johnson MF, GS, GH

**METALWORKS WEIGHING & CONTROL COMPONENTS, INC.**  
206 Lincoln Ave., Hatboro, Pa. (Tel. OSborne 5-0901)  
Purch. Agent: Alfred Krieg  
Sales Mgr.: Henry J. Dursler, Jr.

**METALWORKS WENSCHEL ENGRG.**  
10503 Metropolitan Ave., Kensington, Md. (Tel. LOCKwood 4-0122)  
Purch. Agent: Joseph H. West  
Sales Mgr.: Edward Birachak GS, GE, CO, TS, TR, R&D

**METALWORKS WEKSLER INSTRUMENTS CORP.**  
195 E. Merrick Rd., Freeport, L. I., N. Y. (Tel. MAYfair 3-0100)  
Purch. Agent: Milford Himmel  
V. P.-Sales: F. J. Pla TS

**METALWORKS A. W. WELCH MFG. CO., INC.**  
509 E. 29th St., Indianapolis 5, Ind. (Tel. WA 5-7878)  
Pres.: A. W. Welch  
Sales Mgr.: Jim Hutchison

**METALWORKS WELDED CONSTRUCTION INC.**  
2320 W. 15th Place, Cleveland 13, Ohio (Tel. MAIN 1-0103)  
Purch. Agent: John Dufenez  
Sales: Joseph A. Thayer GS, GH

**METALWORKS WELDMATIC DIV., UNITEK CORP.**  
380 N. Halstead Ave., Pasadena, Calif. (Tel. SYcomore 5-5955)  
Purch. Agent: Robert Raney  
Gen. Mgr.: Gerald E. Woods GS, TS

**METALWORKS WELLMAN BRONZE & ALUMINUM CO.**  
12800 Shaker Blvd., Cleveland, O. (Tel. WYoming 1-7000)  
Purch. Agent: B. E. Weimer  
V. P.-Chg. Sales: Glenn F. Ibrigg MF

**METALWORKS WELWYN INTERNATIONAL INC.**  
3355 Edgecliff Terrace, Cleveland 11, Ohio (Tel. Winton 1-1333)  
Sales Mgr.: John Buchspice MM

**METALWORKS WENZLAU ENGRG. CO.**  
410 Solano Ave., Los Angeles 12, Calif. (Tel. CAPITAL 2-3151)  
Sales Mgr.: William D. Wenzlau GS, GH, MM

**METALWORKS \*R. D. WERNER CO., INC.**  
295 Fifth Ave., New York 16, N. Y. (Tel. MU 6-2595)  
Asst. Adv. Mgr.: Harry Nix GS, GH, TS  
\*(See Page 78 for Advertisement)

**METALWORKS ALBERT WESLING & SONS INC.**  
2912 W. Lake St., Chicago 12, Ill. (Tel. KEDzie 3-2850)  
V. P.-Sales: A. H. Wesling GS

**METALWORKS WESREP CORP.**  
2022 S. Sepulveda Blvd., Los Angeles 25, Calif. (Tel. BRAdshaw 2-3757)  
Pres.: Dudley V. Cassard  
Sales Mgr.: Robert A. Hager PS, GE, TS

**METALWORKS WEST INSTRUMENT CORP.**  
4363 W. Montrose Ave., Chicago 41, Ill. (Tel. PALisade 5-1007)  
Purch. Agents: Lester Thurow, Robert Aerts  
Sales Mgr.: Ardmore M. Willer

**METALWORKS WESTBERG MFG. CO.**  
Box 239, Napa, Calif. (Tel. BA 6-5218)  
Purch. Agent: R. R. Westberg  
Dir.-Sales: D. A. Kratzer TS, MM

**CODING**

Missile Frame MF

Warhead & Nose Cone WN

Propulsion System PS

Ground Support GS

Ground Handling GH

Guidance Equipment GE

Checkout Equipment CO

Test Equipment TS

Tracking & Telemetering TR

Research & Development R&D

Materials & Metals MM

# ... purchasing directory wes—zen

- WESTBURY ELECTRONICS INC.**  
300 Shames Dr., Westbury, N. Y. (Tel. EDgewood 4-8300)  
Purch. Agent: William McBride  
Pres. & Sales Mgr.: H. B. Abajian **GS**
- WESTERN ARC WELDING, INC.**  
749 Kahler St., Los Angeles 21, Calif. (Tel. MA 2-0751)  
Chief Engr.: E. Sherrick **MF, WN, PS, GS, GH**
- WESTERN AUTOMATIC MACHINE SCREW CO., DIV.-STANDARD SCREW CO.**  
377 Woodward Ave., Elyria, D. (Tel. FAirfax 3-3341)  
Purch. Agent: A. Steller  
V. P.-Chg. Sales: M. R. Sorensen **MF, WN, PS**
- WESTERN COATING CO.**  
P. D. Box 598, Oakridge Station, Royal Dak 3, Mich. (Tel. JUmpier 8-3311)  
Dir.-Prod.: Franklin B. Evans  
Pres. & Head Sales: Arthur Aaron, 85 W. Union St., Pasadena, Calif. (Tel. RYan 1-7828)  
Western Sales Mgr.: L. W. Pickens, Jr. **MM**
- WESTERN DESIGN, DIV.-U.S. INDUSTRIES, INC.; SANTA BARBARA DIV.**  
Santa Barbara Airport, Goleta, Calif. (Tel. WOODland 7-4571)  
Purch. Agent: L. E. Saterstrom  
Dir.-Mktg.: John M. Wright **GS, GH, CO, TS**
- WESTERN ELECTRIC CO. INC.**  
120 Broadway, New York, N. Y. (Tel. WOrth 4-2100)  
Radio Div.: C. R. Smith
- WESTERN FELT WRKS & ACADIA SYNTHETIC PRODUCTS DIV.**  
4021-4139 Ogden Ave., Chicago 23, Ill. (Tel. CRawford 7-8000)  
Purch. Agent: L. W. Heide  
Prod. Control: Gene Wojcik  
Sales Mgr.: R. H. Butz **MM**
- WESTERN GEAR CORP.**  
P. D. Box 182, Lynwood, Calif. (Tel. NEVada 6-0911)  
Purch. Agent: James Fortune  
Mktg. Mgr.: Ron Hinman **PS, GS, GH**
- WESTERN GOLD & PLATINUM**  
525 Harbor Blvd., Belmont, Calif. (Tel. LYtell 3-3121)  
Purch. Agent: Michael D. McKinney  
Sales Mgr.: Harry Mason **MM**
- WESTERN INSULATED WIRE CO.**  
2425 E. 30th St., Los Angeles 58, Calif. (Tel. LUDlow 7-7103)  
Mgr.-Purch.: Phil Ramos  
V. P.-Mgr. of Sales: Ed Konner **GS, TR**
- WESTERN INTERNATIONAL CO.**  
45 Vesey St., New York 7, N. Y. (Tel. Dlgby 9-2277)  
Purch. Agent: E. R. Reilly  
Sales Mgr.: R. Warthington **MF, PS, GS, GH, GE, TS, TR**
- WESTERN IRON & FOUNDRY CO. INC.**  
702 E. Second St., Wichita 2, Kansas (Tel. HObart 4-2311)  
V. P.-Purch.: G. L. Debler  
Pres. & Gen. Mgr.: E. E. Urban **MM**
- WESTERN PNEUMATIC TUBE CO.**  
P. O. Box 487, Kirkland, Wash. (Tel. VANdyke 2-2214)  
Purch. Agent: N. E. Ludington  
V. P.-Sales: Carson Eckmann **MM**
- WESTERN SEALANT OF CONN.**  
50 Isaac Pl., Norwalk, Conn. (Tel. TEmple 8-5446)  
Purch. Agent: John Harding  
Dir.-Sales: K. E. Middlebrook
- WESTERN TOOL & MFG. CO., THE**  
1620 E. Pleasant St., Springfield, O.
- WESTFIELD METAL PRODUCTS CO., INC.**  
1040 Lower Union St., Westfield, Mass. (Tel. LOGan 2-3614)  
Purch. Agent: James A. Pool  
Sales Dept.: William H. Bulger & Fred H. Burr **MG, WN, PS, GS, GH, GE**
- WESTGATE LAB., INC.**  
Yellow Springs, Ohio
- WESTINGHOUSE AIR BRAKE CO., INDUSTRIAL PRODUCTS DIV.**  
P. O. Box 36, Wilmerding, Pa. (Tel. BRandywine 1-1490)  
Dir.-Purch.: R. M. Hornbeck  
Asst. Dir.-Purch.: R. E. Maritz  
Buyers: H. I. McKeever, C. H. West, M. L. Stevens & J. E. Kruger  
Sales Mgr.: E. L. Holbrook **GS, GH**
- WESTINGHOUSE ELECTRIC CORP.**  
3 Gateway Center, P. O. Box 2278, Pittsburgh 30, Pa. (Tel. EXpress 1-2800)  
V. P.-Purch.: A. M. Kennedy  
V. P.-Sales: J. H. Jewell  
**WN, PS, GS, GH, GE, TR, MM, R&D**
- WESTINGHOUSE ELECTRIC CORP., LAMP DIV.**  
MacArthur Ave., Bloomfield, N. J. (Tel. HUmboldt 4-3000)  
Purch. Agent: F. C. Esser  
Mktg. Mgr., Parts & Materials: J. Gelok **MM**
- WESTINGHOUSE ELECTRIC CORP., METALS PLANT**  
Blairsville, Pa. (Tel. 1400)  
Purch. Agent: S. J. Pentrack  
Buyer: R. J. Merryman  
Sales Mgr.: S. Chetlin  
Ass't Sales Mgr.: E. V. Clarke, Jr. **MM, R&D**
- WESTLAKE PLASTICS CO.**  
W. Lenni Rd., Lenni Mills, Pa. (Tel. GLOBE 9-1000)  
V. P.-Purch.: E. F. Westlake  
Sales Mgr.: W. F. Noonan, Jr. **MF, PS, GS, GE, TR**
- WESTLINE PRODUCTS DIV.-WESTERN LITHOGRAPHY CO.**  
600 E. 2nd St., Las Angeles 54, Calif. (Tel. MADison 7-2641)  
Dir.-Purch.: Laird Swan  
V. P. & Gen. Sales Mgr.: Maury Engle **MF, PS, GS, TR, MM**
- WESTON HYDRAULICS LTD.-SUB., BORG-WARNER CORP.**  
10918 Burbank Blvd., N. Hollywood, Calif. (Tel. STanley 7-3201)  
Dir.-Purch.: Robert E. Stevens  
Buyers: William Bulkin & K. L. Johnson  
Regional Sales Mgrs.: K. H. Knox & Fred T. Miller **PS, GS, GH, GE, TS**
- WESTON INSTRUMENTS, DIV.-DAYSTROM, INC.**  
614 Frelinghuysen Ave., Newark 12, N. J. (Tel. BIGelow 3-4700)  
Purch. Agent: N. A. Dinnsen  
Gen. Sales Mgr.: K. C. Moulton
- WESTRONICS INC.**  
3605 McCart St., Fort Worth, Tex. (Tel. WA 3-8211)  
Purch. Agent: Bob King  
V. P.-Sales: George W. Puckett **GS, CO, TS**
- WESTVACO CHLOR-ALKALI DIV., FOOD MACHINERY & CHEMICAL CORP.**  
161 E. 42nd St., New York 17, N. Y. (Tel. MURray Hill 7-7400)  
Dir.-Purch.: J. A. Maaney  
Mgr.-Sales: J. R. Harris  
Mgr.-Dimazine Sales: B. L. Rose **PS**
- WESTWOOD CABLE CORP.**  
3440 Dverland Ave., Los Angeles 34, Calif. (Tel. TEXas 0-6831)  
Purch. Agent: I. M. Harris  
Buyer: Jack Kendall  
Gen. Sales Mgr.: John Cooner **GS**
- WETZLER CLAMP CO. INC.**  
43-15 11th St., Long Island City 1, N. Y. (Tel. ST 4-2874)  
V. P.-Sales: H. S. Wetzler **MM**
- WHEEL CRAFT INC.**  
1120 W. Foothill Blvd., Azusa, Calif. (Tel. EDgewood 4-1261)  
Purch. Agent: Phil Backmiller  
Sales Mgr.: Albin T. Sundeen
- WHEELABRATOR CORP.**  
1469 S. Byrkit St., Mishawaka, Ind. (Tel. BLAckburn 5-2141)  
Dir.-Purch.: H. O. Books  
Gen. Sales Mgr.: E. A. Rich
- WHEELER ELECTRONIC CORP., SUB.-SPERRY RAND CORP.**  
150 E. Aurara St., Waterbury, Conn. (Tel. PLaza 4-5191)  
Purch. Agent: W. A. Collier  
Sales Mgr.: R. B. Baker **GS, GE, TS, TR**
- WHEELER LABORATORIES, INC.**  
122 Cutter Mill Rd., Great Neck, N. Y. (Tel. HUInter 2-7876)  
Adv. Mgr.: Patricia A. Lath **R&D**
- WHEELOCK SIGNALS INC.**  
273 Branchport Ave., Long Branch, N. J. (Tel. CAPital 2-6880)  
Purch. Agent: J. E. Gauld  
Sales Mgr.: H. J. Sundermeyer
- WHELAND CO., THE**  
Signal Mountain Rd., Chattanooga, Tenn. (Tel. AM 5-3181)  
V. P.-Mfg.: H. V. McDougall  
Mgr.-Special Sales: L. E. Skelly **MF, WN, PS, GS, GH**
- WHITAKER CABLE CORP.**  
1301 Burlington St., North Kansas City 16, Mo. (1 GRond 1-4640)  
V. P.-Sales: D. E. Stewart  
V. P.-Indsl. Sales: C. Croig Whitaker
- \*WHITE DIESEL ENGINE DIV., THE WHITE MOTOR CO.**  
1401 Sheridan Ave., Springfield, Ohio (Tel. FA 3-4921), Cable SUPERDIESEL)  
Purch. Agent: William J. Lynch  
Asst. Purch. Agents: Paul E. Dunn & Arthur Dscheck  
Buyer: Joe James  
Sales Mgr.: J. H. Newton  
(\*See Page 30 for Advertisement)
- WHITTAKER CONTROLS, DIV.-TELECOMPUTING CORP.**  
915 N. Citrus Ave., Los Angeles 38, Calif. (Tel. HOLlywood 4-0181)  
Supvr.-Purch.: Frank Kurvink, 3000 Imperial Hwy., Lynwood, Calif. (Tel. NEVada 6-9271)  
Dir.-Field Engr.: Sales: H. R. Alexander **PS, GS**
- WHITTAKER GYRO, DIV.-TELECOMPUTING CORP.**  
16217 Lindbergh St., Van Nuys, Calif. (Tel. ST 3-1950)  
Purch. Agent: Vince Underwood  
Buyers: Ben Valucci & J. Schwien  
Dir.-Field Engr.: Danold J. Ramage **PS, GH, GE, TS**
- WICKFIELD, INC.**  
1511 Lavee St., Dallas 7, Texas. (Tel. RI 1-3395)  
Purch. Agent: Harold Roasch  
Sales Mgr.: L. B. Bingham **GS, GH, R**
- EDWIN L. WIEGAND CO.**  
7500 Thomas Blvd., Pittsburgh 8, Pa. (Tel. CH 2-6400)  
Purch. Agent: R. D. Allshouse  
Gen. Sales Mgr.: C. F. Kreiser
- E. B. WIGGINS OIL TOOL CO. INC.**  
3424 E. Olympic Blvd., Los Angeles 23, Calif. (Tel. ANgelus 9-0181)  
Purch. Agent: Ted Smart  
V. P.-Mktg.: Jack Minor **GS, GH, CO**
- WILCOLATOR CO., THE**  
1001 Newark Ave., Elizabeth, N. J. (Tel. ELizabeth 4-1000)  
Purch. Agent: J. Martin  
Sales Mgr.: P. E. McCaughey
- WILCOX ELECTRIC CO., INC.**  
1400 Chestnut St., Kansas City 27, Mo. (Tel. ENtan 1-0700)  
Dir.-Purch.: J. Q. Kohler  
Dir.-Sales: D. E. Busse  
Sales Analyst: Jack F. Hill
- WILCOX-CRITTENDEN DIV., NORTH & JUDD MFG. CO.**  
56 Warwick, Middletown, Conn. (Tel. DIamond 6-8661)  
Purch. Agent: William H. Judd, Jr.  
Mgr.-Gov't Sales: A. J. Crawford
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742 Market St., San Francisco, Calif. (Tel. DOuglas 2-3505)  
Pres.: I. I. Wildberg  
Gen. Sales Mgr.: W. T. Haley
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4821 Bethesda Ave., Washington 14, D. C. (Tel. OLiver 5300)  
Pres. & Gen. Mgr.: W. S. Wilks  
Buyer: M. Smith  
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Sales Dept.: H. M. Ramig
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Sales Mgr.: L. J. Langeness
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Purch. Agent & Sales Mgr.: J. Thomas **GS**

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Pres.: R. F. Wilson

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Sales: R. W. Severson PS, GE, CO, TS, TR

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Sales Mgr.: D. L. Moline  
Mgr.-Defense Sales: R. A. Brewer GS, R&D

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Willard Rd., Norwalk, Conn. (Tel. TEmple 8-8433)  
Purch. Agent: William Kronus  
Sales Supvr.: Louis E. Harrod MM

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Asst. Purch. Agent: M. W. Perrine  
Buyer: W. B. Fuller  
Gr.-Industrial & Military Sales: A. S. Cogan MF, WN, PS, GS, GH, GE

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Buyer: Margaret Cox  
Sales Mgr.: Davis B. Oat TR

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Purch. Dept.: Mrs. Marion Wulchak & A. B. Harris MF, WN, PS, GS, GH, GE, CO, TS, TR

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**J.H. WINN INC.**  
20 Washington St., Winchester, Mass. (Tel. PARkview 9-4400)  
Purch. Agents: Arthur McWilliams  
Sales Mgr.: O. T. Larson

**WPOWER MFG. CO.**  
207 First Ave. E., Newton, Iowa (Tel. 236)  
Purch. Agent: Marvin F. Ham  
Sales Mgr.: F. K. Bauer GS, GH

**WLOW AUTOMATICS, INC.**  
93 East St., New Britain, Conn. (Tel. Baldwin 5-6321)  
Pres.: George Podlasek WN, MM, R&D

**WLOW ENGRG. & MFG. CO.**  
69 Hollis St., Oakland 8, Calif. (Tel. OLYmpic 2-0288)  
Purch. Agent: I. E. Thiele  
Sec. V. P.-Sales: W. G. Nostrand GS

**WTRONICS**  
3 S. Hawthorne Blvd., Hawthorne, Calif. (Tel. OSborne 5-1464)  
Purch.: Daniel R. Winters GS, CO, TS, R&D

**WZEN RESEARCH INC.**  
101 Lyndale Ave. S., Minneapolis 20, Minn. (Tel. TU 1-5871) TR, R&D

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149-247, Santa Barbara Municipal Airport, Goleta, Calif. (Tel. WOODland 7-3620)  
Purch. Agent: (Miss) Petre Melvin  
Sales Mgr.: Mike Rothbart GS, GH, MM

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Pres. & Dir.-Sales: Walter M. Poti GE

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Purch. Agent: Irwin Schwartz  
P.-Sales: Harry L. Schwartz MF

**WAERODRAULICS, INC.**  
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Pres.: T. S. Wise

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Purch. Agent: Paul Meiring  
Sales Mgr.: Edward Percival

**WOLLAM AIRCRAFT & MARINE PRODUCTS CO.**  
222 S. Mill St., Celina, O. (Tel. 2886)  
V. P.: M. J. Wollam MF, PS

**WOLLENSAK OPTICAL CO.**  
850 Hudson Ave., Rochester, N. Y. (Tel. CONgress 6-1000)  
Purch. Agent: Clifford Kulver  
Mgr.-Photo-Instrumentation Sales: Fred M. Emens WN, GS, R&D

**N. WOOD COUNTER LAB.**  
1525 E. 53rd St., Chicago 15, Ill. (Tel. FAirfax 4-1114)  
N. Wood R&D

**WOODWARD SPECIALTIES CORP.**  
182 Broad Ave., Binghamton, N. Y. (Tel. 3-5495)  
Pres.: C. B. Woodworth  
Secy.: R. R. Woodworth

**WOOLFE AIRCRAFT PRODUCTS, INC.**  
3441 Filbert, Wayne, Mich. (Tel. PA 1-5330)  
Pres.: Clarence Woolf MF, PS

**WORCESTER PRESSED STEEL CO.**  
100 Barber Ave., Worcester, Mass. (Tel. PLeasant 5-4361)  
Purch. Agent: C. C. Fletcher  
Pres.: C. C. Higgins MM

**WORK-FACTOR CO., INC., THE**  
206 W. Atlantic Ave., Haddon Hts., N. J. (Tel. LIncoln 17-1676)  
Field Engr.-Purch.: Donald F. Diefenderfer

**WORKLON, INC.**  
253 W. 28th St., New York, N. Y. (Tel. LONgacre 4-7390)  
Sales Mgr.: Carl Robinson

**WORNER ELECTRONIC DEVICES**  
Rankin, Ill. (Tel. EXport 7-4555)  
Pres.: G. A. Worner  
Sales Mgr.: Don Swanson

**WORTHINGTON CORP.**  
426 Worthington Ave., Harrison, N. J.

**WRIGHT AERONAUTICAL DIV., CURTISS-WRIGHT CORP.**  
Wood-Ridge, N. J. (Tel. PRescott 7-2900)  
Dir.-Purch.: James M. Cowell, Jr.  
V. P.-Sales: W. K. Houpt MF, WN, PS, GS, GH

**WRIGHT ELECTRONICS, INC.**  
2537 Grand Ave., Kansas City 8, Mo. (Tel. BAItimore 1-8686)  
Sales Mgr.: Robert A. Wells GS, GE, TR

**WRIGHT ENGINEERING CO.**  
180 E. California Blvd., Pasadena, Calif. (Tel. RYon 1-8488)  
Purch. Agent: Dennis Winton  
Gen. Mgr.: Jack Mott

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Mgr.-Aircraft Sales: P. N. Burkard MM, R&D

**WYCO METAL PRODUCTS**  
6918 Beck, N. Hollywood, Calif. (Tel. STAnley 7-5579)  
Purch. Agent: L. Teitelman  
Buyer: Ronald Stone  
Sales Mgr.: Lew Turner GS, GH, TS

**WYE INDUSTRIES**  
6 Gen. Devine Way, Boston 27, Mass. (Tel. ANDrew 8-6701)  
Purch. Agent & Sales Mgr.: James A. Wye MF, PS, GS, GH, MM

**WYMAN-GORDON CO.**  
105 Madison St., Worcester, Mass. (Tel. PLeasant 6-5111)  
Exec. V. P.: H. F. Wood  
Gen. Sales Mgr.: J. L. Roach MF, WN, PS

**WYZENBEEK & STAFF, INC.**  
223 N. California Ave., Chicago 12, Ill. (Tel. NEvada 2-3771)  
Purch. Agent: W. F. Sheppard  
Sales Mgr.: J. I. Allen

**X-PANDO CORP.**  
43-15 36th St., Long Island City 1, N. Y. (Tel. STIllwell 4-7180)

Gen. Mgr.: John Manio, Jr.  
Adv. Mgr.-Purch: William F. Mano MF, WN, PS, GS, GE, MM

**YALE & TOWNE MFG. CO., THE.-GOVERNMENT DEFENSE PRODUCTS DIV.**  
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Purch: Richard T. Tiebout GH, R&D

**YARDNEY ELECTRIC CORP.**  
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Dir.-Purch.: Leonard Katz  
Mgr.-Sales & Mktg: Saul Padwo GS, GH, GE

**YARDLEY PLASTICS CO.**  
142 Persons Ave., Columbus, Ohio (Tel. CA 1-7401)  
Purch. Agent: Earl Jacobson  
Sales Mgr. Custom Extrusion: Gary Fulmer PS

**YARNALL-WARING CO.**  
102 E. Mermaid Lane, Philad. 18, Pa. (Tel. Chestnut Hill 8-2600)  
Purch. Agent: John Welker  
Asst. Purch. Agent: W. Bodycut  
V. P.-Dist. Prod. Sales: R. S. Pollard  
V. P.-Sales: J. A. Steer

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**H. L. YOH CO., INC.**  
123 S. Second St., Philadelphia 6, Pa. (Tel. MArket 7-7620)  
Purch. Agent: Mrs. Carmel Flynn  
V. P.-Sales: Milton Marder MF, WN, PS, GS, GH, GE, TR

**YORK CORP.**  
Grantley Rd., York, Pa. (Tel. YOrk 8-1131)  
Dir.-Pracurement: H. L. Conley  
V. P.-Marketing: Austin Rising GS

**YOUNG BROTHERS CO.**  
1852 Columbus Rd., Cleveland 13, O. (Tel. MAin 1-2473)  
V. P.-Sales: J. D. Russell  
V. P.: C. H. Barnett

**YOUNG DEVELOPMENT DIV., HERCULES POWDER CO.**  
Rocky Hill, N. J. (Tel. WAInut 4-4040)  
Purch.: Wallace J. Cullen  
Sales: Douglas M. Clarke R&D

**YOUNG & RIOUX WOODWORKING CO., INC.**  
22 Thomas St., East Hartford, Conn. (Tel. BUTler 9-0261)  
Pres.: Herbert Young MM

**Z & W MFG. CORP.**  
30240 Lake Land Blvd., Wickliffe, Ohio (Tel. WH 3-5700)  
Purch. Agent: G. T. Greenfield  
Mgr. Electronics Div.: R. M. Wood TR

**ZACHARIAS ELECTRONICS CORP.**  
23 Country Side Drive, P. O. Box 172, Livingston, N. J. (Tel. WYman 2-3780)  
V. P.: Ellis M. Zacharias, Jr. R&D

**ZALLEA BROTHERS**  
Taylor & Locust Sts., Wilmington, Del. (Tel. OLYmpia 4-2407)  
Buyer: Carl Willoughby  
Eng. Sales Mgr.: Harry Wolpert PS, GS, R&D

**ZENITH ELECTRIC CO.**  
152 W. Walton St., Chicago 10, Ill. (Tel. Mlchigan 2-3322)  
Purch. Agent: Rueben Shore  
Sales Mgr.: Arthur Coren GH, GE, CO

**ZENITH OPTICAL LABORATORY**  
1940 Great Neck Rd., Copiague, L. I., N. Y. (Tel. AMityville 4-4616)  
Gen. Mgr.: Walter Goldstein  
Sales Mgr.: M. N. Hoffman GS, GH, GE, CO, TS, TR

**ZENITH RADIO CORP.**  
6001 W. Dickens Ave., Chicago 39, Ill. (Tel. BErkshire 7-7500)

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Warhead & Nose Cone WN  
Propulsion System PS  
Ground Support GS  
Ground Handling GH  
Guidance Equipment GE  
Checkout Equipment CO  
Test Equipment TS  
Tracking & Telemetering TR  
Research & Development R&D  
Materials & Metals MM

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V. P.-Furch.: J. E. Anderson  
 Buyers: W. Morrison & R. Kehoe  
 V. P. & Dir.-Sales: L. C. Truesdell

R&D

**ZEP AERO**

113 Sheldon St., El Segundo, Calif. (Tel. ORegon 8-1161)

Gen. Mgr.: H. B. McLaughlin  
 Sales Mgr.: Ed Wilson

TS

**ZEPHYR MFG. CO. INC.**

201 Hindry Ave., Inglewood, Calif. (Tel. ORegon 8-4331)

Purch. Agent: Dean Meador  
 Sales Mgr.: W. A. Burns

GS, GH, MF

**ZIERICK MFG. CORP.**

Beechwood & Rockdale Aves., New Rochelle, N. Y.

(Tel. New Rochelle 6-8520)

V. P.-Sales: Russell Zierick

Sales Mgr.: John H. Rodlein

MM

**ZIPPERTUBING CO., THE**

752 S. San Pedro, Los Angeles 14, Calif. (Tel. MAdison 4-6664)

Purch. Agent: G. H. Hassinger

Pres.: W. A. Plummer

MF, GS, GH, CO, TS, TR, MM, R&D

**ZIRCONIUM CORP. OF AMERICA**

31501 Solon Rd., Solon, O. (Tel. CHurchill 8-6191)

Plant Mgr.: J. T. Welter  
 Sales Mgr.: S. Z. Gendel

MM, P

**ZOOMAR INC.**

55 Sea Cliff Ave., Glen Cove, N. Y. (Tel. ORiole 6-1900)

Purch. Agent: Alfred J. Quittner

V. P.-Sales Mgr.: Walter Steuer

TR, I

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112 26th St., Brooklyn 32, N. Y. (Tel. SOuth 8-0907)

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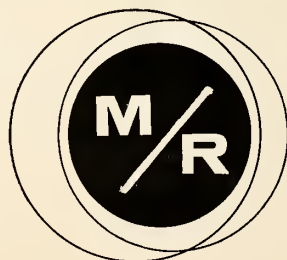
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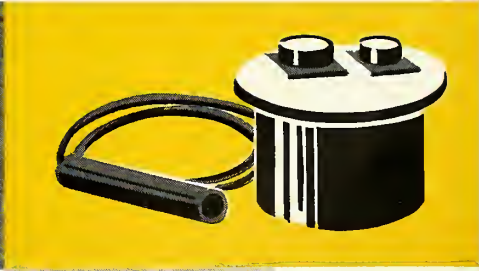
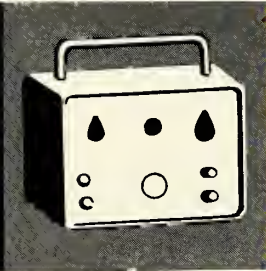
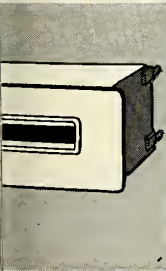
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Aercom Inc.  
Aertron Inc., Div.-Litton Industries  
Aertron Aeroparts  
Aerzee Corporations, Inc.  
Aerzeland Pneumatic Industries, Inc.  
Aerzumbio Research & Development Corp.  
Aerzomay-Bonard  
Aerzerson & Cuming, Inc.  
Aerzederal Shock Mount Corp.-Div. The Korfund Co., Inc.  
Aerzefrom Corp.  
Aerzefriel Co., The, Gabriel Electronics Div.  
Aerzefretal Electric Co., X-Ray Dept.  
Aerzefhn & Clay  
AerzeflOUAILLE INDUSTRIES, INC., BUFFALO  
AerzefHYDRAULICS DIV.  
AerzefW. Johnson & Co., Inc.  
Aerzefrd Mfg. Co.  
AerzefMillon Industrial Corp.  
AerzefURAX CHEMICAL PRODUCTS CORP., METAL CONTAINER DIV.  
Aerzeflot Chemicals, Inc.  
Aerzefrichester Instrument Corp.  
Aerzefdar Design Corp.  
Aerzefrd Lion Cabinet Co., Redco Tool Div.  
Aerzefbercraft Corp. of California  
Aerzefnute & Koerting Co.  
AerzefElectric Corp., Aeronautical Div.  
Aerzefylar Devices, Inc.  
Aerzefpper Mfg. Co., Inc.  
Aerzefn Zelm Associates, Inc.  
Aerzefstern Felt Works & Acodia Synthetic Products Div.

## ABSORBERS, MICROWAVE

See MICROWAVE ABSORBERS

## ABSORBERS, POWER

See POWER ABSORBERS

## ABSORBERS, SHOCK, CORD & RINGS

See SHOCK ABSORBERS, CORDS & RINGS

## ABSORBERS, VIBRATION

See VIBRATION ABSORBERS

## ACCELERATION TEST UNITS, MILITARY

See TEST UNITS, ACCELERATION, MILITARY

## ACCELERATORS, PARTICLE

Aerzefis-Chalmers  
Aerzefericon Instrument Co., Inc.  
Aerzefericon Machine & Foundry Co., Government Products Group  
Aerzefplied Radiation Corp.  
Aerzeflectronics, Borg-Warner Corp.  
Aerzefli Aircraft Corp., Niagara Frontier Div.  
Aerzefpper Development Corp., Sub.-Marquardt Aircraft Co.  
Aerzefystron Pacific Div.-Doystrom, Inc.  
AerzefEliff Instruments  
Aerzeflin Micronics, West Coast Div.-Elgin National Watch Co.  
Aerzefrd Instrument Co., Div.-Sperry Rand Corp.  
Aerzefretal Electric Co., Missile & Space Vehicle Dept.  
Aerzefretal Electric Co., X-Ray Dept.  
AerzefM. Giannini & Co., Inc.  
Aerzefph Voltage Engrg. Corp.  
Aerzefmphey, Inc.  
Aerzefoct-D-Graph Corp., The  
AerzefTel Div.-Cohu Electronics, Inc.  
Aerzeflmsman Instrument Corp., Sub.-Standard Coil Products Co., Inc.  
Aerzefneapolis-Honeywell Regulator Co.-Aeronautical Div.  
Aerzefnational Pneumatic Co., Inc., Holtzer-Cabot Divs.  
Aerzeftion Dynamics, Inc.  
Aerzefrm Instruments, Div.-American Machine & Metals,  
Aerzefrd Lion Cabinet Co., Redco Tool Div.  
Aerzefeves Instrument Corp.  
Aerzefseavitz Engrg.  
Aerzefchnology Instrument Corp.  
AerzefS. Science Corp.  
Aerzefvion Associates

## ACCELEROMETERS

See Industries Inc.  
See Logistics Corp.

## \*AIRESEARCH MFG. CO. OF ARIZ.

R. C. Allen Aircraft Instr. Div., R. C. Allen Bus. Machines, Inc.  
American Electronics, Inc.  
American Felt Co.  
American Machine & Foundry Co., Government Products Group  
Arma Div., American Bosch Arma Corp.  
Associated Engineers, Inc.  
B & F Instruments, Inc.  
B & K Instruments, Inc.  
Belock Instrument Corp.  
Bendix Aviation Corp., Eclipse-Pioneer Div.  
Bendix Aviation Corp., Pioneer-Central Div.  
Bourns Labs., Inc.  
Brush Instruments, Div.-Clevite Corp.  
Cadillac Gage Co.  
Chesapeake Instrument Corp.  
Cleveland Pneumatic Industries, Inc.  
Consolidated Electrodynamics Corp.  
Control Data Corp.  
Delco-Remy Div., General Motors Corp.  
Donner Scientific Co.  
Electro-Mechanical Products Co.  
Elgin Micronics Div.-Elgin National Watch Co.  
Endevco Corp.  
ERA Engrg. Inc.  
Fairchild Controls Corp., Components Div.  
Genisco, Inc.  
Genisco, Inc., Instrument Div.  
Greenleaf Mfg. Div., The, Mandrel Ind. Inc.  
Gulton Industries, Inc.  
Highland Rim Machine Works Inc.  
Hoffman Lobs Div., Hoffman Electronics Corp.  
ITT Labs.  
Inertia Switch, Inc.  
Instrument Development Labs., Inc.  
Jordan Electronics, Div.-Victoreen Instrument Co.  
\*KEARFOTT CO., INC.  
Leach Corp.  
Leor, Inc.  
Leor, Inc., Grand Rapids Div.  
\*WALLACE O. LEONARD, INC.  
Litton Industries, Inc.  
Massa Div.-Cohu Electronics, Inc.  
Minneapolis-Honeywell Regulator Co.-Aeronautical Div.  
Minneapolis-Honeywell Regulator Co., Boston Div.  
Northrop Corp.  
Northrop Corp., The, Nortronics Div.  
Pace Engrg. Co.  
Pacific Scientific Co.  
Pickering & Co., Inc.  
Pioneer Tool & Engrg. Co.  
Power-Tronic Systems Inc.  
Pyles Industries, Inc.  
Radiation, Inc.  
Raymond Engrg. Lab., Inc.  
Red Lion Cabinet Co., Redco Tool Div.  
\*RHEEM MFG. CO., DEFENSE & TECHNICAL PRODUCTS DIV.  
Sonders Associates, Inc.  
Servomechanisms, Inc.  
Sperry Farrogt Co., Div.-Sperry Rand Corp.  
Starham Instruments, Inc.  
Summers Gyroscope Co.  
Trionics Corp.  
Ultradyn, Inc.  
U. S. Science Corp., Div.-Topp Industries, Inc.  
United States Time Corp.  
Walsham Engrg. Corp.  
Whittaker Gyro. Div.-Telecomputing Corp.  
Wilks Precision Instrument Co., Inc.

## ACCESSORIES & COMPONENTS, ENGINE

See ENGINE ACCESSORIES & COMPONENTS

## ACCESSORIES, MICROWAVE

See MICROWAVE ACCESSORIES

## ACCUMULATORS

American Aeroparts  
American Felt Co.  
American Machine & Foundry Co., Government Products Group  
Applied Dynamics Corp.  
Astronautics Engrg. Co.  
Bendix-Pacific Div., Bendix Aviation Corp.  
Bendix Utica Div., Bendix Aviation Corp.  
Cleveland Pneumatic Industries, Inc.

Com-Air Products, Div.-A S R Products Corp.  
Denison Engrg. Div., American Brake Shoe Co.  
Dumont Aircraft Fitting Co.  
Dunbar-Kappler Inc.-Aircraft Components Div.  
Electrol Inc.  
Greer Hydraulics, Inc.  
Hahn & Clay  
Hannifin Co., Div.-Parker-Hannifin Corp.  
Highland Rim Machine Works Inc.  
Hufford Corp., The  
Hydro-Power Corp.  
Hydrodyne Corp., Skinner Seal Div.  
Integral Corp.  
Interstate Engrg. Corp.  
Kaiser Aircraft & Electronics, Div.-Kaiser Industries Corp.  
Waltes Kidde & Co., Inc., Aviation Div.  
Koehler Aircraft Products Co.  
Menasco Mfg. Co.  
Minneapolis-Honeywell Regulator Co., Ordnance Div.  
National Pneumatic Co., Inc., Holtzer-Cabot Divs.  
Natl. Water Lift Co., Div.-Cleveland Pneumatic Industries, Inc.  
Norris-Thermador Corp.  
Parker Hydraulics Div., Parker-Hannifin Corp.  
Portland Copper & Tank Works Inc.  
Randall Engrg. Corp.  
Red Lion Cabinet Co., Redco Tool Div.  
S-P Mfg. Corp., The  
Sargent Engrg. Corp.  
Taylor Devices, Inc.  
U. S. Industries, Inc.  
Vickers Inc., Div.-Sperry Rand  
Vilter Mfg. Co., The  
Vinson Mfg. Co., Inc.  
\*WEATHERHEAD CO., THE

## ACCUMULATORS, HYDRAULIC

American Aeroparts  
American Bosch Arma Corp.  
American Machine & Foundry Co., Government Products Group  
Applied Dynamics Corp.  
Arma Div., American Bosch Arma Corp.  
Atlantic Instrument Corp., Sub.-American Electronics, Inc.  
Bendix-Pacific Div., Bendix Aviation Corp.  
Bendix Utica Div., Bendix Aviation Corp.  
Com-Air Products, Div.-A S R Products Corp.  
Cooper Development Corp., Sub.-Marquardt Aircraft Co.  
Denison Engrg. Div., American Brake Shoe Co.  
Diversey Engrg. Co.  
Dumont Aircraft Fitting Co.  
Eastern Industries Inc.  
Electrol Inc.  
Greer Hydraulics, Inc.  
Hahn & Clay  
Hannifin Co., Div.-Parker-Hannifin Corp.  
Haskel Engrg. & Supply Co.  
Harkey-Moore Associates  
Hufford Corp., The  
Hydro-Power Corp.  
Hydrodyne Corp., Skinner Seal Div.  
Integral Corp.  
Interstate Engrg. Corp.  
Jock & Heintz, Inc.  
Kaiser Aircraft & Electronics, Div.-Kaiser Industries Corp.  
Leor, Inc.  
Menasco Mfg. Co.  
National Pneumatic Co., Inc., Holtzer-Cabot Divs.  
Natl. Water Lift Co., Div.-Cleveland Pneumatic Industries, Inc.  
Norris-Thermador Corp.  
Dill-Dyne, Inc.  
Ozone Metal Products Corp.  
Parker Aircraft Co.  
Parker Hydraulics Div., Parker-Hannifin Corp.  
Parts Engrg. Co., Inc.  
Portland Copper & Tank Works Inc.  
Randall Engrg. Corp.  
Ravenna Metal Products, Div.-Standard Screw Co.  
Red Lion Cabinet Co., Redco Tool Div.  
Ronson Hydraulic Units Corp.  
S-P Mfg. Corp., The  
Sargent Engrg. Corp.  
Stratos Div.-Fairchild Engine & Airplane Corp.  
Taylor Devices, Inc.  
U. S. Industries, Inc.

Vickers Inc., Div.-Sperry Rand  
Vickers Inc., Marine & Ordnance Dept., Machinery  
Hydraulics Div.  
Vincor Corp.  
Vinson Mfg. Co., Inc.  
Walart Fluid Systems, Div.-F.C. Huyck & Sons  
Washington Technological Associates Inc.  
Waste King Corp., Technical Products Div.  
Watertown Div., The New York Air Brake Co.  
\*WEATHERHEAD CO., THE  
Wickfield, Inc.  
Wise Aerodraulics, Inc.

## ACTUATORS

a. Electric  
b. Hydraulic  
c. Linear  
d. Pneumatic  
e. Rotary  
ACF Industries Inc., a, b.  
Abrams Instrument Corp., e.  
Actuation Research Corp., a thru e.  
Actuator Products Div., Geartronic Corp., a thru e.  
Adel Precision Products of California, Div.-General  
Metals Corp., b.  
Aeroflex Corp., The, Aeroflex Labs. Div., a, b, c.  
Airborne Accessories Corp., c, e.  
\*AIRESEARCH MFG. CO. DIV.-THE GARRETT  
CORP., a thru e.  
Alco Valve Co., a, b.  
American Aeroparts, a, b, c.  
American Bosch Arma Corp., a, b, d.  
American Electronics, Inc., c.  
American Machine & Foundry Co., Government  
Products Group, a thru d.  
American Machine & Foundry Co., Greenwich, a thru  
d.  
American Measurement & Control, Inc., a, b, c, e.  
\*ANNIN CO., THE, a, b, d.  
Artisan Electronics Corp., a, c, e.  
Associated Engineers, Inc., a thru d.  
Astronautics Engrg. Co., b.  
Atlantic Instrument Corp., Sub.-American  
Electronics, Inc., a.  
Atlas Precision Products, Co., e.  
Banner Industries, a, b, d.  
Barber-Colman Co., c, d, e.  
Beaver Precision Products Inc., b, e.  
Bell Aircraft Corp., Niagara Frontier Div., b.  
Bellofram Corp., b.  
Belock Instrument Corp., a, c, e.  
\*BENDIX AVIATION CORP.-HAMILTON DIV.,  
b, e.  
Bendix-Pacific Div., Bendix Aviation Corp., a  
thru e.  
Bendix Utica Div., Bendix Aviation Corp.  
Blackhawk Mfg. Co., b.  
Bobrick Mfg. Corp., b, d.  
Bogue Electric Mfg. Co., a.  
Bowser, Inc., Defense Dept., b.  
Breeze Corporations, Inc., a thru e.  
Bristol Co., The, a, b, d, e.  
Bruning Co., The, b.  
CDC Control Services, Inc., a, b.  
Cable Electric Products, Inc., a.  
Cadillac Gage Co., b, c.  
Capital City Mfg. Co., b, d.  
Carter Controls, Inc., b, d, e.  
Chicago Aerial Industries, Inc., a.  
Chicago Pneumatic Tool Co., a, d.  
Clary Dynamics, a, b, d.  
Clemco Aero Products, Inc., b, c, e.  
Cleveland Pneumatic Industries, Inc., a thru e.  
Clippard Instrument Lab., Inc., b, d.  
Com-Air Products, Div.-A S R Products Corp., b,  
c, d.  
Conoff Corp., a, d, e.  
Consolidated Controls Corp., b.  
Consolidated Diesel Electric Corp., a thru e.  
James Cunningham Son & Co., Inc., a, c.  
Curtiss-Wright Corp.-Propeller Div., c, e.  
Dalmator Div., Yuba Consolidated Industries, Inc.,  
a, e.  
Delco-Remy Div., General Motors Corp., a.  
Denison Engrg. Div., American Brake Shoe Co., b.  
Diversey Engrg. Co., b, d.  
Dukes Co., Inc., b.  
Dumont Aircraft Fitting Co., b, d, e.  
Dynamic Controls Corp., b, d, e.  
Eastern Industries, Inc., a, b, e.  
Thomas A. Edison Ind. Instrument Div.-McGraw-  
Edison Co., e.  
\*ELECTRICAL ENGRG. & MFG. CORP., c, e.  
Electrol Inc., b, d, e.  
Electro-Mechanical Products Co., a.  
Electronic Communications, Inc., a, c, e.  
Electro-Seal Corp., a.  
Exact Engrg. & Mfg. Inc., a, e.  
Foote Bros. Gear & Machine Corp., a, c, e.  
Ford Instrument Co., Div.-Sperry Rand Corp., a.  
Fulton-Irgon Corp., The, c, e.  
General Electric Co., Apparatus Sales Div., c, d, e.  
General Electro-Mechanical Corp., a, e.  
Gilfillan Bros. Inc., a thru e.  
Greer Hydraulics, Inc., b, c, e.  
Hamilton Standard, Div.-United Aircraft Corp., a, b,  
d.  
Haskel Engrg. & Supply Co., b, d, e.  
\*A. W. HAYDON CO., THE, a, e.  
Highland Rim Machine Works, Inc., c, e.  
Hoover Electric Co., a, c, e.  
Horkey-Moore Associates, d.

## \*HOUDAILLE INDUSTRIES, INC., BUFFALO

HYDRAULICS DIV., b, e.  
Hufford Corp., The, b.  
Hughes Tool Co., Aircraft Div., a, d.  
Hupp Aviation Co., e.  
Walter J. Hyatt Co., The, a thru e.  
Hycan Mfg. Co., b, c, e.  
Hydra-Power Corp., b thru e.  
Hydrodyne Corp., Skinner Seal Div., d.  
Hydramatics, Inc., b, d.  
Integral Corp., b, d.  
Interstate Engrg. Corp., b, d.  
Jack & Heintz, Inc., a, b, c, e.  
Javelin Aircraft Co., Inc., a thru e.  
Jordan Co., Inc., The, a, c, e.  
Kaiser Aircraft & Electronics, Div.-Kaiser  
Industries Corp., d.  
\*KEARFOTT CO., INC., b thru e.  
Kelsey-Hayes Co., b thru e.  
Kemp Aero Products, b, d, e.  
Walter Kidde & Co., Inc., Aviation Div., d.  
Korda Industries, a thru e.  
Land-Air, Inc., a, c, e.  
Lear, Inc., a thru e.  
Lear, Inc., Grand Rapids Div., a thru e.  
Leatronics, Inc., e.  
Leland Airborne Products, Div.-American Machine &  
Foundry Co., a, e.  
Leslie Co., b, c, d, e.  
Lundy Mfg. Corp., a thru e.  
Lyndon Aircraft, Inc., a, c, e.  
Magtrol, Inc., a, e.  
Marquardt Aircraft Co., b, d.  
Mason-Neilan, b, d.  
McDowell-Wellman Companies, The, b, d.  
Menasco Mfg. Co., b, c, d, e.  
Mercury Tool & Mfg. Corp., b, d.  
Minneapolis-Honeywell Regulator Co.-Aeronautical  
Div., a, b, d, e.  
Minneapolis-Honeywell Regulator Co., Industrial  
Product Group, a, b, d.  
Minneapolis-Honeywell Regulator Co., Ordnance  
Div., a, b.  
Monogram Precision Industries, a, b.  
Moog Valve Co., Inc., a, b, c, e.  
Morse Instrument Co., The, c, e.  
Heinz Mueller Engr. Co. Inc., a, e.  
National Pneumatic Co., Inc., Holtzer-Cabot Div.,  
a thru e.  
Natl. Water Lift Co., Div.-Cleveland Pneumatic  
Industries, Inc., a, b, d, e.  
Newbrook Machine Corp., a thru e.  
Norwood Controls Unit Detroit Controls Div., a.  
Oil-Dyne, Inc., b.  
Ozone Metal Products Corp., b thru e.  
Parker Aircraft Co., b, e.  
Parts Engrg. Co., Inc., b.  
Pesco Products Div.-Borg-Warner Corp., a.  
Phillips Aviation Co.-Marples Gears, a, b, d.  
Platmatron, Inc.  
Pioneer Tool & Engrg. Co., a, b, d.  
Power-Tronic Systems, Inc., a.  
\*PROPELLEX CHEMICAL DIV., CHROMALLOY  
CORP.  
Randall Engrg. Corp.  
Raymond Engr. Lab., Inc., a.  
Red Lion Cabinet Co., Redco Tool Div., a, b.  
Regent Jack Mfg. Co., Inc., b.  
Reinhold Engrg. & Plastics Co., d.  
Republic Mfg. Co., b.  
Robot Industries, Inc., a, c, e.  
Ronson Hydraulic Units Corp., b, d.  
Royal Industries, Inc., a, b, c.  
S-P Mfg. Corp., The, b, d.  
Sage-Craft, Inc., a.  
Sancor Corp., a.  
Sargent Engrg. Corp., a thru e.  
Servomechanisms, Inc., Mechrol Div., e.  
Singer Mfg. Co., The, Military Products Div., c, e.  
Sivalco Systems Corp., b, d, e.  
Skinner Precision Products, d.  
Small Motors, Inc., a.  
Smith-Morris Corp., a, b, c.  
Southwestern Industries, Inc., c, e.  
Space Corp., a, b, e.  
Sperry Farragut Co., Div.-Sperry Rand Corp., a, b.  
Standard Controls, Inc., b.  
Stanley Aviation Corp., d.  
Stratos, Div.-Fairchild Engine & Airplane Corp., b,  
c, d.  
Summers Gyroscope Co., a.  
Swartwout Co., The, a.  
Tactair Valve Div.-Aircraft Products Co., b, d.  
Talley Corp., The, a thru e.  
Tapco Group, Thompson Ramo Wooldrige Inc., b, d.  
Task Corp., a, b, c, e.  
Telectro Industries Corp., a.  
Transco Products, Inc., e.  
Turbo Products, Inc., b, d.  
Twiggs Industries, b.  
U. S. Industries, Inc., a, a.  
United Aircraft Products, Inc., b.  
United Supply Co., a.  
Vap-Air Aeronautical Products Div., Vapor Heating  
Corp., d.  
Vard Inc., a thru e.  
Vickers Inc., Div.-Sperry Rand, b, e.  
Vickers Inc., Marine & Ordnance Dept., Machinery  
Hydraulics Div., b.  
Walbar Machine Products, Inc., b.  
Waldorf Fluid Systems Div.-F. C. Huyck & Sons,  
b, d.  
Waltham Engrg. Corp., a.

Washington Technological Associates Inc., b.  
Waste King Corp., Technical Products Div., b, d.  
Waterawn Div., The New York Air Brake Co., b, i.  
\*WEATHERHEAD CO., THE, b.  
Western Design, Div.-U. S. Industries, Inc., Santa  
Barbara Div., a, c, e.  
Western Gear Corp., a thru e.  
Westinghouse Electric Corp., a, b.  
Weston Hydraulics Ltd.-Sub.-Borg-Warner Corp.,  
b, d.  
Westronics, Inc., a, c.  
Whittaker Controls, Div.-Telecomputing Corp., a,  
b, d.  
Whittaker Gyro. Div.-Telecomputing Corp., a, e.  
Wickfield, Inc., b, d.  
Wise Aerodraulics, Inc., b.

## ACTUATORS, EMERGENCY

\*PROPELLEX CHEMICAL DIV., CHROMALLOY  
CORP.

## ADAPTERS

a. Battery  
b. Crystal  
c. Field Sequential  
d. Foreign  
e. Lamp Socket  
f. Line & Dot Sequential  
g. Phase  
h. Plug  
i. Test  
j. Tube  
k. Tube Socket  
Accurate Electronics Corp., Dept. D., a, h, k.  
Aerolite Electronics Corp., a, e, h, i.  
Aitronics International Corp., g.  
Alden Products Co., h, j.  
American Aeroparts, a.  
Anaheim Electronics Co., Inc., i.  
Anchor Metal Spinning Co., The, j, k.  
Anchor Specialty Mfg. Co. Inc., h, i.  
Arrow-Hart Hegeman Electric Co., The, e, h.  
Associated Engrg. & Mfg. Corp., k.  
Associated Engineers, Inc., h, i.  
Baldwin Mfg. Co., Inc., The, h.  
W. A. Beauchaine & Sons Inc., i, k.  
Cable Electric Products Inc., a, d, g, h, i.  
Chase Brass & Copper Co., Inc., j.  
Coaxial Connector Co., Inc., g.  
Cole Electric Co., a, h, i.  
Cole-Hersee Co., e.  
Dytronics Co., g.  
Eagle Electric Mfg. Co., Inc., c, d, h.  
Elco Corp., k.  
Eldema Corp., e.  
Electro-Mechanical Products Co., a, i.  
\*ELECTROSAP CORP., e.  
Ericson Mfg. Co., The, h.  
FXR, Inc., i.  
Highland Rim Machine Works Inc.  
Indusl. Prod.-Danbury Knudsen Div. Amphenol-Bo  
Electronics Corp., h.  
Jettron Products, Inc., j, k.  
Korda Industries, h.  
Kulka Electric Corp., d, e, h.  
Meridian Metalcraft, Inc., b.  
Meteor Production Engr., Inc., a.  
Microwave Development Labs., Inc.  
Monogram Precision Industries  
Frank W. Morse Co., d, e.  
National Pneumatic Co., Inc., Holtzer-Cabot Div  
a, f, i.  
Paul Nurches Co., h, i, j.  
Pomacel, k.  
Pomona Electronics Co., Inc., i, k.  
Projects Unlimited, Inc., i.  
State Testing Lab., Inc., i.  
Sylvania Electric Products Inc., Parts Div., i, j, k.  
Tamar Electronics, Inc.  
Technical Apparatus Builders, a, h, i, j.  
Vector Electronic Co., i, k.  
Victor R. F. & Microwave Co., a.  
Warren Components, Div. El-Tronics, Inc., k.  
Wayne Pump Co., The, Div.-Symington Wayne Cor  
Western International Co., h.  
Winder Aircraft Corp. of Florida, a.

## ADHESIVES, HIGH TEMPERATURE

Adhesive Engrg. Div.-Hiller Aircraft Corp.  
Aerojet-General Corp.  
Aeroco Mfg. Corp.  
American Latex Products Corp.  
American Rocket Co.  
Aries Laboratories, Inc.  
Armour & Co., Armour Alliance Industries  
Carl H. Biggs Co.  
Bloomingdale Rubber Co.  
Borden Chemical Co.  
Samuel Cabot Inc.  
Connecticut Hard Rubber Co., The  
Corning Glass Works  
DBM Research Corp.  
Dayton Rubber Co., The  
Delta Chemical Works, Inc.  
\*DOW CORNING CORP.  
Dresser Mfg. Div., Dresser Industries, Inc.  
E. I. Du Pont De Nemours & Co., Inc.



Dyno-Therm Chemical Corp.  
Emerson & Cuming, Inc.  
Fulton-Irgon Corp., The  
Furane Plastics, Inc.  
B. F. Goodrich Industrial Products Co.  
Grant Chemical Co., Inc.  
Hoveg Industries, Inc.  
Homalite Corp., The  
Honeycomb Co. of America, Inc.  
Houghton Laboratories, Inc.  
Johns-Manville  
Lantex Industries, Inc.  
Lebec Chemical Corp.  
Leffingwell Chemical Co.  
Marblette Corp., The  
Minnesota Mining & Mfg. Co.  
Minnesota Mining & Mfg. Co.-Adhesives, Coating & Sealers Div.  
Monogram Precision Industries  
Momingstar-Poisley, Inc.  
National Beryllium Corp.  
Dlin Morthieson Chemical Corp., Energy Div.  
Permacel  
Products Research Co.  
Protex-A-Cote, Inc.  
Raybestos-Manhattan, Inc.  
Raybestos-Manhattan, Inc., Po.  
Rubber & Asbestos Corp.  
Soreisen Cements Co.  
Toll Chemical Corp., Industrial Chemicals Div.  
Tooth-On Mfg. Co.  
Tectro-Strip Wire & Cable Corp.  
Tic-Klip Mfg., Co.  
Thermal Refractories Corp.  
Tupper Mfg. Co., Inc.  
United States Rubber Co.  
Vesrep Corp.  
Westline Products Div., Western Lithograph Co.

#### ADHESIVES, METAL TO METAL

Adhesive Engrg., Div.-Hiller Aircraft Corp.  
Aeroflet-General Corp.  
Aimbrod Co. Inc.  
American Lotex Products Corp.  
American Rocket Co.  
Aries Laboratories, Inc.  
Armstrong Cork Co.  
Armstrong Products Co.  
Auronic Instrument Corp., Sub.-American Electronics, Inc.  
Acon Industries, Inc.  
Carl H. Biggs Co.  
Coomingdale Rubber Co.  
Corden Chemical Co.  
Cربولine Co.  
Connecticut Hard Rubber Co., The  
Cox & Co., Inc.  
BM Research Corp.  
Dayton Rubber Co., The  
Delto Chemical Works, Inc.  
Dennis Chemical Co.  
Devcon Corp.  
Dresser Mfg. Div., Dresser Industries, Inc.  
Dyno-Therm Chemical Corp.  
Emerson & Cuming, Inc.  
Enwal Electronics, Inc.  
Enwal Inc.  
B. F. Goodrich Industrial Products Co.  
Gont Chemical Co., Inc.  
Houghton Laboratories, Inc.  
Johns-Manville  
Lebec Chemical Corp.  
Mas & Woldstein Co.  
Marblette Corp., The  
Minnesota Mining & Mfg. Co.  
Minnesota Mining & Mfg. Co.-Adhesives, Coating & Sealers Div.  
Monogram Precision Industries  
Momingstar-Poisley, Inc.  
Norton Co., New Products Dept.  
Oessette Div., American-Moriello Products Research Co.  
Protex-A-Cote, Inc.  
Raybestos-Manhattan, Inc.  
Raybestos-Manhattan, Inc., Po.  
R. W. Renneburg & Sons Co.  
Rubber & Asbestos Corp.  
Soreisen Cements Co.  
Toll Chemical Corp., Industrial Chemicals Div.  
Tooth-On Mfg. Co.  
Tic-Klip Mfg., Co.  
Toll Chemical Corp.  
Tupper Mfg. Co., Inc.  
Tonics Corp.  
T. Industries

#### ADJUSTING SHIMS SHIMS, ADJUSTING

#### AIR BURNERS

AF Industries Inc.  
Curtiss-Wright Corp., Research Div.  
Curtiss-Wright Corp., Wright Aeronautical Div.  
Jersey Engrg. Co.  
Lessor Mfg. Div., Dresser Industries, Inc.  
Linn Aeronautical Div., T. R. Finn & Co., Inc.  
Metcher Mfg. Co., Inc., The  
Top Aviation Co.  
I-E Circuit Breaker Co.  
Thorr Corp.

Kolcast Industries-Div. Thompson Romo Wooldrige Inc.  
\*LAVELLE AIRCRAFT CORP.  
Marquardt Aircraft Co.  
Mercury Tool & Mfg. Corp.  
Norton Co., New Products Dept.  
Penn-Michigan Mfg. Corp.  
Portland Copper & Tank Works Inc.  
Edw. Renneburg & Sons Co.  
\*RHEEM MFG. CO., DEFENSE & TECHNICAL PRODUCTS DIV.  
C. F. Roark Welding & Engrg. Co., Inc.  
Ryon Aeronautical Co.  
Smith-Morris Corp.  
Solar Aircraft Co.  
Stainless Steel Products, Inc.  
Teiner Engrg. Corp.  
United Aircraft Products, Inc.  
Westinghouse Electric Corp.

#### AFTERCOOLERS

R. P. Adams Co., Inc.  
\*AIRESEARCH MFG. CO. DIV.-THE GARRETT CORP.  
Aro Equipment Corp.  
Diversey Engrg. Co.  
Dunham-Bush Inc.  
Griscom-Russell Co., The  
Mercury Tool & Mfg. Corp.  
Portland Copper & Tank Works Inc.  
Rome-Turney Radiator Co., The  
Stainless Steel Products, Inc.  
Teiner Engrg. Corp.  
Thompson Engrg. Co., The, Missile Products Div.  
Trone Co., The  
United Aircraft Products, Inc.  
Westinghouse Electric Corp.

#### AIR ADAPTERS

Bendix Utico Div., Bendix Aviation Corp.  
Highland Rim Machine Works Inc.  
Monogram Precision Industries  
Strotos Div.-Fairchild Engine & Airplane Corp.

#### AIR BAFFLES See BAFFLES, AIR

#### AIR COMPRESSORS See COMPRESSORS, AIR

#### AIR CONDITIONING EQUIPMENT

ACF Industries Inc.  
Accessory Controls & Equipment Corp.  
\*AIRESEARCH MFG. CO. DIV.-THE GARRETT CORP.  
Airtemp Div., Chrysler Corp.  
Alco Valve Co.  
American Air Filter Co., Defense Products Div.  
American Electronics, Inc.  
American Electronics, Inc., Electric Machinery & Equipment Div.  
Aro Equipment Corp.  
Associated Engineers, Inc.  
Bendix Utico Div., Bendix Aviation Corp.  
Blowers Inc.  
Bobrick Mfg. Corp.  
California Aircraft Products  
Combridge Filter Corp.  
Corrier Corp.  
Clarage Fan Co.  
Consolidated Diesel Electric Corp.  
Droyer-Hanson Div., National-U.S. Radiator Corp.  
Dresser Industries, Inc.  
Dunham-Bush Inc.  
Eastern Industries Inc.  
Ellis & Watts Products, Inc.  
Emerson Electric Mfg. Co., The, Electronics & Avionics Div.  
FWD Corp.  
Flexaust Co., The  
General American Transportation Corp.  
Hamilton Standard, Div.-United Aircraft Corp.  
Paul Hardeman, Inc.  
C. G. Hokanson Co., Inc.  
Hughes Tool Co., Aircraft Div.  
Hussmann Aircraft Div.  
ILG Electric Ventilating Co.  
International Radiant Corp.  
Jet-Heat, Inc.  
Marlo Coil Co.  
Minneapolis-Honeywell Regulator Co.-Aeronautical Div.  
Monogram Precision Industries  
Monovio Aviation Corp.  
Mueller Brass Co.  
Perfection Industries, Div.-Hupp Corp.  
Pioneer Industries Div., Almar-York Co. Inc.  
Pre-Flite Industries Corp.-Sub.-Avco Corp.  
Roxed Corp.  
Randall Engrg. Corp.  
Safety Electrical Equipment Corp.  
Scaico Controls, Inc.  
Scientific Instrument Co.  
South Wind Div., Stewart Warner Corp.  
Stainless Steel Products, Inc.  
Strotos, Div.-Fairchild Engine & Airplane Corp.  
Surface Combustion Corp.  
Talley Corp., The  
Tenney Engrg., Inc.  
Torrington Mfg. Co. Inc., The, Specialty Blower Div.  
Trane Co., The

Tranter Mfg., Inc.  
United Aircraft Products, Inc.  
United Control Corp.  
United Electric Controls Co.  
Universal Dynamics Corp.  
Vilter Mfg. Co., The  
Waste King Corp., Technical Products Div.  
Wenzlouw Engrg. Co.  
York Corp.

#### AIR DATA COMPUTERS See COMPUTERS, AIR DATA

#### AIR INLET GUIDE VALVES

Anchor Metal Spinning Co., The  
Baldwin Mfg. Co. Inc., The  
Bobrick Mfg. Corp.  
Clary Dynamics  
Curtiss-Wright Corp.-Wright Aeronautical Div.  
Hamilton Standard, Div.-United Aircraft Corp.  
Monogram Precision Industries  
Randall Engrg. Corp.  
Research Development Mfg. Inc.  
Smith-Morris Corp.  
Solar Aircraft Co.  
Stratos, Div.-Fairchild Engine & Airplane Corp.  
Tolley Corp., The  
Waldorf Fluid Systems, Div.-F.C. Huyck & Sons

#### AIR INLET SCREEN SUPPORTS

American Missile Products Co., Inc.  
Anchor Metal Spinning Co., The  
Cromer Mfg. & Engrg., Inc.  
Curtiss-Wright Corp.-Wright Aeronautical Div.  
Finn Aeronautical Div., T. R. Finn & Co., Inc.  
Konorr Corp.  
Kentucky Metal Products Co.  
Monogram Precision Industries  
Smith-Morris Corp.  
Tolley Corp., The

#### AIR TURBINES See TURBINES, AIR

#### AIRBORNE FILM RECORDERS See RECORDERS, AIRBORNE FILM

#### AIRBORNE HOISTS See HOISTS, AIRBORNE

#### AIRBORNE IGNITION SYSTEMS See IGNITION SYSTEMS, AIRBORNE

#### AIRBORNE LANDING SYSTEMS

American Missile Products Co., Inc.  
Associated Engineers, Inc.  
Atlas Precision Products, Co.  
Beaver Precision Products Inc.  
Emerson Radio & Phonograph Corp.  
Gilfillan Bros. Inc.  
ITT Labs.  
ITT-Kellogg  
Jonsky & Bailey, Inc.  
Kemp Aero Products  
Korda Industries  
Litton Industries, Maryland Div.  
Menlo Research Lab.  
Mercury Tool & Mfg. Corp.  
Minneapolis-Honeywell Regulator Co.-Aeronautical Div.  
Motorola Inc., Military Electronics Div.  
Northrop Corp., The, Nortronics Div.  
Philco Corp., Government & Industrial Div.  
Radiation, Inc.  
Roytheon Mfg. Co., Government Equipment Div.  
Space Corp.  
U. S. Science Corp., Div.-Topp Industries, Inc.  
Westinghouse Electric Corp.

#### AIRBORNE MAGNETIC RECORDERS See RECORDERS, AIRBORNE MAGNETIC

#### AIRBORNE RADAR See RADAR, AIRBORNE

#### AIRBORNE REFRIGERATION EQUIPMENT See REFRIGERATION EQUIPMENT, AIRBORNE

#### AIRBORNE ROCKET LAUNCHERS See LAUNCHERS, AIRBORNE ROCKET

#### ALARM SYSTEM CONTROLS See CONTROLS, ALARM SYSTEM

#### ALARM SYSTEMS

Alto Scientific Co., Inc.  
American Aeroports  
American Electronics, Inc., Toller & Cooper Div.  
\*ARNOUX CORP.  
Assembly Products, Inc.  
Atlantic Instrument Corp., Sub.-American Electronics, Inc.  
Bendix Aviation Corp., York Div.  
Bristol Co., The  
Centronix Inc.  
Control Circuits Inc.  
Davis Instruments  
Thomas A. Edison Ind. Instrument Div.-McGraw-Edison Co.  
Electronic Control Corp.  
\*ETS-HOKIN & GALVAN

Federal Mfg. & Engrg. Corp.  
 Fenwal Electronics, Inc.  
 Fenwal Inc.  
 Globe Automatic Sprinkler Div., The Fyr-Fyter Co.  
 Hamilton Standard, Div.-United Aircraft Corp.  
 ITT-Kellogg  
 Jordan Electronics, Div.-Victoreen Instrument Co.  
 Magnetrol, Inc.  
 Minneapolis-Honeywell Regulator Co., Industrial Product Group  
 Miratel, Inc.  
 \*MIRAX CHEMICAL PRODUCTS CORP., ELECTRO-MECHANICAL PRODUCTS DIV.  
 Motorola Inc., Military Electronics Div.  
 North Electric Co.  
 Northrop Corp., The Nortronics Div.  
 Philco Corp., Government & Industrial Div.  
 Photobell Co., Inc.  
 Scico Controls, Inc.  
 Scam Instrument Corp., The  
 H. H. Scott, Inc.  
 Simmonds Aerocessories, Inc.  
 Stanley Electric Corp.  
 Systron Corp.  
 Thermo Electric Co., Inc.  
 Thiokol Chemical Corp.  
 Thompson-Ramo-Wooldridge Products Co., The  
 U. S. Science Corp., Div.-Topp Industries, Inc.  
 Western Gear Corp.  
 Westronics Inc.  
 Wintronics

#### ALARMS, AUTO

Bendix Aviation Corp., York Div.  
 Bristol Co., The  
 Cole-Hershe Co.  
 \*ETS-HOKIN & GALVAN  
 Northrop Corp., The Nortronics Div.  
 Scico Controls, Inc.  
 Scam Instrument Corp., The  
 Telectro Industries Corp.  
 Thompson-Ramo-Wooldridge Products Co., The  
 United Electric Controls Co.

#### ALIGNMENT TOOLS

See TOOLS, ALIGNMENT

#### ALNICO

Arnold Engrg. Co., The  
 Barker Sales Co.  
 Bogue Electric Mfg., Co.  
 Bram Metallurgical & Chemical Co.  
 Crucible Steel Co. of America  
 Jeto, Inc.  
 Magnetic Seal Corp.  
 National Pneumatic Co., Inc., Holtzer-Cabor Divs.  
 Waimet Alloys Co., Div. Consolidated Foundries & Mfg. Corp.  
 Westinghouse Electric Corp.

#### ALTERNATORS

Aerojet-General Corp.  
 \*AIRESEARCH MFG. CO. DIV.-THE GARRETT CORP.  
 American Aeroparts  
 American Bosch Arma Corp.  
 American Electronics, Inc.  
 American Machine & Foundry Co., Government Products Group  
 Bendix Aviation Corp., Red Bank Div.  
 D. & R. Ltd.  
 Dalmator Div., Yuba Consolidated Industries, Inc.  
 Delco-Remy Div., General Motors Corp.  
 Ecor Div.-Scranon  
 Electric Motors & Specialties, Inc.  
 Electro-Mechanical Products Co.  
 General Electric Co., Apparatus Sales Div.  
 Geator Corp.  
 Greer Hydraulics, Inc.  
 Hallomere Electronics Co.  
 Hoover Electric Co.  
 International Ferrom Machinery Co., Inc.  
 Jack & Heintz, Inc.  
 Leach Corp.  
 Lear, Inc., Grand Rapids Div.  
 Lima Airborne Products, Div.-American Machine & Foundry Co.  
 \*LYCOMING DIV., AVCO MFG. CORP.  
 Motoresearch Co.  
 Heinz Mueller Eng. Co. Inc.  
 Pioneer Tool & Engrg. Co.  
 Talley Corp., The  
 Tapco Group, Thompson Ramo Wooldridge Inc.  
 Task Corp.  
 Technical Apparatus Builders  
 Western Design, Div.-U. S. Industries, Inc., Santa Barbara Div.  
 Westinghouse Electric Corp.  
 Wincharger Corp., Sub.-Zenith Radio Corp.

#### ALTIMETERS, BAROMETRIC PRESSURE

\*AIRESEARCH MFG. CO. DIV.-THE GARRETT CORP.  
 Airguide Instrument Co.  
 Bendix Aviation Corp., Pioneer-Central Div.  
 A. Biederman, Inc.  
 Bourns Labs., Inc.  
 Colvin Labs., Inc.  
 Computer Instruments Corp.  
 Consolidated Diesel Electric Corp.  
 Curtiss-Wright Electronics Div., IML Branch

Daystrom Pacific Div.-Daystrom, Inc.  
 Donner Scientific Co.  
 Fairchild Controls Corp., Components Div.  
 Kollsman Instrument Corp., Sub.-Standord Coil Products Co., Inc.  
 \*WALLACE O. LEONARD, INC.  
 Minneapolis-Honeywell Regulator Co.-Aeronautical Div.  
 Power-Tronic Systems Inc.  
 Rahm Instruments, Div.-American Machine & Metals, Inc.  
 Rosemount Engrg. Co.  
 Wallace & Tiernan Inc.  
 Welham Engrg. Corp.  
 Waste King Corp., Technical Products Div.  
 Winzen Research Inc.

#### ALTIMETERS, RADIO & RADAR

American Machine & Foundry Co., Greenwich Atlas Precision Products, Co.  
 Bendix-Pacific Div., Bendix Aviation Corp.  
 Collins Engrg. Corp.  
 Dayton Aviation Radio & Equipment Corp.  
 Electro Development Corp.  
 Electronic Communications, Inc.  
 Electronics Div., Van Norman Industries Inc.  
 Emerson Electric Mfg. Co., The, Electronics & Avionics Div.  
 Emerson Radio & Phonograph Corp.  
 General Communication Co.  
 Gillilan Bros. Inc.  
 Hazeltine Electronics Div.-Hazeltine Corp.  
 ITT Labs.  
 Lear, Inc.  
 Litton Industries, Maryland Div.  
 W. L. Maxson Corp., The  
 Minneapolis-Honeywell Regulator Co., Ordnance Div.  
 Motorola Inc., Military Electronics Div.  
 Ralph M. Parsons Co., The, Electronics Div.  
 Patterson, Moos Div.-Universal Winding Co., Inc.  
 Radiation, Inc.  
 Raytheon Mfg. Co., Government Equipment Div.  
 Telectro Industries Corp.

#### ALUMINIZERS, VACUUM

See VACUUM ALUMINIZERS

#### ALUMINUM FOIL

See FOIL, ALUMINUM

#### AMMETERS

Assembly Products, Inc.  
 Beede Electrical Instrument Co. Inc.  
 Bristol Co., The  
 Burton-Rogers Co., Sales Div.-Hoyt Electrical Instruments.  
 Cambridge Instrument Co., Inc.  
 Columbia Electric Mfg. Co.  
 Dejour-Amsco Corp., Electronic Sales Div.  
 Electric Design & Mfg. Co.  
 Electro-Tech Equipment Co.  
 Epic, Inc.  
 General Electric Co., Apparatus Sales Div.  
 Greibach Instruments Corp.  
 Helipot Div.-Beckman Instruments Inc.  
 Hewlett-Packard Co.  
 Hoyt Electrical Instrument Works, Burton Rogers Co.  
 Industrial Instruments Inc.  
 International Instruments Inc.  
 Marston Instrument Div.  
 Meters Inc.  
 Minneapolis-Honeywell Regulator Co., Industrial Product Group  
 National Electronics  
 New England Scientific Instruments Co.  
 Pace Electrical Instruments Co., Inc.  
 Physics Research Laboratories, Inc.  
 Rochester Mfg. Co. Inc.  
 Simpson Electric Co.  
 Sun Electric Corp., Aeronautical Div.  
 Technique Associates Div., Duncan Electric Co., Inc.  
 Triplett Electrical Instrument Co.  
 Wacline, Inc.  
 Waters Mfg., Inc.  
 Westinghouse Electric Corp.  
 Weston Instruments, Div.-Daystrom, Inc.

#### AMPLIDYNES

Allis-Chalmers  
 Bogue Electric Mfg., Co.  
 General Electric Co., Apparatus Sales Div.  
 Hoover Electric Co.  
 Waldom Electronics Inc.  
 Westinghouse Electric Corp.

#### AMPLIFIERS

a. Antenna  
 b. Audio Subminiatures  
 c. Booster  
 d. Cathode Followers  
 e. Compressor  
 f. Computer  
 g. Control  
 h. Cuing  
 i. Data Recording  
 j. DC  
 k. Decade, Audio  
 l. Development  
 m. Differential  
 n. Direct Current  
 o. Distribution, Audio

p. Distribution, RF & IF  
 q. Encapsulated  
 r. Industrial Sound  
 s. Instrumentation  
 t. Integrating  
 u. Intermediate Frequency  
 v. Isolation  
 w. Limiting  
 x. Line  
 y. Line, Audio  
 z. Logarithmic  
 a1. Magnetic  
 b1. Microphone  
 c1. Microwave  
 d1. Mixing Audio  
 e1. Mixing, RF  
 f1. Monitoring Audio  
 g1. Monitoring RF  
 h1. Noise-Suppressing  
 i1. Operational  
 j1. Oscilloscope  
 k1. Peak Limiting  
 l1. Photocell  
 m1. Plug-In  
 n1. Power  
 o1. Power, Special Service  
 p1. Printed Circuit  
 q1. Servo  
 r1. Single-Sideband  
 s1. Stabilizing  
 t1. Strain Gage  
 u1. Tone Control  
 v1. Transistor  
 w1. Ultrasonic  
 x1. Vibration Pickup  
 y1. Wideband, Audio  
 z1. Wideband, RF

#### \*ACF ELECTRONICS DIV., GENERAL MOTORS CORP., q, i-1, p-1, v-1.

ACF Industries Inc., a, i, j, l, m, q, s, a-1, p-1, q-1  
 Acromag Inc., f, j, m, n, q, s, t, v, a-1, i-1, l-1, m-1, q-1, s-1.  
 Acton Labs. Inc., k.  
 Adept Industries Inc., p-1.  
 Adler Electronics, Inc., o, u, d-1, v-1, z-1.  
 Advanced Electronics, Inc., x-1.  
 Aeroflex Corp., The, Aeroflex Labs. Div., g, n-1, q-1, s-1, v-1.  
 Aerolab Development Co., f, g, j, l, m, n, t thru z, a-1, h-1, i-1, k-1, m-1 thru l-1, s-1, t-1, v-1.  
 Aerolite Electronics Corp., q.  
 Aeronautical & Instrument Div., Robertshaw-Fulton Controls Co., s-1, v-1.  
 Aeronautic Systems, Inc., Sub.-Ford Motor Co., f, p-1.  
 Aerovox Corp., h, x, y, d-1.  
 Aera Electronics Corp., w-1.  
 Air Logistics Corp., g, h, l, m, q, y, h-1, p-1, x-1.  
 Airborne Accessories Corp., g, a-1, q-1, v-1.  
 Airborne Instruments Lab., Div.-Cutler-Hammer, Inc., f, t, u, i-1.  
 Aircom Inc., c-1.  
 Aircom Inc. of New Jersey, c-1.  
 Airpax Electronics Inc., Seminoe Div., f, g, i, j, m, n, a-1, m-1, p-1, s-1.  
 Airtronics International Corp., p-1, v-1.  
 Alfred Electronics, j.  
 Allegny Instrument Co., Inc., f, j, m, n, s, t, j-1, l-1.  
 Alto Scientific Co., Inc., v-1, z-1.  
 Amelco, Inc., a thru d, g, i, k thru n, s, u, z, a-1, g-1, h-1, i-1, k-1, l-1, n-1, p-1, q-1, s-1, t-1, v-1.  
 Amerac Inc., s-1.  
 American Bosch Arma Corp., f, g.  
 American Electronic Labs., Inc., j, m, s.  
 American Electronics, Inc., f, g, l, a-1, n-1, q-1, v-1.  
 American Machine & Foundry Co., Government Products Group, a thru d, g, l, s, c-1, e-1, f-1, n-1, q-1.  
 American Machine & Foundry Co., Greenwich, a.  
 American Measurement & Control, Inc., g, j, m, q-1, t-1.  
 American Missile Products Co., Inc., a, c, f, g, i, n, q, s, u, i-1, m-1, p-1, v-1, x-1, y-1.  
 American Printed Circuits Co., Inc., t-1.  
 American Research & Mfg. Corp., j, n, q, s, t, v, w, a-1, m-1, n-1, o-1, q-1, t-1, v-1, x-1.  
 Amplifier Corp. of America, w, x, y, n-1.  
 Anaheim Electronics Co., Inc., n, v-1.  
 Analogue Controls, Inc., q-1.  
 Andersen Labs., b thru g, j thru y, a-1, c-1 thru n-1, p-1 thru w-1.  
 Anlab Inc., i.  
 Applied Science Corp. of Princeton, i, j, p, s, v-1, z-1.  
 Astenberg Ultrasonic Lab, Inc., w-1, l-1.  
 \*ARNOUX CORP., d, q, s, a-1, q-1, t-1.  
 Associated Engineers, Inc., e, l, s, v-1, w-1.  
 Atlantic Instrument Corp., Sub.-American Electronics, Inc., n, q, z.  
 Atlantic Research Corp., b, d, l, s, b-1, m-1, v-1, x-1, y-1.  
 Audio Instrument Co., Inc., d, z.  
 Audio-Master Corp., r, y, a-1, v-1.  
 Automation Dynamics Corp., g, v-1.  
 Automation Instruments Inc., w-1.  
 \*AVCO MFG. CORP., CROSLLEY DIV.  
 Avien, Inc., q-1.  
 B & F Instruments, Inc., i.  
 B & K Instruments, Inc., k, s, b-1, t-1, x-1.  
 Baldwin Piano Co., The, Industrial Products Div., k, l, a, x, y, b-1, d-1 thru g-1, i-1, m-1, o-1, p-1, y-1, z-1.

Plantine Labs., Inc., k.  
 Eber-Colman Co., q-1.  
 Eber Sales Co., q.  
 Eker & Williams, Inc., q-1.  
 Ekman Instruments, Inc., Berkeley Div., j, t, i-1.  
 ELMAN-Systems Div., j, s, t-1.  
 ELMAN ENGRG. CO., m-1, n-1.  
 E Aircraft Corp., Niagara Frontier Div., j, a-1, i, q-1.  
 E & Gossett Co., v-1.  
 E & Howell Co., l, r, s, l-1.  
 Eck Instrument Corp., a, b, c, f, g, m, n, q, s, t, z, n-1, q-1, v-1.  
 Eclix Aviation Corp., Eclipse-Pioneer Div., f, g, i, q-1.  
 Eclix Aviation Corp., Pioneer-Central Div., w-1.  
 Eclix Aviation Corp., Red Bank Div., c-1, n-1, i, v-1.  
 Eclix Aviation Corp., Semiconductor Products, Red Bank Div., v-1.  
 Eclix Aviation Corp., York Div., q, s, c-1, e-1.  
 Eclix Computer, Div.-Bendix Aviation Corp., j, t.  
**INDEX PRODUCTS DIV., BENDIX AVIATION CORP.,** i, l, n, q, s, a-1, m-1, p-1, q-1, v-1.  
 Eclix Radio Div., Bendix Aviation Corp., u, v, y, z.  
 Elen Labs., Inc., d, l, q-1, v-1.  
 E Lab., Inc., d, g, i, w, k-1, s-1, y-1.  
 E Jiederman, Inc., l.  
 Elis Electronic Corp., j, v-1.  
 Elmer-Tongue Labs., Inc., b, d, i, k, l, o, p, r, s, t, u, v, x-1, c-1, d-1, e-1, g-1, y-1, z-1.  
 Elon Presto Co., Div.-Siegle Corp., The, o, r, y, i, k, l, m-1.  
 Ely Electronic Mfg. Co., g, j, n, a-1, n-1, q-1, v-1, i, q-1, s-1, v-1.  
 Elm Mfg. Corp., Div.-General Bronze, n, a-1, n-1, i, q-1, s-1, v-1.  
 Elman Instruments, Inc., w-1.  
 Elms Associates, Inc., f, g, i, r, s-1.  
 Elm Co., The, f, g, i, j, m, n, s, t, q-1, t-1.  
 Elm Engrg. Co., Inc., b, f, g, i, k, l, a, n-1, a-1, i, q-1, v-1, y-1, z-1.  
 Elm Instruments, Div.-Clevite Corp., d, f, g, i, j, m, n, s, t, v, x, z, i-1, j-1, n-1, p-1, t-1, s-1, v-1.  
 Elm Electronics Corp., z-1.  
 Elva Watch Co., Electronics Div., b, d, f, t, r, u, n, q, s, t, u, v, z, d-1, g-1, i-1, k-1, m-1, n-1, i, q-1, v-1.  
 Elm Electronic Co., a, b, f, i, j, m, t, r, u, s, x, y, z, d-1, e-1, n-1, a-1, q-1, s-1, v-1, y-1, z-1.  
 Elm Brown Research Corp., f, g, i, j, k, m, s, t, x, z, n-1, p-1, q-1, v-1, w-1, y-1.  
 Elm-Rodgers, Inc., f, g, l, n, r, t, d-1, n-1, i, q-1, v-1.  
 C K Components, Inc., q, a-1.  
 Cernia Technical Industries, Div.-Textron Inc., z.  
 Coraflex Corp., f.  
 Corthers & Fernandez, Inc., b, d, k, l, a, q, x, y, i, m-1, a-1.  
 Cor Engrg. Div.-Control Data Corp., a-1, v-1.  
 Cor (Constantine Engrg. Labs. Co.), a-1, v-1.  
 Corab, Div.-Globe-Union, b.  
 Corson Inc., b, c, d, f, t, r, u, s, t, h, r, u, q, v-1, i, q-1, m-1, t-1, v-1, w-1, x-1, y-1, z-1.  
 Cory Electronics & Instruments, Inc., i, s, t.  
 Cota Engrg. Corp., e, m, n, s, t, x, y, b-1, i-1, i, q-1, v-1.  
 Cotl Co., a.  
 Cotpeake Instrument Corp., b-1, v-1, w-1.  
 Cota Aerial Industries, Inc., e, f, i, r, s, t, i-1, i, q-1.  
 Cota Engrg., y.  
 Cotland Instrument Co., m, s.  
 Cotland Metal Specialties Co., Electronics Div., i, q-1.  
 Cot Electronics, g, l, s, a-1, q-1, v-1.  
 Cot Collins Corp., q-1.  
 Cota Radio Co.  
 Cota Research Corp., f, m, n, t, w, i-1, p-1, q-1, v-1.  
 Cota Products Co., a.  
 Cota Engrg. Corp., a, c, p, z-1.  
 Cota Engrg. Associates, Inc., f, g, i, j, m, n, v, y, i-1, t-1, x-1.  
 Cota Avionics Corp., f, g, i, j, n.  
 Cota Controls Corp., g, i, l, n, s, a-1, q-1, v-1.  
 Cota Diesel Electric Corp., f, g, i, s, a-1, i, q-1, v-1.  
 Cota Electrodynamic Corp., i, s, t-1, x-1.  
 Cota Engrg., Inc., n-1.  
 Cota Circuits Inc., g, i, m, q, s, a-1, a-1, q-1, v-1.  
 Cota Data Corp., a-1.  
 Cota Development Corp., Sub.-Marquardt Aircraft Co., a, i, l, n, q, s.  
 Cota-Wright Corp., Electronics Div., f, j, s.  
 Cota-Wright Corp., Research Div., z, b-1, w-1.  
 Cota-Wright Corp., South Bend Div., t-1.  
 Cota Transformer Corp., a-1.  
 Cota Research Corp., a, i, l, p, q, u, v, w-1.  
 Cota R. Ltd., a-1.  
 Cota Div., Yubo Consolidated Industries, Inc., i, m, n, q, s, t, u, a-1, i-1, m-1, n-1, p-1, q-1, v-1, w-1.  
 Cota Instruments Div.-Telecomputing Corp., s.  
 Cota Control Systems, Inc., s.  
 Cota Corp., j, s.  
 Cota Electronics, Div.-Mid-Continent Mfg., Inc., q-1.  
 Cota Co., The, q, x, t, u, a-1, q-1, m-1, n-1, p-1, v-1, w-1, x-1, z-1.  
 Davenport Mfg. Co., j, n, r, s, l-1.  
 Daystrom Pacific Div.-Daystrom, Inc., f, q-1.  
 Daystrom Transcoil Div., Daystrom Inc., q-1.  
 Dayton Aircraft Products, Inc., a, q-1.  
 Dayton Aviation Radio & Equipment Corp., b, c, g, i, n, t, r, u, q, u, d-1, e-1, m-1, v-1.  
 Daytonair Corp., s, t-1.  
 Delco-Remy Div., General Motors Corp., a-1, a-1, q-1, v-1.  
 Detric Industries, g, l, i, q-1.  
 Di-An Controls, Inc., q-1, v-1.  
 Digitronics Corp., p-1.  
 Donner Scientific Co., c, f, g, i, j, m, q, s, t, w, i-1, m-1, a-1, s-1, y-1.  
 Dorsett Labs., Inc., j, n, m-1.  
 Doty Acoustica Electronic Labs., b, j, k, l, q, m-1, p-1, v-1.  
 Douglas Microwave Co., Inc., c-1.  
 Dresser Industries, Inc., b, d, f, g, i, t, r, u, q, s, t, u, y, a-1, b-1, j-1, t-1, s-1, i-1, v-1, w-1, x-1, z-1.  
 Du Kane Corp., b, t, r, u, s, i, t, r, u, s, u, y, a-1, b-1, d-1, t-1, g-1, m-1, t-1, q-1, s-1, u-1, v-1, y-1, z-1.  
 Dynamics Instrument Co., Div.-Alberhill Corp., f, i, j, m, n, s, t, v, i-1, m-1, t-1, v-1, x-1, y-1.  
 Dytronics Co., m.  
 Edgerton, Germeshausen & Grier, Inc., z, i-1, l-1.  
 Edin Div.-Epsco, Inc., j, n-1, t-1, x-1.  
 Thomas A. Edison Ind. Instrument Div.-Mc Graw-Edison Co., a-1, q-1, v-1.  
 Elcor, Inc., j, k, n, s, t, i-1, y-1, z-1.  
 Eldorado Electronics, n, s, t, h-1, k-1.  
 Electro Development Corp., c, q.  
 Electro Instruments, Inc., f, g, i, j, k, m, n, s, t, v, i-1, j-1, l-1, m-1, p-1, q-1, t-1, v-1, y-1.  
 Electro Precision Corp., f, g, i, s, t, i-1, m-1, p-1, q-1, t-1.  
 Electro Products Laboratories, Inc., g.  
 Electro-Mechanical Research, Inc., a, c, d, e, f, h, i, j, m.  
 Electro-Medical Lab., Inc., m.  
 Electronic Applications, Inc., l, u, t, r, u, x, b-1, c-1, i-1, j-1, y-1.  
 Electronic Communications, Inc., f, g, l, q, s, t, r, u, x, z, a-1, c-1, e-1, g-1, h-1, m-1, t-1, s-1, v-1, z-1.  
 Electronic Control Co., l-1.  
 Electronic Engrg. Co. of California, d, f, g, i, l, k-1, m-1, p-1, v-1.  
 Electronic Instrument Co., Inc. (EICD), y-1.  
 Electronic Research Associates, Inc., b, j, v-1.  
 Electronic Tube Corp., i, j, m, n, s, t, i-1, l-1, a-1, p-1.  
 Electronics of Clearfield, Inc., p, j-1.  
 Electron-Radar Products, l-1.  
 Electro-Tech Equipment Co., r, k-1.  
 Elgin Micronics Div.-Elgin National Watch Co., b, i, l, s, p-1, v-1.  
 Elgin Micronics, West Coast Div.-Elgin National Watch Co., d, f, i, l, m, n, p, s, v, w, x, d-1, l-1, k-1, l-1, p-1.  
 Emerson Electric Mfg. Co., The, Electronics & Avionics Div., a, d, f, g, i, l, m, p, q, r, t, r, u, s, t, v, x, c-1, e-1, h-1, k-1, m-1, p-1, q-1, s-1, v-1.  
 Emerson Radio & Phonograph Corp., f, g, i, l, p, u, x, z, a-1, e-1, p-1, v-1.  
 Empire Products Sales Corp., c-1.  
 Endeavor Corp., d, s, x-1.  
 Engineered Magnetics, Div.-Gulton Industries, Inc., i, j, s.  
 Enso, Inc., f, j, i-1, t-1, v-1.  
 Entron, Inc., a, p, e-1, z-1.  
 FXR, Inc., c-1, e-1, z-1.  
 Fairchild Astrionics Div., Fairchild Engine & Airplane Corp., f, g, k, l.  
 Fairfield Engrg. Corp., g, a-1, n-1, q-1, v-1.  
 Farmer Electric Products Co., Inc., k-1.  
 Federal Mfg. & Engrg. Corp., b, l, o, p, s.  
 Feedback Controls, Inc., f, g, l, a-1, i-1, q-1, v-1.  
 Ferrontron Electronics Co., Inc., b, a, u, m-1, n-1, p-1, q-1, v-1.  
 Fidelity Amplifier Co., l-1, n-1, v-1.  
 Fidelity Instrument Corp., a-1, v-1.  
 Forbes & Wagner, Inc., t.  
 Ford Instrument Co., Div.-Sperry Rand Corp., b, f, h, m, s, t, a-1, m-1, n-1, q-1.  
 Forest Electric Co., The, a, q, v, x.  
 Foto-Video Labs., Inc., c, d, p, v, w, s-1.  
 Freed Transformer Co., Inc., a-1, w-1.  
 General Communication Co., c-1.  
 General Devices, Inc., i, l, m, n, p, r, s, t, e-1, i-1, m-1, p-1, v-1, z-1.  
 General Electric Co., Apparatus Sales Div., a-1, n-1, w-1.  
 General Electric Co., Computer Dept., f, i, i-1, m-1, p-1.  
 General Electric Co., Heavy Military Electronics Dept., a, t, r, u, g, i, l, m, n, p, s, t, u, z, e-1, f-1.  
 General Magnetics, Inc., a-1, q-1.  
 Genisco, Inc., n-1, w-1, y-1.  
 Geontron Labs., Inc., b, t, r, u, f, i, k, l, m, q, s, a-1, v-1.  
 Gilmore Industries, Inc., z.  
 Good Electronic Corp., d, f, g, l, q, s, m-1, p-1, s-1, t-1.  
 Gordon Enterprises, i, z.  
 Goslin Electric & Mfg. Co., z.  
 Graflex Inc., t, q-1.  
 Guided Missile Div.-De Havilland Aircraft of Canada, Ltd., a-1.  
 Gulton Industries, Inc., l, v-1, x-1.  
 Hagan Chemicals & Controls, Inc., j, n.  
 Hallamore Electronics Co., j, m, s, f-1.  
 Haller, Raymond & Brown Inc. Div., Singer Mfg. Co., a, l, p, a-1, z-1.  
 Hallcrafters, a, f, i, j, i, n, p, u, c-1, e-1, n-1, v-1, z-1.  
 Hamilton Standard, Div.-United Aircraft Corp., f, g, i, l, m, n, q, s, t, z, i-1, l-1, n-1, t-1, s-1, v-1, w-1.  
 Hamilton Watch Co., t-1.  
 Hammarlund Mfg. Co., Inc., u, y, d-1, f-1, r-1, u-1, v-1, y-1, z-1.  
 Hanson-Garrill-Brian, Inc., n-1, a-1, q-1, v-1.  
 Paul Hardeman, Inc.  
 Harvey-Wells Electronics Inc., f, a-1, m-1, p-1, z-1.  
 Hays Corp., The, q.  
 Heiland Div.-Minneapolis-Honeywell, i, t, t-1, x-1.  
 Hewlett-Packard Co., k, n, r, y, c-1, i-1, m-1, n-1, v-1, z-1.  
 E. Vernon Hill & Co., s.  
 Hoffman Electronics Corp., Semiconductor Div., l-1.  
 Hauser Electric Co., c, g, i, l, m, n, a, p, q, s, t, u, v, w, z, a-1, e-1, n-1, a-1, q-1, v-1.  
 Walter J. Hyatt Co., The, a, c-1, q-1.  
 Hycon Mfg. Co., g, i, l, m, n.  
 ILS Instrument Co., Div.-The Marium Instrument Co., t.  
 ITT Federal Div., International Telephone & Telegraph Corp., a, e, f, g, k, m, a, t, v, w, x, z, a-1, b-1, c-1, i-1, l-1, m-1, n-1, q-1, r-1, s-1, w-1, x-1, y-1.  
 ITT Labs., l, c-1.  
 Industrial Control Co., j, a-1, n-1, p-1, q-1, t-1, v-1.  
 Industrial Television Inc., b, j-1, v-1.  
 Industrial Test Equipment Co., l, s, t, v, r-1, a-1, q-1.  
 Instrument Corp. of Fla., q-1, h-1, k-1.  
 Instrument Development Labs., Inc., s-1, v-1.  
 Instrument Labs., v-1.  
 Instrumentation Div.-Amplex Corp., a-1, d-1, y-1.  
 Instruments For Industry, Inc., a, l, p, s, u, z, e-1, i-1, i-1, v-1, w-1, x-1.  
 International Research Associates, a, b, c, k, n, x, z, a-1, n-1, a-1, v-1, x-1, y-1.  
 Interstate Electronics Corp., z.  
 ITT-Kellogg, a, w.  
 J.V.-M Microwave Co., c-1, q-1.  
 Jansky & Bailey, Inc., w, z-1.  
 E. F. Johnson Co., n-1.  
 Jordan Co., Inc., The, q-1.  
 Jordan Electronics, Div.-Victoreen Instrument Co., v-1.  
 Kaiser Aircraft & Electronics, Div.-Kaiser Industries Corp., b, a-1, c-1, f-1, l-1, r-1, v-1.  
 Kauke & Co., l, m, n, s, t-1, v-1.  
 Kay Electronic Co., b, s, m-1, v-1.  
**\*KEARFOTT CO., INC.,** g, l, s, t, a-1, c-1, m-1, q-1.  
**\*KEARFOTT CO., INC., MICROWAVE DIV.,** c-1.  
 Keithley Instruments, Inc., k, m, n, v.  
 Kelsey-Hayes Co., d, f, g, n, q-1, i-1, p-1.  
 Ketch Dept., Norden Div., United Aircraft Corp., f, g, a-1, q-1, v-1.  
 Keystone Products Co., a-1.  
 Kin Tel Div.-Cohu Electronics, Inc., g, i, j, m, n, s, i-1, t-1, v-1, w-1, x-1.  
 Kinevox Div.-Electromotion Co., b, i, s, a-1, d-1, t-1.  
 Kollmorgen Optical Corp., a-1, q-1.  
 Kollsman Instrument Corp., Sub.-Standard Coil Products Co., Inc., a-1, m-1, q-1.  
 Land-Air Inc., f, g, i, l, n, s, t, r, u, v, z, m-1, a-1, p-1, x-1, y-1.  
 Langevin Div., W. L. Maxson Corp., The, a, b, c, g, h, o, r, v, t, y, a-1, b-1, d-1, f-1, m-1, n-1, a-1, u-1, v-1, y-1.  
 La Pointe Industries, Inc., c-1, e-1, p-1, q-1.  
 Lavoie Laboratories Inc., j-1.  
 Leach Corp., g, i, j, n, q, s, a-1, t-1, v-1.  
 Lear, Inc., b, d, f, g, l, q, t, r, u, w, a-1, m-1, p-1, q-1, s-1, v-1, z-1.  
 Lear, Inc., Grand Rapids Div., a, g, l, q, s, t, r, u, w, a-1, l-1, m-1, p-1, v-1.  
 Leeds & Northrup Co., g, i, s.  
 L E L Inc., a, b, l, o, t, v, y, b-1, j-1, p-1, u-1, z-1.  
 Leland Airborne Products, Div.-American Machine & Foundry Co., z.  
 Levinthal Electronic Products, Inc., c-1, n-1.  
**\*LEWIS ENGRG. CO., THE,** z.  
 Lewiscope Inc., f, g, q-1.  
 Ling Electronics, Inc., c, d, e, g, b-1, c-1, n-1, a-1, x-1.  
 Liquidometer Corp., The, g, r, s, z, q-1, v-1.  
 Litton Industries, Inc., z.  
 Litton Industries, Maryland Div., a, u, a-1, m-1.  
 Lockheed Aircraft Corp., Missiles & Space Div., b, f, i, m, q, t, r, u, c-1, d-1, e-1, g-1, k-1, p-1, v-1.  
 J. M. Loge, Spurr Engineers, r.  
 MB Mfg. Co., x-1.  
 MF Electronics Co., b, q.  
 Magnasync Mfg. Co., Ltd., y.  
 Magnavox Co., The, t.  
 Magnetic Controls Co., f, j, q, s, a-1, p-1, q-1, r-1, v-1.  
 Magnetic Instrument Co., Inc., g, i, j, l, m, n, s, v, m-1, q-1, t-1, v-1.  
 Magnetic Research Corp., j, a-1.  
 Magnetico, Inc., g, a-1, q-1, v-1.  
 Magnetics, Inc., Control Div., a-1.  
 Maico Electronics, Inc., b, i, p-1, v-1, w-1.  
 Manson Labs., Inc., m-1.  
 Massa Div.-Cohu Electronics, Inc., j, l, m, s, m-1, p-1, q-1, s-1, v-1, w-1.  
 Mast Development Co., Inc., s.  
 W. L. Maxson Corp., The, a, f, g, l, m, p, s, t, u, z, a-1, c-1, e-1, p-1, q-1, v-1, w-1, z-1.

Mergenthaler Linotype Co., a-1, q-1.  
Micro-Gas Products, Inc., g, j, m, l-1, m-1, q-1, v-1.  
Microcrystal Mfg. Co., s, x-1.  
Microwave Associates, Inc., c-1, e-1.  
Midwestern Instruments, Inc., i, j, l, m, n, s, t, i-1, t-1, v-1, y-1.  
Milgo Electric Corp., d, f, g, i, j, l, m, s, t, v, q-1, v-1.  
Minitran Corp., a-1.  
Minneapolis-Honeywell Regulator Co.  
Aeronautical Div., f, g, n, q-1, v-1.  
Minneapolis-Honeywell Regulator Co., Boston Div., f, g, j, l, m, n, s, v, w, x-1.  
Minneapolis-Honeywell Regulator Co., Davies Labs. Div., i, j, s, p-1, q-1.  
Minneapolis-Honeywell Regulator Co., Industrial Div., f, g, i, n, s, q-1.  
Minneapolis-Honeywell Regulator Co., Industrial Product Group, i, j, m, n, s, p-1, q-1, t-1.  
Minneapolis-Honeywell Regulator Co., Ordnance Div., b, k, l, n, q, r, t, z, h-1, l-1, p-1, v-1.  
Miratrol, Inc., c, d, i, o, p, r, v, y, b-1, c-1, e-1, f-1, g-1, y-1, z-1.  
**\*MIRAX CHEMICAL PRODUCTS CORP., ELECTRO-MECHANICAL PRODUCTS DIV., a.**  
Missouri Research Labs., Inc., i.  
Monogram Precision Industries, a, b, v, c-1, h-1, j-1, m-1, n-1, r-1, s-1, u, w, x-1.  
Moran Instrument Corp., l, n, r, q-1.  
Morse Instrument Co., The, g, i, l, s, t, l-1, q-1.  
F. L. Moseley Co., z, q-1.  
Motorola Inc., Military Electronics Div., b, f, g, i, thru l, o, p, q, s, thru x, z, a-1 thru s-1, v-1, w-1, y-1, z-1.  
Heinz Mueller Eng. Co. Inc., j, l, n.  
George L. Nankervis Co., i, r, q-1, v-1.  
Narda Microwave Corp., The, b-1.  
National Pneumatic Co., Inc., Holtzer-Cabot Divs., a, f, j, k, o, p, q, u, y, b-1, d-1 thru g-1, k-1, m-1, q-1, u-1, v-1, y-1, z-1.  
National Ultrasonic Corp., f, k-1, l-1, p-1, v-1.  
Navigation Computer Corp.  
Naz-Dar Co., p-1.  
Neff Instrument Corp., i, j, m, s, v-1, x-1.  
Networks Electronic Corp., g, i, j, m, n, q, s, a-1, m-1, n-1, q-1, t-1, v-1, x-1, l-1.  
Newbrook Machine Corp.  
North Atlantic Industries, Inc., p-1.  
North Electric Co., b, g, l, n, q, s, u, n-1.  
Northeast Electronics Corp., b, d, f, j, n, q, l-1, p-1, v-1.  
Northrop Corp., p-1, q-1, v-1.  
Norton Co., New Products Dept., q.  
Nuclear Products-Erco Div.-ACF Industries, Inc., f.  
Offner Electronics Inc., i, m, n, s, q-1, t-1, v-1.  
Ohio Semiconductors, Inc., n.  
Orbitron Co., Inc., i, j, n, s, v-1.  
Ortho Filter Corp., a-1.  
Osborne Electronic Sales Corp., a-1.  
Pic Design Corp., Sub.-Benrus Watch Co., Inc., m.  
Pacific Magnetic Corp., b, a, g-1.  
Paramount Design Co., f, g, i, s, t, c-1, m-1, q-1, s-1, v-1.  
Paraplegics Mfg. Co., Inc., a-1.  
Peer, Inc., e, g, w, y, v-1.  
Perkin Engrg. Corp., j, n, a-1.  
Perry Plastics, Inc., b, l, b-1, f-1, n-1, v-1.  
Peschel Electronics, Inc., g.  
George A. Philbrick Researches, Inc., c, f, j, s, i-1, m-1, n-1, p-1.  
Philco Corp., Government & Industrial Div., b thru g, i, j, l thru u, w thru z, b-1 thru k-1, m-1 thru v-1, y-1, z-1.  
Phorabell Co., Inc., g, s, a-1, k-1, p-1, v-1.  
Photocon Research Products, j, s, t-1.  
Photo-Crystals, Inc., b-1, l-1.  
Photomat, Inc., l-1.  
Photon Instrument Co., i, j, n, s, i-1, m-1, s-1, t-1, x-1.  
Polytechnic Research & Development Co., Inc., c-1.  
Portchester Instrument Corp., c-1.  
Power Supplies Inc., q-1, w-1.  
Power-Tronic Systems Inc., b, c, d, f, g, i, l, s, t, v, a-1, i-1, n-1, p-1, q-1, s-1, v-1, y-1.  
Precision Electronics Corp., c, d, f, j, k, l, n, o, s, u, w, b-1, d-1 thru g-1, j-1, m-1, p-1, v-1, y-1, z-1.  
Process & Instruments, i, m, s.  
Projects Unlimited Inc.  
Quan-Tech Labs., g, j, k, m, n, v, j-1, p-1, t-1, v-1.  
RS Electronics Corp., l, p, s, u, z, e-1, g-1, n-1, p-1, v-1, z-1.  
Radiophone Co. Inc., a, thru d, i, l, p, s, u, e-1, m-1, p-1, v-1, w-1, y-1, z-1.  
Radiation, Inc.  
Radialectronics, Inc., a.  
Raytheon Mfg. Co., z.  
Raytheon Mfg. Co., Government Equipment Div., c-1.  
Reeves Instrument Corp., f, g, j, t, q-1.  
Reflectone Corp., The, c, g, o-1, q-1, v-1.  
Edw. Renneburg & Sons Co., h-1, l-1.  
Resdel Engrg. Corp., c, l, p, s, u, x, c-1, e-1, n-1, o-1, z-1.  
**\*RHEEM MFG. CO., DEFENSE & TECHNICAL PRODUCTS DIV., j, m, p, s, a-1, p-1, v-1, x-1, z-1.**  
Rixon Electronics Inc., d, j, l, m, q, v-1.  
Roanwell Corp., b.  
Robot Industries Inc., a-1, l-1.  
Royal Industries, Inc., f, j, l, q-1.  
Rutherford Electronics Co., y-1.  
Ryon Aeronautical Co., g, l, n, p-1, q-1.  
Safety Electrical Equipment Corp., a-1.  
Soge-Craft, Inc., a, c, p, x.

Sanborn Corp., j, m, n, s, z, m-1, t-1.  
Sangamo Electric Co., a-1, v-1.  
Santa Barbara Research Center  
Schaevitz Engrs., q-1.  
Scientific-Atlanta, Inc., a, q-1, z-1.  
H. H. Scott, Inc., b, d, k, l, a, r, s, y, z, b-1, f-1, h-1, j-1, m-1, q-1, w-1, x-1, y-1.  
Seeburg Corp., The, a, b, i, s.  
Seisnor Mfg. Co., i, j, k, u, e-1, l-1, w-1, x-1.  
Sequoia Wire & Cable Co.-Div.-Mandrel Industries, Inc., j, k, l, n, a, v-1.  
Servo Corp., a, America, p-1.  
Servomechanisms, Inc., c, d, f, g, j, l, n, q, s, t, w, a-1, d-1, i-1, l-1 thru q-1, s-1, w-1.  
Servomechanisms, Inc., Mechrolor Div., g, s, a-1, q-1, v-1.  
Shure Brothers, Inc., x-1.  
Sigma Instruments, Inc., a-1.  
Signal Transformer Co., a-1.  
Singer Mfg. Co., The, Military Products Div., a, f, g, l, p, p-1, q-1, v-1, z-1.  
Skiatron Electronics & Television Corp., f, g, i, j, l, t, q-1, v-1, y-1, z-1.  
Solar Aircraft Co., v-1.  
Southwestern Industries Electronics Co., b, f, g, i, m, n, s, u, e-1, h-1, i-1, j-1, n-1, a-1, q-1, t-1, u-1, v-1, w-1, x-1.  
Space Corp., h, l, s, y, a-1.  
Specialties, Inc., a-1.  
Specialty Engrg. & Electronics Co., l-1.  
Spectral Electronics Corp., i, q-1, v-1.  
Sperry Electronic Tube Div., Sperry Rand Corp., c-1.  
Sperry Farragut Co., Div.-Sperry Rand Corp., f, s, m-1, p-1, q-1, v-1.  
Sperry Gyroscope Co., Marine Div., Div.-Sperry Rand Corp., s-1.  
Sperry Microwave Electronics Co., Div.-Sperry Rand Corp., c-1.  
Sperry Piedmont Co.-Div.-Sperry Rand Corp., s-1.  
Squires Gage Co., a.  
Statham Instruments, Inc., h, i, s, t-1, v-1.  
Sterling Precision Corp., Instrument Div., e, f, s, l-1, p-1, v-1.  
Strand Engrg. Co., q, u.  
Stromberg-Carlson Div.-General Dynamics Corp., g, a, r, f-1, v-1.  
Systems Inc., a thru z, a-1 thru z-1.  
T.C. Div., Dyna-Empire, Inc., l.  
Talley Corp., The, a-1.  
Topco Group, Thompson Ramo Wooldridge Inc., f, g, i, a-1, q-1, v-1.  
Technical Apparatus Builders, M-1, N-1, a-1, v-1.  
Technitrol Engrg. Co., n-1, q-1.  
Technology Instrument Corp., k, n-1.  
Teifer Engr. Corp., a.  
Telechrome Mfg. Corp., b, c, d, f, i, j, l, m, p, q, s, u, thru x, z, c-1, e-1, g-1, m-1 thru p-1, r-1, s-1, t-1, v-1, z-1.  
Telectro Industries Corp., a thru q, s thru z, a-1 thru v-1, x-1, y-1, z-1.  
Tele-Dynamics Inc., b, c, i, j, l, m, s, d-1, m-1, v-1, w-1, z-1.  
Teledad Mfg. Corp., u, c-1, z-1.  
Television Utilities Corp., p, r, x, f-1.  
Tel-Instrument Electronics Corp., p.  
Thermo Electric Co., Inc., q-1.  
Thomas Electronics, Inc.  
Topper Mfg. Co., Inc., q, p-1, v-1, w-1.  
Torwico Electronics, Inc., a-1.  
Transistor Electronics Corp., f, y, m-1, v-1.  
Transonic, Inc., n, q, a-1, m-1, p-1, v-1.  
Tresco, Inc., z.  
Trionics Corp., b, f, g, l, n, q, s, t, p-1, q-1, v-1, w-1.  
Tube-Turns Div., Chematron Corp., m-1.  
Turbo Machine Co., a, d, g, j, s, u.  
Twenty-First Century Electronics, Inc., m-1, v-1.  
United Control Corp., j, m, n, p, a-1, q-1, v-1.  
United Electrodynamics, Inc., d, i, j, n, s, n-1, p-1, t-1, v-1, x-1.  
U. S. Industries, Inc., a, b, c, g, h, i, m.  
U. S. Science Corp., Div.-Topp Industries, Inc., c, e, f, i, j, l, m, q, s, t, a-1, g-1, r-1, v-1.  
Unified Transformer Co., a-1.  
Universal Tool and Coil Winding, Inc., a-1.  
Vario Associates, Inc., a-1, n-1.  
Vort-L Co., Inc., a-1, o-1.  
Vicon Corp., p, v, x.  
Victor R. F. & Microwave Co., b-1.  
Video Instruments Co., Inc., j, m, n, s, y, l, t-1, v-1.  
Virginia Electronics Co., Inc., p, w, x, y, d-1, e-1, m-1, n-1, p-1.  
Waldorf Electronics, Div.-F. C. Huyck & Sons, f, g, s, i-1, m-1, q-1.  
Walkitt Co., b, d, f, k, m, q, m-1, v-1.  
Waltham Electronics Corp., z-1.  
Warren Components, Div.-El-Tronics, Inc., n-1.  
Warren Transformer Co., Inc., q, a-1.  
Waterman Products Co., Inc., j-1.  
Wough Engrg. Co., q-1, s-1.  
Waveline, Inc., c-1.  
Webcor, Inc., Government Div., a, f, g, i, m, q, f-1, p-1, v-1.  
Westbury Electronics Inc., a, p, q, u, a-1, v-1.  
Western Design, Div.-U.S. Industries, Inc., Santa Barbara Div., s.  
Western Gear Corp., q-1.  
Westinghouse Electric Corp., a, c, f, i, k, l, p, a-1, c-1, n-1, q-1, l-1, v-1, y-1, z-1.  
Weston Hydraulics Ltd.-Sub., Borg-Warner Corp., q-1.  
Weston Instruments, Div.-Doystrom, Inc., g, j, m, n, t, n-1.  
Westronics Inc., g, i, s, q-1, t-1.

Wheeler Electronic Corp., Sub.-Sperry Rand Corp. i, n thru q, s, u thru y, a-1, c-1, n-1, a-1, p-1.  
Winder Aircraft Corp. of Florida, q, j-1.  
Winzer Research Inc., s.  
Warner Electronic Devices, g.  
Wright Engrg. Co., p, c-1, e-1, g-1, z-1.  
Wye Industries, w-1.  
Zacharias Electronics Corp., b, d, k, l, a, s, u, y, y, b-1, d-1, f-1, j-1, p-1, u-1, v-1, w-1, x-1, y-1.  
**ANALYSIS EQUIPMENT, ELECTRO-CHEMICAL**  
American Instrument Co., Inc.  
Analytical Instruments, Inc.  
R. B. Annis Co.  
Beckman-Scientific & Process Instruments Div.  
Bendix Aviation Corp., York Div.  
Bergen Labs., Inc.  
Bristol Co., The  
Consolidated Electrochemicals Corp.  
Delsen Corp.  
Fisher Scientific Co.  
Furane Plastics, Inc.  
General Electric Co., X-Ray Dept.  
Hughes Tool Co., Aircraft Div.  
Industrial Instruments Inc.  
Jarrell-Ash Co.  
Harold Kruger Instruments  
Leeds & Northrup Co.  
National Spectrographic Labs., Inc.  
New England Scientific Instruments Co.  
Pekin-Elmer Corp.  
Milton Roy Co.  
**ANALYSIS EQUIPMENT, MAGNETIC**  
See **MAGNETIC ANALYSIS EQUIPMENT**  
**ANALYZERS**  
a. Antenna Pattern  
b. Audio Amplifier  
c. Cable  
d. Capacitor  
e. Circuit  
f. Coincidence  
g. Crystal  
h. Differential  
i. Differential Computer  
j. Digital  
k. Dimensional  
l. Distortion  
m. Electro-Chemical  
n. Engine  
o. Flight  
p. Frequency  
q. Gas  
r. Ignition  
s. Infrared  
t. Intermodulation  
u. Internal Combustion  
v. Magnetic  
w. Microwave  
x. Neutron Absorption  
y. Noise  
z. Phase  
a1. Radar  
b1. Servo  
c1. Spectrum  
d1. Spectrum, nuclear  
e1. Stress Surface  
f1. Transducer  
g1. Transistor  
h1. Ultrasonic  
i1. Vibration  
j1. Wave  
k1. Waveform  
Advanced Electronics, Inc., i-1.  
Aeroflex Corp., The, Aeroflex Labs. Div., a.  
Aetna Electronics Corp., b-1.  
Air Logistics Corp., d, e, i, z, b-1.  
Airborne Instruments Lab., Div.-Cutler-Hammer, l, a.  
Aircor Inc. of New Jersey, w.  
**\*AIRESEARCH MFG. CO., DIV.-THE GARRETT CORP., n, e-1.**  
Altrax Electronics Inc., Seminole Div., p.  
Amelco, Inc., e, c-1.  
American Electronic Labs., Inc., c-1, q-1.  
American Electronics, Inc., American Nuclear Div. d-1.  
American Electronics, Inc., Tallyer & Cooper Div., m, q.  
American Machine & Foundry Co., Government Products Group, a, b, p, a-1, b-1.  
American Machine & Foundry Co., Greenwich, s, v, w, z, a-1, b-1.  
American Research & Mfg. Corp., l, p, c-1, i-1.  
Analytical Instruments, Inc., m.  
Antlob Inc., a.  
Applied Radiation Corp., v.  
Applied Research Labs., Inc., c-1.  
Applied Science Corp. of Princeton, p, y, b-1, f-1.  
Audio Instrument Co., Inc., l.  
Automotion Dynamics Corp., c.  
Avion, Inc., i-1.  
Axler Associates Inc., q, s.  
B & H Instrument Co., Inc., n, p.  
B & K Instruments, Inc., b, l, p, y, c-1, i-1.  
Bird-Atomic, Inc., q, s, d-1, g-1.  
Borker & Williamson Inc., l.  
**\*BAUSCH & LOMB OPTICAL CO., s, c-1.**  
Beckman-Scientific & Process Instruments Div., m, q, s.  
Bendix Aviation Corp., York Div., a, p, w, z, j-1, l-1.

- Bix Computer, Div.-Bendix Aviation Corp., i, j.  
**\*INDIX PRODUCTS DIV., BENDIX AVIATION DRP., n, s.**  
 Bix Radio Div., Bendix Aviation Corp., a, a-1.  
 Bjen Labs., Inc., m, t, h-1.  
 Bja Labs., Inc., f, h, d-1, k-1.  
 Bider-Tongue Labs., Inc., l, j, l, k-1.  
 Blue Electric Mfg. Co., c, n, a.  
 Bgs Associates, Inc., k-1, k-1.  
 Brol Co., The, e, m.  
 Bswick Instruments, z.  
 Bih Instruments, Div.-Clevite Corp., h, i, j, l thru s, v, w, a-1, b-1, d-1, e-1, f-1, h-1, j-1.  
 Bw Electric Co., i, p, w, b-1.  
 C Labs., Inc., c-1.  
 Cernia Technical Industries, Div.-Textron Inc., a, d, e, w, g-1.  
 Cll Electronics Corp., k-1.  
 Cramix Inc., h thru l, c-1, g-1.  
 Clapeke Instrument Corp., a, j, f-1.  
 Clago Aerial Industries, Inc., d.  
 Clier Corp., Defense Operations Div., p.  
 Cyl Dynamics, i, j-1, f-1.  
 Cleland Instrument Co., k.  
 Cons Microflat Co.  
 Colalated Avionics Corp., g-1.  
 Colalated Diesel Electric Corp., c, e, i, j, f-1, l.  
 Colalated Diesel Electric Corp., Western Div., n.  
 Colalated Electrodynamics Corp., m, q, e-1, f-1, l.  
 Coll-Dubiler Electric Corp., d.  
 Jcs Cunningham Son & Co., Inc., e.  
 Coss-Wright Electronics Div., IMI Branch, f-1, g-1.  
 Cuss-Wright Corp., Research Div., h.  
 Dator Div., Yuba Consolidated Industries, Inc., i.  
 Dds Instruments, q.  
 Deon Aviation Radio & Equipment Corp., b, e.  
 Deborn Electronic Labs., d.  
 Dier Corp., The, p, c-1, i-1.  
 Dornay-Bonardi, p, w, c-1.  
 Din Controls, Inc., j, v.  
 W. J. Dillon & Co., Inc., f-1.  
 DircO, Inc., Electronics Div., c, e.  
 Div-Wayne Electronics, Div.-Divco-Wayne Corp., a.  
 Dier Scientific Co., h, i, t, b-1, f-1, j-1, k-1.  
 Dlas Microwave Co., Inc., w, a-1.  
 Drier Industries, Inc., b, j, p, f-1, i-1.  
 Dic Inc., v.  
 Dnics Co., y.  
 Div.-Epsco, Inc., c-1, k-1.  
 T as A. Edison Ind. Instrument Div.-Mc Grow-Ison Co., b-1.  
 Eido Electronics, f, d-1.  
 Elro Instruments, Inc., d, j.  
 Elro Products Laboratories, Inc., e-1, i-1.  
 Elronic Applications, Inc., l, t.  
 Elronic Communications, Inc., e, p, s, w, z, a-1.  
 Elronic Research Associates, Inc., g-1.  
 Elronic Tube Corp., a-1.  
 Elro-Tech Equipment Co., c, d, e, y, i-1.  
 Elr Micronics, West Coast Div.-Elgin National Tech Co., f, l-1.  
 Elby Motor Co., Inc., c.  
 Enson Electric Mfg. Co., The, Electronics & Ionics Div., a.  
 Enson Radio & Phonograph Corp., j, w, z, a-1, g-1.  
 Enre Products Sales Corp., a, l, w, y, a-1, k-1.  
 Envco Corp., f-1, i-1.  
 Enhard Industries, Inc., q.  
 Ep Inc., i-1.  
 EX Inc., a, w, y, c-1, k-1.  
 Fairchild Astrionics Div., Fairchild Engine & Plane Corp., g-1.  
 Fair Products Corp., k.  
 Fehel Scientific Corp., c-1.  
 Feltron Electronics Co., Inc., y, g-1.  
 Fley Co., The, a.  
 Fir Scientific Co., m, q.  
 Foss, George F., Industrial Mathematician, h, i, j.  
 Frit Transformer Co., Inc., l.  
 Fule Plastics, Inc., l, m.  
 Geral Communication Co., w, c-1.  
 Geral Electric Co., Apparatus Sales Div., h.  
 Geral Electric Co., X-Ray Dept., m, c-1, d-1.  
 Geral Electrodynamics Corp., c-1.  
 Geral Scientific Equipment Co., k-1.  
 Grex Inc., b, a-1.  
 Guin Industries, Inc., h-1, t-1.  
 Hal, Raymond & Brown Inc. Div., Singer Mfg. Co., a-1.  
 Halcrafters, a, t, a-1.  
 Hakainen Instruments, q.  
 Halton Standard, Div.-United Aircraft Corp.  
 Haley-Wells Electronics Inc., j, v, b-1.  
 Ha Corp., The, q.  
 Halline Electronics Div.-Hazeltine Corp., c-1.  
 Heatt-Packard Co., l, y, j-1, k-1.  
 Himp Wires Inc., c.  
 Holan Electronics Corp., Semiconductor Div., s, j, g-1.  
 Hoer Electric Co., g-1.  
 Hues Tool Co., Aircraft Div.  
 W. J. Hyatt Co., The, a, w, a-1, b-1, j-1, k-1.  
 Iederal Div., International Telephone & Telegraph Corp., a, d, e, f, h, i, l, n, a, p, s, t, v thru y-1, c-1, e-1 thru i-1, k-1.  
 Ierial Control Co., b-1.  
 Ierial Instruments Inc., c, m, q.  
 Ierial Test Equipment Co., l, p, z, b-1, k-1.  
 Ins Co., Div.-Bary Controls Inc., i-1.  
 Instrument Labs., e.
- International Research & Development Corp., i-1.  
 International Wire & Cable Co., c.  
 Interstate Electronics Corp., f, d-1.  
 Irek Corp., w, c-1.  
 Jansky & Bailey, Inc., a, p.  
 Jarrell-Ash Co., m, c-1.  
 Jefferson Electronic Products Corp., c.  
 Johnson-Williams, Inc., q.  
 Kahn & Co., Inc., i-1.  
 Koiser Aircraft & Electronics, Div.-Kaiser Industries Corp., c, a, w.  
 Kay Electric Co., a thru e, g, p, y, c-1, g-1, i-1, j-1.  
**\*KEARFOTT CO., INC., j, w, z, b-1, g-1, j-1, k-1.**  
 Kingston Electronics-Div.-Kingston Industries Inc., e.  
 Harold Kruger Instruments, q.  
 Land-Air Inc., j, n, o, u, v, x, f-1, i-1.  
 La Roe Instruments, Inc., i.  
 Laviole Laboratories Inc., e, c-1.  
 Leeds & Northrup Co., m, q, s.  
 Ling Electronics, Inc., c-1.  
 Lockheed Aircraft Corp., Missiles & Space Div., a.  
 MB Mfg. Co., i-1.  
 Magnaflex Corp., v, e-1.  
 Marconi Instruments, l, t, c-1, j-1.  
 Measurements Div., McGraw Edison Co., t.  
 J. E. Menaugh Co., r.  
 Micrometrical Mfg. Co., b, k, p, f-1, g-1, i-1.  
 Mine Safety Appliances Co., m, q, s, y.  
 Minneapolis-Honeywell Regulator Co.-Davies Labs. Div., p, c-1, i-1, j-1.  
 Minneapolis-Honeywell Regulator Co., Industrial Product Group, p, q, c-1, k-1.  
 Missouri Research Labs., Inc., a-1.  
 Monogram Precision Industries, a, b, d, k, s, v, w, a-1, m-1, j-1.  
 Motorola Inc., Military Electronics Div., g thru j, p, t, w, y, z, a-1, b-1, g-1, h-1, k-1.  
 NRC Equipment Corp., q.  
 George L. Nankervis Co., n, r, b-1.  
 Narda Microwave Corp., The, u.  
 National Instrument Laboratories, Inc., q.  
 National Pneumatic Co., Inc., Holtzer-Cabot Divs., b-1.  
 National Spectrographic Labs., Inc., b-1, c-1.  
 North Atlantic Industries, Inc., z.  
 Northeastern Engrg. Inc., c-1.  
 Northrop Corp., i, j.  
 Northrop Corp., The, Norronics Div., d, e, i, s, w.  
 Norton Co., New Products Dept., m.  
 Optimized Devices, Inc., c, d.  
 Pacific Scientific Co., i-1.  
 Paco Electronics Co., Inc., d, e, g-1.  
 Paramount Designs Co., i, j, l.  
 Perkin-Elmer Corp., m, s, c-1.  
 Peschel Electronics, Inc., c, e.  
 Philco Corp., Government & Industrial Div., e, i, s, w, a-1, g-1.  
 Physics Research Laboratories, Inc., e.  
 Pioneer Industries Div., Almar-York Co. Inc., q, s, e-1, h-1.  
 Polaroid Electronics Corp., p, w, a-1, b-1, c-1.  
 Polytechnic Research & Development Co., Inc., w, c-1.  
 Power-Tronic Systems Inc., v, b-1, f-1, g-1.  
 Precise Development Corp., b, d, i.  
 Precision Apparatus Co., Inc., e, g-1.  
 Proboscop Co., Inc., l, p, c-1, k-1.  
 Process & Instruments, q.  
 Projects Unlimited Inc., c.  
 Quan-Tech Labs., t, y, c-1, j-1, k-1.  
 Radiation, Inc.  
 Radiation Instrument Development Lab., Inc., f, h, d-1.  
 Radionics, Inc., h-1.  
 Railway Communications Inc., j-1.  
 Raytheon Mfg. Co., c-1, i-1, j-1, k-1.  
 Edw. Renneburg & Sons Co., u.  
 Republic Aviation Corp., e.  
 Rese Engrg., Inc., v.  
 Milton Roy Co., m.  
 Scientific-Atlanta, Inc., a.  
 H. H. Scott, Inc., p, y, i-1.  
 Servo Corp. of America, b-1.  
 Sheffield Corp., The, Sub.-Bendix Aviation Corp., k.  
 Singer Mfg. Co., The, Military Products Div.  
 Snap-on Tools Corp., n.  
 Solartron Inc., e, l, y, z, b-1, i-1, j-1.  
 Space Corp., g-1, i-1, k-1.  
 Sperry Gyroscope Co., Marine Div., Div.-Sperry Rand Corp., l, n.  
 Sperry Microwave Electronics Co., Div.-Sperry Rand Corp., p, w, a-1, c-1.  
 Sperry Piedmont Co.-Div.-Sperry Rand Corp., n.  
 Sun Electric Corp., Aeronautical Div., n, p, q, r, i-1.  
 Superior Cable Corp., c.  
 Systems Inc., a-1, b-1, c-1, k-1.  
 Technical Apparatus Builders, e.  
 Telechrome Mfg. Corp., f, h, i, j, t, w, z, k-1.  
 Teletron Industries Corp., b, c, d, f, i, j, a, p, r, s, t, z, a-1, b-1, i-1, j-1.  
 Tele-Dynamics Inc., t, z.  
 Telrad Mfg. Corp., p, w, a-1.  
 Tel-Instrument Electronics Corp., i-1.  
 Theta Instrument Corp., y, z, a-1.  
 Towaco Electronics, l, p.  
 Turbo Machine Co., a, b, e, f, w.  
 United Electrodynamics, Inc., f-1.  
 U. S. Industries, Inc.  
 Varian Associates, v, a-1, c-1.  
 Victor R. F. & Microwave Co., w.  
 Victory Engrg. Corp., q.  
 Virginia Electronics Co., Inc., b, e.
- Woldorf Electronics, Div.-F.C. Huyck & Sons, a-1, b-1.  
 Wang Labs., Inc., f, j.  
 Waste King Corp., Technical Products Div., a.  
 Warner Products Co., Inc., z, k-1.  
 Waveltel, Inc., w.  
 Weinschel Engrg., a, w.  
 Western International Co., c.  
 Weston Hydraulics Ltd.-Sub., Borg-Warner Corp., b-1.  
 Weston Instruments, Div.-Daystrom, Inc., j, p.  
 Wintronics, z.  
 Wright Engrg. Co., a, p, t, y, c-1, i-1.  
 Wye Industries, h-1.
- ANEMOMETERS**  
 Aero Research Instrument Co. Inc.  
 Beckman & Whitley, Inc., Missile Products Div.  
 Bendix Aviation Corp., Friez Instrument Div.  
 Epic, Inc.  
 Flow Corp.  
 E. Vernon Hill & Co.  
 Illinois Testing Laboratories, Inc.  
 Instruments Corp., The  
 M. C. Stewart  
 Strong Scott Mfg. Co., The  
 Victory Engrg. Corp.  
 Westberg Mfg. Co.  
 Wilks Precision Instrument Co., Inc.
- ANGLE DRIVES**  
 Acton Labs. Inc.  
 Actuator Products Div., Georronics Corp.  
 Airborne Accessories Corp.  
 Curtiss-Wright Corp.-Wright Aeronautical Div.  
 Electronic Communications, Inc.  
 Foote Bros. Gear & Machine Corp.  
 Hoover Electric Co.  
 Interstate Engrg. Corp.  
 Lear, Inc.  
 Lear, Inc., Grand Rapids Div.  
 Machinery Sales & Engrg. Co.  
 Metron Instrument Co.  
 Robot Industries Inc.  
 Sargent Engrg. Corp.  
 F. W. Stewart Corp.  
 Talley Corp., The  
 George A. Terry Co.  
 Vord Inc.  
 Waste King Corp., Technical Products Div.  
 Western Gear Corp.
- ANNUNCIATORS**  
 Thomas A. Edison Ind. Instrument Div.-Mc Grow-Edison Co.  
**\*ETS-HOKIN & GALVAN**  
 Haller, Raymond & Brown Inc. Div., Singer Mfg. Co.  
 Litton Industries, Inc.  
 National Pneumatic Co., Inc., Holtzer-Cabot Divs.  
 Scam Instrument Corp., The  
 Stackpole Carbon Co.  
 Technical Apparatus Builders
- ANODES, GRAPHITE**  
 Belmont Smelting & Refining Works, Inc.  
 J. Bishop & Co., Platinum Works  
 Division Lead Co.  
 Engelhard Industries, Inc.  
 Helwig Carbon Products, Inc.  
 Dhio Carbon Co., The  
 Squiers Gage Co.  
 Wallace & Tiernan Inc.
- ANODES, METAL**  
 Allied Research Products, Inc.  
 Alpha Metals, Inc.  
 Aluminum Co. of America  
 American Brass Co., The  
 American Silver Co.  
 American Smelting & Refining Co.  
 Attleboro Refining Co., Inc.  
 Bram Metallurgical & Chemical Co.  
 Bridgeport Brass Co.  
 Chase Brass & Copper Co., Inc.  
 Dayton Aircraft Products, Inc.  
 Division Lead Co.  
 Eastern Smelting & Refining Corp.  
 Giannini Plasmadyne Corp.  
 Handy & Harman  
 I-T-E Circuit Breaker Co.  
 Kolcast Industries-Div.-Thompson Ramo Wooldridge Inc.  
 W. L. Maxson Corp., The  
 Metals & Controls Corp., General Plate Div.  
 Mueller Brass Co.  
 Research Development Mfg. Inc.  
 Sel-Rex Corp.  
 Standard Metals Corp.  
 Waldom Electronics Inc.  
 Wildberg Bros. Smelting & Refining Co.
- ANTENNA FEED SYSTEMS**  
 Ainslie Corp.  
 All Products Co.  
 American Aeroparts  
 American Machine & Foundry Co., Government Products Group  
 American Machine & Foundry Co., Greenwich Coaxial Connector Co. Inc.  
 Collins Radio Co.

Cooper Development Corp., Sub-Marquardt Aircraft Co.

DBM Research Corp.  
Dayton Aircraft Products, Inc.  
Douglas Microwave Co., Inc.

Emerson Electric Mfg. Co., The, Electronics & Avionics Div.

**\*KESKIN & GALVAN**

Gabriel Co., The, Gabriel Electronics Div.  
Goodyear Aircraft Corp.  
Haller, Raymond & Brown Inc. Div., Singer Mfg. Co. Hallicrafters

Instruments For Industry, Inc.  
Jansky & Bailey, Inc.

E. F. Johnson Co.

**\*KEARFOTT CO., INC.**

**\*KEARFOTT CO., INC., MICROWAVE DIV.**  
D. S. Kennedy & Co.

Meridian Metalcraft, Inc.  
Microwave Associates, Inc.  
Monogram Precision Industries  
Motorola Inc., Military Electronics Div.  
N. R. K. Mfg. & Engrg. Co.  
National Pneumatic Co., Inc., Holtzer-Cabat Div.

Philca Corp., Government & Industrial Div.

Radiation, Inc.

Royal Industries, Inc.

Scientific-Atlanta, Inc.

Shaw Metal Products Corp.

Sperry Microwave Electronics Co., Div.-Sperry

Rand Corp.

Stavid Engrg., Inc.

Technical Appliance Corp.

Teiner Engrg. Corp.

Telerad Mfg. Corp.

Thermal Refractories Corp.

Tranqua Products, Inc.

Turbo Machine Co.

U. S. Science Corp., Div. Topp Industries, Inc.

Washington Aluminum Co., Inc.

Webar, Inc., Government Div.

Wilcox-Crittenden Div., North & Judd Mfg. Co.

Wind Turbine Co.

Z & W Mfg. Corp.

Wilks Precision Instrument Co., Inc.  
Wind Turbine Co.  
Z & W Mfg. Corp.

**ANTENNA FORMS**  
See FORMS, ANTENNA

**ANTENNA LINKS**  
See LINKS, ANTENNA

**ANTENNA OUTLETS**  
See OUTLETS, ANTENNA

**ANTENNA SWITCHING EQUIPMENT**  
See SWITCHING EQUIPMENT, ANTENNA

**ANTENNA TOWER LIGHTING**

Allied International Co.  
Anchor Metal Spinning Co., The  
Barker & Williamsam Inc.  
Collins Radio Co.  
Douglas Microwave Co., Inc.  
Dresser-Ideca Co., Div.-Dresser Industries, Inc.  
Stainless Inc.  
Teiner Engrg. Corp.  
Telectra Industries Corp.  
Wind Turbine Co.

**ANTENNA TUNING UNITS**

American Machine & Foundry Co., Government Products Group  
Callins Radio Co.  
Electronic Communications, Inc.  
Fard Instrument Co., Div.-Sperry Rand Corp.  
General Electric Co., Missile & Space Vehicle Dept.  
Walter J. Hyatt Co., The  
I-T-E Circuit Breaker Co.  
ITT Federal Div., International Telephone & Telegraph Corp.  
E. F. Johnson Co.  
Lear, Inc.  
Lear, Inc., Grand Rapids Div.  
W. L. Maxson Corp., The  
Meridian Metalcraft, Inc.  
Manogram Precision Industries  
National Pneumatic Co., Inc., Holtzer-Cabat Divs.  
Philca Corp., Government & Industrial Div.  
Radiation, Inc.  
Radiatortronic, Inc.  
Sage-Craft, Inc.  
Seiscor Mfg. Co.  
Teiner Engrg. Corp.  
Telectra Industries Corp.  
Turbo Machine Co.

**ANTENNAS**

- a. Direction Finding
- b. Fixed Station
- c. High Frequency
- d. Loop-Direction Finder
- e. Low Frequency
- f. Microwave Radar
- g. Mobile Commercial
- h. Mobile Communication
- i. Radar
- j. Radiation Test
- k. Rotary Beam
- l. Slatted Line
- m. Ultra High Frequency
- n. Very High Frequency

ACF Industries Inc., e, m, n.  
Adler Electronics, Inc., f, h, m, n.  
Aeradex, Inc., i.  
Aerona Mfg. Corp., i.  
Ainslie Corp., c, f, i, m, n.  
Airborne Instruments Lab., Div.-Cutler-Hammer, Inc., i.  
Aircam Inc., f, i, j, l, m, n.  
Aircam Inc. of New Jersey, f, i.  
Airtron Inc., Div.-Littion Industries, f.  
Allard Mfg. Co., m, n.  
All Products Co., a, b, c, e, thru i, k, m, n.  
Allied International Co., b, c, d, g, h, m.  
Allied Research & Engrg., Div.-Allied Recard Mfg. Co.  
Allison Steel Mfg. Co., b, f, i.  
Alpar Mfg. Corp., b, e.  
American Aeroparts, a.  
American Aerophysics Corp.  
American Aluminum Co., i.  
American Electronic Labs., Inc., f, i, l, m, n.  
American Machine & Foundry Co., Government Products Group, b, c, e, f, g, i thru n.  
American Machine & Foundry Co., Greenwich, a, b, c, e, f, h, i, k, l, m, n.  
Andrew Corp., b, f, h, l, m, n.  
Antenna & Radome Research Associates, f, l, m, n.  
Antenna Specialists Co., The, a, c, e, g, h, m, n.  
Atlas Precision Products, Co., a, f, i.  
Automation Dynamics Corp., a, f, l, m.  
**\*AVCO MFG. CORP., CROSLY DIV.**, i.  
Basco Metal Products, Inc., l.  
Bess Bassett, Inc., g, h, k.  
Beaver Precision Products Inc., i.  
Bell Aircraft Corp., Niagara Frontier Div., c, f, i, m.  
Betack Instrument Corp., i.  
Bendix Aviation Corp., Eclipse-Pioneer Div., i.  
Bendix Aviation Corp., Yark Div., f, i, l.  
Bendix Radio Div., Bendix Aviation Corp., a, d, f, n.  
Blaw-Knox Equipment, Div.-Blaw-Knox Co., f, i, m, n.  
E. W. Bliss Co., i.

Bagart Mfg. Corp., f, m, n.  
Bowser, Inc., Defense Dept., e, i.  
Brach Mfg. Corp., Div.-General Branche, h.  
Brooks & Perkins, Inc., f, i, l.  
Budd Stanley Co. Inc., f, i, l.  
Bulow Electric Co., a, c, d, f, i, k thru n.  
California Technical Industries, Div.-Textron Inc., i, l.  
Canoga Div., Underwood Corp., f, i, j, m, n.  
Chemoval Co., a thru e.  
Coaxial Connector Co. Inc., h, i.  
Collins Radio Co., a, b, c, e thru k, m, n.  
Columbia Products Co., c, e, g, h, m, n.  
Communications Co., b, g, h.  
Communications Research Co., h, n.  
Cooper Development Corp., Sub-Marquardt Aircraft Co., c, h, m, n.  
DBM Research Corp., f, i.  
Dayton Aircraft Products, Inc., a, c, e, m, n.  
Dayton Aviation Radio & Equipment Corp., a, c, d, m.  
Demoray-Bonardi, f.  
Diamond Antenna & Microwave Corp., c, e, f, i, l, l, m, n.  
Diversey Engrg. Co., i.  
Dorne & Margolin, Inc., a, c, d, f, l, m, n.  
Douglas Microwave Co., Inc., f, i, l.  
Dresser Industries, Inc., f, i.  
Dresser-Ideca Co., Div.-Dresser Industries, Inc., a, b, c, e, f, i.  
Electro-Mechanical Products Co., f, i, m, n.  
Electronic Specialty Co., c, l, m, n.  
Emerson Electric Mfg. Co., The, Electronics & Avionics Div., f, i, j, l.  
Emerson Radio & Phonograph Corp., f, m, n.  
FXR, Inc., f, l.  
Fairchild Astrionics Div., Fairchild Engine & Airplane Corp., a, b, c, f, l, m.  
Finney Co., The, a, c, e, m, n.  
Ford Instrument Co., Div.-Sperry Rand Corp., i.  
Freeman Co., The, a, f, g, n.  
Furane Plastics, Inc., i.  
GAR Precision Parts, Inc., f, m.  
Gabriel Co., The, Gabriel Electronics Div., a thru i, k thru n.  
General Communication Co., f.  
General Precision Lab. Inc., f.  
Gladding, McBean & Co., f, i.  
John Gambos Co., Inc., f.  
Goodyear Aircraft Corp., a, b, c, e, f, i, m, n.  
Gulton Industries, Inc., a, b, c, f, i, k thru n.  
Haller, Raymond & Brown Inc. Div., Singer Mfg. Co., c, f, l, m, n.  
Hallicrafters, c, f, h, i, l, m.  
Hazeltine Electronics Div.-Hazeltine Corp., f, i, j, m, n.  
Hi-Lo Manufacturing Corp., a thru n.  
Houston Fearless Corp., f, g.  
Hughes Aircraft Co., f, h, i.  
Hughes Tool Co., Aircraft Div., c, e, f, i, l, m, n.  
Walter J. Hyatt Co., The, a, b, f, i, k, l.  
I.D.E.A., Inc., h.  
I-T-E Circuit Breaker Co., a thru n.  
ITT Federal Div., International Telephone & Telegraph Corp., d, f, i, k.  
ITT Labs., a thru f, h thru n.  
Indusl. Prod.-Danbury Knudsen Div. Amphel-Bo Electronics Corp., g.  
Interccontinental Mfg. Co., Inc., f, i.  
JFD Electronics Corp., m.  
J-V-M Microwave Co., f, i.  
Jansky & Bailey, Inc., a thru e, h, j.  
E. F. Johnson Co., b, k.  
K-W Engrg. Works, g, h.  
Kaiser Aircraft & Electronics, Div.-Kaiser Indust. Corp., i.  
**\*KEARFOTT CO.**, a, d, f, i, j.  
**\*KEARFOTT CO., INC., MICROWAVE DIV.**, f.  
Kelsey-Hayes Co., f, i.  
D. S. Kennedy & Co., f, i, m, n.  
Herb Kreckman Co., b, h, n.  
La Pointe Industries Inc., a, c thru f, i.  
Lear, Inc., a, d, n.  
Lear, Inc., Grand Rapids Div., a, d, n.  
Leitch-Huad Corp., g, h, m, n.  
Liesco, Inc., f, h.  
Littion Industries, Inc., f, i.  
Littion Industries, Maryland Div., a, thru n.  
Lackheed Aircraft Corp., Missiles & Space Div., c, f, i, l, m, n.  
Langren Aircraft Co., Inc., i.  
Lundy Mfg. Corp., e.  
Magnavox Co., The, d, i.  
Mark Products Co., b, c, g, h, j, m, n.  
W. L. Maxson Corp., The, a, c, f, i, l, m, n.  
Meridian Metalcraft, Inc., a, f, i, j, l, m, n.  
Minnesota Mining & Mfg. Co., i.  
**\*MIRAX CHEMICAL PRODUCTS CORP., ELEC. MECHANICAL PRODUCTS DIV.**, e.  
Monogram Precision Industries, a thru i, k, l, m.  
Masley Electronics, Inc., b, c, h, k, n.  
Matarala Inc., Military Electronics Div., a thru d, f thru i, l, m, n.  
N. R. K. Mfg. & Engrg. Co., f, i.  
Narmco Mfg. Co., a thru f, h thru n.  
National Pneumatic Co., Inc., Holtzer-Cabat Divs., a, b, g, h, i, m, n.  
Nuclear Products Co. Div.-ACF Industries, Inc.  
Ralph M. Parsons Co., The, Electronics Div., m.  
Permax Products Div., Chisholm-Ryder Co., Inc., b, c, g, h, m, n.  
Philca Corp., Government & Industrial Div., a, b, c, f thru n.

Photo-Crystals, Inc., f  
Plastic Age Sales, Inc.  
Polaroid Electronics Corp., f  
Portchester Instrument Corp., e  
Radelin Inc., f, h  
Radiation, Inc.  
Radionics, Inc., a thru f, i thru n  
Raytheon Mfg. Co.  
Raytheon Mfg. Co., Government Equipment Div., f, i  
Republic Aviation Corp., a thru f, i, j, m, n  
Resdel Engrg. Corp., f  
Rexon Electronics Inc.  
Royal Industries, Inc., a thru e  
Royal Aeronautical Co., a, f, i  
Sanders Associates, Inc., f, i, l  
Sala Radio Co., a thru d, m, n  
Scientific-Atlanta, Inc., c, f, i, j  
Seiburg Corp., The  
Toscor Mfg. Co., h  
Tosqua Wire & Cable Co.-Div.-Mandrel Industries, Inc., i  
Tru Corp. of America  
Tupper Mfg. Co., The, Military Products Div., b, e, i  
Tutor Electronics & Television Corp., i  
Terry Microwave Electronics Co., Div.-Sperry Rand Corp., f, i, j  
Terry Piedmont Co., - Div.-Sperry Rand Corp., i, m, n  
Uniflex Inc., b, f, i, k, l  
Univ. Engrg., Inc., c, f, i, m, n  
United Precision Corp., Instrument Div., a, f, n  
United Engrg. Co., f, i, l  
Unidow Inc., i  
Unistems Inc., a, c, f, i, m, n  
Unistar Electronics, Inc., a, f, h, i, m, n  
Unistar Group, Thompson Romo Wooldridge Inc., f  
Unistar Technical Appliance Corp., b, c, e, f, h, i, m, n  
Unistar Electronics Corp., a thru n  
Unistar Mfg. Corp., f, i  
Unistar W. Torrington Co., Inc., i  
Unistar Products, Inc., a, c, e, f, i, m, n  
Unistar Aircraft Products Corp., a thru n  
Unistar Machine Co., b, c, e, f, i, l  
Unistar S. Science Corp., Div.-Topp Industries, Inc.  
United States Chemical Milling Corp., i  
United R. F. & Microwave Co., f  
Virginia Electronics Co., Inc., h  
Vithom Horological Corp., e  
Vithom Co. Electronics Div., f  
Vithom Aluminum Co., Inc., b, h, i  
Vithom Vaseline, Inc., f  
Vithom, Inc., Government Div., a, c, d, f, i, m, n  
Vithombury Electronics Inc., f  
Vithom Western Gear Corp., a, h  
Vithom Wishinghouse Electric Corp., f, i  
Vithom Wheeler Laboratories, Inc., f, h, i, m, n  
Vithom Veks Precision Instrument Co., Inc., a, b, e, f, i, l  
Vithom Vtd Turbine Co., k, m, n  
Vithom Z. W. Mfg. Corp., l, m

#### AN-VIBRATION EQUIPMENT

American Aeroparts  
American Latex Products Corp.  
Aronco Metal Hase Div., The American Brass Co.  
Arling, Inc.  
Cleveland Pneumatic Industries, Inc.  
Connecticut Hard Rubber Co., The  
Fin Aeronautical Co., T. R. Finn & Co., Inc.  
CF. Goodrich Industrial Products Co.  
Gton Industries, Inc.  
Hitt-Robins, Inc.  
\*JUDAILLE INDUSTRIES, INC., BUFFALO  
HYDRAULICS DIV.  
Jf. Johnson & Co., Inc.  
Lion Industries, Inc.  
Lion Industries, Maryland Div.  
Lid Mfg. Co.  
Mfg. Co.  
\*MIRAX CHEMICAL PRODUCTS CORP., METAL  
CONTAINER DIV.  
Pacific Scientific Co.  
Pomout Designs Co.  
Pfs Engrg. Co., Inc.  
Rinson Technical Products, Inc.  
Ribercraft Corp. of California  
Af. Stevens Co.  
Tilor Devices, Inc.  
Tactor Industries Corp.  
Unite Co., The, Div.-United-Corr Fastener Corp.  
U. Industries, Inc.  
Whington Technological Associates Inc.

#### APERTURE TUBE MASKS

See MASKS, APERTURE, TUBE

#### ARSIC

Accurate Specialties Co. Inc.  
American Optical Co., Instrument Div.  
American Smelting & Refining Co.  
Blount Smelting & Refining Works, Inc.  
Bry Metalurgical & Chemical Co.  
Dison Lead Co.  
Di. Semiconductors, Inc.  
Ured Mineral & Chemical Corp.

#### ASSEMBLERS, FEEDERS

American Machine & Foundry Co., Government Products Group  
Bristol Co., The  
Eltronics Div., Von Norman Industries Inc.  
\*ETS-HOKIN & GALVAN  
Li-Belt Co.

Manogram Precision Industries  
Printronics Corp.  
Teiner Engrg. Corp.  
Walworth Co. Electronics Div.

#### ASSEMBLIES, EMBEDDED

See EMBEDDED ASSEMBLIES

#### ASSEMBLIES, MICROWAVE

Adler Electronics, Inc.  
Ainslie Corp.  
Aircrom Inc.  
Aircrom Inc. of New Jersey  
American Machine & Foundry Co., Government Products Group  
Antenna & Radome Research Associates  
Applied Radiation Corp.  
Atlantic Instrument Corp., Sub-American Electronics, Inc.  
Atlas Precision Products, Ca.  
Bendix Aviation Corp., York Div.  
Bristol Co., The  
Budd Stanley Co. Inc.  
Bulow Electric Co.  
Coaxial Connector Co. Inc.  
Consolidated Diesel Electric Corp.  
Cooper Development Corp., Sub-Marquardt Aircraft Co.  
Demoray-Banardi  
Douglas Microwave Co., Inc.  
Electrical Insulation Co., Inc.  
Electro-Mechanical Products Co.  
Electronic Communications, Inc.  
Elojoy Corp.  
Emerson Electric Mfg. Co., The, Electronics & Avionics Div.  
Empire Products Sales Corp.  
\*ETS-HOKIN & GALVAN  
FXR, Inc.  
Gabriel Co., The, Gabriel Electronics Div.  
General Communication Co.  
John Gombos Co., Inc.  
Gunnor Laboratories  
Walter J. Hyatt Co., The  
Indusl. Prod.-Danbury Knudsen Div. Amphenol-Borg Electronics Corp.  
\*J-V-M Microwave Co.  
\*KEARFOTT CO., INC., MICROWAVE DIV.  
Lamerit Engrg. Co., Inc.  
Littion Industries, Inc.  
W. L. Moxson Corp., The  
Mercury Tool & Mfg. Corp.  
Meridian Metalcraft, Inc.  
Microlob  
Microwave Associates, Inc.  
Manogram Precision Industries  
Motorola Inc., Military Electronics Div.  
Mutron Corp.  
N. R. K. Mfg. & Engrg. Co.  
National Pneumatic Co., Inc., Holtzer-Cobot Divs.  
Omega Labs., Inc.  
Philco Corp., Government & Industrial Div.  
Polard Electronics Corp.  
Radiatronics, Inc.  
Ryan Aeronautical Co.  
Scientific-Atlanta, Inc.  
Sperry Microwave Electronics Co., Div.-Sperry Rand Corp.  
Sterling Precision Corp., Instrument Div.  
Tapco Group, Thompson Romo Wooldridge Inc.  
Telero Industries Corp.  
Teleraid Mfg. Corp.  
Tronsco Products, Inc.  
Turbo Machine Co.  
Variety Aircraft Corp.  
Victor R. F. & Microwave Co.  
Waltham Horological Corp.  
Waveline, Inc.  
Washinghouse Electric Corp.  
Wheeler Laboratories, Inc.  
Wilks Precision Instrument Co., Inc.

#### ASSEMBLIES, NOZZLE

See NOZZLE ASSEMBLIES

#### ASSEMBLIES, PILOT LIGHT

See PILOT LIGHT ASSEMBLIES

#### ASSEMBLIES, REDUCTION, GEAR

See GEAR ASSEMBLIES REDUCTION

#### ASSEMBLIES, SLIP RING

See SLIP RING ASSEMBLIES

#### ASSEMBLIES, TUBULAR FABRICATIONS

See TUBULAR FABRICATIONS & ASSEMBLIES

#### ASSEMBLIES, TURBINE

See TURBINE ASSEMBLIES

#### ASSEMBLY EQUIPMENT, AUTOMATIC

American Machine & Foundry Co., Government Products Group  
Associated Engineers, Inc.  
Atlas Precision Products, Co.  
Burklyn Co.  
Continental Technical Service, Inc.  
Diversi Engrg. Co., Inc.  
Eisler Engrg. Co., Inc.  
Koiser Aircraft & Electronics, Div.-Koiser Industries Corp.  
Kenhos Corp., Div.

Link-Belt Co.  
Philco Corp., Government & Industrial Div.  
Pioneer Tool & Engrg. Co.  
Printronics Corp.  
Robot Industries Inc.  
Sheffield Corp., The, Sub-Bendix Aviation Corp.  
United Shoe Machinery Corp., Drdnose Dept.

#### ASSEMBLY SHIELD, NUCLEAR

ACF Industries Inc.  
Alpiter, Inc.  
Bar-Ray Products, Inc.  
Brooks & Perkins, Inc.  
Farrel Birmingham Co. Inc.  
General Electric Co., Missile & Space Vehicle Dept.  
Hallert Mfg., Co.  
Nuclear Products-Erco Div.-ACF Industries, Inc.  
R & R Engrg. Co.  
Ryan Aeronautical Co.  
Zipper tubing Co., The

#### ATTENUATORS

- Audio
- Logarithmic
- Microwave
- Precision
- RF & IF

Adler Electronics, Inc., e  
Aero Electronics Corp., a  
Airborne Instruments Lab., Div.-Cutler-Hommer, Inc.  
Aircrom Inc., c  
Aircrom Inc. of New Jersey, c  
Airtion Inc., Div.-Littion Industries, c  
Alford Mfg. Co., c  
American Machine & Foundry Co., Government Products Group, c  
American Machine & Foundry Co., Greenwich, c, e  
Antenna & Radome Research Associates, c, e  
Arenberg Ultrasonic Lab., Inc., h  
Bellock Instrument Corp., h  
Blonder-Tongue Labs., Inc., a, e  
Bogart Mfg. Corp., c  
Budd Stanley Co. Inc., c, e  
Centronix Inc., e  
Cinema Engrg., a  
Clippard Instrument Lab., Inc., e  
Coaxial Connector Co. Inc., c, e  
Cooper Development Corp., Sub-Marquardt Aircraft Co., c  
Daven Co., The, a, d, e  
Demoray-Banardi, c, d  
Device Development Corp., e  
Diamond Antenna & Microwave Corp., c, e  
Double E Products Co., Inc., c, d  
Dymec Inc., c  
Edgerton, Gemeshausen & Grier, Inc., c  
Electronic Applications, Inc., a  
Electron-Radar Products, c  
Elsin Electronics Corp., c, d, e  
Emerson Electric Mfg. Co., The, Electronics & Avionics Div., c, d, e  
Empire Products Sales Corp., c, d, e  
Entron, Inc., e  
FXR, Inc., c, d, e  
Filmhom Corp., c  
General Communication Co., c, e  
Groflex Inc., a  
Holler, Raymond & Brown Inc. Div., Singer Mfg. Co., b, e  
Hazeltine Electronics Div.-Hazeltine Corp., c, d, e  
Hewlett-Packard Co., c, d, e  
Walter J. Hyatt Co., The, c, e  
ITT Federal Div., International Telephone & Telegraph Corp., a, b, c, e  
ITT Labs., a thru e  
Instruments for Industry, Inc., e  
J-V-M Microwave Co., c, e  
Jovex Electronics, a  
E. F. Johnson Co., e  
Julie Research Labs., Inc., d  
Key Electric Co., a, d, e  
\*KEARFOTT CO., INC., c  
\*KEARFOTT CO., INC., MICROWAVE DIV., c, d, e  
Lico, Inc., c, d  
Lockheed Aircraft Corp., Missiles & Space Div., c  
W. L. Moxson Corp., The, a, c, e  
McMillon Industrial Corp., c  
Measurements Div., McGraw Edison Co., e  
Meridian Metalcraft, Inc., c, d  
Microlob, c, e  
Microwave Associates, Inc., c  
Microwave Development Labs., Inc.  
Minneapolis-Honeywell Regulator Co., Industrial Product Group, d  
\*MIRAX CHEMICAL PRODUCTS CORP., ELECTRO-MECHANICAL PRODUCTS DIV., a  
Manogram Precision Industries, a, c, d, e  
Motorola Inc., Military Electronics Div., a, c  
NYT Electronics, Inc., a, e  
Nordo Microwave Corp., The, c  
Notional Pneumatic Co., Inc., Holtzer-Cobot Divs., a, b, d, e  
Omega Labs., Inc., c  
Ortho Filter Corp., a, b, e  
Paramount Designs Co., b, c  
Photo-Crystals, Inc., e  
Polard Electronics Corp., c  
Portchester Instrument Corp., c  
Precise Development Corp., a, e  
Pyrofilm Resistor Co., Inc., c  
Rodor Design Corp., c

Resdel Engr. Corp., e.  
 Rixon Electronics Inc., d, e.  
 Sage Labs., Inc., c.  
 Sage-Craft, Inc., e.  
 Shallcross Mfg. Co., a, d.  
 Special Instruments Div., British Industries Corp., c.  
 Specialty Engr. & Electronics Co., a.  
 Sperry Microwave Electronics Co., Div.-Sperry Rand Corp., c, d.  
 Sterling Precision Corp., Instrument Div., c.  
 Stoddard Aircraft Radio Co., Inc., c, d, e.  
 Suffolk Products Corp., c, e.  
 H. W. Sullivan Ltd., b, d, e.  
 Systems Inc., a thru e.  
 Tapco Group, Thompson Ramo Wooldridge Inc., c.  
 Telectro Industries Corp., a thru e.  
 Telerad Mfg. Corp., c.  
 Telonic Industries, Inc., c, d, e.  
 Turbo Machine Co., c, e.  
 University Loudspeakers, Inc., a.  
 Victor R. F. & Microwave Co., c.  
 Walworth Co. Electronics Div., e.  
 Waveline, Inc., c.  
 Weinschel Engr., a, c, d, e.  
 Wilks Precision Instrument Co., Inc., c.  
 Wright Engr. Co., c, d, e.  
 Zenith Optical Laboratory, c, e.

## ATTITUDE

Aerona Mfg. Corp.  
 American Felt Co.  
 Cleveland Pneumatic Industries, Inc.  
 Cooper Development Corp., Sub.-Marquardt Aircraft Co.  
 Daystrom Pacific Div.-Daystrom, Inc.  
 Hamilton Standard, Div.-United Aircraft Corp.  
 \*KEARFOTT CO., INC.  
 Minneapolis-Honeywell Regulator Co.-Aeronautical Div.  
 Paramount Designs Co.  
 \*PROPELLEX CHEMICAL DIV., CHROMALLOY CORP.  
 Research Controls  
 Summers Gyroscope Co.  
 Waldorf Electronics, Div.-F. C. Huyck & Sons

## AUDIO CDNSDLES

See CDNSOLES, AUDIO

## AUDIO REMDTE PICKUP

See REMOTE PICKUP, AUDIO

## AUTO ALARMS

See ALARMS, AUTO

## AUTOMATIC ASSEMBLY EQUIPMENT

See ASSEMBLY EQUIPMENT, AUTOMATIC

## AUTOMATIC DEHYDRATORS

See DEHYDRATORS, AUTOMATIC

## AUTOMATIC ENGINE CONTROL SYSTEMS

See ENGINE CONTROL SYSTEMS, AUTOMATIC

## AUTOMATIC PILOT CONTROL VALVES

Aero Supply Mfg. Inc.  
 American Measurement & Control, Inc.  
 \*AVCO MFG. CORP., CROSLLEY DIV.  
 Bendix Aviation Corp., Eclipse-Pioneer Div.  
 Bendix-Pacific Div., Bendix Aviation Corp.  
 Cadillac Gage Co.  
 Clary Dynamics  
 Cleveland Pneumatic Industries, Inc.  
 Consolidated Controls Corp.  
 Consolidated Diesel Electric Corp.  
 Fisher Governor Co.  
 Futurecraft Corp.  
 Hamilton Standard, Div.-United Aircraft Corp.  
 Hydro Power Corp.  
 \*HYDRO-AIRE CO., DIV.-CRANE CO.  
 Integral Corp.  
 Javelin Aircraft Co., Inc.  
 \*KEARFOTT CO., INC.  
 Kemp Aero Products  
 Lear, Inc.  
 Lear, Inc., Grand Rapids Div.  
 Minneapolis-Honeywell Regulator Co.-Aeronautical Div.  
 Northrop Corp.  
 DPW-Jordan  
 Dzone Metal Products Corp.  
 Paramount Designs Co.  
 Pneu-Hydro Valve Corp.  
 Sargent Engr. Corp.  
 Sperry Piedmont Co. - Div.-Sperry Rand Corp.  
 Summers Gyroscope Co.  
 Tactair Valve Div.-Aircraft Products Co.  
 United Aircraft Products, Inc.  
 Vinson Mfg. Co., Inc.  
 Waldorf Fluid Systems, Div.-F. C. Huyck & Sons  
 Westinghouse Electric Corp.  
 Weston Hydraulics Ltd.-Sub., Borg-Warner Corp.

## AUTOMATIC PILOTS

See PILOTS, AUTOMATIC

## AUTOMATIC PILOTS, ELECTRONIC

\*AIRESEARCH MFG. CO., DIV.-THE GARRETT CORP.  
 Atlas Precision Products, Co.  
 \*AVCO MFG. CORP., CROSLLEY DIV.

Bendix Aviation Corp., Eclipse-Pioneer Div.  
 Cleveland Pneumatic Industries, Inc.  
 Collins Radio Co.  
 Daystrom Pacific Div.-Daystrom, Inc.  
 Diversey Engr. Co.  
 Donner Scientific Corp.  
 Emerson Electric Mfg. Co., The, Electronics & Avionics Div.  
 Fairchild Astrionics Div., Fairchild Engine & Airplane Corp.  
 ITT Labs.  
 Javelin Aircraft Co., Inc.  
 \*KEARFOTT CO., INC.  
 Lear, Inc.  
 Lear, Inc., Grand Rapids Div.  
 Minneapolis-Honeywell Regulator Co.-Aeronautical Div.  
 Monogram Precision Industries  
 Northrop Corp.  
 Northrop Corp., The, Nortronics Div.  
 Philco Corp., Government & Industrial Div.  
 Radiation, Inc.  
 Ryan Aeronautical Co.  
 Sanders Associates, Inc.  
 Servomechanisms, Inc.  
 Sperry Farrogut Co., Div.-Sperry Rand Corp.  
 Sperry Piedmont Co.-Div.-Sperry Rand Corp.  
 Summers Gyroscope Co.  
 Thiokol Chemical Corp.  
 Westinghouse Electric Corp.  
 Whittaker Gyro. Div.-Telecomputing Corp.

## AUTOMATIC PILOTS, HYDRAULIC

Aerolab Development Co.  
 American Rocket Co.  
 Astronautics Engr. Co.  
 Bendix Aviation Corp., Eclipse-Pioneer Div.  
 Bendix Products Div.-Missiles, Bendix Aviation Corp.  
 Bogue Electric Mfg. Co.  
 Collins Engr. Corp.  
 Consolidated Diesel Electric Corp.  
 Curtiss-Wright Corp., Research Div.  
 Diversey Engr. Co.  
 Dumont Aircraft Fitting Co.  
 Eastern Industries Inc.  
 General Electric Co., Apparatus Sales Div.  
 Gilfillan Bros. Inc.  
 Green Rectifier Co.  
 Hydro Power Corp.  
 \*KEARFOTT CO., INC.  
 Land-Air Inc.  
 Lear, Inc.  
 Leland Airborne Products, Div.-American Machine & Foundry Co.  
 Minneapolis-Honeywell Regulator Co.-Aeronautical Div.  
 DiL-Dyne, Inc.  
 Pacific Scientific Co.  
 Pesco Products Div.-Borg-Warner Corp.  
 Philco Corp., Government & Industrial Div.  
 Power Supplies Inc.  
 Ryan Aeronautical Co.  
 Sargent Engr. Corp.  
 Safety Electrical Equipment Corp.  
 Servomechanisms, Inc.  
 Sperry Piedmont Co. - Div.-Sperry Rand Corp.  
 Summers Gyroscope Co.  
 Turbo Products, Inc.  
 Washington Technological Associates Inc.  
 Westinghouse Electric Corp.

## AUTOMATIC RESISTANCE COMPARATORS

See COMPARATORS, AUTOMATIC RESISTANCE

## AUXILIARY POWER SOURCES

Adel Precision Products of California, Div.-General Metals Corp.  
 Aeronautic Systems, Inc., Sub.-Ford Motor Co.  
 Air Logistics Corp.  
 \*AIRESEARCH MFG. CO. OF ARIZ.  
 \*AIRESEARCH MFG. CO., DIV.-GARRETT CORP.  
 Allied International Co.  
 Amoco Chemicals Corp.  
 Associated Engineers, Inc.  
 Astrodyne, Inc.  
 Atlantic Research Corp.  
 \*BENDIX AVIATION CORP. - HAMILTON DIV.  
 \*BENDIX PRODUCTS DIV., BENDIX AVIATION CORP.  
 Bendix Utica Div., Bendix Aviation Corp.  
 Chrysler Corp., Defense Operations Div.  
 Consolidated Diesel Electric Corp., Western Div.  
 Cummins Engine Co., Inc.  
 Curtiss-Wright Corp., Santa Barbara Div.  
 Curtiss-Wright Corp., Utica Div.  
 Delco-Remy Div., General Motors Corp.  
 Diversey Engr. Co.  
 Eagle-Picher Co., The  
 Electro Development Corp.  
 Electro-Mechanical Products Co.  
 Emerson Electric Mfg. Co., The, Electronics & Avionics Div.  
 \*ETS-HOKIN & GALVAN  
 Gearator Corp.  
 Guided Missile Div.-De Havilland Aircraft of Canada, Ltd.  
 Gulston Industries, Inc.  
 Hamilton Standard, Div.-United Aircraft Corp.  
 Hoover Electric Co.  
 \*HYDRO-AIRE CO., DIV.-CRANE CO.  
 International Ferment Machinery Co., Inc.

Jack & Heintz, Inc.  
 Jeta, Inc.  
 Kemp Aero Products  
 Walter Kidde & Co., Inc., Aviation Div.  
 Leach Corp.  
 Lear, Inc.  
 Lear, Inc., Grand Rapids Div.  
 Leland Airborne Products, Div.-American Machine & Foundry Co.  
 Marquardt Aircraft Co.  
 \*MC CORMICK SELPH ASSOCIATES  
 Minnesota Mining & Mfg. Co.  
 Heinz Mueller Engr. Co. Inc.  
 Motorola Research Co.  
 National Spectrographic Labs., Inc.  
 D. W. Dnan & Sons Inc.  
 Drandane Div.-Food Machinery & Chemical Corp.  
 Patterson, Moos Div. - Universal Winding Co., Inc.  
 Perkin Engr. Corp.  
 Power Designs, Inc.  
 Power Sources, Inc.  
 Radiation Research Corp.  
 Reaction Motors Div., Thiokol Chem. Corp.  
 Reinhold Engr. & Plastics Co.  
 Sargent Engr. Corp.  
 Solar Aircraft Co.  
 Special Projects Lab., Food Machinery & Chemical Corp.  
 Standard Dil Co. of Indiana  
 Stratos, Div.-Fairchild Engine & Airplane Corp.  
 Sun Electric Corp., Aeronautical Div.  
 Talley Corp., The  
 Tapco Group, Thompson Ramo Wooldridge Inc.  
 Technical Apparatus Builders  
 Thiokol Chemical Corp., Hunter-Bristol Div.  
 Turbo Products, Inc.  
 Varo Mfg. Co., Inc.  
 Vickers Inc., Div.-Sperry Rand  
 Watertown Div., The New York Air Brake Co.  
 Western Design, Div.-U. S. Industries, Inc., Santa Barbara Div.  
 Western Gear Corp.  
 Wincharger Corp., Sub.-Zenith Radio Corp.

## AXIAL FLOW COMPRESSOR ASSEMBLIES

See COMPRESSOR ASSEMBLIES, AXIAL FLOW

## AXIAL FLOW MIDFRAME SECTIONS

See MIDFRAME SECTIONS, AXIAL FLOW

## BADGES, RADIATION

Acromark Co., The  
 Adept Industries Inc.  
 American Electronics, Inc.  
 \*BAUSCH & LOMB OPTICAL CO.  
 Eastman Kodak Co.  
 Nuclear-Chicago Corp.  
 St. John X-Ray Lab.  
 Specialty Engr. & Electronics Co.

## BAFFLES, AIR

Allied Witan Co. Inc.  
 Anchor Metal Spinning Co., The  
 Curtiss-Wright Corp.-Wright Aeronautical Div.  
 Elzee Metal Products Co., Inc.  
 Ludwig Honal Mfg. Co.  
 Kentucky Metal Products Co.  
 \*LAVELLE AIRCRAFT CORP.  
 Loftstrand Co., The  
 Mercury Tool & Mfg. Corp.  
 Monogram Precision Industries  
 Smith-Morris Corp.  
 Stanley-Judd Div.-The Stanley Works  
 Variety Aircraft Corp.

## BALANCING EQUIPMENT

American Machine & Foundry Co., Government Products Group  
 R. B. Annis Co.  
 Avien, Inc.  
 Cooper Development Corp., Sub.-Marquardt Aircraft Co.  
 Dean & Benson Research, Inc.  
 Decker Corp., The  
 Dynametrics Corp.  
 Enasco, Inc.  
 International Research & Development Corp.  
 Micro Balancing, Inc.  
 Pic Design Corp., Sub.-Benrus Watch Co., Inc.  
 Telectro Industries Corp.  
 Westinghouse Electric Corp.

## BALL JOINTS

Allegany Instrument Co., Inc.  
 American Aeroparts  
 Amplex Div.-Chrysler Corp.  
 Barco Mfg. Co.  
 Capital City Mfg. Co.  
 Corbin Products Div.  
 Crystal-X Corp.  
 Diversey Engr. Co.  
 Dresser Mfg. Div., Dresser Industries, Inc.  
 Dunbar-Kaplle Inc.-Aircraft Components Div.  
 Flight Refueling, Inc.  
 Industrial Technetics, Inc.  
 Kaydon Engr. Corp., The  
 Mercury Air Parts Co., Inc.  
 Monogram Precision Industries  
 DPW-Jordan  
 Radial Bearing Corp.  
 Rohr Aircraft Corp.



Ryan Aeronautical Co.  
Southwest Products Co.  
Stainless Steel Products, Inc.  
United Mfg. Co., The  
Waste King Corp., Technical Products Div.

## LL LATCHES

Burklyn Co.  
Capital City Mfg. Co.  
Flight Refueling, Inc.  
Dn Mark Couplings, Inc.

## LLISTOCARDIOGRAPHS

ulton Industries, Inc.  
Voice Engrg. Co.

## ROGRAPHS

American Paulin System  
endix Aviation Corp., Friez Instrument Div.  
struments Corp., The  
cientific Instrument Co.

## ROMETERS

irquide Instrument Co.  
merican Paulin System  
endix Aviation Corp., Friez Instrument Div.  
Biederman, Inc.  
ristol Co., The  
ystem Pacific Div.-Daystrom, Inc.  
ynometrics Corp.  
sher Scientific Co.  
struments Corp., The  
ecision Thermometer & Instrument Co.  
cientific Instrument Co.  
shing Instrument Co.  
illice & Tiernon Inc.  
ltham Engrg. Corp.

## BIMETRIC PRESSURE ALTIMETERS

## ALTIMETERS, BAROMETRIC PRESSURE

## BES

a. Antenna  
b. Diode  
c. Relay  
f. Transistor  
Anco Mfg. Corp., a  
Aslie Corp., a  
ied International Co., a  
oys Unlimited Inc., d  
merican Car & Foundry, Div.-ACF Industries, Inc., a  
merican Machine & Foundry Co., Government  
Products Group, a  
merican Machine & Foundry Co., Greenwich, a  
Anchor Metal Spinning Co., The, a  
Ael Electronics, Inc., c  
Associated Engrg. & Mfg. Corp., d  
As Precision Products, Co., a  
A Seal Co., c  
Automatic Electric Sales Corp., c, d  
Eco Metal Products, Inc., a  
Bic Tool Industries, Inc.  
Bidx Aviation Corp., Eclipse-Pioneer Div., a  
EV. Bliss Co., a  
Biser Inc., Defense Dept., a  
Boks & Perkins, Inc., a  
Bidy Corp., Omoton Div., c  
Cago Div., Underwood Corp., a  
Capital City Mfg. Co., a  
Gold Co., a  
Cambia Products Co., a  
Frank R. Cook Co.  
Donald Antenna & Microwave Corp., a  
Electrical Insulation Co., Inc., a, d  
Erson Electric Mfg. Co., The, Electronics &  
ronics Div., a  
Fiel Birmingham Co. Inc., a  
Feral Machine Co. Inc., j  
Giel Co., The, Gabriel Electronics Div.  
He crafters, a  
Hoden Mfg. Co., Inc.  
Hio Manufacturing Corp., a  
Hton Brothers, Inc., b  
Hton Fearless Corp., a  
Wer J. Hyatt Co., The, a  
I-Y Circuit Breaker Co., a  
IT Federal Div., International Telephone &  
Telegraph Corp., a  
ntinental Mfg. Co., Inc., a  
Kney-Hayes Co., a  
Ktone Electronics Corp., b  
KI Metal Spinning & Stomping Co., a  
Le Inc., a  
Leon Metalcraft, Inc., a, d  
Me Fabricators Corp., a  
MAX CHEMICAL PRODUCTS CORP., ELECTRO-  
MECHANICAL PRODUCTS DIV., a  
Mogram Precision Industries, a, b, c  
Molola Inc., Military Electronics Div., a, b, d  
Molnal Pneumatic Co., Inc., Holtzer-Cabot Divs.,  
aru d  
Nolerg Mfg. Co., a  
Nerix Products Div., Chisholm-Ryder Co., Inc., a  
Nacki Aircraft Corp., a  
Nrofif Corp., a  
Nrois Unlimited Inc., a  
Nrotronic, Inc., a  
Nroyan Mfg. Co., Government Equipment Div., a  
Nroes Instrument Corp., a  
Nroil Ross Metals Co., The, c  
Nroy Industries, Inc., a

Scientific-Atlanto, Inc., a  
Show Metal Products Corp., a  
Sinclair Mfg. Co., b, d  
Smith-Morris Corp.  
Specialty Engrg. & Electronics Co., a  
Squiers Gage Co.  
Stackpole Carbon Co., a  
Stainless Inc., a  
Stanley-Judd Div.-The Stanley Works, a  
Tolley Corp., The, a, b  
Technical Appliance Corp., a  
Teiner Engrg. Corp., a  
Telectro Industries Corp., a  
Tranco Products, Inc., a  
Tricroft Products Corp., a  
Warren Components, Div. El-Tronics, Inc., b  
Western Gear Corp., a

## BATTERIES

a. Atomic  
b. Dry Cell  
c. Lead-Acid  
d. Mercury  
e. Nickel Alkaline  
f. Nickel-Cadmium  
g. Nuclear  
h. Silver  
i. Silver Zinc  
j. Transistor  
Aerojet-General Corp., i  
Allied International Co., b, e  
Bio-Rod Labs., a  
Bowers Battery & Spark Plug Co., c  
Bright Star Industries, b, j  
Burgess Battery Co., b, d, f, j  
Carbone Corp., The, b  
Communications Research Co., f  
Frank R. Cook Co., h, i  
Cooper Industries, Inc.  
Delco-Remy Div., General Motors Corp., c, f, i  
Delta Products Div.-Air Accessories, Inc., j  
De Witt Development Co., c  
Eagle-Picher Co., The, e, f, h, i  
Electric Auto-Lite Co., The, c  
Exide Industrial Div.-The Electric Storage Battery  
Co., b, c, f, m, i  
General American Transportation Corp., j  
General Electric Co., Apparatus Sales Div., g  
Gill Electric Mfg. Corp., c, e  
Greenbrier Instruments Inc., j  
Gulton Industries, Inc., e, f  
Hamilton Watch Co.-Industrial Div., d, f  
Hoffman Electronics Corp., Semiconductor Div., j  
Ludwig Honold Mfg. Co., i  
International Rectifier Corp., f  
Magnovox Co., The, d  
P. R. Mallory & Co. Inc., b, d, i, j  
Morathon Battery Co., b, j  
Meteor Production Engrg., Inc., c  
Minneapolis-Honeywell Regulator Co., Ordnance Div.,  
National Lead Co.  
Nicaid Div., Gould-National Batteries, Inc., d, e  
Patterson, Moos Div. - Universal Winding Co.,  
Inc., a, b, g  
Prewitt Aircraft Co., j  
Radiation Research Corp., a, g  
Ray-Q-Vac Co., Div.-Electric Storage Battery Co.,  
a, d, i  
Sonotone Corp., f  
Standard Electric Co., Inc., c  
Turbo Machine Co., j  
United States Chemical Milling Corp., j  
Universal Moulded Products Corp., j  
Whittaker Controls, Div.-Telecomputing Corp., f, i  
Willford Storage Battery Div., c, h, i  
Yardney Electric Corp., h, i

## BATTERY BOXES, CRADLES, ETC.

Abolon Precision Mfg. Corp.  
Aerolite Electronics Corp.  
Anchor Metal Spinning Co., The  
Cambridge Thermionic Corp.  
Chermold Co.  
Frank R. Cook Co.  
Cooper Industries, Inc.  
Crystal-X Corp.  
Dayton Rubber Co., The  
Elzee Metal Products Co., Inc.  
Forwell Metal Fabricating  
General American Transportation Corp.  
General Scientific Equipment Co.  
C. B. Kaupp & Sons, Inc.  
Keystone Electronics Corp.  
Kirk & Blum Mfg. Co., The  
Lofstrand Co., The  
Mercury Tool & Mfg. Corp.  
Meteor Production Engrg., Inc.  
\*MIRAX CHEMICAL PRODUCTS CORP., METAL  
CONTAINER DIV.  
National Pneumatic Co., Inc., Holtzer-Cabot Divs.  
Piasecki Aircraft Corp.  
Plastic Age Sales, Inc.  
Pneumafil Corp.  
Prereg Mfg. Inc.  
Russell Reinforced Plastics Corp.  
Scientific-Atlanta, Inc.  
Seamless Products Co., Inc.  
Shaw Metal Products Corp.  
Skyline Products, Inc.  
Stanley Aviation Corp.

Vitro Labs.  
Vlchek Tool Co., The  
Welded Construction Inc.  
Winder Aircraft Corp. of Florida  
Young Development Div., Hercules Powder Co.

## BATTERY CHARGERS

See CHARGERS, BATTERY

## BATTERY CHARGING & SERVICING EQUIPMENT

Acme Electric Corp.  
Amelco, Inc.  
Automatic Switch Co.  
Bogue Electric Mfg., Co.  
Coral Electronics Corp.  
Christie Electric Corp.  
Consolidated Diesel Electric Corp., Western Div.  
\*ETS-HOKIN & GALVAN  
Exide Industrial Div.-The Electric Storage Battery Co.  
General Electric Co., Apparatus Sales Div.  
Green Rectifier Co.  
Guided Missile Div.-De Havilland Aircraft of  
Canada, Ltd.  
Gulton Industries, Inc.  
Hertner Electric Co., The  
Homelite, Div.-Textron Inc.  
\*KEARFOTT CO., INC.  
Leitch-Huord Corp.  
Leland Airborne Products, Div.-American Machine &  
Foundry Co.  
P. R. Mallory & Co. Inc.  
Meteor Production Engrg., Inc.  
Sanford Miller Co.  
Model Rectifier Corp.  
Motor Appliance Corp.  
\*MOTOR GENERATOR CORP.  
Motoresearch Co.  
D. W. Onan & Sons Inc.  
Perkin Engrg. Corp.  
Power Supplies Inc.  
Precise Development Corp.  
Radiophone Co. Inc.  
Republic Aviation Corp.  
Safety Electrical Equipment Corp.  
Schauer Mfg. Corp.  
Sel-Rex Corp.  
Sun Electric Corp., Aeronautical Div.  
Technical Apparatus Builders  
Telectro Industries Corp.  
Terado Co.  
Westinghouse Electric Corp.  
Wincharger Corp., Sub-Zenith Radio Corp.  
Yardney Electric Corp.

## BATTERY SERVICING EQUIPMENT

Amelco, Inc.  
Bogue Electric Mfg., Co.  
Christie Electric Corp.  
Frank R. Cook Co.  
Electronic Applications, Inc.  
\*ETS-HOKIN & GALVAN  
General Scientific Equipment Co.  
Green Rectifier Co.  
\*KEARFOTT CO., INC.  
Meteor Production Engrg., Inc.  
Orchard Industries, Inc., Actionflex Div.  
Snap-On Tools Corp.  
Technical Apparatus Builders  
Winder Aircraft Corp. of Florida

## BEACONS, CRASH LOCATOR

ACF Industries Inc.  
Aerolab Development Co.  
American Aeroports  
American Machine & Foundry Co., Government  
Products Group  
American Missile Products Co., Inc.  
\*AVCO MFG. CORP., CROSLLEY DIV.  
Blow Electric Co.  
Cooper Development Corp., Sub.-Marquardt  
Aircraft Co.  
Giffillon Bros. Inc.  
Greer Hydraulics, Inc.  
Grimes Mfg. Co.  
Hycan Mfg. Co.  
ITT Labs.  
Lear, Inc.  
L E L, Inc.  
Littion Industries, Maryland Div.  
W. L. Moxson Corp., The  
Julian A. Mc Dermott Corp.  
Motorola Inc., Military Electronics Div.  
\*PACKARD-BELL ELECTRONICS CORP.  
Philco Corp., Government Industrial Div.  
Radiation, Inc.  
Raytheon Mfg. Co., Government Equipment Div.  
Simmonds Aerocrosseries, Inc.  
Stavid Engrg., Inc.  
Telectro Industries Corp.  
Telerod Mfg. Corp.

## BEACONS, RADAR

See RADAR BEACONS

## BEARINGS

a. Ball  
b. Ball Miniature  
c. Jewel  
d. Needle  
e. Oilless  
f. Rod End

- g. Roller
- h. Roller Taper
- i. Self Aligning
- j. Special Purpose

Acorn Bearing Co., a, g, i.  
 Advance Carbon & Electric Mfg. Co., e.  
 Allegany Instrument Co., Inc., j.  
 Alloys Unlimited Inc., b.  
 Aluminum Co. of America  
 American Aeroparts, a thru i.  
 American Machine & Foundry Co., Greenwich, j.  
 American Standard Products, Inc., i.  
 Amplex Div.-Chrysler Corp., e, i, j.  
 Borden Corp., The, a, b, j.  
 Bearing Inspection, Inc., a, b, d, f thru j.  
 Beryllium Metals Corp., e.  
 Beumer Engrg. Co., e.  
 Bergen Carbide Co., c.  
 A. Biedeman, Inc., a.  
 Richard H. Bird & Co., Inc., c.  
 Bonny Mfg. Corp., d, j.  
 Booker-Cooper, Inc., e, j.  
 Boston Gear Works, a, e.  
 Bound Brook Oil-Less Bearing Co., e, i.  
 Bushings, Inc., e, i, j.  
 Capital City Mfg. Co., j.  
 Carbone Corp., The, e, j.  
 Century Fasteners Corp., a, b, d thru i.  
 Chain Belt Co., f, g, i, j.  
 Chemplast, Inc., e.  
 Chrysler Corp., Defense Operations Div., e, j.  
 Cleveland Graphite Bronze, Div.-Clevite Corp., f, j.  
 Collins Engrg. Corp., f.  
 Corning Glass Works, a.  
 Crane Packing Co., d.  
 Curtiss-Wright Corp.-Wright Aeronautical Div., j.  
 Dixon Corp., e.  
 Dodge Mfg. Corp., a, g, h, i.  
 Dresser Mfg. Div., Dresser Industries, Inc., g, j.  
 Duquoin Co., Inc., d.  
 Fafnir Bearings Co., The, a, b, f, i, j.  
 Federal Bearings Co., Inc., The, a, b, i, j.  
 Fluorocarbon Co., The, e.  
 Fluorlon Labs., Inc., d, i.  
 Ford Instrument Co., Div.-Sperry Rand Corp., j.  
 Freeman Co., The, f.  
 General Electric Co., Apparatus Sales Div., c.  
 Gits Brothers Mfg. Co., j.  
 Graphite Metallizing Corp., e, i, j.  
 Gwilliam Co., The, a, g, j.  
 Hamilton Watch Co.-Industrial Div., c, e.  
 Havel Industries, Inc., j.  
 Helwig Carbon Products, Inc., e.  
 Highland Rim Machine Works, Inc., j.  
 Hyatt Bearings Div., General Motors Corp., g, i.  
 Industrial Tectonics, Inc., a, d, f, g, i, j.  
 Joclin Mfg. Co., e, j.  
 Kaydon Engrg. Corp., The, a, d, g thru j.  
 Hugo P. Keller, Jr., c.  
 Karda Industries, a, b, j.  
 Landis & Gyr Inc., a, b, f, j.  
 Link-Belt Co., a, g, i.  
 Morlin-Rackwell Corp., a, b, f, g, j.  
 Marmion Div., Aeroquip Corp., j.  
 Mc Gill Mfg. Co., Inc., Bearing Div., d, g, j.  
 Microtech Corp., Sub.-Federal-Mogul-Bower Bearings, Inc., b, j.  
 Miniature Precision Bearings, Inc., b, j.  
 Monarch Bearing Co., Inc., a thru d, f thru i.  
 Morganite, Inc., e, j.  
 Moser Jewel Co., c.  
 National Beryllio Corp., e, f, g, j.  
 National Lead Co., f.  
 New Departure Div., General Motors Corp., a, b, j.  
 New Hampshire Ball Bearings, Inc., b.  
 Nice Ball Bearing Co., a, i, j.  
 Ohio Carbon Co., The, e, j.  
 Orange Roller Bearing Co., Inc., d, g, j.  
 Pic Design Corp., Sub.-Benrus Watch Co., Inc., a, b, d.  
 Polymer Corp., The, e, j.  
 Rodial Bearing Corp., i.  
 Randall Graphite Bearings, Inc., i, j.  
 Raway Bearing Co., Inc., a, b, d, f, g, i, j.  
 Research Development Mfg. Inc., j.  
 Roller Bearing Co. of America, d, g, j.  
 SKF Industries, Inc., a, b, g, h, i.  
 St. Marys Carbon Co., e, i, j.  
 Sealmaster Bearing Div., Stephens-Adomson Mfg. Co., a, f, i, j.  
 Shofer Bearings, Chain Belt Co., e, f, i, j.  
 Southwest Products Co., e, f, i, j.  
 Sporto Mfg. Co., Div.-U. S. Ceramic Tile Co., i.  
 Sphinx-American Co., c.  
 Squiers Gage Co., i, j.  
 Stockpole Carbon Co., d.  
 Stein Seal Co., e, j.  
 Stephens Adomson Mfg. Co., Seal Master Bearing Div., a, f, i, j.  
 Sterling Precision Corp., Instrument Div., j.  
 Swiss Jewel Co., b.  
 Thermo Refractories Corp., d, g.  
 Thermech Engrg. Corp., j.  
 Timken Roller Bearing Co., The, g.  
 Torrington Co., The, d, g thru j.  
 United States Chemical Milling Corp., j.  
 United Supply Co., a, e thru h.  
 Waltham Precision Instrument Co., c.

#### BELLOW ASSEMBLIES

Accessory Products Co., Div.-Textron Inc.  
 Aircraft Precision Products, Inc.

Allied Plastics Supply Corp.  
 Alloy Bellows Inc.  
 Anacoanda Metal Hose Div., The American Brass Co.  
 Avica Corp.  
 Badger Mfg. Co.  
 \*BEATON & CORBIN MFG. CO., THE  
 Belfab Corp., The  
 \*BENDIX AVIATION CORP.-HAMILTON DIV.  
 Breeze Corporations, Inc.  
 Bridgeport Thermostat Div., Robertshaw-Fulton Controls Co.  
 Bristol Co., The  
 California Aircraft Products  
 Carmac Aviation  
 Chandler Evans Corp.  
 Components Corp.  
 D K Mfg. Co.  
 Diversey Engrg. Co.  
 Dresser Mfg. Div., Dresser Industries, Inc.  
 Dunbar Aircraft Fitting Co.  
 Dunbar-Kopple Inc.-Aircraft Components Div.  
 Flexible Metal Hose Mfg. Co.  
 \*FLEXONICS CORP., AERONAUTICAL DIV.  
 Flight Refueling, Inc.  
 Gits Brothers Mfg. Co.  
 B. F. Goodrich Aviation Products  
 Graflex Inc.  
 Hallatt Mfg., Co.  
 Halley Carburetor Co.  
 Hydroyne Corp., Skinner Seal Div.  
 International Pump & Machine Works  
 Jaclin Mfg. Co.  
 Karda Industries  
 Marmion Div., Aeroquip Corp.  
 Mercury Tool & Mfg. Corp.  
 Orchard Industries, Inc., Actionflex Div.  
 Parts Engrg. Co., Inc.  
 Piasecki Aircraft Corp.  
 Precision Sheet Metal, Inc.  
 Raymond Engrg. Lab., Inc.  
 Reflectane Corp., The  
 Research Appliance Co.  
 Resistoflex Corp.  
 C. F. Roark Welding & Engrg. Co., Inc.  
 Royal Industries, Inc.  
 Seal Corp.  
 Smith-Morris Corp.  
 Solar Aircraft Co.  
 Stainless Steel Products, Inc.  
 Standard-Thomson Corp., Clifford Mfg. Co. Div.  
 Sterling Precision Corp., Instrument Div.  
 Teiner Engrg. Corp.  
 Tube-Turns Div., Chemetron Corp.  
 Turbo Products, Inc.  
 United Electric Controls Co.  
 U. S. Flexible Metallic Tubing Co.  
 United States Chemical Milling Corp.  
 Variety Aircraft Corp.  
 Waste King Corp., Technical Products Div.  
 Wilks Precision Instrument Co., Inc.  
 Zolleo Brothers

#### BELLS

Accessory Products Co., Div.-Textron Inc.  
 Aircraft Precision Products, Inc.  
 Allied Plastics Supply Corp.  
 Alloy Bellows Inc.  
 Anacoanda Metal Hose Div., The American Brass Co.  
 Badger Mfg. Co.  
 Belfab Corp., The  
 \*BENDIX AVIATION CORP.-HAMILTON DIV.  
 Breeze Corporations, Inc.  
 Bridgeport Thermostat Div., Robertshaw-Fulton Controls Co.  
 Bristol Co., The  
 California Aircraft Products  
 Chicago Gasket Co.  
 Cleveland Graphite Bronze, Div.-Clevite Corp.  
 Colonial Rubber Co.  
 Components Corp.  
 Continental Rubber Works  
 Diversey Engrg. Co.  
 Dunbar-Kopple Inc.-Aircraft Components Div.  
 Eagle Electric Mfg. Co., Inc.  
 Emerson Plastics Corp.  
 Engrg. Developments, Inc.  
 Flexible Metal Hose Mfg. Co.  
 \*FLEXONICS CORP., AERONAUTICAL DIV.  
 Flight Refueling, Inc.  
 Fluorocarbon Co., The  
 B. F. Goodrich Aviation Products  
 Graflex Inc.  
 Hydroyne Corp., Skinner Seal Div.  
 Jaclin Mfg. Co.  
 Orchard Industries, Inc., Actionflex Div.  
 Pic Design Corp., Sub.-Benrus Watch Co., Inc.  
 Ports Engrg. Co., Inc.  
 Precision Sheet Metal, Inc.  
 Resistoflex Corp.  
 C. F. Roark Welding & Engrg. Co., Inc.  
 Fred T. Roberts & Co.  
 Royal Industries, Inc.  
 Rubbercorp Corp. of California  
 Seal Corp.  
 Smith-Morris Corp.  
 Solar Aircraft Co.

Stainless Steel Products, Inc.  
 Standard-Thomson Corp., Clifford Mfg. Co. Div.  
 Teiner Engrg. Corp.  
 Turbo Products, Inc.  
 United Electric Controls Co.  
 U. S. Flexible Metallic Tubing Co.  
 United States Rubber Co.  
 Waltham Engrg. Corp.  
 Waste King Corp., Technical Products Div.  
 Zolleo Brothers

#### BELLS & BUZZERS

Automatic Electric Sales Corp.  
 Cable Electric Products Inc.  
 National Pneumatic Co., Inc., Holtzer-Cabat Divs.

#### BELTS, DIAL DRIVE

General American Transportation Corp.  
 General Plastics Corp. of New Jersey  
 Milton Ross Metals Co., The  
 A. T. Stevens Co.  
 United States Rubber Co.

#### BENCHES & STOOLS See STOOLS & BENCHES

#### BEZELS

Adept Industries Inc.  
 Aerolite Electronics Corp.  
 Allied Plastics Supply Corp.  
 Capital City Mfg. Co.  
 Carmody Corp.  
 Craname Inc.  
 Diversey Engrg. Co.  
 Elzee Metal Products Co., Inc.  
 Etched Products Corp.  
 Hamilton Watch Co.-Industrial Div.  
 Jan Hardware Mfg. Co., Inc.  
 King Metal Spinning & Stamping Co.  
 Kollmorgen Optical Corp.  
 Maryland Etching Co., Inc.  
 Sterling Glass Corp.  
 Wilks Precision Instrument Co., Inc.

#### BIMETAL, THERMOSTATIC

American Silver Co.  
 Bram Metallurgical & Chemical Co.  
 Bridgeport Brass Co.  
 Carpenter Steel Co., The  
 Components Corp.  
 Engelhard Industries, Inc.  
 Metals & Controls Corp., General Plate Div.  
 Scoico Controls, Inc.  
 United Aircraft Products, Inc.

#### BINDERS, LIQUID

Grant Chemical Co., Inc.  
 Monogram Precision Industries  
 United States Rubber Co.

#### BINDING POSTS

Accurate Electronics Corp., Dept. D  
 Aerolite Electronics Corp.  
 Amotom Electronic Hardware Co. Inc.  
 Baldwin Mfg. Co., Inc., The  
 Double E Products Co.  
 Eastern Specialty Co., The  
 Elco Corp.  
 Electro-Tech Equipment Co.  
 GAR Mfg. Corp.  
 Graphite Metallizing Corp.  
 Hewlett-Packard Co.  
 E. F. Johnson Co.  
 Litton Industries, U. S. Engrg. Co., Div.  
 Molco Mfg. Co.  
 Minnesota Mining & Mfg. Co.  
 National Pneumatic Co., Inc., Holtzer-Cabat Divs.  
 National Tel-Tronics Corp.  
 North Electric Co.  
 Milton Ross Metals Co., The  
 Standard Electric Time Co., The  
 Superior Electric Co., The  
 The Technical Apparatus Builders  
 Telectro Industries Corp.  
 Woldam Electronics Inc.

#### BINS

Anchor Metal Spinning Co., The  
 Chemelco  
 Elzee Metal Products Co., Inc.  
 Frick Galtgopher Co., Inc.  
 General Box Co.  
 Hewitt-Robins, Inc.  
 Kirk & Blum Mfg. Co., The  
 Mid-West Metal Products, Inc.  
 R & R Engrg. Co.  
 Richardson Scale Co.  
 Sionless Inc.

#### BLADDERS, FUEL

Allied Plastics Supply Corp.  
 Aviators Equipment Corp.  
 Berger Brothers Co., The  
 Dresser Mfg. Div., Dresser Industries, Inc.  
 Fluorlon Labs., Inc.  
 B. F. Goodrich Aviation Products  
 Goodyear Tire & Rubber Co., The Aviation Products Div.  
 Jaclin Mfg. Co.

Minnesota Mining & Mfg. Co.  
United States Rubber Co.  
Walbar Machine Products Inc.

#### LADES

- a. Compressor
- b. Hack saw
- c. Stator
- d. Turbine

Allen Tool Corp., a, c.  
Allis-Chalmers, a, d.  
Aluminum Co. of America, d.  
Astronautics Engrg. Co., d.  
Austenal Co., Div.-Howe Sound Co., Micracast Products, a, c, d.  
Barrett-Christie Co., b.  
Capewell Mfg. Co., b.  
Christie Machine Works, d.  
Curtiss-Wright Corp.-Propeller Div., a, c, d.  
Dresser Industries, Inc., a, d.  
Eaton Mfg. Co., Aircraft Div., a, thru d.  
Engelhard Industries Inc., D. E. Makepeace Div., a, c, d.  
Ferrotherm Co., The, c.  
Fletcher Mfg. Co., Inc., The, a, c, d.  
Forsberg Mfg. Co., The, a.  
Hoynes Stellite Co., Div.-Union Corbide Corp., a, c, d.  
Houston Fearless Corp., c, d.  
Jarvis Corp., a, c, d.  
Kellogg-Hayes Co., a, c, d.  
Koclost Industries-Div. Thompson Romo Wooldridge Inc., a, c, d.  
Ladish Co., a, thru d.  
Lopointe Machine Tool Co., The, a, c, d.  
Marman Div., Aeroquip Corp., d.  
Mercury Tool & Mfg. Corp., a, d.  
Misco Precision Casting Co., a, c, d.  
Heinz Mueller Eng. Co. Inc., c.  
National Beryllia Corp., a, d.  
Parker-Hartford Corp., The, a, c, d.  
Precision Castparts Corp., a, c, d.  
Precision Shapes, Inc., a, c, d.  
**\*RHEEM MFG. CO., DEFENSE & TECHNICAL PRODUCTS DIV.,**  
Schellens-True Corp., a, c, d.  
Simonds Saw & Steel Co., b.  
Snap-On Tools Corp., b.  
Solar Aircraft Co., a, c, d.  
Stalker Corp., The, a, c, d.  
Steel Improvement & Forge, The, a, c, d.  
Talley Corp., The, a, c, d.  
Tapco Group, Thompson Romo Wooldridge Inc., a, c, d.  
Therm, Inc., a, c, d.  
Thermal Refractories Corp., a, d.  
Transmores Corp., b.  
Turbo Products, Inc., a, c, d.  
Universal-Cyclops Steel Corp., a, d.  
Vest Industries, a, c, d.  
Walbar Machine Products Inc., b, c.  
Westinghouse Electric Corp., a, c, d.

#### PRODUCTS DIV., DEFENSE & TECHNICAL

chellens-True Corp., a, c, d.  
Simonds Saw & Steel Co., b.  
Snap-On Tools Corp., b.  
Solar Aircraft Co., a, c, d.  
Stalker Corp., The, a, c, d.  
Steel Improvement & Forge, The, a, c, d.  
Talley Corp., The, a, c, d.  
Tapco Group, Thompson Romo Wooldridge Inc., a, c, d.  
Therm, Inc., a, c, d.  
Thermal Refractories Corp., a, d.  
Transmores Corp., b.  
Turbo Products, Inc., a, c, d.  
Universal-Cyclops Steel Corp., a, d.  
Vest Industries, a, c, d.  
Walbar Machine Products Inc., b, c.  
Westinghouse Electric Corp., a, c, d.

#### AST DEFLECTOR, PADS & TUBES

Air Logistics Corp.  
American Machine & Foundry Co., Government Products Group  
American Machine & Foundry Co., Greenwich 3il-Jax Inc.  
Cleveland Pneumatic Industries, Inc.  
Curtiss-Wright Corp.-Ulrica Div.  
Dean Products, Inc.  
Diversey Engrg. Co.  
Dresser Mfg. Div., Dresser Industries, Inc.  
Dynamic Devices, Inc.  
Dyso-Therm Chemical Corp.  
E. W. Galloway Co.  
Eavey Industries, Inc.  
Eberhardt Aircraft Co.  
Erecture Tool & Mfg. Corp.  
Etnessato Mining & Mfg. Co.  
Etonogram Precision Industries  
Etonational Beryllia Corp.  
Etonewbrook Machine Corp.  
Etonorton Co., New Products Dept.  
Etonpeliko Welding, Machine & Supply Inc.  
Etonrdance Div.-Food Machinery & Chemical Corp.  
Etonrtland Copper & Tank Works Inc.  
Etonaybestos-Manhattan, Inc., Pa.  
Etondw. Renneburg & Sons Co.  
Etonyon Aeronautical Co.  
Etonpace Corp.  
Etonrainless Inc.  
Etonwedlow Inc.  
Etonthermal Refractories Corp.  
Etonard Inc.  
Etonashington Technological Associates Inc.  
Etonayne Pump Co., The, Div.-Symington Wayne Corp.  
Etonippertubing Co., The

#### END RIVETS

#### EE RIVETS, BLIND

#### ESTERS

dept Industries Inc.  
lowers Inc.  
omalite Corp., The  
omafex Industries, Inc.  
omercurey Tool & Mfg. Corp.  
ominesasato Mining & Mfg. Co.  
omational Pneumatic Co., Inc., Hultzzer-Cabot Divs.  
omlastic Age Sales, Inc.

Swedlow Inc.  
Tel-Labs, Inc.

#### BLOCKS, TERMINAL See TERMINAL BLOCKS

#### BLOWERS, MOTOR & GENERATOR

##### \*AIRESEARCH MFG. CO., DIV.-THE GARRETT CORP.

American Aeroparts  
American Electronics, Inc.  
Bendix-Pacific Div., Bendix Aviation Corp.  
Blowers Inc.  
Bogue Electric Mfg. Co.  
Clorange Fan Co.  
Curtiss-Wright Corp., Santa Barbara Div.  
Dalmator Div., Yuba Consolidated Industries, Inc.  
Eastern Industries Inc.  
Globe Industries, Inc.  
Hoover Electric Co.  
**\*HYDRO-AIRE CO., DIV.-CRANE CO.**  
ILG Electric Ventilating Co.  
Instrument Motors  
Joy Mfg. Co.  
Leiman Brothers, Inc.  
Lundy Mfg. Corp.  
McLean Engrg. Laboratories  
Monogram Precision Industries  
Heinz Mueller Eng. Co. Inc.  
National Pneumatic Co., Inc., Hultzzer-Cabot Divs.  
Redmond Co., Inc.  
Ripley Co., Inc.  
Roton Mfg. Co.  
Small Motors Inc.  
Talley Corp., The  
Task Corp.  
Thompson Engrg. Co., The, Missile Products Div.  
Torrington Mfg. Co. Inc., The, Specialty Blower Div.  
United Aircraft Products, Inc.  
Western Design, Div.-U.S. Industries, Inc.; Sonto Barbara Div.  
Western Gear Corp.

#### BLOWERS, SMALL

##### Air Logistics Corp. \*AIRESEARCH MFG. CO., DIV., THE GARRETT CORP.

Air-Marine Motors, Inc.  
American Aeroparts  
American Electronics, Inc.  
Ashland Electric Products, Inc.  
Barber-Colman Co.  
Bendix-Pacific Div., Bendix Aviation Corp.  
Blowers Inc.  
Chicago Aerial Industries, Inc.  
Clorange Fan Co.  
Coppus Engrg. Corp.  
Curtiss-Wright Corp., Santa Barbara Div.  
Dalmator Div., Yuba Consolidated Industries, Inc.  
Dean & Benson Research, Inc.  
Eastern Industries Inc.  
Eicor Div.-Scranton  
El Ray Motor Co., Inc.  
Fuller Co.  
Gorden City Fan Co.  
Globe Industries, Inc.  
Hoover Electric Co.  
ILG Electric Ventilating Co.  
Induction Motors Corp.  
JEM Electronics Corp.  
Joy Mfg. Co.  
Lundy Mfg. Corp.  
McLean Engrg. Laboratories  
Heinz Mueller Eng. Co. Inc.  
National Pneumatic Co., Inc., Hultzzer-Cabot Divs.  
National Spectrographic Labs., Inc.  
Peerless Electric Co., The  
Redmond Co., Inc.  
Ripley Co., Inc.  
Rotron Mfg. Co.  
Sanders Associates, Inc.  
Talley Corp., The  
Task Corp.  
Technical Apparatus Builders  
Teiner Engrg. Corp.  
Thompson Engrg. Co., The, Missile Products Div.  
Torrington Mfg. Co. Inc., The, Specialty Blower Div.  
Turbo Products, Inc.  
Universal Dynamics Corp.  
Wenzlau Engrg. Co.  
Western Design, Div.-U.S. Industries, Inc.; Sonto Barbara Div.  
Western Gear Corp.

#### BLOWERS, TRANSMITTER

Air-Marine Motors, Inc.  
Bendix-Pacific Div., Bendix Aviation Corp.  
Bud Radio Inc.  
Dean & Benson Research, Inc.  
Hoover Electric Co.  
ILG Electric Ventilating Co.  
Joy Mfg. Co.  
Heinz Mueller Eng. Co. Inc.  
Redmond Co., Inc.  
Ripley Co., Inc.  
Rotron Mfg. Co.  
Talley Corp., The  
Technical Apparatus Builders  
Torrington Mfg. Co. Inc., The, Specialty Blower Div.  
Western Gear Corp.

#### BOARDS, CAPACITOR OR RESISTOR

Accurate Electronics Corp., Dept. D  
Adept Industries Inc.  
Aerolite Electronics Corp.  
Airtronics International Corp.  
Carl H. Biggs Co.  
Centralab, Div.-Globe-Union  
Dalmar Corp.  
Detronic Industries  
Duty Acoustica Electronic Labs.  
Double E Products Co.  
Dresser Industries, Inc.  
Electrical Insulation Co., Inc.  
Electro-Mechanical Products Co.  
Gladding, McBean & Co.  
Ludwig Donald Mfg. Co.  
Julie Research Labs., Inc.  
Lifton Industries, U.S. Engrg. Co., Div.  
Minnesota Mining & Mfg. Co.  
National Beryllia Corp.  
National Pneumatic Co., Inc., Hultzzer-Cabot Divs.  
National Tel-Tronics Corp.  
Projects Unlimited Inc.  
Q-Circuits, Div.-Etching Co. of Calif.  
Tri-Dex Co.

#### BOARDS, PLOTTING

Accurate Electronics Corp., Dept. D  
Adept Industries Inc.  
Allied Plastics Supply Corp.  
Benson-Lehner Corp.  
Braks & Perkins, Inc.  
Carmody Corp.  
Double E Products Co.  
Duroolith Corp.  
Electro Instruments, Inc.  
Electromath Corp.  
Eljay Corp.  
Emeloid Co., Inc., The  
Hamalite Corp., The  
ITT Labs.  
Milgo Electronic Corp.  
F. L. Mosley  
Motorola Inc., Military Electronics Div.  
Nuclear Products-Erco Div.-ACF Industries, Inc.  
Seiscar Mfg. Co.  
Sera Corp. of America  
Skidatron Electronics & Television Corp.  
Specialty Engrg. & Electronics Co.  
Virginia Plak Co.

#### BOARDS, PLUG

Accurate Electronics Corp., Dept. D  
Aerolite Electronics Corp.  
Anton Electronic Labs., Inc.  
Automatic Electric Sales Corp.  
Danner Scientific Co.  
Eastern Spec Co., The  
Electrical Insulation Co., Inc.  
Electromath Corp.  
**\*ETS-HOKIN & GALVAN**  
Hamolite Corp., The  
Hydra Molding Co., Inc.  
Monogram Precision Industries  
National Pneumatic Co., Inc., Hultzzer-Cabot Divs.  
National Tel-Tronics Corp.  
Pilgrim Products Inc.  
Projects Unlimited Inc.  
Spaulding Fibre Co., Inc.  
Virginia Electronics Co., Inc.

#### BOARDS, TERMINAL

##### See TERMINAL BOARDS

#### BOBBINS, COIL WINDING

Advanced Electronics, Inc.  
Alden Products Co.  
American Molded Products Co.  
Automatic Electric Sales Corp.  
Banny Mfg. Corp.  
Centralab, Div.-Globe-Union  
Chemplast, Inc.  
Coil Co. of America  
Continental Diamond Fibre Corp.  
Electro-Mechanical Products Co.  
Ermson Plastics Corp.  
Farm-It Products, Inc.  
Franklin Fibre-Lamitex Corp.  
Garde Mfg. Co.  
Gladding, McBean & Co.  
Hays Mfg. Co.  
Hamalite Corp., The  
Hydra Molding Co., Inc.  
Isolantite Mfg. Corp.  
Knopp Inc.  
Lamtex Industries, Inc.  
Lane Star Plastics Co. Inc.  
Maryland Lava Co.  
Minneapolis-Honeywell Regulator Co., Boston Div.  
Molding Corp. of America  
National Coil Co.  
National Pneumatic Co., Inc., Hultzzer-Cabot Divs.  
Peerless Products Industries  
Penn Fibre & Specialty Co., Inc.  
Perry Plastics, Inc.  
Pilgrim Products Inc.  
Q. O. S. Corp.  
Rallan Electric Co.  
Milton Ross Metals Co., The  
Sanford Plastics Corp.  
Silicone Insulation, Inc.

Slip Ring Co. of America  
Stanley-Judd Div.-The Stanley Works  
Stevens Products, Inc.  
Tapper Mfg. Co., Inc.

#### BOBBINS, TRANSFORMER WINDING

American Malted Products Co.  
Bonny Mfg. Corp.  
Coil Co. of America  
Continental Diamond Fibre Corp.  
Emerson Plastics Corp.  
Franklin Fibre-Lamitex Corp.  
Homalite Corp., The  
Hydra Molding Co., Inc.  
Knapp Inc.  
Lantex Industries, Inc.  
Lane Star Plastics Co. Inc.  
Maryland Lava Co.  
Molding Corp. of America  
National Coil Co.  
National Pneumatic Co., Inc., Haltzer-Cabat Divs.  
Milton Ross Metals Co., The  
Silicone Insulation, Inc.  
Slip Ring Co. of America  
Stevens Products, Inc.  
Tapper Mfg. Co., Inc.

#### BOLT CARTRIDGES, EXPLOSIVE

Aero Bolt & Screw Co., Inc.  
American Standard Products, Inc.  
Atlantic Research Corp.  
Beckman & Whitley, Inc., Missile Products Div.  
Components Corp.  
Cooper Development Corp., Sub-Marquardt Aircraft Co.  
Horkey-Moore Associates  
**\*MC CORMICK SELPH ASSOCIATES**  
Olin Mathieson Chemical Corp., Energy Div.  
**\*PROPELLEX CHEMICAL DIV., CHROMALLOY CORP.**  
Thiokol Chemical Corp., Hunter-Bristol Div.

#### BOLTS, EXPLOSIVE

**\*MC CORMICK SELPH ASSOCIATES**

#### BOLTS, LOCK

Abbott Screw & Mfg. Co.  
Aero Bolt & Screw Co., Inc.  
American Aeroparts  
American Standard Products, Inc.  
Bland Burner Co., The  
Capital City Mfg. Co.  
Century Fasteners Corp.  
Chandler Products Corp.  
Corbin Products Div.  
Eaton Mfg. Co., Reliance Div.  
Highland Rim Machine Works Inc.  
Hi-Shear Rivet Tool Co.  
Huck Mfg. Co.  
Lomson & Sessions Co., The  
Lucas Aircraft Supply Co.  
Mercury Air Parts Co., Inc.  
Monogram Precision Industries  
National Screw & Mfg. Co., The  
Republic Steel Corp.  
Standard Pressed Steel Co.  
Stanley-Judd Div.-The Stanley Works  
**\*TOWNSEND CO., CHERRY RIVET DIV.**  
Western Automatic Machine Screw Co., Div.-Standard Screw Co.

#### BOLTS, SPADE

Abbott Screw & Mfg. Co.  
Amatom Electronic Hardware Co. Inc.  
American Aeroparts  
Atlas Screw & Specialty Co.  
Capital City Mfg. Co.  
Century Fasteners Corp.  
Corbin Products Div.  
H. M. Harper Co.  
Lucas Aircraft Supply Co.  
Monogram Precision Industries  
National Screw & Mfg. Co., The  
Stanley-Judd Div.-The Stanley Works  
Teiner Engrg. Corp.

#### BOLTS, TOGGLE OR EXPANSION

Abbott Screw & Mfg. Co.  
Ackerman Johnson Co.  
Allmetal Screw Products Co., Inc.  
American Aeroparts  
Anchor Metal Spinning Co., The  
Arro Expansion Bolt Co.  
Atlas Screw & Specialty Co.  
Barrett-Christie Co.  
Chase Brass & Copper Co., Inc.  
Highland Rim Machine Works Inc.  
Hi-Shear Rivet Tool Co.  
Holub Industries, Inc.  
Lucas Aircraft Supply Co.  
Monogram Precision Industries  
National Screw & Mfg. Co., The  
Republic Steel Corp.  
Stanley-Judd Div.-The Stanley Works  
Star Expansion  
United Supply Co.

#### BONDING JUMPERS

See JUMPERS, BONDING

#### BONDING MATERIALS

American Felt Co.  
Carl H. Biggs Co.  
Carda Chemical Corp.  
Corning Glass Works  
**\*DOW CORNING CORP.**  
Dresser Mfg. Div., Dresser Industries, Inc.  
Dyna-Therm Chemical Corp.  
B. F. Goadrich Industrial Products Co.  
Goodyear Tire & Rubber Co., The, Aviation Products Div.  
Grant Chemical Co., Inc.  
Haveg Industries, Inc.  
Homalite Corp., The  
Kaiser Metal Products, Inc.-Fleetwings Div.  
Lantex Industries, Inc.  
Leiman Brothers, Inc.  
Lord Mfg. Co.  
Minnesota Mining & Mfg. Co.  
Manogram Precision Industries  
National Beryllia Corp.  
Shell Chemical Corp., Industrial Chemicals Div.  
Silicones Div.-Union Carbide Corp.

#### BOOSTERS, GAS PRESSURE

Accessory Controls & Equipment Corp.  
Associated Engineers, Inc.  
Astrodyne, Inc.  
Dynamic Devices, Inc.  
Greer Hydraulics, Inc.  
Hannifin Co., Div.-Parker-Hannifin Corp.  
Haskel Engrg. & Supply Co.  
Ingersoll Kalamazoo Div., Borg-Warner Corp.  
Intercontinental Mfg. Co., Inc.  
Kaiser Metal Products, Inc. - Fleetwings Div.  
M. W. Kellogg Co., The  
**\*MC CORMICK SELPH ASSOCIATES**  
Newbrook Machine Corp.  
Pressed Steel Tank Co.  
Reaction Motors Div., Thiokol Chem. Corp.  
**\*RHEEM MFG. CO., DEFENSE & TECHNICAL PRODUCTS DIV.**  
Sargent Engrg. Corp.  
Universal Moulded Products Corp.  
Wayne Pump Co., The, Div.-Symington Wayne Corp.

#### BOOSTERS, MISSILE, LIQUID FUELED

Aerajet-General Corp.  
Alco Products, Inc.  
Associated Engineers, Inc.  
Chrysler Corp., Defense Operations Div.  
Curtiss-Wright Corp.-Wright Aeronautical Div.  
Diversey Engrg. Co.  
Dresser Mfg. Div., Dresser Industries, Inc.  
Dynamic Devices, Inc.  
Fulton-Irgon Corp., The  
General Electric Co., Apparatus Sales Div.  
Hicks Corp., The  
Hydrodyne Corp., Skinner Seal Div.  
Ingersoll Kalamazoo Div., Borg-Warner Corp.  
Kaiser Metal Products, Inc. - Fleetwings Div.  
M. W. Kellogg Co., The  
Newbrook Machine Corp.  
Pressed Steel Tank Co.  
Reaction Motors Div., Thiokol Chem. Corp.  
**\*RHEEM MFG. CO., DEFENSE & TECHNICAL PRODUCTS DIV.**  
Special Projects Lab., Food Machinery & Chemical Corp.  
Stratos, Div.-Fairchild Engine & Airplane Corp.  
Thiokol Chemical Corp.  
Universal Moulded Products Corp.  
Wayne Pump Co., The, Div.-Symington Wayne Corp.

#### BOOSTERS, MISSILE, SOLID FUELED

Aerajet-General Corp.  
Aerolab Development Co.  
Alco Products, Inc.  
American Rocket Co.  
Associated Engineers, Inc.  
Astrodyne, Inc.  
Atlantic Research Corp.  
Bridgeport Brass Co.  
Chrysler Corp., Defense Operations Div.  
Cooper Development Corp., Sub-Marquardt Aircraft Co.  
Diversey Engrg. Co.  
Dresser Mfg. Div., Dresser Industries, Inc.  
Dynamic Devices, Inc.  
Dyna-Therm Chemical Corp.  
Fulton-Irgon Corp., The  
General Box Co.  
General Electric Co., Apparatus Sales Div.  
Goodyear Aircraft Corp.  
Hohn & Clay  
Hicks Corp., The  
Hinde & Dauch Div.-West Virginia Pulp & Paper Co.  
Ingersoll Kalamazoo Div., Borg-Warner Corp.  
Intercontinental Mfg. Co., Inc.  
Kanarr Corp.  
M. W. Kellogg Co., The  
**\*MC CORMICK SELPH ASSOCIATES**  
Mercury Tool & Mfg. Corp.  
Newbrook Machine Corp.  
Norris-Thermador Corp.  
Orlikon Tool & Arms Corp. of America  
Olin Mathieson Chemical Corp., Energy Div.  
Portland Copper & Tank Works, Inc.  
Pressed Steel Tank Co.

Republic Aviation Corp.  
**\*RHEEM MFG. CO., DEFENSE & TECHNICAL PRODUCTS DIV.**

Roberts Industries Inc.  
Rahm & Haas Co., Redstone Arsenal Research Div.  
Spaulding Fibre Co., Inc.  
Thiokol Chemical Corp.  
Wayne Pump Co., The, Div.-Symington Corp.  
Winder Aircraft Corp. of Florida

#### BOOTHS, DECONTAMINATION

**\*HAWS DRINKING FAUCET CO.**

#### BOXES

A&P Metal Products Mfg. Corp.  
Abalon Precision Mfg. Corp.  
Alpetic, Inc.  
Aluminum Co. of America  
American Aeroparts  
American Aluminum Co.  
Anchor Metal Spinning Co., The  
Brooks & Perkins, Inc.  
Bud Radio Inc.  
Carmady Corp.  
Albert H. Cayne Equipment Corp.  
Champion Co., The  
Chemold Co.  
Chicago Malted Products Corp.  
Eckol Packaging Co.  
Electro-Mechanical Products Co.  
Elzee Metal Products Co., Inc.  
**\*ETS-HOKIN & GALVAN**  
Falstrom Co.  
Farwell Metal Fabricating  
Ferris-Mfg. Co., The  
Fletcher Mfg. Co., Inc., The  
General American Transportation Corp.  
General Box Co.  
Greenbrier Instruments Inc.  
Hardman Tool & Engrg. Co.  
Hinde & Dauch Div.-West Virginia Pulp & Paper Co.  
Kirk & Blum Mfg. Co., The  
Ludwig Harold Mfg. Co.  
Meridian Metalcraft, Inc.  
Mid-West Metal Products, Inc.  
**\*MIRAX CHEMICAL PRODUCTS CORP., METAL CONTAINER DIV.**  
Monogram Precision Industries  
Muckle Mfg. Co.  
National Pneumatic Co., Inc., Holtzer-Cabat Divs.  
Plastic Age Sales, Inc.  
Rimack, Inc.  
Seamless Products Co., Inc.  
Skydyne, Inc.  
Skyline Products, Inc.  
Swedlow Inc.  
United Supply Co.  
Young & Rioux Woodworking Co., Inc.

**BOXES, BATTERY, CRADLES, ETC.**  
**SEE BATTERY BOXES, CRADLES, ETC.**

#### BOXES, JUNCTION

A&P Metal Products Mfg. Corp.  
Abalon Precision Mfg. Corp.  
Aerolite Electronics Corp.  
Anchor Metal Spinning Co., The  
Bell & Howell Co.  
Brooks & Perkins, Inc.  
Bud Radio Inc.  
Calflite Co., Inc.  
Chrysler Corp., Defense Operations Div.  
Consolidated Productions, Inc.  
Crouse-Hinds Co.  
Davenport Co., The  
Dayton Aviation Radio & Equipment Corp.  
Electro-Mechanical Products Co.  
Elzee Metal Products Co., Inc.  
**\*ETS-HOKIN & GALVAN**  
Federal Mfg. & Engrg. Corp.  
Ferris-Mfg. Co., The  
Firestone Tire & Rubber Co., The, Guided Missile Div.  
Fletcher Mfg. Co., Inc., The  
General Box Co.  
General Electric Co., Apparatus Sales Div.  
Hardman Tool & Engrg. Co.  
Hoffman Engrg. Corp.  
Homalite Corp., The  
ITT Federal Div., International Telephone & Telegraph Corp.  
Javex Electronics  
Kirk & Blum Mfg. Co., The  
**\*LAVELLE AIRCRAFT CORP.**  
Litton Industries, Inc.  
Ludwig Harold Mfg. Co.  
**\*MIRAX CHEMICAL PRODUCTS CORP., METAL CONTAINER DIV.**  
Monogram Precision Industries  
Motorola Inc., Military Electronics Div.  
Philo Corp., Government & Industrial Div.  
Piasecki Aircraft Corp.  
Plastic Age Sales, Inc.  
Roberts Industries Inc.  
Russell Reinforced Plastics Corp.  
Ryan Aeronautical Co.  
Sequoia Wire & Cable Co., Div.-Mandrel Industries, Inc.  
Skyline Products, Inc.  
Swedlow Inc.  
Teiner Engrg. Corp.

Telectra Industries Corp.  
Twin Coach Co., Aircraft-Missiles  
United Supply Co.  
Universal Moulded Products Corp.  
Variety Aircraft Corp.  
Wough Engrg. Co.

**BOXES & PANELS, JUNCTION**  
See **JUNCTION BOXES & PANELS**

**BOXES, STORAGE**

A&P Metal Products Mfg. Corp.  
Abalon Precision Mfg. Corp.  
Aluminum Co. of America  
Anchor Metal Spinning Co., The  
Brooks & Perkins, Inc.  
Cormady Corp.  
Albert H. Coyne Equipment Corp.  
Champion Co., The  
Chemold Co.  
Chicago Malted Products Corp.  
Continental Diamond Fibre Corp.  
Curtiss-Wright Corp., Research Div.  
Eckel Packaging Co.  
Ecanaweld Corp.  
Elzee Metal Products Co., Inc.  
Ferris-Mfg. Co., The  
Fletcher Mfg. Co., Inc., The  
General American Transportation Corp.  
Hinde & Dauch Div.-West Virginia Pulp & Paper Co.  
Ludwig Holdol Mfg. Co.  
Intercontinental Mfg. Co., Inc.  
M. W. Kellogg Co., The  
Kirk & Blum Mfg. Co., The  
H. Koch & Sons  
Lyon Van & Storage Co., Aircraft Div.  
Metal-Glass Products Co.  
**\*MIRAX CHEMICAL PRODUCTS CORP., METAL CONTAINER DIV.**

Monogram Precision Industries  
Muckle Mfg. Co.  
Piasecki Aircraft Corp.  
Plastic Age Sales, Inc.  
Precision Sheet Metal, Inc.  
Pry Welding & Mfg., Inc.  
Russell Reinforced Plastics Corp.  
Skyline Products, Inc.  
Swedlow Inc.  
Teiner Engrg. Corp.  
Texas Metal & Mfg. Co., Inc.  
Twin Coach Co., Aircraft-Missiles  
United Supply Co.  
Washington Aluminum Co., Inc.

**RACKETS, HARDWARE**

Abalon Precision Mfg. Corp.  
Aerolite Electronics Corp.  
Aerona Mfg. Corp.  
All Products Co.  
Alpitect, Inc.  
Anatom Electronic Hardware Co. Inc.  
American Aeroparts  
Anchor Metal Spinning Co., The  
Basic Tool Industries, Inc.  
Bud Radio Inc.  
Burklyn Co.  
Capital City Mfg. Co.  
Colonial Aircraft Corp.  
Cooper Industries, Inc.  
Diversey Engrg. Co.  
Double E Products Co.  
EMWCO Plastic Fabricators - Div.-E. M.  
McCarthy Machine Co.  
Ferris-Mfg. Co., The  
Fletcher Mfg. Co., Inc., The  
GAR Mfg. Corp.  
Ingersoll Kalamazoo Div., Borg-Warner Corp.  
M. W. Kellogg Co., The  
Keystone Electronics Corp.  
Mercury Tool & Mfg. Corp.  
**\*MIRAX CHEMICAL PRODUCTS CORP., METAL CONTAINER DIV.**  
Monogram Precision Industries  
Piasecki Aircraft Corp.  
Royleon Mfg. Co.  
C. F. Roark Welding & Engrg. Co., Inc.  
Stanley-Judd Div.-The Stanley Works  
TA Mfg. Corp.  
Teiner Engrg. Corp.  
Wind Turbine Co.

**RACKETS, MOUNTING**

A&P Metal Products Mfg. Corp.  
Abalon Precision Mfg. Corp.  
Allied Plastics Supply Corp.  
Anatom Electronic Hardware Co. Inc.  
American Aeroparts  
Anchor Metal Spinning Co., The  
Automatic Electric Sales Corp.  
B. H. Aircraft Co., Inc.  
Bruce Engrg. Co.  
Bud Radio Inc.  
Capital City Mfg. Co.  
Colonial Aircraft Corp.  
Detronic Industries  
Diversey Engrg. Co.  
Electro-Mechanical Products Co.  
Elzee Metal Products Co., Inc.  
Folstrom Co.  
Farwell Metal Fabricating  
Ferris-Mfg. Co., The

Firestone Tire & Rubber Co., The, Guided  
Missile Div.  
Gar Mfg. Corp.  
Highland Rim Machine Works Inc.  
Hobson Brothers, Inc.  
Ingersoll Kalamazoo Div., Borg-Warner Corp.  
M. W. Kellogg Co., The  
Keystone Electronics Corp.  
Kirk & Blum Mfg. Co., The  
Mercury Tool & Mfg. Corp.  
Mid-West Metal Products, Inc.  
**\*MIRAX CHEMICAL PRODUCTS CORP., METAL CONTAINER DIV.**  
Monogram Precision Industries  
Newton Hydraulic Tooling Co.  
Piasecki Aircraft Corp.  
Pneumafil Corp.  
C. F. Roark Welding & Engrg. Co., Inc.  
Skinner Precision Products  
Smith-Morris Corp.  
Stanley-Judd Div.-The Stanley Works  
TA Mfg. Corp.  
Teiner Engrg. Corp.  
Variety Aircraft Corp.  
Vectar Electronic Co.  
Washington Aluminum Co., Inc.  
Winder Aircraft Corp. of Florida

**BRAKE CONTROL UNITS**

B. F. Goodrich Aviation Products  
Green Rectifier Co.  
Hoover Electric Co.  
Hydra-Power Corp.  
Sargent Engrg. Corp.  
Teiner Engrg. Corp.  
Weston Hydraulics Ltd-Sub., Borg-Warner Corp.

**BRAKE DRUM**

American Aeroparts  
Dresser Mfg. Div., Dresser Industries, Inc.  
B. F. Goodrich Aviation Products  
Kelsey-Hayes Co.  
Mercury Tool & Mfg. Corp.  
Rockwell-Standard Corp.

**BRAKE LININGS**

American Aeroparts  
American Brake Shoe Co.  
Auto Specialties Mfg. Co., Inc.  
**\*BENDIX PRODUCTS DIV., BENDIX AVIATION CORP.**  
Gatke Corp.  
B. F. Goodrich Aviation Products  
Goodyear Tire & Rubber Co., The, Aviation Products Div.  
Johns-Manville  
Johns-Manville Sales Corp.  
National Beryllia Corp.  
Raybestos-Manhattan, Inc.  
Raybestos-Manhattan, Inc., Pa.  
Thermal Refractories Corp.

**BRAKES**

a. Electrical  
b. Magnetic  
c. Mechanical  
d. Pneumatic  
Airborne Accessories Corp., b, c.  
All American Engrg. Co., c.  
American Aeroparts, c, d.  
American Steel Foundries, Hammond Div., c.  
Atlantic Instrument Corp., Sub-American Electronics, Inc., c, d.  
Auto Specialties Mfg. Co., Inc., b, c, d.  
Autotronics Inc., b.  
Beaver Precision Products Inc., c.  
Belock Instrument Corp., b.  
**\*BENDIX PRODUCTS DIV., BENDIX AVIATION CORP., c.**  
Bowmar Instrument Corp., c.  
Burton-Rodgers, Inc., a, b.  
Clark Equipment Co., d.  
Cornelius Co., The, Aero Div., d.  
Curtiss-Wright Corp., Marquette Div., c.  
Cutler-Hammer Inc., a, b.  
Haddon Mfg. Co., a, b.  
Dresser Mfg. Div., Dresser Industries, Inc.  
Eaton Mfg. Co.  
Electro-Mechanical Products Co., b.  
Electro-Tech Equipment Co., b.  
FAE Instrument Corp., b.  
General Electric Co., Apparatus Sales Div., a, b.  
General Electro-Mechanical Corp., a, b.  
Globe Industries, Inc., a, b.  
B. F. Goodrich Aviation Products, c, d.  
Goodyear Tire & Rubber Co., The, Aviation Products Div., a, c, d.  
Haddon Mfg. Co., The, b.  
Hoover Electric Co., a, b, c.  
Integral Corp., c, d.  
Jack & Heintz, Inc., a, b, c.  
**\*KEARFOTT CO., INC., a, b.**  
Kelsey-Hayes Co., c.  
Liggett Supply & Equipment Co., a, c.  
Lundy Mfg. Corp., a thru d.  
Lyndon Aircraft, Inc., a, b.  
Magtrol, Inc., a, b.  
Orbit Instrument Corp., b.  
Pic Design Corp., Sub-Bensus Watch Co., Inc., b, c.  
Pacific Scientific Co., c.  
Reeves Instrument Corp., b.

Robot Industries Inc., a, b.  
Rockwell-Standard Corp., c, d.  
Sterling Precision Corp., Instrument Div., a, b, c.  
Talley Corp., The, a, b, c.  
Technical Apparatus Builders, a, b.  
Technology Instrument Corp., a, b.  
Trambetta Salerni Corp., b, d.  
U. S. Science Corp., Div.-Topp Industries, Inc., b.  
Van Zelm Associates, Inc., c.  
Warner Electric Brake & Clutch Co., a, b.  
Welded Construction Inc., c.  
Western Design, Div.-U. S. Industries, Inc.; Santa Barbara Div., a, b.  
Western Gear Corp., a, b, c.  
Westinghouse Electric Corp., a, b.  
Wright Engrg. Co., a, b.

**BRAKESHOOES**

ACF Industries Inc.  
American Aeroparts  
American Brake Shoe Co.  
American Brazing Alloys Co.  
American Car & Foundry, Div.-ACF Industries, Inc.  
American Steel Foundries, Hammond Div.  
**\*BENDIX PRODUCTS DIV., BENDIX AVIATION CORP.**  
B. F. Goodrich Aviation Products  
Johns-Manville  
Metals & Controls Corp., General Plate Div.  
Monogram Precision Industries  
Raybestos-Manhattan, Inc.  
Rockwell-Standard Corp.  
Thermal Refractories Corp.

**BRAZING**

a. Aluminum Dip  
b. Dry Hydrogen  
**\*BENDIX AVIATION CORP., HAMILTON DIV., a, b.**

**BRAZING ALLOYS**

Accurate Specialties Co. Inc.  
Air Reduction Sales Co., Div.-Air Reduction Co., Inc.  
Alloys Unlimited Inc.  
All-State Welding Alloys Co., Inc.  
Aluminum Co. of America  
American Brass Co., The  
American Silver Co.  
Bridgeport Brass Co.  
Dalweld Co. Inc.  
Engelhard Industries, Inc.  
Handy & Harman  
Metals & Controls Corp., General Plate Div.  
Sargent & Wilbur Heat Treating Corp.  
Solar Aircraft Co.  
United Wire & Supply Corp.  
Vanadium-Alloys Steel Co.  
**\*WALL COLMONDY CORP., STAINLESS PROCESSING DIV.**  
Wildberg Bros. Smelting & Refining Co.

**BRAZING OR SOLDERING FLUX**  
See **FLUX, BRAZING OR SOLDERING**

**BREADBOARD KITS, ELECTRONIC**

Aerolite Electronics Corp.  
Aerona Mfg. Corp.  
Alden Products Co.  
Di-An Controls, Inc.  
Good Electronic Corp.  
Helipot Div.-Beckman Instruments Inc.  
Hicks Corp., The  
Paul Nurches Co.  
Philco Corp., Government & Industrial Div.  
Piasecki Aircraft Corp.  
Pomona Electronics Co., Inc.  
Raymond Engrg. Lab., Inc.  
Rimac, Inc.  
Ryan Aeronautical Co.  
Servo Corp. of America  
Stanley Aviation Corp.  
Transistor Electronics Corp.  
United Aircraft Products, Inc.  
Vector Electronic Co.

**BREAK-AWAY MECHANISMS**

**\*AC ELECTRONICS DIV., GENERAL MOTORS CORP.**  
Aerolab Development Co.  
American Machine & Foundry Co., Government Products Group  
Beaver Precision Products Inc.  
Benbow Mfg. Corp.  
Communications Research Co.  
Components Corp.  
Cooper Development Corp., Sub-Marquardt Aircraft Co.  
Cutler-Hammer Inc.  
Hoover Electric Co.  
Horkey-Moore Associates  
Kaiser Aircraft & Electronics, Div.-Kaiser Industries Corp.  
H. Koch & Sons  
**\*MC CORMICK SELPH ASSOCIATES**  
Pacific Scientific Co.  
Royal Industries, Inc.  
Skinner Precision Products  
Stanley Aviation Corp.  
Thiokol Chemical Corp., Hunter-Bristol Div.  
Wilks Precision Instrument Co., Inc.

## BREAKERS, CIRCUIT

Cable Electric Products Inc.  
Dresser Mfg. Div., Dresser Industries, Inc.  
Electric Auto-Lite Co., The  
General Electric Co., Apparatus Sales Div.  
Heinemann Electric Co.  
I-T-E Circuit Breaker Co.  
Mechanical Products Inc.  
Sengame Electric Co.  
Spencer Div., Metals & Controls Corp.  
Westinghouse Electric Corp.

## BREATHING EQUIPMENT & OXYGEN APPARATUS SEE OXYGEN APPARATUS & BREATHING EQUIPMENT

## BREATHERS, ENGINE

Bendix Filter Div., Bendix Aviation Corp.  
Curtiss-Wright Corp.-Wright Aeronautical Div.  
G. W. Lisk Co. Inc.

## BRIDGES

a. Capacitance  
b. Cathode Interface Impedance  
c. Electrical  
d. Impedance  
e. Inductance  
f. Megohm  
g. Resistance  
h. RF  
i. Self-Balancing  
j. Standing Wave  
k. Synchro  
l. VHF  
m. Wheatstone

Acton Labs. Inc., a, d, e.  
Aero Electronics Corp., g.  
Aeronca Mfg. Corp., a, c, g, h, i, m.  
Airborne Instruments Lab., Div.-Cutler-Hammer, Inc.,  
h, i.  
Aircorn Inc., j.  
Aircorn Inc. of New Jersey, i.  
\*AIRESEARCH MFG. CO., DIV.-THE GARRETT  
CORP., m.  
Airlfite Electronics Co., m.  
Allford Mfg. Co., j.  
Allegany Instrument Co., Inc., g, m.  
American Measurement & Control, Inc., c.  
\*ARNOUX CORP., c, g.  
Associated Research, Inc., f, g.  
Automation Dynamics Corp., g.  
Avien, Inc., a, i.  
B & F Instruments, Inc., i.  
B & H Instrument Co., Inc., i.  
B & K Instruments, Inc., a, e, g.  
Bliss Electronic Corp., g.  
Blomson Radio Corp., d, g, l.  
Bristol Co., The, c, d, f thru i, m.  
Brunswick Instruments, g.  
Cable Electric Products Inc., c.  
California Technical Industries, Div.-Trextron Inc., j.  
Cambridge Instrument Co., Inc., a, d, e, m.  
Cardinal Instrumentation Corp., m.  
Centralab, Div.-Globe-Union, a.  
Centronix Inc.

Clippard Instrument Lab., Inc., a, g.  
Control Circuits Inc., c, d, f, g, i, k, l, m.  
Cornell-Dubilier Electric Corp., a.  
Curtiss-Wright Corp., Electronics Div., g, m.  
Datascan Co., a, b.  
Datran Electronics, Div.-Mid-Continent Mfg., Inc.,  
g, i.  
Daven Co., The, c thru g, m.  
Daystrom Pacific Div.-Daystrom, Inc., i.  
Dayton Aviation Radio & Equipment Corp., l.  
J. W. Dice Co., g.  
Double E Products Co., h.  
Dytronics Co., d.

Electro Instruments, Inc., a, f, g, m.  
Electro-Measurements Inc., a, d, e, g, k, m.  
Electronic Applications, Inc., a, e, f.  
Electronic Instrument Co., Inc. (EICD), f.  
Electronic Processes Corp. of California, m.  
Electro-Tech Equipment Co., f, g, m.  
Engrg. Associates, a, c, d, e, g, h, m.  
Epic, Inc., a, c thru g, m.  
Eppley Laboratory, Inc., The, l.  
FXR, Inc., j.  
Freed Transformer Co., Inc., a, e.  
General Electric Co., Apparatus Sales Div., c, i.  
Globe Industries, Inc., i.  
Good Electronic Corp., c, d, i.  
Gray Instrument Co., g, k, m.  
Gulton Industries, Inc., a.  
Hewlett-Packard Co., l.  
Industrial Control Co., a.  
Industrial Development Labs., Inc., a, g, m.  
Industrial Instruments Inc., c, d, f, g, m.  
Industrial Test Equipment Co., a, d, e, g, k.  
Industrial Transformer Corp., e.  
Javelin Aircraft Co., Inc., m.  
E. F. Johnson Co., j.  
Julie Research Lab., Inc., g, k, m.  
Kahn & Co., Inc., g.  
\*KEARFOTT CO., INC., a, c thru g, i, j, k, m.  
Leeds & Northrup Co., a, c thru g, i, m.  
Mac Lead & Hanopol, Inc.  
Magnetic Controls Co., g.  
Marconi Instruments, a, e, g.  
Metronix, Inc., Sub.-Assembly Products, Inc., a, e, g.

Minneapolis-Honeywell Regulator Co., Industrial  
Product Group, a, c thru g, i, m.  
Monogram Precision Industries, d, e, g, j, k, l.  
Moron Instrument Corp., i.  
Narda Microwave Corp., The, c.  
New England Scientific Instruments Co., a, c thru g,  
m.  
Pace Electronics Co., Inc., a.  
Philca Corp., Government & Industrial Div.  
Photoball Co., Inc., a.  
Physics Research Laboratories, Inc., g, m.  
Precise Development Corp., a, d thru h, m.  
Radar Design Corp., h, l.  
Rindex Corp., d.  
Rinco, Inc., a, d thru g, m.  
Rixon Electronics Inc., j.  
Arthur C. Ruge Associates, Inc., g, m.  
Shallcross Mfg. Co., f, g, m.  
Southwestern Industrial Electronics Co., a, c thru g,  
i.  
Sperry Microwave Electronics Co., Div.-Sperry Rand  
Corp., j.  
H. W. Sullivan Ltd., a, c, d, e, g, m.  
Talley Corp., The, a thru m.  
Telectro Industries Corp., a, b, c, f, i, j.  
Tel-Labs, Inc., m.  
Thiokol Chemical Corp., h.  
Waveline, Inc., i.  
Weston Instruments, Div.-Daystrom, Inc., i.  
Westronics Inc., i.  
Wright Engrg. Co., a, b, d thru h.

## BUSHES, MOTOR

ACF Industries Inc.  
Advance Carbon & Electric Mfg. Co.  
Eagle Electric Mfg. Co. Inc.  
Graphite Metallizing Corp.  
Helwig Carbon Products, Inc.  
Morganite, Inc.  
Heinz Mueller Eng. Co. Inc.  
National Pneumatic Co., Inc., Holtzer-Cobot Divs.  
Ohio Carbon Co., The  
Pacific Scientific Co.  
St. Marys Carbon Co.  
Stackpole Carbon Co.  
Superior Carbon Products, Inc.  
Westinghouse Electric Corp.

## BUSHES, SOUND REPRODUCTION EQUIPMENT

Helwig Carbon Products, Inc.

## BUFFERS, ANTENNA

\*HOUDAILLE INDUSTRIES, INC., BUFFALO  
HYDRAULICS DIV.

## BUFFERS & GRINDERS

Barrett-Christie Co.  
Block & Decker Mfg. Co., The  
Minnesota Mining & Mfg. Co.  
Monogram Precision Industries  
National Beryllia Corp.  
Snap-on Tools Corp.  
Thermal Refractories Corp.  
U. S. Electrical Tool Co.  
Wyzenbeek & Staff, Inc.

## BULBS, RESISTANCE THERMOMETER

See RESISTANCE THERMOMETER BULBS

## BULBS, TEMPERATURE RESISTANT

\*ARNOUX CORP  
Colonial Rubber Co.  
Thomas A. Edison Ind. Instrument Div.-McGraw-  
Edison Co.  
Hallikainen Instruments  
Illinois Testing Laboratories, Inc.  
\*LEWIS ENGRG. CO., THE  
Norton Co., New Products Dept.  
Arthur C. Ruge Associates, Inc.  
Thermo Electric Co., Inc.  
Trans-Sonic, Inc.  
United Control Corp.

## BUSHINGS

Ace Drill Bushing Co. Inc.  
Aero Bolt & Screw Co., Inc.  
Allied Plastics Supply Corp.  
Amatom Electronic Hardware Co. Inc.  
American Aeroparts  
American Brake Shoe Co.  
American Standard Products, Inc.  
American Steel Foundries, Hammond Div.  
Ampco Metal, Inc.  
Arnay Aircraft Associates, Inc.  
Baldwin Mfg. Co. Inc., The  
Beaurum Metals Corp.  
Beemer Engrg. Co.  
Bound Brook Dil-Less Bearing Co.  
Capital City Mfg. Co.  
Century Fasteners Corp.  
Cleveland Graphite Bronze, Div.-Clevite Corp  
Corning Glass Works  
Curtiss-Wright Corp.-Wright Aeronautical Div.  
Division Lead Co.  
Eagle Electric Mfg. Co. Inc.  
Emerson Plastics Corp.  
Federal Machine Co. Inc.  
Highland Rim Machine Works Inc.  
Isolatite Mfg. Corp.  
Joelin Mfg. Co.

Johns-Manville  
Keystone Electronics Corp.  
Landsverk Electrometer Co., The  
Mercury Tool & Mfg. Corp.  
Monarch Bearing Co., Inc.  
National Beryllia Corp.  
National Ceramic Co.  
Ohio Carbon Co., The  
Pic Design Corp., Sub.-Benrus Watch Co., Inc.  
Randall Graphite Bearings, Inc.  
Research Development Mfg. Inc.  
St. Marys Carbon Co.  
Ray A. Scherer & Co.  
Seamless Products Co., Inc.  
Silicone Insulation, Inc.  
Sinclair Mfg. Co.  
Skinner Precision Products  
Southwest Products Co.  
A. T. Stevens Co.  
True Alloys Inc.  
W-S Fittings Works, Forge & Fittings Div., H. K.  
Porter Co. Inc.  
Wilmington Fibre Specialty Co.

## BUSHINGS, HERMETICALLY SEALED

B G Corp., The  
Ceramaseal, Inc.  
Corning Glass Works  
Highland Rim Machine Works Inc.  
Joelin Mfg. Co.  
Landsverk Electrometer Co., The  
Lundey Associates Inc.  
Telectro Industries Corp.  
Torwico Electronics, Inc.

## BUSHINGS, METALLIC

Aero Bolt & Screw Co., Inc.  
Aircraft Precision Products, Inc.  
Airdome Parts Co.  
American Aeroparts  
American Brake Shoe Co.  
American Standard Products, Inc.  
American Steel Foundries, Hammond Div.  
Ampco Metal, Inc.  
Baldwin Mfg. Co. Inc., The  
Beaurum Metals Corp.  
Beemer Engrg. Co.  
Birnback Radio Co., Inc.  
Capital City Mfg. Co.  
Century Fasteners Corp.  
Chase Brass & Copper Co., Inc.  
Cleveland Graphite Bronze, Div.-Clevite Corp.  
Curtiss-Wright Corp.-Wright Aeronautical Div.  
Diversey Engrg. Co.  
Division Lead Co.  
R. C. Dudek & Co.  
Elastic Stop Nut Corp. of America  
Federal Machine Co. Inc.  
Freeman Co., The  
GAR Mfg. Corp.  
Graphite Metallizing Corp.  
Hoyner Stellite Co. Div.-Union Carbide Corp.  
Highland Rim Machine Works Inc.  
Keystone Electronics Corp.  
Landsverk Electrometer Co., The  
Liton Industries, U. S. Engrg. Co., Div.  
Mercury Tool & Mfg. Corp.  
Morganite, Inc.  
Pic Design Corp., Sub.-Benrus Watch Co., Inc.  
Piascecki Aircraft Corp.  
Randall Graphite Bearings, Inc.  
Ratton Mfg. Co., The  
Research Development Mfg. Inc.  
Roller Bearing Co. of America  
Ronson Hydraulic Units Corp.  
St. Marys Carbon Co.  
Ray A. Scherer & Co.  
Seamless Products Co., Inc.  
Sinclair Mfg. Co.  
Skinner Precision Products  
Southwest Products Co.  
True Alloys Inc.  
United Mfg. Co., The  
W-S Fittings Works, Forge & Fittings Div., H. K.  
Porter Co. Inc.  
Wilks Precision Instrument Co., Inc.  
Wrought Washer Mfg., Co.

## BUSHINGS, NON METALLIC

Aero Bolt & Screw Co., Inc.  
Allied Plastics Supply Corp.  
American Aeroparts  
American Standard Products, Inc.  
Anti-Corrosive Metal Products Co., Inc.  
Auburn Mfg. Co., The  
Birnback Radio Co., Inc.  
Capital City Mfg. Co.  
Centralab, Div.-Globe-Union  
Century Fasteners Corp.  
Chemplast, Inc.  
Chicago Gasket Co.  
Colonial Rubber Co.  
Continental Diamond Fibre Corp.  
Continental Rubber Works  
Corning Glass Works  
Curtiss-Wright Corp.-Wright Aeronautical Div.  
Dixon Corp.  
Duramic Products Inc.  
Eagle Electric Mfg. Co. Inc.  
Electrical Insulation Co., Inc.  
Emerson Plastics Corp.

Engineered Plastics, Inc.  
 Franklin Fibre-Lamitex Corp.  
 Frenchtown Porcelain Co.  
 Freeman Co., The  
 Furone Plastics, Inc.  
 Gorko Corp.  
 General Gasket Inc.  
 Gladding, McBean & Co.  
 Graphite Metallizing Corp.  
 Heyman Mfg. Co.  
 Highland Rim Machine Works Inc.  
 Inclin Mfg. Co.  
 Johns-Manville  
 Keystone Electronics Corp.  
 Lip Electronics Corp.  
 Lomax Industries, Inc.  
 Lonsdale Electric Meter Co., The  
 Lundy Associates Inc.  
 Maryland Lava Co.  
 J. E. Menough Co.  
 Mercury Tool & Mfg. Corp.  
 Mico Fabricating Co.  
 Morganite, Inc.  
 National Beryllia Corp.  
 Norton Co., New Products Dept.  
 Ohio Carbon Co., The  
 Pic Design Corp., Sub.-Benrus Watch Co., Inc.  
 Perry Plastics, Inc.  
 Piasecki Aircraft Corp.  
 Pilgrim Products Inc.  
 Polymer Corp., The  
 Rotton Mfg. Co., The  
 Roybestos-Manhattan, Inc., Pa.  
 Fred T. Roberts & Co.  
 Roberts Toledo Rubber Co., The  
 Rogers Corp.  
 St. Morys Carbon Co.  
 Roy A. Schorer & Co.  
 Silicone Insulation, Inc.  
 Southwest Products Co.  
 Sparto Mfg. Co., Div.-U. S. Ceramic Tile Co.  
 Spaulding Fibre Co., Inc.  
 Stockpole Carbon Co.  
 Stein Seal Co.  
 T. T. Stevens Co.  
 Superior Steatite & Ceramic Corp.  
 Tetro Industries Corp.  
 Thermal Refractories Corp.  
 Thermach Engrg. Corp.  
 Wilks Precision Instrument Co., Inc.  
 Wilmington Fibre Specialty Co.

**CURTIS-WRIGHT CORP., Research Div., b**  
 Curtler Metal Products Co., a  
 Dahlstrom Metallic Gear Co., a  
 Delta Products Div.-Air Accessories, Inc., b  
 Deluxe Metal Products Co., a  
 Detranic Industries, a  
 Devca Engrg. Inc., a  
 Dyno-Therm Chemical Corp., d  
 Eckal Pockoging Co., e  
 Electro-Mechanical Products Co., a  
 Eljay Corp., a, b  
 Elzee Metal Products Co., Inc., a  
 Erie Resistor Corp., b  
**\*ETS-HOKIN & GALVAN, a, i**  
 Falstrom Co., a  
 Farwell Metal Fabricating, a  
 Ferris-Mfg. Co., The, a  
 Firestone Tire & Rubber Co., The, Guided Missile Div., a  
 Fletcher Mfg. Co., Inc., The, a, b  
 Franklin Fibre-Lamitex Corp., b  
 Frick Gallagher Mfg. Co., The, a  
 G. W. Golloway Co., d  
 General American Transportation Corp., b  
 General Testing Labs., Inc., d  
 Green Rectifier Co., a  
 Greenbrier Instruments Inc., a  
 Gremco, Inc., a  
 Guardite Co., Div. of American Marietta Co., d  
 Halliburton, Inc., Mfg. Div., a  
 Paul Hardeman, Inc., a  
 Hardman Tool & Engrg. Co., a, b  
 Harris Refrigeration Co., d  
 Hoveg Industries, Inc., b  
 Hicks Corp., The, d  
 Hoffman Engrg. Corp., a  
 Hamolite Corp., The, b  
 Honeycomb Co. of America, Inc., a  
 Ludwig Harold Mfg. Co., a  
 Harkey-Moore Associates, a  
 Hughes Tool Co., Aircraft Div., a  
 Industrial Engrg. Corp., a  
 Industrial Tools Mfg. Corp., Sub.-Pendleton Tool Industries, Inc., a  
 International Radiant Corp., d  
 Javelin Aircraft Co. Inc., a thru e  
 Jeta, Inc., a  
 Kaiser Aircraft & Electronics, Div.-Kaiser Industries Corp., a  
 Kelsey-Hoyes Co., a  
 Kirk & Blum Mfg. Co., The, a  
 H. Koch & Sons, b, i  
 Lomtex Industries, Inc., b  
 Leitch-Huor Corp., a  
 Livingston Electronic Corp., c  
 Lastrand Co., The, a  
 Lone Star Plastics Co. Inc., b  
 Langren Aircraft Co., Inc., a  
 R. H. Lynch Mfg. Co., a  
 Mogee-Bralla & Associates, c, d  
 Mercury Tool & Mfg. Corp., a  
 Meridian Metalcraft, Inc., a  
 Metal Fabricators Corp., a  
 Metal-Glass Products Co., a  
 Mid-West Metal Products, Inc., a, c, d  
 Miller Dial & Nomenclate Co., a  
**\*MIRAX CHEMICAL PRODUCTS CORP., METAL CONTAINER DIV., a**  
 Molding Corp. of America, b  
 Monogram Precision Industries, a, b, d, e  
 Manrovia Aviation Corp., a  
 Morse Instrument Co., The, a  
 Muckle Mfg. Co., a  
 Mullenbach Div.-Electric Machinery Mfg. Co., a  
 National Pneumatic Co., Inc., Haltzer-Cabot Divs., a  
 National Spectrographic Labs., Inc., a  
 Nelson Labs., Inc., e  
 Neumade Products Corp., a  
 North Electric Co., a  
 Northeastern Engrg. Inc., a  
 Nutram Mfg. Co. Inc., a  
 Oxford Components, Inc., c  
**\*PACKARD-BELL ELECTRONICS CORP., e**  
 Piasecki Aircraft Corp., a, b, e  
 Plastic Age Sales, Inc., b  
 Pneumofil Corp., a  
 Portland Copper & Tank Works Inc., a  
 Precision Sheet Metal, Inc., a  
 Premier Metal Products Co., a, c  
 Prerog Mfg. Inc., a  
 Radiophone Co. Inc., a  
 Red Lion Cabinet Co., Redco Tool Div., a, e  
 Reinhold Engrg. & Plastics Co., b  
 Republic Steel Corp., a  
 Rimok, Inc., a, c  
 Rixon Electronics Inc., a  
 Roberts Industries Inc., d  
 Milton Ross Metals Co., The, b  
 Royal Industries, Inc., a  
 Russell Reinforced Plastics Corp., b  
 Santa Anita Engrg. Co., a  
 Sequoia Wire & Cable Co.-Div.-Mondrel Industries, Inc., a  
 Shaw Metal Products Corp., a, c  
 Silicone Insulation, Inc., b  
 Skydyne, Inc., a, b  
 Skyline Electric & Mfg. Co., a  
 Skyline Products, Inc., a  
 L. B. Smith Aircraft Corp., a  
 Smith-Morris Inc., a, b  
 Snap-on-Tools Corp., a  
 Southwestern Industrial Electronics Co., a

Space Corp., a  
 Specialty Engrg. & Electronics Co., a, b  
 Standard Cabinet Co., d  
 TA Mfg. Corp., e  
 Teiner Engrg. Corp., a  
 Telectra Industries Corp., c  
 Teletronics Lab. Inc., a  
 Temperature Engrg. Corp., d  
 Tenney Engrg., Inc., d  
 Texas Metal & Mfg. Co., Inc., a  
 Topatron, Inc., a  
 Twin Coach Co., Aircraft-Missiles, a  
 United Aircraft Products, Inc., a, d  
 United States Chemical Milling Corp., a  
 United States Plywood Corp.  
 United Supply Co., a, b  
 Universal Moulded Products Corp., e  
 Universal Unlimited, Inc., b  
 University Loudspeakers, Inc., e  
 Waldom Electronics Inc., b  
 Washington Aluminum Co., Inc., a  
 Waterbury Companies, Inc., b  
 Worsan Mfg. Co., Inc., a  
 Wayne Pump Co., The, Div.-Symington Wayne Corp.  
 Welded Construction Inc., a  
 Wenzlau Engrg. Co., a  
 Westlake Plastics Co., b  
 Winder Aircraft Corp. of Florida, a  
 Wyco Metal Products, a  
 Young & Rioux Woodworking Co., Inc., e

**CABLE**  
 a. Antenna Transmission  
 b. Bonding  
 c. Clamps & Clips  
 d. Coaxial  
 e. Coaxial Flexible  
 f. Coaxial Rigid  
 g. Control  
 h. Delay  
 i. Disconnects  
 j. Electric  
 k. Floor Woven  
 l. Guards  
 m. Guillatines  
 n. Hangars  
 o. Ignition  
 p. Markers  
 q. Mechanical  
 r. Microphone  
 s. Shielded  
 t. Solid Dielectric  
 u. Splicers  
 v. Tensioners  
 w. Transmission Lines  
 x. Wire

AMP Inc., u  
 Abalon Precision Mfg. Corp., c  
 Actuator Products Div., Geartronic Corp., q  
 Adept Industries Inc., p  
 Aerojet-General Corp., h  
 Aerolite Electronics Corp., c  
 Airtron Inc., Div.-Litton Industries, a, w  
 Alfred Mfg. Co., d, f  
 Allied Plastics Supply Corp., d, e, p  
 Aluminum Co. of America, w, x  
 American Aeronauts, a thru f, h, i, k, o thru r  
 American Brass Co., The, j, x  
 American Electric Cable Co., a, c, g, j, k, a, r, s, x  
 American Insulated Wire Corp., d thru g, j, a, r, s, x  
 American Missile Products Co., Inc., x  
 American Super-Temperature Wires, Inc., a, d, e, j, s, y, z  
 Amphenol Cable & Wire Div., Amphenol-Barg Electronics Corp., a, d, e, f, r, s, t, w, x  
 Amphenol Connector Div., Amphenol-Barg Electronics Corp., c, i  
 Anaconda Wire & Cable Co., a, d thru g, j, a, r, s, t, w, x  
 Anchor Metal Spinning Co., The, c, l, n, p  
 Andrew Corp., a, d, e, f, n, t  
 Anton Electronic Labs., Inc., i  
 Arens Controls, Inc., g, q  
 Borker Sales Co., a, d thru g, j, k, s, t, w  
 Belden Mfg. Co., a, b, d, e, g, j, k, a, r, s, t, w, x  
 Bendix Aviation Corp., Scintilla Div., i, a, s  
 Bergen Wire Rope Co., Inc., a thru e, j, a, r, s, w, x  
 Birbach Radio Co., a  
 Whitney Blake Co., j, r, s  
 Blander-Tangue Labs., Inc., c  
 Bobrick Mfg. Corp., v  
 Bastan Insulated Wire & Cable Co., d, e, j, k, a, s, t, x  
 William Brand & Co., Inc., a, b, d thru g, j, k, p, r, s, t, w, x  
 Breeze Corporations, Inc., c, k, s  
 Bridgeport Brass Co., j, x  
 Burklyn Co., g  
 Cable Electric Products Inc., d, e, j, s, x  
 California Spring Co., Inc., x  
 Colinoy-Div.-Illinois Tool Works, c  
 Carmady Corp., q  
 Century Fasteners Corp., c  
 Chase Brass & Copper Co., Inc., j, w, x  
 Chemald Co., b  
 Chemplot, Inc., c, t  
 Clippord Instrument Lab., Inc., j  
 Columbia Technical Corp., h  
 Consolidated Wire & Associated Companies, e thru f, i, j, n, q, r, v, w  
 Continental Wire Sales Corp., d thru g, o, r, s, x  
 Co-Operative Industries, Inc., e, a, s

**BELLS & BELLS**  
**BELLS & BUZZERS**

**CABINET CHASSIS**  
**CHASSIS, CABINET**

**CABINETS**  
 a. Metal  
 b. Plastic  
 c. Speaker  
 d. Temperature Test  
 e. Wood

Ace Engrg. & Machine Co., Inc., a  
 A&P Metal Products Mfg. Corp., a  
 Abalon Precision Mfg. Corp., p  
 Adept Industries Inc., b, e  
 Aerojet-General Corp.  
 Air Logistics Corp., b  
 Aircraft Armaments, Inc., a  
 Aidan Products Co., a  
 Allied Plastics Supply Corp., b  
 Alpitec, Inc., a  
 Aluminum Co. of America, a  
 Almelco, Inc., a  
 American Agile Corp., b  
 American Aluminum Co., a  
 American Electronics, Inc., Toller & Cooper Div., a  
 American Machine & Foundry Co., Government Products Group, a  
 American Research Corp., d  
 Anchor Metal Spinning Co., The, a  
 Anchor Specialty Mfg. Co., Inc., a, b, d, e  
 Aristocrat Plastics, Inc., b  
**ASSOCIATED TESTING LABS., INC., d**  
 Astravac Corp., d  
 Atkos Engrg. Corp., d  
 H. Aircraft Co., Inc., a  
 Barrett-Christie Co., a  
 Casco Metal Products, Inc., a  
 Castic Tool Industries, Inc., a  
 Cassens Mfg. Co., The, a  
 Hill-Jax Inc., a  
 Lue M Electric Co., d  
 Logue Electric Mfg. Co., a  
 Loomis & Perkins, Inc., a  
 Lud Rodio Inc., a, c  
 Lomody Corp., e  
 Lohemald Co., b  
 L. B. Christiansen Co., a  
 Chrysler Corp., Defense Operations Div.  
 Dale Electric Co., a  
 Dalnial Aircraft Corp., a  
 Danco Engrg. Works, a  
 Daper Industries, Inc., a  
 Dornell Deep Drawing Co., Div.-Loans Industries Corp., a, b  
 Drog Systems, Inc., a  
 Dromer Mfg. & Engrg., Inc., a  
 Romer Inc., a

Copperweld Steel Co., Wire & Cable Div., a, d, j, k, s, w, x  
 Carnish Wire Co. Inc., r, s, v, w  
 Dayton Aircraft Products, Inc., a  
 Devcon Corp., b  
 Dielectric Materials Co., d thru g, i, k, r, s, t  
 W. C. Dillon & Co., Inc., v  
 Dackendorff & Co., Inc., v  
 Duralith Corp., p  
 Dynamic Devices, Inc., m  
 Eagle Electric Mfg. Co. Inc., x  
 Thomas A. Edison Ind. Instrument Div.-McGraw-Edison Co., a, d, e, j  
 Electric Auto-Lite Co., The, j, o, s  
 Electric Cards & Supply Corp., e thru j, s, w  
 Electronic Applications, Inc., r  
 Electronic Parts Mfg. Co., Inc., j  
 Emeloid Co., Inc., The, p  
 Emerson Radio & Phonograph Corp., s  
 Entron, Inc., a, d, e  
 Essex Wire Corp., g, j, o, r, s, x  
 First Electronics Corp., The, k  
 Flexible Metal Hose Mfg. Co., s  
 Furane Plastics, Inc., t  
 General Cable Corp., a, b, d thru k, o, r, s, t, w, x  
 General Cement Mfg. Co., Div.-Textron, Inc., c, r  
 General Electric Co., Wire & Cable Dept., g, i, s, t, w, x  
 General Insulated Wire Works, d, e, g, j, r, s, x  
 General Laboratory Associates, Inc., a  
 Gunnar Laboratories, w  
 Hallett Mfg. Co., b, c, e, i, j, k, o, p, s, x  
 Hallicrafters, a, w  
 Heyman Mfg. Co., c, i  
 Hitemp Wires Inc., d, e, f, k, s  
 Holub Industries, Inc., c  
 Holyake Wire & Cable Corp., a, d, e, g, j, k, r, s, t, w, x  
 Hughes Tool Co., Aircraft Div.  
 Walter J. Hyatt Co., The, a, d  
 ITT Labs.  
 Illumitronic Engrg. Co., c  
 International Resistance Co., e, k  
 International Wire & Cable Co., a, b, d thru g, i, r, s, t, w, x  
 Interstate Electronics Corp.  
 Javelin Aircraft Co., Inc., x  
 Javex Electronics, i, u  
 Jefferson Electronic Products Corp., b, e, g, o, s  
 Jefferson Wire & Cable Corp., a, d, e, r, s, t, w  
 Kickhafer Mfg. Co., c, n  
 Kordan Industries, i, k  
 Lenz Electric Mfg. Co., a, b, d, e, g, k, r, s, t, x  
 \*LEWIS ENGRG. CO., THE, d, e, g, j, s, x  
 Lieco, Inc., f, h  
 Ling Electronics, Inc.  
 Mac Whyte Wire Rope Co., c, f, q, x  
 Magnetic Shield Div. Perfection Mica Co., s  
 \*MC CORMICK SELPH ASSOCIATES, m  
 J. E. Menaugh Co., o, s  
 Meridian Metalcraft, Inc., w  
 Micradat Inc., d  
 Minneapolis-Honeywell Regulator Co., Drdnance Div., g, i  
 Minnesota Mining & Mfg. Co., b, u  
 Mohawk Wire & Cable Corp., d, e, g, j, r, s, t  
 Monogram Precision Industries, a thru f, k  
 National Pneumatic Co., Inc., Haltzer-Cabat Divs., c, g, i, j, o, r  
 Nesar Alloy Products Co., s  
 Networks Electronic Corp., k  
 New England Electrical Works, Inc., b, k, x  
 M. M. Newman Corp., l  
 Okanite Co., The, Subsidiary of Kennecott Copper Corp., a, d, e, g, o, r, s, t, w  
 On Mark Couplings, Inc., i  
 Pacific Scientific Co., i, j, m, v, x  
 Packard Electric Div.-General Motors Corp., b, j, o, s, x  
 Panduit Corp., c, n  
 Phalo Plastics Corp., d, e, j, r, s, t, x  
 Phelps Dodge Copper Products Corp., a, d thru h, j, a, s, t, w, x  
 Plastoid Corp., a, d, e, f, j, o, r, s, t, w  
 Precision Tube Co., Inc., a, d, f, s, t, w  
 Prodelin Inc., c, d, e, t, w  
 \*PROF. LEMX CHEMICAL DIV., CHROMALLOY CORP., m  
 Radar Design Corp., f, w  
 Revere Corp. of America, d, e, j, s, x  
 Rex Corp., The, Sub.-American Enka, d, e, g, j, r, s, t, x  
 Roanwell Corp., r  
 Fred T. Roberts & Co., c  
 Rackbestos Products Corp., d thru g  
 Rame Cable Corp., Sub.-Aluminum Co., of America, g, j, s, x  
 Racnair-Latsch Corp., p  
 Milton Ross Metals Co., The, c  
 Royal Electric Corp., d, e, f, h, j, o, r, s, t, x  
 Sequoia Wire & Cable Co.-Div.-Mandrel Industries, Inc., a, d, e, g, i, j, k, o, r, s, t, x  
 Serwell Products Co., c, g, q  
 Simplex Wire & Cable Co., d, e, g, j, o, r, s, t, w, x  
 Southwest Products Co., g  
 Southwire Co., w, x  
 Specialty Engrg. & Electronics Co.  
 Spectra-Strip Wire & Cable Corp., b thru g, j, k, p, r, s, x  
 Sperry Gyroscope Co., Marine Div., Div.-Sperry Rand Corp., a  
 Sperry Piedmont Co.-Div.-Sperry Rand Corp., a  
 Stainless Inc., a

F. W. Stewart Corp., g  
 Stic-Klip Mfg., Co., c, n  
 Superior Cable Corp., a, b, d, e, g, i, r, s, t, x  
 TA Mfg. Corp., c  
 Tame Electronics, Inc., i, w  
 Tone Cable Corp., j, s, w, c, g, i, q  
 Tensolite Insulated Wire Co., Inc., a, c thru f, j, k, o, q, r, s, x  
 Thermal Wire of America, d, e, g, s  
 Thermax Wire Corp., d, e, g, i, r, s, t, x  
 Times Wire & Cable Co., Inc., a, d, e, g, j, o, r, s, t, w  
 Transco Products, Inc., a, d, w  
 Turbo Products, Inc., c  
 United Supply Co., e, i  
 Universal Wire & Supply Corp., x  
 Universal Metal Products Inc., c  
 Warren Wire Co., d, e, j, o, s, x  
 Washington Aluminum Co., Inc., l  
 Western International Co., a, d thru j, o, r, s, w, x  
 Westwood Cable Corp., b, d, e, g, j, k, o, r, s, t, x  
 Whitaker Cable Corp., j, s, x  
 Wilcox-Crittenden Div., North & Judd Mfg. Co., b  
 Winder Aircraft Corp. of Florida, a, j  
 Wire Co. of America, Inc., a, g, i, s, x  
 Wirecraft Products, Inc., d, e, s, x  
 Zippertubing Co., The, k, l, p, s

#### CABLE ASSEMBLIES, ELECTRICAL

ACF Industries Inc.  
 Advanced Electronics, Inc.  
 Aerodex, Inc.  
 Aerolite Electronics Corp.  
 Aircraft Taals, Inc.  
 \*AIRESEARCH MFG. CO., DIV.-THE GARRETT CORP.  
 Airtronics International Corp.  
 Alden Products Co.  
 Alfa Scientific Co., Inc.  
 Amelco, Inc.  
 American Aeroparts  
 American Bosch Arma Corp.  
 American Electric Cable Co.  
 American Machine & Foundry Co., Government Products Group  
 Amphenol Connector Div., Amphenol-Borg Electronics Corp.  
 Anacoanda Wire & Cable Co.  
 Anchor Specialty Mfg. Co. Inc.  
 Andrew Corp.  
 Automatic Electric Sales Corp.  
 Barker & Williamson Inc.  
 \*BEATON & CORBIN MFG. CO., THE  
 W. A. Beauchaine & Sons Inc.  
 Belden Mfg. Co.  
 Belock Instrument Corp.  
 Bendix Aviation Corp., Scintilla Div.  
 Bernco Engrg. Corp.  
 Birnbach Radio Co., Inc.  
 Whitney Blake Co.  
 Bliss Electronic Corp.  
 Broch Mfg. Corp., Div.-General Bronze  
 William Brand & Co., Inc.  
 Breeze Corporations, Inc.  
 Bristol Co., The  
 Brown Engr. Co., Inc.  
 Bulow Electric Co.  
 Cable Electric Products Inc.  
 California Technical Industries, Div.-Textron Inc.  
 Cameroflex Corp.  
 \*CANNON ELECTRIC CO.  
 Carmody Corp.  
 Centranix Inc.  
 Chelco Engrg. Corp.  
 Chrysler Corp., Defense Operations Div.  
 Coaxial Connector Co. Inc.  
 Coils-Electronics  
 Consolidated Productions, Inc.  
 Continental Technical Service, Inc.  
 Copper Development Corp., Sub.-Marquardt Aircraft Co.  
 Co-Operative Industries, Inc.  
 Carnish Wire Co. Inc.  
 Dale Products, Inc.  
 Dalmatir Div., Yuba Consalidated Industries, Inc.  
 Dayton Aviation Radio & Equipment Corp.  
 Detronic Industries  
 Dielectric Materials Co.  
 Divco-Wayne Electronics, Div.-Divco-Wayne Corp.  
 Dwy Acoustica Electronic Labs.  
 Double E Products Co.  
 Dresser Industries, Inc.  
 Du Kane Corp.  
 Eastern Specialty Co., The  
 Electric Auto-Lite Co., The  
 Electric Cords & Supply Corp.  
 Electramath Corp.  
 Electro-Mechanical Products Co.  
 Electro-Miniatures Corp.  
 Electronic Assembly Co., Inc.  
 Electronic Communications, Inc.  
 Emerson Radio & Phonograph Corp.  
 Empire Electronics Co., Inc.  
 Entron, Inc.  
 Ericson Mfg. Co., The  
 \*ETS-HOKIN & GALVAN  
 Fairchild Astrionics Div., Fairchild Engine & Airplane Corp.  
 Federal Mfg. & Engrg. Corp.  
 Firestone Tire & Rubber Co., The, Guided Missile Div.  
 First Electronics Corp., The

Fugle-Miller Labs. Inc.  
 General Cable Corp.  
 General Laboratory Associates, Inc.  
 General Products Corp.  
 General R-F Fittings, Inc.  
 Geotronic Labs. Inc.  
 Gillfillan Bros. Inc.  
 Goad-All Electric Mfg. Co.  
 Gordon Enterprises  
 Graflex Inc.  
 Guerdon Electric Mfg. Co.  
 Gunnar Laboratories  
 Hallomare Electronics Co.  
 Hallett Mfg., Co.  
 Hamilton Standard, Div.-United Aircraft Corp.  
 Hama Labs & Associates  
 Paul Hordeman, Inc.  
 Hi-Lo Manufacturing Corp.  
 Hitemp Wires Inc.  
 Holyake Wire & Cable Corp.  
 Walter J. Hyatt Co., The  
 Indust. Prod.-Donbury Knudsen Div., Amphenol-Borg Electronics Corp.  
 Inland Electronics Corp.  
 Intercontinental Dynamics Corp.  
 International Wire & Cable Co.  
 Interstate Electronics Corp.  
 ITT-Kellegg  
 Janco Corp.  
 Jefferson Electronic Products Corp.  
 Jeto, Inc.  
 Jettron Products, Inc.  
 Kahn & Co., Inc.  
 Kaiser Aircraft & Electronics, Div.-Kaiser Industries Corp.  
 Kelsey-Hayes Co.  
 Kaileid Kardis Inc.  
 Karda Industries  
 \*LEWIS ENGRG. CO., THE  
 Magee-Bruhl Co. & Associates  
 Methade Mfg. Corp.  
 \*MIRAX CHEMICAL PRODUCTS CORP., ELECTRO-MECHANICAL PRODUCTS DIV.  
 Modelectric Products Corp.  
 Motorola Inc., Military Electronics Div.  
 Mutran Corp.  
 George L. Nankervis Co.  
 National Pneumatic Co., Inc., Haltzer-Cabat Divs.  
 North Electric Co.  
 Paul Nurches Co.  
 Pacific Scientific Co.  
 Packard Electric Div.-General Motors Corp.  
 Paraplegics Mfg. Co., Inc.  
 Piasecki Aircraft Corp.  
 Pamano Electronics Co., Inc.  
 Precise Development Corp.  
 Projects Unlimited Inc.  
 Pyle-National Co., The  
 Radiophone Co. Inc.  
 Ravenna Metal Products, Div.-Standard Screw Co.  
 Renwell Corp.  
 Revere Corp. of America  
 \*RHEEM MFG. CO., DEFENSE & TECHNICAL PRODUCTS DIV.  
 Fred T. Roberts & Co.  
 Milton Ross Metals Co., The  
 Rowe Industries  
 Royal Electric Corp.  
 Royal Industries, Inc.  
 Ryan Aeronautical Co.  
 Schaffer Air Industries, Inc.  
 Sequoia Wire & Cable Co.-Div.-Mandrel Industries, Inc.  
 Shelter Workshops  
 Siltner Corp.  
 Southwestern Industrial Electronics Co.  
 Specialty Engrg. & Electronics Co.  
 Spectra-Strip Wire & Cable Corp.  
 Suffolk Products Corp.  
 Switchcraft, Inc.  
 T-C Div., Dyna-Empire, Inc.  
 Telectro Industries Corp.  
 Thamas Electronics, Inc.  
 Tower Mfg. Corp.  
 Tricraft Products Corp.  
 Tri-Dex Co.  
 Tucson Instrument Corp.  
 U. S. Relay Co.  
 United States Chemical Milling Corp.  
 Victor Adding Machine Co.  
 Victor R. F. & Microwave Co.  
 Virginia Electronics Co., Inc.  
 Waltham Horological Corp.  
 Webcor, Inc., Government Div.  
 Western International Co.  
 Westwood Cable Corp.  
 Wheeler Electronic Corp., Sub.-Sperry Rand Corp.  
 Whitaker Cable Corp.  
 Winder Aircraft Corp. of Florida  
 Wire Co. of America, Inc.  
 Wirecraft Products, Inc.  
 Zippertubing Co., The

#### CABLE ASSEMBLIES, MECHANICAL

Actuator Products Div., Geartronics Corp.  
 Aircraft Taals, Inc.  
 American Aeroparts  
 Amphenol Connector Div., Amphenol-Borg Electronics Corp.  
 Anchor Specialty Mfg. Co. Inc.  
 Andrew Corp.  
 W. A. Beauchaine & Sons Inc.



Bergen Wire Rope Co.  
 William Bond & Co., Inc.  
 Burklyn Co.  
 Carmody Corp.  
 Century Fasteners Corp.  
 Coaxial Connector Co. Inc.  
 Continental Technical Service, Inc.  
 Dayton Aviation Radio & Equipment Corp.  
 Divco-Wayne Electronics, Div.-Divco-Wayne Corp.  
 Electro-Mechanical Products Co.  
 Electro-Miniatures Corp.  
 Emerson Radio & Phonograph Corp.  
 Good-All Electric Mfg. Co.  
 Hallamere Electronics Co.  
 Highland Rim Machine Works Inc.  
 Hi-Lo Manufacturing Corp.  
 Intercontinental Dynamics Corp.  
 Jefferson Electronic Products Corp.  
 Jeto, Inc.  
 Kennedy Aircraft Supply Co.  
 Mac Whyte Wire Rope Co.  
 Magee-Brallo & Associates  
 Munro Corp.  
 Paraplegics Mfg. Co., Inc.  
 Piasecki Aircraft Corp.  
 Precision Sheet Metal, Inc.  
 Projects Unlimited Inc.  
 Ravenna Metal Products, Div.-Standard Screw Co.  
 Renwell Corp.  
 Sequoia Wire & Cable Co., Div.-Mandrel Industries, Inc.  
 Serwell Products Co.  
 Southwest Products Co.  
 Southwestern Industrial Electronics Co.  
 Specialty Engrg. & Electronics Co.  
 Spectra-Strip Wire & Cable Corp.  
 F. W. Stewart Corp.  
 Teleflex Inc.  
 Thomas Electronics, Inc.  
 Tricoart Products Corp.  
 Virginia Electronics Co., Inc.  
 Webcor, Inc., Government Div.  
 Winder Aircraft Corp. of Florida  
 Zipper tubing Co., The

#### ABLE ASSEMBLIES, THERMO-COUPLES

Advanced Electronics, Inc.  
 Aero Research Instrument Co. Inc.  
 Aerolite Electronics Corp.  
 Aircraft Tools, Inc.  
 American Electric Cable Co.  
 Amphenol Connector Div., Amphenol-Borg Electronics Corp.  
 B.G. Corp., The  
**\*BEATON & CORBIN MFG. CO., THE**  
 Bendix Aviation Corp., Scintilla Div.  
 Benco Engrg. Corp.  
 Boston Insulated Wire & Cable Co.  
 William Bond & Co., Inc.  
 Bristol Co., The  
 Dockendorff & Co. Inc.  
 Electric Cords & Supply Corp.  
 General Cable Corp.  
 Cloud S. Gordon Co.  
 Hallett Mfg., Co.  
 Harco Labs., Inc.  
 Illinois Testing Laboratories, Inc.  
 Jefferson Electronic Products Corp.  
**\*LEWIS ENGRG. CO., THE**  
 Minneapolis-Honeywell Regulator Co., Industrial Product Group  
 Munro Corp.  
 Nesor Alloy Products Co.  
 Pacific Scientific Co.  
 Paraplegics Mfg. Co., Inc.  
 Projects Unlimited Inc.  
 Renwell Corp.  
 Revere Corp. of America  
 Sequoia Wire & Cable Co.-Div.-Mandrel Industries, Inc.  
 Spectra-Strip Wire & Cable Corp.  
 T-C Div., Dyna-Empire, Inc.  
 Thermo Refractories Corp.  
 Thermo Electric Co., Inc.  
 Thomas Electronics, Inc.  
 Westwood Cable Corp.  
 Winder Aircraft Corp. of Florida  
 Wire Co. of America, Inc.

#### ABLE CHECKER

See CHECKER, CABLE

#### ABLE-ELECTRIC LUGS

See LUGS, CABLE-ELECTRIC

#### ALIBRATORS

a. Crystal  
 b. Frequency  
 c. Radar Devices  
 d. Radar Range  
 e. Sweep  
 f. Voltage  
 g. UHF  
 h. VSWR

Aircorn Inc., a, h  
 Aircraft Armaments, Inc., d  
 Airttron Inc., Div.-Littion Industries, h  
 American Machine & Foundry Co., Government Products Group, c, d  
 American Machine & Foundry Co., Greenwich, c, d  
 Arenberg Ultrasonic Lab., Inc., d

Bollantine Labs., Inc., f  
 Borke Sales Co., a  
 Rex Bassett, Inc., a  
 Beckman Instruments, Inc., Berkeley Div., b  
 Beckman-Systems Div., f  
 Blonder-Tongue Labs., Inc., g  
 Boonton Radio Corp., f  
 Bud Rodio Inc., a  
 California Technical Industries, Div.-Textron Inc., h  
 Centronix Inc., b, e  
 Collins Radio Co., a, b  
 DBM Research Corp., d  
 Dayton Aviation Radio & Equipment Corp., a, b  
 Divco-Wayne Electronics, Div.-Divco-Wayne Corp., b, c, g  
 Donner Scientific Corp., f  
 Du Kane Corp., b  
 Edgerton, Germeshusen & Grier, Inc., c  
 Electro Instruments, Inc., f  
 Electronic Applications, Inc., b, g  
 Electronic Communications, Inc., c, g  
 Electronics of Cleofield, Inc., d, e  
 Electronics Div., Van Norman Industries Inc., b  
 Engrg. Associates, b, c  
 FXR, Inc., h  
 Federal Mfg. & Engrg. Corp.  
 John Fluke Mfg. Co., Inc., f  
 General Communication Co., b, c  
 Gilfillon Bros. Inc., c, d  
 Gulton Industries, Inc., a  
 Hallicrafters, b, c  
 Walter J. Hyott Co., The, c, d, e  
 ITT Federal Div., International Telephone & Telegraph Corp., a thru h  
 International Wire & Cable Co., e, g  
 E. F. Johnson Co., a, h  
 Kay Electric Co., h  
**\*KEARFOTT CO., INC., c, d, h**  
 Kin Tel Div.-Cohu Electronics, Inc., f  
 Lampkin Labs., Inc., M.R. Div., b, g  
 Leeds & Northrup Co., f  
 Marconi Instruments, b  
 Measurements Div., Mc Graw Edison Co., a  
 Meridian Metalcraft, Inc., c, h  
 Metronix, Inc., Sub.-Assembly Products, Inc., a  
 Minneapolis-Honeywell Regulator Co., Industrial Products Group, f  
 Miratel, Inc., e, g, h  
 Missouri Research Labs., Inc., d  
 Monogram Precision Industries, b, d, f, g, h  
 Moran Instrument Corp., f  
 Motorola Inc., Military Electronics Div., a  
 Ernest Norman Laboratories, a  
 North Hills Electric Co., Inc., f  
 Optimized Devices, Inc., f  
 Orbitran Co., Inc., d  
 Osborne Electronic Soles Corp., f  
 Philco Corp., Government & Industrial Div.  
 Piasecki Aircraft Corp., b  
 Polarad Electronics Corp., h  
 Precise Development Corp., e, f  
 Probescope Co. Inc., a, b  
 Radar Design Corp., b, d  
 Rodiation, Inc.  
 Reeves-Hoffman Corp., a, b  
 Rese Engrg., Inc., f  
 Rixon Electronics Inc., h  
 Simpson Electric Co., f  
 Specialty Engrg. & Electronics Co., f  
 Sperry Microwave Electronics Co., Div.-Sperry Rand Corp., d  
 Stryker Corp., b  
 Telrad Mfg. Corp., b, c, d  
 Tel-Instrument Electronics Corp., d  
 Turbo Machine Co., c, d, h  
 Universal Unlimited, Inc., c, d, f  
 Waveline, Inc., h  
 Weinschel Engrg., h  
 Weston Instruments, Div.-Daystrom, Inc., f  
 Wilks Precision Instrument Co., Inc., h  
 Winder Aircraft Corp. of Florida, c  
 Wright Engrg. Co., b

#### CALLING APPARATUS, SELECTIVE

See SELECTIVE CALLING APPARATUS

#### CALLING SYSTEMS, SELECTIVE, NAVIGATION

Atlas Precision Products, Co.  
 Bell & Gossett Co.  
 Bendix Radio Div., Bendix Aviation Corp.  
 Collins Radio Co.  
**\*ETS-HOKIN & GALVAN**  
 ITT Labs.  
 Jansky & Bailey, Inc.  
 Motorola Inc., Military Electronics Div.  
 Philco Corp., Government & Industrial Div.  
 Sperry Gyroscope Co., Marine Div., Div.-Sperry Rand Corp.  
 Telechrome Mfg. Corp.  
 Telectro Industries Corp.  
 Winder Aircraft Corp. of Florida

#### CAMERA AUXILIARY EQUIPMENT

Abrams Instrument Corp.  
 Atlas Precision Products, Co.  
 Grackman & Whitley, Inc., Missile Products Div.  
 Bell & Howell Co.  
 Bellock Instrument Corp.  
 Benson-Lehner Corp.  
 Bulow Electric Co.  
 Chemold Co.  
 Chicago Aerial Industries, Inc.

Christie Machine Works  
 Eastman Kodak Co.  
 Flight Research, Inc.  
 General Electric Co., X-Ray Dept.  
 Gordon Enterprises  
 Graflex Inc.  
 Houston Fearless Corp.  
 Hycon Mfg. Co.  
 Instrument Corp. of Fla.  
 ITT-Kellogg  
 Mast Development Co., Inc.  
 Mitchell Camera Corp.  
 Monogram Precision Industries  
 Optomechanisms Inc.  
 Philco Corp., Government & Industrial Div.  
 Specialties, Inc.  
 Sterling-Howard Corp.  
 Television Utilities Corp.  
 Traid Corp.  
 Transmores Corp.

#### CAMERA MOUNTS

Aeroflex Corp., The, Aeroflex Labs, Div.  
 American Machine & Foundry Co., Government Products Group  
 American Machine & Foundry Co., Greenwich  
 Anchor Metal Spinning Co., The  
 Atlas Precision Products, Co.  
 Bell & Howell Co.  
 Benson-Lehner Corp.  
 Burke & James Inc.  
 Cameraflex Corp.  
 Capital City Mfg. Co.  
 Chicago Aerial Industries, Inc.  
 Christie Machine Works  
 Flight Research, Inc.  
 Gordon Enterprises  
 Graflex Inc.  
 Ludwig Harold Mfg. Co.  
 Houston Fearless Corp.  
 Hycon Mfg. Co.  
 Instrument Corp. of Fla.  
 Javelin Aircraft Co. Inc.  
 Kelsey-Hays Co.  
 Mast Development Co., Inc.  
 Mercury Tool & Mfg. Corp.  
 Monogram Precision Industries  
 Optomechanisms Inc.  
 Philco Corp., Government & Industrial Div.  
 Piasecki Aircraft Corp.  
 Sterling-Howard Corp.  
 Traid Corp.  
 Transmores Corp.

#### CAMERA SWITCHING EQUIPMENT

See SWITCHING EQUIPMENT, CAMERA

#### CAMERA TURRETS

See TURRETS, CAMERA

#### CAMERAS

a. Data Recording  
 b. High Speed  
 c. Motion Picture  
 d. Oscilloscope  
 e. Recording, Radar & Oscilloscope  
 f. Sequence, Pulse  
 g. Television  
 h. X-Ray  
 Abrams Instrument Corp., a, e  
 Allegany Instrument Co., Inc., a, b  
 American Electronics, Inc., Teller & Cooper Div., a  
 American Felt Co., d  
**\*AYCO MFG. CORP., CROSLLEY DIV., g**  
 Beattie-Coleman, Inc., a, d, e, f, h  
 Beckman & Whitley, Inc., Missile Products Div., b, d  
 Bell & Howell Co.  
 Bendix Aviation Corp., Friez Instrument Div., g  
 Benson-Lehner Corp., a, b  
 Ernest E. Blanche & Associates, Inc., a  
 Blonder-Tongue Labs., Inc., g  
 Bulow Electric Co., f  
 Burke & James Inc., a, e, f, h  
 Comera Mart Inc., The, a, b, c  
 Cameraflex Corp., a, c thru f  
 Chadwick-Helmuth Co., b, c  
 Chicago Aerial Industries, Inc., a thru f  
 Christie Machine Works, b  
 Coleman Engrg. Co., Inc., d  
 DBM Research Corp., a, c, f  
 Dage Television Div., Thompson Ramo Wooldridge, Inc., g  
 Eastman Kodak Co., c  
 Edgerton, Germeshusen & Grier, Inc., a thru e  
 Electro-Medical Lab., Inc., d  
 Electronic Tube Corp., d  
 J. W. Fecker, Inc., a thru f  
 Flight Research, Inc., a thru f, h  
 Foto-Video Labs., Inc., g  
 General Electric Co., Apparatus Sales Div., g, h  
 General Electric Co., Technical Products Dept., g  
 General Electric Co., X-Ray Dept., a, d, e, f, h  
 General Precision Lab. Inc., g  
 Giannini Plasmaadyne Corp., b  
 Gordon Enterprises, a thru g  
 Graflex Inc., a, d, e, f, h  
 Hallamere Electronics Co., g  
 Hycon Mfg. Co., b, f  
 ITT Labs.-Ft. Wayne, b, e, g  
 Instrument Corp. of Fla.  
 Instruments Div.-Phillips Electronics, Inc., h  
 Jarrell-Ash Co., h

Kin Tel Div.-Cohu Electronics, Inc., g  
Land-Air Inc., a, b  
Librascope Inc., b  
Lockheed Aircraft Corp., Missiles & Space Div., a, b, g  
Mast Development Co., Inc., a, b  
Micrometrical Mfg. Co., d  
Midwestern Instruments, Inc., a  
Miratel, Inc., d, g  
Mitchell Camera Corp., a, b, c  
Monogram Precision Industries, e, f  
Morse Instrument Co., The, a, c  
Optomechanics Inc., a, c thru f  
Otis Elevator Co., Electronic Div., a  
Perkin-Elmer Corp., a, g  
Philco Corp., Government & Industrial Div., g  
Picker X-Ray Corp., h  
Rolle Mfg., Co., a thru h  
Royal Industries, Inc., a, b  
St. John X-Ray Lab., h  
Seisnor Mfg. Co., a  
Skiatron Electronics & Television Corp., g  
Southwestern Industrial Electronics Co., a, b, d, e  
Specialties, Inc., e  
Specialty Engrg. & Electronics Co., d  
Sterling Precision Corp., Instrument Div., b  
Sterling-Howard Corp., a, c  
Telchrome Mfg. Corp., d, g  
Traid Corp., a thru f  
Transmores Corp.  
Victor Adding Machine Co., a  
Vought Co., a thru f  
Wallensack Optical Co., a thru f

## CANS, HERMETICALLY SEALED

Abalon Precision Mfg. Corp.  
Aluminum Aluminum Co.  
Balco Research Labs., Inc., Capacitor Div.  
A. Biederman, Inc.  
Brooks & Perkins, Inc.  
Champion Co., The  
Conco Engrg. Works  
Continental Can Co., Inc.  
Cornell Deep Drawing Co., Div.-Lanes Industries Corp.  
Double E Products Co.  
Dresser Mfg. Div., Dresser Industries, Inc.  
Electro-Seal Corp.  
Graflex Inc.  
Ludwig Harold Mfg. Co.  
Intercontinental Mfg. Co., Inc.  
\*MIRAX CHEMICAL PRODUCTS CORP., METAL CONTAINER DIV.  
Monogram Precision Industries  
Natarala Inc., Military Electronics Div.  
Northern Pneumatic Co., Inc., Holtzer-Cabot Divs.  
Milton Ross Metals Co., Inc.  
Seamless Products Co., The  
Silicone Seals, Inc.  
Smith-Morris Corp.  
Southwestern Industrial Electronics Co.  
Teledyne Industries Corp.  
Triad Transformer Corp.  
United Aircraft Products, Inc.  
Wespre Corp.  
Winzen Research Inc.

## CAPACITOR FILMS See FILMS, CAPACITOR

## CAPACITOR OR RESISTOR BOARDS See BOARDS, CAPACITOR OR RESISTOR

## CAPACITOR SPECIALTIES MEASUREMENT

Basco Metal Products, Inc.  
Bliss Electronic Corp.  
Double E Products Co.  
Electronic Applications, Inc.  
New England Scientific Instruments Co.  
Photobell Co., Inc.  
Pyramid Electric Co.  
Teletron Industries Corp.

## CAPACITORS

a. Ceramic  
b. Ceramic Trimmer  
c. Composition  
d. Decade  
e. Electrolytic  
f. Feed-Through  
g. Fixed  
h. Gas-Filled  
i. Glass  
j. Glass Trimmer  
k. Hermetically Sealed  
l. High Temperature  
m. High Voltage  
n. Industrial  
o. Metallized Paper  
p. Mica  
q. Mica Trimmer  
r. Miniature  
s. Mylar Dielectric  
t. Neutralizing  
u. Oil  
v. Oil Filled  
w. Piston  
x. Plastic  
y. Plastic Dielectric  
z. Plug-In  
a1. Polystyrene Insulated  
b1. Porcelain

c1. Precision  
d1. Pressure Types  
e1. Printed Circuit  
f1. Receiver Tuning  
g1. Silicone-Filled  
h1. Silvered Mica  
i1. Standard  
j1. Tantalum  
k1. Teflon  
l1. Teflon, Dielectric  
m1. Temperature Compensated  
n1. Transmitter Tuning  
o1. Transmitting  
p1. Vacuum Types  
q1. Variable

ACF Industries Inc., a, s, e-1  
AMP Inc., g, k, l, r, m, 1, o-1  
Adept Industries Inc., e-1, k-1, l-1  
Advance Carbon & Electric Mfg. Co., e, k, n, u, v, x  
Aerovox Corp., a, b, d thru g, k thru p, r, s, u, v, x  
y, z, a-1, b-1, e-1, g-1 thru n-1  
Airborne Accessories Corp., f, g, l, a, r  
American Aerophysics Corp., w, x  
American Agile Corp., x, y, k-1, l-1  
American Bosch Arma Corp., f  
American Lovo Corp., a, b, f, r, e-1  
Astrovox Corp., m  
Astron Corp., a, g, f, g, k thru a, r, s, u thru z, e-1, g-1, j-1 thru m-1, o-1  
Atlas E-E Corp., j  
Avnet Corp.  
Axel Electronics, f, g, k thru n, s, u, v, x, y, g-1, k-1, l-1  
Balco Research Labs., Inc., Capacitor Div., f, g, k thru n, r, s, x, y, z, a-1, c-1, e-1, g-1, k-1, l-1, p-1, q-1  
Barker & Williamson Inc., n-1, o-1, q-1  
Bendix Aviation Corp., Scintilla Div., l  
Bradford Components, Inc., a  
Bud Radio Inc., r, o-1, q-1  
Cambridge Thermionic Corp., a, b, f, i, q-1  
Carborundum Co., Refractories Div., a, k  
Centralab, Div.-Globe-Union, a, b, f, g, l, m, n, r, w, z, e-1, m-1, o-1  
Chemplast, Inc., l-1  
Chicago Gasket Co., k-1, l-1  
Cornell-Dubilier Electric Corp., a, c thru g, k thru p, r, s, v, x, y, z, a-1, b-1, c-1, e-1, h-1, j-1 thru m-1, o-1  
Corning Glass Works, g, i thru l, n, r, w, c-1, e-1  
Corson Electric Mfg. Corp., k, l, m, s, u, x, a-1, f-1, i-1, k-1  
Dearborn Electronic Labs., g, k thru n, r, s, u, v, x, y, o-1, g-1, k-1, l-1  
Devcon Corp., x  
Dalinko & Wilkens, Inc., p-1  
Danter Scientific Co., z  
Dauble E Products Co., e, f, g, k, l, m, a, p, r, s, y, k-1, l-1  
EFCON (Electronic Fabricators, Inc.), g, i, k, l, m, r, s, x, y, z, a-1, c-1, g-1, i-1 thru l-1  
Eastern Jewel Corp., e, e-1  
Ectro Mfg. Co., a, f, g, m, a, r, e-1, m-1  
Electro-Capacitors Co., e, n  
Electro-Measurements Inc., d, a-1  
Electron Products Co., d, f, g, k thru a, r thru u, x, y, z, a-1, c-1, e-1, g-1, k-1, l-1  
Electronic Applications, Inc., b, a, r, s, w, x, a-1  
El Ray Motor Co., Inc., a, a, q  
Erie Resistor Corp., a, b, e, f, g, i thru m, a thru r, x, y, b-1, d-1, e-1, g-1, h-1, j-1, l-1, m-1, q-1  
Filmohm Corp., h-1  
Filttron Co., Inc., e, f, k thru a, r, s, u, v, x, y, o-1, e-1, g-1, k-1, l-1  
Fluorocarbon Co., The, k-1, l-1  
Franklin Fibre-Lamitec Corp., x, y, a-1, k-1, l-1  
Freed Transformer Co., Inc., d  
Furanc Plastics, Inc., y  
Gas Appliance Stores, Inc., y  
General Electric Co., Apparatus Sales Div., c, e, f, f, k, m, n, r, s, v, y, i-1, j-1, o-1  
General Products Corp., a, s, y, a-1  
Geotronic Labs., Inc., a, r, s, g-1, l-1  
Giannini Plosmadyne Corp.  
John Gombos Co., Inc., q-1  
Good-All Electric Mfg. Co., a, c, e, g, k thru a, r, s, u, v, x, y, z, a-1, c-1, e-1, f-1, g-1, k-1, l-1  
Gulton Industries, Inc., a, i, l, m-1  
Hollert Mfg., Co., f  
Hologen Insulator & Seal Corp., k-1, l-1  
Hammorlund Mfg. Co., Inc., b, l, m, n, e-1, n-1, o-1, q-1  
Haveg Industries, Inc., g-1, k-1, l-1  
ITT-Kellogg, g  
Illinois Condenser Co., d, e, m, n, r, z, e-1, j-1  
Industrial Instruments, Inc., d  
International Electronic Industries, Inc., e, r, e-1, j-1  
JFD Electronics Corp., b, i thru l, r, t, c-1, f-1, n-1, o-1, q-1  
Jennings Radio Mfg. Corp., m, p-1, q-1  
E. F. Johnson Co., a, m, n, r, t, e-1, n-1, o-1, q-1  
Kling Metal Spinning & Stamping Co., q-1  
Leeds & Northrup Co., d, p, c-1, h-1  
Ling Electronics, Inc., a, b, g, k, l, n, o-1, p-1, q-1  
Mac Lead & Hanopol, Inc., l-1  
Mogonovox Co., The, d, i-1, j-1  
Moide Development Co., a, b, f, g, l, m, r, s, e-1, m-1  
P. R. Mollory & Co. Inc., a, e, f, g, k, l, r, v, e-1, j-1  
Moryland Lovo Co., a, x, y, k-1, l-1

Mc Coy Electronics Co., q-1  
Mica Fabricating Co., p, q, a-1  
Milam Electric Mfg. Co., r, x  
Minneapolis-Honeywell Regulator Co., Industri Products Group, e-1  
Minnesota Mining & Mfg. Co., a, b, p, u  
Mitronics Inc., b, j, h-1  
Monogram Precision Industries, a, i, l, m, c-1, p-1  
Mucan Corp., a, r, e-1, m-1  
National Beryllia Corp., a, l  
Nez-Dar Co., e-1  
New England Scientific Instruments Co., h, i-1  
New York Coil Co., a, s  
Northern Plastics Corp., e-1  
Plastic Age Sales, Inc., v, x  
Potter Co., The, f, g, i, k thru a, r, s, u, v, x, y, o-1, e-1, g-1, k-1, l-1  
Precision Development Corp., d  
Radiation Research Corp., m, y, l-1  
Pyramid Electric Co., e, g, i, m, a, q, r, u thru d-1, g-1, j-1  
Radio Industries, Inc., a, f, g, r, z, e-1, m-1  
Rinca, Inc., d  
San Fernando Electric Mfg. Co., d, f, g, k, l, n, r, s, u, x, y, a-1, c-1, e-1, g-1, k-1, l-1  
Sangama Electric Co., c, e, f, g, k thru p, r, s, x, y, z, a-1, c-1, e-1, g-1 thru a-1  
Southern Electronics Corp., d, g, k, l, m, s, y, o-1, c-1, l-1, q-1  
H. W. Sullivan Ltd., d, c-1, i-1  
Tansitor Electronics, Inc., j-1  
Technograph Printed Electronics, Inc., e-1  
Teiner Engrg. Corp., q-1  
Telectro Industries Corp., k, e-1, q-1  
Texas Capacitor Co., Div.-K-C-K Corp., g, l, n, x, y, k-1, l-1  
Tabe Deutschmann Corp., e, f, i thru a, r, s, u, y, z, a-1, c-1, e-1, g-1, k-1, l-1, m-1, o-1  
Trionics Corp., a, l, e-1  
Underwood Electric & Mfg. Co., Inc., g, p, q, h  
United Mineral & Chemical Corp., a, b  
U. S. Science Corp., Div.-Topp Industries, Inc., U. S. Semiconductor Products, Inc., i-1  
Vacap Corp., p-1  
Victor R. F. & Microwave Co., c-1  
Vitro Labs., q  
Waterbury Companies, Inc., x, z  
Westlake Plastics Co., k-1  
Zenith Radio Corp., a

## CAPS, TUBE

Aerojet-General Corp.  
Alden Products Co.  
Anchor Metal Spinning Co., The  
Arnav Aircraft Associates, Inc.  
Claver Industries, Inc.  
Cornell Deep Drawing Co., Div.-Lanes Industri Corp.  
Habson Brothers, Inc.  
Mercury Tool & Mfg. Corp.  
Mueler Brass Co.  
Seamless Products Co., Inc.  
Stanley-Judd Div.-The Stanley Works  
Staver Co., Inc.  
The Warren Components, Div. El-Tronics, Inc.

## CARTRIDGES, PRESSURE PRODUCING

\*MC CORMICK SELPH ASSOCIATES

## CARTRIDGES, STARTER

\*AIRESEARCH MFG. CO., DIV.-THE GARRE CORP

American Rocket Co.  
Amaco Chemicals Corp.  
Astrodyne, Inc.  
Atlantic Research Corp.  
Dynamic Devices, Inc.  
Fulton-Irgon Corp., The  
Hercules Powder Co.  
\*MC CORMICK SELPH ASSOCIATES  
Olin Mathieson Chemical Corp., Energy Div.  
\*PROPELLEX CHEMICAL DIV., CHROMALL CORP  
Stondard Oil Co. of Indiana

## CASES

a. Diode & Transistor  
b. Instrument & Meter  
c. Portable  
d. Transformer  
e. Tubes  
A&P Metal Products Mfg. Corp., b, c  
Abalon Precision Mfg. Corp., b  
Adept Industries Inc., b, c  
American Aluminum Co., a thru d  
Anchor Metal Spinning Co., The, a thru a  
Basco Metal Products, Inc., b, d  
Brooks & Perkins, Inc., b, c  
Bud Radio Inc., b, c  
Cambridge Thermionic Corp., e  
Cormody Corp., b  
Chemold Co., b  
Cornell Deep Drawing Co., Div.-Lanes Industri Corp., b, c, e  
Corning Glass Works, a  
Dohlstrom Metallic Door Co., b  
Dresser Mfg. Div., Dresser Industries, Inc.  
Elzee Metal Products Co., Inc., b, c  
Great Eastern Metal Products Co., d  
Ludwig Harold Mfg. Co., c

Ingersoll Kalamazoo Div., Borg-Warner Corp., e  
Kanarr Corp., e  
Kling Metal Spinning & Stamping Co., c  
H. Koch & Sons, b, c  
Lancaster Glass Corp., b  
Lafstrand Co., The, c  
Lane Star Plastics Co. Inc., a  
Meridian Metalcraft, Inc., a  
Mid-West Metal Products, Inc., b, c, d  
Mitricon, Inc., a  
Monogram Precision Industries, e  
Matarola Inc., Military Electronics Div., a  
National Pneumatic Co., Inc., Holtzer-Cobot Div.,  
o, b, c  
Osborne Electronic Sales Corp., d  
Pneumafit Corp., b, e  
Precision Sheet Metal, Inc., a thru d  
Premier Metal Products Co., b, c  
Prereg Mfg. Inc., b, c, d  
Radiatronics, Inc., b, c  
Rimok, Inc., a thru e  
Roberts Industries Inc., a, b  
Milan Ross Metals Co., The, a thru d  
Silicone Insulation, Inc., d, e  
Simpson Electric Co., a  
Sinclair Mfg. Co., a  
Skydyne, Inc., a, b, c  
Southwestern Industrial Electronics Co., b, c, d  
Stanley Aviation Corp., c  
Staver Co., Inc., The, a, e  
TA Mfg. Corp., b, c  
Teiner Engr. Corp., b  
Universal Unlimited, Inc., b, c  
Waldam Electronics Inc., b  
Warren Components, Div. El-Tranics, Inc.  
Young & Rioux Woodworking Co., Inc., c

#### ASINGS

American Aeroparts  
American Car & Foundry, Div.-ACF Industries, Inc.  
B. H. Aircraft Co., Inc.  
Baker Perkins Inc.  
Dresser Mfg. Div., Dresser Industries, Inc.  
Goodyear Tire & Rubber Co., The, Aviation Products  
Div.  
Ludwig Hanald Mfg. Co.  
Ingersoll Kalamazoo Div., Borg-Warner Corp.  
Kaiser Metal Products, Inc.-Fleetwings Div.  
Kirk & Blum Mfg. Co., The  
Minnesota Mining & Mfg. Co.  
Monogram Precision Industries  
Scalfe Co.-Div.-Wilson Bros.  
Smith-Marris Corp.  
Twigg Industries  
United Mfg. Co., The  
United States Rubber Co  
Walber Machine Products Inc.

#### ASTERS

Aircraft Tools, Inc.  
Albion Industries, Inc.  
Anchor Metal Spinning Co., The  
Bassick Co., The, Div.-Stewart-Warner  
Bud Radio Inc.  
Capital City Mfg. Co.  
Colson Corp., The  
Crown Controls Co., Inc.  
Fairbanks Co., The  
Faultless Coster Corp.  
National Lock Co.  
Nelson Labs., Inc.  
Precision Metalsmiths, Inc.  
Premier Metal Products Co.  
Rapids-Standard Co., Inc., The  
Shenango Furnace Co., The, Centrifugally Cost  
Products Div.  
United Supply Co.

#### ASTINGS

a. Centrifugal, Ferraus  
b. Centrifugal, Non-Ferraus  
c. Die, Ferraus  
d. Die, Non-Ferraus  
e. Precision, Ferraus  
f. Precision, Non-Ferraus  
g. Sand, Ferraus  
h. Sand, Non-Ferraus

ACF Industries Inc., d, g  
Acme Brass Foundry Co. of San Antonio, Inc., h  
Afriron Inc., Div.-Littion Industries, f  
Akron Brass Mfg. Co., Inc., h  
Al-Fin Div., Fairchild Engine & Airplane Corp., b, h  
Allegheny Ludlum Steel Corp., a, e, g  
Alloy Steel Casting Co., e, g  
Alloys Unlimited Inc., f  
Alpha Metals, Inc., d, f  
Aluminum Alloys Corp., h  
Aluminum Co. of America, b, d, f, h  
American Aeroparts, a thru h  
American Agile Corp., b  
American Brake Shoe Co., a, e thru h  
American Car & Foundry, Div.-ACF Industries, Inc.,

Amppo Metal, Inc., b, h  
Anchor Metal Co. Inc., d, f  
Arrow Tool Co. Inc., a thru h  
Austenal Co., Div.-Howe Sound Co., Microcast  
Products, e, f  
Auto Specialties Mfg. Co., Inc., e, g  
Avion Foundry Corp., b, f, h  
Basic Tool Industries, Inc., d, h

Marris Bean & Co., f  
Bearium Metals Corp., h  
Bell & Howell Co., d thru f  
Belmont Smelting & Refining Works, Inc., c  
Bendix Foundries, Bendix Aviation Corp., b, d, f, h  
Bergen Carbide Co., a, b  
E. W. Bliss Co., g  
Blowers Inc., g  
Bridgeport Brass Co., d, f, h  
Bullard Co., The, h  
Celco (Constantine Engr. Labs. Co.), b  
Casting Engineers' Div., Consolidated Foundries &  
Mfg. Corp., f  
Chain Belt Co., g  
Chombersburg Engr. Co., g  
Clark Equipment Co., g, h  
Colonial Aircraft Corp., h  
Consolidated Diesel Electric Corp., h  
C. Lee Cook Co., Airtamic Products Div., g, h  
Cooper-Bessemer Corp., The, g  
Crompton & Knowles Corp., g  
Crouse-Hinds Co., g, h  
Curry-Wright Corp.-Wright Aeronautical Div., c, f,

h  
Dirilyte Co. of America, Inc., h  
Division Lead Co., b, d, h  
Dodge Steel Co., g  
Dollin Corp., d  
Dow Chemical Co., The, d, f, h  
Duraloy Co., The, a, g  
Eaton Mfg. Co., e  
Electric Auto-Lite Co., The, d, g  
Electric Steel Foundry Co., a, e, g  
Electro-Mechanical Products Co., f, h  
Engineered Precision Casting Co., e, f  
FYXR, Inc., e, f  
Farrel Birmingham Co. Inc., a, g  
General Alloys Co., a, g  
General Electric Co., Metallurgical Products Dept.,  
e  
Gordan Enterprises, a thru f  
Hamilton Foundry & Machine Co., The, g  
Haynes Steelite Co., Div.-Union Carbide Corp., b, e,  
f, h  
Hills-Mc Canno Co., h  
Hitchiner Mfg. Co., Inc., e, f  
Investment Casting Co., e, f  
Javelin Aircraft Co. Inc., c, g, h  
Kanarr Corp., d, f, e  
Kalcast Industries-Div. Thompson Rama Waoldridge  
Inc., a, b, d, e  
Lebanon Steel Foundry, a, e, g  
Light Metals, Inc., h  
Lindgren Foundry Co., g  
Magline Inc., d, h  
Mc Pherson Corp., d, e, f, h  
Mincast Mfg. Corp., d, e  
Minneapolis-Honeywell Regulator Co., Ordnance Div.,  
d, f  
Miscellaneous Precision Casting Co., e  
Morse Instrument Co., The, f  
Mueller Brass Co., h  
National Lead Co., c  
National Pneumatic Co., Inc., Holtzer-Cobot Div., d,  
f, g, h

Ohio Precision Castings, Inc., f, h  
Perfecto Cast, o, g  
Piasecki Aircraft Corp., o, f, h  
Precision Castings, Inc., b, f, h  
Precision Castparts Corp., a, e  
Precision Metalsmiths, Inc., d, e  
Randall Graphite Bearings, Inc., b, h  
Rolle Mfg. Co.  
Saginow Bearing Co., h  
Roy A. Scharer & Co., a thru d, g, h  
Shenango Furnace Co., The, Centrifugally Cast  
Products Div., a  
Sibley Machine & Foundry Corp., g  
Solon Foundry, Inc., f, h  
Staver Co., Inc., The, b, d  
Swoyne, Robinson & Co., e thru h  
Techni-Cost Corp., b  
Teiner Engr. Corp., d, f, g, h  
Titan Metal Mfg. Co., d  
True Alloys Inc., b, f, h  
U. S. Industries, Inc.  
Veet Industries, b, f, h  
Vilter Mfg. Co., The, g  
Watertown Div., The New York Air Brake Co., g, h  
Waukesha Foundry Co., g, h  
Wayne Foundry & Stamping Co., h  
Wayne Pump Co., The, Div.-Symington Wayne Corp.  
Wellman Bronze & Aluminum Co., f, h  
Western Automatic Machine Screw Co., Div.  
Standard Screw Co., g  
Western Iron & Foundry Co., Inc., c, g  
Westinghouse Electric Corp., Metals Plant, o, f  
Wheel Craft Inc., b, f  
Wilcox-Crittenden Div., North & Judd Mfg. Co., g, h  
Wisconsin Aluminum Foundry Co., Inc., h

#### CASTINGS, ROTOR

See ROTOR CASTINGS

#### CATAPULTS

All American Engrg. Co.  
Allied International Co.  
American Car & Foundry, Div.-ACF Industries, Inc.  
American Machine & Foundry Co., Greenwich  
E. W. Bliss Co.  
Breeze Corporations, Inc.  
Farrel Birmingham Co. Inc.

Fulton-Irgon Corp., The  
Halax, Inc.  
Horkey-Moore Associates  
Javelin Aircraft Co. Inc.  
Kaiser Aircraft & Electronics, Div.-Kaiser  
Industries Corp.  
Kemp Aero Products  
Langren Aircraft Co., Inc.  
\*MC CORMICK SELPH ASSOCIATES  
Monogram Precision Industries  
\*PROPELLEX CHEMICAL DIV., CHROMALLOY  
CORP.  
Ravenna Metal Products, Div.-Standard Screw Co.  
Reaction Motors Div., Thiokol Chem. Corp.  
Red Lion Cabinet Co., Redco Tool Div.  
Stanley Aviation Corp.  
Talley Corp., The  
Thiokol Chemical Corp.  
U. S. Industries, Inc.  
Van Zelm Associates, Inc.  
Washington Aluminum Co., Inc.

#### CATHODE RAY TUBE CHECKERS

See CHECKERS, CATHODE RAY TUBE

#### CATHODES

Associated Engrg. & Mfg. Corp.  
J. Bishop & Co., Platinum Works  
Bram Metallurgical & Chemical Co.  
Giannini Plasmodyne Corp.  
Philco Corp., Government & Industrial Div.  
Thamos Electronics, Inc.

#### CELLS, PHOTOELECTRIC

Cloirex Corp.  
Eastman Kodak Co.  
General Electric Co., Apparatus Soles Div.  
Haffner Electronics Corp., Semiconductor Div.  
ITT Labs.-Ft. Wayne  
International Rectifier Corp.  
Philco Corp., Government & Industrial Div.

#### CELLS, STANDARD

Eppley Laboratory, Inc., The  
Hoffman Electronics Corp., Semiconductor Div.  
Julie Research Labs., Inc.  
Minneapolis-Honeywell Regulator Co., Industrial  
Product Group  
Philco Corp., Government & Industrial Div.  
Weston Instruments, Div.-Daystrom, Inc.

#### CELLS, THERMAL CONDUCTIVITY

See THERMAL CONDUCTIVITY CELLS

#### CEMENT

a. Asbestos  
b. Pipe-Joint  
c. Plastic  
d. Rivet  
e. Rubber  
f. Rubber-Ta-Metal  
g. Wood

Allied Plastics Supply Corp., b, c  
Ambrad Co. Inc., c thru g  
American Agile Corp., c  
American Latex Products Corp., c, e, f  
Arco Co., The, b  
Aristocrat Plastics, Inc., c  
Barrett-Christie Co., a, b, c  
Carl H. Biggs Co., c, f, g  
Bloomingdale Rubber Co., a thru g  
Bonny Mfg. Corp., b  
Borden Chemical Co., b thru g  
Colonial Rubber Co., f  
Connecticut Hard Rubber Co., The, e, f  
Cooper Industries, Inc.  
Crone Packing Co., b  
DBM Research Corp., c  
Dayton Rubber Co., The, e, f  
Dennis Chemical Co., b, c, e, g  
Devcon Corp., a, c, e, f, g  
Du-Co Ceramics Co., g  
E. I. Du Pont De Nemours & Co., Inc.,  
e, f  
Eagle-Picher Co., The, a  
Emerson & Cuming, Inc., a, c, e, f, g  
Fisher Scientific Co., e  
Furane Plastics, Inc., b, c, f, g  
General Cement Mfg. Co., Div.-Textron, Inc.,  
c, f  
B. F. Goodrich Industrial Products Co., e, f  
Goodyear Tire & Rubber Co., The, Aviation  
Products Div., e  
Grant Chemical Co., Inc., b, c, e, f, g  
Haveg Industries, Inc., c  
R. M. Hollingshead Corp., c, e  
Homolite Corp., The, c, g  
Huntington Rubber Mills, o, f  
Johns-Manville, o, c, e, f  
Johns-Manville Sales Corp., a  
Lomax Industries, Inc., c  
Leffingwell Chemical Co., f  
Louthan Mfg. Co., The, Div.-Ferro Corp., g  
Maas & Woldstein Co., a, c, e, f, g  
Morlette Corp., The, a, c  
Minnesota Mining & Mfg. Co., c thru g  
Minnesota Mining & Mfg. Co.-Adhesives, Coating &  
Sealers Div., e, f  
Monogram Precision Industries, c  
National Ceramic Co., g

National Engr. Products, Inc., b, c.  
New England Tape Co., Div.-United-Carr  
Fastener Corp., c.  
Permacel, b, c, e, f, g.  
Permatex Co., Inc., b, c, e.  
Prestitite Div., American-Marietta, f.  
Pratex-A-Cote, Inc., b, c, f, g.  
Raybestos-Manhattan, Inc., Pa., f.  
Reinhold Engr. & Plastics Co., a, c.  
Rubbercraft Corp. of California, e, f.  
Saureisen Cements Co., a, b, e, f.  
Ray A. Scherer & Co., e, f.  
Smooth-Dn Mfg. Co., b, c.  
Topper Mfg. Co., Inc., a, b, c, e, f, g.  
Union Asbestos & Rubber Co., a.  
United States Chemical Milling Corp., g.  
United States Plywood Corp., g.  
United States Rubber Co., e, f.  
X-Pando Corp., b, c.

#### CENTRIFUGAL FLOW COMPRESSOR ASSEMBLIES See COMPRESSOR ASSEMBLIES, CENTRIFUGAL FLOW

#### CERAMIC PARTS

Aeronca Mfg. Corp.  
American Lava Corp.  
American Refractories & Crucible Corp.  
Antenna & Radome Research Associates  
Auburn Spark Plug Co., Inc.  
B G Corp., The  
Ball Machine Products Co., The  
Bergen Carbide Co.  
Birma Mfg. Co. Inc.  
Birnbach Rodio Co., Inc.  
Brush Beryllium Co., The  
Cambridge Thermionic Corp.  
Carborundum Co., Latrobe Plant, Refractories Div.  
Carborundum Co., Refractories Div.  
Centralab, Div.-Globe-Union  
Cooper Development Corp., Sub.-Marquardt  
Aircraft Co.  
Corning Glass Works  
Curtiss-Wright Corp., Research Div.  
Curtiss-Wright Corp., Santa Barbara Div.  
Delta Chemical Works, Inc.  
Diamonite Products Mfg. Co.  
Duramic Products Inc.  
Electric Auto-Lite Co., The  
Electrical Refractories Co., The  
Electronic Mechanics, Inc.  
Erie Resistor Corp.  
Frenchtown Porcelain Co.  
General Electric Co., Insulator Dept.  
General Electric Co., Metallurgical Products Dept.  
Glodding, McBean & Co.  
International Resistance Co.  
Isolantite Mfg. Corp.  
**\*KEARFOTT CO., INC.**  
Kip Electronics Corp.  
Lockheed Aircraft Corp., Missiles & Space Div.  
Maryland Lava Co.  
Metallizing Co. of Los Angeles Inc.  
Minneapolis-Honeywell Regulator Co., Ordnance Div.  
Minnesota Mining & Mfg. Co.  
Mtronics Inc.  
Monogram Precision Industries  
Motorola Inc., Military Electronics Div.  
Narmco Mfg. Co.  
National Beryllia Corp.  
National Ceramic Co.  
Norton Co.  
Norton Co., New Products Dept.  
Superior Steatite & Ceramic Corp.  
Therm, Inc.  
Thermal Refractories Corp.  
Topper Mfg. Co., Inc.  
United Mineral & Chemical Corp.  
Zirconium Corp. of America

#### CERAMICS, HIGH TEMPERATURE

Aerjet-General Corp.  
Aeronca Mfg. Corp.  
American Latex Products Corp.  
American Lava Corp.  
American Refractories & Crucible Corp.  
Auburn Spark Plug Co., Inc.  
B G Corp., The  
Brush Beryllium Co., The  
Carborundum Co., Latrobe Plant, Refractories Div.  
Carborundum Co., Refractories Div.  
Centralab, Div.-Globe-Union  
Consolidated Electrodynamics Corp.  
Cooper Development Corp., Sub.-Marquardt  
Aircraft Co.  
Corning Glass Works  
Curtiss-Wright Corp., Research Div.  
Curtiss-Wright Corp., Santa Barbara Div.  
DBM Research Corp.  
Diamonite Products Mfg. Co.  
Duramic Products Inc.  
Dyco-Therm Chemical Corp.  
Electric Auto-Lite Co., The  
Electronic Mechanics, Inc.  
Erie Resistor Corp.  
Frenchtown Porcelain Co.  
General Electric Co., Metallurgical Products Dept.  
Glodding, McBean & Co.  
Hovey Industries, Inc.  
Haynes Stellite Co., Div.-Union Carbide Corp.  
Isolantite Mfg. Corp.  
**\*KEARFOTT CO., INC.**

Lockheed Aircraft Corp., Missiles & Space Div.  
Marquardt Aircraft Co.  
Maryland Lava Co.  
Metallizing Engr. Co., Inc.  
Minneapolis-Honeywell Regulator Co., Ordnance Div.  
Minnesota Mining & Mfg. Co.  
Mtronics Inc.  
Monogram Precision Industries  
Morganite, Inc.  
Motorola Inc., Military Electronics Div.  
National Beryllia Corp.  
Norton Co.  
Norton Co., New Products Dept.  
Plastic Age Sales, Inc.  
Thermal Refractories Corp.  
Topper Mfg. Co., Inc.  
Trionics Corp.  
Zirconium Corp. of America

#### CHAIN, SMALL DRIVE

Atlas Precision Products Co.  
Chain Belt Co.  
Sierra Engr. Co.

#### CHAINS

Atlas Precision Products Co.  
Chain Belt Co.  
Dodge Mfg. Corp.  
Jeffrey Mfg. Co., The  
Link-Belt Co.  
Newbrook Machine Corp.  
Sierra Engr. Co., Seal Master Bearing  
Div.

#### CHAMBERS

- a. Acoustic
- b. Alpha, Nuclear
- c. Environmental
- d. Ionization
- e. Shielded Screen
- f. Temperature & Humidity
- g. Test

#### \*AC ELECTRONICS DIV., GENERAL MOTORS CORP., g.

Aeronautics Systems, Inc., Sub.-Ford Motor Co., c.  
Aireco, Inc., c, f, g.  
American Instrument Co., Inc., c, f, g.  
American Research Corp., c, f.  
Anchor Specialty Mfg. Co., Inc., c, g.  
Anton Electronic Labs., Inc., b, d.  
Applied Physics Corp., d.  
**\*ASSOCIATED TESTING LABS., INC.,** a, c, f, g.  
Astravac Corp., c, d, f, g.  
Avtron Mfg., Inc., b.  
Bar-Ray Products, Inc., d.  
Blue M Electric Co., c, f, g.  
Brown Engr. Co., Inc., g.  
Chicago Bridge & Iron Co., c, f, g.  
Consolidated Electrodynamics Corp., Rochester  
Div., c, f.  
Cooper Development Corp., Sub.-Marquardt Aircraft  
Co., d.  
DBM Research Corp., g.  
Dean Products, Inc., b, c, g.  
Delta Design Engineers, Inc., c, f.  
Development Engr. Co., Inc., c, f, g.  
Diversey Engr. Co., g.  
Dynamic Devices, Inc., g.  
Electronic Instrument Co., Inc. (EICD), g.  
Environmental Equipment Co., c, f, g.  
Fisher Scientific Co., f.  
Gardner Laboratory, Inc., c, f.  
General Electric Co., Apparatus Sales Div., d.  
General Electric Co., X-Ray Dept., d.  
Giannini Plasmadyne Corp., c.  
Greenbrier Instruments Inc., f, g.  
Grieve-Hendry Co., Inc., e, f.  
Guardite Co., Div. of American Marietta Co.,  
c, f, g.  
Paul Hardeman, Inc., c, f, g.  
Harris Refrigeration Co., c, f, g.  
Hicks Corp., The  
High Vacuum Equipment Corp., c.  
Homalite Corp., The, f.  
Industrial Acoustics Co., Inc., a, c, e, g.  
Industrial Engr. Corp., g.  
Instruments Div.-Phillips Electronics, Inc., c.  
International Radiant Corp., c, f, g.  
Interstate Electronics Corp., d.  
Jamison Cold Storage Door Co., a, c, f, g.  
Kahn & Co., Inc., g.  
Land-Air Inc., d.  
Ling Electronics, Inc., a, g.  
Magee-Drallo & Associates, c, g.  
Mast Development Co., Inc., c, g.  
Mc Millan Industrial Corp., e.  
Missimers Inc., c, f, g.  
Monogram Precision Industries, c, f, g.  
Murphy & Miller Inc., c, f, g.  
NRC Equipment Corp., d, g.  
Newbrook Machine Corp., a thru f.  
Nuclear Corp. of America, b, d.  
Nuclear-Chicago Corp., d.  
Nuschel Electronics, Inc., g.  
Project Fabrication Corp., c, f, g.  
Retest Labs., Inc., a.  
Shielding Inc., a, c, e, g.  
Shilling-Morris Corp., b.  
Space Corp., c, f, g.  
Stote Testing Lab. Inc., c, g.  
Strand Engr. Co., b.

Surface Combustion Corp., f.  
Temperature Engr. Corp., c, f, g.  
Tenney Engr., Inc., c, f, g.  
Thompson Engr. Co., The, Missile Products Div.  
a, f.  
Topatron, Inc., e, g.  
Universal Dynamics Corp., f, g.  
Winder Aircraft Corp. of Florida, g.

#### CHARGERS, BATTERY

Acme Electric Corp.  
Aerolab Development Co.  
Allis-Chalmers  
Associated Engineers, Inc.  
Automatic Switch Co.  
Basco Metal Products, Inc.  
Bogue Electric Mfg., Co.  
Cornell-Dubilier Electric Corp.  
Dresser Electric Co.  
Electric Auto-Lite Co., The  
Electro Products Laboratories, Inc.  
**\*ETSO-HOKIN & GALVAN**  
Exide Industrial Div.-The Electric Storage  
Battery Co.  
Fisher Scientific Co.  
General Electric Co., Apparatus Sales Div.  
General Scientific Equipment Co.  
Green Rectifier Co.  
Guided Missile Div.-De Havilland Aircraft of  
Canada, Ltd.  
Knopp Inc.  
Leach Corp.  
Leland Airborne Products, Div.-American  
Machine & Foundry Co.  
P. R. Mollary & Co. Inc.  
Meteor Production Engrs., Inc.  
Model Rectifier Corp.  
J. J. Monaghan Co., Inc.  
Motor Appliance Corp.  
**\*MOTOR GENERATOR CORP.**  
Motoresearch Co.  
North Electric Co.  
Northeastern Engr. Inc.  
D. W. Dnan & Sons Inc.  
Paco Electronics Co., Inc.  
Peer, Inc.  
Perkin Engr. Corp.  
Power Supplies Inc.  
Precise Development Corp.  
Reflectone Corp., The  
Republic Aviation Corp.  
Safety Electrical Equipment Corp.  
Schauer Mfg. Corp.  
Sel-Rex Corp.  
Sorensen & Co., Inc.  
Southwestern Industrial Electronics Co.  
Sun Electric Corp., Aeronautical Div.  
Syntron Co.  
Technical Apparatus Builders  
Telectro Industries Corp.  
Terada Co.  
United Control Corp.  
United States Chemical Milling Corp.  
United States Dynamics Corp.  
Western Design, Div.-U. S. Industries, Inc.; Santa  
Barbara Div.  
Westinghouse Electric Corp.  
Willard Storage Battery Div.  
Winder Corp., Sub.-Zenith Radio Corp.  
Winder Aircraft Corp. of Florida  
Winpower Mfg. Co.

#### CHASSIS, CABINET

Abalon Precision Mfg. Corp.  
Aerodex, Inc.  
Aircraft Tools, Inc.  
Alden Products Co.  
Alpitec, Inc.  
Aluminum Co. of America  
American Aluminum Co.  
American Machine & Foundry Co., Government  
Products Group  
Anchor Metal Spinning Co., The  
Basco Metal Products, Inc.  
Basic Tool Industries, Inc.  
Benson Mfg. Co., The  
Bergen Carbide Co.  
Brooks & Perkins, Inc.  
Dud Radio Inc.  
Carmody Corp.  
Centronix Inc.  
ChemoId Co.  
Chrysler Corp., Defense Operations Div.  
Cole Electric Co.  
Colonial Aircraft Corp.  
Culter Metal Products Co.  
Detronic Industries  
Electro-Mechanical Products Co.  
Elzee Metal Products Co., Inc.  
Falstrom Co.  
Farwell Metal Fabricating  
Fletcher Mfg. Co., Inc., The  
Green Rectifier Co.  
Greenbrier Instruments Inc.  
Hardman Tool & Engr. Co.  
Ludwig Harold Mfg. Co.  
Harkey-Moore Associates  
Hughes Tool Co., Aircraft Div.  
Hussmann Aircraft Div.  
Hycon Mfg. Co.

Industrial Tools Mfg. Corp., Sub.-Pendleton Tool Industries, Inc.  
International Mfg. Co., Inc.  
Kaiser Aircraft & Electronics, Div.-Kaiser Industries Corp.  
Lsey-Hayes Co.  
Meady Van Saun Mfg. & Engrg. Corp.  
R. & Blum Mfg. Co., The  
Rich-Huard Corp.  
Strand Co., The  
Trogen Aircraft Co., Inc.  
H. Lynch Mfg. Co.  
Tcury Tool & Mfg. Corp.  
Tridian Metalcraft, Inc.  
Ttal Fabricators Corp.  
T-West Metal Products, Inc.  
**IRAX CHEMICAL PRODUCTS CORP., METAL CONTAINER DIV.**  
Monogram Precision Industries  
Purse Instrument Co., The  
Rational Pneumatic Co., Inc., Holtzer-Cabot Divs.  
Pasecki Aircraft Corp.  
Precision Sheet Metal, Inc.  
Premier Metal Products Co.  
Preg-Way, Inc.  
Red Lion Cabinet Co., Redco Tool Div.  
Rimak, Inc.  
Rixon Electronics Inc.  
Santa Anita Engrg. Co.  
Shaw Metal Products Corp.  
Skyline Products, Inc.  
Smith-Morris Corp.  
Stanley Aviation Corp.  
Roland Teiner Co., Inc.  
Turbo Machine Co.  
Twin Coach Co., Aircraft-Missiles  
United Aircraft Products, Inc.  
Variety Aircraft Corp.  
Watson Mfg. Co., Inc.  
Welded Construction Inc.  
Wyco Metal Products

#### CHASSIS HOLDERS CHASSIS, METAL

AP Metal Products Mfg. Corp.  
Alon Precision Mfg. Corp.  
Arodex, Inc.  
Aircraft Tools, Inc.  
Aler Products Co.  
Apitec, Inc.  
Aluminum Co. of America  
American Aluminum Co.  
American Machine & Foundry Co., Government Products Group  
Anchor Metal Spinning Co., The  
Argen Carbide Co.  
Banks & Perkins, Inc.  
Bard Radio Inc.  
Baptist City Mfg. Co.  
Bentronix Inc.  
Brylster Corp., Defense Operations Div.  
Burk-Aiken Co., The  
Central Aircraft Corp.  
Cenco Engrg. Works  
Cnell Deep Drawing Co., Div.-Lanes Industries Corp.  
Cramer Mfg. & Engrg., Inc.  
Cler Metal Products Co.  
Christrom Metallic Door Co.  
Chronic Industries  
Citra-Mechanical Products Co.  
Cray Corp.  
Cree Metal Products Co., Inc.  
Cristrom Co.  
Cowell Metal Fabricating  
Cris-Mfg. Co., The  
Cretcher Mfg. Co., Inc., The  
Creflex Inc.  
Creen Rectifier Co.  
Cridman Tool & Engrg. Co.  
Cudwig Honold Mfg. Co.  
Cushman Aircraft Div.  
Cyan Mfg. Co.  
Industrial Tools Mfg. Corp., Sub.-Pendleton Tool Industries, Inc.  
International Mfg. Co., Inc.  
Iota, Inc.  
Kaiser Aircraft & Electronics, Div.-Kaiser Industries Corp.  
Lsey-Hayes Co.  
Meady Van Saun Mfg. & Engrg. Corp.  
R. & Blum Mfg. Co., The  
Rich-Huard Corp.  
Strand Co., The  
Trogen Aircraft Co., Inc.  
H. Lynch Mfg. Co.  
Tcury Tool & Mfg. Corp.  
Tridian Metalcraft, Inc.  
Ttal Fabricators Corp.  
T-West Metal Products, Inc.  
Teller Dial & Nameplate Co.  
**IRAX CHEMICAL PRODUCTS CORP., METAL CONTAINER DIV.**  
Monogram Precision Industries  
Purse Instrument Co., The  
Rational Pneumatic Co., Inc., Holtzer-Cabot Divs.  
Pasecki Aircraft Corp.  
Precision Sheet Metal, Inc.  
Premier Metal Products Co.  
Preg-Way, Inc.  
Red Lion Cabinet Co., Redco Tool Div.  
Rimak, Inc.  
Rixon Electronics Inc.  
Santa Anita Engrg. Co.  
Shaw Metal Products Corp.  
Skyline Products, Inc.  
Smith-Morris Corp.  
Stanley Aviation Corp.  
Roland Teiner Co., Inc.  
Turbo Machine Co.  
Twin Coach Co., Aircraft-Missiles  
United Aircraft Products, Inc.  
Variety Aircraft Corp.  
Watson Mfg. Co., Inc.  
Welded Construction Inc.  
Wyco Metal Products

**\*PACKARD-BELL ELECTRONICS CORP.**  
Piasecki Aircraft Corp.  
Precision Sheet Metal, Inc.  
Premier Metal Products Co.  
Red Lion Cabinet Co., Redco Tool Div.  
Rimak, Inc.  
Rixon Electronics Inc.  
Santa Anita Engrg. Co.  
Shaw Metal Products Corp.  
Skyline Products, Inc.  
Smith-Morris Corp.  
Stanley Aviation Corp.  
Roland Teiner Co., Inc.  
Turbo Machine Co.  
Twin Coach Co., Aircraft-Missiles  
United Aircraft Products, Inc.  
Variety Aircraft Corp.  
Watson Mfg. Co., Inc.  
Welded Construction Inc.  
Wyco Metal Products

#### CHECKER, CABLE

Amelco, Inc.  
American Bosch Arma Corp.  
American Machine & Foundry Co., Government Products Group  
Anchor Speciality Mfg. Co. Inc.  
Associated Research, Inc.  
Bague Electric Mfg., Co.  
California Technical Industries, Div.-Textron Inc.  
Consolidated Diesel Electric Corp.  
Dit-Mco, Inc., Electronics Div.  
Hallamore Electronics Co.  
Kaiser Aircraft & Electronics, Div.-Kaiser Industries Corp.  
Korda Industries  
Land-Air Inc.  
Motorola Inc., Military Electronics Div.  
Optimized Devices, Inc.  
Paschal Electronics, Inc.  
Radiophone Co. Inc.  
Telectro Industries Corp.  
Thomas Electronics, Inc.

#### CHECKERS, CATHODE RAY TUBE

Hi-La Manufacturing Corp.  
International Research Associates  
Monogram Precision Industries  
Paco Electronics Co., Inc.  
Precision Development Corp.  
Precision Apparatus Co., Inc.  
Thomas Electronics, Inc.  
Tricraft Products Corp.

#### CHECKERS, CRYSTAL RECTIFIER

Monogram Precision Industries  
Motorola Inc., Military Electronics Div.  
Munston Mfg. & Service, Inc.  
Paco Electronics Co., Inc.  
Precision Apparatus Co., Inc.  
Technical Apparatus Builders  
Wright Engrg. Co.

#### CHECKERS, KLYSTRON TUBE

Land-Air Inc.  
Philco Corp., Government & Industrial Div.  
Polarad Electronics Corp.  
Telerad Mfg. Corp.

#### CHEMICAL DEVELOPERS See DEVELOPERS, CHEMICAL

#### CHEMICALS, RADIOACTIVE

**\*ALLIED CHEMICAL CORP., GENERAL CHEMICAL DIV.**  
Bio-Rad Labs.  
Bios Labs, Inc.  
Curtiss-Wright Corp., Research Div.  
Matheson Co., Inc., The  
Minnesota Mining & Mfg. Co.  
Nuclear-Chicago Corp.  
United States Radium Corp.

#### CHEMICALS, TUBE

**\*ALLIED CHEMICAL CORP., GENERAL CHEMICAL DIV.**  
Barium & Chemicals, Inc.  
Bios Labs, Inc.  
Borden Chemical Co.  
E. I. Du Pont De Nemours & Co. Inc.  
Kelite Corp.  
Lebec Chemical Corp.  
Dakite Products, Inc.  
Sylvania Electric Products Inc., Chemical & Metallurgical Div.

#### CHEMICALS, WIRE STRIPPER

**\*ALLIED CHEMICAL CORP., GENERAL CHEMICAL DIV.**  
Bios Labs, Inc.  
Borden Chemical Co.  
Division Lead Co.  
General Cement Mfg. Co., Div.-Textron, Inc.  
Kelite Corp.  
London Chemical Co., Inc.  
Matheson Co., Inc., The  
Dakite Products, Inc.  
Wye Industries

#### CHOKES

Airpax Electronics Inc. Seminole Div.  
Ballastran Corp.  
Barwood Electronics Inc.  
Bud Radio Inc.  
Cable Electric Products Inc.  
Cambridge Thermionic Corp.  
Carol Electronics Corp.  
Chicago Standard Transformer Corp.  
Clippard Instrument Lab., Inc.  
Double E Products Co.  
Dresser Industries, Inc.  
Electrical Windings, Inc.  
Era Electric Corp.  
Ferranti Electric Inc.  
Ferroxube Corp. of America  
Forbes & Wagner, Inc.  
Forest Electric Co., The  
Green Rectifier Co.  
Hindle Transformer Co. Inc.  
International Resistance Co.  
E. F. Johnson Co.  
Keystone Products Co.  
Langevin Div., W. L. Maxson Corp., The  
Microtran Co. Inc.  
Sanford Miller Co.  
Minitran Corp.  
Motorola Inc., Military Electronics Div.  
NYT Electronics, Inc.  
National Coil Co.  
National Pneumatic Co., Inc., Holtzer-Cabot Divs.  
New York Transformer Co. Inc.  
North Hills Electric Co., Inc.  
Omega Electronic Corp.  
Perry Plastics, Inc.  
Raytheon Mfg. Co.  
Rollan Electric Co.  
Rytron Co., Inc.  
Sage-Craft, Inc.  
Sangamo Electric Co.  
Shallcross Mfg. Co.  
Signal Transformer Co.  
Sterling Transformer Corp.  
Technical Apparatus Builders  
Torwico Electronics, Inc.  
Transformer Design, Inc. of Milwaukee  
Tranconic, Inc.  
Triod Transformer Corp.  
Universal Mfg. Co., Inc.  
Varo Mfg. Co., Inc.  
Virginia Electronics Co., Inc.  
Warren Transformer Co., Inc.  
Westbury Electronics Inc.

#### CHROMATOGRAPHS

American Agile Corp.  
American Instrument Co., Inc.  
Beckman-Scientific & Process Instruments Div.  
Bio-Rad Labs.  
Bristol Co., The  
Consolidated Electrodynamics Corp.  
Fisher Scientific Co.  
Greenbrier Instruments Inc.  
Hallikainen Instruments  
Matheson Co., Inc., The  
Perkin-Elmer Corp.

#### CHROMATOGRAPHS, VAPOR PHASE

Beckman-Scientific & Process Instruments Div.  
Bio-Rad Labs  
Consolidated Electrodynamics Corp.  
Fisher Scientific Co.  
Hallikainen Instruments  
Leads & Narthrop Co.  
Matheson Co., Inc., The  
Perkin-Elmer Corp.

#### CHRONOGRAPHS

Bristol Co., The  
M. Ducommun Co.  
Electro-Medical Lab., Inc.  
Gaertner Scientific Corp., The  
Gordon Enterprises  
Hamilton Watch Co.  
Hamilton Watch Co., Industrial Div.  
Jardur Aviation Co.  
Jardur Import Co.  
Ernest Norman Laboratories  
Systron Corp.  
Union Switch & Signal, Div.-Westinghouse Air Brake Co.  
Wakmann Watch Co. Inc.  
Waltham Engrg. Corp.

#### CHROMOMETERS

Gordon Enterprises  
Hamilton Watch Co.  
Hamilton Watch Co., Industrial Div.  
Sphinx-American Co.  
Wakmann Watch Co. Inc.  
Waltham Engrg. Corp.

#### CHRONOSCOPES

Systron Corp.  
Waltham Engrg. Corp.

#### CIRCUIT BREAKERS See BREAKERS, CIRCUIT

## CIRCUITS

a. Computer, Logic  
b. Computer, Packaged  
c. Plated  
d. Plug-In

**\*AC ELECTRONICS DIV., GENERAL MOTORS CORP.**, a, d.

ACF Industries Inc., a

Accurate Electronics Corp., Dept. D, a, b

Aerona Mfg. Corp., Baltimore Facility, b

Aeronautical Systems, Inc., Sub.-Ford Motor Co., a, thru d

Air Logistics Corp., d

Airflyte Electronics Co., c, d

American Machine & Foundry Co., Greenwich, a, b, d

American Printed Circuits Co., Inc., c, d

Arthur Ansley Mfg. Co., d

Bendix Aviation Corp., York Div., a, d

Bendix Computer, Div.-Bendix Aviation Corp., a, b, d

Bendix Radio Div., Bendix Aviation Corp., a, d

Briggs Associates, Inc., a

Burr-Brown Research Corp., b, d

Burrhoughs Corp., a, b

Burton-Rodgers, Inc., b, d

C & K Components, Inc., a, b

Cardomy Corp., b, d

Centralab, Div.-Globe-Union, b, d

Centronix Inc., a, b, d

Cleveland Metal Specialties Co., Electronics Div., a, b, d

Colorado Research Corp., b

Computer Control Co., Inc., a, b

Consolidated Diesel Electric Corp., d

Control Circuits Inc., b, c, d

Croname Inc., c

Crossis-Wright Electronics Div., IMI Branch, b

DBM Research Corp., a, d

Daltoner Div., Yuba Consolidated Industries, Inc., a, thru d

Daven Co., The, b, d

Daystrom Pacific Div.-Daystrom, Inc., b, d

Day Aviation Radio & Equipment Corp., d

Di-An Controls, Inc., a, b, d

Donner Scientific Co., b

Doty Acoustica Electronic Labs., c, d

Double E Products Co., a, thru d

Dresser Industries, Inc., d

Eaton Electronics Corp., c

Eldorado Electronics, d

Electro Precision Corp., b, d

Electronic Communications, Inc., b

Electronic Engrg. Co. of California, a, b, d

Emerson Electric Mfg. Co., The, Electronics & Avionics Div., a, thru d

Erie Resistor Corp., a, d

Federal Mfg. & Engrg. Corp., a, d

Ferranti Electric Inc., a, b

Ferris-Mfg. Co., The, b

Ferrotron Electronics Co., Inc., d

Forbes & Wagner, Inc., a

General Electric Co., Apparatus Sales Div., a

Gilfillan Bros. Inc., a, b

Gladding, McBean & Co., c

Good Electronic Corp., d

Hallcrafters, a, b

Hamilton Standard, Div.-United Aircraft Corp., a, thru d

Harvey-Wells Electronics Inc., a, b

Hoffman Electronics Corp., Semiconductor Div., a, d

Walter J. Hyatt Co., The, b

**\*KEARFOTT CO., INC.**, b

Lamrex Industries, Inc., c

Land-Air Inc., d

La Roe Instruments, Inc., a, b, d

Librascope Inc., a, b

Liton Industries, U. S. Engrg. Co., Div., a, thru d

Lockheed Aircraft Corp., Missiles & Space Div., a

MF Electronics Co., b, d

Milgo Electronic Corp., a, b, d

Motorola Inc., Military Electronics Div., a, thru d

NYT Electronics, Inc., d

National Pneumatic Co., Inc., Holtzer-Cabot Divs., d

Navigation Computer Corp., a, thru d

North Electric Co., a, d

Northrop Corp., a, thru d

Dio Semiconductor, Inc., a, b

**\*PACKARD-BELL ELECTRONICS CORP.**, a, thru d

George A. Philbrick Researches, Inc., b, d

Philco Corp., Government & Industrial Div., a, b, d

Power-Tronic Systems Inc., a, thru d

Precise Development Corp., d

Printed Electronics Corp., c, d

Printronics Corp., c, d

Projects Unlimited Inc., d

RS Electronics Corp., d

Radiohone Co. Inc., d

Radiation, Inc., a, b

Raytheon Mfg. Co., a

Rese Engrg., Inc., a, thru d

Rixon Electronics Inc., a, b, d

Milton Ross Metals Co., The, c, d

Servomechanisms, Inc.

Singer Mfg. Co., The, Military Products Div., a

Slip Ring Co. of America, c

Soroban Engrg., Inc., a

Southwestern Industrial Electronics Co., a, thru d

Sterling Precision Corp., Instrument Div., a, b

Superelex Electronics Corp., d

Tapco Group, Thompson Rome Wooldrige Inc., a

Technitrol Engrg. Co., a, b, d

Telechrome Mfg. Corp., a, thru d

Telectro Industries Corp., a, thru d

Tapper Mfg. Co., Inc., d

Transistor Electronics Corp., a, b

Transonic, Inc., d

Trionics Corp., a, d

Vitro Labs., a, thru d

Walkirt Co., a, b, d

Webcor, Inc., Government Div., a, d

## CIRCUITS-PRINTED, STAMPED, ETCHED

ACF Industries Inc.

Adept Industrial Inc.

Aerolite Electronics Corp.

Aeronautics Systems, Inc., Sub.-Ford Motor Co.

Air Logistics Corp.

Amelco, Inc.

Arthur Ansley Mfg. Co.

Bendix Aviation Corp., York Div.

Bendix Computer, Div.-Bendix Aviation Corp.

Bendix Radio Div., Bendix Aviation Corp.

Best Aircraft Corp.

Whitney Bloke Co.

Brown Engrg. Co., Inc.

Burr-Brown Research Corp.

Burrhoughs Corp.

Burton-Rodgers, Inc.

Chrysler Corp., Defense Operations Div.

Cleveland Metal Specialties Co., Electronics Div.

Continental Technical Service, Inc.

Corning Glass Works

Croname Inc.

Dale Products, Inc.

Daltoner Div., Yuba Consolidated Industries, Inc.

Dayton Aviation Radio & Equipment Corp.

Digitronics Corp.

Dorsett Labs., Inc.

Doty Acoustica Electronic Labs.

Du Kane Corp.

Eaton Electronics Corp.

Thomas A. Edison Ind. Instrument Div.-McGraw-Edison Co.

Electrolab Inc.

Electronic Engrg. Co. of California

Emerson Electric Mfg. Co., The, Electronics & Avionics Div.

Emerson Radio & Phonograph Corp.

Erie Resistor Corp.

Etched Products Corp.

Gladding, McBean & Co.

Globe Electrical Mfg. Co.

Good Electronic Corp.

B. F. Goodrich Aviation Products

Gulton Industries, Inc.

Hamilton Standard, Div.-United Aircraft Corp.

Harvey-Wells Electronics Inc.

Walter J. Hyatt Co., The

ITT Labs.

Land-Air Inc.

Landsverk Electrometer Co., The

La Pointe Industries Inc.

Liton Industries, Maryland Div.

Liton Industries, U. S. Engrg. Co., Div.

MF Electronics Co.

Mansfield Fabricators Inc.

Methode Mfg. Corp.

Miller Dial & Nameplate Co.

Minneapolis-Honeywell Regulator Co., Drndance Div.

Minnesota Mining & Mfg. Co.

Motorola Inc., Military Electronics Div.

Newton Co., The

Northern Plastics Corp.

Northrop Corp.

**\*PACKARD-BELL ELECTRONICS CORP.**

Philco Corp., Government & Industrial Div.

Piasecki Aircraft Corp.

Power-Tronic Systems Inc.

Precision Circuits, Inc.

Printed Electronics Corp.

Printronics Corp.

Q-Circuits, Div.-Etching Co. of Calif.

RS Electronics Corp.

Rogers Corp.

Milton Ross Metals Co., The

Ryan Aeronautical Co.

St. Regis Paper Co., Panelyte Div.

Southwestern Industrial Electronics Co.

Stanley Aviation Corp.

Stavid Engrg., Inc.

Stromberg-Carlson Div.-General Dynamics Corp.

Telectro Industries Corp.

Trionics Corp.

Ucinite Co., The, Div.-United-Carr Fastener Corp.

United Electroductronics, Inc.

United States Chemical Milling Corp.

Webcor, Inc., Government Div.

Wesrep Corp.

Westinghouse Electric Corp.

Zenith Optical Laboratory

## CLAMPS

a. Conduit  
b. Ground  
c. Harness  
d. Hose  
e. Mechanical Cable  
f. Special  
g. Tube

Abalon Precision Mfg. Corp., b thru f

Adel Precision Products, Div.-General Metals Corp., a, b, c, g

Adel Precision Products of California, Div.-General

Metals Corp., a, c, f, g

Aero Gasket Co., a, b, c, e, f

Aerolite Electronics Corp., c

Aerogrip Corp., Jackson Div., d, f, g

**\*AIRESEARCH MFG. CO., DIV.-THE GARRETT CORP.**, e

Alden Products Co., g

Allenair Corp., f

American Aeroparts, a, thru g

Amphenol Connector Div., Amphenol-Borg Electronics Corp., e

Anchor Metal Spinning Co., The, f

Atlas Precision Products, Co., f

Augat Brothers, Inc., f, g

W. L. Barrett Co., The, f

Barrett-Christie Co., a, d

Best Aircraft Corp., a, thru f

Birnbach Radio Co., Inc., f, g

Birtcher Corp., The, f, g

Blaco Mfg. Co., b

Breeze Corporations, Inc., d

Burklyn Co., f

Cambridge Thermionic Corp., g

Campbell Mfg. Co., c

Century Fasteners Corp., a, c, d, e, g

Continental Rubber Works, d

Cooper Industries, Inc., d

Copperwell Steel Co., Wire & Cable Div., b

Corbin Products Div., c, f

Crouse-Hinds Co., a

Dakota Engrg., Inc., b, c, e, f

Dante Electric Mfg. Co., b

Diversey Engrg. Co., e, f

Dresser Mfg. Div., Dresser Industries, Inc., a, b, c, f, g

Eaton Mfg. Co., Reliance Div., d

Elice Metal Products Co., Inc., f

Erie Resistor Corp., c

Fidelity Chemical Products Corp., g

Fisher Scientific Co., g

Hallett Mfg. Co., a, b, c

Heyman Mfg. Co., e

Highland Rim Machine Works Inc., f

Holub Industries, Inc., a, c, g

International Electronic Research Corp., f

Joelin Mfg. Co., c, thru g

Kickhafer Mfg. Co., a, e, f

Lucas Aircraft Supply Co.

Warman Div., Aeroquip Corp., d, f, g

Monogram Precision Industries, a, thru g

Motorola Inc., Military Electronics Div., f

National Pneumatic Co., Inc., Holtzer-Cabot Divs., e

National Utilities Corp., d, f, g

Panduit Corp., c

Peerless Electronics Inc., f, g

Rattan Mfg. Co., The, a, b

Republic Steel Corp., e

Fred T. Roberts & Co., c, d, g

Rockwell-Standard Corp., d, f

Milton Ross Metals Co., The, c

Ryan Aeronautical Co., f

Shur-Lok Corp., a

Skinner Precision Products, a, f

Smith-Morris Corp., b, d

Solar Aircraft Co., f

Specialty Products Corp., d, f, g

Stanley-Judd Div.-The Stanley Works, a, thru g

Staver Co., Inc., The, g

Stone City Products Co., f

Surface Combustion Corp., g

TA Mfg. Corp., a, thru g

Tinnerman Products, Inc., c, thru g

Titellex, Inc., d, g

Turbo Products, Inc., b, c, f, g

United Supply Co., b, c

Universal Metal Products Corp., a, thru d, f, g

Webcor, Inc., Government Div., f

Wetzler Clomp Co. Inc., f

Wittek Mfg. Co., b, thru g

Wollam Aircraft & Marine Products Co., f

## CLEANERS, CONTACT

**\*ALLIED CHEMICAL CORP., GENERAL CHEMICAL DIV.**

American Aeroparts

Anderson Dil & Chemical Co., Inc.

Georg Basch Co., The

Coig Labs.

Cincinnati Cleaning & Finishing Machinery

Clarkson Labs., Inc., The

Coblyn, Inc.

Delf's Tumbling Service

Devcon Corp.

Dowell Div.-The Dow Chemical Co.

Fidelity Chemical Products Corp.

Grant Chemical Co., Inc.

R. M. Hollingshead Corp.

Kano Labs.

Kelite Corp.

London Chemical Co., Inc.

Monode Inc.

Neumade Products Corp.

Nu Steel Co.

Penetone Co., The

Protective Coatings, Inc.

Quietrole Co.

Trio Chemical Works, Inc.

Turbo Machine Co.

Vapor Blast Mfg. Co.

Wesrep Corp.

Wheelabrator Corp.  
Wye Industries

## LEANERS, ULTRASONIC

Associated Engineers, Inc.  
Bendix Aviation Corp., Pioneer-Central Div.  
Bronson Ultrasonic Corp.  
Cincinnati Cleaning & Finishing Machinery  
Clarkson Labs., Inc., The  
Curtiss-Wright Corp.-Princeton Div.  
Detrex Chemical Industries, Inc.  
Dawell Div.-The Dow Chemical Co.  
General Kinetics, Inc.  
Grant Chemical Co., Inc.  
Kelite Corp.  
Landon Chemical Co., Inc.  
Mossa Div.-Cohu Electronics, Inc.  
Narda Ultrasonics Corp., The  
National Ultrasonic Corp.  
Dakite Products, Inc.  
Penetane Co., The  
Power Supplies Inc.  
Ranshoff, Co.  
Tapper Mfg. Co., Inc.  
Turco Products, Inc.  
Wye Industries

## LEANING COMPOUNDS See COMPOUNDS, CLEANING

## LINOMETERS

Airguide Instrument Co.  
\*ENIGS EQUIPMENT CO.

## LIPS

a. Alligator  
b. Battery  
c. Conduit  
d. Crystal Diode  
e. Mechanical Cable  
f. Spectral  
g. Spring  
h. Test  
i. Tube

AMP Inc., f.  
Abalon Precision Mfg. Corp., f.  
Adel Precision Products, Div.-General Metals Corp., f.  
Adel Precision Products of California, Div.-General Metals Corp., c.  
Aerolite Electronics Corp., a, h.  
American Electronic Hardware Co. Inc., a.  
American Aeroparts, a, b, c.  
Anchor Metal Spinning Co., The, f.  
Anchor Specialty Mfg. Co. Inc., g, h.  
Associated Engrg. Corp., a.  
Astronautics Engrg. Co., f, h, i.  
Atlas E-E Corp., d, f, g, i.  
Augat Brothers, Inc., d, f, g, i.  
W. L. Barrett Co., The, f, g.  
Birnback Rodio Co., Inc., a, f, h.  
Calinoy-Div.-Illinois Tool Works, f, g, i.  
Cambridge Thermionic Corp., g.  
Capital City Mfg. Co., f.  
Century Fasteners Corp., c, e, g, i.  
Carbin Products Div., e, f.  
Dotex Corp., i.  
E-Z-Hook Test Products, b, f, h.  
Electro-Tech Equipment Co., a, b, h.  
Federal Screw Products Inc., a, b.  
Fisher Scientific Co., a, i.  
Gorde Mfg. Co., f, g.  
General Cement Mfg. Co., Div.-Textron, Inc., a.  
General Scientific Equipment Co., a.  
Highland Run Machine Works Inc., f.  
Hobson Brothers, Inc., g.  
Industrial Timer Corp., i.  
International Electronic Research Corp., i.  
Jovex Electronics, a, h.  
Keystone Electronics Corp., b, d.  
Klckhaefer Mfg. Co., c, h.  
L & Q Plastic Products, c, i.  
Monogram Precision Industries, f, g, i.  
Mueller Electric Co., a, b, h.  
National Pneumatic Co., Inc., Holtzer-Cabot Divs., a, e.  
Pacific Cut Washer Co., a, f.  
Reliable Spring & Wire Forms Co., g.  
Rockwell-Standard Corp., f.  
Ailton Ross Metals Co., The, a, g.  
Roy A. Scherer & Co., e.  
Shur-Lok Corp., f.  
C. Sjoberg & Sons, c, e, f.  
Smith-Morris Corp., e, f, g.  
Stanley-Judd Div.-The Stanley Works, a thru i.  
Staver Co., Inc., The, g, i.  
Tic-Klip Mfg. Co., c, g, i.  
Tone City Products Co., h.  
Technical Apparatus Builders, a, b.  
Teiner Engrg. Corp., e, f.  
Tinnerman Products, Inc., f, g, i.  
Universal Metal Products Inc., c, f, g.  
Vectar Electronic Co., a, h.

## LOCKS, TIME

American Aeroparts  
Consolidated Productions, Inc. •  
A. Ducommun Co.  
Electro Precision Corp.  
Electro-Tech Equipment Co.  
Igin Micronics Div.-Elgin National Watch Co.

Fisher Scientific Co.  
Gardner Laboratory, Inc.  
Hamilton Watch Co.-Industrial Div.  
\*A. W. HAYDON CO., THE  
Hewlett-Packard Co.  
Lux Clock Mfg. Co., Inc.  
Ernest Norman Laboratories  
Patterson, Moos Div. - Universal Winding Co., Inc.  
Raymond Engrg. Lab., Inc.  
Research Controls  
Sangamo Electric Co.  
Sphinx-American Co.  
Standard Electric Time Co., The  
Syston Corp.  
Wakmann Watch Co. Inc.  
Waltham Engrg. Corp.  
Waltham Precision Instrument Co.

## CLOTHS, GRILL

Aviation Textile Associates  
Chase Brass & Copper Co., Inc.  
Durocote Corp.

## CLOTHS, SPEAKER GRILLE

Aviation Textile Associates  
Cranome Inc.  
General Cement Mfg. Co., Div.-Textron, Inc.  
Peerless Products Industries  
Sterling Precision Corp., Instrument Div.

## CLUTCHES, MAGNETIC

Actuator Products Div., Geartronics Corp.  
Analogue Controls, Inc.  
Autotronics Inc.  
Cameratex Corp.  
Cedar Engrg. Div.-Control Data Corp.  
Curtiss-Wright Corp., Research Div.  
Dial Products Co.  
Digitronics Corp.  
Dockendorff & Co. Inc.  
Dynamic Instrument Corp.  
Eaton Mfg. Co.  
Exact Engrg. & Mfg. Inc.  
FAE Instrument Corp.  
General Electric Co., Apparatus Soles Div.  
General Electro-Mechanical Corp.  
Globe Industries, Inc.  
Hoddam Mfg. Co., The  
Helipot Div.-Beckman Instruments Inc.  
Hoover Electric Co.  
I-T-E Circuit Breaker Co.  
Jock & Heintz, Inc.  
Land-Air Inc.  
Leor, Inc.  
Lear, Inc., Grand Rapids Div.  
Lundy Mfg. Corp.  
Lyndon Aircraft, Inc.  
Magtrol, Inc.  
Minneapolis-Honeywell Regulator Co., Ordnance Div.  
Nuclear Products-Erco Div.-ACF Industries, Inc.  
Paul Nurches Co.  
Orbit Instrument Corp.  
PIC Design Corp., Sub-Bentus Watch Co., Inc.  
Precision Methods & Machines Div. - Textron Inc.  
Reeves Instrument Corp.  
Servomechanisms, Inc., Mechatrol Div.  
Standard Electromagnetics, Inc.  
Sterling Precision Corp., Instrument Div.  
Talley Corp., The  
Technology Instrument Corp.  
Warner Electric Brake & Clutch Co.  
Wesrep Corp.  
Westinghouse Electric Corp.  
Wright Engrg. Co.

## CLUTCHES, MOTOR & GENERATOR

Curtiss-Wright Corp., Marquette Div.  
Dockendorff & Co. Inc.  
Exact Engrg. & Mfg. Inc.  
General Electro-Mechanical Corp.  
Globe Industries, Inc.  
Graphite Metallizing Corp.  
Hoover Electric Co.  
Jock & Heintz, Inc.  
Land-Air Inc.  
Lundy Mfg. Corp.  
Magtrol, Inc.  
Overload Control Co.  
Servomechanisms, Inc., Mechatrol Div.  
Talley Corp., The

## COAXIAL CABLE FITTINGS See FITTINGS, COAXIAL CABLE

## CODE & TAB MARKERS

Adept Industries Inc.  
W. H. Brady Co.  
William Brond & Co., Inc.  
Miller Dial & Nameplate Co.  
Westline Products Div., Western Lithograph Co.  
Zippertubing Co., The

## COIL ASSEMBLIES

Ace Coil & Electronics Co.  
Advanced Electronics, Inc.  
Aerolite Electronics Corp.  
American Measurement & Control, Inc.

Atlantic Instrument Corp., Sub-American Electronics, Inc.

Atlas Coil Inc.  
Barker & Williamson Inc.  
Bendix Aviation Corp., York Div.  
Brighton Corp.  
Bud Radio Inc.  
Cambridge Thermionic Corp.  
Caruthers & Fernandez, Inc.  
Clippard Instrument Lab., Inc.  
Coil Co. of America  
Coilcraft Inc.  
Coils-Electronics  
Coto-Coil Co., Inc.  
Crown Controls Co., Inc.  
Dayton Aviation Radio & Equipment Corp.  
Dean Products, Inc.  
Diets Design & Mfg. Co.  
Double E Products Co.  
Dresser Industries, Inc.  
Electro-Mechanical Products Co.  
First Electronics Corp., The  
Forbes & Wagner, Inc.  
Fugle-Miller Labs. Inc.  
General Coil Products Corp.  
Genistron, Inc.  
Goslin Electric & Mfg. Co.  
Green Rectifier Co.  
Hoover Electric Co.  
Hussmann Aircraft Div.  
Jack & Heintz, Inc.  
Jet Electronics Corp.  
J. W. Miller Co.  
NYT Electronics, Inc.  
National Coil Co.  
National Pneumatic Co., Inc., Holtzer-Cabot Divs.  
New York Coil Co.  
North Electric Co.  
North Hills Electric Co., Inc.  
Palo Alto Engrg. Co.  
Precision, Inc.  
Projects Unlimited Inc.  
Rixon Electronics Inc.  
Rollan Electric Co.  
Milton Ross Metals Co., The  
Rytron Co., Inc.  
Sage-Craft, Inc.  
Signal Transformer Co.  
Small Motors Inc.  
Stanwyck Winding Co., Inc.  
Telectro Industries Corp.  
Topper Mfg. Co., Inc.  
Tri-Dex Co.  
U. S. Relay Co.  
Vanguard Electronics Co.  
Waldom Electronics Inc.  
Warren Transformer Co., Inc.  
A. W. Welch Mfg. Co., Inc.  
Wheeler Electronic Corp., Sub-Sperry Rand Corp.

## COIL DOPE

Emerson & Cuming, Inc.  
Homalite Corp., The  
Liss Products, Inc.  
Maos & Waldstein Co.

## COIL FORMS

American Molded Products Co.  
W. L. Barrett Co., The  
Brighton Corp.  
Cambridge Thermionic Corp.  
Centralab, Div.-Globe-Union  
Comco Plastics Inc.  
Continental Diamond Fibre Corp.  
Corning Glass Works  
Dixon Corp.  
Electrical Insulation Co., Inc.  
Electro-Mechanical Products Co.  
Emerson Plastics Corp.  
Ferroxcube Corp. of America  
Form-It Products, Inc.  
Franklin Fibre-Lamitex Corp.  
Garde Mfg. Co.  
Hobson Brothers, Inc.  
Hydro Molding Co., Inc.  
Isolanite Mfg. Corp.  
E. F. Johnson Co.  
Kip Electronics Corp.  
Lamtex Industries, Inc.  
Thomas J. Long, Inc.  
Minnesota Mining & Mfg. Co.  
Molding Corp. of America  
National Coil Co.  
National Pneumatic Co., Inc., Holtzer-Cabot Divs.  
North Electric Co.  
North Hills Electric Co., Inc.  
Peerless Products Industries  
Penn Fibre & Specialty Co., Inc.  
Pilgrim Products Inc.  
Milton Ross Metals Co., The  
Sanford Plastics Corp.  
Silicone Insulation, Inc.  
Slip Ring Co. of America  
Spaulding Fibre Co., Inc.  
Stevens Products, Inc.  
Superior Steatite & Ceramic Corp.  
Topper Mfg. Co., Inc.

## COIL WINDING BOBBINS See BOBBINS, COIL WINDING

## COIL WINDING MACHINES, TOROIDAL

American Machine & Foundry Co., Greenwich  
Coil Winding Equipment Co.  
Continental Technical Service, Inc.  
Eisler Engrg. Co., Inc.  
Electro Devices Inc.  
Gulton Industries, Inc.  
Carl Hirschman Co., Inc.  
Industrial Winding Machinery Corp.  
Johnson Electronics Inc.  
Mico Instrument Co.  
Southwestern Industrial Electronics Co.  
Universal Mfg. Co., Inc.

## COIL WINDING TENSIONS See TENSIONS, COIL WINDING

### COILS

a. AF Choke  
b. Choke  
c. Booster  
d. Filter Choke  
e. IF  
f. Printed Circuit  
g. RF Choke  
h. RF Transmitting  
i. Solenoid  
j. Transducer

AMP Inc., f.  
A.P.W. Co., d, l.  
Ace Coil & Electronics Co., e thru h.  
Acme Wire Co., b, d, l.  
Adept Industries Inc., f.  
Advanced Electronics, Inc., l.  
Aerolite Electronics Corp., a, b, d, e, g, h, i.  
Aerovox Corp., d.  
Aetna Electronics Corp., h.  
Airpox Electronics Inc. Seminole Div.  
Aladdin Electronics, Div.-Aladdin Industries Inc.,  
b, d thru g.  
Allied Control Co., Inc., l.  
All-Tronics, Inc., b, d, e, g, h.  
Amelco, Inc.  
American Machine & Foundry Co., Greenwich  
American Measurement & Control, Inc.  
Amplifier Corp. of America, a, b, d.  
Artisan Electronics Corp., l.  
Atlas Coil Inc.  
Audio Development Co., a, d.  
Barker & Williamson Inc., a, b, e, g, h, i.  
Bel-Tronics Corp., a thru i.  
Bendix Aviation Corp., York Div., d, e, f.  
\*BENDIX PRODUCTS DIV., BENDIX AVIATION  
CORP., l.  
J. Bishop & Co., Platinum Works, j.  
Bradford Components, Inc., b, d thru g.  
Brighton Corp.  
Brown Engrg. Co., Inc.  
Bud Radio Inc., g, h.  
Burnell & Co., Inc., f.  
Cambridge Thermionic Corp., a, b, d thru g, i.  
Carol Electronics Corp., a, e thru h.  
Caruthers & Fernandez, Inc., a, i.  
Cedar Engrg. Div.-Central Data Corp., l.  
Celco (Constantine Engrg. Labs. Co.), a thru j.  
Central Transformer Co., a, b, d.  
Cinema Engrg.  
Cleveland Metal Specialties Co., Electronics Div., f.  
Clippard Instrument Lab., Inc., b, d, e, g.  
Coil Co. of America, a thru d, f, i.  
Coilcraft Inc., b, d thru h.  
Coils-Electronics, b, d, f, g, i.  
Collins Radio Co.  
Comar Electric Co., l.  
Control Circuits, Inc.  
Corning Glass Works  
Coto-Coil Co., Inc., g thru j.  
Crown Controls Co., Inc.  
Cycle Transformer Corp., a, b, d, i.  
D. & R. Ltd.  
Dolmotor Div., Yuba Consolidated Industries, Inc.,  
i, j.  
Dayton Aviation Radio & Equipment Corp., a, b, e,  
f, g.  
Dean Products, Inc.  
De Witt Development Co., f, g, i.  
Dietz Design & Mfg. Co., a, b, d thru i.  
Double E Products Co., a, b, d thru h.  
Dresser Industries, Inc., a, b, d, i, j.  
Edcliff Instruments, l.  
Electric Auto-Lite Co., The, l.  
Electrical Windings, Inc., a, b, d, l.  
Electro-Mechanical Products Co., b, g, i.  
Electronic Coils, Inc., b, d, g, l.  
Electronic Transformer Co., Inc., a, b.  
Electro-Tech Equipment Co., l.  
Electro-Winders Co., Inc., a thru i.  
Ferrotan Electric Inc., a, b, d.  
Ferris Mfg. Co., The, f.  
Ferrotan Electronics Co., Inc., b, e, f.  
Forbes & Wagner, Inc., b, e, g, l.  
Forest Electric Co., The, a, b, d.  
Foster Transformer Co., a, b, d, f.  
Freed Transformer Co., Inc., a, d.  
Fugle-Miller Labs. Inc., b, d, e, g, h, i.  
General Coil Products Corp., a, b, d thru l.  
Genistron, Inc.  
Geotronic Labs., Inc., d.  
Good Electronic Corp., f.  
Good-All Electric Mfg. Co., d, h, i.  
Goslin Electric & Mfg. Co., a, b, d.  
Green Rectifier Co., b, d.

Guardian Electric Mfg. Co., l.  
Hamilton Standard, Div.-United Aircraft Corp., l, j.  
Hillburn Electronic Products Co., f.  
Hindle Transformer Co., Inc., b, c, d.  
Hoover Electric Co., l.  
T. J. Houlihan Co., b, e thru i.  
Ilumitronic Engrg. Co., h.  
Industrial Winding Machinery Corp.  
JFD Electronics Corp., e, g, h.  
Jack & Heintz, Inc., l.  
Jet Electronics Corp.  
E. F. Johnson Co., b, g, h.  
Johnson Electronics Inc., a thru h.  
Keystone Products Co., a, b, d.  
Knapp Inc., d, i.  
\*KOONTZ-WAGNER ELECTRIC CO., INC., i.  
Langevin Div., W. L. Maxson Corp., The, a, b, d.  
La Pointe Industries Inc., f.  
Mac Lead & Hanapal, Inc., g.  
Magnetics, Inc., a, b, d, g.  
Merit Coil & Transformer Corp., a, b, d thru g.  
Microtran Co., Inc.  
J. W. Miller Co., b, e thru h.  
Minitran Corp., a, b, d.  
Molelectric Products Corp., a, e, f, i.  
Motorolo Inc., Military Electronics Div., a, d thru  
g, i.  
NYT Electronics, Inc., a, b, d thru h.  
National Coil Co., a thru j.  
National Pneumatic Co., Inc., Holtzer-Cabot Divs.,  
a, b, d, e, g, h, i.  
Naz-Dar Co., f.  
Networks Electronic Corp., e, g.  
New York Coil Co., a thru j.  
New York Transformer Co., Inc., a, b, d.  
North Electric Co.  
North Hills Electric Co., Inc., b, e thru j.  
Omega Electric Corp., g.  
Opeliko Welding, Machine & Supply Inc., j.  
Osborne Electronic Sales Corp., a, e, g, h, i.  
Palo Alto Engrg. Co., a, b, d, f.  
Perry Plastics, Inc., a.  
Philco Corp., Government & Industrial Div., b, d,  
e, g.  
Pickering & Co., Inc., i, j.  
Potter Aeronautical Corp.  
Precision, Inc., l.  
RS Electronics Corp., e, g, h.  
Radio Industries, Inc., e thru h.  
Douglas Randall Inc., j.  
Redmax Electronics Corp., e, g.  
Reliable Spring & Wire Forms Co., g.  
Research Development Mfg. Inc., g.  
Rixon Electronics Inc., f.  
Rollan Electric Co.  
Milton Ross Metals Co., The  
Rytron Co., Inc., a, b, d, e.  
Sage-Craft, Inc., b, e thru j.  
Sangamo Electric Co., a, b, d.  
Signal Transformer Co., a thru d, f, i.  
Southwestern Industrial Electronics Co., a thru j.  
Standard Electromagnetics, Inc., l.  
Stanwyck Winding Co., Inc., b, e thru i.  
Superelex Electronics Corp., a thru d, f, g.  
Technical Apparatus Builders, a thru d.  
Telectro Industries Corp., a thru i.  
Topper Mfg. Co., Inc., a thru l.  
Tranco Products, Inc., l.  
Transistor Electronics Corp., b.  
Tranconic, Inc., a, b, d, f, j.  
Tresco, Inc., a, d.  
Triod Transformer Corp., a, b, d, i.  
Tri-Dex Co., b, l, j.  
U. S. Relay Co., a thru j.  
Universal Transformer Co., a, b, d, f, i, j.  
Universal Mfg. Co., Inc.  
Universal Toroid Coil Winding, Inc., a, b, d, g, j.  
Vanguard Electronics Co., b, d, e, g.  
Virginia Electronics Co., Inc., a, b, d, e, g, h.  
Waldom Electronics Inc.  
Warren Transformer Co., Inc., a thru j.  
A. W. Welch Mfg. Co., Inc., a, b, d, f, g, h.  
Westbury Electronics Inc., a, b, d, i.  
Wheeler Electronic Corp., Sub-Sperry Rand Corp., a thru  
g, i, j.  
Winatic Corp., The, f, l, j.  
Zenith Radio Corp., e.

### COILS, HEATING

Astravac Corp.  
Barker & Williamson Inc.  
W. L. Barrett Co., The  
J. Bishop & Co., Platinum Works  
Blue M Electric Co.  
Bradford Components, Inc.  
Brighton Corp.  
Briscoe Mfg. Co.  
Carrier Corp.  
Central Transformer Co.  
Dean Products, Inc.  
Wilbur B. Driver Co.  
General Electric Co., Apparatus Sales Div.  
Griscom-Russell Co., The  
Hevi-Duty Electric Co.  
Marlo Coil Co.  
Minitran Corp.  
NYT Electronics, Inc.  
Precision, Inc.  
Edw. Renneburg & Sons Co.  
Rome-Turney Radiator Co., The  
Statikil, Inc., Div.-The J.E. Doyle Co.  
Trane Co., The

Tranter Mfg., Inc.  
U. S. Relay Co.  
York Corp.

### COILS, HIGH TEMPERATURE

A.P.W. Co.  
Advanced Electronics, Inc.  
American Measurement & Control, Inc.  
\*BENDIX PRODUCTS DIV., BENDIX AVIATION  
CORP.  
Blue M. Electric Co.  
Corruthers & Fernandez, Inc.  
Chemplast, Inc.  
Double E Products Co.  
Electric Auto-Lite Co., The  
Electronic Parts Mfg. Co., Inc.  
Engelhard Industries, Inc.  
Ferrotan Electronics Co., Inc.  
Forbes & Wagner, Inc.  
Good-All Electric Mfg. Co.  
Griscom-Russell Co., The  
Hevi-Duty Electric Co.  
Haover Electric Co.  
T. J. Houlihan Co.  
Keystone Products Co.  
\*KOONTZ-WAGNER ELECTRIC CO., INC.  
Marlo Coil Co.  
National Coil Co.  
New York Coil Co.  
New York Transformer Co. Inc.  
North Hills Electric Co., Inc.  
Potter Aeronautical Corp.  
Precision, Inc.  
Douglas Randall Inc.  
Edw. Renneburg & Sons Co.  
Signal Transformer Co.  
Thermal Refractories Corp.  
Topper Mfg. Co., Inc.  
Trone Co., The  
Tranconic, Inc.  
Tranter Mfg., Inc.  
U. S. Relay Co.  
Warren Transformer Co., Inc.  
A. W. Welch Mfg., Co., Inc.

### COILS, IGNITION

Acme Wire Co.  
American Aeroparts  
Coil Co. of America  
Electric Auto-Lite Co., The  
General Products Corp.  
Hallett Mfg. Co.  
Molelectric Products Corp.  
NYT Electronics, Inc.  
New York Coil Co.  
Warren Transformer Co., Inc.

### COILS, INDUCTORS

See INDUCTORS, COILS

### COILS, SPEAKER

Aerolite Electronics Corp.  
Coil Co. of America  
Electrical Windings, Inc.  
General Coil Products Corp.  
T. J. Houlihan Co.  
Magnavox Co., The  
National Coil Co.  
National Pneumatic Co., Inc., Holtzer-Cabot Div.  
Osborne Electronic Sales Corp.  
Perry Plastics, Inc.  
Smith-Morris Corp.  
Standard Metals Corp.  
U. S. Relay Co.  
Waldom Electronics Inc.  
Warren Transformer Co., Inc.

### COLD CATHODE LIGHTING See LIGHTING, COLD CATHODE

### COLLECTOR RINGS

American Felt Co.  
Buhl Optical Co.  
Chicago Aerial Industries, Inc.  
Electro-Mechanical Products Co.  
Engelhard Industries Inc., D. E. Makepeace Div.  
Fletcher Mfg. Co., Inc., The  
Industrial-Electrical Works  
Mercury Tool & Mfg. Corp.  
Metals & Controls Corp., General Plate Div.  
Motorola Inc., Military Electronics Div.  
Nippert Electric Products Co., The  
Portland Copper & Tank Works Inc.  
Milton Ross Metals Co., The  
Slip Ring Co. of America  
Stanley-Judd Div. - The Stanley Works  
Twin Coach Co., Aircraft-Missiles

### COLLIMATORS

American Optical Co., Instrument Div.  
\*BAUSCH & LOMB OPTICAL CO.  
Chrysler Corp., Defense Operations Div.  
Davidson Mfg. Co., Inc.  
Edgerton, Gernsheim & Grier, Inc.  
\*ENGIS EQUIPMENT CO.  
Epic, Inc.  
J. W. Fecker, Inc.  
Gordon Enterprises  
Dpto-Metric Tools, Inc.  
Perkin-Elmer Corp.  
Radiation Instrument Development Lab., Inc.



Zenith Optical Laboratory  
Zoomar Inc.

#### DORIMETERS

**\*BAUSCH & LOMB OPTICAL CO.**  
Beckman-Scientific & Process Instruments Div.  
Epic, Inc.  
FXR, Inc.  
Fisher Scientific Co.  
Gardner Laboratory, Inc.  
Instrument Development Labs., Inc.  
National Spectrographic Labs., Inc.  
W. A. Taylor & Co.

#### DORIMETERS, PHOTOELECTRIC

Axler Associates Inc.  
**\*BAUSCH & LOMB OPTICAL CO.**  
Central Scientific Co.  
Epic, Inc.  
Fisher Scientific Co.  
Gardner Laboratory, Inc.  
Hallikainen Instruments  
Instrument Development Labs., Inc.  
Harold Kruger Instruments  
Minneapolis-Honeywell Regulator Co., Industrial Products Group  
National Spectrographic Labs., Inc.  
Photomation, Inc.  
Photavalt Corp.  
Process & Instruments  
Telechrame Mfg. Corp.

#### DORIMETERS, SPECIAL PURPOSE

**\*BAUSCH & LOMB OPTICAL CO.**  
Fisher Scientific Co.  
Gardner Laboratory, Inc.  
Instrument Development Labs., Inc.  
Harold Kruger Instruments  
National Spectrographic Labs., Inc.  
Pharball Co., Inc.  
Milton Roy Co.  
W. A. Taylor & Co.  
Telechrame Mfg. Corp.  
Turbo Products, Inc.  
Universal Moulded Products Corp.

#### COMBUSTION CHAMBER COVERS

Astronautics Engrg. Co.  
Christie Machine Works  
Curtiss-Wright Corp., Wright Aeronautical Div.  
Curtiss-Wright Corp., Santa Barbara Div.  
Dyna-Therm Chemical Corp.  
Ferris-Mfg. Co., The  
Finn Aeronautical Div., T. R. Finn & Co., Inc.  
Grieve-Hendry Co., Inc.  
Huffard Corp., The  
Hupp Aviation Co.  
M. W. Kellag Co., The  
**\*LAVELLE AIRCRAFT CORP.**  
Mercury Tool & Mfg. Corp.  
Minnesota Mining & Mfg. Corp.  
Monogram Precision Industries  
National Beryllia Corp.  
Plastic Age Sales, Inc.  
Portland Copper & Tank Works Inc.  
Reinhold Engrg. & Plastics Co.  
Edw. Renneburg & Sons Co.  
**\*RHEEM MFG. CO., DEFENSE & TECHNICAL PRODUCTS DIV.**  
Smith-Morris Corp.  
Stainless Inc.  
Stainless Steel Products, Inc.  
Thermal Refractories Corp.  
Turbo Products, Inc.  
Twigg Industries

#### COMBUSTION CHAMBERS

American Air Filter Co., Defense Products Div.  
Bell Aircraft Corp., Niagara Frontier Div.  
Benson Mfg., Co., The  
California Aircraft Products  
Carbarundum Co., Refractories Div.  
Christie Machine Works  
Cooper Development Corp., Sub.-Marquardt Aircraft Co.  
Cramer Mfg. & Engrg., Inc.  
Curtiss-Wright Corp., Research Div.  
Curtiss-Wright Corp., Wright Aeronautical Div.  
Diversey Engrg. Co.  
Dynamic Devices, Inc.  
Finn Aeronautical Div., T. R. Finn & Co., Inc.  
Pianinni Plasmadyne Corp.  
Javeg Industries, Inc.  
Levi-Duty Electric Co.  
Huffard Corp., The  
Hupp Aviation Co.  
M. W. Kellag Co., The  
Kelsey-Hayes Co.  
**\*LAVELLE AIRCRAFT CORP.**  
Marquardt Aircraft Co.  
Mercury Tool & Mfg. Corp.  
Monogram Precision Industries  
National Beryllia Corp.  
Jartan Co.  
Penn-Michigan Mfg. Corp.  
Portland Copper & Tank Works Inc.  
Pressed Steel Tank Co.  
Reinhold Engrg. & Plastics Co.  
Edw. Renneburg & Sons Co.  
**\*RHEEM MFG. CO., DEFENSE & TECHNICAL PRODUCTS DIV.**  
Smith-Morris Corp.  
Stainless Inc.  
Stainless Steel Products, Inc.  
Thermal Refractories Corp.  
Turbo Products, Inc.  
Twigg Industries  
**COMBUSTORS**  
Aerolab Development Co.  
American Air Filter Co., Defense Products Div.  
Auburn Spark Plug Co., Inc.  
Budelman Electronics Corp.  
Curtiss-Wright Corp. - Wright Aeronautical Div.  
Dynamic Devices, Inc.  
Elgin Micronics, West Coast Div. - Elgin National Watch Co.  
Hamilton Standard, Div. - United Aircraft Corp.  
**\*LAVELLE AIRCRAFT CORP.**  
Marquardt Aircraft Co.  
Edw. Renneburg & Sons Co.  
Singer Mfg. Co., The, Military Products Div.  
South Wind Div., Stewart Warner Corp.  
Warner Electronic Devices  
**COMMERCIAL COMMUNICATIONS SYSTEM**  
See COMMUNICATIONS SYSTEM, COMMERCIAL  
**COMMUNICATIONS SYSTEM**  
ACF Industries Inc.  
Allied International Co.  
Amelco, Inc.  
Automation Dynamics Corp.  
**\*AVCO MFG. CORP., CROSLY DIV.**  
Barker Sales Co.  
Bell & Gossett Co.  
Bendix Radio Div., Bendix Aviation Corp.  
Bogen-Presto, Div. - Stiegler Corp., The  
Budelman Electronics Corp.  
CGS Labs., Inc.  
Centronix Inc.  
Chalca Engrg. Corp.  
Callins Radio Co.  
Communications Research Co.  
Cooper Development Corp., Sub.-Marquardt Aircraft Co.  
Crasby Laboratories, Inc.  
Dayton Aviation Radio & Equipment Corp.  
Du Kane Corp.  
Edgerton, Gernshausen & Grier, Inc.  
Electronic Communications, Inc.  
Electronics Div., Van Norman Industries Inc.  
Entron, Inc.  
General Communication Co.  
General Precision Lab. Inc.  
Gillfillan Bros. Inc.  
Goodyear Aircraft Corp.  
Hallicrafters  
Hammarlund Mfg. Co. Inc.  
Hazeltine Electronics Div. - Hazeltine Corp.  
Haffman Labs. Div., Haffman Electronics Corp.  
Hogan Laboratories, Inc.  
Hughes Aircraft Co.  
ITT Federal Div., International Telephone & Telegraph Corp.  
ITT Labs.  
ITT-Kelllogg  
Instruments for Industry, Inc.  
Jansky & Bailey, Inc.  
Kahn Research Labs., Inc.  
Land-Air Inc.  
Lear, Inc.  
Ling Electronics, Inc.  
Littan Industries, Maryland Div.  
Livingston Electronic Corp.  
Magnavox Co., The  
Manson Labs., Inc.  
Minneapolis-Honeywell Regulator Co., Ordnance Div.  
Miratel, Inc.  
Monogram Precision Industries  
Motorola Inc., Military Electronics Div.  
National Pneumatic Co., Inc., Holtzer-Cabot Divs.  
Nems Clarke Co., Div. - Vitro Corp. of America  
North Electric Co.  
**\*PACKARD-BELL ELECTRONICS CORP.**  
Perry Plastics, Inc.  
Philca Corp., Government & Industrial Div.  
Precise Development Corp.  
Pradell Inc.  
Radiation, Inc.  
Roytheon Mfg. Co., Government Equipment Div.  
Seeburg Corp., The  
Servo Corp. of America  
Singer Mfg. Co., The, Military Products Div.  
Skyline Electric & Mfg. Co.  
Specialty Engrg. & Electronics Co.  
Stromberg-Carlson Div. - General Dynamics Corp.  
Telechrame Mfg. Corp.  
Telectra Industries Corp.  
Telerad Mfg. Corp.  
Television Utilities Corp.  
Thiokol Chemical Corp.  
U. S. Industries, Inc.  
Virginia Electronics Co., Inc.  
Webcor, Inc., Government Div.  
Westinghouse Electric Corp.  
Winzen Research Inc.  
Warner Electronic Devices

#### COMMUNICATIONS SYSTEM, COMMERCIAL

Allied International Co.  
Amelco, Inc.  
Barker Sales Co.  
Bendix Radio Div., Bendix Aviation Corp.  
Bliss Electronic Corp.  
Bogen-Presto Co., Div.-Stiegler Corp., The  
Centronix Inc.  
Communications Co.  
Crasby Laboratories, Inc.  
Dayton Aviation Radio & Equipment Corp.  
Du Kane Corp.  
Entron, Inc.  
Fisher Research Lab., Inc.  
General Precision Lab. Inc.  
Hammarlund Mfg. Co. Inc.  
ITT Labs.  
ITT-Kelllogg  
Jansky & Bailey, Inc.  
Kaor Engrg. Corp.  
Kahn Research Labs., Inc.  
Land-Air Inc.  
Ling Electronics, Inc.  
Littan Industries, Maryland Div.  
Miratel, Inc.  
Motorola Inc., Military Electronics Div.  
National Pneumatic Co., Inc., Holtzer-Cabot Divs.  
North Electric Co.  
Philca Corp., Government & Industrial Div.  
Precise Development Corp.  
Raytheon Mfg. Co.  
Stromberg-Carlson Div.-General Dynamics Corp.  
Telechrame Mfg. Corp.  
Telectra Industries Corp.  
Tele-Dynamics Inc.  
Thiokol Chemical Corp.  
U. S. Science Corp., Div.-Tapp Industries, Inc.  
Winzen Research Inc.  
Warner Electronic Devices

#### COMMUNICATIONS SYSTEMS, INTERCOM

Barker Sales Co.  
Bliss Electronic Corp.  
Blonder-Tongue Labs., Inc.  
Bogen-Presto Co., Div.-Stiegler Corp., The  
Bristol Metals Div.-Vocaline Co., of America, Inc.  
Centronix Inc.  
Chalca Engrg. Corp.  
Continental Mfg., Inc.  
Cooper Development Corp., Sub.-Marquardt Aircraft Co.  
Du Kane Corp.  
Electronic Communications, Inc.  
Executone, Inc.  
Federal Mfg. & Engrg. Corp.  
Fidelity Amplifier Co.  
Graflex Inc.  
ITT-Kelllogg  
Littan Industries, Maryland Div.  
Miratel, Inc.  
Motorola Inc., Military Electronics Div.  
National Pneumatic Co., Inc., Holtzer-Cabot Divs.  
Nippert Electric Products Co., The  
North Electric Co.  
**\*PACKARD-BELL ELECTRONICS CORP.**  
Perry Plastics, Inc.  
Philca Corp., Government & Industrial Div.  
Precise Development Corp.  
Stromberg-Carlson Div.-General Dynamics Corp.  
Telectra Industries Corp.  
Thiokol Chemical Corp.  
Unison Products, Inc.  
Virginia Electronics Co., Inc.  
Wheeler Electronic Corp., Sub.-Sperry Rand Corp.  
Winzen Research Inc.

#### COMMUTATORS, SWITCHING

Advance Carbon & Electric Mfg. Co.  
Aerolab Development Co.  
Airflyte Electronics Co.  
Alra Scientific Co., Inc.  
Applied Science Corp. of Princeton  
**\*ARNOUX CORP.**  
Callotron Corp.  
Computer Instruments Corp.  
Cubic Corp.  
Cushman Precision Industries  
Electra Development Co.  
Electro Tec Corp.  
Electro-Mechanical Products Co.  
Electro-Miniatures Corp.  
Elgin Micronics Div.-Elgin National Watch Co.  
General Devices, Inc.  
Genisica, Inc., Instrument Div.  
Graphite Metallizing Corp.  
Hesca Engrg.  
Instrument Development Labs., Inc.  
Kauke & Co.  
Land-Air Inc.  
Minneapolis-Honeywell Regulator Co., Davies Labs. Div.  
Minneapolis-Honeywell Regulator Co., Ordnance Div.  
Motorola Inc., Military Electronics Div.  
Radiation, Inc.  
Slip Ring Co. of America  
Talley Corp., The  
Technology Instrument Corp.  
Tele-Dynamics Inc.  
Wang Labs., Inc.

#### COMPARATORS

a. Capacitance

**b. Circuit Linearity****c. Dielectric****d. Iron Core****e. Q****f. Voltage**

Alto Scientific Co., Inc., f.  
 Avipex, Inc., f.  
 B & K Instruments, Inc., a.  
 Bendix Aviation Corp., York Div.  
 Bantam Radio Corp., e.  
 California Technical Industries, Div.-Textron Inc., a, b, f.  
 Centronix Inc., e.  
 Davenport Mfg. Co., f.  
 Delsen Corp., c.  
 Donner Scientific Corp., f.  
 Dytronics Co., a.  
 Electro Instruments, Inc., a, f.  
 Electronic Applications, Inc., a.  
 Electronic Instrument Co., Inc. (EICD), a.  
 Freed Transformer Co. Inc., a.  
 Graflex Inc.  
 Hoffman Electronics Corp., Semiconductor Div., f.  
 Industrial Test Equipment Co., a.  
 Inland Electronics Corp., a.  
 Jule Research Labs., Inc., f.  
 Kaiser Aircraft & Electronics, Div.-Kaiser Industries Corp.  
 Kay Electric Co., a.  
 Lear, Inc., Grand Rapids Div., f.  
 Marconi Instruments, e.  
 Metronix, Inc., Sub-Assembly Products, Inc., a.  
 Micrometrical Mfg. Co., b.  
 Minneapolis-Honeywell Regulator Co., Industrial Product Group, f.  
 National Spectrographic Labs., Inc.  
 Non-Linear Systems, Inc., f.  
 North Hills Electric Co., Inc., a.  
 \*PACKARD-BELL ELECTRONICS CORP., f.  
 Photobell Co., Inc., a, c.  
 Precise Development Corp., a, f.  
 Rese Engrg., Inc., f.  
 Slaughter Co., Inc., a, b, c, f.  
 Saraban Engrg., Inc.  
 Southwestern Industrial Electronics Co., a thru f.  
 Tempo Instrument Inc., f.  
 Trio Laboratories, Inc., f.  
 Weston Instruments, Div.-Daystrom, Inc., f.  
 Wright Engrg. Co., a.

**COMPARATORS, AUTOMATIC RESISTANCE**

Amelco, Inc.  
 California Technical Industries, Div.-Textron Inc.  
 Centronix Inc.  
 Clippard Instrument Lab., Inc.  
 Datron Electronics, Div.-Mid-Continent Mfg., Inc.  
 Dytronics Co.  
 Electro Instruments, Inc.  
 Electronic Applications, Inc.  
 Industrial Test Equipment Co.  
 Jule Research Labs., Inc.  
 Kaiser Aircraft & Electronics, Div.-Kaiser Industries Corp.  
 \*KEARFOTT CO., INC.  
 Minneapolis-Honeywell Regulator Co., Industrial Products Group  
 Non-Linear Systems, Inc.  
 Optimized Devices, Inc.  
 Precise Development Corp.  
 Radiophone Co., Inc.  
 Slaughter Co., Inc.  
 Telectro Industries Corp.

**COMPASSES**

- a. Electronic Gyro
- b. Gyro
- c. Magnetic
- d. Radia
- e. Remote indicating

Airguide Instrument Co., a.  
 American Aeroparts, c, e.  
 American Bosch Arma Corp., b.  
 Arma Div., American Bosch Arma Corp., b.  
 Belock Instrument Corp., a, b, c, e.  
 Bendix Aviation Corp.-Eclipse-Pioneer Div., a, b, e.  
 Bendix Aviation Corp.-Montrose Div., e.  
 Bendix Radio Div., Bendix Aviation Corp., d.  
 Collins Engrg. Corp., b.  
 Datron Electronics, Div.-Mid-Continent Mfg., Inc.  
 Daystrom Pacific Div.-Daystrom, Inc., b.  
 Fisher Research Lab., Inc., d.  
 General Electric Co., Apparatus Sales Div., a, b, e.  
 \*KEARFOTT CO., INC., a thru e.  
 Kollsman Instrument Corp., Sub-Standard Coil Products Co. Inc., c.  
 Lear, Inc., a, b, d, e.  
 Lear, Inc., Grand Rapids Div., a, b, c.  
 Magnovox Co., The, d.  
 Motorola Inc., Military Electronics Div., d.  
 Power-Tronic Systems Inc., a, b, e.  
 Radiation, Inc., d.  
 Sperry Gyroscope Co., Marine Div., Div.-Sperry Rand Corp., b, c, e.  
 Sperry Piedmont Co.-Div.-Sperry Rand Corp., a, b, c, e.  
 Zopher Mills Inc., e.

**COMPONENTS, EMBEDDED**  
See EMBEDDED COMPONENTS**COMPOUNDS, CLEANING**

Air Logistics Corp.  
 Allied Chemical Corp., National Aniline Div.  
 Allied Research Products, Inc.  
 American Felt Co.  
 Anderson Dil & Chemical Co., Inc.  
 Arco Co., The  
 Armitie Labs.  
 George Basch Co., The  
 Borden Chemical Co.  
 Cooper Industries, Inc.  
 Dels Tumbling Service  
 Delta Chemical Works, Inc.  
 Dennis Chemical Co.  
 Devcon Corp.  
 Dow Chemical Co., The  
 Fidelity Chemical Products Corp.  
 Finnell System, Inc.  
 Fisher Scientific Co.  
 Grant Chemical Co., Inc.  
 E. F. Houghton & Co.  
 R. M. Hollingshead Corp.  
 Joy Mfg. Co.  
 Kelite Corp.  
 London Chemical Co., Inc.  
 Monogram Precision Industries  
 Neumade Products Corp.  
 Oakite Products, Inc.  
 Penetone Co., The  
 Permatex Co., Inc.  
 Protective Coatings, Inc.  
 Ransohoff, Co.  
 Bernard Sirota Co.  
 Trio Chemical Works, Inc.  
 Turco Products, Inc.  
 Westep Corp.  
 Wye Industries

**COMPOUNDS, INSULATING**  
See INSULATING COMPOUNDS**COMPRESSOR ASSEMBLIES**

Air Products, Inc.  
 Beach-Russ Co.  
 Carrier Corp.  
 Centrox Ltd., American Sales Office  
 Cornelius Co., The, Aero Div.  
 Cummins Engine Co., Inc.  
 Curtiss-Wright Corp.-Wright Aeronautical Div.  
 Dresser Industries, Inc.  
 Dunham-Bush Inc.  
 Finn Aeronautical Div., T. R. Finn & Co., Inc.  
 Joy Mfg. Co.  
 Kelsey-Hayes Co.  
 Walter Kidde & Co., Inc., Aviation Div.  
 Lear, Inc.  
 \*RHEEM MFG. CO., DEFENSE & TECHNICAL PRODUCTS DIV.  
 Scaife Co.-Div.-Wilson Bros.  
 Smith-Morris Corp.  
 Solar Aircraft Co.  
 Stainless Steel Products, Inc.  
 Tapco Group, Thompson Ramo Wooldridge Inc.  
 Task Corp.  
 Therm, Inc.  
 Turbo Products, Inc.

**COMPRESSOR ASSEMBLIES, AXIAL FLOW**

Air Logistics Corp.  
 \*AIRESEARCH MFG. CO., DIV.-THE GARRETT CORP.  
 Allis-Chalmers  
 Carrier Corp.  
 Centrox Ltd., American Sales Office  
 Christie Machine Works  
 Cummins Engine Co., Inc.  
 Curtiss-Wright Corp.-Research Div.  
 Curtiss-Wright Corp.-Utica Div.  
 Curtiss-Wright Corp.-Wright Aeronautical Div.  
 Dean & Benson Research, Inc.  
 Dresser Industries, Inc.  
 Finn Aeronautical Div., T. R. Finn & Co., Inc.  
 Jovis Corp.  
 Joy Mfg. Co.  
 J. J. Monaghan Co., Inc.  
 Schellens-True Corp.  
 Tapco Group, Thompson Ramo Wooldridge Inc.  
 Therm, Inc.  
 Turbo Products, Inc.  
 Twigg Industries  
 Veet Industries  
 Westinghouse Electric Corp.

**COMPRESSOR ASSEMBLIES, CENTRIFUGAL FLOW**

Air Logistics Corp.  
 Air Products, Inc.  
 Allis-Chalmers  
 American Felt Co.  
 Centrox Ltd., American Sales Office  
 Christie Machine Works  
 Consolidated Diesel Electric Corp.  
 Cummins Engine Co., Inc.  
 Curtiss-Wright Corp.-Research Div.  
 Curtiss-Wright Corp.-Utica Div.  
 Curtiss-Wright Corp.-Wright Aeronautical Div.  
 Dresser Industries, Inc.  
 Hamilton Standard, Div.-United Aircraft Corp.  
 Kelsey-Hayes Co.  
 Jovis Corp.  
 Joy Mfg. Co.  
 Stratos, Div.-Fairchild Engine & Airplane Corp.

Tapco Group, Thompson Ramo Wooldridge Inc.  
 Therm, Inc.  
 Turbo Products, Inc.  
 Veet Industries  
 Wickfield, Inc.  
 York Corp.

**COMPRESSOR ASSEMBLIES, MOBILE**

Accessory Controls & Equipment Corp.  
 Air Logistics Corp.  
 Air Products, Inc.  
 \*AIRESEARCH MFG. CO. OF ARIZ.  
 \*AIRESEARCH MFG. CO., DIV.-THE GARRETT CORP.  
 American Felt Co.  
 Beach-Russ Co.  
 Carrier Corp.  
 Consolidated Diesel Electric Corp.  
 Cornelius Co., The, Aero Div.  
 Cummins Engine Co., Inc.  
 Dresser Industries, Inc.  
 Finn Aeronautical Div., T. R. Finn & Co., Inc.  
 Haskel Engrg. & Supply Co.  
 Joy Mfg. Co.  
 Kelsey-Hayes Co.  
 Walter Kidde & Co., Inc., Aviation Div.  
 Lear, Inc.  
 United Mfg. Co., Div., The W. L. Maxson Corp.  
 Wickfield, Inc.

**COMPRESSORS, AIR**

Accessory Controls & Equipment Corp.  
 Air Logistics Corp.  
 Air Products, Inc.  
 \*AIRESEARCH MFG. CO. OF ARIZ.  
 \*AIRESEARCH MFG. CO., DIV.-THE GARRETT CORP.  
 Allis-Chalmers  
 American Felt Co.  
 American Instrument Co., Inc.  
 Applied Dynamics Corp.  
 Beach-Russ Co.  
 Carrier Corp.  
 Chicago Pneumatic Tool Co.  
 Cooper-Bessmer Corp., The  
 Cornelius Co., The, Aero Div.  
 Cummins Engine Co., Inc.  
 Curtiss-Wright Corp.-Utica Div.  
 Dresser Industries, Inc.  
 Dunham-Bush Inc.  
 Fuller Co.  
 Gardner-Denver Co.  
 Haskel Engrg. & Supply Co.  
 Hoover Electric Co.  
 Joy Mfg. Co.  
 Kahn & Co., Inc.  
 Walter Kidde & Co., Inc., Aviation Div.  
 Lear, Inc.  
 Leiman Brothers' Inc.  
 M. C. Mfg. Co.  
 Nash Engrg. Co., The  
 Pennsylvania Pump & Compressor Co.  
 Quincy Compressor Co.  
 Scaife Co.-Div.-Wilson Bros.  
 Schutte & Koerting Co.  
 Solar Aircraft Co.  
 Stainless Steel Products, Inc.  
 Stratos, Div.-Fairchild Engine & Airplane Corp.  
 Superior Pneumatic & Mfg., Inc.  
 Thompson Engrg. Co., The, Missile Products Div.  
 Trane Co., The  
 Waldorf Fluid Systems, Div.-F.C. Huyck & Sons  
 Waste King Corp., Technical Products Div.  
 Wayne Pump Co., The, Div.-Symington Wayne Corp.

**COMPRESSORS, GAS**

Air Products, Inc.  
 \*AIRESEARCH MFG. CO., DIV.-THE GARRETT CORP.  
 Allis-Chalmers  
 American Felt Co.  
 American Instrument Co., Inc.  
 Beach-Russ Co.  
 Carrier Corp.  
 Chicago Pneumatic Tool Co.  
 Christie Machine Works  
 Cooper-Bessmer Corp., The  
 Cornelius Co., The, Aero Div.  
 Dresser Industries, Inc.  
 Dunham-Bush Inc.  
 Fuller Co.  
 Gardner-Denver Co.  
 Haskel Engrg. & Supply Co.  
 Hoover Electric Co.  
 Joy Mfg. Co.  
 Leiman Brothers, Inc.  
 M. C. Mfg. Co.  
 Nash Engrg. Co., The  
 Pennsylvania Pump & Compressor Co.  
 Schutte & Koerting Co.  
 Solar Aircraft Co.  
 Stainless Steel Products, Inc.  
 Stratos, Div.-Fairchild Engine & Airplane Corp.  
 Thompson Engrg. Co., The, Missile Products Div.  
 Trane Co., The  
 Vilter Mfg. Co., The  
 Waldorf Fluid Systems, Div.-F.C. Huyck & Sons  
 Wayne Pump Co., The, Div.-Symington Wayne Corp.

**COMPRESSORS, PORTABLE**

Air Products, Inc.

**AIRSEARCH MFG. CO. DIV.-THE GARRETT CORP.**

Beach-Russ Co.  
Chicago Pneumatic Tool Co.  
Cornelius Co., The, Aera Div.  
Cummins Engine Co., Inc.  
Curfiss-Wright Corp.-Utica Div.  
Dunham-Bush Inc.  
Gardner-Denver Co.  
Haskell Engrg. & Supply Co.  
Hoover Electric Co.  
Joy Mfg. Co.  
Kahn & Co., Inc.  
Walter Kidde & Co., Inc., Aviation Div.  
Leair, Inc.  
Lear Aircraft Co.  
Lorator, Div.-Fairchild Engine & Airplane Corp.  
Thompson Engrg. Co., The, Missile Products Div.  
Joyne Pump Co., The, Div.-Symington Wayne Corp.

**COMPUTER DEMODULATORS**  
See DEMODULATORS, COMPUTER

**COMPUTER, DIAGNOSTIC EQUIPMENT**  
See DIAGNOSTIC EQUIPMENT, COMPUTER

**COMPUTER DISCS**  
See DISCS, COMPUTER

**COMPUTER HEADS**  
See HEADS, COMPUTER

**COMPUTER INPUT EQUIPMENT**  
Aeronautic Systems, Inc., Sub.-Ford Motor Co.  
**AIRSEARCH MFG. CO. DIV.-THE GARRETT CORP.**

Iwaco Corp.  
Black Instrument Corp.  
Bendix Aviation Corp., York Div.  
Johnson-Lehner Corp.  
Ernest E. Blanche & Associates, Inc.  
Logue Electric Mfg. Co.  
Aristol Co., The  
Burton-Rodgers, Inc.  
Cedar Engrg. Div.-Control Data Corp.  
Centronix Inc.  
Chicago Aerial Industries, Inc.  
Consolidated Diesel Electric Corp.  
IBM Research Corp.  
Data Instruments Div.-Telet computing Corp.  
Di-An Controls, Inc.  
Dresser Industries, Inc.  
Electronic Communications, Inc.  
Electronic Engrg. Co. of California  
Ferranti Electric Inc.  
General Electric Co., Computer Dept.  
General Kinetics, Inc.  
Julie Research Labs., Inc.  
**KEARFOTT CO., INC.**  
Land-Air Inc.  
Librascope Inc.  
Milgo Electronic Corp.  
Minneapolis-Honeywell Regulator Co., Davies Labs. Div.  
Minneapolis-Honeywell Regulator Co., Industrial Product Group  
Narse Instrument Co., The  
F. L. Moseley Co.  
Motorola Inc., Military Electronics Div.  
National Cash Register Co., The, Electronics Div.  
Philco Corp., Government & Industrial Div.  
Radiation, Inc.  
Singer Mfg. Co., The, Military Products Div.  
Sorption Engrg., Inc.  
Sterling Precision Corp., Instrument Div.  
Systrom Corp.  
Technitrol Engrg. Co.  
Thompson-Ramo-Wooldridge Products Co., The  
Tri o Laboratories, Inc.  
United Electrodynamics, Inc.  
Victor Adding Machine Co.  
Vibro Labs., Inc.  
Wang Labs., Inc.  
Wright Engrg. Co.

**COMPUTER MATRIXES**  
See MATRIXES COMPUTER

**COMPUTER OUTPUT EQUIPMENT**  
Aeronautic Systems, Inc., Sub.-Ford Motor Co.  
**AIRSEARCH MFG. CO. DIV.-THE GARRETT CORP.**

Iwaco Corp.  
Black Instrument Corp.  
Bendix Aviation Corp., York Div.  
Ernest E. Blanche & Associates, Inc.  
Aristol Co., The  
Burton-Rodgers, Inc.  
Cedar Engrg. Div.-Control Data Corp.  
Centronix Inc.  
Chicago Aerial Industries, Inc.  
Consolidated Diesel Electric Corp.  
IBM Research Corp.  
Di-An Controls, Inc.  
Dresser Industries, Inc.  
Electronic Communications, Inc.  
Electronic Engrg. Co. of California  
General Electric Co., Computer Dept.  
Julie Research Labs., Inc.  
**KEARFOTT CO., INC.**  
Land-Air Inc.

Librascope Inc.  
Milgo Electronic Corp.  
F. L. Moseley Co.  
Motorola Inc., Military Electronics Div.  
National Cash Register Co., The, Electronics Div.  
Non-Linear Systems, Inc.  
Philco Corp., Government & Industrial Div.  
Radiation, Inc.  
Sanborn Co.  
Singer Mfg. Co., The, Military Products Div.  
Soraborn Engrg., Inc.  
Sterling Precision Corp., Instrument Div.  
Systrom Corp.  
Tapco Group, Thompson Ramo Wooldridge Inc.  
Technitrol Engrg. Co.  
Telectro Industries Corp.  
Thompson-Ramo-Wooldridge Products Co., The  
Victor Adding Machine Co.  
Vibro Labs.  
Wang Labs., Inc.  
Wright Engrg. Co.

**COMPUTER READOUT DEVICES**  
See READOUT DEVICES, COMPUTER

- COMPUTERS**  
a. Analog  
b. Course Line  
c. Data Processing  
d. Digital  
e. Navigation  
f. Offset Track  
g. Storage, Electrostatic  
h. Storage, Ferroelectric  
i. Storage, Magnetic

**\*AC ELECTRONICS DIV., GENERAL MOTORS CORP., a, d, e.**

ACF Industries Inc., a, d.  
Acromag Inc., a, e.  
Advanced Electronics Mfg. Corp., i.  
Aerogel-General Corp., a.  
Aerona Mfg. Corp., Baltimore Facility, d.  
Aeronautic Systems, Inc., Sub.-Ford Motor Co., e, d, e, h, i.  
Air Logistics Corp.  
**\*AIRSEARCH MFG. CO. OF ARIZ., a, i.**  
**\*AIRSEARCH MFG. CO., DIV.-THE GARRETT CORP., a.**  
Airpax Electronics Inc. Seminole Div., d.  
Allegany Instrument Co., Inc., a.  
Alwoc Corp., c, d, i.  
American Bosch Air Corp., a, d, e.  
American Electronics, Inc., c.  
American Electronics, Inc., Teller & Cooper Div., c, d.

Analogue Controls, Inc., a.  
Applied Science Corp. of Princeton, c.  
Arma Div., American Bosch Air Corp., a, d.  
Atlas Precision Products, Co., a, e.  
**\*AVCO MFG. CORP., CROSLLEY DIV., c, e.**  
Beckman Instruments, Inc., Berkeley Div., a.  
Beckman-Systems Div., a, c, d.  
Belack Instrument Corp., a, c, d, e.  
Bendix Aviation Corp., Eclipse-Pioneer Div., a, b, d, e, f.  
Bendix Aviation Corp., York Div., c, d.  
Bendix Computer, Div.-Bendix Aviation Corp., a, c, d.  
Ernest E. Blanche & Associates, Inc., c, d.  
Bommar Instrument Corp., d, e.  
Briggs Associates, Inc., c, d.  
Bristol Co., The, a, d.  
Burroughs Corp., a, thru h.  
Burton-Rodgers, Inc., a, b, c.  
CDC Control Services, Inc., a.  
CGS Labs., Inc., c.  
Centronix Inc., a, c, d, e, i.  
Chicago Aerial Industries, Inc., a, e.  
Christie Machine Works, c, d.  
Clory Dynamics, d, i.  
Clifton Precision Products Co., Inc., e.  
Collins Radio Co., a, e.  
Colorado Research Corp., a, e.  
Computer Control Co., Inc., c, d, i.  
Computer Engrg. Associates, Inc., a.  
Consolidated Avionics Corp., c, d.  
Consolidated Diesel Electric Corp., a, c, d.  
Control Circuits Inc., d.  
Control Data Corp., c, d.  
Cooper Industries, Inc., e.

Curfiss-Wright Corp., Electronics Div., a, d.  
Dalmator Div., Yubo Consolidated Industries, Inc., a, c, d.  
Dotex Corp., c.  
Davenport Mfg. Co., a, d.  
Daystrom Pacific Div.-Daystrom, Inc., a, b, e.  
Device Development Corp., c.  
Di-An Controls, Inc., c, d, e, i.  
Digitronics Corp., c, d.  
Donner Scientific Co., a, c, e.  
Dorsett Labs., Inc., a, d.  
Dresser Industries, Inc., a, c, d, i.  
Eldorado Electronics, a.  
Electro Instruments, Inc., c.  
Electro Precision Corp.  
Electro-Measurements Inc., c.  
Electronic Communications, Inc., a, c, e, i.  
Electronic Engrg. Co. of California, a, d.  
Electronic Tube Corp., c.  
Emeloid Co., Inc., The, e.  
Emerson Electric Mfg. Co., The, Electronics & Avionics Div., a, c, d.

Emerson Radio & Phonograph Corp., a, c, e.  
Enasco, Inc., a.  
Exact Engrg. & Mfg. Inc., e.  
Feedback Controls, Inc., a, e.  
Ferranti Electric Inc., c, d, i.  
Flight Research, Inc., e.  
Forbes, George F., Industrial Mathematician, a, d.  
Ford Instrument Co., Div.-Sperry Rand Corp., a, thru e.  
General Electric Co., Apparatus Sales Div., a, c, d, i.  
General Electric Co., Computer Dept., a, c, d, i.  
General Precision Lab. Inc., e, f.  
G. M. Gianni & Co., Inc., a, c, d.  
Giffillan Bros. Inc., a, thru e, g.  
Goodyear Aircraft Corp., a, c, e.  
Hagan Chemicals & Controls, Inc., c.  
Haller, Raymond & Brown Inc. Div., Singer Mfg. Co., d.

Halvcrifters, c, d.  
Harvey-Wells Electronics Inc., c, d.  
Hazeltine Electronics Div.-Hazeltine Corp., c, e, f.  
Hoffman Labs. Div., Hoffman Electronics Corp., e.  
Hughes Aircraft Co., d, e.  
Hughes Tool Co., Aircraft Div.  
Walter J. Hyatt Co., The, a, e.  
ITT Federal Div., International Telephone & Telegraph Corp., e, c, thru f.  
ITT Labs., a, c, d, e, g, h, i.  
ITT Labs., Ft. Wayne, e.  
Industrial Control Co., a.  
Instrument Development Labs., Inc., a.  
Instrumentation Div.-Ampex Corp., i.  
International Business Machines Corp.-Military Products Div., b, c, d.  
Jonsky & Bailey, Inc., e.  
Jordan Aviation Co., e.  
Jardur Import Co., e.

**\*KEARFOTT CO., INC., a, thru f, h, i.**  
Kelsay-Hayes Co., a.  
Kinevox Div.-Electromotion Co., c, e.  
Kollman Instrument Corp., Sub.-Standard Coil Products Co., Inc., a, e.  
Land-Air Inc., a.  
Leor, Inc., a, thru f.  
Leor, Inc., Grand Rapids Div., a, e.  
Leeds & Northrup Co., a.  
Librascope Inc., c, d, e, i.  
Litton Industries, Inc., c, d, e, i.  
Litton Industries, Maryland Div., a.  
Lockheed Aircraft Corp., Missiles & Space Div., d, h.  
Magnovox Co., The, a.  
W. L. Maxson Corp., The, a, b, d, e.  
Mergenthaler Linotype Co., a, c.  
Mid-Century Instrumental Corp., a, c.  
Milgo Electronic Corp., a.  
Minneapolis-Honeywell Regulator Co., Aeronautical Div., a, c, d, e.  
Minneapolis-Honeywell Regulator Co., Industrial Div., c.  
Minneapolis-Honeywell Regulator Co., Industrial Product Group, c, d.  
Minneapolis-Honeywell Regulator Co., Ordnance Div., a, d.

Missouri Research Labs., Inc., e.  
Motorola Inc., Military Electronics Div., a, thru f, h, i.  
National Cash Register Co., The, Electronics Div., b, c, d, g, h.  
Navigation Computer Corp., c, thru f.  
Northrop Corp., a, d, e, i.  
Northrop Corp., The, Northrons Div., a, d, e, h.  
Norton Associates, Inc., i.  
Nuclear Products-Erco Div.-ACF Industries, Inc., a.  
Ohio Semiconductors, Inc., a.  
**\*PACKARD-BELL ELECTRONICS CORP., c, d.**  
Perkin-Elmer Corp., a.  
George A. Philbrick Researches, Inc., a.  
Philco Corp., Government & Industrial Div., c, d, e.  
Power-Tronics Systems Inc., a, c, e, f.  
Radiation, Inc., a, c, d.  
Ramo-Wooldridge Div., Thompson Ramo Wooldridge of Calif., a, c, d.  
George Rattray & Co., a.  
Raymond Engrg. Lab., Inc., d.  
Roytheon Mfg. Co., Government Equipment Div., a, c, d, e, g.  
Reeves Instrument Corp., a, e.  
Reflectone Corp., The, e.  
Remington Rand Univac Div.-Sperry Rand Corp., b, c, d.

Republic Aviation Corp., c.  
Res Engrg., Inc., i.  
Royal Industries, Inc., a, d.  
Ryan Aeronautical Co., e.  
Servo Corp. of America, d.  
Servomechanisms, Inc., a, d.  
Singer Mfg. Co., The, Military Products Div., a, b, c, g, h, i.  
Skiontron Electronics & Television Corp., a, e.  
Solar Aircraft Co., a, d.  
Solortron Inc., a, c.  
Soraborn Engrg., Inc., c, d.  
Southwestern Industrial Electronics Co., a, thru i.  
Sperry Farogot Co., Div.-Sperry Rand Corp., a, d, e.  
Sterling Precision Corp., Instrument Div., e.  
Summers Gyroscopic Co., e.  
Tapco Group, Thompson Ramo Wooldridge Inc., c.  
Technitrol Engrg. Co., c, d.  
Telectrome Mfg. Corp., a, d.  
Telectro Industries Corp., a, b, c, i.  
Telemeter Magnetics, Inc., c, h, i.  
Thompson-Ramo-Wooldridge Products Co., The, c, d.  
Transistor Electronics Corp., i.

Trionics Corp., a, d, f.  
 U. S. Science Corp., Div.-Topp Industries, Inc., a, c, e.  
 Victor Adding Machine Co., c, d  
 Vitro Labs., c, d, h, i.  
 Waldorf Electronics, Div.-F. C. Huyck & Sons, a, b, d, e.  
 Waltham Electronics Corp., a, d  
 Wang Labs., Inc., b, d, h, i.  
 Wayne-George Corp., c  
 Webcor, Inc., Government Div., a thru i.  
 Westinghouse Electric Corp., a, d

#### COMPUTERS, AIR DATA

Aeronautics Systems, Inc., Sub-Ford Motor Co.,  
 \*AIRESEARCH MFG. CO., DIV.-THE GARRETT CORP.  
 Applied Science Corp. of Princeton  
 Atlas Precision Products, Co.  
 \*AVCO MFG. CORP., CROSLLEY DIV.  
 Bendix Aviation Corp., Eclipse-Pioneer Div.  
 Ernest E. Blanche & Associates, Inc.  
 Centronix Inc.  
 Consolidated Controls Corp.  
 Cooper Industries, Inc.  
 Dalmator Div., Yuba Consolidated Industries, Inc.  
 Daystrom Pacific Div.-Daystrom, Inc.  
 Elgin Micronics Div.-Elgin National Watch Co.  
 Fairchild Astrionics Div., Fairchild Engine & Airplane Corp.  
 Fairchild Controls Corp., Components Div.  
 Feedback Controls, Inc.  
 Ford Instrument Co., Div.-Sperry Rand Corp.  
 General Precision Lab, Inc.  
 G. M. Giannini & Co., Inc.  
 Goodyear Aircraft Corp.  
 Harvey-Wells Electronics Inc.  
 Hughes Aircraft Co.  
 ITT Federal Div., International Telephone & Telegraph Corp.  
 ITT Labs.  
 \*KEARFOOT CO., INC., LITTLE FALLS, N. J.  
 Kollsman Instrument Corp., Sub-Standard Coil Products Co. Inc.  
 Land-Air Inc.  
 Lear, Inc.  
 Lear, Inc., Grand Rapids Div.  
 \*WALLACE O. LEONARD, INC.  
 Litroscope Inc.  
 Litton Industries, Inc.  
 W. L. Maxson Corp., The  
 Mergenthaler Linotype Co.  
 Minneapolis-Honeywell Regulator Co.-Aeronautical Div.  
 Motorola Inc., Military Electronics Div.  
 \*PACKARD-BELL ELECTRONICS CORP.  
 Philco Corp., Government & Industrial Div.  
 Radiation, Inc.  
 Servomechanisms, Inc.  
 Southwestern Industrial Electronics Co.  
 Specialties, Inc.  
 Summers Gyroscope Co.  
 United Control Corp.  
 U. S. Industries, Inc.  
 U. S. Science Corp., Div.-Topp Industries, Inc.  
 Vitro Labs.  
 Waldorf Electronics Div.-F. C. Huyck & Sons  
 Webcor, Inc., Government Div.

#### CONDITIONING EQUIPMENT, THERMAL

See THERMAL CONDITIONING EQUIPMENT

#### CONDUITS

- a. Electric
- b. Fiber
- c. Ignition Wire
- d. Metal
- e. Metal, Flexible
- f. Metal, Non-Flexible

Adam Metal Supply Inc., f.  
 American Brass Co., The, a, d, e, f.  
 Anaconda Metal Hose Div., The American Brass Co., a, e.  
 Breeze Corporations, Inc., e.  
 Bridgeport Brass Co., a, d, e.  
 Carrier Corp., f.  
 Century Fasteners Corp., d, e.  
 Chase Brass & Copper Co., Inc., a, d.  
 Collins Engrg. Corp., a.  
 Continental Diamond Fibre Corp., a, b.  
 Co-Operative Industries, Inc., a, c, e.  
 D K Mfg. Co., d, e, f.  
 \*ETS-HOKIN & GALVAN, f.  
 Federal Metal Hose Corp., e.  
 Flexaust Co., The, a, d, e.  
 Flexible Metal Hose Mfg. Co., a, e.  
 \*FLEXONICS CORP., AERONAUTICAL DIV., a.  
 Fromson Drban Co., Inc., d.  
 General Cable Corp., a, d, e, f.  
 General Electric Co., Wire & Cable Dept., a, d.  
 General Plastics Corp. of New Jersey, b.  
 Hallett Mfg., Co., a, c thru f.  
 Hoeg Industries, Inc., b.  
 Johns-Manville, a, b.  
 Kling Metal Spinning & Stamping Co., f.  
 Marca Industries Co., e.  
 Metoplast Corp., e.  
 Minnesota Mining & Mfg. Co., a thru e.  
 Newbrook Machine Corp., f.  
 Panduit Corp., b.  
 Ravenna Metal Products, Div.-Standard Screw Co., e.

Republic Steel Corp., d, f.  
 Rome Cable Corp., Sub.-Aluminum Co. of America, a, d, e, f.  
 Saylor Electric Products Corp., a.  
 Teleflex Inc., d, e.  
 United Wire & Supply Corp., d.  
 Wilmington Fibre Specialty Co., b.  
 Wiremold Co., The, a

#### CONES, EXHAUST

Anchor Metal Spinning Co., The  
 B. H. Aircraft Co., Inc.  
 Basic Tool Industries, Inc.  
 Benson Mfg., Co., The  
 California Aircraft Products  
 Chemold Co.  
 Christie Machine Works  
 Curtiss-Wright Corp.-South Bend Div.  
 Curtiss-Wright Corp.-Wright Aeronautical Div.  
 Diverser Engrg. Co.  
 Dresser Industries, Inc.  
 Dresser Mfg. Div., Dresser Industries, Inc.  
 Fletcher Mfg. Co., Inc., The  
 Hoeg Industries, Inc.  
 Hufford Corp., The  
 Hupp Aviation Co.  
 Ingersoll Kalamazoo Div., Borg-Warner Corp.  
 Intercontinental Mfg. Co., Inc.  
 Kaiser Aircraft & Electronics, Div.-Kaiser Industries Corp.  
 Kaiser Metal Products, Inc. - Fleetwings Div.  
 Kanar Corp.  
 M. W. Kellogg Co., The  
 Kelsey-Hayes Co.  
 Kling Metal Spinning & Stamping Co.  
 \*LAVELLE AIRCRAFT CORP.  
 Machine Products Div., New Haven Trap Rock Co.  
 Mercury Tool & Mfg. Corp.  
 Minnesota Mining & Mfg. Co.  
 Monogram Precision Industries  
 National Beryllia Corp.  
 Norris-Thermador Corp.  
 Norton Co.  
 Norton Co., New Products Dept.  
 Parts Engrg. Co., Inc.  
 Penn-Michigan Mfg. Corp.  
 Perry Plastics, Inc.  
 Piasecki Aircraft Corp.  
 Plastic Age Sales, Inc.  
 Portland Copper & Tank Works Inc.  
 Precision Sheet Metal, Inc.  
 Pressed Steel Tank Co.  
 Raybestos-Manhattan, Inc., Pa.  
 Reinhold Engrg. & Plastics Co.  
 Edw. Renneburg & Sons Co.  
 \*RHEEM MFG. CO., DEFENSE & TECHNICAL PRODUCTS DIV.  
 C. F. Roark Welding & Engrg. Co., Inc.  
 Rohr Aircraft Corp.  
 Rolack Inc.  
 Ryan Aeronautical Co.  
 Scofie Co.-Div.-Wilson Bros.  
 Silicone Insulation, Inc.  
 Smith-Morris Corp.  
 Stainless Steel Products, Inc.  
 Swedlow Inc.  
 Tapco Group, Thompson Ramo Wooldridge Inc.  
 Teiner Engrg. Corp.  
 Thermal Refractories Corp.  
 C. W. Torngren Co., Inc.  
 Turbo Products, Inc.  
 Twigg Industries  
 Twin Coach Co., Aircraft-Missiles  
 United Aircraft Products, Inc.  
 Waste King Corp., Technical Products Div.  
 Wheeland Co., The  
 Wilks Precision Instrument Co., Inc.  
 Young Development Div., Hercules Powder Co.

#### CONES, SPEAKER

Anchor Metal Spinning Co., The  
 Chemold Co.  
 Magnavox Co., The  
 Perry Plastics, Inc.  
 Plastic Age Sales, Inc.  
 Smith-Morris Corp.  
 Waldam Electronics Inc.

#### CONNECTOR, OXYGEN EQUIPMENT

American Aeroparts  
 Aero Equipment Corp.  
 Carnac Aviation  
 Dresser Mfg. Div., Dresser Industries, Inc.  
 Essex Mfg., Co., Inc.  
 Walter Kidde & Co., Inc., Aviation Div.  
 H. Koch & Sons  
 Harold Kruger Instruments  
 Monogram Precision Industries  
 Parts Engrg. Co., Inc.  
 Puritan Compressed Gas Corp., Aviation Div.  
 Ronon & Kunzl, Inc.

#### CONNECTORS

- a. Electric Subminiature
- b. Miniature
- c. Printed Circuit
- d. Rack & Panel
- e. RF

AMP Inc., a thru d.  
 Abalon Precision Mfg. Corp., d.

Accurate Electronics Corp., Dept. D, a, b, c.  
 Aerolite Electronics Corp., b.  
 Aircrom Inc., d.  
 Aircraft Controls Co., Div., Gorn Electric Co., Inc., b, c, d.  
 Alden Products Co., d.  
 American Aeroparts, a, b, d.  
 American Standard Products, Inc.  
 Amphenol Connector Div., Amphenol-Borg Electronics Corp., a thru e.  
 Amphenol Western Div., Amphenol-Borg Electronics Corp., e.  
 Anton Electronic Labs., Inc., a thru e.  
 Arnel Electronics, Inc., a thru d.  
 Avnet Corp., b, d.  
 W. A. Beauchaine & Sons Inc., d.  
 Bendix Aviation Corp., Scintilla Div., b, d.  
 Birnbach Radio Co., Inc., b, c, d.  
 Burndy Corp., Dmaton Div., b thru e.  
 Cable Electric Products Inc., a, b.  
 Cambridge Thermionic Corp., b, c.  
 \*CANNON ELECTRIC CO., a thru e.  
 Century Fasteners Corp., b.  
 Chemold Co., d.  
 Cleveland Metal Specialties Co., Electronics Div., c.  
 Coaxial Connector Co., Inc., b, e.  
 Cole Electric Co., d, e.  
 Connector Corp. of America, e.  
 Consolidated Electrodynamics Corp., b.  
 Continental Connector Corp., a thru d.  
 Dage Electric Co., Inc., a, b, e.  
 Dialight Corp., b.  
 R. C. Dudek & Co., a thru d.  
 E-Z-Hook Test Products  
 Elco Corp., a thru d.  
 Electrical Insulation Co., Inc., a, b, c.  
 Electro Tec Corp., a.  
 Electrocraft, Inc., b.  
 Entrom, Inc., e.  
 \*ETS-HOKIN & GALVAN, d.  
 Furane Plastics, Inc., c.  
 G. W. Galloway Co., b.  
 Garde Mfg. Co., c, d, e.  
 General R-F Fittings, Inc., b, e.  
 Glasseal Products Co., Inc., d.  
 Good Electronic Corp., c.  
 Good-All Electric Mfg. Co., a thru e.  
 Gulton Industries, Inc., a.  
 Hallett Mfg. Co., Inc., b.  
 Hampden Mfg. Co., Inc., b.  
 Indust. Prod.-Danbury Knudsen Div., Amphenol-Borg Electronics Corp., b, d, e.  
 Javex Electronics, b, d.  
 Jettron Products, Inc., a, b, c.  
 Joclin Mfg. Co., b.  
 E. F. Johnson Co.  
 Howard B. Jones Div.-Cinch Mfg. Corp., a, b, c.  
 Korda Industries, a.  
 Kulka Electric Corp., c.  
 La Pointe Industries Inc., c.  
 Malco Mfg. Co., a, b, c.  
 Meridian Metalcraft, Inc., e.  
 Methode Mfg. Corp., b, e, d.  
 Microdot Inc., a, b, c, e.  
 Microwave Associates, Inc., e.  
 Minnesota Mining & Mfg. Co.  
 Molding Corp. of America, a, b.  
 Frank W. Morse Co., b.  
 Motorola Inc., Military Electronics Div., a.  
 National Pneumatic Co., Inc., Holtzer-Cabat Div., d, e.  
 National Tel-Tronics Corp., a, b.  
 North Electric Co., d.  
 Nugent Electronics Co., Inc., a, b, c.  
 Philco Corp., Government & Industrial Div., a, b, c.  
 Plasteck, Inc., a, b, c.  
 Radar Design Corp., e.  
 \*REDEL INC., a, b, c.  
 Edw. Renneburg & Sons Co., d.  
 Research Development Mfg. Inc., e.  
 Milton Ross Metals Co., The, a, b, c.  
 Savage-Rowe Plating Co., Inc.  
 Shur-Lok Corp.  
 C. Sioberg & Son, a, b.  
 Stanley-Judd Div.-The Stanley Works, a, d.  
 Tamar Electronics, Inc., e.  
 Tap-A-Line Mfg. Co., d.  
 Tapco Group, Thompson Ramo Wooldridge Inc., e.  
 Titeflex, Inc., b.  
 Tower Mfg. Corp., d.  
 Transco Products, Inc., e.  
 Transistor Electronics Corp., c.  
 Tru-Connector Corp., e.  
 Ucinite Co., The, Div.-United-Carr Fastener Corp., c.  
 U. S. Components, Inc., a thru d.  
 United States Chemical Milling Corp., c.  
 United Supply Co., b, e.  
 Waltham Engrg. Corp., a, b, c.  
 Waltham Horological Corp., a, b, c, e.  
 Western International Co., a, b, d, e.  
 Westwood Cable Corp., e.  
 E. B. Wiggins Dil Tool Co., Inc., b, d.  
 Winchester Electronics, Inc., a thru e.

#### CONNECTORS, ELECTRICAL FIREWALL

\*AIRESEARCH MFG. CO., DIV.-THE GARRETT CORP.  
 Amphenol Connector Div., Amphenol-Borg Electronics Corp., a.  
 Anton Electronic Labs., Inc.  
 Bendix Aviation Corp., Scintilla Div.

**CANNON ELECTRIC CO.**  
Century Fasteners Corp.  
Cole Electric Co.  
R. C. Dudek & Co.  
General R-F Fittings, Inc.  
Gladding, McBean & Co.  
Good-All Electric Mfg. Co.  
Joy Mfg. Co.  
J. S. Industries, Inc.  
United Supply Co., Inc.  
E. B. Wiggins Oil Tool Co., Inc.  
Winchester Electronics, Inc.

### CONNECTORS, HIGH VOLTAGE

**CAMP** Inc.  
**AIRESRESEARCH MFG. CO., DIV.-THE GARRETT CORP.**  
Alden Products Co.  
Amphenol Connector Div., Amphenol-Borg Electronics Corp.  
Anton Electronic Labs., Inc.  
Armel Electronics, Inc.  
Auburn Spark Plug Co., Inc.  
Bendix Aviation Corp., Scintillo Div.  
**\*CANNON ELECTRIC CO.**  
Coaxial Connector Co., Inc.  
Cole Electric Co.  
Continental Connector Corp.  
Eagle Electric Mfg. Co., Inc.  
Elco Corp.  
Electro Tec Corp.  
Good-All Electric Mfg. Co.  
Hobson Brothers, Inc.  
Joelin Mfg. Co., Inc.  
E. F. Johnson Co.  
Joy Mfg. Co.  
Molding Corp. of America  
Topco Group, Thompson Romo Wooldridge Inc.  
Western International Co.  
Winchester Electronics, Inc.

### CONNECTORS, INTER-STAGE BREAKAWAY

**\*CANNON ELECTRIC CO.**

### CONNECTORS, MICROPHONE

Amphenol Connector Div., Amphenol-Borg Electronics Corp.  
Birnbach Radio Co., Inc.  
**\*CANNON ELECTRIC CO.**  
Cole Electric Co.  
Dialight Corp.  
Elco Corp.  
Electrocraft, Inc.  
Howard B. Jones Div.-Cinch Mfg. Corp.  
Notional Tel-Tronics Corp.  
Perry Plastics, Inc.  
Switchcraft, Inc.  
Waltham Horological Corp.  
Western International Co.

### CONNECTORS, POWER

Accurate Electronics Corp., Dept. D.  
**AIRESRESEARCH MFG. CO., DIV.-THE GARRETT CORP.**  
Amphenol Connector Div., Amphenol-Borg Electronics Corp.  
Anton Electronic Labs., Inc.  
Armel Electronics, Inc.  
V. A. Beauchaine & Sons Inc.  
Bendix Aviation Corp., Scintillo Div.  
Jurdy Corp., Omoton Div.  
**CANNON ELECTRIC CO.**  
Cole Electric Co.  
Continental Connector Corp.  
Elco Corp.  
**ETS-HOKIN & GALVAN**  
E. W. Galloway Co.  
Oxev Electronics  
Howard B. Jones Div.-Cinch Mfg. Corp.  
Joy Mfg. Co.  
Kyle-National Co., The  
Loyal Electric Corp.  
Specialty Engrg. & Electronics Co.  
Superior Electric Co., The  
Tincite Co., The, Div.-United-Corr Fastener Corp.  
J. S. Components, Inc.  
Waltham Horological Corp.  
Western International Co.  
Winchester Electronics, Inc.

### CONNECTORS, PRESSURIZED

Amphenol Connector Div., Amphenol-Borg Electronics Corp.  
Bendix Aviation Corp., Scintillo Div.  
Jurdy Corp., Omoton Div.  
**CANNON ELECTRIC CO.**  
Cormac Aviation  
Coaxial Connector Co., Inc.  
Cole Electric Co.  
Continental Connector Corp.  
General R-F Fittings, Inc.  
Good-All Electric Mfg. Co.  
Joelin Mfg. Co.  
Joy Mfg. Co.  
Microdat Inc.  
On Mark Couplings, Inc.  
Orts Engrg. Co., Inc.  
Kyle-National Co., The  
Ruc-Connector Corp.

Waltham Horological Corp.  
Western International Co.  
Winchester Electronics, Inc.

### CONNECTORS, PATCH CORDS See PATCH CORDS, CONNECTORS

### CONNECTORS, SKIO & SLED

Amphenol Connector Div., Amphenol-Borg Electronics Corp.  
Amphenol Western Div., Amphenol-Borg Electronics Corp.  
**\*CANNON ELECTRIC CO.**  
Copewell Mfg. Co.  
Cormac Aviation  
Cole Electric Co.  
Joy Mfg. Co.  
On Mark Couplings, Inc.

### CONNECTORS, UMBILICAL

**\*CANNON ELECTRIC CO.**

### CONSOLES, AUDIO

Brooks & Perkins, Inc.  
Bud Radio Inc.  
Du Kane Corp.  
**\*ETS-HOKIN & GALVAN**  
Fletcher Mfg. Co., Inc., The  
Ludwig Harold Mfg. Co.  
Kirk & Blum Mfg. Co., The  
Litton Industries, Maryland Div.  
Livingston Electronic Corp.  
**\*MIRAX CHEMICAL PRODUCTS CORP., ELECTRO-MECHANICAL PRODUCTS DIV.**  
Motorola Inc., Military Electronics Div.  
National Pneumatic Co., Inc., Holtzer-Cobot Divs.  
Peer, Inc.  
Phileo Corp., Government & Industrial Div.  
Rimok, Inc.  
Telectro Industries Corp.

### CONSOLES, LIGHTING CONTROL

Anchor Specialty Mfg. Co., Inc.  
**\*ELECTROSNAP CORP.**  
**\*ETS-HOKIN & GALVAN**  
Fletcher Mfg. Co., Inc., The  
Ludwig Harold Mfg. Co.  
Kirk & Blum Mfg. Co., The  
**\*MIRAX CHEMICAL PRODUCTS CORP., ELECTRO-MECHANICAL PRODUCTS DIV.**  
Mullenbach Div.-Electric Machinery Mfg. Co.  
Peer, Inc.  
Sequoia Wire & Cable Co.-Div.-Mondrel Industries, Inc.  
Technical Apparatus Builders  
Telectro Industries Corp.

### CONTACT CLEANERS

See CLEANERS, CONTACT

### CONTACTORS

Arrow-Hart & Hegemon Electric Co., The  
Automatic Switch Co.  
Cole Electric Co.  
Cutler-Hammer Inc.  
Electro-Mechanical Products Co.  
Electro-Miniatures Corp.  
Erwin-Newman Co., The  
General Electric Co., Apparatus Sales Div.  
Hartman Electrical Mfg. Co., The  
E. F. Johnson Co.  
J. E. Menough Co.  
Vap-Air Aeronautical Products Div., Vapor Heating Corp.  
Zenith Electric Co.

### CONTAINERS

Air Logistics Corp.  
American Aluminum Co.  
American Cor & Foundry, Div.-ACF Industries, Inc.  
American Machine & Foundry Co., Government Products Group  
Anchor Metal Spinning Co., The  
Applied Design Co.  
Brooks & Perkins, Inc.  
Buffalo Metal Container Corp.  
Butler Mfg. Co.  
Champion Co., The  
Chemold Co.  
Chicago Molded Products Corp.  
Chrysler Corp., Defense Operations Div.  
Colonial Aircraft Corp.  
Conco Engrg. Works  
Curtiss-Wright Corp., Research Div.  
Cutler Metal Products Co.  
Dresser Mfg. Div., Dresser Industries, Inc.  
FWD Corp.  
Forwell Metal Fabricating  
Ferris-Mfg. Co., The  
Fletcher Mfg. Co., Inc., The  
Fruehauf Trailer Co., Military Equipment Div.  
General Box Co.  
**\*HARGO CONTAINERS DIV.-HABOR BOAT BUILDING CO.**  
Hordman Tool & Engrg. Co.  
Hicks Corp., The  
Ludwig Harold Mfg. Co.  
Horkey-Moore Associates  
Jeto, Inc.  
M. W. Kellogg Co., The

Walter Kidde & Co., Inc., Aviation Div.  
Kirk & Blum Mfg. Co., The  
H. Koch & Sons  
Lyon Von & Storage Co., Aircraft Div.  
Mercury Tool & Mfg. Corp.  
**\*MIRAX CHEMICAL PRODUCTS CORP., METAL CONTAINER DIV.**  
Notional Tube Div., United States Steel Corp.  
Oliver Corp., The  
Opeliko Welding, Machine & Supply Inc.  
Ordnance Div.-Food Machinery & Chemical Corp.  
Penn-Michigan Mfg. Corp.  
Pioscecki Aircraft Corp.  
Pressed Steel Tank Co.  
Pry Welding & Mfg., Inc.  
**\*RHEEM MFG. CO., OFFENSE & TECHNICAL PRODUCTS DIV.**  
Smith-Morris Corp.  
Superior Air Products Co.  
Trailmobile Inc.  
United States Rubber Co.  
Vendorlator Mfg. Co.  
Wayne Pump Co., The, Div.-Symington Wayne Corp.

### CONTAINERS, SHIPPING See SHIPPING CONTAINERS

### CONTAINERS, STORAGE See STORAGE CONTAINERS

### CONTROL DAMPERS See DAMPERS, CONTROL

### CONTROL, PULSATION See PULSATION CONTROL

### CONTROL SYSTEMS DISCONNECTS See DISCONNECTS, CONTROL SYSTEMS

### CONTROL SYSTEMS, HEAT TRANSFER See HEAT TRANSFER CONTROL SYSTEMS

### CONTROL SYSTEMS, HUMIDITY See HUMIDITY CONTROL SYSTEMS

### CONTROL SYSTEMS, SERVO MECHANISM See SERVO MECHANISM CONTROL SYSTEMS

### CONTROL SYSTEMS, TEMPERATURE See TEMPERATURE CONTROL SYSTEMS

### CONTROL UNITS, BRAKE See BRAKE CONTROL UNITS

### CONTROLLERS, REMOTE SOUND Motorola Inc., Military Electronics Div.

### CONTROLS

- a. Audio Recording
- b. Automatic Approach
- c. Broadcast Input
- d. Camera
- e. Camera, Remote
- f. Capacitance Operated
- g. Chemical
- h. Combustion
- i. Computer
- j. Conductivity
- k. Counting & Sorting
- l. Density
- m. Dimensional
- n. Dynamometer
- o. Electronic AC Motor Speed
- p. Engine
- q. Film Thickness
- r. Fire
- s. Flame Failure
- t. Fluid Conductivity
- u. Fluid Flow
- v. Fuel
- w. Gas
- x. Heat Treating
- y. Humidity
- z. Inspection
  - a1. Liquid Level
  - b1. Loop Regulation
  - c1. Machine Safety
  - d1. Master
  - e1. Materials Thickness
  - f1. Motors & Generators
  - g1. PH
  - h1. Photographic Exposure
  - i1. Photoelectric
  - j1. Positioning
  - k1. Power Level
  - l1. Pressure
  - m1. Push-Pull
  - n1. Radio Remote
  - o1. Reactor, Nuclear
  - p1. Register
  - q1. Register Cutter
  - r1. Remote, Antenna
  - s1. Servo
  - t1. Signal
  - u1. Smoke Density
  - v1. Sound System
  - w1. Specific Gravity
  - x1. Speed
  - y1. Strain
  - z1. Tension
  - a2. Timing
  - b2. Torque, Electronic

- c2. Turbidity
- d2. Vacuum
- e2. Ventilating Control System
- f2. Voltage Regulator
- g2. Volume
- h2. Volume & Tone
- i2. Weight
- j2. Welding

**\*AC ELECTRONICS DIV., GENERAL MOTORS CORP., v, x-1.**

- ACF Industries, Inc., w, f, i, s, l, d, 2
- A-G-A Div., Elastic Stop Nut Corp. of America, a, 2
- Abrams Instrument Corp., d, a, a, 2
- Acro Div., Robertshaw-Fulton Controls, i-1
- Acromag Inc., z, a-1, s-1
- Actuation Research Corp., t, u
- Adel Precision Products of California, Div., General Metals Corp., p, u
- Adept Industries Inc., t-1
- Advanced Products Co., The, a-2
- Aero Gasket Corp., u, v
- Aero Supply Mfg. Inc., p, u, v, w, a-1, l-1, s-1, e-2
- Aerojet-General Corp., p, u, v, j-1, a-1
- Aerolab Development Co., b-1, k-1, s-1, a-2, f-2
- Aerona Mfg. Corp., h, v, n-1
- Aeromutual Systems, Inc., Sub-Ford Motor Co., i, u
- Aerotec Corp., The, u, a-1, l-1
- Air Logistics Corp., n, s
- Aircraft Controls Co., Div., Gorn Electric Co., Inc., a-1, l-1
- \*AIRESEARCH MFG. CO., DIV.-THE GARRETT CORP., i, a, p, u, v, w, f-1, j-1, l-1, s-1, e-2**
- Airpix Electronics Inc. Seminole Div., a, s-1, x-1, a-2
- Allied Research Products, Inc., t, a-1
- Allis-Chalmers, a-1, f-1, j-1
- Alloy Bellows Inc., i-1
- Alto Scientific Co., Inc., a-2
- Amelco, Inc., s-1
- American Agile Corp., e-2
- American Bosch Arms Corp., a, p, u, v, f-1, s-1, x-1
- American Electronics, Inc., f-1, j-1, k-1, s-1, b-2
- American Electronics, Inc., Tallier & Cooper Div., d, n, e-2
- American Machine & Foundry Co., Government Products Group, g-2, i-2, k, m, p, b-1 thru e-1, j-1, k-1, m-1, a-1, r-1, s-1, t-1, x-1
- American Machine & Foundry Co., Greenwich, a-1, r-1, s-1, b-2
- American Measurement & Control, Inc., u, j-1, l-1, s-1, x-1
- American Research & Mfg. Corp., z, s-1, f-2
- Anglo Corp., t-1, a-2
- Analogue Controls, Inc., i, j-1, s-1
- Anderson Machine & Tool Co., r
- \*ANNIN CO., THE, u**
- Antilab Inc., j-1
- Applied Dynamics Corp., l-1
- Arens Controls, Inc., p, m-1
- \*ARNOUX CORP.**
- Aro Equipment Corp., w, a-1, l-1, d-2
- Arnold-Hart & Hegeman Electric Co., The, a, a-1, f-1, m-1, a-2
- Assembly Products, Inc., j, f-1, a-2
- Associated Engineers, Inc., u-1
- Astronautics Eng. Co., n, u, l-1, i-2
- Atlantic Instrument Corp., Sub-American Electronics, Inc., u, a-1
- Atlas Precision Products, Co., d, e, j-1, r-1, s-1, x-1, a-2
- Automation Dynamics Corp., n-1
- Automation Products, Inc., l, a-1, w-1
- Autron, Inc., f-1
- Autronics Inc., x-1
- \*AVCO MFG. CORP., CROSLEY DIV., b, r, n-1**
- Avien, Inc., p, u, a-1
- Axler Associates Inc., g
- B & F. Instruments, Inc., y-1, b-2
- B & H Instrument Co., Inc., s-1
- Bobcock Radio Eng., Inc., n-1
- Barber-Colman Corp., j-1, s-1, e-2
- Beaver Precision Products Inc., v, j-1, m-1, a-1
- Beckman Instruments, Inc., Berkeley Div., a, x-1, a-2
- Beckman Aircraft Corp., Niagara Frontier Div., s-1
- Bell & Howell Co., d, e, a, b-1, h-1, l-1
- Belock Instrument Corp., d, e, r-1, s-1, x-1
- Bendix Aviation Corp., Eclipse-Pioneer Div., b
- Bendix Aviation Corp., Friez Instrument Div., y, l-1, a-2
- \*BENDIX AVIATION CORP., HAMILTON DIV., p, u, v, s-1.**
- Bendix Aviation Corp., Pioneer-Central Div., u, a-1
- Bendix Aviation Corp., York Div., a-1, j-1
- \*BENDIX PRODUCTS DIV., BENDIX AVIATION CORP., h, p, v, k-1, l-1, s-1, x-1, b-2**
- Bendix-Pacific Div., Bendix Aviation Corp., u, s-1, a-2
- Bendix Utah Div., Bendix Aviation Corp., p, u, l-1, s-1, a-2
- Berco Engrg. Corp., p, x, a-1, a-2
- Blackhawk Mfg. Co., u, j-1, m-1
- Blonder-Tongue Labs, Inc., d, e
- Bogue Electric Mfg., Co., b, i, a, a-1, f-1, j-1, s-1, x-1, f-2
- Bowmer Instrument Corp., h, j, k, r, u, v, a-1, l-1, s-1
- Bowser, Inc., Defense Dept., g, u, v, w

- Brach Mfg. Corp., Div.-General Bronze, a, b-1, a-1, r-1, s-1, x-1, f-2
- Branson Corp., a-2
- Branson Instruments, Inc., m, a, e-1
- Briggs Associates, Inc., j-2
- Bristol Co., The, f thru l, s thru y, a-1, g-1, j-1, k-1, l-1, n-1, s-1, u-1, w-1, x-1, y-1, a-2, c-2, d-2, e-2
- Bristol Motors Div.-Vocaline Co., of America, Inc., a-2
- Brooks Rotameter Corp., u, a-1, w-1
- Brown Engrg. Co., Inc., s-1
- Bulow Electric Co., e, a-1, r-1, s-1, a-2
- Burroughs Corp., l, r
- Burton-Rodgers, Inc., i, s-1, t-1, v-1
- CDC Central Services, Inc., g, u, y, j-1, l-1, r-1, s-1, i-2
- CGS Labs., Inc., f-1
- Cametflex Corp., d, e, h-1
- J. C. Carter Co., The, u, v, a-1, l-1
- Centrolab, Div.-Globe-Union, g-1, h-2
- Centronix Inc., a, i, k, i-1
- Chalco Engrg. Corp., u, A-1
- Chandler Evans Corp., h, l, p, u, v, w, j-1, k-1, l-1, r-1, s-1, x-1, a-2
- John Chatillon & Sons, m-1, b-2
- Chicago Aerial Industries, Inc., d, e, i, a, h-1, l-1, r-1, s-1, x-1, a-2
- Cinema Engrg., a, c
- Clasostat Mfg. Co., Inc., g-2, h-2
- Clory Dynamics, g, h, i, l-1, s-1, g-2
- Cleveland Instrument Co., m, z, e-1
- Cleveland Pneumatic Industries, Inc., s-1
- Clifton Precision Products Co., Inc., s-1
- Coils-Electronics, a, s-1
- Collins Radio Co., b, c
- Colorado Research Corp., i, j-1
- Columbia Products Co., r-1
- Communications Research Co., n-1
- Components Corp., u, v, w, a-1, s-1, d-2
- ConaFlow Corp., g, u, v, w, a-1, l-1, s-1, d-2
- Consolidated Avionics Corp., j, k, u, x-1, a-2
- Consolidated Controls Corp., p, v, w, j-1, l-1, m-1, a-1, s-1, x-1, d-2
- Consolidated Diesel Electric Corp., h, v, w, l-1, a-1, d-2, f-2
- Consolidated Diesel Electric Corp., Western Div., f-1
- Consolidated Electro-dynamics Corp., l-1
- Continental Corbin, Div.-Wirt Co., g-2, h-2
- Control Circuits Inc., i, j, k, s-1, w-1
- Control Engrg. Co., Div. Jervis B. Webb Co., n, a, p, d-1, a-2
- Controls Co. of America, s, u, v, w, z, z-1
- Cornelius Co., The, Aero Div., l-1, d-2
- Cornell Deep Drawing Co., Div.-Lones Industries Corp., z, k-1, e-2
- Cosa Corp., n
- Cramer Controls Corp., a-2
- Curtiss-Wright Corp., Electronics Div., l, a-1, f-2
- Curtiss-Wright Corp., Propeller Div., j-1, s-1
- Curtiss-Wright Corp., Research Div., a-1
- Curtiss-Wright Corp., Wright Aeronautical Div., h, p, k-1
- Curtiss-Wright Electronics Div., IMI Branch, l-1
- Cutter-Hammer Inc., a, a-1, f-1, j-1, l-1, d-2, e-2, f-2
- DBM Research, Inc., d, e, k, l-1
- Dale Products, Inc., e, k
- Dalmator Div., Yuba Consolidated Industries, Inc., i, a, b-1, j-1, s-1, x-1
- Data Instruments Div.-Telecomputing Corp., u, l-1
- Datex Corp., j-1
- Datron Electronics, Div.-Mid-Continent Mfg., Inc., y-1
- Daven Co., The, a, c, k-1, v-1, h-2
- Davenport Mfg. Co., i-1, f-2
- Daystrom Pacific Div.-Daystrom, Inc., i, j-1, l-1, s-1
- Dayton Aviation Radio & Equipment Corp., b, b-1, l-1, m-1, r-1, s-1
- Daytronic Corp., m, e-1, j-1, y-1, z-1
- Deisen Corp., f, e-1
- Denison Engrg. Div., American Brake Shoe Co., l-1, g-2
- Deringer Metallurgical Corp., j-2
- Destron Co., a-2
- Detronic Industries, i-1, s-1, j-2
- Dial Products Co., z-1
- Di-An Controls, Inc., i, k, a-2
- J. W. Dice Co., m, a, q, z, e-1
- Henry G. Dietz Co., Inc., u, a-1, l-1, a-2, d-2, e-2
- W. C. Dillon & Co., Inc., i-2
- Donner Scientific Co., i, j-1, a-1
- Dresser Industries, Inc., i, s-1, f-2
- M. Ducommun Co., a-2
- Dynamic Controls Corp., u, a-1, l-1, a-2
- Eastern Industries Inc., u, y, k-1, s-1
- Eastern Jewel Corp., g-2, h-2
- Edgerton, Gernshausen & Grier, Inc., d, e, h-1, n-1, a-1, a-2
- Thomas A. Edison Ind. Instrument Div.-McGraw-Edison Co., r, s, s-1, a-2
- Electric Machinery Mfg. Co., a, e-1
- Electric Regulator Corp., a, p, f-1, k-1, s-1, x-1, f-2
- Electro Precision Corp., s-1, f-2
- Electro Products Laboratories, Inc., k, c-1, j-1, x-1, b-2
- \*ELECTROSNAP CORP., r, c-1, j-1, m-1**
- Electro-Mechanical Products Co., r, d-1, f-1, r-1, s-1, f-2
- Electronic Applications, Inc., w
- Electronic Communications, Inc., n-1, r-1, s-1
- Electronic Control Corp., h, j, k, q, t, x, a-1, c-1, i-1, j-1, k-1, u-1, a-2, b-2
- Electronic Engrg. Co. of California, d, e, i, k, a-2
- Electronic Specialty Co., a-2

- Electron-Radar Products, s, y, i-1
- Elgin Micronics, West Coast Div.-Elgin National Watch Co., d
- Emerson Electric Mfg. Co., The, Electronics & Avionics Div., s-1
- Epic, Inc., y
- Eric Resistor Corp., k, a-2
- \*ETS-HOKIN & GALVAN, a, b, c, o, p, r thru u, y, a-1, b-1, d-1, f-1, j-1, k-1, m-1, n-1, s-1, u-1, v-1, c-2, e-2, thru h-2**
- Exact Engrg. & Mfg., Inc., l, a
- Fae Instrument Corp., s-1
- Fairchild Astrionics Div., Fairchild Engine & Airplane Corp., p, i-1, s-1, x-1
- Fairfield Engrg. Corp., a, f-1, h-1 thru k-1, s-1, b-2, f-2, j-2
- Farmco Electric Products Co., Inc., h-1, z-1
- J. W. Fecker, Inc., d, e, s-1
- Federal Mfg. & Engrg. Corp., h-1
- Federal Products Corp., m, z, j-1
- Federal Tool Engrg. Co., j-2
- Feedback Controls, Inc., i, r, a-1, r-1, s-1
- Fidelity Amplifier Co., h, s
- Fidelity Instrument Corp., a, f-1, f-2
- Fischer & Porter Co., u, v, l-1, w-1
- Fisher Governor Co., w, a-1, l-1
- Flight Refueling, Inc., u, a-1, l-1, n-1, g-2
- Four Instrument Co., Div.-Sperry Rand Corp., b, i, u, a-1, r-1, s-1
- Furnas Electric Co., a-1, d-1, f-1, l-1
- Galland-Henning Napak Div., x-1
- Gardner Laboratory, Inc., a, y, e-1, g-1
- General Communication Co., l, w-1
- General Devices, Inc., a-2
- General Electric Co., Apparatus Sales Div., n thru u, w, a-1, d-1, e-1, f-1, i-1 thru l-1, a-1, p-1, s-1, u-1, x-1, y-1, z-1, a-2, c-2, d-2, f-2, j-2
- General Electric Co., Computer Dept., i
- General Electric Co., Missile & Space Vehicle Dept., e-1
- General Electric Co., X-Ray Dept., d
- General Electro-Mechanical Corp., s-1, z-1
- General Magnetics, Inc., f-2
- General Precision Lab., Inc., d, e
- G. M. Giannini & Co., Inc., i, j-1, l-1, s-1, f-2, g-2
- Giannini Plossmadyne Corp., d-2
- Gilmore Industries, Inc., i-2
- Good Electronic Corp., z, y-1
- Goodyear Aircraft Corp., r-1
- Cloud S. Gordon Co., w
- Gordan Enterprises, d, e, h-1, a-2
- Graflex Inc., d, e
- Green Rectifier Co., x-1, d-2, f-2
- Grimes Mfg. Co., De Havilland Aircraft of Canada, i, l-1, f-1
- Guided Missile Div.-De Havilland Aircraft of Canada, i, l-1, e-2, f-2
- Gulton Industries, Inc., g, u, z
- Hagan Chemicals & Controls, Inc., g, h, j, l, u, v, y, a-1, g-1, l-1, w-1, x-1, g-2
- Haley Electronics Co., u, a-1, i-1, d-2
- Hamilton Standard, Div.-United Aircraft Corp., i, m, p, v, y, b-1, d-1, i-1, j-1, k-1, m-1, a-1, s-1, x-1, b-2
- Hamilton Watch Co.-Industrial Div., t-1, a-2
- Hammilland Mfg. Co., Inc., a, e, i, k, r, s, t, u, a-1, b-1, l-1
- Hammill-Oahl Div.-General Controls Co., u, a-1
- Hannifin Co., Div.-Parker-Hannifin Corp., u, c-1, l, m-1, x-1
- Hanson-Gorrill-Brien, Inc., a, i-1, s-1, x-1
- Paul Hardean, Inc., t, u, l-1, a-1
- \*A. W. HAYDON CO., THE, d, i, k, p, f-1, a-2**
- Helipot Div.-Beckman Instruments Inc., s-1
- Herlo Engrg. Corp., j-2
- High Vacuum Equipment Corp., x, e-2
- E. Vernon Hill Co., f-2
- Hobbs Mfg. Co., z-1
- Hoffman Electronics Corp., Semiconductor Div., r, i-1, u-1, f-2
- Holley Carburetor Co., v
- Hoover Electric Co., e, f, a, f-1, j-1, k-1, a-1, l-1, x-1, a-2, b-2, e-2, f-2
- Hufford Corp., The, c-1, j-1
- Hughes Tool Co., Aircraft Div., v
- Hughes & Phillips, Inc., i-1
- Hull Corp., d-2
- Walter J. Hyatt Co., The, u, v, r-1
- Hycan Mfg. Co., d, e, h-1, j-1
- Hydro-Power Corp., t thru u, l-1, s-1
- \*HYDRO-AIRE CO., DIV.-CRANE CO., v, w**
- Hydromatics, Inc., u, j-1, l-1
- Imperial Brass Mfg. Co., The, u, m-1
- Industrial Control Co., k, a, f-1, j-1, s-1
- Industrial Engrg. Corp., k-1
- Industrial Instruments Inc., i, t
- Industrial Timer Corp., a-2
- Ingraham Co., The, a-2
- Instrument Development Labs., Inc., i-1, u-1
- Instrumentation Div.-Ampex Corp., a, i
- Instruments Corp., The, y
- Instruments Div.-Phillips Electronics, Inc., n-1
- International Register Co., a-2
- Interstate Engrg. Corp., t
- ITT-Kellogg, d, e, t-1, v-1, a-2
- JEM Electronics Corp., l-1
- Jack & Heintz, Inc., f-1, f-2
- Jansky & Bailey, Inc., r-1
- Javex Electronics, g-2
- Jeto, Inc., f-1
- Jones & Lamson Machine Co., j-1
- Jordan Co., Inc., The, j-1, a-1, s-1, z-1
- Kahn & Co., Inc., x-1

anarr Corp., i-2  
**KEARFOTT CO., INC.**, i, o, f-1, j-1, r-1, s-1.  
 eithley Instruments, Inc., a-1.  
 eisey-Hayes Co., s-1.  
 etaj Dept., Norden Div., United Aircraft Corp., s-1.  
 etard Kidde & Co., Inc., Aviation Div., s-1.  
 etgen Aircraft Div., f, d-1, v-1.  
 etngston Electronics-Div.-Kingston Industries Inc.,  
 ety  
 etney Mfg. Div., The New York Air Brake Co., d-2  
 etzler Aircraft Products Co., u, v, w, a-1.  
 etzo Industries, h, p, u, v, x-1.  
 etzold Kruger Instruments, g, g-1, c-2  
 etzand-Air Inc., d, e, i, n, u, v, z, o-1, j-1, r-1, s-1,  
 a-2  
 etzane Electronics Mfg. Corp., n-1.  
 etzch Corp., a, f-1, a-2, f-2  
 etzear, Inc., b, p, j-1, n-1, o-1, s-1, z-1, b-2  
 etzear, Inc., Grand Rapids Div., b, o, f-1, j-1, r-1, s-1.  
 etzeor Inc., Lear-Romec Div., s-1.  
 etzeds & Northrup Corp., g, h, i, a, t, x, y, a-1, g-1,  
 o-1, w-1, x-1, i-2.  
 etzeland Airborne Products, Div.-American Machine &  
 etzFoundry Co., f-1, f-2  
**WALLACE O. LEONARD, INC.**, i, o-1, l-1, s-1.  
 etzleslie Co., u, v, l-1, d-2  
 etzlibroscope Inc., i  
 etzliquidometer Corp., The, a-1.  
 etzundy Mfg. Corp., c, a, f-1, b-2, e-2  
 etzagnaflex Corp., g, z, e-1.  
 etzagnetic Instrument Co. Inc., f, l, v, a-1, o-1, s-1,  
 y-1.  
 etzognetico, Inc., s-1.  
 etzognetrol, Inc., u, a-1.  
 etzagtrol, Inc., n, j-1, s-1, b-2.  
 etzaco Electronics, Inc., f-1.  
 etzJ. R. Mallory & Co. Inc., a-2, g-2, b-2  
 etzMarquardt Aircraft Co., h, p, w, j-1, k-1, o-1, x-1.  
 etzMasson-Nellan, u, a-1, l-1, w-1, d-2  
 etzMatheson Co., Inc., The, w, l-1.  
 etzL. Maxson Corp., The, u, a-1, t-1.  
 etzMeriam Instrument Co., u  
 etzMerix Chemical Co., g  
 etzMetals & Controls Corp., Spencer Div., m-1.  
 etzMicro Gee Products, Inc., s-1.  
 etzMidwestern Instruments, Inc., a  
 etzMilgo Electronic Corp., i, s-1.  
 etzMinitron Corp., f-2  
 etzInneapolis-Honeywell Regulator Co., Aeronautical  
 Div., b, f, i, p, s, o-1, j-1, s-1.  
 etzInneapolis-Honeywell Regulator Co., Boston Div.,  
 s-1.  
 etzInneapolis-Honeywell Regulator Co., Industrial  
 Div., j, l, s thru v, x, y, a-1, g-1, j-1, l-1, o-1,  
 s-1, w thru z-1, a-2, d-2  
 etzInneapolis-Honeywell Regulator Co., Industrial  
 Product Group, i, l, u thru y, a-1, b-1, g-1, j-1,  
 k-1, l-1, o-1, s-1, u-1, w-1 thru z-1, d-2  
 etzInneapolis-Honeywell Regulator Co., Ordnance Div.,  
 y, u-1, b-2, f-2  
 etzIntrel, Inc., a  
 etzIpsos Research Labs., Inc., s-1.  
 etzJ. Monaghan Co., Inc., l-1.  
 etzInogram Precision Industries, r-1.  
 etzInpro Associates, Inc., m-1.  
 etzInran Instrument Corp., s-1.  
 etzInran Instrument Co., The, p, h-1, i-1, m-1, r-1, s-1.  
 etzIntarola Inc., Military Electronics Div., b, i, j-1,  
 n-1, r-1, s-1, v-1.  
 etzInz Mueller Eng. Co. Inc., o, f-1.  
 etzIllenbach Div. Electric Machinery Mfg. Co., c-1,  
 f-2  
**RC Equipment Corp., d-2**  
 etzGeorge L. Nankervis Co., m, n, o, t, u, s-1, w-1.  
 etzNational Instrument Laboratories, Inc., u  
 etzNational Pneumatic Co., Inc., Holtzer-Cabot Divs.,  
 s-1, g-2, h-2.  
 etzNational Water Control Co., Div.-Cleveland Pneumatic  
 Industries, Inc., p, u, s-1.  
 etzNavigation Computer Corp., i  
 etzNelson Labs., Inc., k  
 etzNetworks Electronic Corp., a, b-1, f-1, m-1, s-1,  
 f-2  
 etzNew England Scientific Instruments Co., y, a-1,  
 f-1, k-1, l-1, s-1, x-1.  
 etzNewark Controls Co., l, w, a-1, l-1, d-2  
 etzNewark Corp., The, l, s-1.  
 etzNorth Atlantic Industries, Inc., s-1.  
 etzNorth Electric Co., e, i, k, k-1, v-1.  
 etzNorthwestern Engrg. Inc., f-1.  
 etzNorthrop Corp., s-1.  
 etzOrwood Controls Unit Detroit Controls Div., g, u, a-1,  
 j-1, l-1, o-1.  
 etzNuclear Products-Erco Div.-ACF Industries, Inc.,  
 i, a-1.  
 etzOwl Nurches Co., a-2  
 etzP.W.-Jordan, a-1, l-1.  
 etzOhio Semiconductors, Inc., i, k-1, s-1, f-2  
 etzOmni Corp., The, l, a-1, w-1.  
 etzOji-Dyne, Inc., t  
 etzOxis Elevator Co., Electronic Div., s-1.  
 etzOxygen Equipment & Service Co.  
 etzOzone Metal Products Corp., r-1, u-1.  
 etzPacific Scientific Co., x, z-1.  
**PACKARD-BELL ELECTRONICS CORP.**, i  
 etzApesch & Kolstad, Inc., x  
 etzAragon Electric Co., a-2  
 etzArts Engrg. Co., Inc., u, v, w  
 etzAer, Inc., j-2  
 etzAschel Electronics, Inc., z  
 etzAtlico Corp., Government & Industrial Div., b thru e,  
 i, r, n-1, s-1, t-1, v-1, f-2, g-2, h-2

United Control Corp., e, a-1, j-1, l-1, s-1, e-2  
 United Electric Controls Co., p, r, t, s thru y, a-1,  
 c-1, f-1, j-1, k-1, l-1, d-2, e-2  
 United Electrodynamic, Inc., f-2  
 U. S. Science Corp., Div.-Topp Industries, Inc., d, e,  
 k-1, j-1, s-1, a-2, e-2  
 United Transformer Co., f-2  
 Universal Dynamics Corp., y  
 University Loudspeakers, Inc., h-2  
 Vacuum Tube Products, Div.-Hughes Aircraft Co.,  
 o-2, d-2, i-2  
 Variety Aircraft Corp., m-1  
 Vero Mfg. Co., Inc., a, b-1, f-1, j-1, m-1, s-1, x-1, f-2  
 Veeco Vacuum Corp., d-2  
 Vemaline Products Co., a-2  
 Vickers Inc., Div.-Sperry Rand, s-1  
 Victory Engrg. Corp., f, t, a-1  
 Wallace, Inc., o, x-1  
 Waldorf Electronics, Div.-F.C. Huyck & Sons, i, j-1,  
 s-1.  
 Walker Co., k  
 Walham Engrg. Corp., o-2, d-2  
 Waltham Precision Instrument Co., a-2  
 Watertown Div., The New York Air Brake Co., u, l-1,  
 s-1.  
 Waugh Engrg. Co., u, s-1, a-2  
 Webcor, Inc., Government Div., o, i, k, n-1, r-1, a-2,  
 b-2  
 Weighing & Control Components, Inc., y, z-1, i-2  
 West Instrument Corp., x  
 Western Arc Welding, Inc., p, m-1, b-2  
 Western Design Div.-U.S. Industries, Inc., Santa  
 Barbara Div., a, o-2, f-2  
 Westinghouse Air Brake Co., Industrial Products Div.,  
 k-1  
 Westinghouse Electric Corp., o, f-1, o-1, s-1, z-1, e-2,  
 f-2, i-2  
 Weston Hydraulics Ltd.-Sub., Borg-Warner Corp.,  
 l-1, s-1.  
 Weston Instruments, Div.-Daystrom, Inc., q, y, h-1,  
 i-1, l-1.  
 Westronics Inc., a-1, s-1, y-1.  
 Wilcolator Co., The, y  
 G. C. Wilson & Co., i-1, a-2  
 Winder Aircraft Corp., of Florida, f-2  
 Winzen Research Inc., n-1.  
 Warner Electronic Devices, g, j, k, r, y, z, a-1, b-1,  
 h-1, t-1, u-1, w-1, o-2, c-2  
 Zenith Radio Corp., n-1.  
 Zomcor Inc., d, e, h-1.

**CONTROLS, ALARM SYSTEM**

American Electronics, Inc., Taller & Cooper Div.  
 American Machine & Foundry Co., Government  
 Products Group  
 American Research & Mfg. Corp.  
 Assembly Products, Inc.  
 Barker Sales Co.  
 Bristol Co., The  
 Centronix Inc.  
 Cornell Deep Drawing Co., Div.-Lanes Industries  
 Corp.  
 Curtiss-Wright Corp., Electronics Div.  
 Thomas A. Edison Ind. Instrument Div.-McGraw-  
 Edison Corp.  
**\*ETS-HOKIN & GALVAN**  
 Federal Mfg. & Engrg. Corp.  
 Fenwal Inc.  
 Fischer & Porter Co.  
 Globe Automatic Sprinkler Div., The Fyr-Fyter Co.  
 Hamilton Standard, Div.-United Aircraft Corp.  
 Hammarlund Mfg., Co., Inc.  
 Paul Hardeman, Inc.  
 Leeds & Northrup Co.  
 Minneapolis-Honeywell Regulator Co., Industrial  
 Product Group  
**\*MIRAX CHEMICAL PRODUCTS CORP., ELECTRO-  
 MECHANICAL PRODUCTS DIV.**  
 Missouri Research Labs., Inc.  
 Motorola Inc., Military Electronics Div.  
 North Electric Co.  
 Philco Corp., Government & Industrial Div.  
 Photobell Co., Inc.  
 Scaco Controls, Inc.  
 Scam Instrument Corp., The  
 Scientific Instrument Co.  
 Simmonds Accessories, Inc.  
 Southwestern Industrial Electronics Co.  
 Specialty Engrg. & Electronics Co.  
 Sun Electric Corp., Aeronautical Div.  
 Technical Apparatus Builders  
 Thermo Electric Co., Inc.  
 Thompson-Ramo-Wooldrige Products Co., The  
 United Control Corp.  
 United Electric Controls Co.

**CONTROLS, GENERATOR**

a Illumination  
 b Mechanical Overload  
 c Mechanical Switch  
 d Motor & Generator Communications  
 e Motor & Generator, Industrial  
 f Oxygen  
 g X-ray  
 Air Products, Inc., f  
**\*AIRESEARCH MFG. CO., DIV.-THE GARRETT  
 CORP., f**  
 Allis-Chalmers, e  
 American Aeroparts, b  
 American Bosch Arma Corp.

American Electronics, Inc., a, e  
 Aro Equipment Corp., f  
 Atlas Precision Products, Co., b, c  
 Barker Sales Co., d  
 Bendix Aviation Corp., Red Bank Div.  
 Bogue Electric Mfg. Co.  
 Bracke-Seib X-ray Co., Inc., g  
 Bristol Co., The, f  
 Cole-Hershe Co., c  
 Consolidated Diesel Electric Corp., a, d, e  
 Consolidated Diesel Electric Corp., Western Div., e  
 Cornell Deep Drawing Co., Div.-Lanes Industries Corp., c  
 Cutler-Hammer Inc., e  
 Electric Machinery Mfg. Co., e  
 Electric Regulator Corp.  
 Electro-Mechanical Products Co., b, c  
 Electronic Control Corp., g  
 \*ETS-HOKIN & GALVAN, a thru e  
 FXR, Inc., g  
 General Electric Co., Apparatus Sales Div., a, d, e, g  
 General Electric Co., X-ray Dept., g  
 Guided Missile Div.-De Havilland Aircraft of Canada, Ltd.  
 Hoover Electric Co., b, c, d, e  
 Instruments Div.-Philips Electronics, Inc., g  
 Jock & Heintz, Inc.  
 Jeto, Inc., e  
 Kilgen Aircraft Div., a, c  
 Leach Corp., e  
 Leland Airborne Products, Div.-American Machine & Foundry Co.  
 Motoresearch Co.  
 Heinz Mueller Eng. Co., Inc., d, e  
 Mullenbach Div.-Electric Machinery Mfg. Co., e  
 National Pneumatic Co., Inc., Holtzer-Cobot Div., d, e  
 Overload Control Co., b  
 Oxygen Equipment & Service Co., f  
 PIC Design Corp., Sub.-Benrus Watch Co., Inc., b  
 Ports Engrg. Co., Inc., f  
 Picker X-ray Corp., g  
 Power Supplies Inc., d, e  
 Robot Industries Inc., c  
 Safety Electrical Equipment Corp., e  
 Smith-Morris Corp., g  
 Tolley Corp., The, b thru e  
 Topco Group, Thompson Ramo Wooldridge Inc.  
 Technical Apparatus Builders, a  
 Telectro Industries Corp., b  
 United Electric Controls Co., b, e  
 Voro Mfg. Co., Inc., d, e  
 Wocline, Inc., d, e  
 Westinghouse Electric Corp., e, g  
 Winder Aircraft Corp. of Florida, b, c  
 Winzen Research Inc., f

**CONTROLS, OXYGEN SYSTEMS & SEE OXYGEN SYSTEMS & CONTROLS**

**CONTROLS & STARTING SYSTEMS SEE STARTING SYSTEMS & CONTROLS**

**CONTROLS, SURFACE FINISH**

American Research & Mfg. Corp.  
 Brush Instruments, Div.-Clevite Corp.  
 Cleveland Instrument Co.  
 \*ENGIS EQUIPMENT CO.  
 General Electric Co., Apparatus Sales Div.  
 Micrometrical Fg. Co.  
 Sel-Rex Corp.

**CONTROLS & SYSTEMS, PNEUMATIC SEE PNEUMATIC CONTROLS & SYSTEMS**

**CONTROLS, VIBRATION SEE VIBRATION CONTROLS**

**CONVERTERS**

- a. AC-DC
- b. Analog Digital
- c. DC-AC
- d. Electric
- e. Field Sequential
- f. FM Communications
- g. Frequency, Measurement & Test
- h. Frequency, Power Supplies
- i. Liquid Oxygen
- j. Microwave
- k. RF
- l. Rotary
- m. Voltage
- n. Waveform

ACF Industries Inc., b  
 Accurate Instrument Co., c, h  
 Adler Electronics, Inc., g  
 Aerolab Development Co., a, c, d, f, g, h, m  
 Aerona Mfg. Corp., Baltimore Facility, b  
 Airborne Accessories Corp., a, c  
 Aircom, Inc., j  
 Aircom Inc. of New Jersey, j  
 \*AIRESEARCH MFG. CO., DIV.-THE GARRETT CORP., a, i  
 Airflyte Electronics Co., b  
 Airpix Electronics Inc. Seminole Div., c, g, h  
 Allis-Chalmers, a, c  
 Alto Scientific Co., Inc., a, c  
 Amelco, Inc., a, c, d, f, h, k  
 Amerac, Inc., i

American Electronics, Inc., a, c, h, l  
 American Electronics, Inc., Electric Machinery & Equipment Div., a, c, h, m  
 American Electronics, Inc., Toller & Cooper Div., b  
 American Missile Products Co., Inc., a, b, c  
 American Research & Mfg. Corp., a, c, d, h  
 Analogue Controls, Inc., b  
 Andromedo, Inc., b  
 Applied Science Corp. of Princeton, b  
 \*ARNOLD CORP., a, c, d, h, m  
 Aro Equipment Corp., i  
 Atlas Precision Products, Co., b  
 Austin Co., The, Special Devices Div., b  
 B & H Instrument Co., Inc., b  
 Baldwin Piano Co., The, Industrial Products Div., b  
 Ballantine Labs., Inc., c  
 Beckman Instruments, Inc., Berkeley Div., b, g, j  
 Beckman-Systems Div., a, b, c  
 Bendix Aviation Corp., Eclipse-Pioneer Div., b  
 Bendix Aviation Corp., Pioneer-Central Div., i  
 Bendix Aviation Corp., Red Bank Div., a, c, h, l, m  
 Bendix Aviation Corp., York Div., j  
 \*BENDIX PRODUCTS DIV., BENDIX AVIATION CORP., g  
 Bogue Electric Mfg. Co., a, c, d, h, l  
 Briggs Associates, Inc., b  
 Bristol Co., The, a, b, c  
 Brown Engrg. Co., Inc., c  
 Burroughs Corp., a  
 Carruthers & Fernandez, Inc., a, c, h  
 Centronix Inc., a, b  
 Chalco Engrg. Corp., a, c  
 Christie Electric Corp., a  
 Clifton Precision Products Co., Inc., b  
 Coils-Electronics, a  
 Coleman Engrg. Co., Inc., b  
 G. L. Collins Corp., c  
 Colorado Research Corp., b  
 Computer Engrg. Associates, Inc., a, c  
 Consolidated Avionics Corp., a, b, c, m  
 Consolidated Controls Corp., b  
 Consolidated Diesel Electric Corp., a thru d, l, m  
 Consolidated Diesel Electric Corp., Western Div., a, c, h  
 Consolidated Electrodynamics Corp., b  
 Cornell-Dubilier Electric Corp., a, c  
 Crescent Engrg. & Research Co., a  
 Crosby Laboratories, Inc., f  
 Cubic Corp., a, b, c  
 Curtiss-Wright Electronics Div., IMI Branch, b  
 D. & R. Ltd., l  
 Dalmator Div., Yubo Consolidated Industries, Inc., a, c, d, l, m  
 Data Instruments Div.-Telecomputing Corp., b  
 Datex Corp., b  
 Daven Co., The, a, c, h, k  
 Davenport Mfg. Co., a, b, c, m  
 Demornay-Bonardi, j  
 Di-An Controls, Inc., b  
 Divco-Wayne Electronics, Div.-Divco-Wayne Corp., b  
 Dorsett Labs., Inc., c  
 Dresser Electric Co., a  
 Dresser Industries, Inc., a thru d, h, m  
 Dyche Corp., b  
 Dymec Inc., b  
 Dynamic Devices, Inc., i  
 Eicor Div.-Scranton, c, l  
 Electro Development Corp.  
 Electro Instruments, Inc., a, b, g  
 Electro Products Laboratories, Inc., a, c  
 Electro-Mec Lab. Inc., b  
 Electro-Mechanical Research, Inc., a, f  
 Electronic Assembly Co., Inc., a, c, m  
 Electronic Communications, Inc., b, f, j, k  
 Electronic Research Associates, Inc., a, c, h  
 Electronic Specialty Co., a, c  
 Emerson Electric Mfg. Co., The, Electronics & Avionics Div., b  
 Engineered Magnetics, Div.-Gulton Industries, Inc., a  
 Entron, Inc., g, k  
 Ero Electric Corp., c  
 FXR, Inc., j, k, n  
 Ferratron Electronics Co., Inc., a, c, k, m  
 Fischer & Porter Co., b  
 Ford Instrument Co., Div.-Sperry Rand Corps., b  
 Freed Transformer Co., Inc., a, c  
 General Devices, Inc., l  
 General Electric Co., Apparatus Sales Div., a, c, d, h, k, l, m  
 General Magnetics, Inc., c  
 General Photo Products Co., Inc., a  
 General Precision Lab. Inc., b  
 Georator Corp., a, d, g, h, l  
 Geotronic Labs. Inc., c, f  
 Giannini Plasmodyne Corp., a  
 Gordon Enterprises, a, c, d  
 Green Rectifier Co., a, d, m  
 Guided Missile Div.-De Havilland Aircraft of Canada, Ltd., a, c, h  
 Gulton Industries, Inc., a, b  
 Hollomere Electronics Co., c  
 Hamilton Standard, Div.-United Aircraft Corp., a, c, d, h, m  
 Hertzner Electric Co., The, a, c, d, h, l  
 Hofman Labs., Inc., i  
 Hoover Electric Co., a thru e, g, h, l, m  
 Walter J. Hyatt Co., The, j  
 ITT Labs., b, j  
 Industrial Test Equipment Co., h  
 Instrument Development Labs., Inc., b, e

International Research Associates, b  
 Jack & Heintz, Inc., a, c, d, m  
 Jordan Electronics, Div.-Victoreen Instrument Co.  
 Julie Research Labs., Inc., b  
 Kaiser Aircraft & Electronics, Div.-Kaiser Indust  
 c  
 \*KEARFOTT CO., INC., b, j, l  
 Kin Tel Div.-Cohu Electronics, Inc., b  
 Land-Air Inc., a thru g  
 La Pointe Industries Inc., j, k  
 La Roe Instruments, Inc., a, c, d, h, m  
 Leach Corp., a, c, d, l, m  
 Lear, Inc., a, c, k  
 Leland Airborne Products, Div.-American Machine Foundry Co., a, c, d, h, l, m  
 Libroscope Inc., b  
 Lieco, Inc., j  
 Litton Industries, Inc., b  
 Lundy Mfg. Corp., a, c  
 Mac Lead & Honopoli, Inc., b  
 Magnovox Co., The, c  
 Magnetic Controls Co., a, c, h, m  
 Magnetic Instrument Co., Inc., c  
 Magnetic Research Corp.  
 Magneto, Inc., c  
 Maico Electronics, Inc., b, c  
 Mansson Labs., Inc., k  
 Meridian Metalcraft, Inc., j, k  
 Micrometrical Mfg. Co., g  
 Milgo Electronic Corp., b  
 Minneapolis-Honeywell Regulator Co., Aeronautic b  
 Minneapolis-Honeywell Regulator Co., Baxton Div  
 Minneapolis-Honeywell Regulator Co., Industrial c  
 Minneapolis-Honeywell Regulator Co., Ordnance l  
 a, b, e  
 Model Rectifier Corp., a, m  
 \*MOTOR GENERATOR CORP., a, c  
 Motorola Inc., Military Electronics Div., b, f, j, k  
 Heinz Mueller Eng. Co., Inc., a, c, l  
 Multi-Amp Corp., a  
 NYT Electronics, Inc., a, c, m  
 George L. Nankervis Co., b  
 National Pneumatic Co., Inc., Holtzer-Cobot Div  
 a, b, d thru h, l  
 Networks Electronic Corp., a, c, d  
 Newton Co., The, b  
 Non-Linear Systems, Inc., a, b  
 Ernest Norman Laboratories, g, h  
 North Atlantic Industries, Inc., a  
 Northeast Electronics Corp., c  
 Northrop Corp., a  
 Northrop Corp., The, Nortronics Div., b  
 Norwood Controls Unit Detroit Controls Div., b  
 Ohio Semiconductors, Inc., a, c  
 Pacific Magnetic Corp.  
 \*PACKARD-BELL ELECTRONICS CORP., b, m  
 Palo Alto Engrg. Co., a, c  
 Ralph M. Parsons Co., The, Electronics Div., c  
 Paterson, Moos Div. - Universal Winding Co., In a  
 Perkin Engrg. Corp., a, c, d, m, n  
 Perry Plastics, Inc., h  
 Pesca Products Div.-Borg-Warner Corp., a, c  
 Philco Corp., Government & Industrial Div., a, b, f, g, h, j, k  
 Potter Aeronautical Corp., a, b, g  
 Power Designs Inc., a, c  
 Power Supplies Inc., c, h  
 Power Sources, Inc., a, c, d, h, m, n  
 Power-Tronic Systems Inc., a thru d, m  
 Precision Development Corp., g, h  
 Project Fabricator Corp., i  
 RS Electronics Corp., a, k  
 Radar Design Corp., j, k  
 Radiation, Inc.  
 Radiation Instrument Development Lab., Inc., b  
 Radionatics, Inc., j  
 Ramo-Wooldridge Div., Thompson Ramo Wooldrid  
 Calif., a, b  
 Research Appliance Co., b  
 \*RHEEM MFG. CO., DEFENSE & TECHNICAL PRODUCTS DIV., c, f, k  
 Rixon Electronics, Inc., a, c  
 Ronon & Kunz, Inc., i  
 Royal Industries, Inc., a thru d, g, h, l  
 Safety Electrical Equipment Corp., a, c, d, l, m  
 Sangamo Electric Co., a, c, h, l  
 Sel-Rex Corp., a, d, m  
 Sequoia Wire & Cable Co.-Div.-Mandel Industrie a, c, d, h, m  
 Servomechanisms, Inc., a, b, c, m  
 Singer Mfg. Co., The, Military Products Div., a  
 Small Motors Inc., d  
 Sorensen & Co., Inc., a, h  
 Southwestern Industrial Electronics Co., a thru l  
 Specialty Engrg. & Electronics Co., a  
 Spectrol Electronics Corp., a, c, h, m  
 Standard Electric Time Co., The, c  
 Strong Scott Mfg. Co., The, n  
 Sun Electric Corp., Aeronautical Div., g  
 Syntro, Co., a  
 Systron Corp., a, b, g  
 TKM Electric Corp., a  
 Tolley Corp., The, a, c, d, l  
 Tapco Group, Thompson-Ramo-Wooldridge Inc., l  
 Technical Apparatus Builders, a, c, d, h, l, m, t  
 Telechrome Mfg. Corp., b, e, n  
 Telectro Industries Corp., a, b, c, f, h, n



Telerad Mfg. Corp., j  
 Tel-Instrument Electronics Corp., g, h  
 Terado Co., c, m  
 Thompson-Ramo-Woolridge Products Co., The, b  
 Torwica Electronics, Inc., a, c  
 Trons Electronics, Inc., a, c  
 Tronsonic, Inc., a, c, d, h, m  
 Turbo Machine Co., h, j, k  
 United Control Corp., a, c  
 United Electrodynamics, Inc., a, b, c, g, h, m  
 U. S. Science Corp., Div.-Tapp Industries, Inc., c, e, m  
 Varo Mfg. Co., Inc., a, c, g, h, l, m  
 Vitro Labs., b  
 Waldorf Electronics, Div.-F.C. Huyck & Sons, b  
 Waste King Corp., Technical Products Div., i  
 Waugh Engrg. Co., a, g  
 Wayne-George Corp., b  
 Western Gear Corp., a, c, d, l, m  
 Westinghouse Electric Corp., a, d, j  
 Weston Instruments, Div.-Daysstrom, Inc., a, b  
 Wincharger Corp., Sub.-Zenith Radio Corp., a, c, m  
 Winzen Research Inc., i

**CONVEYORS**

American Conveyor Co.  
 American Machine & Foundry Co., Government Products Group  
 American Monoreil Co., The  
 Albert H. Cayne Equipment Corp.  
 Chain Belt Co.  
 Calson Corp., The  
 Control Engrg. Co., Div. Jervis B. Webb Co.  
 Electronic Control Corp.  
 Goodyear Tire & Rubber Co., The, Aviation Products Div  
 Hapman Conveyors, Inc.  
 Hewitt-Robins, Inc.  
 Jeffrey Mfg. Co., The  
 Link-Belt Co.  
 MacDowell-Walton Companies, The  
 Mercury Tool & Mfg. Corp.  
 Mid-West Metal Products, Inc.  
 Nelson Labs., Inc.  
 Oliver Corp., The - A. B. Forquhar Div.  
 Pyles Industries, Inc.  
 Rapids-Standard Co., Inc., The  
 Ravenna Metal Products, Div.-Standard Screw Co.  
 Edw. Renneberg & Sons Co.  
 Richardson Scale Co.  
 Richards-Wilcox Mfg. Co.  
 Sealmaster Bearing Div., Stephens-Adams Mfg. Co.  
 Smith-Morris Corp.  
 Stephens Adams Mfg. Co., Seal Master Bearing Div.  
 A. T. Stevens Co.  
 Sturtevant Mill Co.  
 Syntron Co.  
 Texas Metal & Mfg. Co., Inc.  
 United States Rubber Co.  
 Western Gear Corp.

**WORKERS, ELECTRONIC**

Anagram Precision Industries  
 Raytheon Mfg. Co.

**SOLANT RADIATORS**

See RADIATORS, COOLANT

**SOLANTS**

Anderson Oil & Chemical Co., Inc.  
 Aero Equipment Corp.  
 George Basch Co., The  
 DOW CORNING CORP.  
 F. Houghton & Co.  
 ISA Research Corp.  
 Minnesota Mining & Mfg. Co.  
 Monsanto Chemical Co. - Organic Chemicals Div.  
 VE Industries

**SOLERS, OIL**

AIRESEARCH MFG. CO., DIV.-THE GARRETT CORP.  
 American Aerosparts  
 BENDIX AVIATION CORP.-HAMILTON DIV.  
 Avion Products, Inc.  
 Avion Engrg. Div., American Brake Shoe Co.  
 Boyle & Roth Mfg. Co., Inc.  
 Avion-Bush Inc.  
 Avion Industries Inc.  
 Ellis & Watts Products, Inc.  
 Avion-Russell Co., The  
 Avion Tool & Mfg. Corp.  
 Anagram Precision Industries  
 Portland Copper & Tank Works Inc.  
 South Wind Div., Stewart Warner Corp.  
 Standard-Thomson Corp., Clifford Mfg. Co. Div.  
 Avion Engrg. Co., The, Missile Products Div.  
 Avion Co., The  
 Avion Mfg., Inc.  
 United Aircraft Products, Inc.  
 Avion Mfg. Co., The  
 Waste King Corp., Technical Products Div.

**SOLING SYSTEMS, ELECTRONIC**

AIRESEARCH MFG. CO., DIV.-THE GARRETT CORP.  
 Aero Equipment Corp.  
 BENDIX AVIATION CORP.-HAMILTON DIV.  
 Bendix Utica Div., Bendix Aviation Corp.  
 Avion-Bush Inc.  
 Avion Industries Inc.  
 Ellis & Watts Products, Inc.  
 Avion Standard, Div.-United Aircraft Corp.  
 G. Hokanson Co., Inc.

Hoover Electric Co.  
 Hussmann Aircraft Div.  
 Lear Inc., Lear-Romec Div.  
 Northrop Corp., The, Nortronics Div.  
 Ohio Semiconductors, Inc.  
 Pesco Products Div.-Borg-Warner Corp.  
 Pneumafilm Corp.  
 South Wind Div., Stewart Warner Corp.  
 Stratos, Div.-Fairchild Engine & Airplane Corp.  
 Task Corp.  
 Trone Co., The  
 United Aircraft Products, Inc.  
 Waste King Corp., Technical Products Div.

**COPPER LAMINATES, PRINTED CIRCUIT**

Adept Industries Inc.  
 Cornish Wire Co. Inc.  
 General Plastics Corp. of New Jersey  
 Minnesota Mining & Mfg. Co.  
 National Vulcanized Fibre Co.  
 New England Laminates Co., Inc.  
 Rogers Corp.  
 St. Regis Paper Co., Panelyte Div.  
 Spaulding Fibre Co., Inc.  
 Taylor Fibre Co.  
 United States Chemical Milling Corp.

**CORD SETS**

Aerolite Electronics Corp.  
 Alden Products Co.  
 American Insulated Wire Corp.  
 W. A. Beauchaine & Sons Inc.  
 Birnbach Radio Co., Inc.  
 Cable Electric Products Inc.  
 Canady Corp.  
 Consolidated Wire & Associated Companies  
 Cooper Industries, Inc.  
 Eagle Electric Mfg. Co. Inc.  
 Electrocraft, Inc.  
 Empire Electronics Co., Inc.  
 Essex Wire Corp.  
 First Electronics Corp., The  
 General Cable Corp.  
 Gordon Enterprises  
 Holyoke Wire & Cable Corp.  
 Koiled Kords Inc.  
 Model Electric Products Corp.  
 Nutron Corp.  
 National Pneumatic Co., Inc., Holtzer-Cabot Divs.  
 North Electric Co.  
 Paraplex Mfg. Co., Inc.  
 Projects Unlimited Inc.  
 Milton Ross Metals Co., The  
 Royal Electric Corp.  
 Sequia Wire & Cable Co.-Div.-Mandel Industries, Inc.  
 Spectra-Strip Wire & Cable Corp.  
 Waldom Electronics Inc.  
 Whitaker Cable Corp.

**CORDS**

- a. Attachment
- b. Dial
- c. Dial Cords & Cables
- d. Lacing
- e. Line
- f. Line Resistance
- g. Patch
- h. Retractable
- i. Shock

Aero Leather Products Co., d  
 American Insulated Wire Corp., a, e  
 American Super-Temperature Wires, Inc., d  
 Associated Engrg. Corp., a, e, g  
 Audio Development Co., g  
 Aviation Textile Associates, d, e, i  
 Belden Mfg. Co., a, e, g  
 Birnbach Radio Co., Inc., a, c thru h  
 Whitney Blake Co., e, h  
 Borden Chemical Co., The, Div.-The Borden Co., Resinate Dept., d  
 Coaxial Connector Co. Inc., a, g  
 Columbian Rope Co., d  
 Consolidated Wire & Associated Companies, a, e, f  
 Cornish Wire Co. Inc., a  
 C. R. Daniels, Inc., i  
 Detronic Industries, g  
 Eagle Electric Mfg. Co. Inc., a, e  
 Empire Electronics Co., Inc., g  
 Ericson Mfg. Co., The, a  
 Essex Wire Corp., a, h  
 First Electronics Corp., The, g  
 General Cable Corp., b, c, g, h  
 General Cement Mfg. Co., Div.-Textron, Inc., b, c  
 General Electric Co., Wire & Cable Dept., a  
 General Insulated Wire Works, a, h  
 Gudebrod Bros. Silk Co., Inc., b, c, d  
 Heminway & Bartlett Mfg. Co., The, d  
 Holyoke Wire & Cable Corp., e, f  
 ITT-Kellogg, b, c, g, h  
 Koiled Kords Inc., h  
 Metals & Controls Corp., General Plate Div.  
 Narrow Fabric Co., The, d  
 National Pneumatic Co., Inc., Holtzer-Cabot Divs., b thru e, g, h  
 New England Electrical Works, Inc., b, c  
 M. M. Newman, Corp., d  
 North Electric Co., b, c, g  
 Paul Nurches Co., g  
 Phalo Plastics Corp., a, e, g  
 Pomona Electronics Co., Inc., g

Milton Ross Metals Co., The, b, c  
 Royal Electric Corp., a, e  
 Schlegel Mfg. Co., d  
 Sequia Wire & Cable Co.-Div.-Mandel Industries, Inc., g  
 Spectra-Strip Wire & Cable Corp., d, g, h  
 Standard Electric Time Co., The, g  
 Stramberg-Carlson Div.-General Dynamics Corp., c, g  
 Top-A-Line Mfg. Co., a  
 Vector Electronic Co., g  
 Virginia Electronics Co., Inc., g  
 Waldom Electronics Inc., e  
 Waltham Horological Corp., f  
 Westwood Cable Corp., g

**CORES**

- a. C Type
- b. Ceramic
- c. Cut
- d. E Type
- e. Ferrite
- f. High Permeability Magnetic
- g. Iron
- h. Laminated
- i. Powdered
- j. Slug Tuning Units
- k. Tape Wound
- l. Toroidal

Aeronautronic Systems, Inc., Sub.-Ford Motor Co., a  
 Aerovox Corp., a, e, f, i, l  
 Airpac Electronics Inc. Seminole Div., l  
 Airtron Inc., Div.-Littion Industries, a  
 Alden Products Co., k  
 American Lava Corp., b  
 Arnold Engrg. Co., The, a, c, d, f thru l  
 Barker Sales Co., a, k, l  
 Cable Electric Products Inc., d, k  
 Carborundum Co., Refractories Div., b  
 Centralab, Div.-Globe-Union, b  
 Chemold Co., h  
 Collins Radio Co., l  
 Continental Con. Co., Inc., a, h  
 Double E Products Co., g, l  
 Dynacor, Inc., f, k, l  
 Electro-Mechanical Products Co., g  
 G-L Electronics Co., Inc., f, h, k, l  
 Glodding, McBean & Co., b  
 Hamilton Watch Co., a  
 Isolantite Mfg. Corp., b  
 Kip Electronics Corp., b  
 Land-Air Inc., g, h  
 Liss Products, Inc., h  
 Louthon Mfg. Co., The, Div.-Ferro Corp., a  
 Magnetic Core Corp., b, f thru i, l  
 Magnetics Inc., f, i, k, l  
 Maryland Lava Co., b  
 Metals & Controls Corp., General Plate Div., h  
 Minnesota Mining & Mfg. Co., b, a  
 Mitronics Inc., b  
 J. J. Monaghan Co., Inc., c  
 Monogram Precision Industries, e, f, h, i  
 Motorola Inc., Military Electronics Div., b, e, i, j, l  
 National Beryllia Corp., b  
 National Moldite Co., a, b, d thru g, i, j, l  
 Newton Co., The, k  
 North Electric Co., f, g, l  
 Norton Co., b  
 Norton Co., New Products Dept., b  
 Polymer Corp., The, f, i, l  
 Q. O. S. Corp., f, g, i, l  
 Radio Cores, Inc., f, g, i, j, l  
 Ravenna Metal Products, Div.-Standard Screw Co., h  
 Raybestos-Monhattan, Inc., Pa., h  
 Research Development Mfg. Inc., g  
 Milton Ross Metals Co., The, k, l  
 Sangoma Electric Co., l  
 Skinner Precision Products, b, e, f  
 Smith-Morris Corp., g  
 Stockpole Carbon Co., d, f  
 Superex Electronics Corp., a  
 Superior Steatite & Ceramic Corp., b  
 Telemeter Magnetics, Inc., b  
 Thermal Refractories Corp., b  
 Vitro Labs., e  
 Wespre Corp., e, f, g, i, l  
 Westinghouse Electric Corp., a, k, l

**COUNTERS**

- a. Computer
- b. Electro-Magnetic
- c. Electronic
- d. Footage
- e. Frequency
- f. Geiger
- g. Impulse
- h. Mechanical
- i. Preset
- j. Proportional
- k. Radiation
- l. Revolution
- m. Scintillation

Abrams Instrument Corp., b, g, i  
 Ad-Yu Electronics Lab., Inc., c, d  
 Aeronautronic Systems, Inc., Sub.-Ford Motor Co., a  
 Airpac Electronics Inc., Seminole Div., b, c, e, g  
 Alwac Corp., a  
 Amerac Inc., l  
 American Electronics, Inc., k, m  
 American Electronics, Inc., American Nuclear Div., f, k

American Electronics, Inc., Toller & Cooper Div.,  
a, b, h  
American Machine & Foundry Co., Government  
Products Group, b thru e, g thru j, l  
Analogic Controls, Inc., a, c  
Anton Electronic Labs., Inc., f, j, k  
Atlas Precision Products, Co., a, h  
Automation Dynamics Corp., b, c, i  
Avion, Inc., g, l  
Baird-Atomic, Inc., c, i, j, k, m  
Baldwin Piano Co., The, Industrial Products Div., a  
Barker & Williamson Inc., l  
Beckman Instruments, Inc., Berkeley Div., c, e, l  
Beckman-Systems Div., a  
Bell & Gossett Co., c  
Bendix Aviation Corp., York Div., a  
Benson-Lehner Corp., g, l  
Beva Lab., Inc., c, g, m  
Ernest E. Blanche & Associates, Inc., a  
Bowmar Instrument Corp., b, h, j, l  
Brown Engrg. Co., Inc., i  
Burroughs Corp., a, b, c  
Burroughs Corp., Electronic Tube Div., c, i  
Burton-Rodgers, Inc., a  
Cameraflex Corp., d  
Centronix Inc., a, c, e, j  
Chicago Aerial Industries, Inc., d  
Clary Dynamics, a, b, c, g, h  
Cleveland Metal Specialties Co., Electronics Div., a  
DBM Research Corp., a, c  
Data Instruments Div.-Telecomputing Corp., i, l  
Davenport Mfg. Co., c  
Di-An Controls, Inc., a, c, e, g, i  
Dresser Industries, Inc., c, l  
Durant Mfg. Co., b, d, e, g, h, i, l  
Dymec Inc., c, e, i  
Elocor, Inc., b  
Elaradio Electronics, c, k  
Electronic Precision Corp., c, e, i  
Electronic Control Corp., c  
Electronic Engrg. Co. of California, a, c, e, g, i  
Electro-Tech Equipment Co., b, d, h, l  
Elgin Micronics Div.-Elgin National Watch Co., b, g, m  
Elgin Micronics, West Coast Div.-Elgin National  
Watch Co., c  
Epic, Inc., b  
Ero Engrg. Inc., k  
Erie Instrumentation, Div. Erie Resistor Corp., c, e, i, l  
Erie Resistor Corp., c, e, g, h, i, l  
Exact Engrg. & Mfg. Inc., a, b, h  
First Electronics Corp., The, b, g, h  
Fischer & Porter Co., c, g  
Fisher Research Lab., Inc., f, k, m  
Fisher Scientific Co., h  
Ford Instrument Co., Div.-Sperry Rand Corp., a, c, h  
Freed Transformer Co., Inc., i  
General Devices, Inc., c, g, h  
General Electric Co., X-Ray Dept., k, m  
General Electro-Mechanical Corp., b, g  
Gordon Enterprises, b, d, e, g, h, i, l  
Hamilton Standard, Div.-Unised Aircraft Corp., b, c  
Hamilton Watch Co.-Industrial Div., b, g  
Harvey-Wells Electronics Inc., a  
\*A. W. HAYDON CO., THE, b, g, j  
Hayward Scientific Glass Corp., m  
Hewlett-Packard Lab., c, e, i, l, m  
Hilburn Electronic Products Co., b, g  
Hoffman Electronics Corp., Semiconductor Div., g  
I-L-S Instrument Div., The Meriam Instrument Co.,  
a, c, d, e, g, i, l  
ITT-Kelllogg, g  
Industrial Winding Machinery Corp., h, i  
Instruments Div.-Philips Electronics, Inc., f, j, k, m  
Interstate Electronics Corp., c, f, g, j, k, m  
\*KEARFOTT CO., INC., a, c, h  
Land-Air Inc., b, g, h, m  
Landis & Gyr Inc., b, g, i, l  
La Roe Instruments, Inc., c, e, f, k  
Lavoie Laboratories Inc., c  
Levinthal Electronic Products, Inc., m  
Lirascope Inc., a  
Magnetic Instrument Co. Inc., m  
Mast Development Co., Inc., b, d, g, h, l  
Menlo Research Lab., f, k, l  
Minneapolis-Honeywell Regulator Co.-Davies Labs.  
Div., d  
Moran Instrument Corp., f, k, m  
Motorola Inc., Military Electronics Div., a, b, c  
Navigation Computer Corp., a, e, i  
Neumade Products Corp., d  
North Electric Co., b, l  
Northeastern Engrg. Inc., e, i  
Nuclear-Chicago Corp., f, g, i, j, k, m  
Orbitron Co., l  
\*PACKARD-BELL ELECTRONICS CORP., a, b, c  
Patterson, Moos Div. - Universal Winding Co., Inc.,  
a, b  
Photocon Research Products, b, h, i  
Pilot Chemicals, Inc., m  
Potter Aeronautical Corp., c, e, g, i, j, l  
Radiation, Inc.  
Radiation Instrument Development Lab., Inc., f, j, k,  
m  
Resdel Engrg. Corp., c  
Richardson Scale Co., c, h  
Royal Industries, Inc., c, g  
Singer Mfg. Co., The, Military Products Div., a, b,  
h, i, j  
Specialty Engrg. & Electronics Co., a, c, e, f, k  
Spectral Electronics Corp., h  
Sperry Gyroscopic Co., Marine Div., Div.-Sperry  
Rand Corp., a

Standard Electric Time Co., The, c, l  
Stanley Aviation Corp., k, m  
Syston Corp., d, e, g, i thru l  
Tally Corp., The, b, h  
Telechrome Mfg. Corp., c, g, h  
Telectro Industries Corp., a, b  
Transistor Electronics Corp., a  
U. S. Industries, Inc.  
Veeder-Root Inc., b, c, d, g thru j, l  
Victor Adding Machine Co., c, g  
Vibro Labs., a  
Wakmann Watch Co. Inc.  
Walkirt Co., a, c, e, g, i, l  
Walsham Precision Instrument Co., b  
Webcor, Inc., Government Div., a, b, c, e, h  
Wilks Precision Instrument Co., Inc., h  
N. Wood Counter Lab., f, j, k, m  
Wright Engrg. Co., h, l

#### COUNTING DEVICES

Abrams Instrument Corp.  
Allegany Instrument Co., Inc.  
American Electronics, Inc., Toller & Cooper Div.  
American Machine & Foundry Co., Government  
Products Group  
Atlas Precision Products, Co.  
Automation Dynamics Corp.  
Baird-Atomic, Inc.  
Beckman Instruments, Inc., Berkeley Div.  
Benson-Lehner Corp.  
Beva Lab., Inc.  
Ernest E. Blanche & Associates, Inc.  
Bowmar Instrument Corp.  
Bristol Co., The  
Brown Engrg. Co., Inc.  
Brush Instruments, Div.-Clevite Corp.  
Centronix Inc.  
Data Instruments Div.-Telecomputing Corp.  
Di-An Controls, Inc.  
Dresser Industries, Inc.  
Durant Mfg. Co.  
Electro Precision Corp.  
Electro Products Laboratories, Inc.  
Electro-Tech Equipment Co.  
Exact Engrg. & Mfg. Inc.  
Fischer & Porter Co.  
General Devices, Inc.  
Gordon Enterprises  
Harvey-Wells Electronics Inc.  
\*A. W. HAYDON CO., THE  
Hewlett-Packard Co.  
Hoffman Electronics Corp., Semiconductor Div.  
I-L-S Instrument Div., The Meriam Instrument Co.  
I-T-E Circuit Breaker Co.  
Instruments Div.-Philips Electronics, Inc.  
\*KEARFOTT CO., INC.  
Landis & Gyr Inc.  
Motorola Inc., Military Electronics Div.  
Northeastern Engrg. Inc.  
Northrop Corp., The, Nortronics Div.  
PIC Design Corp., Sub.-Benrus Watch Co., Inc.  
Photobell Co.  
Potter Aeronautical Corp.  
Royal Industries, Inc.  
Servomechanisms, Inc.  
Specialty Engrg. & Electronics Co.  
Syston Corp.  
Telectro Industries Corp.  
Vibro Labs.  
Walkirt Co.  
Webcor, Inc., Government Div.  
Warner Electronic Devices

#### COUPLERS, DIRECTIONAL, MICROWAVE

Aircorn Inc.  
Aircorn Inc. of New Jersey  
Airtren Inc., Div.-Litton Industries  
American Electronics, Inc.  
American Machine & Foundry Co., Government  
Products Group  
Antenna & Radome Research Associates  
Bogart Mfg. Corp.  
Budd Stanley Co., Inc.  
Bulow Electric Co.  
California Technical Industries, Div.-Textron Inc.  
Cooper Development Corp., Sub.-Marquardt Aircraft  
Co.  
Demornay-Bonardi  
Diamond Antenna & Microwave Corp.  
Douglas Microwave Co., Inc.  
Electronic Communications, Inc.  
Walter J. Hyatt Co., The  
ITT Federal Div., International Telephone &  
Telegraph Corp.  
Indel Prod.-Danbury Knudsen Div. Amphelton-Borg  
Electronics Corp.  
J-V-M Microwave Co.  
\*KEARFOTT CO., INC.  
Lieco, Inc.  
Litton Industries, Inc.  
Litton Industries, Maryland Div.  
W. L. Maxson Corp., The  
Meridian Metalcraft, Inc.  
Microlab  
Microwave Associates, Inc.  
Monogram Precision Industries  
Motorola Inc., Military Electronics Div.  
N. R. K. Mfg. & Engrg. Co.  
Narda Microwave Corp., The  
Omega Labs., Inc.  
Philco Corp., Government & Industrial Div.  
Polytechnic Research & Development Co., Inc.

Portchester Instrument Corp.  
Prodelin Corp.  
Radar Design Corp.  
Radiation, Inc.  
Sage Labs., Inc.  
Sperry Microwave Electronics Co., Div.-Sperry  
Rand Corp.  
Tapco Group, Thompson Ramo Wooldridge Inc.  
Technical Appliance Corp.  
Telectro Industries Corp.  
Telrad Mfg. Corp.  
Turbo Machine Co.  
Varion Associates  
Victor R. F. & Microwave Co.  
Weinschel Engrg.  
Wheeler Laboratories, Inc.

#### COUPLERS & KEYS See KEYS & COUPLERS

#### COUPLERS, TRANSMITTER

Amatam Electronic Hardware Co. Inc.  
Amelco, Inc.  
Collins Radio Co.  
Electronic Communications, Inc.  
E. F. Johnson Co.  
\*KEARFOTT CO., INC.  
Leair, Inc.  
Radiation, Inc.  
Telrad Mfg. Corp.

#### COUPLING & PHASING UNITS

Aircorn Inc.  
Amatam Electronic Hardware Co. Inc.  
\*KEARFOTT CO., INC.  
Motorola Inc., Military Electronics Div.  
Piasceki Aircraft Corp.  
Radiation, Inc.  
Telrad Mfg. Corp.

#### COUPLINGS

a. Flexible  
b. Hydraulic  
c. Microwave  
d. Quick Disconnect  
e. Rigid  
f. Shaft  
g. Shaft, Reducers & Extensions  
h. Shaft, Rigid & Flexible  
i. Tube  
Accurate Electronics Corp., Dept. D, a  
Aerquip Corp., Jackson Div., a, b, d, i  
Aerotec Corp., The, d  
Airterra, b, d  
Aircorn Inc., c  
Aircorn Inc. of New Jersey, c  
Airdome Parts Co., b, i  
\*AIRESEARCH MFG. CO., DIV.-THE GARRETT  
CORP., d  
Airtren Inc., Div.-Litton Industries, a, c, d, e  
Allen Aircraft Products, Inc., d  
Alloy Bellows Inc., a  
Amatam Electronic Hardware Co. Inc., a, e, thru h  
American Machine & Foundry Co., Government  
Products Group, c, d  
Anchor Coupling Co., Inc., b, i  
Arnay Aircraft Associates, Inc., l  
Atlas Precision Products, Co., f  
Avico Corp., a  
\*BALCRANK INC., MACHINE TOOL DIV., b  
Baldwin Mfg. Co. Inc., The, f, g  
Barker & Williamson Inc., a  
Benbow Mfg. Corp., b, d  
Bendix Utica Div., Bendix Aviation Corp., a, d  
Best Aircraft Corp., a, b, d, e, i  
Birnbach Radio Co., Inc., f, g, h  
Bobrick Mfg. Corp., d  
Bogart Mfg. Corp., c  
Boston Gear Works, a  
Breeze Corporations, Inc., a  
Bruning Co., The, b, d, h  
Buckeye Iron & Brass Works, d  
Bud Radio Inc., a, f  
Budd Stanley Co., Inc., c  
Bulow Electric Co., c  
Bushings, Inc., a, f  
Carmac Aviation, a thru i  
Century Fasteners Corp., b, d  
Chain Belt Co., h  
Chase Brass & Copper Co., Inc., i  
Chicago Gasket Co., a  
Coaxial Connector Co., Inc., c, e  
Collins Engrg. Corp., a  
Continental Rubber Works, a  
Control Engrg. Co., Div. Jervis B. Webb Co., d  
Cooper Development Corp., Sub.-Marquardt Aircraft  
Co., d  
Curtis-Wright Corp.-Wright Aeronautical Div., e, f,  
g, i  
Demornay-Bonardi, c  
Dial Products Co., a, h  
Dockendoff & Co. Inc., a, f  
Dodge Mfg. Corp., a, e, f, h  
Douglas Microwave Co., Inc., c  
Dresser Mfg. Div., Dresser Industries, Inc., a, b, c,  
e, f, i  
Elsin Electronics Corp., c  
Essex Mfg. Co., Inc., b, d  
FAE Instrument Corp., a  
Farel Birmingham Co. Inc., a, b

Federal Machine Co. Inc.  
**\*FLEXONICS CORP., AERONAUTICAL DIV., a**  
 Flight Refueling, Inc., a, d, i.  
 Ford Instrument Co., Div.-Sperry Rand Corp., a  
 Gee Engrg. Co., e, h  
 John Gomboc Co., Inc., c  
 Graphite Metallizing Corp., c  
 Gray Co., Inc., b, d  
 B. H. Hadley, Inc., d  
 Hallett Mfg. Co., d  
 Hansen Mfg. Co., The, b, d  
 Helipot Div.-Beckman Instruments Inc., a, e  
 thru h.  
 Hewitt-Robins, Inc., a, e  
 Highland Rim Machine Works Inc., a, d, e, f  
 Holman Labs., Inc., d  
 Holland Hitch Co., d, e  
 Huffard Corp., The, b, d  
 Hupp Aviation Co., e, f, g  
 Walter J. Hyatt Co., The, b, c, d  
 Hydro-Power Corp., b  
 Imperial Brass Mfg. Co., The, i  
 Integral Corp., b, d  
 Jan Horwore Mfg. Co., Inc., e, f, g  
**\*JANITROL AIRCRAFT DIV., SURFACE  
 COMBUSTION CORP., a, d, e, i.**  
 E. F. Johnson Co., a, e thru h.  
 Kahn & Co., Inc., d  
**\*KEARFOOT CO., INC., c**  
 Keystone Electronics Corp., f  
 H. Koch & Sons, a, d, e  
 Koppers Co., Inc., a  
 Koppers Co., Inc., Metal Products Div., a  
 Ladish Co., b, d, e  
 Lear, Inc., h  
 Lear, Inc., Grand Rapids Div., a  
 Lieco, Inc., c, d  
 Link-Belt Co., a, e thru h.  
 Litton Industries, Inc., a, c, d  
 Litton Industries, U. S. Engrg. Co. Div., f  
 Lord Mfg. Co., a, b  
 Lovejoy Flexible Coupling Co., a, e  
 Marmon Div., Aerquip Corp., a, b, d, e  
 W. L. Maxson Corp., The, c  
 Mercury Tool & Mfg. Corp., b, e, i  
 Veridian Metalcraft, Inc., c  
 Metron Instrument Co., a  
 Microwave Associates, Inc., c  
 Monogram Precision Industries, c, d  
 Motorola Inc., Military Electronics Div., c  
 Mueller Brass Co., i  
 N. R. K. Mfg. & Engrg. Co., c, e  
 Norda Microwave Corp., The, c  
 National Unifites Corp., a, b, d, e, i  
 NPW Jordan, d  
 Omega Labs., Inc., c  
 On Mark Couplings, Inc., a thru e, i  
 Orchard Industries, Inc., Actionflex Div., a, b, i  
 Watonna Tool Co., b  
 Ozon Metal Products Corp., b, d  
 PIC Design Corp., Sub.-Bentrus Watch Co., Inc.,  
 a, d thru h.  
 Parker Fittings & Hose Div., Parker-Hannifin Corp.,  
 i  
 Parts Engrg. Co., Inc., a, b, d thru i  
 Philco Corp., Government & Industrial Div., c  
 Piosceki Aircraft Corp., d  
 Pyles Industries, Inc., b, d  
 Radar Design Corp., c  
 Randall Engrg. Corp., b, d  
 Reeves Instrument Corp., h  
 Reflectone Corp., The, a  
 Renbrandt, Inc., a  
 Resistoflex Corp., a, b, e  
 Ronson Hydraulic Units Corp., b  
 Saylor Inc., b, e  
 Seeger Teck Inc., a, b, e, i  
 Sargent Engrg. Corp., d, f, g, h  
 Servomechanisms Inc., Mechanical Div., a, f, g  
 Sier-Bath Gear & Pump Co., Inc., a, d thru h  
 Smith-Morris Corp., d, e  
 Snap-Tite, Inc., b, d  
 Southwest Products Co., a, h  
 Special Instruments Div., British Industries Corp., c  
 Specialty Products Corp., d  
 Stainless Steel Products, Inc., a  
 Sterling Precision Corp., Instrument Div., a, f, g, h  
 W. Stewart Corp., h  
 Strataflex, Inc., a, b, d, i  
 Strong Scott Mfg. Co., The, f, g  
 Superior Pneumatic & Mfg., Inc., d  
 Surface Combustion Corp., e  
 Tapco Group, Thompson Ramo Wooldridge Inc., b, d  
 Telflex Inc., d, e  
 Telerad Mfg. Corp., c  
 Thokol Chemical Corp., d  
 Titeflex, Inc., b, d  
 Turbo Machine Co., c  
 Turbo Products, Inc., b, d  
 U. S. Flexible Metallic Tubing Co., a, d  
 United States Rubber Co., a  
 Variety Aircraft Corp., a, e thru h  
 Vaseline Products Co., a  
 Victor R. F. & Microwave Co., c  
 V-S Fittings Works, Forge & Fittings Div.,  
 H. K. Porter Co., Inc., b  
 Vaseline, Inc., c  
 Vesp Corp., a  
 Western Gear Corp., d, e, f  
 Western International Co., a, c, d  
 W. Wiggins Oil Tool Co. Inc., a thru h  
 Wizenbeek & Staff, Inc., f  
 Wilco Brothers, a

**CRANES**  
 Acco Equipment Div., American Chain & Cable  
 Co., Inc.  
 American Monorail Co., The  
 Austin-Western, Constr. Equip. Div., Baldwin-Lima-  
 Hamilton Corp.  
 Baker Industrial Trucks, Div.-Dtis Elevator Co.  
 Blackhawk Mfg. Co.  
 Breeze Corporations, Inc.  
 Albert H. Cayne Equipment Corp.  
 Chisholm-Moore Hoist Div., Columbus McKinnon  
 Chain Corp.  
 Cleveland Pneumatic Industries, Inc.  
 Conco Engrg. Works  
 Crane Carrier Corp.  
 Detroit Hoist & Machine Co.  
 Elwell-Parker Electric Co., The  
 Link-Belt Co.  
 McDowell-Wellman Companies, The  
 Pacific Coast Engrg. Co.  
 Regent Jack Mfg. Co., Inc.  
 Richards-Wilcox Mfg. Co.  
 Robbins & Myers, Inc., Hoist & Crane Div.  
 Silent Hoist & Crane Co.  
 Unit Crane & Shovel Corp.  
 Western Gear Corp.

**CRANKS**  
**\*BALCRANK INC., MACHINE TOOL DIV.**

**CRASH LOCATOR, BEACONS**  
 See BEACONS, CRASH LOCATOR

**CRYSTAL**  
 a. Crystal Analysis Equipment  
 b. Cartridges  
 c. Communications  
 d. Mounts  
 e. Sockets  
 Airborne Instruments Lab., Div.-Cutler-Hammer, Inc.,  
 a  
 Aircom Inc., d  
 Airtron Inc., Div.-Litton Industries, d  
 American Electronic Labs., Inc., d  
 Augat Brothers, Inc., d, e  
 Baldwin Piano Co., The, Industrial Products Div.,  
 a, c, d  
 Rex Bassett, Inc., c  
 Bulova Watch Co., Electronics Div., c  
 Clark Crystal Co., c, e  
 Demoray-Bonardi, d  
 Douglas Microwave Co., Inc., d  
 General Crystal Co., Inc., c  
 Hunt Corp., The, a, c  
 Instruments Div.-Phillips Electronics, Inc., a  
 Javex Electronics, e  
 E. F. Johnson Co., e  
 Kay Electric Co., a  
 E. B. Lewis Co., Inc., c  
 Lieco, Inc., d  
 Linde Co., Div.-Union Carbide Corp.  
 Mc Coy Electronics Co., c  
 Midland Mfg. Co., Inc., c  
 Mosley Electronics, Inc., c  
 Motorola Inc., Military Electronics Div., a thru e  
 Norda Microwave Corp., The, d  
 Northern Engrg. Laboratories, Inc., c  
 Norton Co., New Products Dept.  
 Philco Corp., Government & Industrial Div., c  
 Piezo Crystal Co., c  
 Polytechnic Research & Development Co., Inc., d  
 Premier Research Labs., Inc., c  
 Radar Design Corp., d  
 Sege Labs., Inc., d  
 Scientific-Atlanta, Inc., d  
 Special Instruments Div., British Industries Corp., d  
 Staver Co., Inc., The, d  
 Sylvania Electric Products Inc., Parts Div., e  
 Volpey Crystal Corp., c  
 Victor R. F. & Microwave Co., d  
 Waldom Electronics Inc., e  
 Wright Electronics Inc., c  
 Wright Engrg. Co., a

**CRYSTAL HOLDERS**  
 See HOLDERS, CRYSTAL

**CRYSTAL OVEN, HEATING, ELEMENTS**  
 See ELEMENTS, HEATING, CRYSTAL OVEN

**CRYSTAL RECTIFIER CHECKERS**  
 See CHECKERS, CRYSTAL RECTIFIER

**CRYSTALS**  
 Baldwin Piano Co., The, Industrial Products Div.  
 Rex Bassett, Inc.  
 Bram Metallurgical & Chemical Co.  
 Bulova Watch Co., Electronics Div.  
 Cambridge Thermionic Corp.  
 Diamond Drill Carbon Co., The  
 Genalex Div.-British Industries Corp.  
 General Electric Co., X-Ray Dept.  
 P. R. Hoffman Co.  
 Hunt Corp., The  
 E. B. Lewis Co., Inc.  
 Linde Co., Div.-Union Carbide  
 Mc Coy Electronics Co.  
 Midland Mfg. Co., Inc.  
 Motorola Inc., Military Electronics Div.  
 Northern Engrg. Laboratories, Inc.  
 Norton Co.

Philco Corp., Government & Industrial Div.  
 Piezo Crystal Co.  
 Premier Research Labs., Inc.  
 Radiation Instrument Development Lab., Inc.  
 Scientific Radio Products, Inc.  
 U. S. Semiconductor Products, Inc.  
 Valpey Crystal Corp.

**CRYSTALS, DIAL**  
 See DIAL CRYSTALS

**CRYSTALS, RAW**  
 Baldwin Piano Co., The, Industrial Products Div.  
 Diamond Drill Carbon Co., The  
 P. R. Hoffman Co.  
 Linde Co., Div.-Union Carbide  
 Motorola Inc., Military Electronics Div.  
 U. S. Semiconductor Products, Inc.  
 Valpey Crystal Corp.

**CRYSTALS, SAPPHIRE**  
 Baldwin Piano Co., The, Industrial Products Div.  
 Bram Metallurgical & Chemical Co.  
 Linde Co., Div.-Union Carbide  
 Teiner Engrg. Corp.  
 Weaver Mfg. Co.

**CUTTERS**  
 Aircraft Tools, Inc.  
 Fulton-Irgon Corp., The  
 Hobbs Mfg. Co.  
 Lovejoy Tool Co., Inc.  
 Norwalk Cutter Sharpening Co.  
 Dnsrud Cutter Mfg. Co., Inc.  
 Dnsrud Machine Works, Inc.  
 Pioneer Industries Div., Almar-York Co., Inc.  
 H. K. Porter Co., Inc.  
 H. P. Preis Engraving Machine Co.  
 Radial Cutter Mfg. Corp.  
 M. H. Rhodes, Inc.

**CYLINDERS**  
 a. Air  
 b. Compressed Gas  
 c. Hydraulic  
 d. Rocket Engine  
 ACF Industries Inc., c, d  
 Adel Precision Products of California, Div.-General  
 Metals Corp., c  
 Aerojet-General Corp., d  
 Alcoa Products, Inc., d  
 Allenoir Corp., a, c  
 American Aerogats, c  
 American Car & Foundry, Div.-ACF Industries, Inc.,  
 d  
 American Machine & Foundry Co., Government  
 Products Group, a thru d  
 American Measurement & Control, Inc., c  
**\*ANNIN CO., THE, a, c**  
 Astronautics Engrg. Co., c  
 Baker Industrial Trucks, Div.-Otis Elevator Co., c  
**\*BENDIX PRODUCTS DIV., BENDIX AVIATION  
 CORP., d**  
 Benton Harbor Engrg. Works, Inc., c  
 Blackhawk Mfg. Co., c  
 E. W. Bliss Co., d  
 Brooks & Perkins, Inc., d  
 Bruning Co., The, c  
 Burklyn Co., a  
 Cadillac Gage Co., c  
**\*CAMERON IRON WORKS, INC., d**  
 Capital City Mfg. Co., c, d  
 Carter Controls, Inc., a, c  
 Chrysler Corp., Defense Operations Div., d  
 Cleveland Pneumatic Industries, Inc., a, b, c  
 Clippord Instrument Lab., Inc., a, c  
 Commercial Shearing & Stamping Co., c  
 Components Corp., a, b  
 Conoflow Corp., a  
 Cornelius Co., The, Aero Div., a  
 Curtiss-Wright Corp.-Wright Aeronautical Div., d  
 D K Mfg. Co., a  
 Doyle & Roth Mfg. Co., Inc., a thru d  
 Dresser Industries, Inc., a thru d  
 Dukes Co., Inc., c  
 Eastern Industries Inc., c  
 Electron Inc., c  
 Electro-Tech Equipment Co., a  
 Golland-Henning Napak Div., a, c  
 Globe Hoist Co., a, c  
 Hannifin Co., Div.-Parker-Hannifin Corp., a, c  
 Haskel Engrg. & Supply Co., a, b, c  
 Hoke Inc., a, b  
 Walter J. Hyatt Co., The, c  
 Hydro-Power Corp., a, c  
 Hydraulic Press Mfg. Co., The, Div.-Koehring Co.,  
 a, c  
 Integral Corp., c  
 Intercontinental Mfg. Co., Inc., d  
 Interstate Engrg. Corp., c  
 Kahn & Co., Inc., a  
 Kaiser Metal Products, Inc. - Fleetwings Div., d  
 M. W. Kellogg Co., The, d  
 Walter Kiddle & Co., Inc., Aviation Div., a, b  
 Lamtex Industries, Inc., a thru d  
 Lear, Inc., a, c  
 Leden Inc., a, c  
**\*LYCOMING DIV., AVCO MFG. CORP., d**  
 Machine Products Div., New Haven Trap Rock Co., d  
 Matheson Co., Inc., The, a, b

McDowell-Wellman Companies, The, a, c.  
Menasco Mfg. Co., a, b, c  
Mercury Tool & Mfg. Corp., c, d  
Minnesota Mining & Mfg. Co., b, d  
Monogram Precision Industries, a thru d  
National Pneumatic Co., Inc., Holtzer-Cabat Divs., a  
National Tube Div., United States Steel Corp., a, b  
Newbrook Machine Corp., d  
Newton Hydraulic Tooling Co., c  
Norris-Thermador Corp., b, c, d  
Oliver Corp., The, c  
Ortman-Miller Machine Co., Inc., a, c  
Dzotona Tool Co., c  
Dzote Metal Products Corp., a, c  
Pioneer Tool & Engrg. Co., c  
Pressed Steel Tank Co., a thru d  
Reaction Motors Div., Thiokol Chem. Corp., d  
Red Lion Cabinet Co., Redco Tool Div., c, d  
Regent Jack Mfg. Co., Inc., c  
Republic Mfg. Co., c

**\*RHEEM MFG. CO., DEFENSE & TECHNICAL PRODUCTS DIV., d**

Rivett Lathe & Grinder Inc., a, c  
Ranson Hydraulic Units Corp., a thru d  
Rotary Lift Co., Div.-Dover Corp., c  
Rotex Punch Co., Inc., a, b, c  
Ryan Aeronautical Co., d  
S-P Mfg. Corp., The, a, c  
Sanacor Corp., c  
Sargent Engrg. Corp., a, b, c  
A. O. Smith Corp., b, d  
Smith-Morris Corp., a, c, d  
Strong Scott Mfg. Co., The, d  
Tapco Group, Thompson Ramo Wooldridge Inc., c, d  
Taylor Winfield Corp., a  
Twig Industries, d  
United Aircraft Products, Inc., c  
Vickers Inc., Marine & Ordnance Dept., Machinery Hydraulics Div., c, a, b, c  
Waste King Corp., Technical Products Div., d  
Weaver Mfg., Co., c  
Weston Hydraulics Ltd.-Sub., Borg-Warner Corp., a, b, c  
Wheland Co., The, d  
Wickfield, Inc., c  
Wise Aerodraulics, Inc., c  
Worcester Pressed Steel Co., b

**DAMPERS, CDNTROL**

Anchor Metal Spinning Co., The  
Chandler Evans Corp.  
Clemco Aero Products, Inc.  
Cleveland Pneumatic Industries, Inc.  
Federal Shock Mount Corp.-Div. The Korfund Co., Inc.  
Ford Instrument Co., Div.-Sperry Rand Corp.  
**\*HOUDAILLE INDUSTRIES, INC., BUFFALO HYDRAULICS DIV.**  
Korda Industries  
Lear, Inc.  
Lear, Inc., Grand Rapids Div.  
Lundy Mfg. Corp.  
Lyndon Aircraft, Inc.  
Minneapolis-Honeywell Regulator Co., Aeronautical Div.  
Minneapolis-Honeywell Regulator Co., Industrial Div.  
Monogram Precision Industries  
Dzote Metal Products Corp.  
Edw. Renneburg & Sons Co.  
Ryan Aeronautical Co.  
Sargent Engrg. Corp.  
Secso Mfg., Inc.  
Weston Hydraulics Ltd.-Sub., Borg-Warner Corp.

**DAMPERS, PULSATION**

Anchor Metal Spinning Co., The  
Barrett-Christie Co.  
Cleveland Pneumatic Industries, Inc.  
Consolidated Controls Corp.  
Consolidated Diesel Electric Corp.  
**\*DOW CORNING CORP.**  
Dunbar-Kapple Inc.-Aircraft Components Div.  
Korda Industries  
Lyndon Aircraft, Inc.  
Monogram Precision Industries  
National Engrg. Products, Inc.  
Dzote Metal Products Corp.  
Parker Fittings & Hose Div., Parker-Hannifin Corp.  
Edw. Renneburg & Sons Co.  
Sargent Engrg. Corp.  
A. U. Stone & Co., Inc.

**DAMPERS, VIBRATION & SHIMMY**

Actuation Research Corp.  
American Aeroparts  
Anacoando Metal Hose Div., The American Brass Co.  
Anchor Metal Spinning Co., The  
Clemco Aero Products, Inc.  
Cleveland Pneumatic Industries, Inc.  
**\*DOW CORNING CORP.**  
Federal Shock Mount Corp.-Div. The Korfund Co., Inc.  
General Electric Co., Metallurgical Products Dept.  
B. F. Goodrich Industrial Products Co.  
**\*HOUDAILLE INDUSTRIES, INC., BUFFALO HYDRAULICS DIV.**  
Huntington Rubber Mills  
Hydra-Power Corp.  
J. W. Johnson & Co., Inc.  
Korda Industries

Lord Mfg. Co.  
Lyndon Aircraft, Inc.  
MB Mfg. Co.  
McDowell-Wellman Companies, The  
**\*MIRAX CHEMICAL PRODUCTS CORP., METAL CONTAINER DIV.**  
Monogram Precision Industries  
George L. Nankster Co.  
Dzote Metal Products Corp.  
Raybestos-Manhattan, Inc.  
Robinson Technical Products, Inc.  
Ranson Hydraulic Units Corp.  
Rubbercraft Corp. of California  
Sargent Engrg. Corp.  
Secso Mfg., Inc.  
A. T. Stevens Co.  
Taylor Devices, Inc.  
Turbo Products, Inc.  
Weston Hydraulics Ltd.-Sub., Borg-Warner Corp.

**DATA**

a. Recorders, Analog  
b. Recorders, Digital  
c. Recording Equipment  
ACF Industries Inc., a, b, c  
Aeronastronic Systems, Inc., Sub.-Ford Motor Co. b, c  
Airpax Electronics Inc. Seminale Div., b  
Allegory Instrument Co., Inc., a, b, c  
Alwac Corp., b  
American Electronics, Inc., a, b, c  
American Electronics, Inc., Tallier & Cooper Div., a, b, c  
American Machine & Foundry Co., Government Products Group, c  
Atlas Precision Products, Co., a  
**\*AVCO MFG. CORP., CROSLEY DIV.**  
B & F Instruments, Inc., c  
BJ Electronics, Borg-Warner Corp., c  
Barker Sales Co., c  
Beckman Instruments, Inc., Berkeley Div., b  
Bendix Aviation Corp., York Div., a, b  
Benson-Lehner Corp., c  
Ernest E. Blanche & Associates, Inc., b  
Bristol Co., The, a, b, c  
Brush Instruments, Div.-Clevite Corp., a, b, c  
Bulow Electric Co., c  
Centronix Inc., a, b, c  
Century Electronics & Instruments, Inc., a, c  
Clary Dynamics, b  
Consolidated Avionics Corp., c  
Consolidated Electrodynamics Corp., a, b, c  
Cooper Development Corp., Sub.-Marquardt Aircraft Co., c  
Data Instruments Div.-Telecomputing Corp., b  
Data-Control Systems, Inc., a, c  
Datex Corp., b, c  
Datran Electronics, Div.-Mid-Continent Mfg. Co., Inc., b  
Di-An Controls, Inc., b, c  
Oresser Industries, Inc., a, b, c  
Dymec Inc., c  
Edgerton, Garmeshausen & Grier, Inc., c  
Eldorado Electronics, b  
Electro Instruments, Inc., a, b, c  
Electronic Engrg. Co. of California, a, b, c  
Electronic Tube Corp., b  
Elgin Micronics Div.-Elgin National Watch Co., a  
Emerson Electric Mfg. Co., The, Electronics & Avionics Div., a  
Federal Scientific Corp., c  
Fischer & Porter Co., a, b  
Ford Instrument Co., Div.-Sperry Rand Corp., a, b, c  
General Electric Co., Apparatus Sales Div., a, b, c  
General Electric Co., Computer Dept., a, b, c  
General Precision Lab. Inc., c  
G. M. Giannini & Co., Inc., a, b  
Gilmore Industries, Inc., a, b, c  
Gordon Enterprises, c  
Graflex Inc., c  
Hagan Chemicals & Controls, Inc., c  
Haller, Raymond & Brown Inc. Div., Singer Mfg. Co., c  
Hanson-Gorill-Brian, Inc., b  
Walter J. Hyatt Co., The, a  
**\*KEARFOTT CO., INC., a, b, c**  
Lang-Air Inc., c  
Leach Corp., a, b, c  
Leeds & Northrup Co., a, c  
Librascope Inc., a, b  
Litton Industries, Inc., c  
Magnavox Co., The, b  
Magnetic Instrument Co. Inc., a  
Maico Electronics, Inc., a, b, c  
Massa Div.-Cohu Electronics, Inc., a, c  
Micrometrical Mfg. Co., c  
Midwestern Instruments, Inc., a, b, c  
Miles Electronic Corp., a, b, c  
Minneapolis-Honeywell Regulator Co., Davies Labs. Div., a, b, c  
Minneapolis-Honeywell Regulator Co., Industrial Div., a, b, c  
Minneapolis-Honeywell Regulator Co., Industrial Product Group, a, b, c  
F. L. Moseley Co., a, b, c  
Motorola Inc., Military Electronics Div., a, b, c  
New England Scientific Instruments Co., c  
Offner Electronics Inc., a, c  
Philco Corp., Government & Industrial Div., b, c  
Radiation, Inc., a, b, c  
Research Appliance Co., b  
Royal Industries, Inc., a, b, c

Sanborn Co., a, c  
Seiscor Mfg. Co., a, b  
Seytron Engrg., Inc., b, c  
Syraban Corp., a, b, c  
Technitrol Engrg. Co., b, c  
Telchrom Mfg. Corp., a, b, c  
Telectro Industries Corp., a, b, c  
Thompson-Ramo-Wooldridge Products Co., The, a, b, c  
Traid Corp., c  
Varian Associates, a  
Victor Adding Machine Co., b, c  
Vitra Labs., b, c  
Vought Co., c  
Wang Labs., Inc., b  
Waste King Corp., Technical Products Div., a, c  
Wayne-George Corp., b  
Webcor, Inc., Government Div., a, b, c  
Westronics Inc., a

**DECADE BOXES**

Abalan Precision Mfg. Corp.  
Aerovox Corp.  
Anchor Metal Spinning Co., The  
Clorostat Mfg. Co., Inc.  
Clorostat Mfg. Co., Inc.  
Cornell-Dubilier Electric Corp.  
Daven Co., The  
Electro-Measurements Inc.  
Electro-Tech Equipment Co.  
Epic, Inc.  
Fletcher Mfg. Co., Inc.  
The Freed Transformer Co. Inc.  
Industrial Instruments Inc.  
Julie Research Labs., Inc.  
Leeds & Northrup Co.  
Minneapolis-Honeywell Regulator Co., Industrial Div.  
Minneapolis-Honeywell Regulator Co., Industrial Product Group  
New England Scientific Instruments Co.  
Precise Development Corp.  
Projects Unlimited Inc.  
Shallcross Mfg. Co.  
H. W. Sullivan Ltd.  
Telectro Industries Corp.  
Universol Mfg. Co., Inc.

**DECADE VOLTAGE SUPPLIES**  
See VOLTAGE SUPPLIES, DECADE

**DECALCOMANIAS**

Adept Industries Inc.  
W. H. Brady Co.  
Duralith Corp.  
Landsverk Electrometer Co., The  
Meyercord Co.  
Minnesota Mining & Mfg. Co.  
New England Etching & Plating Co., Inc.  
D. A. Schultz Co.  
Scioto Sign Co.  
Topflight Corp.  
E. F. Twomey Co., Inc.

**DECODERS**

ACF Industries Inc.  
Applied Science Corp. of Princeton  
Babcock Radio Engrg., Inc.  
Bendix Aviation Corp., York Div.  
CGS Labs, Inc.  
Di-An Controls, Inc.  
Electronic Instruments, Inc.  
Electronic Communications, Inc.  
Electronic Engrg. Co. of California  
Elgin Micronics Div.-Elgin National Watch Co.  
Haller, Raymond & Brown Inc. Div., Singer Mfg. Co.  
**\*A. W. HAYDON CO., THE**  
Litton Industries, Maryland Div.  
Minneapolis-Honeywell Regulator Co.-Davies Labs. Div.  
Motorola Inc., Military Electronics Div.  
Philco Corp., Government & Industrial Div.  
Radiation, Inc.  
Telectro Industries Corp.  
Tele-Dynamics Inc.  
Vitra Labs.  
Wang Labs., Inc.  
Webcor, Inc., Government Div.  
Wright Engrg. Co.

**DEFLECTOR, PADS & TUBES, BLAST**  
See BLAST DEFLECTOR, PADS & TUBES

**DEFLECTION YOKES**  
See YOKES, DEFLECTION

**DEHUMIDIFIERS**

Accessory Controls & Equipment Corp.  
Aluminum Co. of America  
Associated Engineers, Inc.  
Barium & Chemicals, Inc.  
Bulow Electric Co.  
Damp-Chaser, Inc.  
Desomatic Products, Inc.  
Droyer-Hanson Div., National-U. S. Radiator Corp.  
Driaire, Inc.  
Drymatic Corp.  
Eastern Industries Inc.  
Ellis & Watts Products, Inc.

International Radiant Corp.  
Kohn & Co., Inc.  
Leor, Inc.  
Marla Coil Co.  
**MIRAX CHEMICAL PRODUCTS CORP., METAL CONTAINER DIV.**  
Missimers Inc.  
Pioneer Industries Div., Almar-York Co., Inc.  
Surface Combustion Corp.  
United States Dynamics Corp.  
Universal Dynamics Corp.  
Waldorf Electronics Div.-F. C. Huyck & Sons  
Wenzlau Engrg. Co.  
Winder Aircraft Corp. of Florida

#### DEHYDRATING AGENTS

American Aeroparts  
Associated Engineers, Inc.  
Barium & Chemicals, Inc.  
Bowser, Inc., Defense Dept.  
Chandler Evans Corp.  
Delta Chemical Works, Inc.  
Desomatic Products, Inc.  
Driaire, Inc.  
Fisher Scientific Co.  
Lithium Corp. of America, Inc.  
Metal Hydrides Inc.  
Robbins Aviation, Inc.  
Universal Dynamics Corp.

#### DEHYDRATOR FLUGS

American Aeroparts  
Associated Engineers, Inc.  
Chandler Evans Corp.  
Driaire, Inc.  
Leor, Inc., Grand Rapids Div.  
Robbins Aviation, Inc.  
Universal Dynamics Corp.

#### DEHYDRATORS, AUTOMATIC

American Aeroparts  
Applied Dynamics Corp.  
Associated Engineers, Inc.  
Bowser, Inc., Defense Dept.  
Cincinnati Cleaning & Finishing Machinery  
Cornelius Co., The, Aero Div.  
Desomatic Products, Inc.  
Driaire, Inc.  
Dryomatic Corp.  
Eastern Industries Inc.  
Kahn & Co., Inc.  
Walter Kilde & Co., Inc., Aviation Div.  
Leor, Inc.  
Leor, Inc., Grand Rapids Div.  
Leor, Inc., Lear-Romec Div.  
Robbins Aviation, Inc.  
Selas Corp. of America  
Universal Dynamics Corp.

#### DEHYDRATORS, OXYGEN EQUIPMENT

Aro Equipment Corp.  
Associated Engineers, Inc.  
Bowser, Inc., Defense Dept.  
Desomatic Products, Inc.  
Leor, Inc.  
Mueller Brass Co.  
Robbins Aviation, Inc.  
Universal Dynamics Corp.

#### FLAY LINES

a. Computer  
b. Digital  
c. Distributed-Constant Fixed  
d. Distributed-Constant Variable  
e. Lumped-Constant Fixed  
f. Lumped-Constant Variable  
g. Measurement & Test  
h. Printed Circuit

AMP Inc., a thru f.  
Acton Labs. Inc., g.  
Adept Industries Inc., h.  
Ad-Yu Electronics Lab., Inc., c thru g.  
Aerona Mfg. Corp., Baltimore Facility, d, f.  
Aeronautic Systems, Inc., Sub.-Ford Motor Co.,  
a, b.  
Aitronics International Corp., c, e.  
Alden Products Co., a.  
Andersen Labs., a, b.  
Del Fuse Inc., a, c, d, h.  
Richard D. Brew & Co., Inc., a thru h.  
Burnell & Co., Inc., e, h.  
Cambridge Thermionic Corp., e, f.  
Columbia Technical Corp., a, b, c, e.  
Computer Control Co., Inc., b.  
Cornell-Dubilier Electric Corp.  
Corning Glass Works  
Curtiss-Wright Corp., Electronics Div.  
Data-Control Systems, Inc.  
Jovan Co., The, c, e.  
Dr-An Controls, Inc., b.  
Dietz Design & Mfg. Co., a thru h.  
Danner Scientific Co., a, d.  
Dresser Industries, Inc., a thru f.  
SC Corp., a thru h.  
Errant Electric Inc., a, b, c.  
Illtron Co., Inc., a thru f.  
Lorbes & Wagner, Inc., a, c, e.  
Lorato-Video Labs., Inc., e.  
Lugle-Miller Labs. Inc., c, e.  
Neotronic Labs. Inc., a, e, f, g.

Gudeman Co. of California, Inc., The, Monrovia  
Div., c, e.  
Helipot Div.-Beckman Instruments Inc., d.  
Hewlett-Packard Co., b.  
Instruments for Industry, Inc., g.  
JFD Electronics Corp., a, b, c, e.  
Kay Electric Co., g.  
La Pointe Industries Inc., h.  
Librascope Inc., a.  
Litton Industries, U. S. Engrg. Co., Div., e.  
Monogram Precision Industries, d, f.  
Motorola Inc., Military Electronics Div., a thru  
f, h.  
NYT Electronics, Inc., a, b, c, e, g, h.  
Navigation Computer Corp., b.  
Dribtran Co., Inc., a, e, g.  
PCA Electronics Inc., c thru f.  
**\*PACKARD-BELL ELECTRONICS CORP., a**  
thru f, h.  
Ralph M. Parsons Co., The, Electronics Div.,  
a, c thru g.  
Penn Keystone Corp., h.  
Philco Corp., Government & Industrial Div., a, b, h.  
Precision Circuits, Inc., h.  
Redman Electronics Corp., a, b, e.  
Shallcross Mfg. Co., a thru f.  
Southwestern Industrial Electronics Co., a thru h.  
Technitrol Engrg. Co., a thru f, g.  
Technology Instrument Corp., g.  
Telectro Industries Corp., a, b, e thru h.  
Tobe Deutschmann Corp., a, e, h.  
Transistor Electronics Corp., a.  
Transonic, Inc., e.  
Tucson Instrument Corp., c, e.  
Vanguard Electronics Co., c, e, f.  
Vitro Labs., b.  
Wong Labs., Inc., b.  
Wheeler Electronic Corp., Sub.-Sperry Rand Corp., e.

#### DELAY NETWORKS

Aitronics International Corp.  
American Bosch Arma Corp.  
Andersen Labs.  
Burnell & Co., Inc.  
Daven Co., The  
Dietz Design & Mfg. Co.  
Double E Products Co.  
Dresser Industries, Inc.  
ESC Corp.  
General Electric Co., Apparatus Sales Div.  
Geotronic Labs. Inc.  
JFD Electronics Corp.  
Miralte, Inc.  
Motorola Inc., Military Electronics Div.  
NYT Electronics, Inc.  
Navigation Computer Corp.  
Networks Electronic Corp.  
Dribtran Co., Inc.  
**\*PACKARD-BELL ELECTRONICS CORP.**  
Ralph M. Parsons Co., The, Electronics Div.  
Philco Corp., Government & Industrial Div.  
Servomechanisms, Inc.  
Shallcross Mfg. Co.  
Telectro Industries Corp.  
Tobe Deutschmann Corp.  
Vanguard Electronics Co.

#### DEMAGNETIZERS

R. B. Annis Co.  
Bearing Inspection, Inc.  
Coils-Electronics  
General Electric Co., Apparatus Sales Div.  
Green Rectifier Co.  
Ideal Industries, Inc.  
Kahn & Co., Inc.  
Kinevox Div.-Electromotion Co.  
Magnaflex Corp.  
Modellectric Products Corp.  
Projects Unlimited Inc.  
Robins Industries Corp.  
Taft-Peirce Mfg. Co., The  
Telectro Industries Corp.

#### DEMINERALIZERS & STILLS

See STILLS & DEMINERALIZERS

#### DEMODULATORS, COMPUTER

Airpix Electronics Inc. Seminole Div.  
Andersen Labs.  
Consolidated Diesel Electric Corp.  
Leor, Inc.  
Magnetic Research Corp.  
Motorola Inc., Military Electronics Div.  
Ohio Semiconductor, Inc.  
Radiation, Inc.  
Servomechanisms, Inc.  
Solatron Inc.  
Sperry Farragut Co., Div.-Sperry Rand Corp.  
Telectro Industries Corp.  
Tempo Instrument Inc.

#### DENSITOMETERS, ELECTRONIC

Applied Research Labs., Inc.  
Cooper Development Corp., Sub.-Marquardt Aircraft  
Co.  
Edgerton, Garmeshausen & Grier, Inc.  
NRC Equipment Corp.  
National Spectrographic Labs., Inc.  
Photobell Co., Inc.  
Photovolt Corp.

Potter Aeronautical Corp.  
Weston Instruments, Div.-Daystrom, Inc.

#### DESTRUCTORS

Aerojet-General Corp.  
Atlantic Research Corp.  
Beckman & Whitley, Inc., Missile Products Div.  
Edgerton, Garmeshausen & Grier, Inc.  
Elgin Micronics Div.-Elgin National Watch Co.  
Ensign-Bickford Co., The  
Fulton-Irgan Corp., The  
Gabriel Co., The-Tal Engrg. Co. Div.  
**\*MC CORMICK SELPH ASSOCIATES**  
Olin Mathieson Chemical Corp., Energy Div.  
**\*PROPELLEX CHEMICAL DIV., CHROMALLOY**  
CORP.  
Raymond Engrg. Lab., Inc.  
Thiokol Chemical Corp., Hunter-Bristol Div.  
Walham Engrg. Corp.  
Waste King Corp., Technical Products Div.

#### DESTRUCTORS & ASSOCIATED MECHANISMS

Aerojet-General Corp.  
Aerona Mfg. Corp.  
American Machine & Foundry Co., Government Products  
Group  
Atlantic Research Corp.  
Beckman & Whitley, Inc., Missile Products Div.  
Belock Instrument Corp.  
Cooper Development Corp., Sub.-Marquardt Aircraft  
Group  
Edgerton, Garmeshausen & Grier, Inc.  
Ensign-Bickford Co., The  
Horkey-Moore Associates  
Land-Air Inc.  
Leor, Inc.  
**\*MC CORMICK SELPH ASSOCIATES**  
Dlin Mathieson Chemical Corp., Energy Div.  
Potterson, Moos Div.-Universal Winding Co., Inc.  
RS Electronics Corp.  
Raymond Engrg. Lab., Inc.  
Stanley Aviation Corp.  
Thiokol Chemical Corp., Hunter-Bristol Div.  
U. S. Industries, Inc.  
Walham Engrg. Corp.  
Waste King Corp., Technical Products Div.  
Western Gear Corp.

#### DETECTION SYSTEMS

American Machine & Foundry Co., Government  
Products Group  
Anton Electronic Labs., Inc.  
Bowser, Inc., Defense Dept.  
Consolidated Electrodynamic Corp.  
Dresser Industries, Inc.  
Edgerton, Garmeshausen & Grier, Inc.  
Thomas A. Edison Ind. Instrument Div.-McGraw-  
Edison Co.  
Fenwal Inc.  
Fisher Scientific Co.  
Goodyear Tire & Rubber Co., The, Aviation Products  
Div.  
Land-Air Inc.  
Litton Industries, Maryland Div.  
Mine Safety Appliances Co.  
Miralte, Inc.  
Motorola Inc., Military Electronics Div.  
Philco Corp., Government & Industrial Div.  
Photobell Co., Inc.  
Servomechanisms, Inc.  
Stanley Aviation Corp.  
Telectro Industries Corp.  
U. S. Science Corp., Div.-Topp Industries, Inc.  
Veeco Vacuum Corp.  
Wintronics

#### DETECTORS

a. Crack  
b. Crystal  
c. Detonation  
d. Explosive Gas  
e. Flaw & Defect, Electronic  
f. Impedance  
g. Leak  
h. Magnetic  
i. Metal, Electronic  
j. Monoxide  
k. Null  
l. Null, RF  
m. Radiation  
n. Radiation, Nuclear  
o. Resistance  
p. Scintillation  
q. Smoke  
r. Standing Wave  
s. Vibration  
t. Voltage  
u. Water Leak

Acromag Inc., h.  
Advanced Electronics, Inc., s.  
Airborne Instruments Lab., Div.-Cutler-Hammer,  
Inc., m.  
Aircorn Inc., r.  
Aircon Inc. of New Jersey, r.  
**\*AIRESEARCH MFG. CO. OF ARIZ.**  
Airpix Electronics Inc. Seminole Div., h.  
Allis-Chalmers, i.  
American Aeroparts, s.  
American Electronics, Inc., g, m, n, p.  
American Electronics, Inc., American Nuclear  
Div., g, n, p.

American Electronics, Inc., Toller & Cooper Div., d, j  
 American Research & Mfg. Corp., k, s  
 R. B. Annis Co., h  
 Antenna & Radome Research Associates, b  
 Anton Electronic Labs., Inc., m, n, t  
 \*ARNOUX CORP., a  
 Associated Engineers, Inc., q  
 Associated Research, Inc., o, t  
 Atlantic Research Corp., c  
 BairdAtomic, Inc., d, m, n, p  
 Barber-Colman Co., k  
 Bearing Inspection, Inc., e  
 Beva Lab., Inc., p  
 Branson Instruments, Inc., o, e  
 E. W. Brimley Labs., Inc., i  
 Budd Stanley Co. Inc., r  
 California Technical Industries, Div.-Textron Inc., r  
 Consolidated Electrodynamics Corp., g, s  
 Curtiss-Wright Corp., Electronics Div., n  
 Curtiss-Wright Corp., Princeton Div., e  
 Curtiss-Wright Corp., Research Div., a, g  
 Davenport Mfg. Co., t  
 Davis Instruments, d, g  
 Delsen Corp., e  
 Demornay-Banardi, b, r  
 Device Development Corp., h  
 J. W. Dice Co., a, e, h, i  
 Douglas Microwave Co., Inc., b  
 Dresser Industries, Inc., c, h, n, s  
 Dytronics Co., u  
 Eastman Kodak Co., m, n  
 Edgerton, Germeshausen & Grier, Inc., c, n  
 Thomas A. Edison Ind. Instrument Div.-McGraw-Edison Co., k, a  
 Electro Products Laboratories, Inc., i, s  
 Electro-Measurements Inc., k  
 Electronic Control Corp., e, i, q  
 Electro-Tech Equipment Co., g  
 Elgin Micronics, West Coast Div.-Elgin National Watch Co., m, n  
 Epic, Inc., s  
 Eppley Laboratory, Inc., The, m  
 Ero Engrg. Inc., n  
 ER, Inc., f, r  
 Fenwal Inc., d  
 Ferrotran Electronics Co., Inc., t  
 Fisher Research Lab., Inc., i, n, p, u  
 Fisher Scientific Co., g  
 Freed Transformer Co. Inc., k  
 Gos Appliance Stores, Inc., g  
 General Electric Co., Apparatus Sales Div., g, n, t  
 General Electric Co., X-Ray Dept., m, n, p  
 General Electrodynamics Corp., m  
 General Scientific Equipment Co., d, f, q  
 John Gamba Co., Inc., r  
 Gulton Industries, Inc., e, s  
 Hamilton Standard, Div.-United Aircraft Corp., t  
 Hewlett-Packard Co., l, r  
 High Voltage Engrg. Corp., a  
 E. Vernon Hill & Co., g  
 Hoffman Electronics Corp., Semiconductor Div., d, i, q  
 Hoffman Labs. Div., Hoffman Electronics Corp., m  
 ITT Labs.-Ft. Wayne, l, m, n  
 Industrial Test Equipment Co., k  
 Infrared Industries Inc., m  
 Instruments Div.-Philips Electronics, Inc., m, p  
 International Research & Development Corp., s  
 Jansky & Bailey, Inc., e, l, m  
 Johnson-Williams, Inc., d  
 Land-Air Inc., m, n, p, s  
 Leeds & Northrup Co., k, a, t  
 Levinthal Electronic Products, Inc., p  
 Lieco, Inc., b  
 Lisle Corp., h  
 MB Mfg. Co., s  
 Magnaflex Corp., a, e, g, h, i, u  
 Magnetic Instrument Co. Inc., m, n, p  
 Jas. P. Marsh Corp., g, u  
 Menlo Research Lab., a, b, g, m, n, p, u  
 Meridian Metalcraft, Inc., b, l, r  
 Micrometrical Mfg. Co., s  
 Microwave Associates, Inc., b, r  
 Millites Corp., k  
 Mine Safety Appliances Co., d, g, j  
 Minneapolis-Honeywell Regulator Co., Aeronautical Div., d, i, q  
 Minneapolis-Honeywell Regulator Co., Boston Div., k  
 Minneapolis-Honeywell Regulator Co., Industrial Div., k, m  
 Minneapolis-Honeywell Regulator Co., Industrial Product Group, k, a, t  
 Minneapolis-Honeywell Regulator Co., Ordnance Div., q  
 Motorola Inc., Military Electronics Div., b, i  
 NRC Equipment Corp., g  
 Narda Microwave Corp., The, b  
 National Research Corp., g  
 National Ultrasonic Corp., e  
 Newbrook Machine Corp., a  
 North Atlantic Industries, Inc., k  
 Nuclear Corp. of America, n, p  
 Nuclear-Chicago Corp., m, n, p  
 Ohio Semiconductors, Inc., h  
 Omega Labs., Inc., r  
 Optimized Devices, Inc., t  
 Patterson, Moas Div.-Universal Winding Co., Inc., d, m, n, p  
 Penn Keystone Corp., t

Perkin-Elmer Corp., g, m  
 Peschel Electronics, Inc., e, a, t  
 Photobell Co., Inc., e, q  
 Photomat, Inc., q  
 Pilot Chemicals, Inc., p  
 Patter Aeronautical Corp., g, u  
 Precise Development Corp., p  
 Radar Design Corp., b, l  
 Radiation Instrument Development Lab., Inc., n, p  
 Rinco, Inc., k  
 Sage Labs., Inc., b  
 St. John X-Ray Lab., m, n  
 Scientific-Atlanto, Inc., b, l, r  
 H. H. Scott, Inc., k, s  
 Servomechanisms, Inc., k  
 Shallcross Mfg. Co., k, a  
 Simpson Electric Co., k  
 Special Projects Lab., Food Machinery & Chemical Corp., g  
 Specialty Engrg. & Electronics Co., d, l, m, n  
 Sperry Microwave Electronics Co., Div.-Sperry Rand Corp., f, r  
 Sperry Products, Inc., a, e  
 Stanley Aviation Corp., n, p  
 Strand Engrg. Co., n  
 Tel-Instrument Electronics Corp.  
 Telonic Industries, Inc., b, l  
 Thiokol Chemical Corp., d, i  
 Turco Products, Inc., a, g, u  
 Twenty-First Century Electronics, Inc., e, h, n  
 U. S. Industries, Inc., m  
 Vacuum Tube Products, Div.-Hughes Aircraft Co., g  
 Vorian Associates, g, h  
 Veeco Vacuum Corp., g  
 Victor R. F. & Microwave Co., t  
 Waveline, Inc., q  
 Wevline Engrg., b, f, k, r  
 Weston Instruments, Div.-Doystrom, Inc., e  
 Wheeler Laboratories, Inc., b  
 Warner Electronic Devices, q

#### DEVELOPERS, CHEMICAL

Bios Labs., Inc.  
 E. I. Du Pont de Nemours & Co. Inc.  
 Eastman Kodak Co.  
 Electronic Tube Corp.  
 General Electric Co., X-Ray Dept.  
 Gordon Enterprises  
 Motheson Co., Inc., The  
 National Spectrographic Labs., Inc.  
 Turco Products, Inc.

#### DIAGNOSTIC EQUIPMENT-COMPUTER

American Machine & Foundry Co., Government Products Group  
 Di-An Controls, Inc.  
 General Electric Co., Computer Dept.  
 Land-Air Inc.  
 Motorola Inc., Military Electronics Div.  
 \*PACKARD-BELL ELECTRONICS CORP.  
 Philco Corp., Government & Industrial Div.  
 Transistor Electronics Corp.  
 Vitro Labs.

#### DIAL ACCESS TABS

See TABS, DIAL ACCESS

#### DIAL CRYSTALS

Homalite Corp., The  
 Lancaster Glass Corp.  
 Jas. P. Marsh Corp.  
 Sterling Glass Corp.  
 Sun Electric Corp., Aeronautical Div.  
 Waterbury Companies, Inc.  
 Zenith Optical Laboratory

#### DIAL DRIVE BELTS

See BELTS, DIAL DRIVE

#### DIAL POINTERS

See POINTERS, DIAL

#### DIALS

Ackerman Engravers, Inc.  
 Acramark Co., The  
 Adept Industries Inc.  
 Allied Plastics Supply Corp.  
 Amerac Inc.  
 Atlas Precision Products Co.  
 Birnbach Radio Co., Inc.  
 Borg Equipment Div., Amphenol-Borg Electronics Corp.  
 W. H. Brady Co.  
 Canadian Radium & Uranium Corp.  
 Carmody Corp.  
 Cann-Craft Co.  
 Croname Inc.  
 Henry G. Dietz Co., Inc.  
 Duralith Corp.  
 Electrical Insulation Co., Inc.  
 Eljay Corp.  
 Emeloid Co., Inc., The  
 Emerson Plastics Corp.  
 Etched Products Corp.  
 General Communication Co.  
 Helipot Div.-Beckman Instruments Inc.  
 Homalite Corp., The  
 Industrial Engravers, Inc.

E. F. Johnson Co.  
 Jas. P. Marsh Corp.  
 Maryland Etching Co. Inc.  
 Mica Insulator Div.-Minnesota Mining & Mfg., Co.  
 Miller Dial & Nameplate Co.  
 New England Etching & Plating Co., Inc.  
 North Electric Co.  
 PIC Design Corp., Sub.-Benrus Watch Co., Inc.  
 Panel Engrg. Corp.  
 Park Nameplate Co., Inc.  
 Plasteck, Inc.  
 Q-Circuits, Div.-Etching Co. of Calif.  
 Scientific Instrument Co.  
 Servomechanisms, Inc., Mechotrol Div.  
 Sterling Glass Corp.  
 Sun Dial Corp.  
 Sun Electric Corp., Aeronautical Div.  
 Technology Instrument Corp.  
 Teiner Engrg. Corp.  
 United States Radium Corp.  
 Vemaline Products Co.  
 Virginia Plak Co.  
 Waldom Electronics Inc.  
 Wilks Precision Instrument Co., Inc.

#### DIALS, COMPLETE

Ackerman Engravers, Inc.  
 Acramark Co., The  
 Adept Industries Inc.  
 Atlas Precision Products Co.  
 Borg Equipment Div., Amphenol-Borg Electronics Corp.  
 Canadian Radium & Uranium Corp.  
 Carmody Corp.  
 Dayton Aviation Radio & Equipment Corp.  
 Electrical Insulation Co., Inc.  
 Eljay Corp.  
 Etched Products Corp.  
 Helipot Div.-Beckman Instruments Inc.  
 Homalite Corp., The  
 E. F. Johnson Co.  
 Jas. P. Marsh Corp.  
 Maryland Etching Co. Inc.  
 Miller Dial & Nameplate Co.  
 New England Etching & Plating Co., Inc.  
 North Electric Co.  
 Pic Design Corp., Sub.-Benrus Watch Co., Inc.  
 Panel Engrg. Corp.  
 Scientific Instrument Co.  
 Servomechanisms, Inc., Mechotrol Div.  
 Sun Dial Corp.  
 Sun Electric Corp., Aeronautical Div.  
 Theta Instrument Corp.  
 Vemaline Products Co.  
 Waldom Electronics Inc.  
 Waterbury Companies, Inc.  
 Wilks Precision Instrument Co., Inc.

#### DIALS, INSTRUMENT

Ackerman Engravers, Inc.  
 Adept Industries Inc.  
 Aero Gasket Corp.  
 Aero-lite Electronics Corp.  
 Atlas Precision Products Co.  
 Borg Equipment Div., Amphenol-Borg Electronics Corp.  
 Carmody Corp.  
 Croname Inc.  
 Duralith Corp.  
 Electrical Insulation Co., Inc.  
 Eljay Corp.  
 Emeloid Co., Inc., The  
 Etched Products Corp.  
 Graflex Inc.  
 Helipot Div.-Beckman Instruments Inc.  
 Homalite Corp., The  
 Industrial Engravers, Inc.  
 E. F. Johnson Co.  
 Kerrco Products  
 Jas. P. Marsh Corp.  
 Miller Dial & Nameplate Co.  
 New England Etching & Plating Co., Inc.  
 North Electric Co.  
 PIC Design Corp., Sub.-Benrus Watch Co., Inc.  
 Panel Engrg. Corp.  
 Plasteck, Inc.  
 Reeves Instrument Corp.  
 Scientific Instrument Co.  
 Servomechanisms, Inc., Mechotrol Div.  
 Smith-Morris Corp.  
 Sterling Glass Corp.  
 Sun Dial Corp.  
 Teiner Engrg. Corp.  
 Theta Instrument Corp.  
 United States Radium Corp.  
 Vemaline Products Co.  
 Waldom Electronics Inc.  
 Wilks Precision Instrument Co., Inc.

#### DIAMOND NEEDLES

See NEEDLES, DIAMOND

#### DIAPHRAGMS, JET ENGINE

Aero Gasket Corp.  
 Anchor Metal Spinning Co., The  
 Bellofram Corp.  
 Chicago Rawhide Mfg. Co.  
 Chicago-Allis Mfg. Corp.  
 Curtiss-Wright Corp.-Wright Aeronautical Div.

Diversey Engrg. Co.  
 Dresser Mfg. Div., Dresser Industries, Inc.  
 Haves Industries, Inc.  
 Joelin Mfg. Co.  
 C. B. Kaupp & Sons, Inc.  
 Kelsey-Hayes Co.  
 Kolcast Industries-Div. Thompson-Ramo-Wooldridge Inc.  
 Mercury Tool & Mfg. Corp.  
 Portland Copper & Tank Works Inc.  
**\*RHEEM MFG. CO., DEFENSE & TECHNICAL PRODUCTS DIV.**  
 Ryan Aeronautical Co.  
 Smith-Morris Corp.  
 Solar Aircraft Co.  
 Topco Group, Thompson-Ramo-Wooldridge Inc.  
 Turbo Products, Inc.  
 United States Rubber Co.  
 Waltham Engrg. Corp.  
 Westinghouse Electric Corp.  
 Wilks Precision Instrument Co., Inc.  
 Zalleo Brothers

**DIAPHRAGMS, JET ENGINE NOZZLE**

Aerolab Development Co.  
 Badger Die Casting Corp.  
 Christie Machine Works  
 Curtiss-Wright Corp.-Wright Aeronautical Div.  
 Diversey Engrg. Co.  
 Dresser Mfg. Div., Dresser Industries, Inc.  
 Gordon Enterprises  
 Haves Industries, Inc.  
 Jovis Corp.  
 Joelin Mfg. Co.  
 Kolcast Industries-Div. Thompson-Ramo-Wooldridge Inc.  
 Lee Co., The  
 Mercury Tool & Mfg. Corp.  
 Portland Copper & Tank Works Inc.  
**\*RHEEM MFG. CO., DEFENSE & TECHNICAL PRODUCTS DIV.**  
 Ryan Aeronautical Co.  
 Schellens-True Corp.  
 Smith-Morris Corp.  
 Solar Aircraft Co.  
 Topco Group, Thompson-Ramo-Wooldridge Inc.  
 Teiner Engrg. Corp.  
 Turbo Products, Inc.  
 Twigg Industries  
 United States Rubber Co.  
 Waltham Engrg. Corp.  
 Westinghouse Electric Corp.  
 Wilks Precision Instrument Co., Inc.

**DIE CASTINGS**

Aluminum Co. of America  
 American Aeroparts  
 Anchar Metal Co. Inc.  
 Belmont Smelting & Refining Works, Inc.  
 Bendix Foundries, Bendix Aviation Corp.  
 Bridgeport Brass Co.  
 Curtiss-Wright Corp.-Wright Aeronautical Div.  
 Division Lead Co.  
 Doehler-Jovis Div., National Lead Co.  
 Dow Chemical Co., The  
 Electric Auto-Lite Co., The  
 Hydro Molding Co., Inc.  
 Kanarr Corp.  
 Minneapolis-Honeywell Regulator Co., Ordnance Div.  
 Minnesota Mining & Mfg. Co.  
 National Pneumatic Co., Inc., Holtzer-Cabot Divs.  
 Milton Ross Metals Co., The  
 Stanley-Judd Div., The Stanley Works  
 Wayne Pump Co., The, Div.-Symington Wayne Corp.

**ELECTRIC HEATING EQUIPMENT**

Astravoc Corp.  
 Erdao Engrg. Corp.  
 Firth Sterling Inc.  
 Furone Plastics, Inc.  
 General Electrodynamics Corp.  
 Induction Heating Corp.  
 Integrated Mica Corp.  
 Reeve Electronics, Inc.  
 Resdel Engrg. Corp.  
 Sherman Industrial Electronics, Div.-Engrg. Design Inc.  
 Telectro Industries Corp.  
 Westinghouse Electric Corp.  
 Young Brothers Co.

**IES**

ACF Industries Inc.  
 Abalon Precision Mfg. Corp.  
 Accurate Electronics Corp., Dept. D  
 Acromark Co., The  
 Amatonic Electronic Hardware Co. Inc.  
 American Cor & Foundry, Div.-ACF Industries, Inc.  
 Bergen Carbide Co.  
 E. W. Bliss Co.  
 Brown Engrg. Co., Inc.  
 California Spring Co., Inc.  
 Capitol City Mfg. Co.  
 Clark-Aiken Co., The  
 East Dayton Tool & Die Co., The  
 Electro-Mechanical Products Co.  
 Forsberg Mfg. Co., The  
 Furone Plastics, Inc.  
 GAR Mfg. Corp.

Greenfield Tap & Die, Div.-United-Greenfield Corp.  
 Lemit Engrg. Co., Inc.  
 Mercury Tool & Mfg. Corp.  
 Metal Carbides Corp.  
 Metal-Glass Products Co.  
 J. L. Morris Co.  
 D'Neil-Irwin Mfg. Co.  
 Milton Ross Metals Co., The  
 Sheffield Corp., The, Sub.-Bendix Aviation Corp.  
 C. Sjoberg & Son  
 A. O. Smith Corp.  
 Squires Gage Co.  
 Teimer Engrg. Corp.  
 Therm, Inc.  
 Thermal Refractories Corp.  
 Wales Strippit Inc., Unit of Houdaille Industries, Inc.  
 Wayne Foundry & Stamping Co.  
 Wellman Bronze & Aluminum Co.  
 Westem Tool & Mfg. Co., The  
 Wilks Precision Instrument Co., Inc.

**DIFFERENTIAL PRESSURE FLOWMETERS**  
 See FLOWMETERS, DIFFERENTIAL PRESSURE

**DIFFUSERS, GAS TURBINE ENGINE**

Curtiss-Wright Corp., Research Div.  
 Ingersoll Kalomazoo Div., Barga-Warner Corp.  
 Kaiser Aircraft & Electronics, Div.-Kaiser Industries Corp.  
**\*RHEEM MFG. CO., DEFENSE & TECHNICAL PRODUCTS DIV.**  
 Ryan Aeronautical Co.  
 Smith-Morris Corp.  
 Solar Aircraft Co.  
 Topco Group, Thompson-Ramo-Wooldridge Inc.  
 Teimer Engrg. Corp.  
 Thermal Refractories Corp.  
 Turbo Products, Inc.  
 Westinghouse Electric Corp.

**DIODES**

a. Crystal  
 b. Germanium  
 c. Microwave Mixer  
 d. Silicon  
 e. Silicon Power  
 American Elite, Inc., b.  
 Audio Devices, Inc.-Rectifier Div., d.  
 Bendix Aviation Corp.-Semiconductor Products, Red Bank Div., e.  
 Bogue Electric Mfg., Co., d.  
 Bradley Semiconductor Corp., a, d, e.  
 CBS-Hytron, Div.-Columbia Broadcasting System, Inc., b, c, d.  
 Clevite Transistor Products, Div.-Clevite Corp., a, b, d.  
 Columbus Electronics Corp., d, e.  
 Eitel-McCullough, Inc.  
 Erie Resistor Corp., b, d.  
 Ferranti Electric Inc., d, e.  
 Finney Co., The, a, b, d.  
 Gahagan Inc., a, b, c.  
 Genalex Div.-British Industries Corp., a thru e.  
 General Transistor Corp., b.  
 Green Rectifier Co.  
 Hoffman Electronics Corp., Semiconductor Div., c, d, e.  
 Hughes Aircraft Co., b, d.  
 International Rectifier Corp., d, e.  
 International Research Associates, e.  
 International Resistance Co.  
 Kemtron Electron Products Inc., a thru e.  
 Microwave Associates, Inc., a, c, d.  
 Minneapolis-Honeywell Regulator Co., Ordnance Div., b.  
 Motorola Inc., Military Electronics Div., a thru e.  
 Narda Microwave Corp., The, c.  
 North American Electronics Inc., d, e.  
 Pacific Semiconductors, Inc., d, e.  
 Philco Corp., Government & Industrial Div., a thru e.  
 Philco Corp., Lansdale Tube Co. Div., b, c, d.  
 Quatron Semiconductor Corp., a, b, d.  
 Roytheon Mfg. Co., a, b, d, e.  
 Sequoia Wire & Cable Co., Div.-Mandel Industries, Inc., d.  
 Shockley Transistor Corp., d.  
 Silicon Transistor Corp., d.  
 Sperry Semiconductor Div., Sperry Rand Corp., d, e.  
 Sylvania Electric Products Inc., Semiconductor Div., a thru d.  
 Syntro Co., d, e.  
 Technical Apparatus Builders, b, d, e.  
 Transiron Electronic Corp., b, d, e.  
 U. S. Science Corp., Div.-Topp Industries, Inc., d.  
 U. S. Semiconductor Products, Inc., d.  
 United States Dynamics Corp., a, b, d, e.  
 Warren Components, Div. El-Tronics, Inc., b.  
 Wesrep Corp., d.  
 Westinghouse Electric Corp., a thru e.

Motorola Inc., Military Electronics Div., a thru e.  
 Narda Microwave Corp., The, c.  
 North American Electronics Inc., d, e.  
 Pacific Semiconductors, Inc., d, e.  
 Philco Corp., Government & Industrial Div., a thru e.  
 Philco Corp., Lansdale Tube Co. Div., b, c, d.  
 Quatron Semiconductor Corp., a, b, d.  
 Roytheon Mfg. Co., a, b, d, e.  
 Sequoia Wire & Cable Co., Div.-Mandel Industries, Inc., d.  
 Shockley Transistor Corp., d.  
 Silicon Transistor Corp., d.  
 Sperry Semiconductor Div., Sperry Rand Corp., d, e.  
 Sylvania Electric Products Inc., Semiconductor Div., a thru d.  
 Syntro Co., d, e.  
 Technical Apparatus Builders, b, d, e.  
 Transiron Electronic Corp., b, d, e.  
 U. S. Science Corp., Div.-Topp Industries, Inc., d.  
 U. S. Semiconductor Products, Inc., d.  
 United States Dynamics Corp., a, b, d, e.  
 Warren Components, Div. El-Tronics, Inc., b.  
 Wesrep Corp., d.  
 Westinghouse Electric Corp., a thru e.

**DIRECTION FINDERS**

Aetna Electronics Corp.  
 Allied International Co.  
**\*AVCO MFG. CORP., CROSLLEY DIV.**  
 Bendix Radio Div., Bendix Aviation Corp.  
 Centronix Inc.  
 Collins Radio Co.  
 Dayton Aviation Radio & Equipment Corp.  
 Emerson Radio & Phonograph Corp.  
 General Devices, Inc.

ITT Federal Div., International Telephone & Telegraph Corp.  
 ITT Labs.  
 Jonsky & Bailey, Inc.  
**\*KEARFOTT CO., INC.**  
 Lane Electronics Mfg. Corp.  
 Lear, Inc.  
 Lear, Inc., Grand Rapids Div.  
 Liftan Industries, Maryland Div.  
 Magnavox Co., The  
 W. L. Maxson Corp., The  
 Motorola Inc., Military Electronics Div.  
 Munston Mfg. & Service, Inc.  
 National Pneumatic Co., Inc., Holtzer-Cabot Divs.  
 Philco Corp., Government & Industrial Div.  
 Precise Development Corp.  
 Roytheon Mfg. Co.  
 Roytheon Mfg. Co., Government Equipment Div.  
 Robot Industries Inc.  
 Royal Industries, Inc.  
 Ryan Aeronautical Co.  
 Servo Corp. of America  
 Sperry Piedmont Co., Div.-Sperry Rand Corp.  
 Telectro Industries Corp.  
 U. S. Science Corp., Div.-Topp Industries, Inc.  
 Waldorf Electronics, Div.-F. C. Huyck & Sons  
 Webcor, Inc., Government Div.

**DIRECTION FINDERS, RADIO**  
 See RADIO DIRECTION FINDERS

**DISCHARGE EQUIPMENT, LOW TEMPERATURE**

Edw. Renneburg & Sons Co.

**DISCHARGERS, STATIC**

American Aeroparts  
 Best Aircraft Corp.  
 Goodyear Tire & Rubber Co., The, Aviation Products Div.

**DISCONNECTS, CONTROL SYSTEMS**

Aerotec Corp., The  
 Alden Products Co.  
 Anton Electronic Labs., Inc.  
 Arrow-Hart & Hegemon Electric Co., The  
 Assembly Products, Inc.  
 Cormac Aviation Components Corp.  
 Dresser Mfg. Div., Dresser Industries, Inc.  
 General Electric Co., Apparatus Sales Div.  
 Hydromatics, Inc.  
 Integral Corp.  
 Lundy Mfg. Corp.  
 Dr. Mark Couplings, Inc.  
 Pyle-National Co., The  
 Reinhold Engrg. & Plastics Co.  
 Stanley Aviation Corp.  
 Western Gear Corp.

**DISCONNECTS, IGNITION SYSTEMS**

Alden Products Co.  
 Anton Electronic Labs., Inc.  
 Auburn Spark Plug Co., Inc.  
 Cole-Hersee Co.  
 Dresser Mfg. Div., Dresser Industries, Inc.  
 Hallett Mfg., Co.  
 Litton Industries, Inc.  
 J. E. Menaugh Co.  
 On Mark Couplings, Inc.  
 Rochester Mfg. Co. Inc.  
 Stanley Aviation Corp.

**DISCRIMINATORS**

Amelco, Inc.  
 Barker & Williamson Inc.  
 Bell & Gossett Co.  
 Bendix-Pacific Div., Bendix Aviation Corp.  
 Beva Lab., Inc.  
 Brush Instruments, Div.-Clevite Corp.  
 Centronix Inc.  
 Collins Radio Co.  
 Data-Control Systems, Inc.  
 Electro-Mechanical Research, Inc.  
 FXR, Inc.  
 Freed Transformer Co. Inc.  
 Hollomare Electronics Co.  
 Lear, Inc.  
 Lear, Inc., Grand Rapids Div.  
 W. L. Maxson Corp., The  
 Meridian Metalcraft, Inc.  
 Minneapolis-Honeywell Regulator Co.-Dovies Labs. Div.  
 Motorola Inc., Military Electronics Div.  
 National Pneumatic Co., Inc., Holtzer-Cabot Divs.  
 Optimized Devices, Inc.  
 Portchester Instrument Corp.  
 Systron Corp.  
 Telectro Industries Corp.  
 Transonic, Inc.

**DISCS, COMPUTER**

Adept Industries Inc.  
 Emeloid Co., Inc., The  
 Manogram Precision Industries  
 Telectro Industries Corp.  
 United States Chemical Milling Corp.

**DISSIPATORS, HEAT**

Bud Rodio Inc.

Eitel-McCullough, Inc.  
Metal Textile Corp., Electronics Div.  
Minnesota Mining & Mfg. Co.  
National Beryllia Corp.  
Edw. Renneburg & Sons Co.  
Staver Co., Inc., The  
Thompson Engrg. Co., The, Missile Products Div.  
Tranter Mfg., Inc.  
United Aircraft Products, Inc.

**DISTANCE MEASURING EQUIPMENT**

\*AVCO MFG. CORP., CROSLLEY DIV.  
Avian, Inc.  
Beaver Precision Products Inc.  
Bendix Radio Div., Bendix Aviation Corp.  
Benson-Lehner Corp.  
Collins Radio Co.  
Communications Research Co.  
Dorsett Labs., Inc.  
Ferranti Electric Inc.  
Ford Instrument Co., Div.-Sperry Rand Corp.  
General Precision Lab., Inc.  
Hazeltine Electronics Div.-Hazeltine Corp.  
Land-Air Inc.  
Lear, Inc.  
Litton Industries, Maryland Div.  
Minneapolis-Honeywell Regulator Co., Aeronautical Div.  
Motorole Inc., Military Electronics Div.  
Northrop Corp., The, Northronics Div.  
Ralph M. Parsons Co., The, Electronics Div.  
Radiation, Inc.  
Ryan Aeronautical Co.

**DISTRIBUTORS, FUEL**

American Bosch Arma Corp.  
\*BENOIX AVIATION CORP., HAMILTON DIV.  
\*BENDIX PRODUCTS DIV., BENDIX AVIATION CORP.  
Chandler Evans Corp.  
Dresser Mfg. Div., Dresser Industries, Inc.  
Korda Industries  
United Aircraft Products, Inc.

**DISTRIBUTORS, IGNITION**

Electric Auto-Lite Co., The  
Gordon Enterprises  
Hallett Mfg., Co.

**OLLIES**

Acco Equipment Div., American Chain & Cable Co., Inc.  
Air Logistics Corp.  
American Machine & Foundry Co., Government Products Group  
American Machine & Foundry Co., Greenwich  
Anchor Metal Spinning Co., The  
Arnolt Corp.  
Associated Engineers, Inc.  
Bil-Jax Inc.  
Blowers Inc.  
Bowser, Inc., Defense Dept.  
Brooks & Perkins, Inc.  
Capital City Mfg. Co., Inc.  
Albert H. Cayne Equipment Corp.  
Champion Co., The  
C. B. Christiansen Co.  
Cleveland Pneumatic Industries, Inc.  
Colonial Aircraft Corp.  
Colson Corp., The  
Columbia Research & Development Corp.  
Consolidated Diesel Electric Corp.  
Consolidated Diesel Electric Corp., Western Div.  
Continental Technical Service, Inc.  
Crane Carrier Corp.  
Cramer Mfg. & Engrg., Inc.  
Eidol Mfg. Co., Inc.  
FWD Corp.  
Fairbanks Co., The  
Gremco, Inc.  
Ludwig Harold Mfg. Co.  
Hufford Corp., The  
Industrial Tools Mfg. Corp., Sub.-Pendleton Tool Industries, Inc.  
Machine Products Div., New Haven Trap Rock Co.  
Magline Inc.  
Marquardt Aircraft Co.  
Mercury Tool & Mfg. Corp.  
\*MIRAX CHEMICAL PRODUCTS CORP., METAL CONTAINER DIV.  
Monogram Precision Industries  
Dpelika Welding, Machine & Supply Inc.  
Ordnance Div.-Food Machinery & Chemical Corp.  
Precision Sheet Metal, Inc.  
R & R Engrg. Co.  
Ravenna Metal Products, Div.-Standard Screw Co.  
Red Lion Cabinet Co., Redco Tool Div.  
Regent Jack Mfg. Co., Inc.  
Roberts Industries Inc.  
Royal Industries, Inc.  
Santa Anita Engrg. Co.  
Schaffer Air Industries, Inc.  
Seamless Products Co., Inc.  
Skyline Products, Inc.  
Technical Service Corp.  
Teiner Engrg. Corp.  
Thiokol Chemical Corp.  
Trailmobile Inc.  
United Mfg. Co., The  
United States Chemical Milling Corp.  
Weaver Mfg. Co.

Welded Construction Inc.  
Albert Wesling & Sons Inc.  
Wheland Co., The  
Wickfield, Inc.

**OOMES, NAVIGATION**  
See NAVIGATION OOMES

**DOSIMETERS**

American Machine & Foundry Co., Government Products Group  
\*BAUSCH & LOMB OPTICAL CO.  
Cambridge Instrument Co., Inc.  
Corning Glass Works  
Eastman Kodak Co.  
FXR, Inc.  
General Electric Co., X-Ray Dept.  
Land-Air Inc.  
Menlo Research Lab.  
Minnesota Mining & Mfg. Co.  
Nuclear-Chicago Corp.  
Paterson, Moss Div. - Universal Winding Co., Inc.  
St. John X-Ray Lab.

**DOWELS**

Allen Mfg. Co.  
Baldwin Mfg. Co. Inc., The  
Capital City Mfg. Co.  
Carbin Products Div.  
\*HARTFORD MACHINE SCREW CO., DIV.-STANDARD SCREW CO.  
Standard Pressed Steel Co.  
Stanley-Judd Div.-The Stanley Works  
Wilmington Fibre Specialty Co.

**DRAFTING EQUIPMENT**

Barber-Colman Co.  
Dalgorukov Mfg. Co.  
E-Z Way Templates  
Emmert Mfg. Co.  
Faber Pencil Co., Eberhard  
Fisher & Crome  
Gardon Enterprises  
Joseph E. Podgor Co., Inc.  
E. F. Twomey Co., Inc.  
Universal Drafting Machine Corp.

**DRAFTING PAPER**

Pic Design Corp., Sub.-Bentus Watch Co., Inc.  
Joseph E. Podgor Co., Inc.

**DRIFTMETERS**

Air Logistics Corp.  
Ryan Aeronautical Co.

**ORILL PRESSES**

Barrett-Christie Co.  
Beaver Precision Products Inc.  
Burg Tool Mfg. Co., Inc.  
Clausing Div.-Atlas Press Co.  
Continental Technical Service, Inc.  
High Speed Hammer Co., Inc., The  
Carl Hirschmann Co., Inc.  
Match & Merryweather Machinery Co., The, Avey Div.  
Joseph T. Ryerson & Son, Inc.  
Sibley Machine & Foundry Corp.  
Transmores Corp.  
Veet Industries

**DRILL PRESSES, PRECISION**

Barrett-Christie Co.  
Beaver Precision Products Inc.  
Burg Tool Mfg. Co., Inc.  
Burgmaster Corp.  
Clausing Div.-Atlas Press Co.  
High Speed Hammer Co., Inc., The  
Carl Hirschmann Co., Inc.  
Louis Levin & Son, Inc.  
Mico Instrument Co.  
Match & Merryweather Machinery Co., The, Avey Div.  
Transmores Corp.  
Veet Industries

**DRILLS, ELECTRIC**

Barrett-Christie Co.  
Black & Decker Mfg. Co., The  
Chicago Pneumatic Tool Co.  
Joseph T. Ryerson & Son, Inc.  
Snap-On Tools Corp.  
Stanley-Judd Div.-The Stanley Works  
U. S. Electrical Tool Co.

**DRILLS, HANO**

Barrett-Christie Co.  
Forsberg Mfg., Co., The  
Gardner-Denver Co.  
Joseph T. Ryerson & Son, Inc.  
Stanley-Judd Div.-The Stanley Works

**DRILLS, TWIST**

Barrett-Christie Co.  
Continental Drill Corp.  
Greenfield Tap & Die, Div.-United-Greenfield Corp.  
Louis Levin & Son, Inc.

New York Twist Drill Co., Inc.  
Joseph T. Ryerson & Son, Inc.  
Serwell Products Co.  
Snap-On-Tools Corp.  
Sphinx-American Co.  
Stanley-Judd Div.-The Stanley Works

**ORIVES**

a. Hydraulic  
b. Small Electric Drive Mechanisms  
c. Tachometer  
d. Torque Tube  
Actuator Products Div., Geartronic Corp., c.  
Adel Precision Products of California, Div.-General Metals Corp., a.  
American Aertparts, a, c.  
American Bosch Arma Corp., a, b.  
American Brake Shoe Co.  
American Machine & Foundry Co., Government Products Group, a.  
American Machine & Foundry Co., Greenwich, a, b, d.  
American Measurement & Control, Inc., a  
Ardmore Products, a.  
Arnolt Corp., a.  
Astronautics Engrg. Co., a.  
Atlas Precision Products Co., b.  
\*BENOIX AVIATION CORP., HAMILTON DIV., a.  
Bendix-Pacific Div., Bendix Aviation Corp., b.  
Bendix Utica Div., Bendix Aviation Corp.  
E. W. Bliss Co., a.  
Breeze Corporations, Inc., b.  
Cadillac Gage Co., a.  
Capital City Mfg. Co., a.  
Conaflow Corp., b.  
Cornelius Co., The, Aero Div., a.  
Crane Carrier Corp., a.  
Curtsiss-Wright Corp., Research Div., b.  
Denison Engrg. Div., American Brake Shoe Co., a.  
Eastern Industries Inc., a.  
Electric Auto-Lite Co., The, a, b.  
Electronic Communications, Inc., b.  
Gobriel Co., The, Gabriel Electronics Div., b.  
General Electric Co., Apparatus Sales Div., a, b, c.  
Globe Industries, Inc., b, c.  
Haskel Engrg. & Supply Co., a.  
\*A. W. HAYDON CO., THE, b, c.  
Hoover Electric Co., b, d.  
Hufford Corp., The, a.  
Walter J. Hyatt Co., The, a, b.  
Hydra-Power Corp., a.  
Insko Co., Div.-Barry Controls Inc., b.  
Integral Corp., a.  
Javelin Aircraft Co. Inc., a, b.  
Jordan Co., Inc., The, b.  
Kelsey-Hayes Co., a.  
Kemp Aero Products, a.  
Lear, Inc., Grand Rapids Div., b.  
Lyndon Aircraft, Inc., b.  
Minneapolis-Honeywell Regulator Co., Ordnance Div., a.  
National Pneumatic Co., Inc., Holtzer-Cobot Divs., b, c.  
Dil-Dyne, Inc., a.  
Pioneer Tool & Engrg. Co., a, b.  
Power-Tronic Systems Inc., b, c.  
Racine Hydraulics & Machinery Inc., a.  
Reflectone Corp., The, b.  
Sargent Engrg. Corp., a, b, d.  
Servomechanisms, Inc., Mechanical Div., b.  
Stross, Div.-Ford Child Engine & Airplane Corp., a.  
Tapco Group, Thompson-Ramo-Wooldridge Inc., a, b.  
Vard Inc., b.  
Variety Aircraft Corp., b.  
Vickers Inc., Div.-Sperry Rand, a, b.  
Vickers Inc., Marine & Ordnance Dept., Machinery Hydraulics Div., a.  
Wacline, Inc., b.  
Washington Machine & Tool Works, Inc., b.  
Waste King Corp., Technical Products Div., b, d.  
Watertown Div., The New York Air Brake Co., a.  
Western Design, Div.-U. S. Industries, Inc.; Santa Barbara Div., b.  
Western Gear Corp., a thru d.  
**DRIVES, CONSTANT SPEED**  
\*LYCOMING DIV., AVCO MFG. CORP.  
**DRIVES, VARIABLE SPEED**  
\*LYCOMING DIV., AVCO MFG. CORP.  
**DROP FORGINGS**  
Aircraft Mechanics, Inc.  
Aluminum Co. of America  
American Aertparts  
American Brake Shoe Co.  
American Car & Foundry, Div.-ACF Industries, Inc.  
Billings & Spencer Co., The  
Bridgeport Brass Co.  
\*CAMERON IRON WORKS, INC.  
Capewell Mfg. Co.  
Consolidated Industries, Inc.  
Corbin Products Div.  
Crucible Steel Co. of America  
Dirilyte Co. of America, Inc.  
Kelsey-Hayes Co.  
Ladish Co.  
Lofstrand Co., The  
Dpelika Welding, Machine & Supply Inc.  
Pettibone Mulliken Corp.  
H. K. Porter Co., Inc.



Rackwell-Standard Corp.  
Solar Aircraft Co.  
Steel Improvement & Forge, The  
Tranvue & Williams Steel Forging Corp.  
Vlchek Tool Co., The  
Wilcox-Crittenden Div., North & Judd Mfg. Co.  
J. H. Williams & Co.

## JCTS, EXHAUST

Aeronca Mfg. Corp.  
American Agile Corp.  
American Tube Bending Co., Inc.  
Anacosta Metal Hose Div., The American Brass Co.  
Anchor Metal Spinning Co., The  
B. H. Aircraft Co., Inc.  
Basic Tool Industries, Inc.  
\*BEATON & CORBIN MFG. CO., THE  
Breeze Corporations, Inc.  
Carmac Aviation  
Colonial Aircraft Corp.  
Components Corp.  
Cromer Mfg. & Engrg., Inc.  
Curtiss-Wright Corp.-Wright Aeronautical Div.  
D K Mfg Co.  
Diversey Engrg. Co.  
Dunbar-Kapelle Inc.-Aircraft Components Div.  
Elzee Metal Products Co., Inc.  
Ferris-Mfg. Co., The  
Fletcher Mfg. Co., Inc., The  
Flexible Metal Hose Mfg. Co.  
Flexible Tubing Corp.  
\*FLEXONICS CORP., AERONAUTICAL DIV.  
Ludwig Harold Mfg. Co.  
Huffard Corp., The  
Hupp Aviation Co.  
Intercontinental Mfg. Co., Inc.  
Kaiser Aircraft & Electronics, Div.-Kaiser Industries Corp.  
Kaiser Metal Products, Inc. - Fleetwings Div.  
Kirk & Blum Mfg. Co., The  
\*LAVELLE AIRCRAFT CORP.  
Langren Aircraft Co., Inc.  
Mercury Tool & Mfg. Corp.  
Monogram Precision Industries  
Normco Mfg. Co.  
Orchard Industries, Inc., Actionflex Div.  
Parts Engrg. Co., Inc.  
Penn-Michigan Mfg. Corp.  
Portland Copper & Tank Works Inc.  
Precision Sheet Metal, Inc.  
Raybestos-Manhattan, Inc., Pa.  
Edw. Renneburg & Sons Co.  
\*RHEEM MFG. CO., DEFENSE & TECHNICAL PRODUCTS DIV.  
C. F. Roark Welding & Engrg. Co., Inc.  
Rahr Aircraft Corp.  
Ryan Aeronautical Co.  
Shaw Metal Products Corp.  
Smith-Morris Corp.  
Solar Aircraft Co.  
Stainless Steel Products, Inc.  
Turbo Products, Inc.  
Twig Industries  
United Aircraft Products, Inc.  
Universal Metal Products Inc.  
Variety Aircraft Corp.  
Waste King Corp., Technical Products Div.  
Wiremold Co., The  
Zippertubing Co., The

## JCTS, FLEXIBLE & COMPRESSIBLE

American Aeroplasts  
American Air Filter Co., Defense Products Div.  
Anacosta Metal Hose Div., The American Brass Co.  
Anchor Metal Spinning Co., The  
\*BEATON & CORBIN MFG. CO., THE  
Blowers Inc.  
Breeze Corporations, Inc.  
Carmac Aviation  
Components Corp.  
Consolidated Diesel Electric Corp.  
Lardo Chemical Corp.  
Cromer Mfg. & Engrg., Inc.  
D K Mfg. Co.  
L. R. Daniels, Inc.  
Jaytan Rubber Co., The  
Dresser Mfg. Div., Dresser Industries, Inc.  
Dunbar-Kapelle Inc.-Aircraft Components Div.  
Flexible Metal Hose Mfg. Co.  
Flexible Tubing Corp.  
\*FLEXONICS CORP., AERONAUTICAL DIV.  
C. F. Goodrich Aviation Products  
Luntington Rubber Mills  
Kaiser Metal Products, Inc. - Fleetwings Div.  
Lofstrand Co., The  
Lone Star Plastics Co., Inc.  
Linnesota Mining & Mfg. Co.  
Monogram Precision Industries  
Orchard Industries, Inc., Actionflex Div.  
Parts Engrg. Co., Inc.  
Precision Sheet Metal, Inc.  
Raybestos-Manhattan, Inc., Pa.  
Reinhold Engrg. & Plastics Co.  
Edw. Renneburg & Sons Co.  
C. F. Roark Welding & Engrg. Co., Inc.  
Red T. Roberts & Co.  
Rubbercraft Corp. of California  
Ryan Aeronautical Co.  
Smith-Morris Corp.  
Solar Aircraft Co.  
Outwest Products Co.

Stainless Steel Products, Inc.  
Standard-Thomson Corp., Clifford Mfg. Co. Div.  
Taylor Electric Inc.  
Turbo Products, Inc.  
United Aircraft Products, Inc.  
U. S. Flexible Metallic Tubing Co.  
United States Rubber Co.  
Waste King Corp., Technical Products Div.  
Wiremold Co., The  
Zippertubing Co., The

## DUCTS, NON-FLEXIBLE

American Aeroplasts  
American Agile Corp.  
American Tube Bending Co., Inc.  
Anchor Metal Spinning Co., The  
B. H. Aircraft Co., Inc.  
\*BEATON & CORBIN MFG. CO., THE  
Carmac Aviation  
Colonial Aircraft Corp.  
Cromer Mfg. & Engrg., Inc.  
D K Mfg. Co.  
Dunbar-Kapelle Inc.-Aircraft Components Div.  
Fletcher Mfg. Co., Inc., The  
Flexible Metal Hose Mfg. Co.  
\*FLEXONICS CORP., AERONAUTICAL DIV.  
Intercontinental Mfg. Co., Inc.  
Kaiser Aircraft & Electronics, Div.-Kaiser Industries Corp.  
Kirk & Blum Mfg. Co., The  
Lomax Industries, Inc.  
Lone Star Plastics Co., Inc.  
Langren Aircraft Co., Inc.  
Mercury Tool & Mfg. Corp.  
Monogram Precision Industries  
Normco Mfg. Co.  
Parts Engrg. Co., Inc.  
Portland Copper & Tank Works Inc.  
Precision Sheet Metal, Inc.  
Reinhold Engrg. & Plastics Co.  
Edw. Renneburg & Sons Co.  
C. F. Roark Welding & Engrg. Co., Inc.  
Rahr Aircraft Corp.  
Ryan Aeronautical Co.  
Shaw Metal Products Corp.  
Silicone Insulation, Inc.  
Stainless Steel Products, Inc.  
Taylor Electric Inc.  
Texas Metal & Mfg. Co., Inc.  
Turbo Products, Inc.  
Twig Industries  
United Aircraft Products, Inc.  
Universal Metal Products Inc.  
Variety Aircraft Corp.  
Waste King Corp., Technical Products Div.  
Wolf Aircraft Products, Inc.

## DUPLEXERS

Aircorn Inc. of New Jersey  
Airtron Inc., Div.-Lifton Industries  
Andrew Corp.  
Budd Stanley Co., Inc.  
Bulow Electric Co.  
Diamond Antenna & Microwave Corp.  
Douglas Microwave Co., Inc.  
Eljay Corp.  
Genalex Div.-British Industries Corp.  
J-V-M Microwave Co.  
\*KEARFOTT CO., INC., MICROWAVE DIV.  
Lieco, Inc.  
Microwave Associates, Inc.  
Monogram Precision Industries  
Motorola Inc., Military Electronics Div.  
N. R. K. Mfg. & Engrg. Co.  
Parchester Instrument Corp.  
Sage Labs., Inc.  
Sperry Microwave Electronics Co., Div.-Sperry Rand Corp.  
Telrad Mfg. Corp.  
Victor R. F. & Microwave Co.  
Waveline, Inc.

## DUST ENCLOSURES

See ENCLOSURES, DUST

## DYNAMOMETERS

American Electronics, Inc., Teller & Cooper Div.  
Consolidated Diesel Electric Corp.  
Dalmator Div., Yuba Consolidated Industries, Inc.  
W. C. Dillon & Co., Inc.  
Eaton Mfg. Co.  
Eder Engrg. Co., Inc.  
General Electric Co., Apparatus Sales Div.  
Hoover Electric Co.  
Hunter Spring Co., Div.-American Machine & Metals, Inc.  
Industrial Engrg. Corp.  
L. A. B. Corp.  
Leeds & Northrup Co.  
Magtrol, Inc.  
George L. Nankervis Co.  
Radiation, Inc.  
Schaevitz Engrg.  
Standard Electric Time Co., The  
Statham Instruments, Inc.  
Talley Corp., The  
Thwing-Albert Instrument Co.

## DYNAMOTORS

American Aeroplasts  
Bendix Aviation Corp.-Montrose Div.

Bogue Electric Mfg., Co.  
Continental Electric Co., Inc.  
Dalmator Div., Yuba Consolidated Industries, Inc.  
Dayton Aviation Radio & Equipment Corp.  
Eicar Div.-Scranton  
General Electric Co., Apparatus Sales Div.  
Hoover Electric Co.  
Induction Motors Corp.  
Heinz Mueller Eng. Co. Inc.  
National Pneumatic Co., Inc., Haltzer-Cabat Divs.  
Redmond Co., Inc.  
Safety Electrical Equipment Corp.  
Sangama Electric Co.  
Talley Corp., The  
Task Corp.  
Wincharger Corp., Sub-Zenith Radio Corp.

## EJECTION SEAT ACCESSORIES, CARTRIDGE ACTUATED

\*PROPELLEX CHEMICAL DIV., CHROMALLOY CORP.

## EJECTION SYSTEMS

Aerogjet-General Corp.  
Aerolab Development Co.  
American Machine & Foundry Co., Government Products Group  
Bendix Aviation Corp., Red Bank Div.  
California Aircraft Products  
Consolidated Diesel Electric Corp.  
Diversey Engrg. Co.  
Fulton-Irgon Corp., The  
Gabriel Co., The-Talco Engrg. Co. Div.  
Goodyear Aircraft Corp.  
Paul Hardeman, Inc.  
Hardman Tool & Engrg., Co.  
Holex, Inc.  
Horkey-Moore Associates  
Hughes Tool Co., Aircraft Div.  
\*MC CORMICK SELPH ASSOCIATES  
Pacific Scientific Co.  
Patterson, Moas Div. - Universal Winding Co., Inc.  
\*PROPELLEX CHEMICAL DIV., CHROMALLOY CORP.  
Red Lion Cabinet Co., Redco Tool Div.  
Reinhold Engrg. & Plastics Co.  
\*RHEEM MFG. CO., DEFENSE & TECHNICAL PRODUCTS DIV.  
Royal Industries, Inc.  
Skinner Precision Products  
Stratos Aviation Corp.  
Stratos, Div.-Fairchild Engine & Airplane Corp.  
Washington Technological Associates Inc.  
Western Gear Corp.

## ELECTRIC DRILLS

See DRILLS, ELECTRIC

## ELECTRIC PANEL BOARDS

See PANEL BOARDS, ELECTRIC

## ELECTRIC POWER SYSTEMS

Aerolab Development Co.  
\*AIRESEARCH MFG. CO., DIV.-THE GARRETT CORP.  
Allied International Co.  
American Bosch Arma Corp.  
American Machine & Foundry Co., Greenwich  
Bendix Aviation Corp., Red Bank Div.  
Bendix Utica Div., Bendix Aviation Corp.  
Consolidated Diesel Electric Corp.  
Consolidated Diesel Electric Corp., Western Div.  
Cummins Engine Co., Inc.  
Delco-Remy Div., General Motors Corp.  
Du Kane Corp.  
General Electric Co., Apparatus Sales Div.  
Generator Corp.  
Hamilton Standard, Div.-United Aircraft Corp.  
Hoover Electric Co.  
International Ferromat Machinery Co., Inc.  
Jack & Heintz, Inc.  
Jeta, Inc.  
Land-Air Inc.  
Leach Corp.  
Leland Airborne Products, Div.-American Machine & Foundry Co.  
Monogram Precision Industries  
Mullenbach Div.-Electric Machinery Mfg. Co.  
D. W. Onan & Sons Inc.  
Patterson, Moas Div. - Universal Winding Co., Inc.  
Perkin Engrg. Corp.  
RS Electronics Corp.  
Safety Electrical Equipment Corp.  
Standard Electric Time Co., The  
Technical Apparatus Builders  
Telectro Industries Corp.  
U. S. Relay Co.  
Westinghouse Electric Corp.  
Winpower Mfg. Co.

## ELECTRIC VALVE OPERATOR

See VALVE OPERATOR, ELECTRIC

## ELECTRICAL CABLE ASSEMBLIES

See CABLE ASSEMBLIES, ELECTRICAL

## ELECTRICAL FIREWALL CONNECTORS

See CONNECTORS, ELECTRICAL FIREWALL

## ELECTRICAL MEASURING INSTRUMENTS

See INSTRUMENTS, ELECTRICAL MEASURING

**ELECTRICAL MEASURING METERS, INSTRUMENTS**  
See INSTRUMENTS, ELECTRICAL MEASURING METERS

**ELECTRO MAGNETS**  
See MAGNETS, ELECTRO

**ELECTROCARDIOGRAPHS**

American Cystoscope Makers, Inc.  
Cambridge Instrument Co., Inc.  
Enso, Inc.  
FXR, Inc.  
General Electric Co., X-Ray Dept.  
Jansky & Bailey, Inc.  
Levinthal Electronic Products, Inc.  
Offner Electronics Inc.  
Sanborn Co.  
Winzen Research Inc.

**ELECTRO-CHEMICAL ANALYSIS EQUIPMENT**  
See ANALYSIS EQUIPMENT, ELECTRO-CHEMICAL

**ELECTRON MICROSCOPES**  
See MICROSCOPES, ELECTRON

**ELECTRONIC AUTOMATIC PILOTS**  
See AUTOMATIC PILOTS, ELECTRONIC

**ELECTRONIC BREADBOARD KITS**  
See BREADBOARD KITS, ELECTRONIC

**ELECTRONIC COOKERS**  
See COOKERS, ELECTRONIC

**ELECTRONIC COOLING SYSTEMS**  
See COOLING SYSTEMS, ELECTRONIC

**ELECTRONIC DENSITOMETERS**  
See DENSITOMETERS, ELECTRONIC

**ELECTRONIC EQUIPMENT PACKAGING, SERVICE ONLY**  
See PACKAGING, ELECTRONIC EQUIPMENT, SERVICE ONLY

**ELECTRONIC GENERATORS**  
See GENERATORS, ELECTRONIC

**ELECTRONIC IGNITION SYSTEMS**  
See IGNITION SYSTEMS, ELECTRONIC

**ELECTRONIC INTEGRATORS**  
See INTEGRATORS, ELECTRONIC

**ELECTRONIC LANDING AIDS**  
See LANDING AIDS, ELECTRONIC

**ELECTRONIC MEGAPHONES**  
See MEGAPHONES, ELECTRONIC

**ELECTRONIC METEOROLOGICAL EQUIPMENT**  
See METEOROLOGICAL EQUIPMENT, ELECTRONIC

**ELECTRONIC MICROMETERS**  
See MICROMETERS, ELECTRONIC

**ELECTRONIC PHOTOFLASH EQUIPMENT**  
See PHOTOFLASH EQUIPMENT, ELECTRONIC

**ELECTRONIC TACHOMETERS**  
See TACHOMETERS, ELECTRONIC

**ELECTROPLATING EQUIPMENT**

Allied Research Products, Inc.  
Briscoe Mfg. Co.  
Dean Products, Inc.  
Electronic Parts Mfg. Co., Inc.  
Grant Chemical Co., Inc.  
Kanthal Corp., The  
NRC Equipment Corp.  
George L. Nankervis Co.  
Rosemount Engrg. Co.  
Sanborn Co.  
Sel-Rex Corp.  
Technical Apparatus Builders  
Western Coating Co.  
Westinghouse Electric Corp.  
Wildberg Bros. Smelting & Refining Co.

**ELECTROSTATIC PRECIPITATORS**  
See PRECIPITATORS, ELECTROSTATIC

**ELEMENTS, HEATING**

B & H Instrument Co., Inc.  
Blue M Electric Co.  
Corborundum Co., Refractories Div.  
Cole Electric Co.  
Corning Glass Works  
Cox & Co., Inc.  
Dean Products, Inc.  
Diversey Engrg. Co.  
Wilbur B. Driver Co.  
Eagle Electric Mfg. Co., Inc.  
Electric Heater Co., The  
Electro-Flex Heat, Inc.  
Electro-Tech Equipment Co.  
General Electric Co., Apparatus Sales Div.  
Glorb Plant, Refractories Div.-The Corborundum Co.

Goodyear Tire & Rubber Co., The, Aviation Products Div.  
Hevi-Duty Electric Co.  
Integrated Mica Corp.  
Kanthal Corp., The  
Mica Fabricating Co.  
Miskella Infra-Red Co., The  
Norton Co.  
Precision, Inc.  
Rosemount Engrg. Co.  
States Co., The  
Statikil, Inc., Div.-The J. E. Doyle Co.  
Syntron Co.  
Temperature Engrg. Corp.  
Thermal Refractories Corp.  
H. I. Thompson Fiber Glass Co.  
Tranter Mfg., Inc.  
Waste King Corp., Technical Products Div.  
Edwin L. Wiegand Co.

**ELEMENTS, HEATING, CRYSTAL OVEN**

American Printed Circuits Co., Inc.  
Bendix Aviation Corp., York Div.  
Cox & Co., Inc.  
Electro-Flex Heat, Inc.  
Monogram Precision Industries  
Motorola Inc., Military Electronics Div.  
Piasceki Aircraft Corp.  
Milton Ross Metals Co., The  
Telectro Industries Corp.  
United States Dynamics Corp.

**ELIMINATORS, STATIC**  
See STATIC ELIMINATORS

**EMBEDDED ASSEMBLIES**

Adept Industries Inc.  
Advanced Electronics, Inc.  
Aerolite Electronics Corp.  
Airflyte Electronics Co.  
American Printed Circuits Co., Inc.  
Bacon Industries, Inc.  
Benco Engrg. Corp.  
C & K Components, Inc.  
Cleveland Metal Specialties Co., Electronics Div.  
Control Circuits Inc.  
Copper Development Corp., Sub.-Marquardt Aircraft Co.

Daty Acoustica Electronic Labs.  
Dresser Industries, Inc.  
Edgerton, Gerneshausen & Grier, Inc.  
Electro-Mechanical Products Co.  
Eljay Corp.  
Emerson & Cuming, Inc.  
Erie Resistor Corp.  
Good Electronic Corp.  
Green Rectifier Co.  
Hamilton Standard, Div.-United Aircraft Corp.  
Hardman Tool & Engrg. Co.  
Houghton Laboratories, Inc.  
ITT Federal Corp., International Telephone & Telegraph Corp.  
Joalin Mfg. Co.  
La Pointe Industries Inc.  
MF Electronics Co.  
Metaplast Corp.  
Minnesota Mining & Mfg. Co.  
Monogram Precision Industries  
Motorola Inc., Military Electronics Div.  
Mutron Corp.  
National Coil Co.  
Networks Electronic Corp.  
New York Coil Co.  
Piasceki Aircraft Corp.  
Precision, Inc.  
Projects Unlimited Inc.  
Reinhold Engrg. & Plastics Co.  
Milton Ross Metals Co., The  
Telectro Industries Corp.  
Tapper Mfg. Co., Inc.  
Tarwica Electronics, Inc.  
Transistor Electronics Corp.  
Trionics Corp.  
United States Chemical Milling Corp.  
Virginia Electronics Co., Inc.  
Warren Transformer Co., Inc.

**EMBEDDED COMPONENTS**

Adept Industries Inc.  
Aerolite Electronics Corp.  
Airflyte Electronics Co.  
American Lotex Products Corp.  
Bacon Industries, Inc.  
Double E Products Co.  
Dyner Industries, Inc.  
Edgerton, Gerneshausen & Grier, Inc.  
Electro-Mechanical Products Co.  
Eljay Corp.  
Emerson & Cuming, Inc.  
Erie Resistor Corp.  
Good Electronic Corp.  
Green Rectifier Co.  
Hamilton Standard, Div.-United Aircraft Corp.  
Hardman Tool & Engrg. Co.  
Houghton Laboratories, Inc.  
International Resistance Co.  
Metaplast Corp.  
Minitron Corp.  
Molding Corp. of America  
Motorola Inc., Military Electronics Div.  
Mutron Corp.

National Coil Co.  
Networks Electronic Corp.  
New York Coil Co.  
Precision, Inc.  
Reinhold Engrg. & Plastics Co.  
Silicane Insulation, Inc.  
Topper Mfg. Co., Inc.  
Torwico Electronics, Inc.  
Trionics Corp.  
Union Products, Inc.  
Virginia Electronics Co., Inc.  
Warren Transformer Co., Inc.

**EMERGENCY LIGHTING EQUIPMENT**  
See LIGHTING EQUIPMENT, EMERGENCY

**ENAMEL, INSULATION**

George C. Borthig Co. Inc.  
Demiss Chemical Co.  
\*DOW CORNING CORP.  
Metallizing Co. of Los Angeles Inc.  
Midland Industrial Finishes Co.  
Permacel  
Polymer Corp., The  
Vorac Co., The

**ENCLOSURES, DUST**

A&P Metal Products Mfg. Corp.  
\*AIRESEARCH MFG. CO. OF ARIZ.  
Alpitect, Inc.  
Anchor Metal Spinning Co., The  
Brooks & Perkins, Inc.  
Delta Products Div.-Air Accessories, Inc.  
Fletcher Mfg. Co., Inc., The  
The Kaiser Metal Products, Inc. - Fleetwings Div.  
Mid-West Metal Products, Inc.  
Monogram Precision Industries  
Smith-Morris Corp.  
Strang-Scott Mfg. Co., The  
The United States Rubber Co.  
Waldorf Fluid Systems Div.-F. C. Huyck & Sons

**ENGINE ACCESSORIES & COMPONENTS**

Accessory Products Co., Div.-Textron Inc.  
Actuator Products Div., Geartronics Corp.  
Adel Precision Products of California, Div.-General Metals Corp.  
Aero Supply Mfg. Inc.  
Aerodex, Inc.  
Aerajet-General Corp.  
\*AIRESEARCH MFG. CO. OF ARIZ.  
\*AIRESEARCH MFG. CO., DIV.-THE GARRETT CORP.  
Allen Tool Corp.  
American Aeraparts  
American Bosch Arma Corp.  
American Non Gran Branze Co.  
American Standard Products, Inc.  
American Tube Bending Co., Inc.  
Arnolt Corp.  
Astronautics Engrg. Co.  
Atlantic Instrument Corp., Sub.-American Electronics, Inc.  
Auburn Spark Plug Co., Inc.  
B G Corp., The  
B. H. Aircraft Co., Inc.  
Beaver Precision Products Inc.  
\*BENDIX AVIATION CORP., HAMILTON DIV.  
Bendix Aviation Corp., Mentrose Div.  
Bendix Aviation Corp., Red Bank Div.  
\*BENDIX PRODUCTS DIV., BENDIX AVIATION CORP.  
Bendix-Pacific Div., Bendix Aviation Corp.  
Bendix Utica Div., Bendix Aviation Corp.  
Benco Engrg. Corp.  
California Aircraft Products  
\*CAMERON IRON WORKS, INC.  
Capital City Mfg. Co.  
Caterpillar Tractor Co., Engine Div.  
Centrax Ltd., American Sales Office  
Century Fasteners Corp.  
Chandler Evans Corp.  
Christie Machine Works  
Clark-Aiken Co., The  
Conax Corp.  
Consolidated Controls Corp.  
Consolidated Diesel Electric Corp.  
Cummins Engine Co., Inc.  
Curtiss-Wright Corp., Research Div.  
Curtiss-Wright Corp., Wright Aeronautical Div.  
Delco-Remy Div., General Motors Corp.  
Diversey Engrg. Co.  
Dresser Mfg. Div., Dresser Industries, Inc.  
Dunbar-Kopple Inc.-Aircraft Components Div.  
Dynamic Controls Corp.  
Dynamic Devices, Inc.  
Electric Regulator Corp.  
Electrical & Mechanical Design Co.  
Essex Mfg. Co., Inc.  
Federal Mfg. & Engrg. Corp.  
\*FLEXONICS CORP., AERONAUTICAL DIV.  
General Electric Co., Apparatus Sales Div.  
B. H. Hadley, Inc.  
Hallett Mfg. Co.  
Hamilton Standard, Div.-United Aircraft Corp.  
\*A. W. HAYDON CO., THE  
Holley Carburetor Co.  
Hoover Electric Co.  
Hupp Aviation Co.  
Hydra-Power Corp.  
\*HYDRO-AIRE CO., DIV.-CRANE CO.

Hydrodyne Corp., Skinner Seal Div.  
 Jack & Heintz, Inc.  
 Jaclyn Mfg. Co.  
 C. B. Knapp & Sons, Inc.  
 Koyner Mfg. Co., Inc.  
 M. W. Kellogg Co., The  
 Kelsey-Hoyes Co.  
 Koehler Aircraft Products Co.  
 Korda Industries  
**\*LYCOMING DIV., AVCO MFG. CORP.**  
 J. E. Menough Co.  
 Mercury Tool & Mfg. Corp.  
 Monogram Precision Industries  
 Natl. Water Lift Co., Div.-Cleveland Pneumatic  
 Industries, Inc.  
 Parts Engrg. Co., Inc.  
 Pesco Products Div.-Borg-Worner Corp.  
 Pneu-Hydro Valve Corp.  
 Portland Copper & Tank Works Inc.  
 Reaction Motors Div., Thiokol Chem. Corp.  
 Reinhold Engrg. & Plastics Co.  
 Revere Corp. of America  
**\*RHEEM MFG. CO., DEFENSE & TECHNICAL  
 PRODUCTS DIV.**  
 Rohr Aircraft Corp.  
 Ryan Aeronautical Co.  
 Sargent Engrg. Corp.  
 Servomechanisms, Inc.  
 Simmonds Aerocessories, Inc.  
 Smith-Morris Corp.  
 Solor Aircraft Co.  
 Southwest Products Co.  
 Stainless Steel Products, Inc.  
 Standard-Thomson Corp., Clifford Mfg. Co. Div.  
 A. U. Stone & Co., Inc.  
 Stratos, Div.-Fairchild Engine & Airplane Corp.  
 T-C Div., Dyna-Empire, Inc.  
 Tapco Group, Thompson-Ramo-Woodriddle Inc.  
 Thiokol Chemical Corp., Hunter-Bristol Div.  
 Turbo Products, Inc.  
 United Aircraft Products, Inc.  
 Vard Inc.  
 Vickers Inc., Div.-Sperry Rand  
 Waste King Corp., Technical Products Div.  
**\*WEATHERHEAD CO., THE**  
 Western Gear Corp.

**ENGINE BREATHERS**  
 See BREATHERS, ENGINE

**ENGINE CONTROL SYSTEMS**

ACF Industries Inc.  
 Adel Precision Products of California, Div.-  
 General Metals Corp.  
 Aero Supply Mfg. Inc.  
 Aerojet-General Corp.  
 Air Logistics Corp.  
**\*AIRESEARCH MFG. CO. OF ARIZ.**  
**\*AIRESEARCH MFG. CO., DIV.-THE GARRETT  
 CORP.**  
 American Bosch Arma Corp.  
 Avien, Inc.  
 Beaver Precision Products Inc.  
**\*BENDIX AVIATION CORP., HAMILTON DIV.**  
**\*BENDIX PRODUCTS DIV., BENDIX AVIATION  
 CORP.**  
 Bristol Co., The  
 Bulow Electric Co.  
 Capital City Mfg. Co.  
 Chandler Evans Corp.  
 Consolidated Controls Corp.  
 Consolidated Diesel Electric Corp.  
 Curtiss-Wright Corp., Research Div.  
 Curtiss-Wright Corp.-Wright Aeronautical Div.  
 Dalmotor Div., Yuba Consolidated Industries, Inc.  
 Delco-Remy Div., General Motors Corp.  
 Fairchild Astrionics Div., Fairchild Engine &  
 Airplane Corp.  
 General Electric Co., Apparatus Sales Div.  
 Hamilton Standard, Div.-United Aircraft Corp.  
**\*A. W. HAYDON CO., THE**  
 Hoover Electric Co.  
 Kelsey-Hoyes Co.  
 Korda Industries  
 Lear, Inc., Grand Rapids Div.  
 Marquardt Aircraft Co.  
 Morse Instrument Co., The  
 Pneu-Hydro Valve Corp.  
 Kelsey-Hoyes Co.  
 Korda Industries  
 Lear, Inc., Grand Rapids Div.  
 Marquardt Aircraft Co.  
 Morse Instrument Co., The  
 Pneu-Hydro Valve Corp.  
**\*RHEEM MFG. CO., DEFENSE & TECHNICAL  
 PRODUCTS DIV.**  
 Rocketdyne Div.-North American Aviation, Inc.  
 Sargent Engrg. Corp.  
 Servomechanisms, Inc.  
 Simmonds Aerocessories, Inc.  
 Southwest Products Co.  
 Space Corp.  
 Standard-Thomson Corp., Clifford Mfg. Co. Div.  
 T-C Div., Dyna-Empire, Inc.  
 Tapco Group, Thompson-Ramo-Woodriddle Inc.  
 Teleflex Inc.  
 Twin Coach Co., Aircraft-Missiles  
 United Aircraft Products, Inc.  
 United Electric Controls Co.  
 Waldorf Electronics, Div.-F.C. Huyck & Sons  
 Waste King Corp., Technical Products Div.  
 Western Design, Div.-U.S. Industries, Inc., Santa  
 Barbara Div.  
**ENGINE CONTROL SYSTEMS, AUTOMATIC**  
 Aerojet-General Corp.  
 Air Logistics Corp.

**\*AIRESEARCH MFG. CO., DIV.-THE GARRETT  
 CORP.**

American Bosch Arma Corp.  
 Avien, Inc.  
**\*BENDIX AVIATION CORP., HAMILTON DIV.**  
**\*BENDIX PRODUCTS DIV., BENDIX AVIATION  
 CORP.**  
 Bendix Utica Div., Bendix Aviation Corp.  
 Bristol Co., The  
 Chandler Evans Corp.  
 Consolidated Controls Corp.  
 Consolidated Diesel Electric Corp.  
 Curtiss-Wright Corp.-Wright Aeronautical Div.  
 Dalmotor Div., Yuba Consolidated Industries, Inc.  
 Edgerton, Gerneshausen & Grier, Inc.  
 Electric Regulator Corp.  
 Fairchild Astrionics Div., Fairchild Engine &  
 Airplane Corp.  
 General Electric Co., Apparatus Sales Div.  
 Hamilton Standard, Div.-United Aircraft Corp.  
**\*A. W. HAYDON CO., THE**  
 Holley Carburetor Co.  
 Hoover Electric Co.  
 Korda Industries  
 Marquardt Aircraft Co.  
 Minneapolis-Honeywell Regulator Co.-Aeronautical  
 Div.  
 Pneu-Hydro Valve Corp.  
 Reaction Motors Div., Thiokol Chem. Corp.  
 Rocketdyne Div.-North American Aviation, Inc.  
 Ryan Aeronautical Co.  
 Sargent Engrg. Corp.  
 Servomechanisms, Inc.  
 Southwestern Industrial Electronics Co.  
 Standard-Thomson Corp., Clifford Mfg. Co. Div.  
 Tapco Group, Thompson-Ramo-Woodriddle Inc.  
 Twin Coach Co., Aircraft-Missiles  
 United Aircraft Products, Inc.  
 United Electric Controls Co.  
 Waldorf Electronics, Div.-F.C. Huyck & Sons  
 Waste King Corp., Technical Products Div.

**ENGINE CONTROLS, MECHANICAL & VACUUM**

ACF Industries Inc.  
 Aero Supply Mfg. Inc.  
 Aerojet-General Corp.  
**\*AIRESEARCH MFG. CO., DIV.-THE GARRETT  
 CORP.**  
 American Bosch Arma Corp.  
 Applied Dynamics Corp.  
 Arens Controls, Inc.  
 Atlantic Instrument Corp., Sub.-American Elec-  
 tronics, Inc.  
 Atlas Precision Products, Co.  
**\*BENDIX AVIATION CORP., HAMILTON DIV.**  
**\*BENDIX PRODUCTS DIV., BENDIX AVIATION  
 CORP.**  
 Bristol Co., The  
 Capital City Mfg. Co.  
 Chandler Evans Corp.  
 Components Corp.  
 Consolidated Controls Corp.  
 Consolidated Diesel Electric Corp.  
 Curtiss-Wright Corp.-Wright Aeronautical Div.  
 Hamilton Standard, Div.-United Aircraft Corp.  
 Holley Carburetor Co.  
 Hoover Electric Co.  
**\*HYDRO-AIRE CO., DIV.-CRANE CO.**  
 Marquardt Aircraft Co.  
 Morse Instrument Co., The  
 Pacific Scientific Co.  
 Sargent Engrg. Corp.  
 Simmonds Aerocessories, Inc.  
 Southwest Products Co.  
 Southwestern Industrial Electronics Co.  
 Standard-Thomson Corp., Clifford Mfg. Co. Div.  
 United Aircraft Products, Inc.  
 United Electric Controls Co.  
 Vard Inc.  
 Waldorf Fluid Systems, Div.-F.C. Huyck & Sons  
 Waste King Corp., Technical Products Div.  
 Western Gear Corp.

**ENGINE MOUNTS**

See MOUNTS, ENGINE

**ENGINE STARTERS, GAS TURBINE**

See STARTERS, GAS TURBINE ENGINE

**ENGINE STARTERS, ROCKET**

See STARTERS, ROCKET ENGINE

**ENGINE STARTING SYSTEMS & CONTROLS, GAS  
 TURBINE ENGINE**

Accessory Products Co., Div.-Textron Inc.  
 Aerojet-General Corp.  
**\*AIRESEARCH MFG. CO. OF ARIZ.**  
**\*AIRESEARCH MFG. CO., DIV.-THE GARRETT  
 CORP.**  
 American Bosch Arma Corp.  
 Avien, Inc.  
 Bendix Aviation Corp., Red Bank Div.  
**\*BENDIX PRODUCTS DIV., BENDIX AVIATION  
 CORP.**  
 Bendix Utica Div., Bendix Aviation Corp.  
 Capital City Mfg. Co.  
 Chandler Evans Corp.  
 Christie Machine Works  
 Consolidated Diesel Electric Corp.  
 Consolidated Diesel Electric Corp., Western Div.  
 Curtiss-Wright Corp.-Santa Barbara Div.  
 Curtiss-Wright Corp.-Utica Div.

Curtiss-Wright Corp.-Wright Aeronautical Div.  
 Delco-Remy Div., General Motors Corp.  
 Dresser Industries, Inc.  
 Electric Regulator Corp.  
 General Electric Co., Apparatus Sales Div.  
 Hamilton Standard, Div.-United Aircraft Corp.  
 Hoover Electric Co.  
 Hughes Tool Co., Aircraft Div.  
**\*HYDRO-AIRE CO., DIV.-CRANE CO.**  
 Jack & Heintz, Inc.  
 Lear, Inc., Grand Rapids Div.  
 George L. Nonkervis Co.  
 Northeastern Engrg. Inc.  
 Perfection Industries, Div.-Hupp Corp.  
 Pre-Flite Industries Corp.-Sub. - Avco Corp.  
 Randall Engrg. Corp.  
 Sargent Engrg. Corp.  
 Salar Aircraft Co.  
 Southwestern Industrial Electronics Co.  
 Space Corp.  
 Standard-Thomson Corp., Clifford Mfg. Co. Div.  
 Stratos, Div.-Fairchild Engine & Airplane Corp.  
 Tapco Group, Thompson-Ramo-Woodriddle Inc.  
 Vard Mfg. Co., Inc.  
 Vickers Inc., Div.-Sperry Rand  
 Waldorf Fluid Systems, Div.-F.C. Huyck & Sons  
 Watertown Div., The New York Air Brake Co.  
 Western Gear Corp.  
 Weston Hydraulics Ltd.-Sub., Borg-Worner Corp.

**ENGINE-COOLING RADIATORS**

See RADIATORS, ENGINE-COOLING

**ENGINES**

- a. Auxiliary Jet
- b. Auxiliary Rocket
- c. Diesel
- d. Gas Turbine
- e. Nuclear Rocket
- f. Nuclear Turbine
- g. Pulse Jet
- h. Ramjet
- i. Rocket
- j. Rocket, Liquid
- k. Rocket, Solid

ACF Industries Inc., e.  
 Aerojet-General Corp., b, i, j, k.  
 Aerolab Development Co., k.  
**\*AIRESEARCH MFG. CO. OF ARIZ., c, e.**  
**\*AIRESEARCH MFG. CO., DIV.-THE GARRETT  
 CORP., a, d.**  
 Alco Products, Inc., c, e, k.  
 Allied International Co., c.  
 Allis-Chalmers, c.  
 American Rocket Co., a, i, k.  
 Arde-Portland, Inc., k.  
 Astrodyne, Inc., b, k.  
 Atlantic Research Corp., b, i, k.  
 Bell Aircraft Corp., Niagara Frontier Div., a, b, i,  
 j, k.  
 Bridgeport Brass Co., i, k.  
 Caterpillar Tractor Co., Engine Div., c.  
 Chicago Pneumatic Tool Co., c.  
 Christie Machine Works, d, i, k.  
 Continental Aviation & Engrg. Corp., a, c, d, h.  
 Cooper Development Corp., Sub-Marquardt Aircraft  
 Co., b, i, k.  
 Cooper-Bessemer Corp., The, c.  
 Cummins Engine Co., Inc., c.  
 Curtiss-Wright Corp., Research Div., d thru h.  
 Curtiss-Wright Corp., Santa Barbara Div., d.  
 Curtiss-Wright Corp., Utica Div., e, d.  
 Curtiss-Wright Corp., Wright Aeronautical Div., a, b,  
 d, e, h, i, j.  
 Detroit Diesel Engine Div.-General Motors Corp., c.  
 Diversey Engrg. Co., a, b, d, e, f, h thru k.  
 Dresser Industries, Inc., c, d.  
 Dynamic Devices, Inc., b, h thru k.  
 Edgerton, Gerneshausen & Grier, Inc., e, f.  
 Food Machinery & Chemical Corp., h thru k.  
 Fulton-Irgon Corp., The, b, i, j, k.  
 General Electric Co., Apparatus Sales Div., a, b, d,  
 f, h thru k.  
 Giannini Plasmadyne Corp.  
 Hicks Corp., The, i.  
 Hoover Electric Co., c, d.  
 Hughes Tool Co., Aircraft Div., a, b, d, h.  
 Intercontinental Mfg. Co., Inc., a, k.  
 Kaiser Metal Products, Inc. - Fleetwings Div., a, b,  
 h thru k.  
 M. W. Kellogg Co., The, a, b, g thru k.  
 Kennedy Van Saun Mfg. & Engrg. Corp., k.  
**\*LYCOMING DIV., AVCO MFG. CORP., d.**  
 Mack Trucks, Inc., Government Div., c.  
 Marquardt Aircraft Co., h.  
**\*MC CORMICK SELPH ASSOCIATES, b, i, k.**  
 Newbrook Machine Corp., a, b, i, j, k.  
 Nordberg Mfg. Co., c.  
 Norris-Thermador Corp., b, h, k.  
 Orlikon Tool & Arms Corp. of America, k.  
 Olin Mathieson Chemical Corp., Energy Div., k.  
 Oliver Corp., The, c.  
 D. W. Onan & Sons Inc., c.  
 Parts Engrg. Co., Inc., j, k.  
 Patterson, Moos Div. - Universal Winding Co., Inc.,  
 e.  
 Pressed Steel Tank Co., a, b, i, k.  
**\*PROPELLEX CHEMICAL DIV., CHROMALLOY  
 CORP., k.**  
 Reaction Motors Div., Thiokol Chem. Corp., b, i, j, k.  
 Red Lion Cabinet Co., Redco Tool Div., k.  
 C. F. Roark Welding & Engrg. Co., Inc., f.

Rocketdyne Div.-North American Aviation, Inc., b, e, i, j.  
Rohm & Haas Co., Redstone Arsenal Research Div., b, i, k.  
Solar Aircraft Co., d, i.  
Southwestern Industrial Electronics Co.  
Special Projects Lab., Food Machinery & Chemical Corp., b, i, j.  
Stanley Aviation Corp., i, j.  
Strong Scott Mfg. Co., The, i.  
Thiokol Chemical Corp., a, b, e, f, i, j, k.  
Topper Mfg. Co., Inc., k.  
Universal Moulded Products Corp., a, b, h thru k.  
Veet Industries, j.  
Western Arc Welding, Inc., k.  
Westinghouse Electric Corp., d.  
Wheland Co., The, k.  
**\*WHITE DIESEL ENGINE DIV., THE WHITE MOTOR CO., c.**  
Wilks Precision Instrument Co., Inc., k.

#### ENVIRONMENTAL TEST CHAMBERS

See TEST CHAMBERS, ENVIRONMENTAL

#### EXCITERS, FIELD

Electric Machinery Mfg. Co.  
General Electric Co., Apparatus Sales Div.  
Green Rectifier Co.  
Heinz Mueller Eng. Co. Inc.

#### EXHAUST ASSEMBLIES

Aircraft Precision Products, Inc.  
American Agile Corp.  
American Machine & Foundry Co., Government Products Group  
American Tube Bending Co., Inc.  
Anaconda Metal Hose Div., The American Brass Co.  
Anchor Metal Spinning Co., The  
Associated Engrs. & Mfg. Corp.  
B. H. Aircraft Co., Inc.  
**\*BEATON & CORBIN MFG. CO., THE**  
Benson Mfg., Co., The  
Colonial Aircraft Corp.  
Curtiss-Wright Corp.-Wright Aeronautical Div.  
Diversey Engrg. Co.  
Dresser Industries, Inc.  
Dresser Mfg. Div., Dresser Industries, Inc.  
Finn Aeronautical Div., T. R. Finn & Co., Inc.  
**\*FLEXONICS CORP., AERONAUTICAL DIV.**  
Hanlon & Wilson Co., The  
Hufford Corp., The  
Hupp Aviation Co.  
Kaiser Aircraft & Electronics, Div.-Kaiser Industries Corp.  
Kaiser Metal Products, Inc. - Fleetwings Div.  
M. W. Kellogg Co., The  
Kelsey-Hayes Co.  
Mercury Tool & Mfg. Corp.  
Minnesota Mining & Mfg. Co.  
Monogram Precision Industries  
Norton Co., New Products Dept.  
Parts Engrg. Co., Inc.  
Penn-Michigan Mfg. Corp.  
Piasecki Aircraft Corp.  
Portland Copper & Tank Works Inc.  
Red Lion Cabinet Co., Redco Tool Div.  
Edw. Renneburg & Sons Co.  
**\*RHEEM MFG. CO., DEFENSE & TECHNICAL PRODUCTS DIV.**  
C. F. Roark Welding & Engrg. Co., Inc.  
Rohr Aircraft Corp.  
Ryan Aeronautical Co.  
Smith-Morris Corp.  
Solar Aircraft Co.  
Stainless Inc.  
Stainless Steel Products, Inc.  
Stalker Corp., The  
Tapeco Group, Thompson-Ramo-Wooldridge Inc.  
Task Corp.  
Turbo Products, Inc.  
Twigg Industries  
Twin Coach Co., Aircraft-Missiles  
Union Asbestos & Rubber Co.  
United Aircraft Products, Inc.  
Waste King Corp., Technical Products Div.  
Wilks Precision Instrument Co., Inc.

#### EXHAUST CONES

See CONES, EXHAUST

#### EXHAUST CONES, GAS TURBINE ENGINE

Aircraft Mechanics, Inc.  
Aircraft Precision Products, Inc.  
Anchor Metal Spinning Co., The  
B. H. Aircraft Co., Inc.  
Benson Mfg., Co., The  
Christie Machine Works  
Cromer Mfg. & Engrg., Inc.  
Curtiss-Wright Corp., Santo Barbara Div.  
Diversey Engrg. Co.  
Dresser Industries, Inc.  
Dresser Mfg. Div., Dresser Industries, Inc.  
Finn Aeronautical Div., T. R. Finn & Co., Inc.  
Fletcher Mfg. Co., Inc., The  
Hanlon & Wilson Co., The  
Hove Industries, Inc.  
Hupp Aviation Co.  
Ingersoll Kalamazoo Div., Borg-Warner Corp.  
Kaiser Aircraft & Electronics, Div.-Kaiser Industries Corp.  
Kaiser Metal Products, Inc. - Fleetwings Div.  
M. W. Kellogg Co., The

Kelsey-Hayes Co.  
Lodish Co.  
**\*LAVELLE AIRCRAFT CORP.**  
Lodge & Shipley Co., The  
Mercury Tool & Mfg. Corp.  
National Beryllia Corp.  
Newbrook Machine Corp.  
Norton Co., New Products Dept.  
Parts Engrg. Co., Inc.  
Penn-Michigan Mfg. Corp.  
Piasecki Aircraft Corp.  
Portland Copper & Tank Works Inc.  
**\*RHEEM MFG. CO., DEFENSE & TECHNICAL PRODUCTS DIV.**  
C. F. Roark Welding & Engrg. Co., Inc.  
Ryan Aeronautical Co.  
Silicone Insulation, Inc.  
Smith-Morris Corp.  
Solar Aircraft Co.  
Stainless Steel Products, Inc.  
Thermal-Refractories Corp.  
C. W. Tomgren Co., Inc.  
Turbo Products, Inc.  
Twigg Industries  
Twin Coach Co., Aircraft-Missiles  
United Aircraft Products, Inc.  
Westinghouse Electric Corp.

#### EXHAUST

- a. Ducts
- b. Heat Exchangers
- c. Huffs
- d. Stacks
- e. Systems

Aeronco Mfg. Corp., a, b.  
Aeroscience, Inc.  
Aircraft Mechanics, Inc., a, d.  
Aircraft Precision Products, Inc., a thru d.  
**\*AIRESEARCH MFG. CO. DIV.-THE GARRETT CORP., b.**  
American Air Filter Co., Defense Products Div., b.  
American Machine & Foundry Co., Government Products Group, a.  
American Tube Bending Co., Inc., d.  
Anaconda Metal Hose Div., The American Brass Co., a.  
Anchor Metal Spinning Co., The, a, d.  
B. H. Aircraft Co., Inc., a.  
Bals-Taal Industries, Inc., a, b, c.  
**\*BEATON & CORBIN MFG. CO., THE, a.**  
Benson Mfg., Co., The, a, c, d.  
Blowers Inc., e.  
Byrne Doors Inc., a, d.  
California Aircraft Products, a, b.  
Carmac Aviation, a, c, d, e.  
Christie Machine Works  
Colonial Aircraft Corp., a thru e.  
Cromer Mfg. & Engrg., Inc., a, c, d.  
Curtiss-Wright Corp., Research Div., a, b, c.  
Dean Products, Inc., b.  
Diversey Engrg. Co., a thru d.  
Dayle & Roth Mfg. Co., Inc., b.  
Dresser Mfg. Div., Dresser Industries, Inc., a thru e.  
Dunbar-Kaple Inc.-Aircraft Components Div., a.  
Eastern Industries Inc., b.  
Finn Aeronautical Div., T. R. Finn & Co., Inc., a.  
Fletcher Mfg. Co., Inc., The, a.  
Flexible Metal Hose Mfg. Co., a.  
**\*FLEXONICS CORP., AERONAUTICAL DIV., a.**  
Friscom-Russell Co., The, b.  
Hanlon & Wilson Co., The, a thru e.  
Hove Industries, Inc., a thru e.  
Hewitt-Robins, Inc., a.  
Ludwig Honold Mfg. Co., a.  
Houston Fearless Corp., a, b.  
Hupp Aviation Co., a thru e.  
Intercontinental Mfg. Co., Inc., a.  
**\*JANITROL AIRCRAFT DIV., SURFACE COMBUSTION CORP., a, b, e.**  
Kaiser Aircraft & Electronics, Div.-Kaiser Industries Corp., a thru e.  
Kentucky Metal Products Co., a.  
Koltac Industries-Div. Thompson Ramo Wooldridge Inc., a.  
Lantex Industries, Inc., a.  
**\*LAVELLE AIRCRAFT CORP., a.**  
Mercury Tool & Mfg. Corp., a thru d.  
Minnesota Mining & Mfg. Co., a.  
Monogram Precision Industries, a thru d.  
Narmco Mfg. Co., a.  
National Beryllia Corp., b.  
Newbrook Machine Corp., a thru d.  
Opelika Welding, Machine & Supply Inc., a thru d.  
Orchard Industries, Inc., Actionflex Div., a.  
Parts Engrg. Co., Inc., a, d, e.  
Penn-Michigan Mfg. Corp., d, e.  
Portland Copper & Tank Works Inc., a.  
Precision Sheet Metal, Inc., a.  
Project Fabrication Corp., b.  
Red Lion Cabinet Co., Redco Tool Div., b.  
Reinhold Engrg. & Plastics Co., a.  
Edw. Renneburg & Sons Co., a thru e.  
**\*RHEEM MFG. CO., DEFENSE & TECHNICAL PRODUCTS DIV., d, e.**  
C. F. Roark Welding & Engrg. Co., Inc., a, b.  
Ryan Aeronautical Co., a thru e.  
Silicone Insulation, Inc., a.  
Smith-Morris Corp., a thru d.  
Solar Aircraft Co., a thru e.  
South Wind Div., Stewart Warner Corp., b.  
Stainless Inc., a, d.  
Stainless Steel Products, Inc., a, c, d, e.

Standard-Thomson Corp., Clifford Mfg. Co., Div., a, b.  
Task Corp., b.  
Teiner Engrg. Corp., a, b.  
Thompson Engrg. Co., The, Missile Products Div., b.  
Trane Co., The, b.  
Twigg Industries, a, b, c.  
Twin Coach Co., Aircraft-Missiles, a, b, d.  
United Aircraft Products, Inc., a, b.  
Universal Metal Products, Inc., a, d.  
Waste King Corp., Technical Products Div., a thru e.  
Western Iron & Foundry Co., Inc., d.

#### EXPLOSIVE BOLT CARTRIDGES

See BOLT CARTRIDGES, EXPLOSIVE

#### EXPLOSIVE METAL FORMING & SIZING

**\*PROPELLEX CHEMICAL DIV., CHROMALLOY CORP.**

#### EXPLOSIVE RIVETS

See RIVETS, EXPLOSIVE

#### EXPLOSIVES, METAL FORMING

**\*AMERICAN POTASH & CHEMICAL CORP.**

#### EXTENSIONS, SHAFT

Actuator Products Div., Geartronics Corp.  
Amatom Electronic Hardware Co. Inc.  
Capital City Mfg. Co.  
Diversey Engrg. Co.  
Hoover Electric Co.  
Vard Inc.

#### EXTRUSIONS, METALLIC

Adam Metal Supply Inc.  
Allegheny Ludlum Steel Corp.  
Aluminum Co. of America  
American Aeroparts  
American Brass Co., The  
Bram Metallurgical & Chemical Co.  
**\*CAMERON IRON WORKS, INC.**  
Chase Brass & Copper Co., Inc.  
Curtiss-Wright Corp., Research Div.  
Division Lead Co.  
Dow Chemical Co., The  
Etched Products Corp.  
H. M. Harper Co.  
Harvey Aluminum  
Hufford Corp., The  
The International Nickel Co., The  
Kaiser Aluminum & Chemical Sales, Inc.  
Ladish Co.  
Mueller Bros Co.  
National Tube Div.,-United States Steel Corp.  
Norris-Thermador Corp.  
Precision Shopes, Inc.  
Pressed Steel Tank Co.  
Standard Metals Corp.  
Teiner Engrg. Corp.  
Titanium Metals Corp. of America  
Tube-Turns Div., Chemetron Corp.

#### EXTRUSIONS, NON-METALLIC

Allied Plastics Supply Corp.  
American Aeroparts  
American Agile Corp.  
Auburn Mfg. Co., The  
Centralab, Div.-Globe-Union  
Chemplast, Inc.  
Continental Rubber Works  
Curtiss-Wright Corp., Research Div.  
Electrical Refractories Co., The  
Emerson Plastics Corp.  
Gladding, McBean & Co.  
Huntington Rubber Mills  
Isolanite Mfg. Corp.  
Jesell Plastics  
Jodee Plastics Co.  
Luzerne Rubber Co.  
M & Q Plastic Products  
Metals & Controls Corp., General Plate Div.  
Minnesota Mining & Mfg. Co.  
National Beryllia Corp.  
National Tube Div.,-United States Steel Corp.  
New England Tape Co., Div.-United-Corr Fastener Corp.  
Norton Co.  
Norton Co., New Products Dept.  
Ohio Carbon Co., The  
Polymer Corp., The  
The Raybestos-Manhattan, Inc.  
Restoflex Corp.  
Roberts Toledo Rubber Co., The  
Milton Ross Metals Co., The  
The Rubbercraft Corp. of California  
Saylor Electric Products Corp.  
Schlegel Mfg. Co.  
Sparto Mfg. Co., Div.-U. S. Ceramic Tile Co.  
Taylor Electric Inc.  
Thermal Refractories Corp.  
Turbo Products, Inc.  
United States Rubber Co.  
Wilington Fibre Specialty Co.  
Yordley Plastics Co.

#### EYELETS

Abbott Screw & Mfg. Co.  
Aloc, Inc.  
Amatom Electronic Hardware Co. Inc.  
American Brass Co., The

Eyelet Tool Co. Inc.  
 Eye Engrg. Co.  
 E. Menough Co.  
 Prospect Screw Machine Products  
 Edward Seegal  
 Stanley-Judd Div.-The Stanley Works  
 Dover Co., Inc., The  
 Edwin B. Stimpson Co., Inc.  
 Ylvanio Electric Products Inc., Parts Div.  
 United Mineral & Chemical Corp.  
 United Shoe Machinery Corp., Ordnance Dept.  
 Waterbury Companies, Inc.  
 Waterbury Pressed Metal Co., The

**FABRICATORS, POWDERED METAL PARTS**

Aluminum Co. of America  
 American Aeroports  
 Messick Co., The, Div.-Stewart-Worner  
 Morgan Carbide Co.  
 Puritiss-Wright Corp., Research Div.  
 Sells Chemical Works, Inc.  
 Noble E Products Co.  
 Engelhard Industries, Inc.  
 Globe Industries, Inc., Supermet Div.  
 Jordan Enterprises  
 Monogram Precision Industries  
 Otatolo Inc., Military Electronics Div.  
 Uckle Mfg. Co.  
 Jeweller Brass Co.  
 Raybestos-Manhattan, Inc.  
 Raybestos-Manhattan, Inc., Po.  
 W. Renneburg & Sons Co.  
 J. Morys Carbon Co.  
 Smith Products Co., Inc.  
 Specialty Engrg. & Electronics Co.  
 Yvanio Electric Products Inc., Chemical &  
 Metallurgical Div.  
 United Mineral & Chemical Corp.

**FACSIMILE RECORDING PAPER  
 AND PAPER, FACSIMILE RECORDING**

**FAIRFAX RESEARCH MFG. CO., DIV.-THE GARRETT  
 CORP.**  
 American Aeroports  
 American Agile Corp.  
 American Air Filter Co., Defense Products Div.  
 Ashland Electric Products, Inc.  
 Benson Mfg., Co., The  
 Garage Fan Co.  
 Oppus Engrg. Corp.  
 H. & Benson Research, Inc.  
 Heli Mfg. Co.  
 Jordan City Fan Co.  
 Dover Electric Co.  
 G Electric Ventilating Co.  
 Y Mfg. Co.  
 Oppers Co., Inc.  
 Leon Engrg. Laboratories  
 Monogram Precision Industries  
 Inz Mueller Eng. Co., Inc.  
 Wireless Electric Co., The  
 Iso Products Div.-Borg-Warner Corp.  
 W. Renneburg & Sons Co.  
 Itran Mfg. Co.  
 Arrington Mfg. Co., Inc., The, Specialty Blower Div.  
 Stern Design, Div.-U.S. Industries, Inc., Santa  
 Barbara Div.

**FANS, TURBO  
 AND TURBO FANS**

**FAN EXCITERS**  
 a. Blind  
 b. Cowl  
 c. Self-Locking  
 d. Slide  
 e. Snap  
 Abbott Screw & Mfg. Co.  
 Am Metal Supply Inc., a.  
 Ams Rite Mfg. Co., b.  
 Arlo Bolt & Screw Co., Inc., c.  
 Aro Leather Products Co., e.  
 Len Mfg. Co.  
 Metal Screw Products Co., Inc., c.  
 American Aeroports, a thru e.  
 American Screw Co., b.  
 American Standard Products, Inc., a thru e.  
 In-Corrosive Metal Products Co., Inc., c.  
 Iso-Valve Inc., a, b, c.  
 Jst Aircraft Corp., a thru e.  
 Lind Burner Co., The, b.  
 Lots Aircraft Nut Corp., a, c.  
 Lush Nail Expansion Bolt Co., a, c.  
 Klyn Co.  
 May-Div.-Illinois Tool Works, a thru e.  
 Incar Screw & Mfg. Co., Div.-Textron Industries,  
 Inc., b.  
 Inlac Fastener Corp., b, c.  
 Geowell Mfg. Co., e.  
 Omac Aviation  
 Century Fasteners Corp., b, c.  
 Guse Brass & Copper Co., Inc.  
 Chicago Screw Co., The, Div.-Standard Screw Co.  
 Inmar Products Corp., d.  
 Continental Screw Co., c.  
 Cbin Products Div., c.  
 Lutsch Fastener Corp., a, b, d.  
 Lico-Groy Co., c.

R. C. Dudek & Co., a, c.  
 Eaton Mfg. Co., c.  
 Eaton Mfg. Co., Reliance Div., c, e.  
 Elastic Stop Nut Corp. of America, a, b, c.  
 Fasteners, Inc., c.  
 Federal Screw Products Inc., a.  
 George K. Garrett Co., Inc., a.  
 General American Transportation Corp.  
 B. F. Goodrich Aviation Products, a, d.  
 Groov-Pin Corp., a, c.  
 H. M. Harper Co.  
 \*HARTFORD MACHINE SCREW CO., DIV.-  
 STANDARD SCREW CO.  
 Heli-Coil Corp., c.  
 HI-Shear Rivet Tool Co., a, c.  
 Huck Mfg. Co., a, c.  
 Jacobson Nut Mfg. Corp., c.  
 Kynar Mfg. Co., Inc., e.  
 Klincher Locknut Corp., c.  
 H. Koch & Sons, c.  
 Lion Fastener Co., Inc., b, c.  
 Lucas Aircraft Supply Co., a thru e.  
 Monogram Precision Industries, a thru e.  
 National Lead Co.  
 National Screw & Mfg. Co., The, a, c.  
 Nelson Stud Welding, Div.-Gregory Industries, Inc., e.  
 D. W. Price Corp., c.  
 Republic Steel Corp., c.  
 Roson, Inc., a thru e.  
 Schlegel Mfg. Co., c, d.  
 Scovill Mfg. Co., b, d, e.  
 Serwell Products Co., c.  
 Shur-Lok Corp., c.  
 Simmons Fastener Corp., a, b, c.  
 Southco Div., South Chester Corp., a, b, c.  
 Standard Locknut & Lockwasher Inc., c.  
 Standard Pressed Steel Co., a, c.  
 Stanley-Judd Div.-The Stanley Works, a thru e.  
 Star Expansion, a.  
 Stic-Klip Mfg., Co., c.  
 Edwin B. Stimpson Co., Inc., d, e.  
 T.A. Mfg. Corp., a.  
 Tolon, Inc., d.  
 Tinnerman Products, Inc., a, b, c.  
 \*TOWNSEND CO., CHERRY RIVET DIV., a, c.  
 United States Chemical Milling Corp., a, b, d.  
 United Supply Co., a thru d.  
 Waldes Kohinoor, Inc., b thru e.  
 Waldom Electronics Inc.  
 Waltham Precision Instrument Co., c.  
 Waterbury Pressed Metal Co., The, c.  
 Zippertubing Co., The, d.

**FEED SYSTEMS**  
 Ainslie Corp.  
 American Machine & Foundry Co., Greenwish  
 Associated Engineers, Inc.  
 Chondler Evans Corp.  
 Diamond Antenna & Microwave Corp.  
 Dresser Mfg. Div., Dresser Industries, Inc.  
 Eyelet Tool Co., Inc.  
 Radiotronics, Inc.  
 Teiner Engrg. Corp.  
 Telerad Mfg. Corp.  
**FEED SYSTEMS, ANTENNA**  
 See ANTENNA FEED SYSTEMS  
**FEEDERS, ASSEMBLERS  
 AND ASSEMBLERS, FEEDERS**  
**FIBRE GROMMETS  
 AND GROMMETS, FIBRE**  
**FIELD EXCITERS  
 AND EXCITERS, FIELD**  
**FILES**  
 Barrett-Christie Co.  
 Bergen Carbide Co.  
 Deluxe Metal Products Co.  
 Handicraft Tools, Inc., Div.-X-Acto, Inc.  
 Simonds Saw & Steel Co.  
**FILM, MAGNETIC STRIPE**  
 Bell & Howell Co.  
 Eastman Kodak Co.  
 Minnesota Mining & Mfg. Co.  
 Vitro Labs.  
**FILMS, CAPACITOR**  
 Aerovox Corp.  
 Allied Plastics Supply Corp.  
 Continental Diamond Fibre Corp.  
 Dilectrix Corp.  
 Double E Products Co.  
 E. I. Du Pont De Nemours & Co. Inc.  
 Mico Fabricating Co.  
 Nafcor Corp.  
 Permacel  
 Topco Group, Thompson-Romo-Woolldridge Inc.  
 Vitro Labs.  
**FILMS, PLASTIC FOR WOUND INSULATION**  
 \*ALLIED CHEMICAL CORP., GENERAL  
 CHEMICAL DIV.  
 Chemplast, Inc.  
 Continental Diamond Fibre Corp.  
 Dilectrix Corp.  
 E. I. Du Pont De Nemours & Co. Inc.

Franklin Fibre-Lamitex Corp.  
 Joclin Mfg. Co.  
 Mico Fabricating Co.  
 Minnesota Mining & Mfg. Co.  
 Orblitron Co., Inc.  
 Permacel  
 Picker X-Ray Corp.  
 Polyken Sales Div., The Kendall Co.  
 Polymer Corp., The  
 Sanford Plastics Corp.  
 Sparta Mfg. Co., Div.-U.S. Ceramic Tile Co.  
 Tubo Products, Inc.  
 United States Rubber Co.

**FILTERS**

a. Air  
 b. Antenna  
 c. Audio  
 d. Band Elimination  
 e. Band Pass  
 f. Continuously Variable  
 g. Crystal  
 h. Detonation  
 i. Electric  
 j. Electric Wave Section  
 k. Equalizer  
 l. Fuel & Oil  
 m. High Pass  
 n. Hydraulic  
 o. IF  
 p. Interference  
 q. Line  
 r. Low Pass  
 s. Measurement  
 t. Mechanical  
 u. Microwave  
 v. Needle Scratch  
 w. Noise Suppressing  
 x. Optical  
 y. Pneumatic System  
 z. Polarizing  
 a1. Radio  
 b1. Radio Noise  
 c1. Radio Range  
 d1. Radio Tower Lighting  
 e1. RF  
 f1. Telemetering  
 g1. UHF & VHF  
 h1. Vacuum System  
 i1. Variable Electronic  
 j1. Vestigial Sideband  
 k1. Wave Trap  
 ACF Industries Inc., a, l, n, y.  
 Accessory Products Co., Div.-Textron Inc., a, l, n.  
 Actuation Research Corp.  
 R.\*P. Adoms Co., Inc., a, y.  
 Adler Electronics, Inc., b, d, e, m, r, u, g-1.  
 Aero Supply Mfg. Inc., a, l, n.  
 Aerovox Corp., c, d, h, i, j, m, a, g, r, c-1, e-1.  
 Air Filter Corp., a.  
 Airterra, l, n.  
 Airborne Accessories Corp., i, w, b-1.  
 Aircom Inc., b, u.  
 Aircraft Porous Medio, Inc., a, l, n, y.  
 \*AIRESEARCH MFG. CO. OF ARIZ., v, b-1.  
 \*AIRESEARCH MFG. CO., DIV.-THE GARRETT  
 CORP., b-1.  
 Air-Maze Corp., a, l, n, t, y.  
 Airtron Inc., Div.-Litton Industries, u.  
 Airtronics International Corp., d, e, m, r.  
 Alford Mfg. Co., r, j-1.  
 R. C. Allen Aircraft Instr. Div., R. C. Allen Bus.  
 Machines, Inc., b-1.  
 Allied Witon Co. Inc., a.  
 Allison Labs., c thru f, m, r.  
 All-Tronics, Inc., p, w, b-1, e-1.  
 Alsoop Engrg. Corp., l, n.  
 Alto Scientific Co., Inc., d, e, a, e-1, g-1.  
 Amelco, Inc., e.  
 Amerac Inc., u.  
 American Aeroports, a, b, l, n, a-1, b-1.  
 American Air Filter Co., Defense Products Div., a.  
 American Bosch Arma Corp., l, w, b-1, e-1.  
 American Electronics, Inc., t.  
 American Electronics, Inc., Toller & Cooper Div., f-1.  
 American Machine & Foundry Co., Government  
 Products Group, b, n.  
 American Missile Products Co., Inc., f-1.  
 American Optical Co., Instrument Div., x.  
 Andrew Corp., b.  
 Antenna & Radome Research Associates, u, e-1.  
 Astron Corp., e, m, p, r, w, b-1, e-1.  
 Atlantic Research Corp., x.  
 Audio Development Co., c, d, e, i, j, k, m, r, w, f-1.  
 Automation Dynamics Corp., f-1.  
 Axel Electronics, i, p, q, r, w, a-1, b-1, e-1.  
 Axler Associates Inc., p.  
 B & K Instruments, Inc., e, e.  
 Barker Sales Co., f-1, e-1, i-1, j-1, k-1.  
 Barker & Williamson Inc., b thru e, j, m, r, a-1, e-1,  
 f-1, k-1.  
 Barnebey-Cheney Co., a.  
 Barrett-Christie Co., a, y.  
 \*BAUSCH & LOMB OPTICAL CO., x, z.  
 Beach-Russ Co., h-1.  
 Bendix Filter Div., Bendix Aviation Corp., a, l, n,  
 q, t, y.  
 Bendix-Pacific Div., Bendix Aviation Corp., e, r, f-1.  
 Bendix Utica Div., Bendix Aviation Corp., a, l, n, y.  
 Blonder-Tongue Labs., Inc., c thru f, q, r, w, a-1, b-1,  
 e-1, g-1, i-1.  
 Bogart Mfg. Corp., u.

Bawser, Inc., Defense Dept., l, n, s, t, y.  
 Briggs Associates, Inc., e.  
 Briggs Filtration Co., The, a, l, n.  
 Budd Stanley Co., Inc., u.  
 Buhl Optical Co., x.  
 Bulova Watch Co., Electronics Div., d, e, g, m, a, p, r, s, w, a-1, b-1, c-1, e-1, f-1, j-1.  
 Burnell & Co., Inc., c, d, e, g, i, k, m, a, r, f-1, j-1, k-1.  
 Cable Electric Products Inc., l.  
 Cambridge Filter Corp., a, h-1.  
 Caruthers & Fernandez, Inc., c, e, q, r.  
 Celco (Constantine Engr. Labs. Co.) a thru l, n thru q.  
 Centronix Inc., c, f-1.  
 Chicago Electronic Engr. Co., Inc., e, r.  
 Chicago Standard Transformer Corp., c, d, e, m, r.  
 Christie Machine Works, l, n.  
 Cinema Engr., c, e.  
 David Clark Co., Inc., w.  
 Clippard Instrument Lab., Inc., b, a, r, e-1.  
 Coil Co. of America, c.  
 Collins Radio Co., b thru e, u, d-1.  
 Commercial Filters Corp., a, l, n, t, y.  
 Communications Research Co., b, f-1.  
 Conflow Corp., a, y.  
 Consolidated Diesel Electric Corp., l, n, y.  
 Consolidated Diesel Electric Corp., Test Equip. Div., n, y.  
 Coptus Engr. Corp., a.  
 Cornell Co., The, Aero Div., y.  
 Cornell-Dubilier Electric Corp., b thru f, m, a thru r, w, a-1, b-1, e-1.  
 Corno Glass Works, l, x.  
 Corning Engr. Corp., The, a, l, n, t, y.  
 Curtiss-Wright Corp., Research Div., f-1.  
 D. & R. Ltd., c, e, m, r.  
 Data-Control Systems, Inc., e, r, f-1.  
 Daven Co., The, c, d, e, g, m, a, r, e-1.  
 Dayton Aviation Radio & Equipment Corp., a, b-1, e-1, g-1.  
 Dayton Rubber Co., The, a, k.  
 Demony-Bonardi, e, u.  
 Denison Engr. Div., American Brake Shoe Co., n.  
 Diamond Antenna & Microwave Corp., b, e, g, r, u.  
 Dietz Design & Mfg. Co., c, d, e, l, j, k, m, a thru s, w, a-1, b-1, c-1, e-1, f-1, g-1, j-1, k-1.  
 Dunnet Scientific Co., x, z.  
 Double E Products Co., b thru e, m, a thru s, u, w, a-1, b-1, c-1, e-1, g-1, k-1.  
 Douglas Microwave Co., Inc., e, r, u.  
 Dresser Industries, Inc., c, d, e, i, j, m, p, q, r, f-1.  
 Dresser Mfg. Div., Dresser Industries, Inc.  
 Dumont Aircraft Fitting Co., l, n, t, y.  
 Dynamic Filters Inc., a, l, n, q, t.  
 Dynamics Instrumentation Co., Div.-Alherhill Corp., i-1.  
 Dyrnics Co., c, e, f.  
 ESC Corp., d, e, l, j, k, r, f-1.  
 Eastman Kodak Co., p, x, z.  
 Edmund Scientific Co., x, z.  
 Electrical Windings, Inc., c.  
 Electro-Mechanical Products Co., b, f-1.  
 Electro-Mechanical Research, Inc., e, r, f-1.  
 Electron Products Co., p, b-1.  
 Electronic Communications, Inc., b, f, p, u, b-1, e-1, g-1, i-1.  
 Electronic Research Associates, Inc., r, b-1.  
 Electronic Specialty Co., d, e, r, t, g-1.  
 Electronic Transformer Co., Inc., b thru e, r.  
 Emerson Radio & Phonograph Corp., e, p, u, a-1, e-1, g-1.  
 Empire Products Sales Corp., d, e, r, u, g-1.  
 Entron, Inc., b, d, e, f, k, m, e-1, g-1, k-1.  
 FXR, Inc., a, e-1, g-1.  
 J. W. Fecker, Inc., x.  
 Ferrotron Electronics Co., Inc., d, e, i, a, r.  
 Filtron Co., Inc., b, d, e, i, m, a thru r, u, w, a-1, b-1, e-1, g-1.  
 Fisher Governor Co., a.  
 Fisher Scientific Co., h-1.  
 Fish-Schurman Corp., p, x.  
 Flow Corp., r.  
 Forbes & Wagner, Inc., c, d, e, m, r, e-1.  
 Foster Transformer Co., c, d, e, m, q, r.  
 Foto-Video Labs, Inc., e.  
 Fram Corp., a, l, n, q, x.  
 Freed Transformer Co., Inc., c, d, e, i, k, m, p, r, c-1, e-1.  
 Fugle-Miller Labs., Inc., d, e, j, m, a, r, e-1, k-1.  
 Gabriel Co., The, Gabriel Electronics Div., b, u, g-1.  
 Gardner-Denver Co., a, y.  
 General Devices, Inc., f-1.  
 General Filters, Inc., l, n.  
 Genistran, Inc., c, m, p, q, r, w, b-1, e-1.  
 Geotronic Labs, Inc., c, d, e, l, i, q.  
 Gits Brothers Mfg. Co., a.  
 John Gombos Co., Inc., u.  
 Gordon Enterprises, x.  
 Gray Co., Inc., a, q.  
 Green Rectifier Co., r, x.  
 Greer Hydraulics, Inc., n.  
 Grimes Mfg. Co., a.  
 Gulton Industries, Inc., r.  
 Gyrex Corp., The, e, t.  
 Hagon Chemicals & Controls, Inc., a, l.  
 Hallamore Electronics Co., f-1.  
 Haller, Raymond & Brown Inc. Div., Singer Mfg. Co., b, d, e, e-1.  
 Halleff Mfg. Co., p, b-1.  
 Hallcrafters, b, e-1, j-1.  
 Hammond Mfg. Co., Inc., c, d, e, m, r.  
 Hannifin Co., Div.-Parker-Hannifin Corp., y, h-1.

Harman Equipment Co., a, l, n, y, h-1.  
 Haskel Engr. & Supply Co., a, l, n, y.  
 Haves Industries, Inc., a.  
 Hayward Scientific Glass Corp., x.  
 Herlo Engr. Corp.  
 Hewlett-Packard Co., e, r, s.  
 High Vacuum Equipment Corp., h-1.  
 Hill Electronics, Inc., c, d, e, g, i, m, a, p, r, w, e-1, f-1.  
 Hoke, Inc., q.  
 Hoover Electric Co., b-1, e-1.  
 Hughes Aircraft Co., g.  
 Hughey & Phillips, Inc., d-1.  
 Walter J. Hyatt Co., The, a, b, l, n, u, y, k-1.  
 Hydrodyne Corp., Skinner Seal Div., a, l, n, y.  
 IIT Federal Div., International Telephone & Telegraph Corp., b, x, e-1.  
 Imperial Brass Mfg. Co., The, l.  
 Instruments for Industry, Inc., b, d, e, i, j, k, m, a, p, r, a-1, b-1, e-1, f-1, g-1.  
 Interference Measurement Laboratory, Inc., p, q, r, w, b-1.  
 International Research & Development Corp., f, i-1.  
 JFD Electronics Corp., d, e, m, e-1, f-1, g-1.  
 J-V-M Microwave Co., d, r, u.  
 Jonsky & Bailey, Inc., b-1.  
 Johnson Electronics Inc., d, n, p, q, z, e-1.  
 Kahn & Co., Inc., a, l, t, y.  
 Kauke & Co., r.  
**\*KEARFOTT CO., MICROWAVE DIV., e, u, e-1.**  
 D. S. Kennedy & Co., b, u, z.  
 Kentucky Metal Products Co., b-1.  
 Keystone Products Co., c, d, e, i, j, m, r, k-1.  
 Kinney Mfg. Div., The New York Air Brake Co., h-1.  
 Koehler Aircraft Products Co., a, l, n, y.  
 Kopp Glass, Inc., x, e-1.  
 Lancaster Glass Corp., x.  
 Land-Air Inc., c-1, f-1, j-1.  
 Langevin Div., W. L. Maxson Corp., The, c, d, e.  
 Lear, Inc., b thru e, m, r, f-1, g-1.  
 Lear, Inc., Grand Rapids Div., b, d, p, b-1.  
 Warner Lewis Co., Div.-Fram Corp., l, n.  
 Libroscope Inc., p, x.  
 Lieco, Inc., u.  
 Ling Electronics, Inc., r.  
 Litton Industries, Inc., f-1.  
 Litton Industries, Maryland Div., b, d, e, m, r.  
 Livingston Electronic Corp., a.  
 Lynch Carrier Systems Inc., d, e, j, k, m, q, r, f-1.  
 Magnavox Co., The, g-1.  
 Marvel Engr. Co., l, n.  
 Mason-Norton, a.  
 McCoy Electronics Co., d, e, g, m, r, a-1.  
 McMillan Industrial Corp., a, u, b-1, g-1.  
 Meridian Metalcraft, Inc., b, d, e, r, u, g-1.  
 Metal Textile Corp., Electronics Div., a, l.  
 Michigan Wire Cloth Co., l, n.  
 Microlab, d, e, i, m, r, u, a-1, b-1, e-1, g-1, k-1.  
 Microwave Associates, Inc., e, u, e-1.  
 Microwave Development Labs, Inc., i.  
 Midland Mfg. Co., Inc., g.  
 Midwest Instruments, Inc., f-1.  
 J. W. Miller Co., b, d, e, m, a thru r, v, w, a-1, b-1, d-1, e-1, k-1.  
 Millipore Filter Corp., l, n, t.  
 Mine Safety Appliances Co., a, l.  
 Miniran Corp., c, d, e, k, m, r.  
 Minneapolis-Honeywell Regulator Co., Aeronautical Div., a.  
 Minneapolis-Honeywell Regulator Co., Industrial Product Group, y.  
 Miratel, Inc., c, e, a, u, e-1, g-1, k-1.  
 Monogram Precision Industries, a, b, d, e, i, t, u, x, z.  
 Motorola Inc., Military Electronics Div., b thru g, i, m, a thru r, t, u, w, a-1, b-1, e-1, f-1, g-1, i-1, j-1, k-1.  
 Mutron Corp., a.  
 NYT Electronics, Inc., c, d, e, i, j, k, m, a, r, e-1, f-1.  
 Narda Microwave Corp., The, u.  
 Narco Mfg. Co., b.  
 National Coil Co., c, d, e, m, a thru r, b-1, c-1.  
 National Pneumatic Co., Inc., Holtzer-Cobot Divs., a thru e, g, i, m, a thru r, w, a-1, b-1, e-1, f-1, g-1.  
 National Research Corp., h-1.  
 Networks Electronic Corp., c, d, e.  
 New York Transformer Co., Inc., c, d, e, i, j, k, m, r, f-1.  
 Newark Wire Cloth Co., l.  
 North Hills Electric Co., Inc., c, d, e, i, j, k, m, a, q, r, e-1, f-1, j-1, k-1.  
 O & S Research, Inc., x.  
 Optical Coating Lab., Inc., p, x.  
 Orbitran Co., Inc., r.  
 Ortho Filter Corp., b thru e, g thru k, m, a, q, r, s, u, b-1, c-1, e-1, f-1, g-1, j-1, k-1.  
 Palo Alto Engr. Co., c, d, e, p, q, r, w.  
 Ralph M. Parsons Co., The, Electronics Div., b, e, e-1, f-1, j-1.  
 Philco Corp., Government & Industrial Div., a, b, e, a, p, q, u, a-1, b-1, e-1, f-1, g-1, i-1.  
 Polaroid Electronics Corp., u.  
 Polaroid Corp., z.  
 Portchester Instrument Corp., b, d, m, r, u.  
 Potter Co., The, e, m, p, q, r, w, b-1.  
 Power-Tronic Systems Inc., c thru f, k, r, s, t.  
 Precise Development Corp., r, v.  
 Precision Equipment Co., Inc., a, l, n, t.  
 Puritan Compressed Gas Corp., Aviation Div., h-1.  
 Purulator Products Inc., a, l, n, q, t, y.  
 RS Electronics Corp., a, e-1.

Radar Design Corp., u.  
 Radar Relay, Inc., b-1.  
 Radex Corp., a, i.  
 Radiation, Inc., f-1.  
 Radiatronics, Inc., b, d, e, r thru u, e-1, f-1, g-1.  
 Railway Communications Inc., e, m, r.  
 Raytheon Mfg. Co., t.  
 Reeves-Haffman Div., d, e, g, k.  
 Research Products Corp., a.  
 Riverbank Labs., Dept-Engr., e.  
 Rixan Electronics Inc., c, d, e, m, p, r, j-1.  
 Robbins Aviation, Inc., a.  
 Rollan Electric Co., a.  
 Royal Industries, Inc., f-1.  
 Roylyn Inc., l, n.  
 Rytton Co., Inc., d, e, k, m, a, r, e-1, f-1.  
 Sage Labs, Inc., e, g, m, r, u, e-1.  
 Sage-Craft, Inc., q, e-1, g-1.  
 St. Marys Carbon Co., a, l, n, t.  
 San Fernando Electric Mfg. Co., p, w, b-1.  
 Sangama Electric Co., d, e, m, p thru s, w, k-1.  
 Sargent Engr. Corp., n.  
 H. H. Scott, Inc., c, e, m, r, w.  
 Shannon Luminous Materials Co., d, e.  
 Sioux Dtl Co., l.  
 A. O. Smith Corp. - Smith-Erie Div., l.  
 Southwestern Industrial Electronics Co., d, e, f, m.  
 Sparkler-Filtration Corp., l, n.  
 Spectrum Instruments, Inc., c thru f, i, r, w, f-1, i-1.  
 Superelex Electronics Corp., b, q, r, a-1, e-1.  
 Superior Pneumatic & Mfg., Inc., a.  
 Systems Inc., g.  
 Technical Apparatus Builders, p, q, w, b-1.  
 Telechrome Mfg. Corp., d, e, k, m, o, r, u, e-1, f-1, g-1, i-1, j-1, k-1.  
 Telectro Industries, Inc., b thru g, i, j, k, a thru s, w, a-1, b-1, c-1, e-1, f-1, g-1, i-1, k-1.  
 Telerad Mfg. Corp., e, u.  
 Telonic Industries, Inc., e, m, r, e-1.  
 Tinsley Labs., Inc., x.  
 Toke Deutschmann Corp., b, d, e, i, j, k, m, a thru r, u, w, a-1, b-1, c-1, e-1, g-1, k-1.  
 Torwico Electronics, Inc., c, e, m, r.  
 Tower Mfg. Corp., l.  
 Transco Products, Inc., b, e-1.  
 Tronconic, Inc., c, d, e, i, j, k, m, r, s, a-1, f-1.  
 Triod Transformer Corp., c, d, e, j, k, m, r, f-1, j-1.  
 Turbo Machine Co., u.  
 United Aircraft Products, Inc., l, n.  
 United Electrodynamics, Inc., e, r, f-1.  
 United Transformer Co., c thru f, i, j, k, q, r, u, c-1, f-1, j-1, k-1.  
 Universal Dynamics Corp., y.  
 Universal Toroid Coil Winding, Inc., d, e, f, r, e-1.  
 University Loudspeakers, Inc., c.  
 Vanguard Electronics Co., b, d, e, m, a, r, e-1, k-1.  
 Vaco Mfg. Co., Inc., e, m, a, r, e-1.  
 Vickers Inc., Marine & Drndance Dept., Machinery Hydraulics Div., n.  
 Victor R. F. & Microwave Co., u.  
 Warren Transformer Co., Inc., c, d, e, p, q, r, b-1, e-1.  
 Waveline, Inc., u.  
 Wenzlau Engr. Co., l.  
 Westbury Electronics Inc., m, r.  
 Westinghouse Air Brake Co., Industrial Products l, q, y.  
 Wheeler Electronic Corp., Sub-Sperry Rand Corp., d, e, i.  
 Wheeler Laboratories, Inc., u.  
 Winslow Engr. & Mfg. Co., l, n.  
 Winzen Research Inc., f-1.  
 Zenith Optical Laboratory, x.

**FINDERS, RANGE**

American Cystoscope Makers, Inc.  
 American Optical Co., Instrument Div.  
**\*BAUSCH & LOMB OPTICAL CO.**  
 Bendix Radio Div., Bendix Aviation Corp.  
 J. W. Fecker, Inc.  
 Ford Instrument Co., Div.-Sperry Rand Corp.  
 Gordon Enterprises  
 Graflex Inc.  
 Kollmorgen Optical Corp.  
 Motorola Inc., Military Electronics Div.  
 Northrop Corp., The, Nontronics Div.  
 Philco Corp., Government & Industrial Div.  
 Telectro Industries Corp.  
 Wobcor, Inc., Government Div.

**FINDERS, VIEW**

American Optical Co., Instrument Div.  
**\*BAUSCH & LOMB OPTICAL CO.**  
 Buhl Optical Co.  
 Dockendorf & Co. Inc.  
 J. W. Fecker, Inc.  
 Gordon Enterprises  
 Graflex Inc.  
 Trait Corp.

**FINISHERS, PLASTIC**

Dennis Chemical Co.  
 Duralith Corp.  
 General Plastics Corp. of New Jersey  
 Hardman Tool & Engr. Co.  
 Minnesota Mining & Mfg. Co.  
 Panel Engr. Corp.  
 Perry Plastics, Inc.  
 Turbo Products, Inc.  
 Waterbury Companies, Inc.

## FINISHES

- a. Crystal
- b. Luminous Materials
- c. Ripple
- d. Wrinkle

Bios Labs., Inc., b.  
Canadian Radium & Uranium Corp., b.  
Lofstrand Co., The, c, d.  
Maas & Waldstein Co., c, d.  
Minnesota Mining & Mfg. Co., b.  
National Pneumatic Co., Inc., Holtzer-Cabot Divs., b, d.  
Paral Engrg. Corp., b.  
Shannon Luminous Materials Co., b.  
United States Radium Corp., b.  
Vapor Blast Mfg. Co.

## FINS

American Brake Shoe Co.  
American Car & Foundry, Div.-ACF Industries, Inc.  
Anchor Metal Spinning Co., The  
\*AVCO MFG. CORP., CROSLLEY DIV.  
Brooks & Perkins, Inc.  
Carmac Aviation  
Clark-Aiken Co., The  
Continental Can Co., Inc.  
Curtiss-Wright Corp., Santa Barbara Div.  
Curtiss-Wright Corp., Wright Aeronautical Div.  
Diversey Engrg. Co.  
Ferris-Mfg. Co., The  
Fletcher Mfg. Co., Inc., The  
Graffix Inc.  
Hardman Tool & Engrg. Co.  
Haveg Industries, Inc.  
Ludwig Honold Mfg. Co.  
Hughes Tool Co., Aircraft Div.  
Intercinatlntal Mfg. Co., Inc.  
Jarvis Corp.  
Kaiser Aircraft & Electronics, Div.-Kaiser Industries Corp.  
Kaiser Metal Products, Inc.-Fleetwings Div.  
Kanarr Corp.  
Kelsey-Hayes Co.  
\*LAVELLE AIRCRAFT CORP.  
Lafstrand Co., The  
Langren Aircraft Co., Inc.  
Magline Inc.  
Marlo Coil Co.  
Minnesota Mining & Mfg. Co.  
Monogram Precision Industries  
Namco Mfg. Co.  
Norris-Thermador Corp.  
Precision Shopes, Inc.  
Precision Sheet Metal, Inc.  
Red Lion Cabinet Co., Redco Tool Div.  
\*RHEEM MFG. CO., DEFENSE & TECHNICAL PRODUCTS DIV.  
Santa Anita Engrg. Co.  
Solar Aircraft Co.  
Sperry Piedmont Co. - Div.-Sperry Rand Corp.  
Stanley-Judd Div.-The Stanley Works  
Universal Moulded Products Corp.  
Wheland Co., The  
Winder Aircraft Corp. of Florida  
Young Development Div., Hercules Powder Co.

## FIRE

- a. Alarm Systems
- b. Detectors
- c. Extinguishing Systems
- d. Protection Systems

Accessory Products Co., Div.-Textron Inc., c.  
Akron Brass Mfg. Co., Inc., c, d.  
American Aeroports, a, b, c.  
Ansil Chemical Co., c.  
\*ARNOUX CORP., a, b.  
Cardox Div., Chemetron Corp., c, d.  
Thomas A. Edison Ind. Instrument Div.-McGraw-Edison Co., a, b, d.  
Electronic Control Corp., a, b, d.  
\*ETS-HOKIN & GALVAN, a thru d.  
Fenwal Inc., a thru d.  
G. W. Galloway Co., c.  
Gamewell Co., The, a.  
General Fire Extinguisher Corp., The, c, d.  
Grinnell Co., a thru d.  
Hesco Engrg., a, b.  
Hoffman Electronics Corp., Semiconductor Div., b.  
ITT-Kellogg, a.  
Iron Firearm Mfg. Co., Electronics Div., b.  
Walter Kidde & Co., Inc., Aviation Div., a thru d.  
Mater Trucks, Inc., Government Div., c, d.  
Minneapolis-Honeywell Regulator Co.-Aeronautical Div., b.  
National Foam System, Inc., c.  
North Electric Co., a.  
Richards-Wilcox Mfg. Co., b.  
Royal Industries, Inc., b, d.  
Scanco Controls, Inc., b.  
Space Corp., c, d.  
Spraying Systems Co., c.  
Sun Electric Corp., Aeronautical Div., a.  
United Electric Controls Co., a.

## FIRE STANDS, MISSILE

ACCD Equipment Div., American Chain & Cable Co., Inc.  
Aerofet-General Corp.  
American Aeroports  
American Machine & Foundry Co., Greenwich

Associated Engineers, Inc.  
Astronautics Engrg. Co.  
Basic Tool Industries, Inc.  
Champion Co., The  
C. B. Christiansen Co.  
Conco Engrg. Works  
Crane Carter Corp.  
Cromer Mfg. & Engrg., Inc.  
Dresser-Ideca Co., Div.-Dresser Industries, Inc.  
Dyna-Therm Chemical Corp.  
G. W. Galloway Co.  
Paul Hardeman, Inc.  
Hardman Tool & Engrg., Co.  
Intercinatlntal Mfg. Co., Inc.  
Kaiser Aircraft & Electronics, Div.-Kaiser Industries Corp.  
Monogram Precision Industries  
Norton Co., New Products Dept.  
Dpeltko Welding, Machine & Supply Inc.  
Phillips & Davies Inc.  
Space Corp.  
Thiokol Chemical Corp., Hunter-Bristol Div.  
Twin Coach Co., Aircraft-Missiles  
United Aircraft Products, Inc.  
Washington Aluminum Co., Inc.  
Washington Technological Associates Inc.  
Welded Construction Inc.  
Wheland Co., The

## FIRE WALLS

Basic Tool Industries, Inc.  
Benson Mfg., Co., The  
Colonial Aircraft Corp.  
Fletcher Mfg. Co., Inc., The  
G. W. Galloway Co.  
Haveg Industries, Inc.  
Jahns-Manville  
Kaiser Aircraft & Electronics, Div.-Kaiser Industries Corp.  
Kentucky Metal Products Co.  
\*LAVELLE AIRCRAFT CORP.  
Monogram Precision Industries  
Namco Mfg. Co.  
Penn-Michigan Mfg. Corp.  
Ryan Aeronautical Co.  
Solar Aircraft Co.  
Stainless Steel Products, Inc.  
H. I. Thompson Fiber Glass Co.  
Twin Coach Co., Aircraft-Missiles

## FIRING PLATFORMS

See PLATFORMS, FIRING

## FIRING STAND ACCESSORIES

Accessory Products Co., Div.-Textron Inc.  
American Aeroports  
American Instruments Co., Inc.  
American Machine & Foundry Co., Greenwich  
Astronautics Engrg. Co.  
Basic Tool Industries, Inc.  
Capital City Mfg. Co.  
Clark-Aiken Co., The  
Consolidated Diesel Electric Corp.  
Cromer Mfg. & Engrg., Inc.  
Diversey Engrg. Co.  
Paul Hardeman, Inc.  
Hardman Tool & Engrg., Co.  
Horkey-Moore Associates  
Houston Fearless Corp.  
Hufford Corp., The  
\*HYDRO-AIRE CO., DIV.-CRANE CO.  
Hydromatics, Inc.  
Kelsey-Hayes Co.  
Mercury Tool & Mfg. Corp.  
Minnesota Mining & Mfg. Co.  
Monogram Precision Industries  
George L Nankervis Co.  
Phillips & Davies Inc.  
Space Corp.  
Thermo Refractories Corp.  
Tronier Mfg., Inc.  
\*R. D. WERNER CO., INC.  
Wheland Co., The

## FITTINGS & ACCESSORIES, ANTENNA

See ANTENNA FITTINGS & ACCESSORIES

## FITTINGS, COAXIAL CABLE

Aircorn Inc. of New Jersey  
Coaxial Connector Co. Inc.  
Dage Electric Co., Inc.  
Thomas A. Edison Ind. Instrument Div.-McGraw-Edison Co.  
Hallert Mfg. Co.  
Kling Metal Spinning & Stamping Co.  
Lucas Aircraft Supply Co.  
Stanley-Judd Div.-The Stanley Works  
Tapco Group, Thompson-Ramo-Wooldrige Inc.  
United Supply Co.  
Victor R. F. & Microwave Co.

## FITTINGS, METALLIC

Accessory Products Co., Div.-Textron Inc.  
Aircraft Fitting Co., The  
Airdome Parts Co.  
American Instruments Co., Inc.  
American Standard Products, Inc.  
Ampco Metal, Inc.  
Anchor Coupling Co. Inc.  
Arnav Aircraft Associates, Inc.

Astronautics Engrg. Co.  
Avico Corp.  
Basic Tool Industries, Inc.  
Best Aircraft Corp.  
Breeze Corporations, Inc.  
Bruce Engrg. Co.  
Capewell Mfg. Co.  
Capital City Mfg. Co.  
Carmac Aviation  
Century Fasteners Corp.  
Chase Brass & Copper Co., Inc.  
Clark-Aiken Co., The  
Clippard Instrument Lab., Inc.  
Collins Engrg. Corp.  
Corbin Products Div.  
Diversey Engrg. Co.  
Dumont Aircraft Fitting Co.  
\*FLEXONICS CORP., AERONAUTICAL DIV.  
GAR Mfg. Corp.  
Grinnell Co.  
Hannifin Co., Div.-Parker-Hannifin Corp.  
Hardman Tool & Engrg. Co.  
Harvey Aluminum  
International Nickel Co., The  
Kaiser Aircraft & Electronics, Div.-Kaiser Industries Corp.  
Kanarr Corp.  
Kohler Co.  
Lodish Co.  
Lucas Aircraft Supply Co.  
Mercury Tool & Mfg. Corp.  
Mueller Brass Co.  
Newton Hydraulic Tooling Co.  
Norton Co., New Products Dept.  
Parker Aircraft Co.  
Parker Fittings & Hose Div., Parker-Hannifin Corp.  
Peerless Machine Co.  
Pisecki Aircraft Corp.  
Precision Equipment Co., Inc.  
Precision Shapes, Inc.  
Rattan Mfg. Co., The  
Shaw Metal Products Corp.  
Smith-Morris Corp.  
Stanley-Judd Div.-The Stanley Works  
Tube-Turns Div., Chemetron Corp.  
United Supply Co.  
Variety Aircraft Corp.  
W-S Fittings Works, Forge & Fittings Div., H. K. Porter Co., Inc.  
\*WEATHERHEAD CO., THE  
Western Arc Welding, Inc.

## FITTINGS, NON-METALLIC

Airdome Parts Co.  
American Standard Products, Inc.  
Astronautics Engrg. Co.  
Carmac Aviation  
Chemplast, Inc.  
Continental Rubber Works  
Dresser Mfg. Div., Dresser Industries, Inc.  
Gladding, McBean & Co.  
Grinnell Co.  
Haveg Industries, Inc.  
Joelin Mfg. Co.  
Jahns-Manville  
Keystone Electronics Corp.  
Lomtex Industries, Inc.  
Lucas Aircraft Supply Co.  
Luzerne Rubber Co.  
Mercury Tool & Mfg. Corp.  
Mueller Brass Co.  
National Beryllia Corp.  
Pisecki Aircraft Corp.  
Polymer Corp., The  
Rattan Mfg. Co., The  
Fred T. Roberts & Co.  
Silicone Insulation, Inc.  
United States Rubber Co.  
United Supply Co.  
Zipperbush Co., The

## FLAMEHOLDERS, RAM JET

Aircraft Precision Products, Inc.  
California Aircraft Products  
Curtiss-Wright Corp., Research Div.  
Curtiss-Wright Corp., Wright Aeronautical Div.  
Finn Aeronautical Div., T. R. Finn & Co., Inc.  
Hupp Aviation Co.  
Kolcast Industries-Div.-Thompson Ramo Wooldrige Inc.  
\*LAVELLE AIRCRAFT CORP.  
\*LYCOMING DIV., AVCO MFG. CORP.  
Marquardt Aircraft Co.  
Mercury Tool & Mfg. Corp.  
National Beryllia Corp.  
Portland Copper & Tank Works Inc.  
\*RHEEM MFG. CO., DEFENSE & TECHNICAL PRODUCTS DIV.  
C. F. Roark Welding & Engrg. Co., Inc.  
Ryan Aeronautical Co.  
Solar Aircraft Co.  
Thermal Refractories Corp.

## FLANGES, MICROWAVE

Ainslie Corp.  
Aircorn Inc.  
Aircorn Inc. of New Jersey  
Airtron Inc., Div.-Littion Industries  
American Radar Components Inc.  
Andrew Corp.  
A. Biedeman, Inc.

Carmac Aviation  
Chase Brass & Copper Co., Inc.  
Coaxial Connector Co., Inc.  
Connector Corp. of America  
Demornay-Bonardi  
Douglas Antenna & Microwave Corp.  
Diamond Microwave Co., Inc.  
F.X.R., Inc.  
John Gombos Co., Inc.  
Walter J. Hyatt Co., The  
I-T-E Circuit Breaker Co.  
Lieco, Inc.  
Mercury Tool & Mfg. Corp.  
Microwave Associates, Inc.  
Monogram Precision Industries  
N.R.K. Mfg. & Engr. Co.  
Omega Labs., Inc.  
Portchester Instrument Corp.  
Telrad Mfg. Corp.  
Turbo Machine Co.  
United Aircraft Products, Inc.  
Victor R. F. & Microwave Co.  
Walworth Co. Electronics Div.  
Waveline, Inc.  
Western International Co.  
Wilks Precision Instrument Co., Inc.

#### FLAT DIE FORGINGS

See FORGINGS, FLAT DIE

#### FLEXIBLE & COMPRESSIBLE OUCTS

See OUCTS, FLEXIBLE & COMPRESSIBLE

#### FLEXIBLE HEATING EQUIPMENT

See HEATING EQUIPMENT, FLEXIBLE

#### FLEXIBLE SHAFTS

See SHAFTS, FLEXIBLE

#### FLEXIBLE WAVEGUIDES

See WAVEGUIDES, FLEXIBLE

#### FLIGHT DIRECTORS

##### \*AIRESEARCH MFG. CO., DIV.-THE GARRETT CORP.

Bendix Aviation Corp., Eclipse-Pioneer Div.  
Centronix Inc.  
Communications Research Co.  
ITT Labs.  
Lear, Inc.  
Lear, Inc., Grand Rapids Div.  
Minneapolis-Honeywell Regulator Co.-Aeronautical Div.  
Motorola Inc., Military Electronics Div.  
Ryon Aeronautical Co.  
Woldorf Electronics, Div.-F. C. Huyck & Sons

#### FLIGHT SIMULATION TEST CHAMBERS

See TEST CHAMBERS, FLIGHT SIMULATION

#### FLIGHT SIMULATORS

See SIMULATORS, FLIGHT

#### FLIGHT TERMINATION DEVICES

Aerojet-General Corp.  
Centronix Inc.  
ITT Labs.  
Land-Air Inc.  
Motorola Inc., Military Electronics Div.  
Ryan Aeronautical Co.  
Thiokol Chemical Corp., Hunter-Bristol Div.

#### FLOWMETERS, DIFFERENTIAL PRESSURE

Aeroscience, Inc.  
Astronautics Engr. Co.  
Barton Instrument Corp.  
A. Biederman, Inc.  
Bowser, Inc., Defense Dept.  
Bristol Co., The  
Brooks Rotameter Co.  
Centronix Inc.  
Clary Dynamics  
Dresser Industries, Inc.  
Dresser Mfg. Div., Dresser Industries, Inc.  
Dynometrics Corp.  
Fischer & Porter Co.  
Hagan Chemicals & Controls, Inc.  
Hoke, Inc.  
\*WALLACE O. LEONARO, INC.  
Libroscope Inc.  
Litton Industries, Maryland Div.  
Mason-Neilan  
Meriam Instrument Co.  
Minneapolis-Honeywell Regulator Co., Industrial Div.  
Minneapolis-Honeywell Regulator Co., Industrial Product Group  
George L. Nankervis Co.  
National Instrument Laboratories, Inc.  
Norwood Controls Unit Detroit Controls Div.  
Rohm Instruments, Div.-American Machine & Metals, Inc.  
Schutte & Koerting Co.  
Southwestern Industrial Electronics Co.  
Specialties, Inc.  
Statham Instruments, Inc.  
Textron Corp.  
Trimount Instrument Co.  
Wallace & Tiernon Inc.

#### FLOWMETERS, MASS RATE

Aero Research Instrument Co. Inc.

Aeroscience, Inc.  
Astronautics Engr. Co.  
Avien, Inc.  
Bendix Aviation Corp., Pioneer-Central Div.  
Bowser, Inc., Defense Dept.  
Bristol Co., The  
Cox Instruments Div., George L. Nankervis Co.  
Crescent Engr. & Research Co.  
Curtiss-Wright Corp., Electronics Div.  
Decker Corp., The  
Dresser Industries, Inc.  
Dresser Mfg. Div., Dresser Industries, Inc.  
Dynametrics Corp.  
Fischer & Porter Co.  
Flow Measurements Corp.  
General Electric Co., Apparatus Sales Div.  
Hagan Chemicals & Controls, Inc.  
Hoke, Inc.  
Korda Industries  
Land-Air Inc.  
Libroscope Inc.  
Litton Industries, Maryland Div.  
Matheson Co., Inc., The  
Minneapolis-Honeywell Regulator Co., Industrial Product Group  
National Instrument Laboratories, Inc.  
Dhmart Corp., The  
Potter Aeronautical Corp.  
Precision Thermometer & Instrument Co.  
Revere Corp. of America  
A. D. Smith Corp. - Smith-Erie Div.  
Standard Controls, Inc.  
Trans-Sonics, Inc.  
Turbo Products, Inc.  
Wallace & Tiernon Inc.  
Wough Engr. Co.

#### FLOWMETERS, VOLUMETRIC

Air Logistics Corp.  
American Measurement & Control, Inc.  
Astronautics Engr. Co.  
Barton Instrument Corp.  
Bristol Co., The  
Brooks Rotameter Co.  
Henry G. Dietz Co., Inc.  
Dresser Industries, Inc.  
Dresser Mfg. Div., Dresser Industries, Inc.  
Dynametrics Corp.  
Fischer & Porter Co.  
Fisher Scientific Co.  
Flow Measurements Corp.  
Hagan Chemicals & Controls, Inc.  
Hoke, Inc.  
Litton Industries, Maryland Div.  
Matheson Co., Inc., The  
W. L. Maxson Corp., The  
Meriam Instrument Co.  
George L. Nankervis Co.  
National Instrument Laboratories, Inc.  
Potter Aeronautical Corp.  
Revere Corp. of America  
Selas Corp. of America  
A. O. Smith Corp. - Smith-Erie Div.  
Turbo Products, Inc.  
Wallace & Tiernon Inc.  
Wough Engr. Co.

#### FLUID METERING PUMP SYSTEMS

Adel Precision Products of California, Div.-General Metals Corp.  
Aerojet-General Corp.  
American Aeronautics  
American Bosch Arma Corp.  
\*BENIOX AVIATION CORP., HAMILTON OIV.  
Bendix Utica Div., Bendix Aviation Corp.  
Bowser, Inc., Defense Dept.  
Chandler Evans Corp.  
Delsen Corp.  
Denison Engr. Div., American Brake Shoe Co.  
Eastern Industries Inc.  
Electric Auto-Lite Co., The  
Fischer & Porter Co.  
G. W. Galloway Co.  
\*HYORO-AIRE CO., DIV.-CRANE CO.  
Korda Industries  
Lear Inc., Lear-Romec Div.  
Minneapolis-Honeywell Regulator Co., Industrial Product Group  
Drandance Div.-Food Machinery & Chemical Corp.  
Pesco Products Div.-Borg-Warner Corp.  
Research Appliance Co.  
Milton Roy Co.  
A. O. Smith Corp.  
A. D. Smith Corp. - Smith-Erie Div.  
Wallace & Tiernon Inc.

#### FLUID MOTORS

Adel Precision Products of California, Div.-General Metals Corp.  
American Bosch Arma Corp.  
American Brake Shoe Co.  
American Machine & Foundry Co., Government Products Group  
\*BENIOX AVIATION CORP., HAMILTON OIV.  
Cornelius Co., The, Aero Div.  
Denison Engr. Div., American Brake Shoe Co.  
Eastern Industries Inc.  
Electric Auto-Lite Co., The  
General Electric Co., Apparatus Sales Div.  
Hamilton Stondard, Div.-United Aircraft Corp.  
Hannifin Co., Div.-Parker-Hannifin Corp.  
\*HYORO-AIRE CO., DIV.-CRANE CO.

Lear, Inc.  
Lear Inc., Lear-Romec Div.  
Dil-Dyne, Inc.  
Pesco Products Div.-Borg-Warner Corp.  
Reinhold Engr. & Plastics Co.  
Sargent Engr. Corp.  
Stratos, Div.-Fairchild Engine & Airplane Corp.  
Tapco Group, Thompson-Ramo-Woolridge Inc.  
Vickers Inc., Div.-Sperry Rand  
Vickers Inc., Marine & Ordnance Dept., Machinery Hydraulics Div.  
Watertown Div., The New York Air Brake Co.

#### FLUIDS, HYDRAULIC OILS, COOLANTS, ETC.

Anderson Oil & Chemical Co., Inc.  
George Bosch Co., The  
\*DOW CORNING CORP.  
E. I. DuPont de Nemours & Co. Inc.  
R. M. Hollingshead Corp.  
E. F. Houghton & Co.  
ITT Labs.  
MSA Research Corp.  
Minnesota Mining & Mfg. Co.  
Monsanto Chemical Co. - Organic Chemicals Div.  
Pemsalt Chemicals Corp.  
Shannon Luminous Materials Co.  
Silicones Div.-Union Carbide Corp.

#### FLUORESCENT COMPOUNDS, PHOSPHORS

##### \*ALLIEO CHEMICAL CORP., GENERAL CHEMICAL DIV.

Carl H. Biggs Co.  
Bias Labs., Inc.  
Borden Chemical Co.  
Bram Metallurgical & Chemical Co.  
Canadian Radium & Uranium Corp.  
E. I. Du Pont de Nemours & Co. Inc.  
General Electric Co., Lamp Metals & Components Dept.  
Luminous Resins Inc.  
Miller Dial & Nameplate Co.  
Minnesota Mining & Mfg. Co.  
Joseph E. Podgor Co., Inc.  
Shannon Luminous Materials Co.  
Sylvania Electric Products Inc., Chemical & Metallurgical Div.  
Thomas Electronics, Inc.  
\*ULTRA-VIOLET PRODUCTS, INC.  
United Mineral & Chemical Corp.  
United States Radium Corp.

#### FLUORINE, GAS & LIQUID

##### \*ALLIEO CHEMICAL CORP., GENERAL CHEMICAL DIV.

#### FLUOROMETERS

Belmont Smelting & Refining Works, Inc.  
Epic, Inc.  
Fisher Scientific Co.  
Photovolt Corp.

#### FLUX, BRAZING OR SOLDERING

Accurate Specialties Co. Inc.  
All-State Welding Alloys Co., Inc.  
Alpha Metals, Inc.  
Aluminum Co. of America  
American Brazing Alloys Co.  
American Silver Co.  
American Solder & Flux Co.  
Ampco Metal, Inc.  
Anchor Metal Co. Inc.  
Barrett-Christie Co.  
Blackstone Corp.  
Bow Solder Products Co., Inc.  
Burnley Battery & Mfg. Co., The  
Chase Brass & Copper Co., Inc.  
Curtiss-Wright Corp., Princeton Div.  
Curtiss-Wright Corp., Research Div.  
Dalweld Co. Inc.  
Division Lead Co.  
Dow Chemical Co., The  
M. W. Dunton Co. Inc., The  
E. I. Du Pont de Nemours & Co. Inc.  
Engelhard Industries, Inc.  
Hardy & Hartman  
International Nickel Co., The  
Johnson Mfg. Co., Inc.  
Linde Co., Div.-Union Carbide Corp.  
Landon Chemical Co., Inc.  
Metals & Controls Corp., General Plate Div.  
Mico Instrument Co.  
Mueller Brass Co.  
National Lead Co.  
Solar Aircraft Co.  
Strong Scott Mfg. Co., The  
Superior Flux & Mfg. Co., The  
United Wire & Supply Corp.  
\*WALL COLMONOY CORP., STAINLESS PROCESSING OIV.  
Wildberg Bros. Smelting & Refining Co.

#### FLYWHEELS

Curtiss-Wright Corp.-Wright Aeronautical Div.  
Lovejoy Tool Co., Inc.  
Mercury Tool & Mfg. Corp.  
Staver Co., Inc., The  
Western Iron & Foundry Co., Inc.

#### FOCUSING MAGNETS

See MAGNETS, FOCUSING



**OIL, ALUMINUM**

Accurate Specialties Co. Inc.  
Adept Industries Inc.  
Alloys Unlimited Inc.  
Aluminum Co. of America  
American Silver Co.  
Anchor Metal Co. Inc.  
Belmont Smelting & Refining Works, Inc.  
Bram Metallurgical & Chemical Co.  
Hamilton Watch Co.-Industrial Div.  
Kaiser Aluminum & Chemical Sales, Inc.  
United Mineral & Chemical Corp.

**OIL, LEAD**

Accurate Specialties Co. Inc.  
Alloys Unlimited Inc.  
American Smelting & Refining Co.  
Anchor Metal Co. Inc.  
Bar-Ray Products, Inc.  
Division Lead Co.  
National Lead Co.  
St. John X-Ray Lab.  
United Mineral & Chemical Corp.

**RCE MEASURING CELLS**

B & F Instruments, Inc.  
V. C. Dillon & Co., Inc.  
Dynametrics Corp.  
Evere Corp. of America  
pace Corp.  
tatham Instruments, Inc.

**ROINGS, DROP  
S DROP FORGINGS****ROINGS, FLAT DIE**

Alco Products, Inc.  
Allegheny Ludlum Steel Corp.  
Aluminum Co. of America  
American Aeroparts  
American Brake Shoe Co.  
American Car & Foundry, Div.-ACF Industries, Inc.  
Billings & Spencer Co., The  
Bridgeport Brass Co.  
**CAMERON IRON WORKS, INC.**  
Lapwell Mfg. Co.  
Clark Equipment Co.  
Consolidated Industries, Inc.  
Corbin Products Div.  
Harvey Aluminum  
Earle M. Jorgensen Co.  
Kelsey-Hayes Co.  
Ladish Co.  
Charles E. Larson & Sons, Inc.  
Midvale-Heppenstall Co.  
National Forge Co.  
Pettibone Mulliken Corp.  
Rockwell-Standard Corp.  
Steel Improvement & Forge., The  
Tapco Group, Thompson-Ramo-Wooldrige Inc.  
Vanadium-Alloys Steel Co.

**ROINGS, PRESS**

ACF Industries Inc.  
Alco Products, Inc.  
Allegheny Ludlum Steel Corp.  
Aluminum Co. of America  
American Aeroparts  
American Brake Co., The  
American Brass Co., The  
Billings & Spencer Co., The  
Bridgeport Brass Co.  
**CAMERON IRON WORKS, INC.**  
Nase Brass & Copper Co., Inc.  
Consolidated Industries, Inc.  
Corbin Products Div.  
Dresser Mfg. Div., Dresser Industries, Inc.  
Harvey Aluminum  
Earle M. Jorgensen Co.  
Kaiser Aluminum & Chemical Sales, Inc.  
Kelsey-Hayes Co.  
Klinger Co.  
Ladish Co.  
Midvale-Heppenstall Co.  
Neller Brass Co.  
National Forge Co.  
Pettibone Mulliken Corp.  
Rockwell-Standard Corp.  
Scovill Mfg. Co.  
Star Aircraft Co.  
Steel Improvement & Forge., The  
Tapco Group, Thompson-Ramo-Wooldrige Inc.  
Tatham Metal Mfg. Co.  
Transue & Williams Steel Forging Corp.  
Tube-Turns Div., Chemetron Corp.  
Vanadium-Alloys Steel Co.  
Dresser Industries  
S Fittings Works, Forge & Fittings Div., H. K. Porter Co. Inc.

**ROINGS, SPECIAL ALLOYS****CAMERON IRON WORKS, INC.****ROINGS, UPSET**

ACF Industries Inc.  
Alco Products, Inc.  
Allegheny Ludlum Steel Corp.  
Aluminum Co. of America  
American Aeroparts

American Brake Shoe Co.  
American Car & Foundry, Div.-ACF Industries, Inc.  
American Steel Foundries, Hammond Div.  
Billings & Spencer Co., The  
Bridgeport Brass Co.  
**\*CAMERON IRON WORKS, INC.**  
Clark Equipment Co.  
Commercial Shearing & Stamping Co.  
Corbin Products Div.  
Dresser Mfg. Div., Dresser Industries, Inc.  
Endicott Forging & Mfg. Co., Inc.  
Harvey Aluminum  
Earle M. Jorgensen Co.  
Kelsey-Hayes Co.  
Ladish Co.  
Midvale-Heppenstall Co.  
Pettibone Mulliken Corp.  
Rockwell-Standard Corp.  
Scovill Mfg. Co.  
Steel Improvement & Forge., The  
Tapco Group, Thompson-Ramo-Wooldrige Inc.  
Transue & Williams Steel Forging Corp.  
Tube-Turns Div., Chemetron Corp.  
Vanadium-Alloys Steel Co.  
W-S Fittings Works, Forge & Fittings Div., H. K. Porter Co. Inc.

**FORMS, UPSET**

American Aeroparts  
Bowser, Inc., Defense Dept.  
Kling Metal Spinning & Stamping Co.  
Ladish Co.  
Monogram Precision Industries  
Stanley-Judd Div.-The Stanley Works  
Teiner Engrg. Corp.

**FORMS, ANTENNA**

Ainslie Corp.  
Intercontinental Mfg. Co., Inc.  
Isolantite Mfg. Corp.  
Meridian Metalcraft, Inc.  
National Beryllia Corp.  
Turbo Machine Co.

**FOUNTAINS**

- a. Drinking
- b. Eye Wash
- c. Eye-Face Wash
- d. Portable Eye Wash

\*HAWS DRINKING FAUCET CO., a thru d.

**FRAMES, GRID**

See GRID FRAMES

**FRAMES, MISSILE**

See MISSILE FRAMES

**FREQUENCY CALIBRATION SERVICES**

A. Biederman, Inc.  
Budelman Electronics Corp.  
Data-Control Systems, Inc.  
FXR, Inc.  
General Electric Co., Apparatus Sales Div.  
Gyrex Corp., The  
Land-Air Inc.  
Northern Engrg. Laboratories, Inc.  
Weinschel Engrg.

**FREQUENCY METERS**

Acromag Inc.  
Adler Electronics, Inc.  
Aero Instrument Co.  
Aircorn Inc. of New Jersey  
Airpax Electronics Inc. Seminole Div.  
Amelco, Inc.  
American Aeroparts  
American Machine & Foundry Co., Government Products Group  
Avtron Mfg., Inc.  
Beckman Instruments, Inc., Berkeley Div.  
Bristol Co., The  
Budelman Electronics Corp.  
Diamond Antenna & Microwave Corp.  
Divco-Wayne Electronics Div., Divco-Wayne Corp.  
Douglas Microwave Co., Inc.  
Electro Precision Corp.  
Electronic Applications, Inc.  
Electronics Div., Van Norman Industries Inc.  
Electro-Tech Equipment Co.  
Engrg. Associates  
Erie Resistor Corp.  
FXR, Inc.  
Federal Mfg. & Engrg. Corp.  
General Communication Co.  
General Electric Co., Apparatus Sales Div.  
Helipot Div.-Beckman Instruments Inc.  
Hewlett-Packard Co.  
Kahn & Co., Inc.  
Lampkin Labs., Inc., M.R. Div.  
Lavoie Laboratories Inc.  
Meridian Metalcraft, Inc.  
Micrometrical Mfg. Co.  
Microwave Associates, Inc.  
Minneapolis-Honeywell Regulator Co., Davies Labs. Div.  
Minneapolis-Honeywell Regulator Co., Industrial Div.  
Minneapolis-Honeywell Regulator Co., Industrial Product Group

Narda Microwave Corp., The  
National Electronics  
Polytechnic Research & Development Co., Inc.  
Radar Design Corp.  
Sanborn Co.  
Sperry Microwave Electronics Co., Div.-Sperry Rand Corp.  
Sun Electric Corp., Aeronautical Div.  
Systan Corp.  
Technology Instrument Corp.  
Telectra Industries Corp.  
Telerad Mfg. Corp.  
Vera Mfg. Co., Inc.  
Wacline, Inc.  
Waltham Electronics Corp.  
Waveline, Inc.  
Weston Instruments, Div.-Daystrom, Inc.  
Wright Engrg. Co.

**FUEL BLADDERS**

See BLADDERS, FUEL

**FUEL DISTRIBUTORS**

See DISTRIBUTORS, FUEL

**FUEL HANDLING EQUIPMENT**

Aerojet-General Corp.  
American Machine & Foundry Co., Government Products Group  
Associated Engineers, Inc.  
Bowser, Inc., Defense Dept.  
Bruning Co., The  
Buckeye Iron & Brass Works  
Butler Mfg. Co.  
J. C. Carter Co., The  
Chandler Evans Corp.  
Chrysler Corp., Defense Operations Div.  
Components Corp.  
Consolidated Diesel Electric Corp.  
Consolidated Diesel Electric Corp., Western Div.  
Crane Carrier Corp.  
Cromer Mfg. & Engrg., Inc.  
Curtiss-Wright Corp., Research Div.  
Dresser Industries, Inc.  
Eastern Industries Inc.  
FWD Corp.  
Flight Refueling, Inc.  
G. W. Galloway Co.  
Goodyear Aircraft Corp.  
Goodyear Tire & Rubber Co., The, Aviation Products Div.  
Huffard Corp., The  
**\*HYDRO-AIRE CO., DIV.-CRANE CO.**  
Hydromatics, Inc.  
Jeffrey Mfg. Co., The  
Lear, Inc.  
Lear, Inc., Grand Rapids Div.  
Lear Inc., Leor-Romec Div.  
Langren Aircraft Co., Inc.  
Mack Trucks, Inc., Government Div.  
DPW-Jordan  
Drnnonce Div.-Food Machinery & Chemical Corp.  
Parker Aircraft Co.  
Project Fabrication Corp.  
Purulator Products Inc.  
Reaction Motors Div., Thiokol Chem. Corp.  
Charles Ross & Son Co., Inc.  
A. O. Smith Corp. - Smith-Erie Div.  
Space Corp.  
Stearns-Roger Mfg. Co.  
Texas Metal & Mfg. Co., Inc.  
Vickers Inc., Div.-Sperry Rand  
Washington Technological Associates Inc.  
Wayne Pump Co., The, Div.-Symington Wayne Corp.  
Welded Construction Inc.

**FUEL INJECTION SYSTEMS**

See INJECTION SYSTEMS, FUEL

**FUEL LINES**

American Tube Bending Co., Inc.  
Anaconda Metal Hose Div., The American Brass Co.  
Arnolt Corp.  
Avica Corp.  
Consolidated Electrodynamics Corp., Rochester Div.  
Cromer Mfg. & Engrg., Inc.  
Dresser Mfg. Div., Dresser Industries, Inc.  
Flexible Metal Hose Mfg. Co.  
**\*FLEXONICS CORP., AERONAUTICAL DIV.**  
Flight Refueling, Inc.  
G. W. Galloway Co.  
Imperial Brass Mfg. Co., The  
Kaiser Aircraft & Electronics, Div.-Kaiser Industries Corp.  
Lewis & Saunders  
Pesco Products Div.-Borg-Warner Corp.  
Precision Sheet Metal, Inc.  
Reaction Motors Div., Thiokol Chem. Corp.  
Stainless Steel Products, Inc.  
Stalker Corp., The  
Standard-Thomson Corp., Clifford Mfg. Co. Div.  
Stearns-Roger Mfg. Co.  
Wayne Pump Co., The, Div.-Symington Wayne Corp.  
Wolf Aircraft Products, Inc.

**FUEL PRESSURE WARNING UNITS**

See WARNING UNITS, FUEL PRESSURE

## FUEL SYSTEMS & EQUIPMENT

- a. Balancing Controls
- b. Flow Dividers or Distributors
- c. Injection Equipment
- d. Lines
- e. Mixture Controls, Automatic
- f. Pressure Gauges
- g. Pressure Warning Units
- h. Pumps
- i. Ratio Controllers
- j. Strainers

ACF Industries Inc., a, b, c, e thru j.  
Accessory Products Co., Div.-Textron Inc., j.  
Actuation Research Corp., j.  
Adel Precision Products of California, Div.-  
General Metals Corp., h.  
Aero Supply Mfg. Inc., a, b, j.  
Aerojet-General Corp., a, h.  
Aeroquip Corp., Jackson Div., d.  
Aeroscience, Inc.  
Airotero, j.  
\*AIRESEARCH MFG. CO., DIV.-THE GARRETT  
CORP., e, h, i.  
American Bosch Arma Corp., b, c, h, j.  
American Machine & Foundry Co., Government  
Products Group, a.  
American Tube Bending Co., Inc., d.  
Ardmore Products  
Associated Engineers, Inc., h.  
Avico Corp., d.  
Avion, Inc., a, c.  
Bodger Mfg. Co.  
Barco Mfg. Co., d.  
\*BEATON & CORBIN MFG. CO., THE, d.  
\*BENOIX AVIATION CORP., HAMILTON DIV., b,  
c, e, h, i.  
Bendix Aviation Corp., Montrose Div., g.  
\*BENOIX PRODUCTS DIV., BENOIX AVIATION  
CORP., b, c, e.  
Bendix Utica Div., Bendix Aviation Corp., b, h.  
Bowser, Inc., Defense Dept., b, e, h, i.  
Brooks Rotometer Co., i.  
Byron-Jackson Pumps Inc., h.  
California Aircraft Products, e.  
J. C. Carter Co., The, h.  
Chandler Evans Corp., a, b, c, e, g, h, i.  
Christie Machine Works, h.  
Chrysler Corp., Defense Operations Div.  
Clary Dynamics, b, e, j.  
Cleveland Pneumatic Industries, Inc., h.  
Cole-Hersee Co., g.  
Collins Engrg. Corp., h.  
Consolidated Controls Corp., f, g, i.  
Consolidated Diesel Electric Corp., a, b, e, f, g, i, j.  
Cromer Mfg. & Engrg., Inc., d.  
Cuno Engrg. Corp., The, j.  
Curtiss-Wright Corp., Santa Barbara Div., h.  
Curtiss-Wright Corp., Wright Aeronautical Div., a thru e.  
Delavan Mfg. Co., b, c.  
Dresser Industries, Inc., c, h.  
Dresser Mfg. Div., Dresser Industries, Inc.  
Dumont Aircraft Fitting Co., b, e, g, j.  
Dynamic Controls Corp., g, i.  
Eastern Industries Inc., h.  
Eddington Metal Specialty Co., b, c, j.  
Engineered Products Co., The, b, c.  
Essex Mfg. Co., Inc., g.  
Fischer & Porter Co., i.  
Flexible Metal Hose Mfg. Co., d.  
\*FLEXONICS CORP., AERONAUTICAL DIV., d.  
Flight Refueling, Inc., a, b, d.  
C. W. Galloway Co., a thru j.  
General Electric Co., Apparatus Sales Div., h.  
Hamilton Standard, Div.-United Aircraft Corp., a, e, i.  
Paul Hardeman, Inc.  
Harmon Equipment Co., j.  
Holley Carburetor Co.  
Hufford Corp., The, a thru j.  
Hupp Aviation Co., h.  
\*HYORO-AIRE CO., DIV.-CRANE CO., b, h.  
Hydroyne Corp., Skinner Seal Div., h, j.  
Hydromatics, Inc., e, i.  
Imperial Brass Mfg. Co., The, d.  
Kemp Aero Products, b, h.  
Koehler Aircraft Products Co., b, j.  
Korda Industries, a, b, c, e, h, i.  
Land-Air Inc., a, e.  
Leor, Inc., h.  
Leor, Inc., Grand Rapids Div., c, h.  
Leor, Inc., Leor-Romec Div., b, h.  
Lee Co., The, b, c, e.  
Marquardt Aircraft Co., a, b, c.  
Michigan Wire Cloth Co., j.  
Minneapolis-Honeywell Regulator Co., Industrial  
Product Group, f.  
National Aircraft Burner Co., h.  
Northwood Controls Unit Detroit Controls Div., f, g.  
DPW Jordan, f.  
Orchard Industries, Inc., Actionflex Div., d.  
Ordnance Div.-Food Machinery & Chemical Corp.  
Parker Aircraft Co., b, c, e, g, i, j.  
Parts Engrg. Co., Inc., c.  
Pesco Products Div.-Borg-Warner Corp., h.  
Pneu-Hydra Valve Corp., a, b, e.  
Potter Aeronautical Corp., i.  
Precision Sheet Metal, Inc., d.  
Project Fabrication Corp., d, h.  
Racine Hydraulics & Machinery Inc., h.  
Rahm Instruments, Div.-American Machine & Metals,  
Inc., f.  
Reaction Motors Div., Thiokol Chem. Corp., h.  
Republic Mfg. Co., b, g.

Rocketdyne Div.-North American Aviation, Inc.  
Roylyn Inc., j.  
St. Marys Carbon Co., j.  
Servomechanisms, Inc., a, f.  
Simmonds Aerospaces, Inc., c, h.  
A. D. Smith Corp., h.  
Southwestern Industries, Inc., d.  
Spraying Systems Co., j.  
Stainless Steel Products, Inc., d.  
Standard-Thomson Corp., Clifford Mfg. Co. Div., e,  
g.  
A. U. Stone & Co., Inc., b.  
Strotos, Div.-Fairchild Engine & Airplane Corp., a, b.  
Syston Corp., i.  
Tapco Group, Thompson-Ramo-Wooldrige Inc., b, h.  
Turbo Products, Inc.  
United Aircraft Products, Inc., b, c, e, h.  
United Electric Controls Co., j.  
Universal Metal Products Inc., g.  
Valcor Engrg. Corp., b, e.  
Vickers Inc., Div.-Sperry Rand, h.  
Waldorf Fluid Systems, Div.-F. C. Huyck & Sons, b.  
Wayne Pump Co., The, Div.-Symington Wayne Corp.,  
h.  
\*WEATHERHEAD CO., THE, d.  
Westronics Inc., a.  
Wilks Precision Instrument Co., Inc., h.

## FUELING LAOERS

See LAOOERS, FUELING

## FUELS, LIQUID

\*ALLIEO CHEMICAL CORP., GENERAL  
CHEMICAL DIV.

## FUELS, SOLID

Aerojet-General Corp.  
\*AMERICAN POTASH & CHEMICAL CORP.  
American Rocket Co.  
Astrodyne, Inc.  
Atlantic Research Corp.  
Bios Labs., Inc.  
Callery Chemical Co.  
Continental Aviation & Engrg. Corp.  
Dynamic Devices, Inc.  
Escombia Chemical Corp.  
Food Machinery & Chemical Corp.  
Foote-Mineral Co.  
Fulton-Irgon Corp., The  
Gabriel Co., The-Tolco Engrg. Co. Div.  
ITT Labs.  
Kennedy Van Saun Mfg. & Engrg. Corp.  
Derlikon Tool & Arms Corp. of America  
Dlin Mathieson Chemical Corp., Energy Div.  
Pennsalt Chemicals Corp.  
\*REOEL INC.  
Rohm & Haas Co., Redstone Arsenal Research Div.  
Topper Mfg. Co., Inc.  
Winder Aircraft Corp. of Florida

## FURNACES

Airtemp Div., Chrysler Corp.  
American Gas Furnace Co.  
\*AMERICAN POTASH & CHEMICAL CORP.  
Astrovac Corp.  
Blue M Electric Co.  
Curtiss-Wright Corp., Santa Barbara Div.  
Diversey Engrg. Co.  
Engelhard Industries, Inc.  
Fisher Scientific Co.  
Gardner Laboratory, Inc.  
General Electric Co., Apparatus Sales Div.  
General Vacuum Corp.  
Grieve-Hendry Co., Inc.  
C. I. Hayes, Inc.  
Hevi-Duty Electric Co.  
High Vacuum Equipment Corp.  
A. F. Holden Co., The  
Huppert, K. H., Co.  
Jet-Heat, Inc.  
Kinthol Corp., The  
Lindberg Engrg. Co.  
Jahn Mohr & Sons  
NRC Equipment Corp.  
National Aircraft Burner Co.  
National Beryllia Corp.  
National Research Corp.  
Pacific Scientific Co.  
Popesch & Kolstod, Inc.  
Edw. Renneburg & Sons Co.  
Selas Corp. of America  
Surface Combustion Corp.  
Temperature Engrg. Corp.  
Thermal Retroactories Corp.  
Thompson Engrg. Co., The, Missile Products Div.  
United States Dynamics Corp.  
Westinghouse Electric Corp.  
Young Brothers Co.  
Zirconium Corp. of America

## FUSE HOLDERS

See HOLDERS, FUSE

## GALVANOMETERS

Associated Research, Inc.  
B & H Instrument Co., Inc.  
Beede Electrical Instrument Co. Inc.  
James G. Biddle Co.  
Bristol Co., The  
Brush Instruments, Div.-Clevite Corp.  
Cambridge Instrument Co., Inc.

Centronix Inc.  
Century Electronics & Instruments, Inc.  
Consolidated Electrodynamics Corp.  
Epic, Inc.  
Fisher Scientific Co.  
G-M Labs. Inc.  
General Electric Co., Apparatus Sales Div.  
Gordon Enterprises  
Greibach Instruments Corp.  
Hamilton Watch Co.  
Hamilton Watch Co., Hathaway Instrument Div.  
Hamilton Watch Co.-Industrial Div.  
Heiland Div.-Minneapolis-Honeywell  
Kin Tel Div.-Cohu Electronics, Inc.  
Leeds & Northrup Co.  
Massa Div.-Cohu Electronics, Inc.  
Meters Inc.  
Midwestern Instruments, Inc.  
Minneapolis-Honeywell Regulator Co., Boston Div.  
Minneapolis-Honeywell Regulator Co., Industrial  
Minneapolis-Honeywell Regulator Co., Industrial  
Product Group  
National Electronics  
New England Scientific Instruments Co.  
Dffner Electronics Inc.  
Pace Electrical Instruments Co., Inc.  
Phatron Instrument Co.  
Physics Research Laboratories, Inc.  
Precision Development Corp.  
Sonnborn Co.  
Shallcross Mfg. Co.  
Simpson Electric Co.  
Southwestern Industrial Electronics Co.  
H. W. Sullivan Ltd.  
Sun Electric Corp., Aeronautical Div.  
Technology Instrument Corp.  
Weston Instruments, Div.-Daystrom, Inc.

## GAS ANALYZERS

American Electronics, Inc., Toller & Cooper Div.  
Bristol Co., The  
Cambridge Instrument Co., Inc.  
Central Scientific Co.  
Consolidated Electrodynamics Corp.  
Dovis Instruments  
Engelhard Industries, Inc.  
Epic, Inc.  
Fisher Scientific Co.  
Gardner Laboratory, Inc.  
Hallikainen Instruments  
Industrial Instruments Inc.  
Jarrell-Ash Co.  
Johnson-Williams, Inc.  
Harold Kruger Instruments  
Leeds & Northrup Co.  
Life Safety Appliances Co.  
NRC Equipment Corp.  
Perkin-Elmer Corp.  
Pioneer Industries Div., Almor-York Co. Inc.  
Process & Instruments  
Sperry Gyroscopic Co., Marine Div., Div.-Sperry  
Rand Corp.  
Sperry Piedmont Co. - Div.-Sperry Rand Corp.  
Sun Electric Corp., Aeronautical Div.  
Thiokol Chemical Corp.  
Victory Engrg. Corp.

## GAS COMPRESSORS

See COMPRESSORS, GAS

## GAS GENERATING DEVICES

Aerojet-General Corp.  
Aro Equipment Corp.  
Astrodyne, Inc.  
Engelhard Industries, Inc.  
Fisher Scientific Co.  
General Electric Co., Apparatus Sales Div.  
C. I. Hayes, Inc.  
Hevi-Duty Electric Co.  
Intercontinental Mfg. Co., Inc.  
\*JANITROL AIRCRAFT DIV., SURFACE  
COMBUSTION CORP.  
MSA Research Corp.  
\*MC CORMICK SELPH ASSOCIATES  
Mc Dowell-Wellman Companies, The  
Dlin Mathieson Chemical Corp., Energy Div.  
Pressed Steel Tank Co.  
Project Fabrication Corp.  
\*PROPELLEX CHEMICAL DIV., CHROMAL  
CORP.  
Reaction Motors Div., Thiokol Chem. Corp.  
\*REOEL INC.  
Rocketdyne Div.-North American Aviation, Inc.  
Special Projects Lab., Food Machinery & Chem  
Corp.  
Surface Combustion Corp.  
Thiokol Chemical Corp., Hunter-Bristol Div.  
Waste King Corp., Technical Products Div.

## GAS PRESSURE BOOSTERS

See BOOSTERS, GAS PRESSURE

## GAS TURBINE ENGINE OIFFUSERS

See OIFFUSERS, GAS TURBINE ENGINE

GAS TURBINE ENGINE, ENGINE STARTING  
SYSTEMS & CONTROLS  
See ENGINE STARTING SYSTEMS & CONTROLS  
GAS TURBINE ENGINE

GAS TURBINE ENGINE EXHAUST CONES  
See EXHAUST CONES, GAS TURBINE ENGINE

## AS TURBINE ENGINE ROTOR ASSEMBLIES See ROTOR ASSEMBLIES, GAS TURBINE ENGINE

### ASES, NITROGEN

Air Reduction Sales Co., Div.-Air Reduction Co., Inc.  
Engelhard Industries, Inc.  
Linde Co., Div.-Union Carbide Corp.  
Matheson Co., Inc., The  
Puritan Compressed Gas Corp., Aviation Div.  
Trionics Corp.

### ASES, RARE

Air Reduction Sales Co., Div.-Air Reduction Co., Inc.  
Associated Engrg. & Mfg. Corp.  
Linde Co., Div.-Union Carbide Corp.  
Matheson Co., Inc., The

### ASKET PASTE & CEMENT

Anchor Packing Co., The  
Armstrong Cork Co.  
Borrett-Christie Co.  
Borden Chemical Co.  
Emmel Cabot Inc.  
Cooper Industries, Inc.  
Crane Packing Co.  
Dresser Mfg. Div., Dresser Industries, Inc.  
Greene, Tweed & Co.  
Johns-Manville Sales Corp.  
Minnesota Mining & Mfg. Co.  
Minnesota Mining & Mfg. Co.-Adhesives, Coating & Sealers Div.  
Longram Precision Industries  
National Engrg. Products, Inc.  
Parker Fittings & Hose Div., Parker-Hannifin Corp.  
Rematex Co., Inc.  
Rohrer Research Co.  
Sorensen Cements Co.  
Tenth-De Mfg. Co.  
Union Asbestos & Rubber Co.  
Zophar Mills Inc.

### ASKETS, METALLIC

Abbott Screw & Mfg. Co.  
Ame Mfg. & Gasket Co.  
Advanced Products Co., The  
Aro Gasket Corp.  
Barton Inc., Div.-Littin Industries  
Bill Specs Corp.  
Bilied Plastics Supply Corp.  
Bloys Unlimited Inc.  
Alpha Metals, Inc.  
Bipotec, Inc.  
American Aeroparts  
Anchor Metal Co. Inc.  
Anchor Metal Spinning Co., The  
Anchor Packing Co., The  
Auburn Mfg. Co., The  
Axygen Carbide Co.  
Capital City Mfg. Co.  
Armac Aviation  
Arobin Products Div.  
Division Lead Co.  
Fletcher Mfg. Co., Inc., The  
Gasket Mfg. Co. Inc.  
General Gasket Inc.  
Greene, Tweed & Co.  
Hydrodyne Corp., Skinner Seal Div.  
Johns-Manville  
Johns-Manville Sales Corp.  
Kentucky Metal Products Co.  
Kestrel Textile Corp., Electronics Div.  
Metallo Gasket Co.  
Microwave Development Labs., Inc.  
Pacific Cut Washer Co.  
Penn Fibre & Specialty Co., Inc.  
Rubber Teck Inc.  
Sover Co., Inc., The  
United Aircraft Products, Inc.  
Victor Mfg. & Gasket Co.

### ASKETS, NON-METALLIC

Ame Mfg. & Gasket Co.  
Aro Gasket Corp.  
Arocom Inc.  
Bill Specs Corp.  
Bilied Plastics Supply Corp.  
American Aeroparts  
American Agile Corp.  
American Felt Co.  
Anchor Packing Co., The  
Armstrong Cork Co.  
Auburn Mfg. Co., The  
Axygen Carbide Co.  
Arobin Mfg. Co. Inc.  
Arobin Mfg. Corp.  
H. Brady Co.  
Emplast, Inc.  
Chicago Gasket Co.  
Chicago Rawhide Mfg. Co.  
Clonal Rubber Co.  
Connecticut Hard Rubber Co.  
Continental Rubber Works  
Cooper Industries, Inc.  
Crane Packing Co.  
Dresser Mfg. Div., Dresser Industries, Inc.  
E. Du Pont De Nemours & Co. Inc.  
Herson Plastics Corp.

Excelsior Leather Washer Mfg. Co., Inc.  
Fellers Co., The  
Fletcher Mfg. Co., Inc., The  
Fluorocarbon Co., The  
Fluorulon Labs., Inc.  
Furane Plastics, Inc.  
Gasket Mfg. Co. Inc.  
General Gasket Inc.  
General Plastics Corp. of New Jersey  
B. F. Goodrich Industrial Products Co.  
Goshen Rubber Co., Inc.  
Greene, Tweed & Co.  
Halogen Insulator & Seal Corp.  
Hamilton Kent Mfg. Co.  
Homalite Corp., The  
E. F. Houghton & Co.  
Integrated Mica Corp.  
Jodee Plastics Co.  
Johns-Manville  
Johns-Manville Sales Corp.  
Thomas J. Long, Inc.  
M & Q Plastic Products  
Metallo Gasket Co.  
Mica Fabricating Co.  
Mica Insulator Div.-Minnesota Mining & Mfg., Co.  
Microwave Development Labs., Inc.  
Minnesota Mining & Mfg. Co.  
Minnesota Rubber Co.  
New England Tape Co., Div.-United-Carr Fastener Corp.

Norton Co., New Products Dept.  
Pacific Cut Washer Co.  
Penn Fibre & Specialty Co., Inc.  
Polymer Corp., The  
Raybestos-Manhattan, Inc.  
Raybestos-Manhattan, Inc., Pa.  
Resistoflex Corp.  
Rogers Corp.  
Rubber Teck Inc.  
Rubbercraft Corp. of California  
Silicone Insulation, Inc.  
Sparta Mfg. Co., Div.-U. S. Ceramic Tile Co.  
Stover Co., Inc., The  
Thermach Engrg. Corp.  
Union Asbestos & Rubber Co.  
Victor Mfg. & Gasket Co.  
Waldom Electronics Inc.  
Western Felt Works & Acadia Synthetic Products Div.  
Westlake Plastics Co.  
Wilmington Fibre Specialty Co.  
Young Development Div., Hercules Powder Co.

### GAUGES

- a. Air Pressure
- b. Compression
- c. Differential Pressure
- d. Displacement Measuring
- e. Fuel Pressure
- f. Fuel Quantity
- g. Hydraulic Pressure
- h. Liquid Level
- i. Manifold Pressure
- j. Oil Level
- k. Oil Pressure
- l. Outside Air Temperature
- m. Pressure
- n. Quantity
- o. Strain
- p. Suction
- q. Tension
- r. Thickness, Electronic
- s. Torque Pressure
- t. Ultrasonic Thickness

Allegany Instrument Co., Inc., a.  
American Aeroparts, a, e thru n, p, q.  
American Felt Co., m, a, r.  
American Instruments Co., Inc., g, m, a, r.  
Aro Equipment Corp., a, c, h, m.  
Atlantic Research Corp., c, d, m.  
Automation Products, Inc., h, i.  
Avien, Inc., f, h, j, l.  
B & F Instruments, Inc., q.  
Barrett-Christie Co., a, g thru k, m.  
Barton Instrument Corp., c, h, m.  
Bearing Inspection, Inc.  
Bendix-Aviation Corp., Pioneer-Control Div., h.  
Boston Auto Gage Co., The, f, h, j.  
Branson Instruments, Inc., r, t.  
Bristol Co., The, a, c, g, l, m, a, p.  
Brush Instruments, Div.-Clevite Corp., c, d, e, g, m, a, q, s.  
Cleveland Instrument Co., d, r.  
Collins Engrg. Corp., j.  
Consolidated Controls Corp., a, e, g, k, m, p, s.  
Consolidated Diesel Electric Corp., a, c, e, g, i, k, l, m, p.  
Consolidated Electroynamics Corp., c, d, m, a.  
Curtiss-Wright Corp., Research Div., r.  
Curtiss-Wright Electronics Div., IMI Branch, a, c, e, g, k, m.  
Daytronic Corp., d, n, q, r.  
Decker Corp., The, c, d, r.  
Delsen Corp., r.  
Denison Engrg. Div., American Brake Shoe Co., h.  
J. W. Dice Co., r, t.  
Henry G. Dietz Co., Inc., a, c.  
W. C. Dillon & Co., Inc., q, s.  
Dynamic Instrument Co., Inc., a, c, d, g, i, m, a.  
Thomas A. Edison Ind. Instrument Div.-Mc Grow-Edison Co., a, c, k, l, m, s.  
Electro Auto-Lite Co., The, a, e, g, i thru m.

Electronic Control Corp., r.  
Federal Products Corp., r.  
Fischer & Porter Co., a, c, e thru k, m, n.  
Fisher Scientific Co., a, m.  
Fleetwood Labs., Inc., r.  
Gardner Laboratory, Inc., r.  
General Electric Co., Apparatus Sales Div., r.  
General Electric Co., X-Ray Dept., h, r.  
General Scientific Equipment Co., a.  
Gilmore Industries, Inc., m, a.  
Gits Brothers Mfg. Co., a, h, j, m.  
Glassco Instrument Co., a, b, c, e, g, i, k, m.  
Gulton Industries, Inc., m, r.  
Hagan Chemicals & Controls, Inc., a.  
High Vacuum Equipment Corp., a.  
E. Vernon Hill & Co., a, l.  
Hoke, Inc., a, m.  
Imtra Corp., a.  
Industrial Control Co., a.  
Instruments Div.-Philips Electronics, Inc., r.  
International Register Co., g, k, m.  
Jerguson Gage & Valve Co., h.  
Kollman Instrument Corp., Sub-Standard Coil Products Co., Inc., i, m, p.  
Land-Air Inc., d, f, h, n.  
\*LEWIS ENGRG. CO., THE, I.  
Liquidometer Corp., The, h, n.  
Magnaflex Corp., a, r, t.  
Magnetic Instrument Co. Inc., f, h.  
Jas. P. Marsh Corp., a, b, e, g, i, k, m.  
Matheson Co., Int., The, a, m.  
Meriam Instrument Co., c, h, m.  
Merz Engrg., Inc., r.  
Minneapolis-Honeywell Regulator Co., Aeronautical Div., a, c, f, h, j, l, m, n.  
Minneapolis-Honeywell Regulator Co., Industrial Product Group, a, c, e thru m, a, p, q.  
NRC Equipment Corp., a, m.  
National Research Corp., m.  
Norwood Controls Unit Detroit Controls Div., a, b, c, g, h, i, k, m, a.  
Ohio Semiconductors, Inc., d.  
Dhmart Corp., The, h.  
Dwatonna Tool Co., g.  
Pacific Scientific Co., l, p.  
Photocon Research Products, d, a.  
Puritan Compressed Gas Corp., Aviation Div., a.  
Pyles Industries, Inc.  
Republic Mfg. Co., i, j.  
Revere Corp. of America, f, h, j.  
Rochester Mfg. Co. Inc., a, c, e thru p.  
Rosemount Engrg. Co., l, m.  
Milton Roy Co., h.  
Sonborn Co., c, d, m.  
Schauer Mfg. Corp., b.  
Scientific Instrument Co., a, c, l, m.  
Sheffield Corp., The, Sub-Bendix Aviation Corp., r.  
Simmonds Aerocessories, Inc., d, f, h, i, n.  
Snap-Dn-Tools Corp., b.  
Sperry Products, Inc., t.  
Squires Gage Co., m, n, a.  
Standard Controls, Inc., a, c, e, g, k, m.  
Statham Instruments, Inc., a, e.  
Sun Electric Corp., Aeronautical Div., b, i.  
Taft-Peirce Mfg. Co., The, d, r.  
Telechrome Mfg. Corp., d, g, l, m, a, q, s.  
Thomas Electronics, Inc., r.  
Uhling Instrument Co., a, c, f, h, i, j, m, p.  
Unit Process Assemblies, Inc., r.  
Varian Associates, p.  
Wallace & Tieman Inc., a, c, f, g, m, n, p.  
Weston Instruments, Div.-Doystrom, Inc., m, p, r.  
Wye Industries, t.

### GAUDEMETERS

Devise Development Corp.  
Electro-Tech Equipment Co.  
General Electric Co., Apparatus Sales Div.  
Magnaflex Corp.  
Ohio Semiconductors, Inc.  
Rawson Electrical Instrument Co.  
T-C Div., Dyna-Empire, Inc.  
Varian Associates  
Wright Engrg. Co.

### GEAR ASSEMBLIES, LANDING See LANDING GEAR ASSEMBLIES

### GEAR ASSEMBLIES REDUCTION

Actuator Products Div., Geartronics Corp.  
American Machine & Foundry Co., Government Products Group  
Arch Gear Works Inc.  
Atlantic Instrument Corp., Sub-American Electronics, Inc.  
Atlas Precision Products, Co.  
Bendix-Pacific Div., Bendix Aviation Corp.  
Boston Gear Works  
Bowmar Instrument Corp.  
Clark Equipment Co.  
Consolidated Diesel Electric Corp.  
Control Circuits Inc.  
Crane Carrier Corp.  
Cromack Inc.  
Curtiss-Wright Corp.-Wright Aeronautical Div.  
Divco-Wayne Electronics, Div.-Divco-Wayne Corp.  
Dynamic Gear Co., Inc.  
Thomas A. Edison Ind. Instrument Div.-McGrow-Edison Co.  
Elgin Micronics Div.-Elgin National Watch Co.  
Exact Engrg. & Mfg. Inc.

FWD Corp.  
 Fae Instrument Corp.  
 Feedback Controls, Inc.  
 Foote Bros. Gear & Machine Corp.  
 General Electric Co., Apparatus Sales Div.  
 Globe Industries, Inc.  
 Gordon Enterprises  
 Graflex Inc.  
 Grant Gear Works, Inc.  
 Hoffman Labs. Div., Hoffman Electronics Corp.  
 Hoover Electric Co.  
 Hupp Aviation Co.  
 Insko Co., Div.-Barry Controls Inc.  
 Instru-Lec Corp.  
 Juall Gear Co., Inc.  
 Kelsey-Hayes Co.  
 Link-Belt Co.  
 Lundy Mfg. Corp.  
 Lyndon Aircraft, Inc.  
 Merz Engrg., Inc.  
 Metron Instrument Co.  
 Newbrook Machine Corp.  
 PIC Design Corp., Sub.-Benrus Watch Co., Inc.  
 Perkins Machine & Gear Co.  
 Phillips Aviation Co.-Marples Gears  
 Piasecki Aircraft Corp.  
 Sargent Engrg. Corp.  
 Sier-Bath Gear & Pump Co., Inc.  
 Singer Mfg. Co., The, Military Products Div.  
 Southwestern Industries, Inc.  
 Spiroid Div., Illinois Tool Works  
 Sterling Precision Corp., Instrument Div.  
 Strong Scott Mfg. Co., The  
 Suffolk Products Corp.  
 Talley Corp., The  
 Telestro Industries Corp.  
 U. S. Gear Corp.  
 Vard Inc.  
 Vinco Corp.  
 Waldom Electronics Inc.  
 Washington Machine & Tool Works, Inc.  
 Western Design, Div.-U.S. Industries, Inc., Santa Barbara Div.  
 Western Gear Corp.  
 Westinghouse Electric Corp.  
 Wilks Precision Instrument Co., Inc.

#### GEARS, POWDERED METAL

American Aeroports  
 Amplex Div.-Chrysler Corp.  
 Bassick Co., The, Div.-Stewart-Warner  
 Bergen Carbide Co.  
 Forsberg Mfg., Co., The  
 Globe Industries, Inc.  
 Globe Industries, Inc., Supermet Div.  
 Lux Clock Mfg. Co., Inc.  
 Mueller Brass Co.  
 Raybestos-Manhattan, Inc., Pa.  
 Milton Ross Metals Co., The  
 St. Marys Carbon Co.  
 Sier-Bath Gear & Pump Co., Inc.  
 Spiroid Div., Illinois Tool Works  
 Waltham Engrg. Corp.  
 Western Gear Corp.

#### GEARS, PRECISION

##### \*AC ELECTRONICS DIV., GENERAL MOTORS CORP.

American Aeroports  
 American Machine & Foundry Co., Government Products Group  
 Arch Gear Works Inc.  
 Atlantic Instrument Corp., Sub.-American Electronics, Inc.  
 Atlas Precision Products, Co.  
 Beaver Gear Works, Inc.  
 Belock Instrument Corp.  
 Bergen Carbide Co.  
 Boston Gear Works  
 Bowmar Instrument Corp.  
 Camdale Precision Inc.  
 Curtiss-Wright Corp.-Wright Aeronautical Div.  
 Divco-Wayne Electronics, Div.-Divco-Wayne Corp.  
 Dackendorff & Co. Inc.  
 Dynamic Gear Co., Inc.  
 Thomas A. Edison Ind. Instrument Div.-McGraw-Edison Co.

Eisler Engrg. Co., Inc.  
 Elgin Micronics Div.-Elgin National Watch Co.  
 Enterprise Tool & Gear Corp.  
 Exact Engrg. & Mfg. Inc.  
 Fae Instrument Corp.  
 Feedback Controls, Inc.  
 Foote Bros. Gear & Machine Corp.  
 Ford Instrument Co., Div.-Sperry Rand Corp.  
 General Electric Co., Apparatus Sales Div.  
 Gordon Enterprises  
 Graflex Inc.  
 Grant Gear Works, Inc.  
 Helipot Div.-Beckman Instruments Corp.  
 Hoffman Labs. Div., Hoffman Electronics Corp.  
 Hoover Electric Co.  
 Hupp Aviation Co.  
 Wolter J. Hyatt Co., The  
 Hydro Molding Co., Inc.  
 Instru-Lec Corp.  
 Juall Gear Co., Inc.  
 Kelsey-Hayes Co.  
 \*LAVEZZI MACHINE WORKS  
 Lear, Inc., Grand Rapids Div.  
 Lear Inc., Lear-Romec Div.

Libroscope Inc.  
 Litton Industries, Maryland Div.  
 Lundy Mfg. Corp.  
 Lux Clock Mfg. Co., Inc.  
 \*LYCOMING DIV., AVCO MFG. CORP.  
 Massachusetts Gear & Tool Co.-Div.-Geartronics Corp.  
 W. L. Maxson Corp., The  
 Mercury Tool & Mfg. Corp.  
 Micron Gear Co., Inc.  
 National Pneumatic Co., Inc., Holtzer-Cabot Divs.  
 Northrop Corp., The, Nortronics Div.  
 PIC Design Corp., Sub.-Benrus Watch Co., Inc.  
 Perkins Machine & Gear Co.  
 Phillips Aviation Co.-Marples Gears  
 Reeves Instrument Corp.  
 Research Development Mfg. Inc.  
 Milton Ross Metals Co., The  
 Sargent Engrg. Corp.  
 Sier-Bath Gear & Pump Co., Inc.  
 Sphinx-American Co.  
 Spiroid Div., Illinois Tool Works  
 Sterling Precision Corp., Instrument Div.  
 Talley Corp., The  
 Tapco Group, Thompson-Ramo-Wooldrige Inc.  
 Telestro Industries Corp.  
 U. S. Gear Corp.  
 Vard Inc.  
 Vinco Corp.  
 Waltham Engrg. Corp.  
 Washington Machine & Tool Works, Inc.  
 Wesrep Corp.  
 Western Design, Div.-U.S. Industries, Inc.; Santa Barbara Div.  
 Western Gear Corp.  
 Wright Engrg. Co.

#### GEARS, RADIO & INSTRUMENT

Acton Labs. Inc.  
 Arch Gear Works Inc.  
 Atlantic Instrument Corp., Sub.-American Electronics, Inc.  
 Atlas Precision Products, Co.  
 Beaver Gear Works, Inc.  
 Bergen Carbide Co.  
 Divco-Wayne Electronics, Div.-Divco-Wayne Corp.  
 Dynamic Gear Co., Inc.  
 Thomas A. Edison Ind. Instrument Div.-McGraw-Edison Co.  
 Elgin Micronics Div.-Elgin National Watch Co.  
 Exact Engrg. & Mfg. Inc.  
 Feedback Controls, Inc.  
 Graflex Inc.  
 Grant Gear Works, Inc.  
 Hoover Electric Co.  
 Hydro Molding Co., Inc.  
 Instru-Lec Corp.  
 Juall Gear Co., Inc.  
 \*LAVEZZI MACHINE WORKS  
 Lear, Inc., Grand Rapids Div.  
 Massachusetts Gear & Tool Co.-Div.-Geartronics Corp.  
 Motorola Inc., Military Electronics Div.  
 National Pneumatic Co., Inc., Holtzer-Cabot Divs.  
 PIC Design Corp., Sub.-Benrus Watch Co., Inc.  
 Perkins Machine & Gear Co.  
 Phillips Aviation Co.-Marples Gears  
 Research Development Mfg. Inc.  
 Sphinx-American Co.  
 Spiroid Div., Illinois Tool Works  
 Telestro Industries Corp.  
 U. S. Gear Corp.  
 Vard Inc.  
 Vinco Corp.  
 Waldom Electronics Inc.  
 Waltham Engrg. Corp.  
 Washington Machine & Tool Works, Inc.  
 Western Gear Corp.

#### GENERATING DEVICES, GAS

See GAS GENERATING DEVICES

#### GENERATOR CONTROLS

See CONTROLS, GENERATOR

#### GENERATOR & MOTOR STATORS

See STATORS, MOTOR & GENERATOR

#### GENERATORS

- a. Electric AC
- b. Electric DC
- c. Engine Driven
- d. Liquid Oxygen
- e. Liquid Oxygen, Mobile
- f. Tachometer
- g. Timing Marker

Aerojet-General Corp., a.  
 \*AIRESEARCH MFG. CO. OF ARIZ., a, b.  
 \*AIRESEARCH MFG. CO., DIV.-THE GARRETT CORP., a, b, d, e.  
 Allied International Co., a, b, c.  
 Allis-Chalmers, a, b, c.  
 American Aeroports, a, b, e.  
 American Bosch Armo Corp., b, c.  
 American Electric Works, Inc., Electric Machinery & Equipment Div., a, c.  
 American Machine & Foundry Co., Government Products Group, a, b.  
 Barber-Colman Co., f.  
 Barker Sales Co., c.  
 Beckman Instruments, Inc., Berkeley Div., f.  
 Bendix Aviation Corp., Montrose Div., f.

Bendix Aviation Corp., Red Bank Div., a, b, c.  
 Bogue Electric Mfg. Co., a, b.  
 Caterpillar Tractor Co., Engine Div., a, c.  
 Cedar Engrg. Div.-Control Data Corp., a, b, f.  
 Collins Engrg. Corp., g.  
 Columbia Electric Mfg. Co., a, b.  
 Consolidated Diesel Electric Corp., a, b, c.  
 Continental Electric Co., Inc., a.  
 Control Data Corp., a, b.  
 Cummins Engine Co., Inc., c.  
 Curtiss-Wright Corp., Research Div.  
 Curtiss-Wright Corp., Utica Div., c.  
 D. & R. Ltd., a, f.  
 Dalmator Div., Yubo Consolidated Industries, Inc., a, b, c, f, g.  
 Daystrom Transcoil Div., Daystrom Inc., f.  
 Delco-Remy Div., General Motors Corp., a, b.  
 Detroit Diesel Engine Div.-General Motors Corp., a, b.  
 Diehl Mfg. Co., f.  
 Thomas A. Edison Ind. Instrument Div.-McGraw-Edison Co., f.  
 Eicar Div.-Scranton, a.  
 Electric Auto-Lite Co., The, b.  
 Electric Machinery Mfg. Co., c.  
 Electric Products Co., The, a, b, c.  
 \*ELECTRO PRODUCTS LABORATORIES, INC., f.  
 \*ETS-HOKIN & GALVAN, a, b, c.  
 G-M Labs, Inc., f.  
 G. W. Galloway Co., e.  
 General Crystal Co., Inc., c.  
 General Electric Co., Apparatus Sales Div., a, b, c, f.  
 Georator Corp., a, b, c, f.  
 Globe Industries, Inc., a, b, f.  
 Gordon Enterprises, g.  
 Graflex Inc., a, b.  
 Grecco, Inc., c.  
 Guided Missile Div.-De Havilland Aircraft of Canada, Ltd., a.

Hallamere Electronics Co., a.  
 \*A. W. HAYDON CO., THE, f, g.  
 Hermer Electric Co., The, a, b, c.  
 Hewlett-Packard Co., f.  
 Homelite, Div.-Textron Inc., a, b, c.  
 Hoover Electric Co., a, b, c, f.  
 Hughes Tool Co., Aircraft Div.  
 Industrial Test Equipment Co., a.  
 Instrument Motors, a, b, f.  
 Instruments Div.-Philips Electronics, Inc., d.  
 Jack & Heintz, Inc., a, b, c, f.  
 Jeta, Inc., a, b.  
 Karolight Corp., a, b, c.  
 \*KEARFOTT CO., INC., a, b, f.  
 Ketay Dept., Norden Div., United Aircraft Corp., f.  
 Kollsman Instrument Corp., Sub.-Standard Cail Products Co., Inc., f.  
 Land-Air Inc., g.  
 Leach Corp., a, b, c.  
 Leor, Inc., Grand Rapids Div., a, c.  
 Leland Airborne Products, Div.-American Machine & Foundry Co., a, b, c.  
 Linde Co.-Div.-Union Carbide Corp.  
 Luther Mfg. Co., a, b, f.  
 Meters Inc., f.  
 Microwave Development Labs., Inc.  
 Minneapolis-Honeywell Regulator Co., Industrial Product Group, f.  
 \*MOTOR GENERATOR CORP., a, b.  
 Motoresearch Co., a, b, c.  
 Heinz Mueller Eng. Co. Inc., a, b, f.  
 National Pneumatic Co., Inc., Holtzer-Cabot Divs., a thru f.  
 Ernest Norman Laboratories, g.  
 Oliver Corp., The, a, b.  
 D. W. Onan & Sons Inc., a, b, c.  
 Patterson, Moos Div. - Universal Winding Co., Inc., b.  
 Pesco Products Div.-Borg-Warner Corp.  
 Potter Aeronautical Corp., f.  
 Project Fabrication Corp., d, e.  
 Radionics, Inc., g.  
 Safety Electrical Equipment Corp., a, b, c.  
 Sangamo Electric Co., a, b, c.  
 Servomechanisms, Inc., Mechrolat Div., f.  
 Singer Mfg. Co., The, Military Products Div., f.  
 Small Motors Inc., a, b, f.  
 A. D. Smith Corp., a, b.  
 Stratos, Div.-Fairchild Engine & Airplane Corp., d.  
 Superior Air Products Co., d.  
 TKM Electric Corp., a.  
 Tolley Corp., The, a, b, c, f.  
 Tapco Group, Thompson-Ramo-Wooldrige Inc., a, f.  
 Task Corp., a.  
 Telechrome Mfg. Corp., b, c, d, h, i, l, n, q.  
 Tempo Instrument Inc., g.  
 Wacline, Inc., f.  
 Western Design, Div.-U.S. Industries, Inc.; Santa Barbara Div., a, b, g.  
 Western Gear Corp., a, b.  
 Westinghouse Electric Corp., a, b, c.  
 Weston Instruments, Div.-Daystrom, Inc., f.  
 \*WHITE DIESEL ENGINE DIV., THE WHITE MOTOR CO., a, b.  
 Wincharger Corp., Sub.-Zenith Radio Corp., a, b, c.  
 Winpower Mfg. Co., a, b, c.  
 Zenith Radio Corp., c.

#### GENERATORS, ELECTRONIC

- a. AM & FM
- b. Microwave
- c. Noise
- d. Picture Signal
- e. Pulse

f. Signal, AF  
g. Signal, FM  
h. Signal, RF  
i. Signal, SHF  
j. Signal, Single Sideband  
k. Signal, Sweeping  
l. Signal, Television Synchronizing  
m. Signal, UHF, VHF  
n. Square Wave  
o. Ultrasonic  
p. Variable Frequency  
q. Waveform

MP Inc., e.  
Ader Electronics, Inc., a, g, h, i, m, q  
Aerolab Development Co., e, n  
Aetna Electronics Corp., a  
Aerborne Instruments Lab., Div.-Cutler-Hammer, Inc., a, b, c, h, p  
Aircam Inc., b, k  
Aircam Inc. of New Jersey, b  
Aired Electronics, b, k  
Ailied International Co., a  
Aerac Inc., b, h  
American Bosch Arma Corp., e  
American Machine & Foundry Co., Government Products Group, b  
Andersen Labs., a, i, a, p  
Aerenberg Ultrasonic Lab., Inc., a  
Aero Ltd., a, f, g  
& K Instruments, Inc., f  
Aeroback Radio Engrg., Inc., f, g, m  
Aerker & Williamson Inc., f  
Aerckman Instruments, Inc., Berkeley Div., e  
Ail & Gossett Co., e  
Aerndix Aviation Corp., Red Bank Div., b, c, p  
Aerndix Aviation Corp., York Div., b, c, e, g, h, p  
Aerckstone Corp., a  
Aerogue Electric Mfg., Co., p  
Aerontan Radio Corp., a, g, h, m  
Aerontan Ultrasonic Corp., a  
Aerown Engrg. Co., Inc., h  
Aerlow Electric Co., b, e thru h, m  
Aerl-Brown Research Corp., f, n  
Aerlifornia Technical Industries, Div.-Textron Inc., b  
Aerentral Electronic Mfrs., Div.-Nuclear Corp. of America, e  
Aertranix Inc., a thru h, j thru q  
Aerlca Engrg. Corp., p  
Aerlorado Research Corp., p  
Aercommunications Research Co., j  
Aermmunity Engrg. Corp., k  
Aerinfinitel Electronics Mfg. Co., a, e  
Aerpsy Laboratories, Inc., j  
Aerlic Corp., e, h, q  
Aerliss-Wright Corp., Princeton Div., a  
Aerliss-Wright Corp., Research Div., e, a  
Aerlto-Control Systems, Inc., f  
Aerlen Co., The, a, f, h, k, a, p  
Aerlmanay-Bonardi, b, c  
Aerlmer Scientific Co., f, n, p, q  
Aerllesser Industries, Inc., f, p  
Aerl Kane Corp., f  
Aerlmecc Inc., b  
Aerlgepton, Germeshausen & Grier, Inc., b  
Aerlor, Inc., e, n  
Aerlorado Electronics, e  
Aerlronic Communications, Inc., b, e  
Aerlronic Engrg. Co. of California, e, n, p, q  
Aerlronic Instrument Co., Inc. (EICO) f, h, i, l  
Aerlronic Tube Corp., n  
Aerlronics of Clearfield, Inc., e, p  
Aerlronics Div., Van Norman Industries Inc., a, b, j, g, h, i, k, m, p  
Aerlenco, Inc., c  
Aerlerson Electric Mfg. Co., The, Electronics & Avionics Div., b  
Aerlre Products Sales Corp., b, e, p  
Aerlrg. Associates, a, b, c, e thru i, m thru p  
AerlPR, Inc., b, c, e, h, m, n, p, q  
Aerlrol Mfg. & Engrg. Corp., b, e, g, h, a  
Aerlrol-Video Labs., Inc., d, h, l, p  
AerlFed Transformer Co. Inc., a  
AerlCeral Communication Co., a, b, e thru h, n  
AerlCon Industries, Inc., a  
AerlCex Corp., The, f  
AerlFler, Roymond & Brown Inc. Div., Singer Mfg. Co., q  
AerlMicrotraters, e, h, i  
AerlHelte Electronics Div.-Hazeltine Corp., b, e, h, m  
AerlHietti-Packard Co., a, b, c, e thru i, m, n, p, q  
AerlHyver Electric Co., f, g, h  
AerlHines Tool Co., Aircraft Div.  
AerlWer J. Hyatt Co., The, b  
AerlFederal Div., International Telephone & Telegraph Corp., b, h, m  
AerlLabs., a, b, c, f thru j, m  
AerlIndustrial Test Equipment Co., f, p  
AerlContinental Dynamics Corp., c  
AerlInternational Research Associates, p  
AerlIstrate Electronics Corp., e  
AerlKier Aircraft & Electronics, Div.-Kaiser Industries Corp., b, j  
AerlK Electric Co., a thru i, k, l, m, a, p, q  
AerlKARFOTT CO., INC., b  
AerlKitel Div.-Cohu Electronics, Inc., l, a  
AerlKivox Div.-Electromation Co., e  
AerlLepkin Labs., Inc., M. R. Div., h, m, p  
AerlLef-Air Inc., a  
AerlLyle Laboratories Inc., e, m  
AerlLenthal Electronic Products, Inc., b, e  
AerlLion Industries, Maryland Div., f, g, h, j, k, m

Lumatron Electronics, Inc., e, n, p  
Manson Labs., Inc., b, e, h, m, p  
Marconi Instruments, a, c, e, f, g, m, n, p  
Mc Kenna Labs., a  
Measurements Div., McGraw-Edison Co., a, e thru h, m  
Meridian Metalcraft, Inc., b  
Minneapolis-Honeywell Regulator Co., Ordnance Div., b, e thru h  
Miratel, Inc., a, b, f, g, h, i, l, m  
Motorola Inc., Military Electronics Div., a, b, c, e thru q  
Munston Mfg. & Service, Inc., g, h  
Narda Ultrasonics Corp., The, a  
National Pneumatic Co., Inc., Holtzer-Cabat Divs., a thru q  
National Ultrasonic Corp., a  
Navigation Computer Corp., e, q  
Ernest Norman Laboratories, e  
Northeast Scientific Corp., n  
Orbitron Co., Inc., e  
Pacific Radionics, e, a, p  
Paca Electronics Co., Inc., h  
Piasecki Aircraft Corp., m  
Polarad Electronics Corp., a thru e  
Polytechnic Research & Development Co., Inc., b, c  
Power Supplies Inc., a  
Precision Development Corp., a, d thru h, k, l, n, p  
Precision Apparatus Co., Inc., a, f, g, h, k, n  
RS Electronics Corp., c  
Radiation, Inc.  
Radiation Instrument Development Lab., Inc., e  
Radiatronics, Inc., b  
Radionics, Inc., a, q  
Raytheon Mfg. Co., b  
Resdel Engrg. Corp., b, e, i, m  
Rese Engrg., Inc., e  
Rutherford Electronics Co., e  
Schaevitz Engrg., e  
Scientific-Atlanta, Inc., b, h  
H. H. Scott, Inc., c  
Singer Mfg. Co., The, Military Products Div., e  
Special Instruments Div., British Industries Corp., e  
Specialty Engrg. & Electronics Co., e, f, h  
Spectrum Instruments, Inc., q  
Sperry Microwave Electronics Co., Div.-Sperry Rand Corp., b  
Stoddart Aircraft Radio Co., Inc., e  
Systems Inc., a, b, c, e thru k, p, q  
Syston Corp., p  
Talley Corp., The, a, b, c, e  
Tapco Group, Thompson-Ramo-Wooldrige Inc., p  
Technical Apparatus Builders, p  
Technitrol Engrg. Co., e, p  
Teletrechme Mfg. Corp., a thru e, g thru j, l, m, n, q  
Telectro Industries Corp., a, d thru n  
Telered Mfg. Corp., b  
Teletronics Lab. Inc., e  
Tel-Instrument Electronics Corp., d, h, k, l, m, p  
Telonic Industries, Inc., e, h, k, m  
Tempo Instrument Inc., e  
Tranonic, Inc., f, n  
Twenty-First Century Electronics, Inc., h  
U. S. Industries, Inc., c, d  
U. S. Science Corp., Div.-Topp Industries, Inc., h, m  
Walkirt Co., e, n  
Waltham Electronics Corp., a, b, c, f thru i, m, n  
Wang Labs., Inc., e, p, q  
Wavefine, Inc., b  
Weinschel Engrg., b, e, h, i, m, n  
Wright Engrg. Co., b, c, h, i, m

**GENERATORS, GAS**

\*McCORMICK SELPH ASSOCIATES

**GENERATORS, STARTER**

\*ELECTRICAL ENGRG. & MFG. CORP.

**GEO PHYSICAL APPARATUS**

Aerolab Development Co.  
Anton Electronic Labs., Inc.  
Associated Research, Inc.  
Benson-Lehner Corp.  
Cooper Development Corp., Sub.-Marquardt Aircraft Co.  
J. W. Fecker, Inc.  
Fisher Research Lab., Inc.  
General Devices, Inc.  
Georator Corp.  
Geotronic Labs., Inc.  
Gordon Enterprises  
Instrumentation Div.-Ampex Corp.  
Mast Development Co., Inc.  
Midwestern Instruments, Inc.  
Minneapolis-Honeywell Regulator Co., Boston Div.  
Moran Instrument Corp.  
Motorola Inc., Military Electronics Div.  
Seiscor Mfg. Co.  
Southwestern Industrial Electronics Co.  
Spectrum Instruments, Inc.  
Twenty-First Century Electronics, Inc.  
United Electrodynamics, Inc.  
U. S. Industries, Inc.  
Varion Associates  
Virginio Electronics Co., Inc.

**GLASS JEWELS**

See JEWELS, GLASS

**GLASS, LOW MELTING POINT**

**\*ALLIED CHEMICAL CORP., GENERAL CHEMICAL DIV.**

**GOVERNORS, MISSILE CONTROL**

\*BENDIX AVIATION CORP., HAMILTON DIV.  
Graflex Inc.  
Guided Missile Div.-De Havilland Aircraft of Canada, Ltd.  
Haaf Products Co.  
Hoover Electric Co.  
National Pneumatic Co., Inc., Holtzer-Cabat Divs.

**GRAPHIC RECORDING INSTRUMENTS**

See INSTRUMENTS, GRAPHIC RECORDING

**GRAPHITE ANODES**

See ANODES, GRAPHITE

**GRID FRAMES**

Astronautics Engrg. Co.  
Manogram Precision Industries  
Stover Co., Inc., The

**GRIDS**

Astronautics Engrg. Co.  
Jadee Plastics Co.  
Manogram Precision Industries  
Stover Co., Inc., The

**GRILLES, METAL**

A&P Metal Products Mfg. Corp.  
Abalon Precision Mfg. Corp.  
Adapt Industries Inc.  
Aiptec, Inc.  
American Aluminum Co.  
Anchor Metal Spinning Co., The  
B. H. Aircraft Co., Inc.  
Bendix Aviation Corp., York Div.  
Cornell Deep Drawing Co., Div.-Lanes Industries Corp.  
Croname Inc.  
Etched Products Corp.  
Flock Process Co., Inc.  
Lofstrand Co., The  
Mercury Tool & Mfg. Corp.  
Mid-West Metal Products, Inc.  
Manogram Precision Industries  
Charles Mundt & Sons  
Pioneer Industries Div., Almar-York Co. Inc.  
Edw. Renneburg & Sons Co.  
Rimak, Inc.  
Roloc Inc.  
Stainless Inc.  
Teiner Engrg. Corp.

**GRILLES, MOLDED PLASTIC**

Adept Industries Inc.  
American Insulator Corp.  
Chemold Co.  
Cornell Deep Drawing Co., Div.-Lanes Industries Corp.  
Crystal-X Corp.  
Erie Resistor Corp.  
Haidman Tool & Engrg., Co.  
Haveg Industries, Inc.  
Hughes Tool Co., Aircraft Div.  
Joelin Mfg. Co.  
Lantex Industries, Inc.  
Lancaster Gloss Corp.  
Minnesota Mining & Mfg. Co.  
Perry Plastics, Inc.  
Plastic Age Sales, Inc.  
Milton Ross Metals Co., The  
Universal Moulded Products Corp.

**GRILLS, SPEAKER**

Croname Inc.  
Etched Products Corp.  
Flock Process Co., Inc.  
Charles Mundt & Sons  
Pacific Cut Washer Co.  
Peerless Products Industries  
Perry Plastics, Inc.  
Milton Ross Metals Co., The  
Rubber Teck Inc.  
Waterbury Companies, Inc.  
Western Felt Works & Acadia Synthetic Products Div.

**GRINDERS & BUFFERS**

See BUFFERS & GRINDERS

**GROMMETS**

Allied Plastics Supply Corp.  
Amaton Electronic Hardware Co. Inc.  
American Brass Co., The  
Auburn Mfg. Co., The  
Auburn Spark Plug Co., Inc.  
Caliny-Div.-Illinois Tool Works  
Century Fasteners Corp.  
Colonial Rubber Co.  
Continental Rubber Works  
Eljay Corp.  
Federal Screw Products Inc.  
General Gasket Inc.  
Goshen Rubber Co., Inc.  
Hallett Mfg., Co.  
Hooster Torpaulin & Canvas Goods Co., Inc.  
Joelin Mfg. Co.  
Lord Mfg. Co.

Minnesota Rubber Co.  
Molding Corp. of America  
Drchard Industries, Inc., Actionflex Div.  
Penn Fibre & Specialty Co., Inc.  
Pneumafil Corp.  
Roberts Toledo Rubber Co., The  
Milton Ross Metals Co., The  
Rubbercraft Corp. of California  
Silicone Insulation, Inc.  
Stanley-Judd Div.-The Stanley Works  
Thermach Engr. Corp.  
Turbo Products, Inc.  
United Shoe Machinery Corp., Drdnance Dept.  
Waldom Electronics Inc.  
Walscop Products, Inc.  
Wilcox-Crittenden Div., North & Judd Mfg. Co.

#### GROMMETS, FIBRE

All Specs Corp.  
Allied Plastics Supply Corp.  
Amatom Electronic Hardware Co. Inc.  
American Missile Products Co., Inc.  
Auburn Mfg. Co., The  
Comco Plastics Inc.  
Continental Diamond Fibre Corp.  
Eljay Corp.  
Emerson Plastics Corp.  
Federal Screw Products Inc.  
General Gasket Inc.  
Haveg Industries, Inc.  
Heyman Mfg. Co.  
Hossier Tarpaulin & Canvas Goods Co., Inc.  
Jaclyn Mfg. Co.  
National Tel-Tronics Corp.  
National Vulcanized Fibre Co.  
**\*PACKARD-BELL ELECTRONICS CORP.**  
Penn Fibre & Specialty Co., Inc.  
Rogers Corp.  
Waldom Electronics Inc.  
Wilmington Fibre Specialty Co.

#### GROUND BASED MISSILE LAUNCHERS

See LAUNCHERS, GROUND BASED MISSILE

#### GROUND CHECK-OUT EQUIPMENT, MISSILES

See MISSILES, GROUND CHECK-OUT EQUIPMENT

#### GROUND HANDLING EQUIPMENT, MISSILES

ACF Industries Inc.  
Accessory Controls & Equipment Corp.  
Accessory Products Co., Div.-Textron Inc.  
Acco Equipment Div., American Chain & Coble Co., Inc.  
Aero Leather Products Co.  
Aerofjet-General Corp.  
Aeroscience, Inc.  
Air Logistics Corp.  
Aircraft Armaments, Inc.  
**\*AIRESEARCH MFG. CO., DIV.-THE GARRETT CORP.**  
Alad Aluminum Ladder Corp.  
Alco Products, Inc.  
**\*ALUMINUM SAFETY PRODUCTS, INC.**  
Amelco, Inc.  
American Air Filter Co., Defense Products Div.  
American Car & Foundry, Div.-ACF Industries, Inc.  
American Machine & Foundry Co., Government Products Group  
American Machine & Foundry Co., Greenwisch  
American Missile Products Co., Inc.  
American Steel Foundries, Hammond Div.  
Anchor Metal Spinning Co., The  
Applied Design Co.  
Arnolt Corp.  
Associated Engineers, Inc.  
Astronautics Engrg. Co.  
Atlas Precision Products, Co.  
Austin-Western, Constr. Equip. Div., Baldwin-Lima-Hamilton Corp.  
**\*AVCO MFG. CORP., CROSLLEY DIV.**  
Baker Industrial Trucks, Div.-Otis Elevator Co.  
Basco Metal Products, Inc.  
Bassick Co., The, Div.-Stewart-Warner  
Beaver Precision Products Inc.  
Belock Instrument Corp.  
**\*BENDIX PRODUCTS DIV., BENDIX AVIATION CORP.**  
Bendix Products Div.-Missiles, Bendix Aviation Corp.  
Bendix Radio Div., Bendix Aviation Corp.  
Benson Mfg., Co., The  
Berger Brothers Co., The  
Bil-Jax, Inc.  
E. W. Bliss Co.  
Bowser, Inc., Defense Dept.  
Breeze Corporations, Inc.  
Brooks & Perkins, Inc.  
Brown Engrg. Co., Inc.  
Bruce Engrg. Co.  
Butler Mfg. Co.  
Byron-Jackson Pumps Inc.  
Capitol City Mfg. Co.  
Chalco Engrg. Corp.  
C. B. Christiansen Co.  
Chrysler Corp., Defense Operations Div.  
Clark Equipment Co.  
Cleveland Pneumatic Industries, Inc.  
Coleman Engrg. Co., Inc.  
Colonial Aircraft Corp.  
Columbia Research & Development Corp.  
Conco Engrg. Works

Consolidated Diesel Electric Corp.  
Consolidated Diesel Electric Corp., Test Equip. Div.  
Consolidated Diesel Electric Corp., Western Div.  
Continental Technical Service, Inc.  
Control Engrg. Co., Div. Jervis B. Webb Co.  
Cooper Development Corp., Sub.-Marquardt Aircraft Co.  
Cornelius Co., The, Aero Div.  
Craig Systems, Inc.  
Crane Carrier Corp.  
Cromer Mfg. & Engrg., Inc.  
Curtiss-Wright Corp., Research Div.  
Curtiss-Wright Corp., Santa Barbara Div.  
Curtiss-Wright Corp., South Bend Div.  
Dalmator Div., Yuba Consolidated Industries, Inc.  
Data-Control Systems, Inc.  
Divco-Wayne Electronics, Div.-Divco-Wayne Corp.  
Diversey Engrg. Co.  
Double E Products Co.  
Dresser Industries, Inc.  
Dresser-Ideco Co., Div.-Dresser Industries, Inc.  
Edgerton, Germeshausen & Grier, Inc.  
Eidal Mfg. Co., Inc.  
Electro-Mechanical Products Co.  
Emerson Electric Mfg. Co., The, Electronics & Avionics Div.  
Emerson Radio & Phonograph Corp.  
FWD Corp.  
Fairchild Astrionics Div., Fairchild Engine & Airplane Corp.  
Farrel Birmingham Co., Inc.  
Federal Mfg. & Engrg. Corp.  
Firestone Tire & Rubber Co., The, Guided Missile Div.  
Food Machinery & Chemical Corp.  
Fruehauf Trailer Co., Military Equipment Div.  
Fulton-Irton Corp., The  
Gobal Co., The-Talco Engrg. Co. Div.  
G. W. Galloway Co.  
General Electric Co., Missile & Space Vehicle Dept.  
Globe Hoist Co.  
Goodyear Aircraft Corp.  
Gremco, Inc.  
Griscom-Russell Co., The  
Hallcrafters  
**\*HARCO CONTAINERS DIV.-HARBOR BOAT BUILDING CO.**  
Paul Hardeman, Inc.  
Hardman Tool & Engrg. Co.  
Haskel Engrg. & Supply Co.  
Highland Rim Machine Works Inc.  
Ludwig Harold Mfg. Co.  
Hoover Electric Co.  
Harkey-Moore Associates  
Houston Fearless Corp.  
Hufford Corp., The  
Hughes Aircraft Co.  
Hughes Tool Co., Aircraft Div.  
Hussmann Aircraft Div.  
Walter J. Hyatt Co., The  
Hydro-Power Corp.  
**\*HYDRO-AIRE CO., DIV.-CRANE CO.**  
ITT Federal Div., International Telephone & Telegraph Corp.  
Industrial Tools Mfg. Corp., Sub.-Pendleton Tool Industries, Inc.  
Intersoll Kalamazoo Div., Borg-Warner Corp.  
Integral Corp.  
Intercontinental Mfg. Co., Inc.  
Interstate Engrg. Corp.  
Jack & Heintz, Inc.  
Jeta, Inc.  
Kohn & Co., Inc.  
Koiser Aircraft & Electronics, Div.-Koiser Industries Corp.  
Koiser Steel Corp., Fabricating Div.  
Kanair Corp.  
Kemp Aero Products  
Land-Air Inc.  
Lear, Inc., Grand Rapids Div.  
R. G. Letourneau, Inc.  
Liggett Supply & Equipment Co.  
Link-Belt Co.  
Longren Aircraft Co., Inc.  
Machine Products Div., New Haven Trap Rock Co.  
Mack Trucks, Inc., Government Div.  
Marotto Valve Corp.  
Marquardt Aircraft Co.  
Mast Development Co., Inc.  
Mc Dowell-Wellman Companies, The  
Mechanics Universal Joint Div., Borg-Warner Corp.  
Metronix, Inc., Sub.-Assembly Products, Inc.  
Minneapolis-Honeywell Regulator Co., Aeronautical Div.  
Minneapolis-Honeywell Regulator Co., Drdnance Div.  
**\*MIRAX CHEMICAL PRODUCTS CORP., ELECTRO-MECHANICAL PRODUCTS DIV.**  
Monogram Precision Industries  
Monrovia Aviation Corp.  
George L. Nankervis Co.  
Nebel Machine Tool Corp.  
**\*NEWAY EQUIPMENT CO.**  
Newbrook Machine Corp.  
Northrop Corp., The, Nortronics Div.  
Nuclear Products-Erco Div.-ACF Industries, Inc.  
Dpelika Welding, Machine & Supply Inc.  
Optimized Devices, Inc.  
Dis Elevator Co., Electronic Div.  
Philco Corp., Government & Industrial Div.  
Phillips & Davies, Inc.  
Piasecki Aircraft Corp.  
Portland Copper & Tank Works Inc.

Precision Shapes, Inc.  
Precision Sheet Metal, Inc.  
Pre-Flite Industries Corp.-Sub. - AVCO Corp.  
Project Fabrication Corp.  
Pry Welding & Mfg., Inc.  
Ramo-Woolbridge Div., Thompson-Ramo-Woolbridge of Calif.  
Ravenna Metal Products, Div.-Standard Screw Co.  
Red Lion Cabinet Co., Redco Tool Div.  
Regent Jack Mfg. Co., Inc.  
Republic Aviation Corp.  
Research Controls  
**\*RHEEM MFG. CO., DEFENSE & TECHNICAL PRODUCTS DIV.**  
Royal Industries, Inc.  
Sancor Corp.  
Sondberg-Serrell Corp.  
Sargent Engrg. Corp.  
Scaife Co.-Div.-Wilson Bros.  
Schaffer Air Industries, Inc.  
Seeburg Corp., The  
Servo Corp. of America  
Skyline Products, Inc.  
Space Corp.  
Special Projects Lab., Food Machinery & Chemical Corp.  
Stainless Inc.  
Stainless Steel Products, Inc.  
Stanley Aviation Corp.  
Stearns-Roger Mfg. Co.  
A. U. Stone & Co., Inc.  
Strong Scott Mfg. Co., The  
Sun Electric Corp., Aeronautical Div.  
Systron Corp.  
Talley Corp., The  
Tapco Group, Thompson-Ramo-Woolbridge Inc.  
Telectro Industries Corp.  
Texas Metal & Mfg. Co., Inc.  
Theto Instrument Corp.  
Thiokol Chemical Corp.  
Thiokol Chemical Corp., Hunter-Bristol Div.  
Trailmobile Inc.  
Turbo Products, Inc.  
Twin Coach Co., Aircraft-Missiles  
United Aircraft Products, Inc.  
United Mfg. Co., The  
United Mfg. Co., Div., The W. L. Maxson Corp.  
U. S. Science Corp., Div.-Topp Industries, Inc.  
United States Chemical Milling Corp.  
Universal Metal Products Inc.  
Van Zelm Associates, Inc.  
Vard Inc.  
Vickers Inc., Div.-Sperry Rand  
Vitra Labs.  
Washington Technological Associates Inc.  
Wayne Pump Co., The, Div.-Symington Wayne Corp.  
Weber Aircraft Corp.  
Welded Construction Inc.  
Wenzlau Engrg. Co.  
**\*R. D. WERNER CO., INC.**  
Western Design, Div.-U. S. Industries, Inc.; Santa Barbara Div.  
Western Gear Corp.  
Westinghouse Air Brake Co., Industrial Products  
Westinghouse Electric Corp.  
Wheland Co., The  
Wickfield, Inc.  
Winder Aircraft Corp. of Florida  
Wintronics

#### GROUND HOISTS

See HOISTS, GROUND

#### GROUND LANDING SYSTEMS

Air Logistics Corp.  
Associated Engineers, Inc.  
Astronautics Engrg. Co.  
Atlas Precision Products, Co.  
**\*AVCO MFG. CORP., CROSLLEY DIV.**  
Bell Aircraft Corp., Niagara Frontier Div.  
Belock Instrument Corp.  
**\*BENDIX PRODUCTS DIV., BENDIX AVIATION CORP.**  
Bendix Products Div.-Missiles, Bendix Aviation Corp.  
Bogue Electric Mfg. Co.  
Brown Engrg. Co., Inc.  
Cleveland Pneumatic Industries, Inc.  
Collins Radio Co.  
Craig Systems, Inc.  
Dalmator Div., Yuba Consolidated Industries, Inc.  
Data-Control Systems, Inc.  
Gilfillan Bros. Inc.  
ITT Federal Div., International Telephone & Telegraph Corp.  
**\*KEARFOTT CO., INC.**  
Land-Air Inc.  
Litton Industries, Maryland Div.  
Longren Aircraft Co., Inc.  
Minneapolis-Honeywell Regulator Co.-Aeronautical Div.  
Motorola Inc., Military Electronics Div.  
National Pneumatic Co., Inc., Holtzer-Cobot Div.  
Otis Elevator Co., Electronic Div.  
Philco Corp., Government & Industrial Div.  
Raytheon Mfg. Co., Government Equipment Div.  
Telectro Industries Corp.  
U. S. Industries, Inc.  
U. S. Science Corp., Div.-Topp Industries, Inc.  
Washington Technological Associates Inc.  
Westinghouse Electric Corp.  
Winder Aircraft Corp. of Florida

**AIR AND NAVIGATION EQUIPMENT**  
**NAVIGATION EQUIPMENT, GROUND**

**AIR POWER SOURCES**  
**POWER SOURCES, GROUND**

**AIR REFRIGERATION EQUIPMENT**  
**REFRIGERATION EQUIPMENT, GROUND**

**AIR STRIPS**  
**STRIPS, GROUND**

**AIR SWITCHES**  
**SWITCH GUARDS**

**AIR CANCELLATION EQUIPMENT, MISSILES**

**AIR CANCELLATION ELECTRONICS DIV., GENERAL MOTORS CORP.**

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**AIR CANCELLATION ELECTRONICS DIV., GENERAL MOTORS CORP.**

Servo Corp. of America  
Servomechanisms, Inc.  
Skiatron Electronics & Television Corp.  
Sperry Farragut Co., Div.-Sperry Rand Corp.  
Stainless Inc.  
Summers Gyroscope Co.  
Superior Carbon Products, Inc.  
Telero Industries Corp.  
Telero Mfg. Corp.  
Twenty-First Century Electronics, Inc.  
U. S. Industries, Inc.  
United States Time Corp.  
Varian Associates  
Vinco Corp.  
Washington Technological Associates Inc.  
Waste King Corp., Technical Products Div.  
Wayne Pump Co., The, Div.-Symington Wayne Corp.  
Webcor, Inc., Government Div.  
Westinghouse Electric Corp.  
Whittaker Gyro. Div.-Telet computing Corp.  
Zenith Optical Laboratory

**GUIDANCE SYSTEMS**

- a. Infrared
- b. Inertial
- c. Pilotless Aircraft
- d. Radar
- e. Radio
- f. Stellar

**\*AC ELECTRONICS DIV., GENERAL MOTORS CORP., b, c.**

ACF Industries Inc., a thru e.  
Aerajet-General Corp., a  
Aerona Mfg. Corp., d, e.  
Amelco, Inc., c, e.  
American Bosch Arma Corp., b.  
American Machine & Foundry Co., Greenwich, a.  
American Optical Co., Instrument Div., a.  
Arma Div., American Bosch Arma Corp., b.  
Atlantic Instrument Corp., Sub-American Electronics, Inc., a.  
Atlas Precision Products, Co., c, d.  
Babcock Radio Engrg., Inc., c.

**\*BAUSCH & LOMB OPTICAL CO., a.**

Bell Aircraft Corp., Niagara Frontier Div., a thru d.  
Bell Instrument Corp., a, b, d.  
Bendix Aviation Corp., Eclipse-Pioneer Div., b, c.  
Bendix Aviation Corp., Friez Instrument Div.  
Bendix-Pacific Div., Bendix Aviation Corp., d.  
Bendix Radio Div., Bendix Aviation Corp., c, d.  
Blow-Knox Equipment, Div.-Blow-Knox Co., d, f.  
Brown Engrg. Co., Inc., b.  
Bulow Electric Co., a.  
Burrughs Corp., a, d.  
Canoga Div., Underwood Corp., d.  
Cedar Engrg. Div.-Control Data Corp., a, b.  
Centronix Inc., d, e.  
Chicago Aerial Industries, Inc., a, c, f.  
Collins Radio Co., c, e.  
Communications Research Co., f.  
Cooper Development Corp., Sub.-Marquardt Aircraft Co., a.  
DBM Research Corp., d.  
Dalmator Div., Yuba Consolidated Industries, Inc., b, c.  
Data-Control Systems, Inc., e.  
Davidson Mfg., Co., Inc., a.  
Doystrom Pacific Div.-Doystrom, Inc., a, b, d.  
Dayton Aviation Radio & Equipment Corp., e.  
Divco-Wayne Electronics, Div.-Divco-Wayne Corp., d, e.

**Donner Scientific Co., b.**

Eastman Kodak Co., a.  
Thomas A. Edison Ind. Instrument Div.-McGraw-Edison Co.  
Electro Development Co., c, d.  
Electronic Communications, Inc., a thru f.  
Electronic Research Associates, Inc., e.  
Emerson Electric Mfg. Co., The, Electronics & Avionics Div., a, b, d, e.  
Emerson Radio & Phonograph Corp., c, d, e.  
Fairchild Astrionics Div., Fairchild Engine & Airplane Corp., b thru e.  
Federal Mfg. & Engrg. Corp., c, d.  
Feedback Controls, Inc., c.  
Ford Instrument Co., Div.-Sperry Rand Corp., b thru e.

**General Devices, Inc., e.**

General Precision Lab. Inc., a, b, d, f.  
G. M. Giannoni & Co., Inc., b.  
Gilfillan Bros. Inc.  
Goodyear Aircraft Corp., c, d, f.  
Guided Missile Div.-De Havilland Aircraft of Canada, Ltd., a.  
Gulton Industries, Inc., b.  
Hallam Electronics Co., c.  
Haller, Raymond & Brown Inc. Div., Singer Mfg. Co., a.  
Hallcrafters, d, e.  
Hamilton Standard, Div.-United Aircraft Corp., a.  
Hazelhine Electronics Div.-Hazelhine Corp., a thru e.  
Hoover Electric Co., c.  
Hughes Aircraft Co., a, d.  
Walter J. Hyatt Co., The, a, b, d.  
Hydro-Power Corp., b, c, f.  
ITT Federal Div., International Telephone & Telegraph Corp., a, d, e.  
ITT Labs., a thru f.  
ITT Labs.-Fr. Wayne, a.  
International Business Machines Corp.-Military Products Div., b, f.  
Jonsky & Bailey, Inc., e.

**\*KEARFOTT CO., INC., a, b, c, f.**

Kelsey-Hayes Co.  
Land-Air Inc., b, c.  
Lear, Inc., a, b, c, e.  
Lear, Inc., Grand Rapids Div., b, c, e.  
Levinthal Electronic Products, Inc., d.  
Librascope Inc., a.  
Litton Industries, Inc., b.  
Litton Industries, Maryland Div., d, e, f.  
Lockheed Aircraft Corp., Missiles & Space Div., a, d, e.  
W. L. Maxson Corp., The, b, c, d.  
Mergenthaler Linotype Co., a.  
Minneapolis-Honeywell Regulator Co.-Aeronautical Div., a, b, c.  
Missouri Research Labs., Inc., c, d.  
Monogram Precision Industries, a, d.  
Morse Instrument Co., The, d.  
Motorola Inc., Military Electronics Div., a thru e.  
Narmco Mfg. Co.  
National Pneumatic Co., Inc., Holtzer-Cabot Divs., e.  
Narthrop Corp., a thru f.  
Narthrop Corp., The, Nartronics Div., a, b, c, f.  
\*PACKARD-BELL ELECTRONICS CORP., b, d.  
Patterson, Maos Div. - Universal Winding Co., Inc., a.  
Perkin-Elmer Corp., a, f.  
Phileo Corp., Government & Industrial Div., a thru f.  
Piascki Aircraft Corp., c, d, e.  
Pioneer Tool & Engrg. Co., b.  
Power-Tronic Systems Inc., b, c, f.  
Radiation, Inc.  
Ramo-Woolridge Div., Thompson Ramo Woolridge of Calif.  
Raytheon Mfg. Co., d.  
Raytheon Mfg. Co., Government Equipment Div., a, c, d, e.  
Reeves Instrument Corp., b, d.  
Republic Aviation Corp., a thru e.  
Royal Industries, Inc., a.  
Ryan Aeronautical Co., b, c, d.  
Santa Barbara Research Center, a, f.  
Seisior Mfg. Co., e.  
Servo Corp. of America  
Shannon Luminous Materials Co., b.  
Singer Mfg. Co., The, Military Products Div., a.  
Skiatron Electronics & Television Corp., a, d, e, f.  
Smith-Morris Corp.  
Specialties, Inc., c.  
Sperry Farragut Co., Div.-Sperry Rand Corp., b, d.  
Sperry Gyroscope Co., Marine Div., Div.-Sperry Rand Corp., b.  
Sperry Piedmont Co. - Div.-Sperry Rand Corp., b, d.  
Stavid Egg, Inc., d.  
Stromberg-Carlson Div.-General Dynamics Corp., e.  
Summers Gyroscope Co., b, c.  
Systems Inc., a, c, d.  
Tele-Dynamics Inc., c, e.  
Telero Mfg. Corp., d.  
Tinsley Labs., Inc., a.  
Topper Mfg. Co., Inc., a.  
Twenty-First Century Electronics, Inc., a.  
U. S. Industries, Inc., a, d.  
United States Time Corp., a, b.  
Varian Associates, d.  
Waldorf Electronics, Div.-F.C. Huyck & Sons, d, e.  
Walham Engrg. Corp., b.  
Washington Aluminum Co., Inc., d.  
Waste King Corp., Technical Products Div., b, c.  
Webcor, Inc., Government Div., a thru f.  
Westinghouse Electric Corp., a thru e.  
Whittaker Gyro. Div.-Telet computing Corp., c.  
Winzen Research Inc., e.

**GUIDED MISSILE TELEMETERING**

**\*AC ELECTRONICS DIV., GENERAL MOTORS CORP.**

ACF Industries Inc.  
Adler Electronics, Inc.  
Aerajet-General Corp.  
Aerona Mfg. Corp.  
Aircrom Inc.  
American Missile Products Co., Inc.  
Applied Science Corp. of Princeton  
Atlas Precision Products Co.  
Barker Sales Co.  
Beaver Precision Products Inc.  
Bell Aircraft Corp., Niagara Frontier Div.  
Belock Instrument Corp.  
Bendix Aviation Corp., Eclipse-Pioneer Div.  
Bendix Aviation Corp., York Div.  
Bendix-Pacific Div., Bendix Aviation Corp.  
Brush Instruments, Div.-Clevite Corp.  
Bulow Electric Co.  
Centronix Inc.  
Chrysler Corp., Defense Operations Div.  
Clary Dynamics  
Cleveland Metal Specialties Co., Electronics Div.  
Communications Research Co.  
Cooper Development Corp., Sub.-Marquardt Aircraft Co.  
Curtiss-Wright Electronics Div., IMI Branch  
Data-Control Systems, Inc.  
Edgerton, Gerneshousen & Grier, Inc.  
Electro-Mechanical Products Co.  
Electro-Mechanical Research, Inc.  
Electro Tec Corp.  
Electronic Communications, Inc.  
Emerson Electric Mfg. Co., The, Electronics & Avionics Div.  
Emerson Radio & Phonograph Corp.

Fairchild Astrionics Div., Fairchild Engine & Airplane Corp.  
 Federal Mfg. & Engrg. Corp.  
 Firestone Tire & Rubber Co., The, Guided Missile Div.  
 Ford Instrument Co., Div.-Sperry Rand Corp.  
 General Devices, Inc.  
 Gillfillan Bros. Inc.  
 Graflex Inc.  
 Hallamere Electronics Co.  
 Hazeltine Electronics Div.-Hazeltine Corp.  
 Hogan Laboratories, Inc.  
 ITT Federal Div., International Telephone & Telegraph Corp.  
 Instrumentation Div.-Ampex Corp.  
 Kauke & Co.  
 Land-Air Inc.  
 Lear, Inc.  
 L. E. L., Inc.  
 Litton Industries, Inc.  
 Litton Industries, Maryland Div.  
 Lockheed Aircraft Corp., Missiles & Space Div.  
 Magnavox Co., The  
 Minneapolis-Honeywell Regulator Co.-Davies Labs. Div.  
 Minnesota Mining & Mfg. Co.  
 Motorola Inc., Military Electronics Div.  
 Narmco Mfg. Co.  
 Networks Electronic Corp.  
 Oris Elevator Co., Electronic Div.  
**\*PACKARD-BELL ELECTRONICS CORP.**  
 Ralph M. Parsons Co., The, Electronics Div.  
 Philco Corp., Government & Industrial Div.  
 Polaroid Electronics Corp.  
 Radiophone Co. Inc.  
 Radiation, Inc.  
 Ramo-Woolbridge Div., Thompson Ramo Woolbridge of Calif.  
 Raytheon Mfg. Co., Government Equipment Div.  
 Republic Aviation Corp.  
**\*RHEEM MFG. CO., DEFENSE & TECHNICAL PRODUCTS DIV.**  
 Royal Industries, Inc.  
 Seeburg Corp., The  
 Servo Corp. of America  
 Servomechanisms, Inc.  
 Singer Mfg. Co., The, Military Products Div.  
 Skiatron Electronics & Television Corp.  
 Summers Gyroscope Co.  
 Sun Electric Corp., Aeronautical Div.  
 Talley Corp., The  
 Telechrome Mfg. Corp.  
 Telectro Industries Corp.  
 Tele-Dynamics Inc.  
 Telerad Mfg. Corp.  
 United Electrodynamics, Inc.  
 U. S. Science Corp., Div.-Topp Industries, Inc.  
 United States Time Corp.  
 Washington Technological Associates Inc.  
 Webcor, Inc., Government Div.  
 Westinghouse Electric Corp.  
 Whittaker Gyro. Div.-Telecomputing Corp.  
 Winzen Research Inc.

**GUIDES, VALVE**  
 See VALVE GUIDES

**GUN MOUNTS, TELEVISION**

American Machine & Foundry Co., Government Products Group  
 American Machine & Foundry Co., Greenwich Anchor Metal Spinning Co., The  
 Arma Div., American Bosch Arma Corp.  
 Bendix Aviation Corp., Friez Instrument Div.  
 Bender-Tongue Labs., Inc.  
 Capital City Mfg. Co.  
 Kaiser Aircraft & Electronics, Div.-Kaiser Industries Corp.  
 Mercury Tool & Mfg. Corp.  
 Philco Corp., Government & Industrial Div.  
 Skiatron Electronics & Television Corp.  
 Stainless Inc.  
 Thomas Electronics, Inc.  
 U. S. Industries, Inc.

**GUNS, SOLDERING**  
 See SOLDERING GUNS

**GYRDS**

- a. Attitude
- b. Directional
- c. Free
- d. Integrating
- e. Missiles
- f. Rate

**\*AC ELECTRONICS DIV., GENERAL MOTDRS**

**CDRP., b, d, e, f.**  
 Aeroflex Corp., The, Aeroflex Labs. Div., a, d, e, f.  
 Air Logistics Corp., f.  
 R. C. Allen Aircraft Instr. Div., R. C. Allen Bus. Machines, Inc., c, e, f.  
 American Aeroparts, a, b.  
 American Bosch Arma Corp.  
 Arma Div., American Bosch Arma Corp., c, d.  
 Bell Aircraft Corp., Niagara Frontier Div., b, e.  
 Belock Instrument Corp., a thru f.  
 Bendix Aviation Corp., Eclipse-Pioneer Div., a, f.  
 Bendix Aviation Corp., Pioneer-Central Div., a, f.  
 Cedar Engrg. Div.-Control Data Corp., a thru f.  
 Clary Dynamics, a, b, c, e.  
 Collins Engrg. Corp., a.

Control Data Corp., a, b, e, f.  
 Daystrom Pacific Div.-Daystrom, Inc., a thru f.  
 Donner Scientific Co., a thru f.  
 Fairchild Controls Corp., Components Div., f.  
 Ford Instrument Co., Div.-Sperry Rand Corp., a thru f.  
 General Electric Co., Apparatus Sales Div., a, b, d, e, f.  
 G. M. Giannini & Co., Inc., a thru f.  
 Globe Industries, Inc., a, b, c, f.  
 Graflex Inc., e.  
 Greenleaf Mfg. Div., The, Mandrel Ind. Inc., c thru f.  
 Gyrex Corp., The  
 Hoffman Labs. Div., Hoffman Electronics Corp., a thru f.  
 Humphrey, Inc., a, b, c, e, f.  
 Iron Firearm Mfg. Co., Electronics Div., b, c, e.  
**\*KEARFOTT CO., INC., a thru f.**  
 Ketyl Dept., Norden Div., United Aircraft Corp., a thru f.  
 Lear, Inc., a, b.  
 Lear, Inc., Grand Rapids Div., a thru f.  
 W. L. Maxson Corp., The, c thru f.  
 Minneapolis-Honeywell Regulator Co., Aeronautical Div., a thru f.  
 Minneapolis-Honeywell Regulator Co., Boston Div., c, e, f.  
 Pacific Scientific Co., f.  
 Piasecki Aircraft Corp., a, f.  
 Pioneer Tool & Engrg. Co., a thru f.  
 Power-Tronic Systems, Inc., d, f.  
 Reeves Instrument Corp., d, e.  
 Sanders Associates, Inc., a, e, f.  
 Salartron Inc., f.  
 Sperry Farragut Co., Div.-Sperry Rand Corp., b thru f.  
 Sperry Gyroscope Co., Marine Div., Div.-Sperry Rand Corp., b, f.  
 Sperry Piedmont Co. - Div.-Sperry Rand Corp., b, f.  
 Sterling Precision Corp., Instrument Div., d, f.  
 Summers Gyroscope Co., a thru f.  
 United States Time Corp., a thru f.  
 Waltham Precision Instrument Co., c, e, f.  
 Waste King Corp., Technical Products Div., a thru e.  
 Westinghouse Electric Corp., a thru f.  
 Whittaker Gyro. Div.-Telecomputing Corp., a, b, c, e, f.

**GYRDSOPES**

Aeroflex Corp., The, Aeroflex Labs. Div.  
 R. C. Allen Aircraft Instr. Div., R. C. Allen Bus. Machines, Inc.  
 American Bosch Arma Corp.  
 Atlantic Instrument Corp., Sub.-American Electronics, Inc.  
 Bell Aircraft Corp., Niagara Frontier Div.  
 Belock Instrument Corp.  
 Bendix Aviation Corp., Eclipse-Pioneer Div.  
 Cedar Engrg. Div.-Control Data Corp.  
 Clary Dynamics  
 Control Data Corp.  
 Daystrom Pacific Div.-Daystrom, Inc.  
 Donner Scientific Co.  
 Ford Instrument Co., Div.-Sperry Rand Corp.  
 General Electric Co., Apparatus Sales Div.  
 G. M. Giannini & Co., Inc.  
 Globe Industries, Inc.  
 Graflex Inc.  
 Hoffman Labs. Div., Hoffman Electronics Corp.  
 Humphrey, Inc.  
 Iron Firearm Mfg. Co., Electronics Div.  
**\*KEARFOTT CO., INC.**  
 Ketyl Dept., Norden Div., United Aircraft Corp.  
 Lear, Inc., Grand Rapids Div.  
 W. L. Maxson Corp., The  
 Minneapolis-Honeywell Regulator Co., Aeronautical Div.  
 Minneapolis-Honeywell Regulator Co., Boston Div.  
 Pioneer Tool & Engrg. Co.  
 Power-Tronic Systems Inc.  
 Sperry Gyroscope Co., Marine Div., Div.-Sperry Rand Corp.  
 Sperry Piedmont Co. - Div.-Sperry Rand Corp.  
 Sterling Precision Corp., Instrument Div.  
 Summers Gyroscope Co.  
 United States Time Corp.  
 Waste King Corp., Technical Products Div.  
 Westinghouse Electric Corp.  
 Whittaker Gyro. Div.-Telecomputing Corp.

**HAMMERS**

Aircraft Tools, Inc.  
 Barrett-Christie Co.  
 Billings & Spencer Co., The  
 Black & Decker Mfg. Co., The  
 Capewell Mfg. Co.  
 Chicago Rawhide Mfg. Co.  
 Division Lead Co.  
 Greene, Tweed & Co.  
 High Speed Hammer Co., Inc., The  
 Hunter Tool Co.  
 Lemerit Engrg. Co., Inc.  
 Owatonna Tool Co.  
 Simonds Saw & Steel Co.  
 Snap-On Tools Corp.  
 Stanley-Judd Div.-The Stanley Works  
 Superior Pneumatic & Mfg., Inc.  
 TA Mfg. Corp.  
 Vlchek Tool Co., The

**HAND DRILLS**  
 See DRILLS, HAND

**HAND OR MECHANICAL TOOLS**  
 See TOOLS, HAND OR MECHANICAL

**HAND SETS**

National Pneumatic Co., Inc., Holtzer-Cabot Div.  
 Perry Plastics, Inc.  
 Roonwell Corp.  
 J. H. Sessions & Son  
 Specialty Engrg. & Electronics Co.  
 Wheeler Electronic Corp., Sub.-Sperry Rand Corp.

**HANDLES**

Abalon Precision Mfg. Corp.  
 Adams Rite Mfg. Co.  
 Allied Plastics Supply Corp.  
 Amatom Electronic Hardware Co. Inc.  
 American Aeroparts  
 American Insulator Corp.  
 Anchor Metal Spinning Co., The  
**\*BALCRANK INC., MACHINE TOOL DIV.**  
 Barrett-Christie Co.  
 Bendix Aviation Corp., Friez Instrument Div.  
 Cambridge Thermionic Corp.  
 Dimco-Gray Co.  
 Double E Products Co.  
 Freeman Co., The  
 Goe Engrg. Co.  
 Gordon Electronics, Inc.  
 National Lock Co.  
 PIC Design Corp., Sub.-Benrus Watch Co., Inc.  
 Rubbercraft Corp. of California  
 Schlegel Mfg. Co.  
 Specialty Engrg. & Electronics Co.  
 Stanley-Judd Div.-The Stanley Works  
 TA Mfg. Corp.  
 Vemaline Products Co.

**HANDLES, LEATHER**

Aero Leather Products Co.  
 Auburn Mfg. Co., The  
 TA Mfg. Corp.

**HARDWARE**

Abalon Precision Mfg. Corp.  
 Adams Rite Mfg. Co.  
 Aero Bolt & Screw Co., Inc.  
 All Specs Corp.  
 Alpine Electronic Components, Inc.  
 Amatom Electronic Hardware Co. Inc.  
 American Aeroparts  
 Anchor Metal Spinning Co., The  
 Anti-Corrosive Metal Products Co., Inc.  
 Arroyo Aircraft Associates, Inc.  
**\*AVCO MFG. CORP., CROSLEY DIV.**  
**\*BEATON & CORBIN MFG. CO., THE**  
 Best Aircraft Corp.  
 Burk Burner Co., The  
 Burlington Co.  
 Calinoy-Div.-Illinois Tool Works  
 Cambridge Thermionic Corp.  
 Capewell Mfg. Co.  
 Carmac Aviation  
 Century Fasteners Corp.  
 Cooper Industries, Inc.  
 Corbin Products Div.  
 Double E Products Co.  
 R. C. Dudek & Co.  
 Edgington Metal Specialty Co.  
 Emcco Plastic Fabricators - Div.-E. M. McCarty Machine Co.  
 Federal Screw Products Inc.  
 Forsberg Mfg. Co., The  
 Goe Engrg. Co.  
 Gordon Enterprises  
 Helipot Div.-Beckman Instruments Inc.  
 Hobson Brothers, Inc.  
 Hoosier Tarpaulin & Canvas Goods Co., Inc.  
 Industrial Television Inc.  
 Ingersoll Kalamazoo Div., Borg-Warner Corp.  
 Jan Hardware Mfg. Co., Inc.  
 Kaynor Mfg. Co., Inc.  
 Keystone Electronics Corp.  
 H. Koch & Sons  
 Lerco Electronics, Inc.  
 Litton Industries, U. S. Engrg. Co., Div.  
 Lucas Aircraft Supply Co.  
 Mercury Air Parts Co., Inc.  
 Monogram Precision Industries  
 J. I. Morris Co.  
 National Lock Co.  
 Newbrook Machine Corp.  
 Raytheon Mfg. Co.  
 Richards-Wilcox Mfg. Co.  
 J. H. Sessions & Son  
 Shur-Lok Corp.  
 Solar Aircraft Co.  
 Stanley-Judd Div.-The Stanley Works  
 Stone City Products Co.  
 Thompson-Bremser & Co.  
 Vector Electronic Co.  
 Vemaline Products Co.  
 Waldom Electronics Inc.  
 Westfield Metal Products Co., Inc.  
 Wilco-x-Crittenden Div., North & Judd Mfg. Co.  
 Yale & Towne Mfg. Co., The-Government Defense Products Div.

**HARDWARE, PARACHUTE**  
 See PARACHUTE HARDWARE



## FINESSES

a. Electric  
b. Ignition  
c. Thermocouples  
d. Wire

mp Inc., a.  
Advanced Electronics, Inc., a, c, d.  
Aero Research Instrument Co. Inc., c.  
Aerjet-General Corp., a thru d.  
Aerolite Electronics Corp., a.  
Aircraft Tools, Inc., a, c, d.  
Aertronics International Corp., d.  
Alden Products Co., d.  
Aer Scientific Co., Inc., a.  
Aermeico, Inc., a.  
American Aeroparts, b.  
American Bosch Arma Corp., a, d.  
American Electric Cable Co., a, b, c.  
American Machine & Foundry Co., Government Products Group, a.  
American Missile Products Co., Inc., a, c.  
Amphenol Connector Div., Amphenol-Borg Electronics Corp., a thru d.  
Anchor Specialty Mfg. Co. Inc., a, b, d.  
Anlas Coil Inc., a.  
Auburn Spark Plug Co., Inc., b.  
**BEATON & CORBIN MFG. CO., THE, a, c.**  
A. Bauchne & Sons Inc., a.  
Bendix Aviation Corp., Scintilla Div., a thru d.  
Benco Engrg. Corp., a thru d.  
Bendbach Radio Co., Inc., d.  
Bess Electronic Corp., a, d.  
Bach Mfg. Corp., Div.-General Brnze, d.  
Bliam Brand & Co., Inc., a, c, d.  
Beeze Corporations, Inc., b.  
Bristol Co., The, c.  
Bumble Electric Products Inc., a, d.  
**CANNON ELECTRIC CO., a.**  
Catalco Engrg. Corp., a.  
Chrysler Corp., Defense Operations Div.  
Chippard Instrument Lab., Inc., a.  
Continental Technical Service, Inc., a, d.  
Co-Operative Industries, Inc., a thru d.  
Cormish Wire Co., Inc., d.  
Cromator Div., Yuba Consolidated Industries, Inc., a, d.  
Croyton Aviation Radio & Equipment Corp., a, d.  
Cronic Industries, a, d.  
Cubicle E Products Co., a thru d.  
Cusser Industries, Inc., d.  
Cetric Auto-Lite Co., The, a, b, d.  
Cetric Cords & Supply Corp., a, b, c.  
Cetromoth Corp., a, b.  
Cetro-Mechanical Products Co., a, d.  
Cetror. Products Co., a, d.  
Cerson Radio & Phonograph Corp., a, d.  
Ciprite Electronics Co., Inc., a, d.  
Cie Resistor Corp., d.  
Cise Wire Corp., a, d.  
**CS-HOKIN & GALVAN, a.**  
Cederal Mfg. & Engrg. Corp., a.  
Ceral Electronics Corp., The, a, b, d.  
Ceral Electric Co., Apparatus Sales Div., c.  
Croud S. Gordon Co., c.  
Crdan Enterprises, a, c.  
Cdnar Laboratories, a.  
Clet Mfg., Co., a thru d.  
Coco Labs., Inc., a, b, c.  
Colo Manufacturing Corp., d.  
Coles Tool Co., Aircraft Div., a, d.  
Custrial Television Inc., c.  
Cerson Electronic Products Corp., a thru d.  
Cig, Inc., a, d.  
Cilka Electric Corp., a, d.  
Cid-Air Inc., a.  
Cids & Northrup Co., b.  
**CLEWIS ENGRG. CO., THE, a, c.**  
C. Leod & Hanopol, Inc., a.  
CJ. Menough Co., b.  
Cneapolis-Honeywell Regulator Co., Industrial Product Group, c.  
Cneapolis-Honeywell Regulator Co., Ordnance Div., a.  
Cnesota Mining & Mfg. Co., a, d.  
Cnic Electric Products Corp., a, b.  
Cnyan Corp., Military Electronics Div., d.  
Cnyon Corp., a thru d.  
Cnonal Pneumatic Co., Inc., Holtzer-Cobot Divs., b, d.  
CMA Newman, Corp., a, d.  
Cpific Scientific Co., a, c, d.  
Cplord Electric Div.-General Motors Corp., a, b, d.  
Cplegics Mfg. Co., Inc., a, c.  
Cplects Unlimited Inc., a, c, d.  
Cpore Corp. of America, a, c, d.  
**CHEM MFG. CO., DEFENSE & TECHNICAL PRODUCTS DIV., a.**  
C. T. Roberts & Co., a.  
Cion Ross Metals Co., The, a.  
Crie Industries, a.  
Crol Industries, Inc., a.  
Csolamo Electric Co., d.  
Csepio Wire & Cable Co., Div.-Mandrel Industries, a, c, d.  
Cshered Workshops, a, d.  
Cster Corp., d.  
Cspecially Engr. & Electronics Co., a.  
Cstey-Judd Div.-The Stanley Works  
Cstulk Products Corp., a.  
Ct Mfg. Corp., a, b, c, d.  
Ct. Div., Dyna-Empire, Inc., a thru d.  
Ctetro Industries Corp., a thru d.

Thermo Electric Co., Inc., c.  
Thomas Electronics, Inc., a thru d.  
Titeflex, Inc., b.  
Tricraft Products Corp., d.  
Tri-Dex Co., a, d.  
Twin Coach Co., Aircraft-Missiles, a.  
Weber, Inc., Government Div., a thru d.  
Westbury Electronics Inc., d.  
Western International Co., d.  
Westwood Cable Corp., a.  
Wheeler Electronic Corp., Sub.-Sperry Rand Corp., a, d.  
Whitaker Cable Corp., a, d.  
Winder Aircraft Corp. of Florida, a thru d.

## HEADERS

American Aeroparts  
Amphenol Connector Div., Amphenol-Borg Electronics Corp.  
Cooper Industries, Inc.  
Dodge Electric Co., Inc.  
Garde Mfg. Co.  
Mercury Tool & Mfg. Corp.  
Networks Electronic Corp.  
Pilgrim Products Inc.  
Precision Sheet Metal, Inc.  
Milton Ross Metals Co., The  
Strat-O-Seal Mfg. Co.  
Thomas Electronics, Inc.

## HEADPHONES & HEADSETS

C. F. Cannon Co.  
Electronic Applications, Inc.  
ITT-Kelllogg  
Edwin A. Lipps Engrg.  
National Pneumatic Co., Inc., Holtzer-Cobot Divs.  
Perry Plastics, Inc.  
Roonwell Corp.  
Superex Electronics Corp.  
Telectro Industries Corp.

## HEADS, COMPUTER

Alwac Corp.  
General Transistor Western Corp.  
Libroscope Inc.  
Shure Brothers, Inc.  
Soroban Engrg., Inc.

## HEADSETS & HEADPHONES

See HEADPHONES & HEADSETS

## HEAT DISSIPATORS

See DISSIPATORS, HEAT

## HEAT TRANSFER CONTROL SYSTEMS

**\*AIRESEARCH MFG. CO., DIV.-THE GARRETT CORP.**  
Arde-Portland, Inc.  
**\*BENDIX AVIATION CORP., HAMILTON DIV.**  
Bowser, Inc., Defense Dept.  
Griscom-Russell Co., The  
Hullcrafters  
Hanlon & Wilson Co., The  
Paul Hardean, Inc.  
**\*JANITROL AIRCRAFT DIV., SURFACE COMBUSTION CORP.**  
Marlo Coil Co.  
Monogram Precision Industries  
Pneumafil Corp.  
Project Fabrication Corp.  
South Wind Div., Stewart Warner Corp.  
Thiokol Chemical Corp.  
Trane Co., The  
Tranter Inc.  
United Aircraft Products, Inc.  
Waste King Corp., Technical Products Div.

## HEAT TREATING SERVICE

ACF Industries Inc.  
Aerodex, Inc.  
Aerona Mfg. Corp.  
Alco Products, Inc.  
American Gas Furnace Co.  
American Steel Foundries, Hammond Div.  
Benson Mfg. Co., The  
E. W. Bliss Co.  
California Aircraft Products  
Curtiss-Wright Corp.-Propeller Div.  
Curtiss-Wright Corp.-South Bend Div.  
Curtiss-Wright Corp.-Wright Aeronautical Div.  
Diversey Engrg. Co.  
Dynacor, Inc.  
Ferrotherm Co., The  
Gralex Inc.  
C. I. Hayes, Inc.  
High Vacuum Equipment Corp.  
Induction Heating Corp.  
Jan Hardware Mfg. Co., Inc.  
Kanarr Corp.  
M. W. Kellogg Co., The  
Kelsey-Hoyes Co.  
Klock Corp.  
Charles E. Larson & Sons, Inc.  
Langren Aircraft Co., Inc.  
**\*LYCOMING DIV., AVCO MFG. CORP.**  
Metal Treating Institute  
Metal-Gloss Products Co.  
Metallurgical, Inc.  
Norris-Thermador Corp.  
Papesch & Kolstad, Inc.

Piasecki Aircraft Corp.  
Precision Castings, Inc.  
Red Lion Cabinet Co., Redca Tool Div.  
Sargeant & Wilbur Heat Treating Corp.  
Solar Aircraft Co.  
Solon Foundry, Inc.  
Taft-Peirce Mfg. Co., The  
Teiner Engrg. Corp.  
True Alloys Inc.  
Twig Industries  
Veet Industries

## HEATER MUFFLER ASSEMBLIES

American Air Filter Co., Defense Products Div.  
Colonial Aircraft Corp.  
Hanlon & Wilson Co., The  
The Kaiser Aircraft & Electronics, Div.-Kaiser Industries Corp.  
Norton Co., New Products Dept.  
Piasecki Aircraft Corp.  
Portland Copper & Tank Works Inc.

## HEATERS

### \*AIRESEARCH MFG. CO., DIV.-THE GARRETT CORP.

American Air Filter Co., Defense Products Div.  
Bradford Components, Inc.  
Briscoe Mfg. Co.  
Bulow Electric Co.  
Cole Electric Co.  
Caming Glass Works  
Cox & Co., Inc.  
Cutler-Hammer Inc.  
Damp-Chaser, Inc.  
Dean Products, Inc.  
Electric Heater Co., The  
Electro-Flex Heat, Inc.  
Electro-Mechanical Products Co.  
Electro-Tech Equipment Co.  
Engelhard Industries, Inc.  
General Electric Co., Apparatus Sales Div.  
Giannini Plosmadyne Corp.  
Goodyear Tire & Rubber Co., The, Aviation Products Div.  
Griscom-Russell Co., The  
Haddam Mfg. Co., The  
Hanlon & Wilson Co., The  
Hussmann Aircraft Div.  
Janco Corp.

### \*JANITROL AIRCRAFT DIV., SURFACE COMBUSTION CORP.

Jet-Heat, Inc.  
Minco Products, Inc.  
Perfection Industries, Div.-Hupp Corp.  
Edw. Rennebury & Sons Co.  
Rome-Turney Radiator Co., The  
Rosemount Engrg. Co.  
Safeway Heat Elements, Inc.  
Selas Corp. of America  
South Wind Div., Stewart Warner Corp.  
Special Projects Lab., Food Machinery & Chemical Corp.  
Statikil, Inc., Div.-The J. E. Doyle Co.  
Temperature Engrg. Corp.  
Thermal Refractories Corp.  
Thermo-O-Lab Corp.  
Trane Co., The  
United Aircraft Products, Inc.  
Universal Dynamics Corp.  
Western Gear Corp.  
Westinghouse Electric Corp.  
Edwin L. Wiegand Co.

## HEATING COILS

See COILS, HEATING

## HEATING ELEMENTS

See ELEMENTS, HEATING

## HEATING EQUIPMENT, DIELECTRIC

See DIELECTRIC HEATING EQUIPMENT

## HEATING EQUIPMENT, FLEXIBLE

Briscoe Mfg. Co.  
Cox & Co., Inc.  
Dean Products, Inc.  
Electro-Flex Heat, Inc.  
Ero Engrg. Inc.  
General Electric Co., Apparatus Sales Div.  
B. F. Goodrich Aviation Products  
Goodyear Tire & Rubber Co., The, Aviation Products Div.  
Haddam Mfg. Co., The  
A. F. Holden Co., The  
**\*JANITROL AIRCRAFT DIV., SURFACE COMBUSTION CORP.**  
Jet-Heat, Inc.  
Marlo Coil Co.  
Minco Products, Inc.  
Monogram Precision Industries  
Paul Nurches Co.  
Rome-Turney Radiator Co., The  
Safeway Heat Elements, Inc.  
Stainless Steel Products, Inc.  
Temperature Engrg. Corp.  
United Aircraft Products, Inc.  
Edwin L. Wiegand Co.

## HEATING EQUIPMENT, INDUCTION

See INDUCTION HEATING EQUIPMENT

**HEATING POTS & TANKS**  
See **POTS & TANKS, HEATING**

**HERMETIC SEALING SERVICE**  
See **SEALING SERVICE, HERMETIC**

**HERMETICALLY SEALED CANS**  
See **CANS, HERMETICALLY SEALED**

**HIGH H PERMEAMETERS**  
See **PERMEAMETERS, HIGH H**

**HIGH PRESSURE PLASTIC LAMINATORS**  
See **LAMINATORS, PLASTIC, HIGH TEMPERATURE**

**HIGH TEMPERATURE ADHESIVES**  
See **ADHESIVES, HIGH TEMPERATURE**

**HIGH TEMPERATURE CERAMICS**  
See **CERAMICS, HIGH TEMPERATURE**

**HIGH TEMPERATURE COILS**  
See **COILS, HIGH TEMPERATURE**

**HIGH VOLTAGE CONNECTORS**  
See **CONNECTORS, HIGH VOLTAGE**

**HINGES**  
All American Engr. Co.  
American Aeroparts  
Anchor Metal Spinning Co., The  
Barrett-Christie Co.  
Burklyn Co.  
Century Fasteners Corp.  
Cabin Products Div.  
Electro-Flex Heat, Inc.  
National Lock Co.  
Precision Shapes, Inc.  
Richards-Wilcox Mfg. Co.  
Stanley-Judd Div.-The Stanley Works  
TA Mfg. Corp.

**HOISTS, AIRBORNE**  
Acco Equipment Div., American Chain & Cable Co., Inc.  
Air Logistics Corp.  
\***AIRESEARCH MFG. CO., DIV.-THE GARRETT CORP.**

All American Engr. Co.  
American Machine & Foundry Co., Greenwich  
Bendix-Pacific Div., Bendix Aviation Corp.  
Bendix Utica Div., Bendix Aviation Corp.  
Benson Mfg., Co., The  
Breeze Corporations, Inc.  
Crane Carrier Corp.  
Cromer Mfg. & Engrg., Inc.  
Curtiss-Wright Corp.-South Bend Div.  
Foots Bros. Gear & Machine Corp.  
Jack & Heintz, Inc.  
Hoover Electric Co.  
Kelsey-Hayes Co.  
Longren Aircraft Co., Inc.  
Piasecki Aircraft Corp.  
Red Lion Cabinet Co., Inc.  
Redco Tool Div.  
\***RHEEM MFG. CO., DEFENSE & TECHNICAL PRODUCTS DIV.**  
Sargent Engr. Corp.  
Silent Hoist & Crane Co.  
Tolley Corp., The  
Vard Inc.  
Waste King Corp., Technical Products Div.  
Western Design, Div.-U.S. Industries, Inc.; Santa Barbara Div.  
Western Gear Corp.  
Yale & Towne Mfg. Co., The, Government Defense Products Div.

**HOISTS, GROUND**  
Acco Equipment Div., American Chain & Cable Co., Inc.  
American Aeroparts  
American Machine & Foundry Co., Government Products Group  
American Machine & Foundry Co., Greenwich  
Baker Industrial Trucks, Div.-Dtis Elevator Co.  
Barrett-Christie Co.  
Beaver Precision Products Inc.  
Bendix Utica Div., Bendix Aviation Corp.  
Bil-Jax Inc.  
E. W. Bliss Co.  
Breeze Corporations, Inc.  
Albert H. Cayne Equipment Corp.  
Chicago Pneumatic Tool Co.  
Chisholm-Moore Hoist Div., Columbus McKinnon Chain Corp.  
Coffing Hoist Div., Duff-Norton Co.  
Control Engrg. Co., Div. Jerry B. Webb Co.  
Crane Carrier Corp.  
Cromer Mfg. & Engrg., Inc.  
Curtiss-Wright Corp.-South Bend Div.  
Detroit Hoist & Machine Co.  
Dresser Industries, Inc.  
Emerson Electric Mfg. Co., The, Electronics & Avionics Div.  
G. W. Galloway Co.  
Gardner-Denver Co.  
Hoover Electric Co.  
Hufford Corp., The  
Jack & Heintz, Inc.  
Longren Aircraft Co., Inc.

Mc Dowell-Wellman Companies, The  
Morse Instrument Co., The  
Regent Jack Mfg. Co., Inc.  
Robbins & Myers, Inc., Hoist & Crane Div.  
Rotary Lift Co., Div.-Dover Corp.  
Royal Industries, Inc.  
Santa Anita Engr. Co.  
Sargent Engrg. Corp.  
Silent Hoist & Crane Co.  
Stainless Inc.  
Talley Corp., The  
Western Design, Div.-U.S. Industries, Inc.; Santa Barbara Div.  
Western Gear Corp.  
Wheland Co., The  
Yale & Towne Mfg. Co., The, Government Defense Products Div.

**HOLDERS, CHASSIS**  
Anchor Metal Spinning Co., The  
Challenge Machinery Co., The  
Hardman Tool & Engrg., Co.  
Ludwig Honold Mfg. Co.  
Longren Aircraft Co., Inc.  
Mercury Tool & Mfg. Corp.  
Mid-West Metal Products, Inc.  
Monogram Precision Industries  
Piasecki Aircraft Corp.

**HOLDERS, CRYSTAL**  
Aircam Inc. of New Jersey  
Augat Brothers, Inc.  
Demoray-Bonardi  
Diamond Antenna & Microwave Corp.  
Douglas Microwave Co., Inc.  
Javex Electronics  
E. F. Johnson Co.  
Microlab  
Microwave Associates, Inc.  
Motorola Inc., Military Electronics Div.  
Portchester Instrument Corp.  
Sage Labs., Inc.  
Special Instruments Div., British Industries Corp.  
Stover Corp., Inc., The  
Victor R. F. & Microwave Co.  
Waldom Electronics Inc.

**HOLDERS, FUSE**  
Accurate Electronics Corp., Dept. D  
Alden Products Co.  
Augat Brothers, Inc.  
Garde Mfg. Co.  
Janco Corp.  
Howard B. Jones Div.-Cinch Mfg. Corp.  
Kulka Electric Corp.  
Pilgrim Products Inc.  
Raytheon Mfg. Co.  
Stover Corp., Inc., The  
Wilks Precision Instrument Co., Inc.

**HORNS, MICROWAVE**  
Ainslie Corp.  
Aircam Inc. of New Jersey  
Airtron Inc., Div.-Litton Industries  
American Machine & Foundry Co., Greenwich  
Bogart Mfg. Corp.  
Brooks & Perkins, Inc.  
Budd Stanley Co., Inc.  
Cooper Development Corp., Sub.-Marquardt Aircraft Co.  
Demoray-Bonardi  
Diamond Antenna & Microwave Corp.  
Douglas Microwave Co., Inc.  
FXR, Inc.  
GAR Precision Parts, Inc.  
John Gombos Co., Inc.  
Walter J. Hyatt Co., The  
I-T-E Circuit Breaker Co.  
ITT Federal Div., International Telephone & Telegraph Corp.  
J-V-M Microwave Co.  
D. S. Kennedy & Co.  
Lico, Inc.  
Litton Industries, Inc.  
Litton Industries, Maryland Div.  
W. L. Maxson Corp., The  
Meridian Metalcraft, Inc.  
Microwave Associates, Inc.  
Monogram Precision Industries  
Motorola Inc., Military Electronics Div.  
N.R.K. Mfg. & Engrg. Co.  
Narda Microwave Corp., The  
Omega Labs., Inc.  
Polarad Electronics Corp.  
Radar Design Corp.  
Radiotronics, Inc.  
Sage Labs., Inc.  
Scientific-Atlanta, Inc.  
Sperry Microwave Electronics Co., Div.-Sperry Rand Corp.  
Stainless Inc.  
Suffolk Products Corp.  
Telerad Mfg. Corp.  
Turbo Machine Co.  
Victor R. F. & Microwave Co.  
Walworth Co. Electronics Div.  
Washington Aluminum Co., Inc.  
Waveline, Inc.  
Wheeler Laboratories, Inc.

**HORNS, SPEAKER PROJECTOR**  
Kling Metal Spinning & Stamping Co.

**HOSE**  
a. Air  
b. Assemblies, Flexible  
c. Flexible, Metallic  
d. Flexible, Non Metallic  
e. Hydraulic  
Aeroquip Corp., Jackson Div., a, b, d, e.  
All Specs Corp., b thru e.  
Allied Plastics Supply Corp., a thru e.  
American Brass Co., The, a, b, c.  
Anaconda Metal Hose Div., The American Brass Co., a thru e.  
Anchor Coupling Co. Inc., a, b, d, e.  
Anchor Packing Co., The  
Atlantic Metal Hose Co., Inc., b, c.  
Avica Corp., b, e.  
Barrett-Christie Co., a thru e.  
\***BEATON & CORBIN MFG. CO., THE, b, e.**  
Borden Chemical Co., d.  
Breeze Corporations, Inc., c.  
Bridgeport Brass Co., c.  
Carmac Aviation, a thru e.  
Century Fasteners Corp., b, c, e.  
Chemplast, Inc., d.  
Chicago Pneumatic Tool Co., a.  
Chiksan Co., Sub.-Food Machinery & Chemical Corp., b.  
Cobra Metal Hose Div. D K Mfg. Co., a, b, e.  
Components Corp., c.  
Continental Rubber Works, a, e.  
Herbert Cooper Co., Inc., b, d.  
Cooper Industries, Inc., c.  
Co-Operative Industries, Inc., a, b, c, e.  
D K Mfg. Co., b, c.  
C. R. Daniels, Inc., d.  
Dayton Rubber Co., The, a, b, c.  
Dunbar-Kapelle Inc.-Aircraft Components Div., b thru e.  
Electric Hose & Rubber Co., a thru e.  
Flexhaust Co., The, a, d.  
Flexible Metal Hose Mfg. Co., b, c.  
Flexible Tubing Corp., a, b, d.  
\***FLUXONICS CORP., AERONAUTICAL DIV., a thru e.**  
Gering Products, Inc., d.  
B. F. Goodrich Aviation Products, a, d.  
B. F. Goodrich Industrial Products Co., a, b, d, e.  
Goodyear Tire & Rubber Co., The, Aviation Products Div.  
Gray Co., Inc., a, e.  
Hallett Mfg., Co., b, c.  
Hannifin Co., Div.-Parker-Hannifin Corp., b, d, e.  
Hewitt-Robins, Inc., a, b, d.  
Imperial Brass Mfg. Co., The, a, b, d, e.  
Jessall Plastics, d.  
Jodee Plastics Co., d.  
M & Q Plastic Products, a, b, d, e.  
Matheson Co., Inc., The, c, d.  
Minnesota Mining & Mfg. Co., b, d.  
J. J. Monaghan Co., Inc., b.  
New England Tape Co., Div.-United-Corr Fastener Corp., d.  
Orchard Industries, Inc., Actionflex Div., a, b, d.  
Owatonna Tool Co., e.  
Parker Fittings & Hose Div., Parker-Hannifin Corp., b, d, e.  
Parts Engrg. Co., Inc., b, d, e.  
Polymer Corp., The, a, b, e.  
H. K. Porter Co., Inc., Thermoid Div., a, d, e.  
Pyle Industries, Inc., a, e.  
Raybestos-Manhattan, Inc., a, d, e.  
Raybestos-Manhattan, Inc., Pa., a, d, e.  
Resistoflex Corp., a, b, d, e.  
Ron T. Roberts & Co., a, b, d.  
Fred & Kunz, Inc., c.  
Saylor Electric Products Corp., d.  
Sparta Mfg. Co., Div.-U.S. Ceramic Title Co., d.  
Standard-Thomson Corp., Clifford Mfg. Co. Div., Stratoflex, Inc., a, b, d, e.  
Swan Rubber Co., a, d.  
Titellex, Inc., a thru e.  
United States Rubber Co., a, d, e.  
\***WEATHERHEAD CO., THE, a, b, d, e.**  
Wing Aircraft Corp. of Florida, a thru e.  
Z & W Mfg. Corp., b.  
Zallea Brothers, b, c.

**HOT OIPED TINNING**  
See **TINNING, HOT OIPPEO**

**HUMIDITY CONTROL SYSTEMS**  
\***AIRESEARCH MFG. CO., DIV.-THE GARRETT CORP.**  
Airtemp Div., Chrysler Corp.  
American Instruments Co., Inc.  
Associated Engineers, Inc.  
Bristol Co., The  
CDC Control Services, Inc.  
Carrier Corp.  
Ellis & Watts Products, Inc.  
Epic, Inc.  
Instruments Corp., The  
International Radiant Corp.  
Lear, Inc.  
Minneapolis-Honeywell Regulator Co., Industrial Product Group  
Minneapolis-Honeywell Regulator Co., Ordnance Div.

Missimers Inc.  
New England Scientific Instruments Co.  
Photobell Co., Inc.  
Pitasecki Aircraft Corp.  
Pioneer Industries Div., Almar-York Co. Inc.  
Project Fabrication Corp.  
Research Products Corp.  
Scientific Instrument Co.  
Skyline Electric & Mfg. Co.  
Spraying Systems Co.  
Surface Combustion Corp.  
Thompson Engrg. Co., The, Missile Products Div.  
United Aircraft Products, Inc.  
United Electric Controls Co.  
United States Dynamics Corp.  
Warren Components, Div. El-Tronics, Inc.  
Western Instruments, Div. Dayton, Inc.  
Winder Aircraft Corp. of Florida  
Winer Research Inc.  
Warner Electronic Devices

**BRID, MICROWAVE JUNCTIONS**  
See **JUNCTIONS, HYBRID, MICROWAVE**

**HYDRAULIC ACCUMULATORS**  
See **ACCUMULATORS, HYDRAULIC**

**HYDRAULIC AUTOMATIC PILOTS**  
See **AUTOMATIC PILOTS, HYDRAULIC**

**HYDRAULIC OILS, COOLANTS, FLUIDS**  
See **FLUIDS, HYDRAULIC OILS, COOLANTS, ETC.**

**HYDRAULIC RESERVOIRS**

Accessory Products Co., Div.-Textron Inc.  
American Bosch Arma Corp.  
Applied Dynamics Corp.  
Astronautics Engrg. Co.  
Aerodyne Pacific Div., Bendix Aviation Corp.  
Adillac Gage Co.  
Colonial Aircraft Corp.  
Cooper Development Corp., Sub.-Marquardt Aircraft Co.  
Denison Engrg. Div., American Brake Shoe Co.  
Eastern Industries Inc.  
Globe Hoist Co.  
Greer Hydraulics, Inc.  
Hannifin Co., Div.-Parker-Hannifin Corp.  
Haskel Engrg. & Supply Co.  
Hiley-Moore Associates  
Hull Corp., The  
Hull Corp.  
Integral Corp.  
John & Co., Inc.  
Kaiser Aircraft & Electronics, Div.-Kaiser Industries Corp.  
Mercury Tool & Mfg. Corp.  
M. C. Dyne, Inc.  
Zone Metal Products Corp.  
Parker Aircraft Co.  
J. K. Porter Co., Inc.  
Sess Steel Tank Co.  
Paine Hydraulics & Machinery Inc.  
Randall Engrg. Corp.  
Red Lion Cabinet Co., Redco Tool Div.  
Rgent Engrg. Corp.  
In Electric Corp., Aeronautical Div.  
United Aircraft Products, Inc.  
Vickers Inc., Div.-Sperry Rand  
nson Mfg. Co. Inc.  
stewart Div., The New York Air Brake Co.  
See Aerodrualics, Inc.

**HYDRAULIC SYSTEMS & CONTROLS**

el Precision Products, Div. General Metals Corp.  
el Precision Products of California, Div.-General Metals Corp.  
**HYDRAULIC RESEARCH MFG. CO., DIV.-THE GARRETT CORP.**  
merican Bosch Arma Corp.  
merican Brake Shoe Co.  
merican Brake Shoe Co., Kellogg Div.  
merican Machine & Foundry Co., Government Products Group  
merican Machine & Foundry Co., Greenwich  
merican Measurement & Control, Inc.  
plied Dynamics Corp.  
me Products  
sociated Engineers, Inc.  
**ASSOCIATED TESTING LABS, INC.**  
tronautics Engrg. Co.  
**BENDIX AVIATION CORP., HAMILTON DIV.**  
**BENDIX PRODUCTS DIV., BENDIX AVIATION CORP.**  
ndix Utica Div., Bendix Aviation Corp.  
ndix-Pacific Div., Bendix Aviation Corp.  
ckhowk Mfg. Co.  
W. Bliss Co.  
wser, Inc., Defense Dept.  
stal Co., The  
illac Gage Co.  
ruthers & Fernandez, Inc.  
ontal Aircraft Corp.  
n-Air Products, Div.-A S R Products Corp.  
mmercial Shearing & Stamping Co.  
omponents Corp.  
isolated Controls Corp.  
isolated Diesel Electric Corp.  
isolated Diesel Electric Corp., Test Equip.  
iv.  
isolated Diesel Electric Corp., Western Div.

Control Engrg. Co., Div. Jervis B. Webb Co.  
Denison Engrg. Div., American Brake Shoe Co.  
Diversey Engrg. Co.  
Dumont Aircraft Fitting Co.  
Dunbar-Kapelle Inc.-Aircraft Components Div.  
Eastern Industries, Inc.  
Emerson Electric Mfg. Co., The, Electronics & Avionics Div.  
Galland-Henning Napak Div.  
G. W. Galloway Co.  
General Electric Co., Apparatus Sales Div.  
Globe Hoist Co.  
Greer Hydraulics, Inc.  
Hamilton Standard, Div.-United Aircraft Corp.  
Haskel Engrg. & Supply Co.  
Hufford Corp., The  
Hughes Tool Co., Aircraft Div.  
Hull Corp.  
Walter J. Hyatt Co., The  
Hydra-Power Corp.  
Hydraulic Press Mfg. Co., The, Div.-Kaehring Co.  
**\*HYDRO-AIRE CO., DIV.-CRANE CO.**  
Industrial Engrg. Corp.  
Interstate Engrg. Corp.  
Kahn & Co., Inc.  
Kaiser Aircraft & Electronics, Div.-Kaiser Industries Corp.  
**\*KEARFOTT CO., INC.**  
Kelsey-Hayes Co.  
Kemp Aero Products  
Lear, Inc.  
Lear Inc., Lear-Romec Div.  
Leslie Co.  
M. C. Mfg. Co.  
Mc Dowell-Wellman Companies, The  
Minneapolis-Honeywell Regulator Co., Aeronautical Div.  
Minneapolis-Honeywell Regulator Co., Industrial Product Group  
George L. Nankervis Co.  
Norwood Controls Unit Detroit Controls Div.  
Dil-Dyne, Inc.  
Ordnance Div.-Food Machinery & Chemical Corp.  
Owatonna Tool Co.  
Dzane Metal Products Corp.  
Parker Aircraft Co.  
Pesca Products Div.-Borg-Warner Corp.  
Pioneer Tool & Engrg. Co.  
Pneu-Hydra Valve Corp.  
H. K. Porter Co., Inc.  
Racine Hydraulics & Machinery Inc.  
Randall Engrg. Corp.  
Red Lion Cabinet Co., Redco Tool Div.  
Rivett Lathe & Grinder Inc.  
Royal Industries, Inc.  
Sancor Corp.  
Sargent Engrg. Corp.  
Sinclair-Collins Valve Co., Div.-IBEC  
Sivalco Systems Corp.  
Skyvalve Inc.  
Space Corp.  
A. U. Stone & Co., Inc.  
Sun Electric Corp., Aeronautical Div.  
Tactair Valve Div.-Aircraft Products Co.  
Trimount Instrument Co.  
Turbo Products, Inc.  
United Aircraft Products, Inc.  
United Electric Controls Co.  
Valcor Engrg. Corp.  
Vickers Inc., Div.-Sperry Rand  
Vickers Inc., Marine & Ordnance Dept., Machinery Hydraulics Div.  
Vinson Mfg. Co. Inc.  
Waldorf Fluid Systems, Div.-F. C. Huyck & Sons  
Watertown Div., The New York Air Brake Co.  
Wayne Pump Co., The, Div.-Symington Wayne Corp.  
Western Hydraulics Ltd.-Sub., Borg-Warner Corp.  
Wickfield, Inc.  
Wide Aerodrualics, Inc.

**HYDRAULIC SYSTEMS RESERVOIRS**  
See **RESERVOIRS, HYDRAULIC SYSTEMS**

**HYDRAULIC SYSTEMS RESTRICTEDS**  
See **RESTRICTEDS, HYDRAULIC SYSTEMS**

**HYDRAULIC VALVE OPERATOR**  
See **VALVE OPERATOR, HYDRAULIC**

**HYDROMETERS**

American Machine & Foundry Co., Government Products Group  
Barrett-Christie Co.  
Fischer & Porter Co.  
Fisher Scientific Co.  
General Scientific Equipment Co.  
Pitasecki Aircraft Corp.  
Precision Thermometer & Instrument Co.  
Scientific Instrument Co.  
Weksler Instruments Corp.

**IGNITERS, Jet ENGINE**

Aerojet-General Corp.  
American Aeroparts  
**\*AMERICAN POTASH & CHEMICAL CORP.**  
Auburn Spark Plug Co., Inc.  
B G Corp., The  
Bendix Aviation Corp., Scintilla Div.  
Breeze Corporations, Inc.  
Champion Spark Plug Co.  
Com-Air Products, Div.-A S R Products Corp.

Cooper Industries, Inc.  
Electric Auto-Lite Co., The  
General Laboratory Associates Inc.  
Halex, Inc.  
Hydrodyne Corp., Skinner Seal Div.  
M. W. Kellogg Co., The  
Kilgore Inc., International Flare-Signal Div.  
J. E. Menough Co.  
Plastic Age Sales, Inc.  
**\*RHEEM MFG. CO., DEFENSE & TECHNICAL PRODUCTS DIV.**  
Thiokol Chemical Corp.  
United Aircraft Products, Inc.

**IGNITERS, LIQUID & SOLID PROPELLANT**

**\*MC CORMICK SELPH ASSOCIATES**  
**\*PROPELLEX CHEMICAL DIV., CHROMALLOY CORP.**

**IGNITION ASSEMBLIES**

Aerolab Development Co.  
Airtran Inc., Div.-Littan Industries  
American Aeroparts  
**\*AMERICAN POTASH & CHEMICAL CORP.**  
Auburn Spark Plug Co., Inc.  
**\*BEATON & CORBIN MFG. CO., THE**  
Bendix Aviation Corp., Scintilla Div.  
Breeze Corporations, Inc.  
Cooper Development Corp., Sub.-Marquardt Aircraft Co.  
Dynamic Devices, Inc.  
Electric Auto-Lite Co., The  
General Laboratory Associates, Inc.  
Hallett Mfg., Co.  
Halex, Inc.  
J. E. Menough Co.  
Modelectric Products Corp.  
Rocketdyne Div.-North American Aviation, Inc.  
Thermal Refractories Corp.  
Thiokol Chemical Corp., Hunter-Bristol Div.  
United Aircraft Products, Inc.

**IGNITION ASSEMBLIES, SOLID ROCKET**

Aerojet-General Corp.  
Aerolab Development Co.  
American Machine & Foundry Co., Greenwich  
**\*AMERICAN PTDASH & CHEMICAL CORP.**  
American Rocket Co.  
Astradyne, Inc.  
Auburn Spark Plug Co., Inc.  
Beckman & Whitley, Inc., Missile Products Div.  
Bendix Aviation Corp., Scintilla Div.  
Breeze Corporations, Inc.  
Cooper Development Corp., Sub.-Marquardt Aircraft Co.  
Diversey Engrg. Co.  
Dynamic Devices, Inc.  
Halex, Inc.  
M. W. Kellogg Co., The  
Land-Air Inc.  
**\*MC CORMICK SELPH ASSOCIATES**  
Newbrook Machine Corp.  
Olin Mathieson Chemical Corp., Energy Div.  
**\*PROPELLEX CHEMICAL DIV., CHRDMALLOY CORP.**  
Red Lion Cabinet Co., Redco Tool Div.  
**\*REDEL INC.**  
**\*RHEEM MFG. CO., DEFENSE & TECHNICAL PRODUCTS DIV.**  
Rohm & Haas Co., Redstone Arsenal Research Div.  
Thiokol Chemical Corp.  
Thiokol Chemical Corp., Hunter-Bristol Div.

**IGNITION COILS**  
See **COILS, IGNITIDN**

**IGNITION DISTRIBUTORS**  
See **DISTRIBUTORS, IGNITION**

**IGNITION SYSTEMS, AIRBORNE**

**\*AMERICAN POTASH & CHEMICAL CORP.**  
Auburn Spark Plug Co., Inc.  
Bendix Aviation Corp., Scintilla Div.  
Breeze Corporations, Inc.  
Cooper Development Corp., Sub.-Marquardt Aircraft Co.  
General Laboratory Associates, Inc.  
Hallett Mfg., Co.  
Halex, Inc.  
J. E. Menough Co.  
Reaction Motors Div., Thiokol Chem. Corp.  
United Aircraft Products, Inc.

**IGNITION SYSTEMS, DISCONNECTS**  
See **DISCONNECTS, IGNITION SYSTEMS**

**IGNITION SYSTEMS, ELECTRONIC**

Aerolab Development Co.  
Auburn Spark Plug Co., Inc.  
Bendix Aviation Corp., Scintilla Div.  
Cooper Development Corp., Sub.-Marquardt Aircraft Co.  
Edgerton, Germeshausen & Grier, Inc.  
Electric Auto-Lite Co., The  
General Laboratory Associates, Inc.  
Hallett Mfg., Co.  
Halex, Inc.  
Land-Air Inc.  
Modelectric Products Corp.  
Renwell Corp.

**IGNITION TUBE ASSEMBLIES**

\*AMERICAN POTASH & CHEMICAL CORP.  
\*BEATON & CORBIN MFG. CO., THE  
Bendix Aviation Corp., Scintilla Div.  
Breeze Corporations, Inc.  
Detranic Industries  
Dynamic Devices, Inc.  
General Laboratory Associates, Inc.  
Huffard Corp., The  
Mercury Tool & Mfg. Corp.  
National Beryllio Corp.

**IMPELLERS**

Aerojet-General Corp.  
Astronautics Engrs. Co.  
Bendix Utica Div., Bendix Aviation Corp.  
Capital City Mfg. Co.  
J. C. Carter Co., The  
Chandler Evans Corp.  
Christie Machine Works  
Curtiss-Wright Corp., Santa Barbara Div.  
Curtiss-Wright Corp., Wright Aeronautical Div.  
Electro-Mechanical Products Co.  
Jarvis Corp.  
Kelsey-Hayes Co.  
\*Heinz Mueller Eng. Co. Inc.  
Newbrook Machine Corp.  
Parker-Hartford Corp., The  
\*RHEEM MFG. CO., DEFENSE & TECHNICAL PRODUCTS DIV.  
Schellens-True Corp.  
Steel Improvement & Forge., The  
Tapco Group, Thompson-Ramo-Wooldrige Inc.  
Turbo Products, Inc.  
Western Gear Corp.

**INCLINOMETERS**

Cadillac Gage Co.  
Crescent Engrg. & Research Co.  
Donner Scientific Co.  
Electro-Mechanical Products Co.  
Elgin Micronics Div.-Elgin National Watch Co.  
\*ENGIS EQUIPMENT CO.

**INDICATORS**

- a. Air Position
- b. Airspeed
- c. Angle-of-Yaw
- d. Antenna Position
- e. Arc Back
- f. Arc-Over
- g. Bank & Turn
- h. Capacitor Leakage
- i. Data Display
- j. Detonation Indicators & Meters
- k. Deviation
- l. Drive Point
- m. Dielectric Constant
- n. Dive Angle
- o. Drift
- p. Engine Synchronizer
- q. Film Thickness
- r. Fluid Conductivity
- s. Fluid Flow, Electronic
- t. Frequency
- u. Fuel Flow Rate
- v. Fuel Mixture
- w. Ground Position
- x. Gyro
- y. Humidity
- z. Illumination
- o1. Industrial
- d1. Liquid Level, Electronics
- c1. Magnetic Field
- d1. Materials Thickness
- e1. Modulation
- f1. Moisture, Electronic
- g1. Moving Target
- h1. Null
- i1. Null-Balance
- j1. Oxygen
- k1. PH
- l1. Photographic Exposure
- m1. Pion Position
- n1. Pressure
- o1. Proximity
- p1. Pulse Timer Riser
- q1. Radiation
- r1. Radiation, Nuclear
- s1. Rate-of-Climb
- t1. Rate-of-Roll
- u1. Rate-of-Yaw
- v1. Recording Engine
- w1. Remote
- x1. Servo
- y1. Snake & Combustion, Electronic
- z1. Sound Level
- o1. Specific Gravity
- b2. Speed
- c2. Strain
- d2. Telemetering
- e2. Temperature
- f2. Thrust
- g2. Timing
- h2. Torque
- i2. True Air Speed
- j2. Vacuum
- k2. Variable
- l2. Vibration
- m2. Volume
- n2. Weight

o2. Wind Direction  
p2. Wind Speed, Electronic

ACF Industries Inc., n-1, j-2.  
AMP Inc., m.  
Acromag Inc., t, b-2.  
Actuator Products Div., Geartronics Corp., o-1, b-2.  
Advanced Products Co., The, g-2.  
Aera Instrument Co., t, g-2.  
Aero Supply Mfg. Inc., s.  
Aeroflex Corp., The, Aeroflex Labs. Div., x, i-1.  
Aeroflex-General Corp., o-1, d-2.  
Aeralite Electronics Corp., z.  
Aerotec Corp., The, n-1.  
Aircraft Porous Media, Inc., n-1.  
\*AIRESEARCH MFG. CO., DIV.-THE GARRETT CORP., b, c, i, n-1, u-1, e-2, f-2, i-2, j-2.  
Airguide Instrument Co., y, e-2.  
Aircraft Electronics Inc. Seminoole Div., b, t, b-2, o-2, p-2.  
R. C. Allen Aircraft Instr. Div., R. C. Allen Bus. Machines, Inc., g, x.  
Allied Chemical Corp., National Aniline Div., k-1.  
Allied International Co., o, b, o, y, o-2.  
Alto Scientific Co., Inc., g-2.  
Amelco, Inc., t.  
American Aeroparts, o, b, g, o, p, u thru x, j-1, k-1, s-1, x-1, l-2.  
American Instruments Co., Inc., l, p, q, y, d-1, f-1, i-1, n-1, e-2, h-2.  
American Machine & Foundry Co., Government Products Group, t, x-1, m-2, n-2.  
American Machine & Foundry Co., Greenwich, i.  
American Measurement & Control, Inc., s.  
American Missile Products Co., Inc., d-2.  
American Research & Mfg. Corp., l-2.  
Amthor Testing Instrument Co., Inc., d-1.  
R. B. Annis Co., c-1.  
Antlob Inc., d.  
Anton Electronic Labs., Inc., q-1, r-1.  
Applied Science Corp. of Princeton, i, d-2.  
\*ARNOUX CORP., d-2, e-2.  
Aro Equipment Corp., b-1, j-1.  
Assembly Products, Inc., e-2.  
Associated Engineers, Inc., y-1.  
Astronautics Engrs. Co., u.  
Atlantic Instrument Corp., Sub-American Electronics, Inc., b-1, e-2.  
Atlas Precision Products Co., d, w-1, x-1, b-2, d-2, e-2, g-2.  
Automation Dynamics Corp., i.  
Automation Products, Inc., b-1, a-2.  
Avien, Inc., s, u, b, l, e-2, l-2.  
Avtron Mfg., Inc., e-1.  
B & F Instruments, Inc., e-2, f-2, h-2.  
B & H Instrument Co., Inc., t, h-1, i-1, e-2.  
B & K Instruments, Inc., z-1, e-2, l-2.  
Barker Sales Co., d-2, j-2.  
Barker Instrument Corp., u, i-1, m-2.  
Beckman Instruments, Inc., Berkeley Div., t, g-2.  
Beckman & Whitley, Inc., Missile Products Div., e-2, o-2, p-2.  
Beede Electronic Instrument Co. Inc., t, h-1, i-1.  
Bell & Howell Co., l-1.  
Belock Instrument Corp., x, x-1, d-2.  
Bendix Aviation Corp., Eclipse-Pioneer Div., x, x-1.  
Bendix Aviation Corp., Friez Instrument Div., y, n-1, o-2, p-2.  
Bendix Aviation Corp., Montrose Div., u, n-1, w-1, x-1.  
Bendix Aviation Corp., Pioneer-Central Div., b, g, s, u, b-1, s-1.  
Bendix Filter Div., Bendix Aviation Corp., n-1.  
\*BENDIX PRODUCTS DIV., BENDIX AVIATION CORP., u, w-1.  
Bendix-Pacific Div., Bendix Aviation Corp., d-2.  
Benson-Lehner Corp., i.  
Bergen Labs., Inc., h-2.  
James G. Biddle Co., t.  
A. Biederman, Inc., b, c, d, k, n, t, u, h-1, i-1, j-1, s-1, o-2, p-2.  
Bliss Electronic Corp., h.  
Blonder-Tongue Labs., Inc., l-2.  
Bowmar Instrument Corp., o, g, n, w, o-2.  
Bawser, Inc., Defense Dept., s, u.  
Brannon Instruments, Inc., q, d-1.  
Briggs Associates, Inc., i.  
Bristol Co., The, l, r, s, t, y, z, o-1, f-1, h-1, i-1, i-1, n-1, v-1 thru y-1, o-2 thru d-2, g-2, j-2.  
Brooks Rotameter Co., u, o-2.  
Brush Instruments, Div.-Clevite Corp., c, u-1, v-1, x-1, b-2 thru e-2.  
Burr-Brown Research Corp.  
CDC Control Services, Inc., l, n-2.  
Central Electronic Mfg., Div.-Nuclear Corp. of America, j-2.  
Central Scientific Co., f-1, j-2.  
Centranix Inc., d, i, c-2, d-2.  
Chalco Engrg. Corp., s, b-1.  
Chesapeake Instrument Corp., z-1.  
Chicago Aerial Industries, Inc., i, w, l-1.  
Collins Engrs. Corp., b, x, s-1.  
Computer Instruments Corp., n-1.  
Consolidated Controls Corp., n-1, o-1, e-2, f-2, h-2.  
Consolidated Diesel Electric Corp., b, t, n-1, b-2, e-2, f-2, i-2, j-2.  
Consolidated Electro-dynamics Corp., i, f-1, n-1, c-2, d-2, l-2.  
Control Data Corp., x.  
Cornell Deep Drawing Co., Div.-Lanes Industries Corp., n-1.  
Cox Instruments Div., George L. Nankervis Co., i, s, u, o-2, h-2.

Crescent Engrg. & Research Co., s, u, b-1, n-1, t-1, u-1, d-2, e-2, h-2.  
Crown Controls Co., Inc., g.  
Curtiss-Wright Electronics Div., IMI Branch, n-1, d-2.  
Curtiss-Wright Corp., Research Div., o-1.  
DBM Research Corp., i, d-2, g-2.  
Data Instruments Div.-Telecomputing Corp., i.  
Datran Electronics, Div.-Mid-Continent Mfg., Inc., i-1, x-1, e-2.  
Daven Co., The, m-2.  
Davis Instruments, i-1.  
Daystrom Pacific Div.-Daystrom, Inc., b, c, i, x, i-1, s-1, t-1, u-1, w-1, x-1, e-2, f-2, i-2.  
Daystrom Transicoid Div., Daystrom Inc., x-1.  
Dayton Aviation Radio & Equipment Corp., o, d, i, k, w-1.  
Daytronic Corp., c-2.  
Dean Products, Inc., q-1.  
Decker Corp., The, n-1, o-1, j-2, l-2.  
Dejuro-Amsco Corp., Electronic Sales Div., l-1, z-1, e-2, g-2.  
Delsen Corp., m, d-1, f-1.  
Device Development Corp., c-1.  
J. W. Dice Co., q, d-1.  
W. C. Dillon Co., Inc., n-2.  
Divco-Wayne Electronics, Div.-Divco-Wayne Corp., x-1.  
Donner Scientific Co., o, b, c, x, h-1, i-1, s-1, t-1, u-1, i-2.  
Dresser Industries, Inc., i, s, u, w-1, x-1, d-2.  
Dresser Mfg. Div., Dresser Industries, Inc., u.  
Droiero, Inc., y.  
M. Ducommun Co., g-2.  
Dymec Inc., i, t.  
Eastman Kodak Co., l-1, q-1, r-1.  
Edcliff Instruments, c, g, n-1, s-1, t-1, u-1, i-2.  
Edgerton, Germeshausen & Grier, Inc., i, j, l-1, r-1, d-2, g-2, p-2.  
Thomas A. Edison Ind. Instrument Div.-McGraw-Edison Co., k, t, o-1, h-1, n-1, w-1, x-1, y-1, e-2.  
Eldorado Electronics, g-2.  
Electro Instruments, Inc., i, a-1.  
Electro Precision Corp., x-1.  
Electro Products Laboratories, Inc., i, t, o-1, o-1, b-2, h-2, l-2.  
Electronic Communications, Inc., i, g-1, m-1, w-1, d-2.  
Electronic Control Corp., b-1, y-1, e-2, h-2.  
Electron-Radar Products, y-1.  
\*ELECTRONAP CORP., i, z, o-1, w-1.  
Electro-Tech Equipment Co., e-2, g-2, l-2.  
Elgin Micronics Div.-Elgin National Watch Co., h, p-1, v-1, g-2.  
Elgin Micronics, West Coast Div.-Elgin National Watch Co., j, r-1, e-2, g-2.  
Emerson Electric Mfg. Co., The, Electronics & Avionics Div., d, i, g-1, m-1, l-1, x-1.  
Engelhard Industries, Inc., l, i, j, i, k-1.  
Epic, Inc., t, y, e-2, l-2.  
Era Engrg., Inc., r-1.  
FXR, Inc., b-1, e-1.  
Foe Instrument Corp., x-1.  
Federal Mfg. & Engrg. Corp., l-1.  
Federal Products Corp., d-1.  
Fenwol Inc., e-2.  
Fenwol Electronics, Inc., e-2.  
Fischer & Porter Co., i, s thru v, o-1, b-1, j-1, n-1, o-2, e-2, j-2, m-2.  
Fisher Governor Co., b-1.  
Fisher Research Lab., Inc., b-1, f-1.  
Fisher Scientific Co., y, l, k-1, n-1, o-2, e-2, j-2.  
Flow Corp., p-2.  
Flow Measurements Corp., s, u.  
Ford Instrument Co., Div.-Sperry Rand Corp., o, w.  
Freed Transformer Co., Inc., h-1.  
Gardner Laboratory, Inc., q, y, d-1, f-1, e-2, o-2.  
General Communication Co., o-2.  
General Devices, Inc., i, t, p-2, d-2, g-2.  
General Electric Co., Apparatus Sales Div., u, x, o-1, d-1, l-1, q-1, r-1, w-1, y-1, b-2, e-2, f-2, j-2.  
General Electric Co., Metallurgical Products Dept., e-1.  
General Electric Co., X-Ray Dept., b-1, d-1, q-1, n-1.  
General Scientific Equipment Co., y, g-2.  
Giffilan Bros. Inc., o, c, d, w, g-1, m-2, t-1, u-1, x-1, d-2.  
Gilmore Industries, Inc., i, s, u, i-1, n-1, c-2, e-2, f-2, h-2, n-2.  
Good Electronic Corp., e-2, e-2, p-2.  
Gordon Enterprises, l-1.  
Graflex Inc., h-1.  
Green Rectifier Co., j-2.  
Gulton Industries, Inc., n-1, e-2.  
Haley Electronics Co., s, o-1.  
Hallamore Electronics Co., x-1, d-2.  
Hamilton Watch Co., Hathaway Instrument Div., e-2.  
Harvey-Wells Electronics Inc., i.  
\*A. W. HAYDON CO., THE, w-1, g-2.  
Hays Corp., The, n-1.  
HazelTine Electronics Div.-HazelTine Corp., a, i, w, g-1, m-1, w-1.  
High Vacuum Equipment Corp., j-2.  
E. Vernon Hill & Co., l, y.  
Hoffman Labs. Div., Hoffman Electronics Corp., b, c, g, n, u, w, x, h-1, s-1, t-1, u-1, x-1, f-2, j-2, l-2.  
Hogan Laboratories, Inc., i.  
Hughes Tool Co., Aircraft Div.  
Hull Corp., j-2.  
Humphrey, Inc., c, n, x, t-1, u-1.  
Hyler J. Hyatt Co., The, x-1.  
Hycon Mfg. Co., o, l-1.

I.D.E.A., Inc., i.  
I-L-5 Instrument Div., The Meriam Instrument Co., s,  
t, u, p-1.  
ITT Labs., i, g-1, m-1, o-1.  
ITT Labs.-Ft. Wayne, i, g-1.  
Illinois Testing Laboratories, Inc., l, e-2.  
Impact-O-Graph Corp., The, o-2.  
Industrial Control Co., x-1, c-2.  
Industrial Instruments Inc., h, r.  
Industrial Test Equipment Co., h-1, i-1.  
Industrial Timer Corp., g-2.  
Ingram Co., The, g-2.  
Instruments Corp., The, l, y, d-2, e-2, o-2, p-2.  
International Research & Development Corp., l-2.  
Janaky & Bailey, Inc., q-1.  
Jordan Co., Inc., The, x-1.  
Kaiser Aircraft & Electronics, Div., Kaiser Industries  
Corp., b, x, m-1, x-1.  
Kauke & Co., d-2.  
Kay Electric Co., t, z-1, l-2.  
**\*KEARFOTT CO., INC.**  
Keithley Instruments, Inc., i-1.  
Ketary Dept., Norden Div., United Aircraft Corp., w-1.  
Kinney Mfg. Div., The New York Air Brake Co., l-2.  
Kin Tel Div., Cohu Electronics, Inc., z-1.  
Kollman Instrument Corp., Sub-Standard Coil  
Products Co. Inc., b, c, p, n-1, s-1, w-1, x-1, f-2,  
l-2, l-2.  
Lampkin Labs., Inc., M.R. Div., t, e-1.  
Laurier Inc., l, p, s, u, b-1, g-1, q-1, r-1, v-1, w-1,  
d-2, g-2, l-2.  
Lear, Inc., a, g, i, n, x, s-1, t-1, u-1, w-1, x-1, e-2,  
f-2, l-2.  
Lear, Inc., Grand Rapids Div., i, n, x, w-1, x-1.  
Leeds & Northrup Co., h-1, i-1, k-1, e-2.  
**\*WALLACE O. LEONARD, INC.**, b, u, n-1, x-1,  
i-2.  
**\*LEWIS ENGRG. CO., THE**, e-2.  
Librascope Inc., i.  
Liquidum Corp., The, b-1, i-1, o-2, e-2.  
Lundy Mfg. Corp., s-1.  
MB Mfg. Co., l-2.  
Magnaflex Corp., a, c-1, d-1, o-1, c-2.  
Magnetic Instrument Co. Inc., b-1.  
Magtrol, Inc., h-2.  
Marion Instrument Div., h-1.  
Mas. P. Marsh Corp., n-1, e-2, j-2.  
Master Specialties Co., i, t.  
Matheson Co., Inc., The, k-1, n-1.  
Y. L. Maxson Corp., The, u, b-1, w-1.  
Menlo Research Lab., k-1, q-1.  
Meters Inc., h-1, i-1.  
Micrometrical Mfg. Co., t, l-2.  
Midwestern Instruments, Inc., i, d-2.  
Miller Dial & Nameplate Co., i, z.  
Minco Products, Inc., e-2.  
Mine Safety Appliances Co., l, y, j-1.  
Minneapolis-Honeywell Regulator Co., Aeronautical  
Div., a, b, x, b-1, i-1, j-1, n-1, v-1, x-1, f-2, i-2.  
Minneapolis-Honeywell Regulator Co., Davies Labs.  
Div., d-2.  
Minneapolis-Honeywell Regulator Co., Industrial  
Div., o-1.  
Minneapolis-Honeywell Regulator Co., Industrial  
Product Group, i, k, l, s, t, u, y, o-1, b-1, f-1,  
h-1, i-1, k-1, n-1, q-1, w-1, o-2 thru f-2, h-2, j-2,  
n-2, o-2, p-2.  
J. Monaghan Co., Inc., m-2.  
Moran Instrument Corp., i-1, x-1.  
L. Moseley Co., h-1, i-1.  
Motorola Inc., Military Electronics Div., d, f, w,  
e-1, g-1, m-1, o-1, w-1, d-2.  
Muller Brass Co., r, b-1.  
RC Equipment Corp., l-2.  
George L. Nankervis Co., i, s, t, u, a-2, f-2, h-2.  
National Electronics, b, t, i, b-1, h-1, e-2.  
National Research Corp., l-2.  
New England Scientific Instruments Co., t, y, b-1,  
f-1, n-1, b-2, d-2, e-2.  
On-Linear Systems, Inc., i, w-1.  
Orth Atlantic Industries, Inc., i, h-1, w-1, x-1, d-2,  
e-2.  
Orthrop Corp., a, o-2, p-2.  
Orwood Controls Unit Detroit Controls Div., b-1,  
i-1, n-1, d-2.  
Oscular Corp. of America, r-1.  
Oscular-Chicago Corp., r-1.  
Ohio Semiconductors, Inc., c-1, d-1.  
Ormet Corp., The, f-2.  
Ormetized Devices, Inc., h, h-1.  
Oto-Metric Tools, Inc., h, h-1.  
Optron Co., Inc., n-2.  
Oxygen Equipment & Service Co., j-1.  
Pacific Scientific Co., l, c-2, e-2, l-2, o-2, p-2.  
Palmer Thermometers, Inc., e-2.  
P. M. Parsons Co., The, Electronics Div.,  
a-1, d-2.  
Patent Div., Patent Button Co., i.  
Penn Keystone Corp., o, n, w, r-1, w-1.  
Performance Measurements Co., s, u, i-1, x-1, c-2,  
e-2, f-2, h-2, m-2.  
Peschel Electronics, Inc., h, o-1.  
Pierce Corp., Government & Industrial Div., o-1, d-2,  
p-2.  
Pitabell Co., Inc., y, z, b-1, f-1, o-1, y-1.  
Pitcan Research Products, n-1, o-1.  
Pitco-Crystals, Inc., y.  
Platination, Inc., y-1.  
Platovak Corp., k-1, l-1.  
Polar Aeronautical Corp., s, t, u, o-2, b-2, i-2.  
Poly-Tronic Systems Inc., b, s, t, u, w, x, b-1, c-1,  
j-1, x-1, h-2, p-2.  
Precision Thermometer & Instrument Co., a-2, e-2.  
Process & Instruments, l-2.  
Puritan Compressed Gas Corp., Aviation Div., j-1.  
Pyrameter Instrument Co., Inc., e-2.  
Radar Relay, Inc., i.  
Radiation Instrument Development Lab., Inc., r-1.  
Rahm Instruments, Div., American Machine & Metals,  
Inc., s, o-1, b-1, x-1, l-2, p-2.  
Rawson Electrical Instrument Co., c-1.  
Raymond Engrg. Lab., Inc., g-2.  
Raytheon Mfg. Co., Government Equipment Div., i,  
w, g-1, m-1, w-1.  
Republic Mfg. Co., n-1.  
Revere Corp. of America, s, u, f-2, n-2.  
Richardson Scale Co., n-2.  
Rinco, Inc., h-1.  
Milton Roy Co., b-1, k-1.  
Royco Instruments, Inc., e-2.  
Arthur C. Ruge Associates, Inc., e-2.  
Ryan Aeronautical Co., i.  
St. John X-Ray Lab., q-1, r-1.  
Sambon Co., k, t, e-2.  
Schaevitz Engrg., x-1, f-2.  
Schutte & Koerting Co., o-2.  
Scientific Instrument Co., y, n-1, e-2.  
Scientific-Atlanta, Inc., d, z-1.  
H. H. Scott, Inc., h-1, i-1, z-1, l-2.  
Seivcor Mfg. Co., x-1.  
Sensor Mechanisms, Inc., a, b, c, i, b-1, i-1, n-1, x-1,  
b-2, d-2, e-2, h-2, i-2, m-2, n-2, o-2.  
Shallcross Mfg. Co., h-1.  
Shannon Luminous Materials Co., i.  
Signalite Inc., z.  
Simmonds Aerocessories, Inc., u, b-1, m-2, n-2.  
Simpson Electric Co., h-1, e-2.  
Southwestern Industrial Electronics Co., h, e-1, k-1.  
Space Corp., b-1, l-2.  
Specialties, Inc., o, b, c, l-1, s-1, x-1, i-2.  
Specialty Engrg. & Electronics Co., q-1, r-1, o-2,  
p-2.  
Sperry Gyroscope Co., Marine Div., Div.-Sperry Rand  
Corp., i, x, g-1, m-1.  
Sperry Piedmont Co. - Div.-Sperry Rand Corp., n, x,  
g-1, m-1.  
Standard Controls, Inc., n-1.  
Stanley Aviation Corp., o-1, q-1, r-1.  
Sterling Precision Corp., Instrument Div., w, x.  
M. C. Stewart, o-2, p-2.  
Strand Engrg. Co., m-1.  
P. A. Sturtevant Co., h-2.  
Summers Gyroscope Co., g, i, x, s-1, t-1, u-1, w-1,  
x-1.  
Sun Electric Corp., Aeronautical Div., t, w-1, d-2,  
l-2, o-2, p-2.  
Systems Inc., r-1.  
Systron Corp., s, t, u, b-2 thru h-2.  
Tapco Group, Thompson-Ramo-Woolridge Inc., t,  
b-1, x-1.  
Task Corp., a, b, c.  
W. A. Taylor & Co., k-1.  
Technique Associates, e-2.  
Telechrome Mfg. Corp., d-2.  
Tele-Dynamics Inc., d-2.  
Telerad Mfg. Corp., t.  
Temperature Engrg. Corp., j-2.  
Textron Corp., s-1.  
Thermal Refractories Corp., e-2.  
Thermo Electric Co., Inc., e-2.  
Theta Instrument Corp., d, j, x-1.  
Thomas Electronics, Inc., q.  
Thwing-Albert Instrument Co., q-1, e-2.  
Towaco Electronics Co., t.  
Transistor Electronics Corp., i, o-1, g-2.  
Trans-Sonics, Inc., b-1, n-1, l-2.  
Trimount Instrument Co., b-1, o-1.  
Uehling Instrument Co., n-1, j-2.  
Union Switch & Signal, Div.-Westinghouse Air Brake  
Co., d-2.  
United Electric Controls Co., o-1, n-1, w-1, e-2, j-2.  
United Electro-dynamics, Inc., d-2.  
U. S. Science Corp., Div.-Topp Industries, Inc., o, c,  
i, k-1, t-1, u-1, x-1.  
United States Time Corp., x, s-1, t-1, u-1.  
Universal Dynamics Corp., l, y, f-1.  
Vacuum Tube Products, Div.-Hughes Aircraft Co.,  
j-2.  
Varian Associates, c-1.  
Vemaline Products Co., g-2.  
Victory Engrg. Corp., b-1, y-1, d-2, e-2.  
Vinson Mfg. Co. Inc., b-1, h-2.  
Waldorf Electronics, Div.-F. C. Huyck & Sons, b, c,  
d, g, i, n, o, s, u, x, q-1, m-1, s-1, t-1, u-1, w-1,  
x-1, b-2, f-2, i-2, o-2, p-2.  
Wallace & Tieman Inc., b, k-1, n-1, f-2, h-2, i-2, j-2.  
Warren Components, Div.-El-Tronics, Inc., y, f-1.  
Waste King Corp., Technical Products Div., b, c, n,  
x, i-2.  
Waugh Engrg. Co., s, t, u.  
West Instrument Corp., w-1, e-2.  
Westinghouse Electric Corp., c-1, q-1, r-1, d-2, e-2,  
f-1, h-1, l-1, z-1, b-2, e-2, g-2, m-2.  
Westronics Inc., l, l, s, t, u, y, z, o-1, b-1, h-1 thru  
k-1, n-1, q-1, r-1, x-1, o-2, b-2, c-2, e-2, f-2, h-2,  
j-2, n-2, p-2.  
Whittaker Gyro. Div.-Telecomputing Corp., g, x, t-1,  
u-1.  
Wind Turbine Co., d.  
Winzen Research Inc., d-2.  
N. Wood Counter Lab., q-1, r-1.  
Worner Electronic Devices, y, z, o-1, b-1, y-1.  
Yellow Springs Instrument Co., The, e-2.  
Z & W Mfg. Corp., c.

## INDICATORS, POSITION

See POSITION INDICATORS

## INDICATORS, RADIO COMPASS

See RADIO COMPASS INDICATORS

## INDUCTANCE SPECIALTIES, MEASUREMENT

Dietz Design & Mfg. Co.  
Dresser Industries, Inc.  
Leeds & Northrup Co.  
Marconi Instruments  
Metronix, Inc., Sub-Assembly Products, Inc.  
New England Scientific Instruments Co.  
North Hills Electric Co., Inc.  
Precision Development Corp.  
Sangamo Electric Co.  
Southwestern Industrial Electronics Co.  
H. W. Sullivan Ltd.  
United Transformer Co.  
Vari-L Co., Inc.  
Wright Engrg. Co.

## INDUCTANCES, VARIABLE

Aetna Electronics Corp.  
Barker & Williamson Inc.  
CGS Labs., Inc.  
California Spring Co., Inc.  
Cambridge Thermionic Corp.  
Celco (Constantine Engrg. Labs. Co.)  
Calcraft Inc.  
Computer Engrg. Associates, Inc.  
Forbes & Wagner, Inc.  
Freed Transformer Co. Inc.  
Fugle-Miller Labs. Inc.  
JFD Electronics Corp.  
E. F. Johnson Co.  
Motorola Inc., Military Electronics Div.  
NYT Electronics, Inc.  
National Coil Co.  
North Hills Electric Co., Inc.  
Stanwyck Winding Co., Inc.  
H. W. Sullivan Ltd.  
Superec Electronics Corp.  
Telectro Industries Corp.  
United Transformer Co.  
Universal Toroid Coil Winding, Inc.  
Vanguard Electronics Co.  
Vari-L Co., Inc.

## INDUCTION HEATING EQUIPMENT

Astravac Corp.  
Barker & Williamson Inc.  
Erdco Engrg. Corp.  
General Electric Co., Apparatus Sales Div.  
General Electrodynamics Corp.  
C. I. Hayes, Inc.  
High Vacuum Equipment Corp.  
Induction Heating Corp.  
Instruments Div.-Philips Electronics, Inc.  
Lindberg Engrg. Co.  
Marion Instrument Div.  
**\*MOTOR GENERATOR CORP.**  
Pacific Scientific Co.  
Papesch & Kolstad, Inc.  
Reeve Electronics, Inc.  
Sherman Industrial Electronics, Div.-Engrg.  
Design Inc.  
Telectro Industries Corp.  
Tocco Div., The Ohio Crankshaft Co.  
United Aircraft Products, Inc.  
Young Brothers Co.

## INDUCTION HEATING EQUIPMENT, 400 CYCLE

**\*MOTOR GENERATOR CORP.**

## INDUCTORS

Aerovox Corp.  
Aladdin Electronics, Div.-Aladdin Industries Inc.  
Amplifier Corp. of America  
Audio Development Co.  
Avtron Mfg., Inc.  
Barker & Williamson Inc.  
Burnell & Co., Inc.  
CGS Labs., Inc.  
Cambridge Thermionic Corp.  
Carruthers & Fernandez, Inc.  
Celco (Constantine Engrg. Labs. Co.)  
Coils-Electronics  
Computer Engrg. Associates, Inc.  
Corning Glass Works  
D. & R. Ltd.  
Dietz Design & Mfg. Co.  
Dresser Industries, Inc.  
Electro Engrg. Works  
Ferranti Electric Inc.  
Forbes & Wagner, Inc.  
Freed Transformer Co. Inc.  
Fugle-Miller Labs. Inc.  
General Electric Co., Apparatus Sales Div.  
Genistron, Inc.  
Goslin Electric & Mfg. Co.  
E. F. Johnson Co.  
Keystone Products Co.  
Leeds & Northrup Co.  
Minitran Corp.  
NYT Electronics, Inc.  
Neworks Electronic Corp.  
North Hills Electric Co., Inc.  
Redman Electronics Corp.

Signal Transformer Co.  
Stanwyck Winding Co., Inc.  
H. W. Sullivan Ltd.  
Superex Electronics Corp.  
Telectro Industries Corp.  
Tocco Div., The Ohio Crankshaft Co.  
Transonic, Inc.  
Tri-Dex Co.  
United Transformer Co.  
Universal Toroid Coil Winding, Inc.  
Vanguard Electronics Co.  
Varo Mfg. Co., Inc.  
Westbury Electronics Inc.  
Wheeler Electronic Corp., Sub.-Sperry Rand Corp.

## INDUCTORS, COILS

A. P. W. Co.  
Aetna Electronics Corp.  
Aladdin Electronics, Div.-Aladdin Industries Inc.  
Audio Development Co.  
Barker & Williamson Inc.  
Burnell & Co., Inc.  
CGS Labs., Inc.  
Cambridge Thermionic Corp.  
Caruthers & Fernandez, Inc.  
Celco (Constantine Engrs. Labs. Co.)  
Central Transformer Co.  
Coilcraft Inc.  
Coils-Electronics  
Coring Glass Works  
De Witt Development Co.  
Diez Design & Mfg. Co.  
Dresser Industries, Inc.  
Ferranti Electric Inc.  
Forbes & Wagner, Inc.  
Freed Transformer Co. Inc.  
Fuge-Miller Labs, Inc.  
General Coil Products Corp.  
General Electric Co., Apparatus Sales Div.  
Genitron, Inc.  
Goslin Electric & Mfg. Co.  
JFD Electronics Corp.  
E. F. Johnson Co.  
Johnson Electronics Inc.  
Keystone Products Co.  
Langevin Div., The W. L. Maxson Corp.  
Minitran Corp.  
Motorola Inc., Military Electronics Div.  
NYT Electronics, Inc.  
National Coil Co.  
National Electronics  
National Pneumatic Co., Inc., Holtzer-Cabot Divs.  
Networks Electronic Corp.  
New York Coil Co.  
North Hills Electric Co., Inc.  
Philco Corp., Government & Industrial Div.  
Railway Communications Inc.  
Redman Electronics Corp.  
Sangamo Electric Co.  
Signal Transformer Co.  
Stanwyck Winding Co., Inc.  
H. W. Sullivan Ltd.  
Superex Electronics Corp.  
Telectro Industries Corp.  
Tocco Div., The Ohio Crankshaft Co.  
Torwico Electronics, Inc.  
Transonic, Inc.  
Tri-Dex Co.  
United Transformer Co.  
Universal Toroid Coil Winding, Inc.  
Vanguard Electronics Co.  
Vari-L Co., Inc.  
Westbury Electronics Inc.  
Wheeler Electronic Corp., Sub.-Sperry Rand Corp.

## INDUSTRIAL SLIDES

See SLIDES, INDUSTRIAL

## INFRARED

- Detection Systems
- Image Converters
- Systems
- Systems, Guidance

ACF Industries Inc., a thru d.  
Aerofet-General Corp., a thru d.  
\*AIRESEARCH MFG. CO., DIV.-THE GARRETT CORP., c.  
American Optical Co., Instrument Div., c, d.  
Atlantic Instrument Corp., Sub.-American Electronics, Inc., d.  
\*AVCO MFG. CORP., CROSLLEY DIV.  
Axler Associates Inc., a, c.  
Baird-Atomic, Inc., a, c, d.  
\*BAUSCH & LOMB OPTICAL CO., a, c, d.  
Bell Aircraft Corp., Niagara Frontier Div., d.  
Bulow Electric Co., a, c.  
Chicago Aerial Industries, Inc., a, d.  
Cooper Development Corp., Sub.-Marquardt Aircraft Co., c.  
Curtiss-Wright Corp., Research Div.  
Davidson Mfg. Co., Inc.  
Eastman Kodak Co., a, c, d.  
Thomas A. Edison Ind. Instrument Div.-Mc Graw-Edison Co., a, e.  
Edmund Scientific Co., a, b.  
Electronic Communications, Inc., a, c, d.  
Emerson Electric Mfg. Co., The, Electronics & Avionics Div., c.  
Engelhard Industries, Inc.

Ford Instrument Co., Div.-Sperry Rand Corp., a.  
General Electric Co., Missile & Space Vehicle Dept.  
General Electrodynamics Corp., b.  
General Precision Lab. Inc., d.  
Gilfillan Bros. Inc., a thru d.  
Guided Missile Div.-De Havilland Aircraft of Canada, Ltd., a, c, d.  
Haller, Raymond & Brown Inc. Div., Singer Mfg. Co., a thru d.  
Hamilton Standard, Div.-United Aircraft Corp., a.  
Hayward Scientific Glass Corp., d.  
Hughes Aircraft Co., a, c, d.  
Walter J. Hyatt Co., The, a, c, d.  
Hycan Mfg. Co., a, c.  
ITT Federal Div., International Telephone & Telegraph Corp., d.  
ITT Labs., a thru d.  
ITT Labs.-Ft. Wayne, a thru d.  
Infrared Industries Inc., a, c, d.  
\*KEARFOOT CO., INC., a, d.  
Leor, Inc., a thru d.  
Librascope Inc., a, c, d.  
Lockheed Aircraft Corp., Missiles & Space Div., a, c.  
Mergenthaler Linotype Co., a, c.  
Minneapolis-Honeywell Regulator Co., Aeronautical Div., a, c, d.  
Minneapolis-Honeywell Regulator Co., Ordnance Div., a, c.  
Monogram Precision Industries, c.  
Motorola Inc., Military Electronics Div., a thru d.  
Northrop Corp., a thru d.  
Nortron Corp., The, Nortronics Div., a thru d.  
Ohio Semiconductors, Inc.  
Dtis Elevator Co., Electronic Div., c.  
Patterson, Moos Div. - Universal Winding Co., Inc., a, c, d.  
Perkin-Elmer Corp., a, c, d.  
Philco Corp., Government & Industrial Div., a, c, d.  
Photobell Co., Inc., a.  
Pioneer Industries Div., Almar-York Co. Inc., a.  
Q. D. S. Corp., a, b.  
Radiation, Inc., a thru d.  
Ramo-Woolridge Div., Thompson Ramo Woolridge of Calif.  
Raytheon Mfg. Co., Government Equipment Div., a, c, d.  
Republic Aviation Corp., a, c, d.  
Santa Barbara Research Center, a, c, d.  
Servo Corp. of America, a, c, d.  
Singer Mfg. Co., The Military Products Div., a thru d.  
Skiatron Electronics & Television Corp., a, d.  
H. W. Sullivan Ltd.  
Systems Inc., a, c, d.  
Thiokol Chemical Corp., a.  
Trionics Corp., a.  
U. S. Industries, Inc., a, d.  
Waldorf Electronics, Div.-F. C. Huyck & Sons, c, d.  
Webcor, Inc., Government Div., a thru d.  
Westinghouse Electric Corp., a thru d.  
Warner Electronic Devices  
Zenith Optical Laboratory, c.

## INFRA-RED LAMPS

See LAMPS, INFRA-RED

## INITIATORS

- Destructors
- Primers
- Squibs

\*McCORMICK SELPH ASSOCIATES, a, b, c.

## INJECTION SYSTEMS, FUEL

American Bosch Arma Corp.  
Auburn Spark Plug Co., Inc.  
B. H. Aircraft Co., Inc.  
\*BENDIX AVIATION CORP., HAMILTON DIV.  
\*BENDIX PRODUCTS DIV., BENDIX AVIATION CORP.  
California Aircraft Products  
Chandler Evans Corp.  
Curtiss-Wright Corp., Santa Barbara Div.  
Curtiss-Wright Corp., Wright Aeronautical Div.  
Finn Aeronautical Div., T. R. Finn & Co., Inc.  
Korda Industries  
Marquardt Aircraft Co.  
Reaction Motors Div., Thiokol Chem. Corp.  
Simmonds Aerossories, Inc.  
United Aircraft Products, Inc.  
Veet Industries

## INJECTION SYSTEMS, WATER

ACF Industries Inc.  
\*AIRESEARCH MFG. CO., DIV.-THE GARRETT CORP.  
Bendix Utica Div., Bendix Aviation Corp.  
Chandler Evans Corp.  
Curtiss-Wright Corp., Santa Barbara Div.  
Curtiss-Wright Corp., Wright Aeronautical Div.  
Marquardt Aircraft Co.  
United Aircraft Products, Inc.

## INSPECTION EQUIPMENT

- Fluorescent
- Lighting
- Magnetic
- Optical
- X-Ray

Allen Tool Corp.  
American Cystoscope Makers, Inc., d.  
American Optical Co., Instrument Div., d.  
American Research & Mfg. Corp., d.  
Bar-Ray Products, Inc., e.  
\*BAUSCH & LOMB OPTICAL CO., d.  
Bearing Inspection, Inc.  
Bendix Aviation Corp., Friez Instrument Div., a.  
Blowers Inc., a, b, d.  
Bracke-Seib X-Ray Co., Inc., e.  
Branson Instruments, Inc.  
Buhl Optical Co., d.  
Collins Microflat Co.  
Curtiss-Wright Corp.-Princeton Div., e.  
Davidson Mfg. Co., Inc., d.  
Day-Ray Products, Inc., b.  
Device Development Corp., c.  
Eastman Kodak Co., d.  
Edmund Scientific Co., d.  
Engrs. Developments, Inc., d.  
\*ENGIS EQUIPMENT CO., d.  
J. W. Fecker, Inc., d.  
Gardner Laboratory, Inc., d.  
General Electric Co., Apparatus Sales Div., e.  
General Electric Co., X-Ray Dept., a, e.  
Gordon Enterprises, d.  
Hayward Scientific Glass Corp., d.  
High Voltage Engr., e.  
Ideal Industries, Inc., a.  
Instruments Div.-Phillips Electronics, Inc., e.  
Jones & Lamson Machine Co., d.  
Kollmorgen Optical Corp., d.  
Land-Air Inc., d.  
Magnaflex Corp., a, c.  
Menlo Research Lab., a.  
Newbrook Machine Corp., d, e.  
D & S Research, Inc., d.  
Ohio Semiconductors, Inc., c.  
Dpto-Metric Tools, Inc., d.  
Perkin-Elmer Corp., d.  
Philco Corp., Government & Industrial Div., d, e.  
Picker X-Ray Corp., c, e.  
Rotatest Labs., Inc., e.  
St. John X-Ray Lab., e.  
Shannon Luminous Materials Co., a thru d.  
Sheffield Corp., The, Sub.-Bendix Aviation Corp., e.  
Smith-Morris Corp., a, b, e.  
Soderberg Mfg. Co., Inc., b.  
Sperry Products, Inc., e.  
Strat-O-Seal Mfg. Co., a.  
Tinsley Labs., Inc., d.  
Triplett & Barton, Inc., e.  
Turco Products, Inc.  
\*ULTRA-VIOLET PRODUCTS, INC., a.  
Van Keuren Co., d.  
Veet Industries  
Wasley Products, Inc., b.  
Weston Instruments, Div.-Daystrom, Inc., d, e.  
Wollensak Optical Co., d.  
Zoomar Inc., d.

## INSPECTION LAMPS

See LAMPS, INSPECTION

## INSPECTION MIRRORS

See MIRRORS, INSPECTION

## INSTALLATION TOOLS FOR BLIND RIVETS & LOCKBOLTS

\*TOWNSEND CO., CHERRY RIVET DIV.

## INSTRUCTION PLATES

See PLATES, INSTRUCTION

## INSTRUMENT DIALS

See DIALS, INSTRUMENT

## INSTRUMENT LANDING SYSTEMS

See LANDING SYSTEMS, INSTRUMENT

## INSTRUMENT PANEL VIBRATORS

See VIBRATORS, INSTRUMENT PANEL

## INSTRUMENTS, ELECTRICAL MEASURING

- Ammeters
- Audiometers
- Bridges
- Calibrators
- Circuit Linearity
- Comparators
- Comparators Voltage
- Galvanometers
- Magnetometers
- Megahmmeters
- Micraammeters
- Micrafaradimeters
- Micro-Micraammeters
- Milliammeters
- Millivoltmeters
- Ohmmeters
- Panel
- Ratiometers
- Recorders
- Standards
- Tracers, Signal
- Ultrasonic
- Valtmeters
- Vol-Ohm-Milliammeters
- Wattmeters

cton Labs. Inc., c, s, t, w  
eroscience, Inc.  
irbarne Instruments Lab., Div.-Cutler-Hammer, Inc., c, d  
itronics International Corp., x  
ilegany Instrument Co., Inc., d, e, f, r  
merican Aeroparts, a, w  
merican Electronics, Inc., Taller & Cooper Div., s  
merican Machine & Foundry Co., Government Products Group, w  
merican Machine & Foundry Co., Greenwich  
merican Measurement & Control, Inc., d  
mpifier Corp. of America, g  
. B. Annis Co., i  
ntlab Inc., s  
ntan Electronic Labs., Inc., m, n, o, q, w, x  
nplied Physics Corp., m  
renberg Ultrasonic Lab., Inc., v  
ssembly Products, Inc., a, k, n thru q, w, y  
ssociated Research, Inc., h, j, k, p  
lantic Research Corp., d, v  
vien, Inc., f, g  
vo Ltd., a, p, w, x  
& F Instruments, Inc., c, d  
& K Instruments, Inc., h, o  
& K Instruments, Inc., d, f, j, k, m  
llantine Labs., Inc., d, a, w  
ckman Instruments, Inc., Berkeley Div., p, w  
ckman-Scientific & Process Instruments Div., m  
ede Electrical Instrument Co. Inc., a, h, k, n, o, q, w  
nsan-Lehner Corp., s  
mes G. Biddle Co., h, j, p  
Biederman, Inc., t  
ss Electronic Corp., c, f, g  
anson Instruments, Inc., v  
istol Co., The, a, c, d, h, j, k, m thru q, s, w, y  
sh Instruments, Div.-Clevite Corp., a, e, h, i, n, q, s, t, x  
rr-Brown Research Corp., a, v, w  
ran-Rogers Co., Sales Div.-Hoyt Electrical Instruments, a, k, n, o, p, v, w  
lifornia Technical Industries, Div.-Textron Inc., s, f, g  
ntronix Inc., f, s  
ntury Electronics & Instruments, Inc., h, s  
esapeake Instrument Corp., c  
sveland Instrument Co., f  
llins Engrg. Corp., a, w  
nsolidated Electrodynamics Corp., h, s, w  
binder Corp., a, p, r, w, y  
riss-Wright Corp., Electronics Div., c, i, k, m, h, o, s  
riss-Wright Corp., Research Div., v  
tran Electronics, Div.-Mid-Continent Mfg., Inc., r  
ven Co., The, b, w, x  
venpart Mfg. Co., d, g, j, t  
ur-Amsco Corp., Electronic Sales Div., a, k, n, y, q, w  
vice Development Corp., i  
. W. Dice Co., f, j, p  
hner Scientific Co., c, f, g  
sser Industries, Inc., i, n, o, p, s, w, x  
tronics Co., f, t  
omas A. Edison Ind. Instrument Div.-Mc Graw-Edison Co., r  
lor, Inc., k, m  
ctric Auto-Lite Co., The, a  
ctric Design & Mfg. Co., a, k, n, o, q, w  
ctro Instruments, Inc., c, d, f, g, j thru p, r, s, w  
ctro-Measurements Inc., c  
ctronic Applications, Inc., j, p  
ctronic Instrument Co., Inc. (EICO), u, w, x  
ctronics Div., Van Norman Industries Inc., k, n, q, w  
ctro-Tech Equipment Co., a, c, h, j, k, n thru q, t, w, x, y  
lin Micronics Div.-Elgin National Watch Co., s  
pire Products Sales Corp., u  
pshard Industries, Inc., w  
rg. Associates, c, s, t  
c, Inc., a, c, h, j, k, m thru p, s, w, x, y  
hded Products Corp., q  
FR, Inc., c, r  
fleral Products Corp., f  
fcher & Porter Co., q, s  
Fher Research Lab., Inc., a, w  
Fher Scientific Co., h  
Fw Corp., a, w  
Jh Fluke Mfg. Co., Inc., d, g, a, w, y  
Fed Transformer Co. Inc., c, f, j  
Fane Plastics, Inc., f  
Ceral Electric Co., Apparatus Sales Div., a, h, i, j, n, o, q, s, w, y  
G. A. Giannini & Co., Inc., r  
Gnore Industries, Inc., s  
Gy Instrument Co.  
Gion Industries, Inc., s  
Hilton Watch Co.-Industrial Div., h  
Hza Labs., Inc., y  
Hpot Div.-Beckman Instruments Inc., a, q, w  
Hlett-Packard Co., k, m, n, o, r, t, w, x, y  
Han Laboratories, Inc., s  
H Electrical Instrument Works, Burton Rogers Co., a, k, n, o, q, w  
Industrial Instruments Inc., a, c, j, p  
Industrial Television Inc., x  
Industrial Test Equipment Co., c, f, t  
Inertia Switch, Inc., s  
Instrument Labs., x  
International Instruments Inc., a, k, n, o, q, w, x  
Jennings Radio Mfg. Corp., w  
Jones & Lamson Machine Co., f  
Julie Research Labs., Inc., c, d, g, m, o, q, s  
Kahn & Co., Inc., b, c  
Kauke & Co., a  
Koy Electric Co., w  
Keithley Instruments, Inc., j, k, m, a, p, x  
Kin Tel Div.-Cohu Electronics, Inc., a, h, k, m thru p, r, v, w  
Knopp Inc.  
Land-Air Inc., d, s  
Lavoie Laboratories Inc., f, g  
Leach Corp., s  
Leeds & Northrup Co., c, g, j, k, m, p, s, t  
Leitch-Huard Corp., x  
MacLeod & Hanopol, Inc., j  
Magnaflex Corp., i, v  
Magnetic Instrument Co., Inc., r  
Marconi Instruments, c, l, p, w, x  
Marion Instrument Div., a, k, n, o, q, w  
Massa Div.-Cohu Electronics, Inc., h, v  
Mania Research Lab., f  
Meters Inc., a, h, j, k, n thru q, w, x  
Metatrix, Inc., Sub-Assembly Products, Inc., c, d, f, a, w  
Microametric Mfg. Co., s  
Midwestern Instruments, Inc., c, h  
Milgo Electronic Corp., s  
Millitest Corp., c  
Minneapolis-Honeywell Regulator Co., Boston Div., h, i  
Minneapolis-Honeywell Regulator Co., Industrial Div., s  
Minneapolis-Honeywell Regulator Co., Industrial Product Group, a, c thru h, j, k, m thru p, s, t, w  
F. L. Moseley Co., a, s  
Motorola Inc., Military Electronics Div., d  
National Electronics, a, h, j, k, n thru s, w, x, y  
National Instrument Laboratories, Inc., t  
National Pneumatic Co., Inc., Haltzer-Cabot Divs., j  
National Spectrographic Labs., Inc., s  
New England Etching & Plating Co., Inc., q  
New England Scientific Instruments Co., c, h, j, k, l, n thru q, s, t, w, y  
Non-Linear Systems, Inc., f, g, p, r, w, x  
North Atlantic Industries, Inc., r, w  
Paul Nurches Co., a, n, q, w  
Dfner Electronics Inc., h, s  
Ohio Semiconductors, Inc., i, y  
Optimized Devices, Inc., d, f, g, p  
Pace Electrical Instruments Co., Inc., a, h, k, n, o, q, w  
Paco Electronics Co., Inc., u, x  
Phaostran Instrument & Electronic Co., a, n thru q, w, x  
Philco Corp., Government & Industrial Div.  
Photran Instrument Co., h, s  
Physics Research Laboratories, Inc., a, c, d, f, h, j, k, n, p, q, t, w, x, y  
Pioneer Industries Div., Almar-York Co. Inc., v  
Plasteck, Inc., a  
Power-Tronic Systems Inc., a, c, f, s  
Precise Development Corp., a thru d, f, h, j, k, n thru q, w, x, y  
Precision Apparatus Co., Inc., j, x  
Q. V. S. Inc., a, h, k, n thru q, w  
Quan-Tech Labs., k  
Radiation, Inc., e, g, s  
Rawson Electrical Instrument Co., a, d, k, n, a, t, w, x, y  
Rese Eng., Inc., f, g  
Research Applance Co., s  
**\*RHEEM MFG. CO., DEFENSE & TECHNICAL PRODUCTS DIV., m, p, x**  
Rinco, Inc., c  
Rochester Mfg. Co. Inc., a  
Royal Industries, Inc., s  
Sanborn Co., n, s, w, y  
Schaevitz Engrg., s  
Sel-Rex Corp.  
Servo Corp. of America, r  
Shallcross Mfg. Co., c, h, j, k, n, o  
Simplex Electric Co., a, d, h, k, n thru q, t, w, x, y  
Slaughter Co., Inc., c, e, f, g, i, p  
Solartan Inc., w, y  
Southwestern Industrial Electronics Co., b thru q, s, w  
H. W. Sullivan Ltd., c, h, k, m, n, a, t  
Sun Electric Corp., Aeronautical Div., a, b, h, k, n, o, q, w, y  
Systron Corp., f, g, r, s, w  
Technical Apparatus Builders, a, d, g, k, n, a, w  
Technology Instrument Corp., s, w, x  
Telectro Industries Corp., s, t  
Telermfg. Corp., d  
Thermo Electric Co., Inc., a, s  
Theta Instrument Corp., c  
Thiokol Chemical Corp., c  
Thwing-Albert Instrument Co., s  
Trio Laboratories, Inc., g, p, w, x  
Triplet Electrical Instrument Co., a, j, k, n thru q, w, x, y  
United Electric Controls Co., q  
Varian Associates, s  
Wacline, Inc., a, j, k, m thru q, w, x  
Waltham Electronics Corp., x  
Weinschel Engrg., d  
West Instrument Corp., n, a, s  
Westinghouse Electric Corp., a, k, n, o, p, w, x, y  
Weston Instruments, Div.-Daystrom, Inc., a, d, g, h, j, k, n thru q, s, t, w, x, y  
Westronics Inc., s  
Wimmons, d, f  
Wright Engrg.-Cohu, j  
Wye Industries, v

**INSTRUMENTS, ELECTRICAL MEASURING METERS**

a. Electronic Capacitance  
b. Field Strength  
c. FM Deviation  
d. Frequency  
e. Impedance  
f. Modulation  
g. Null  
h. Output  
i. Panel  
j. Phase Angle  
k. Power Factor  
l. Q  
m. RF Power  
n. Standing Wave Ratio  
o. Wave  
p. X-Ray Intensity

Acton Labs. Inc., a, e, j, k  
Adler Electronics, Inc., c, d, e  
Aera Instrument Co., d  
Air Logistics Corp., j  
Airbarne Instruments Lab., Div.-Cutler-Hammer, Inc., m  
Aircam Inc. of New Jersey, n  
Airpax Electronics Inc. Seminoe Div., d  
American Machine & Foundry Co., Government Products Group, d, k  
American Machine & Foundry Co., Greenwich  
Anton Electronic Labs., Inc., i, p  
Assembly Products, Inc., i  
Avtron Mfg., Inc., c, d, f  
B & H Instrument Co., Inc., d  
Ballantine Labs., Inc., a  
Barker & Williams Inc., m, n  
Beckman Instruments, Inc., Berkeley Div., d, j  
Bergen Labs., Inc., g, j  
Beva Lab., Inc., p  
James G. Biddle Co., d  
A. Biederman, Inc.  
Blonder-Tongue Labs., Inc., b  
Baanton Radio Corp., l  
Briggs Associates, Inc., a  
Budelman Electronics Corp., c, d  
Burr-Brown Research Corp., g  
California Technical Industries, Div.-Textron Inc., n  
Centronix Inc., b, m  
Chemold Co., i  
Chesapeake Instrument Corp., e  
Clippard Instrument Lab., Inc., a  
Colorado Research Corp., j  
Davenport Mfg. Co.  
Daystrom Pacific Div.-Daystrom, Inc., g  
Dejuro-Amsco Corp., Electronic Sales Div., h, i  
Divco-Wayne Electronics, Div.-Divco-Wayne Corp., d  
Donner Scientific Co., g  
Douglas Microwave Co., Inc., d, n, a  
Dytronics Co., j  
Eastern Specialty Co., The, j  
Electro Instruments, Inc., a  
Electro-Measurements Inc., e, g  
Electronic Applications, Inc., c  
Electronic Tube Corp., i  
Electro-Tech Equipment Co., k  
Empire Products Sales Corp., b, f, m  
Engrg. Associates, b, d  
Epic, Inc., d, e, j  
Etched Products Corp., i  
FXR, Inc., d, e, f, m, n, a  
Federal Mfg. & Engrg. Corp., d  
Fischer & Porter Co., h, i  
Freed Transformer Co. Inc., l  
General Communication Co., d, m, o  
General Electric Co., Apparatus Sales Div., d, i, j, m, p  
General Electric Co., X-Ray Dept., p  
Hagan Chemicals & Controls, Inc., g  
Hamilton Watch Co.-Industrial Div., j  
Helipot Div.-Beckman Instruments Inc., d, i  
Hewlett-Packard Co., c, d, e, g, j, m, n, o  
Hoyt Electrical Instrument Works, Burton Rogers Co., l  
Industrial Instruments Inc., e  
Industrial Television Inc., b  
Industrial Test Equipment Co., g, j, k, l  
International Instruments Inc., i  
E. F. Johnson Co., n  
Kahn & Co., Inc., d  
Kay Electric Co., d, l, o  
Kin Tel Div.-Cohu Electronics, Inc., g  
Knopp Inc.  
Lampkin Labs., Inc. M. R. Div., c, d, f  
Land-Air Inc., d, j, p  
Leeds & Northrup Co., g  
Liquidometer Corp., The, a  
**\*LYCOMING DIV., AVCO MFG. CORP., d**  
Manson Labs., Inc., d  
Marconi Instruments, a, c, d, i, m  
Marion Instrument Div., g, i  
Measurements Div., Mc Graw Edison Co., b, d

Meridian Metalcraft, Inc., n.  
Meters Inc., g, h, i.  
Metronix, Inc., Sub-Assembly Products, Inc., a.  
Micromerical Mfg. Co., d.  
Millitest Corp., g.  
Minneapolis-Honeywell Regulator Co., Boston Div., g.  
Minneapolis-Honeywell Regulator Co., Davies Labs. Div., d.  
Minneapolis-Honeywell Regulator Co., Industrial Div., d, g.  
Minneapolis-Honeywell Regulator Co., Industrial Product Group, a, b, d, e, g thru k, p.  
Miratec, Inc., c, m.  
Motorola Inc., Military Electronics Div., b, c, d, f, h, i, m.  
Narda Microwave Corp., The, e.  
National Electronics, d, g, i, k, m.  
New England Etching & Plating Co., Inc., i.  
New England Scientific Instruments Co., d, i, j.  
North Atlantic Industries, Inc., g, j.  
Ohio Semiconductors, Inc., b.  
Pace Electrical Instruments Co., Inc., i.  
Paco Electronics Co., Inc., a.  
Phillco Corp., Government & Industrial Div., p.  
Physics Research Laboratories, Inc., g, i, k.  
Plicker X-Ray Corp., p.  
Pioneer Tool & Engrg. Co., a, b, d thru j.  
Polarad Electronics Corp., b, m, n.  
Polytechnic Research & Development Co., Inc., m.  
Precision Development Corp., a, e, f.  
Q. V. S. Inc., i.  
Radar Design Corp., a.  
Radiation, Inc., b, d.  
Renwell Corp., i.  
Rixon Electronics Inc., n.  
Royal Industries, Inc., a, d, e, f, h.  
Schaevitz Engrg., b.  
Scientific-Atlanta, Inc., b.  
Shallcross Mfg. Co., g.  
Simpson Electric Co., b, i, m.  
Solatron Inc., d, g, j.  
Southwestern Industrial Electronics Co., a.  
Special Instruments Div., British Industries Corp., n.  
Sperry Microwave Electronics Co., Div.-Sperry Rond Corp., n.  
Stoddard Aircraft Radio Co., Inc., b.  
Sun Dial Corp., i.  
Sun Electric Corp., Aeronautical Div., g, i.  
Systems Inc., c, d, f.  
Systron Corp., d, i.  
Technology Instrument Corp., e, j.  
Telchrome Mfg. Corp., j.  
Telectro Industries Corp., a, b.  
Telrad Mfg. Corp., d.  
Teltronics Lab. Inc., d.  
Theta Instrument Corp., j.  
Trio Laboratories, Inc., g, j.  
Triplet Electrical Instrument Co., h, i.  
Vero Mfg. Co., Inc., d.  
Wacline, Inc., d, g, h, i, m.  
Walham Electronics Corp., c, d, f, n.  
Waveline, Inc., m, n, a.  
Weinschel Engrg., g, m.  
Westinghouse Electric Corp., p.  
Weston Hydraulics Ltd.-Sub., Borg-Warner Corp., j.  
Weston Instruments, Div.-Daystrom, Inc., d, h, i, k, m.  
Westronics Inc., d.  
Wintronics, j.  
Wright Engrg. Co., a thru e, m.

## INSTRUMENTS, GRAPHIC RECORDING

Allegany Instrument Co., Inc.  
Applied Science Corp. of Princeton  
B & F Instruments, Inc.  
B & K Instruments, Inc.  
Benson-Lehner Corp.  
Bristol Co., The  
Brush Instruments, Div.-Clevite Corp.  
Century Electronics & Instruments, Inc.  
Consolidated Electrodynamics Corp.  
Edgerton, Germeshausen & Grier, Inc.  
Electro Instruments, Inc.  
Electro-Tech Equipment Co.  
Engrg. Associates  
Epic, Inc.  
Fischer & Porter Co.  
General Electric Co., Apparatus Sales Div.  
Graflex Inc.  
Hallcrafters  
Hogan Laboratories, Inc.  
Impact-D-Graph Corp., The  
Instruments Corp., The  
Koy Electric Co.  
Leeds & Northrup Co.  
Mason-Neilson  
Masso Div.-Cohu Electronics, Inc.  
Mast Development Co., Inc.  
Merz Engrg., Inc.  
Micromerical Mfg. Co.  
Midwestern Instruments, Inc.  
Minneapolis-Honeywell Regulator Co., Industrial Div.  
Minneapolis-Honeywell Regulator Co., Industrial Product Group  
F. L. Moseley Co.  
Motorola Inc., Military Electronics Div.  
National Electronics  
New England Scientific Instruments Co.  
Offner Electronics Inc.  
Perkin-Elmer Corp.

Photran Instrument Co.  
Power-Tronic Systems Inc.  
Radiation, Inc.  
Sanborn Co.  
Scientific Instrument Co.  
Scientific-Atlanta, Inc.  
Seiscar Mfg. Co.  
Sperry Gyroscope Co., Marine Div., Div.-Sperry Rond Corp.  
Sperry Piedmont Co., Div.-Sperry Rond Corp.  
Sun Electric Corp., Aeronautical Div.  
Technitrol Engrg. Co.  
Technology Instrument Corp.  
Traid Corp.  
Varian Associates  
Waldorf Electronics, Div.-F. C. Huyck & Sons  
Weksler Instruments Corp.  
West Instrument Corp.  
Westinghouse Electric Corp.  
Weston Instruments, Div.-Daystrom, Inc.  
Westronics Inc.  
Zophar Mills Inc.

## INSTRUMENTS, METEOROLOGICAL See METEOROLOGICAL INSTRUMENTS

## INSTRUMENTS, PRESSURE See PRESSURE INSTRUMENTS

## INSULATING COMPOUNDS

Acme Wire Co.  
Aries Laboratories, Inc.  
Carl H. Biggs Co.  
Borden Chemical Co.  
George C. Borthing Co., Inc.  
Crompton & Knowles Corp.  
Dayton Rubber Co., The  
Dennis Chemical Co.  
\*DOW CORNING CORP.  
E. I. Du Pont De Nemours & Co. Inc.  
Electro Tec Corp.  
Gladding, McBean & Co.  
Houghton Laboratories, Inc.  
Joelin Mfg. Co.  
Johns-Manville  
Minnesota Mining & Mfg. Co.  
National Engrg. Products, Inc.  
Permacel  
Pilgrim Products Inc.  
Polymer Corp., The  
Products Research Co.  
Saureisen Cements Co.  
Topper Mfg. Co., Inc.  
United States Plywood Corp.  
Westinghouse Electric Corp.

## INSULATION ENAMEL See ENAMEL INSULATION

## INSULATION PAPER See PAPER, INSULATION

## INSULATION PARTS

- a. Bead
- b. Ceramic
- c. Insulating Sleeves
- d. Rods
- e. Sheets
- f. Silicone Rubber
- g. Stampings & Punchings

AMP Inc., c.  
Accurate Electronics Corp., Dept. D, g.  
Aero Gasket Corp., e, f, g.  
Aerolite Electronics Corp., g.  
Allied Plastics Supply Corp., c thru g.  
Amaton Electronic Hardware Co. Inc., g.  
American Lava Corp., b.  
Atmo Seal Co., a.  
Auburn Mfg. Co., The, c thru g.  
Bacon Industries, Inc., f.  
W. L. Barrett Co., The, g.  
Bergen Carbide Co., b, g.  
Birma Mfg. Co., Inc., b, e, g.  
Birnback Radio Co., Inc., c, f.  
Bonny Mfg. Corp., c, d.  
Borden Chemical Co., The, Div.-The Borden Co., Resinite Dept., c, d, e.  
Bristol Co., The, a, b.  
Calflite Co., Inc., c.  
Carborundum Co., Latrobe Plant, Refractories Div., a thru d.  
Carborundum Co., Refractories Div., b.  
Centralab, Div.-Globe-Union, a thru d.  
Chemplast, Inc., c, d, e, g.  
Colonial Rubber Co., e, f, g.  
Columbia Products Co., d.  
Comco Plastics Inc., g.  
Connecticut Hard Rubber Co., The, f.  
Continental Diamond Fiber Corp., c, f.  
Continental Rubber Works, f.  
Cooper Development Corp., Sub.-Marquardt Aircraft Co., b.  
Cornell Deep Drawing Co., Div.-Lones Industries Corp., g.  
Corning Glass Works, b.  
Crane Packing Co., a, c, d, e.  
Oelto Chemical Works, Inc., b, f.  
Diamondite Products Mfg. Co., b.  
Dielectric Materials Co., c, f.

Dixan Corp., d, e.  
Dresser Mfg. Div., Dresser Industries, Inc., a.  
Du-Co Ceramics Co., a thru d.  
E. I. Du Pont De Nemours & Co., Inc., e, f.  
Duramic Products Inc., b.  
Electric Auto-Lite Co., The, b, g.  
Electrical Insulation Co., Inc., d, e, g.  
Electrical Refractories Co., The, b, c.  
Electronic Mechanics, Inc., b thru e.  
Emerson Plastics Corp., a, c, d, e, g.  
Enfab Inc., g.  
Engelhard Industries, Inc., b.  
Erie Resistor Corp., b.  
Flexrock Corp., d, e, g.  
Formica Corp., d.  
Franklin Fibre-Lamitex Corp., c, d, e, g.  
General Electric Co., Insulator Dept., b.  
General Gasket Inc., e, f, g.  
General Plastics Corp. of New Jersey, a.  
Gilman Brothers Co., The, e.  
Gladding, McBean & Co., a thru e.  
Goodyear Tire & Rubber Co., The, Aviation Products Div., f.  
Goshen Rubber Co., Inc., f.  
Hamden Mfg. Co., Inc., g.  
Havag Industries, Inc., b thru f.  
Hays Mfg. Co., e, g.  
Hitamp Wires Inc., c.  
Homolite Corp., The, c, d.  
Houghton Laboratories, Inc., d, e.  
Isolanite Mfg. Corp., a thru d.  
Jessall Plastics, c, d.  
Jadee Plastics Co., d, g.  
Johns-Manville, b thru f.  
Johns-Manville Sales Corp., b thru e.  
Keystone Electronics Corp., g.  
Kip Electronics Corp., a thru d, g.  
Kling Metal Spinning & Stamping Co., g.  
Lamtex Industries, Inc., c.  
Lone Star Plastics Co. Inc., f.  
Thomas J. Long, Inc., d, g.  
Louthan Mfg. Co., The, Div.-Ferro Corp., b.  
Mansfield Fabricators Inc., g.  
Maryland Lovo Co., a thru e.  
J. E. Menough Co., c.  
Metallizing Co. of Los Angeles Inc., b.  
Mica Fabricating Co., b thru e, g.  
Mica Insulator Div.-Minnesota Mining & Mfg., Co., f, g.  
Minneapolis-Honeywell Regulator Co., Ordnance Div., b, g.  
Minnesota Mining & Mfg. Co., a thru e.  
Minnesota Rubber Co., f.  
Mitronics Inc., b.  
Monogram Precision Industries, b, c, f, g.  
Motorola Inc., Military Electronics Div., b.  
Narmco Mfg. Co., c.  
National Beryllia Corp., a thru e.  
National Ceramic Co., a.  
National Vulcanized Fibre Co., c, d, e, g.  
Navtar Corp., c, f.  
New England Laminates Co., Inc., e.  
Norton Co., b.  
Norton Co., New Products Dept., a, c, d.  
Peerless Products Industries, c, g.  
Penn Fibre & Specialty Co., Inc., d, e, g.  
Penn-Michigan Mfg. Corp., g.  
Permacel, c, e, f.  
Piasecki Aircraft Corp., g.  
Pilgrim Products Inc., c, d, e, g.  
Plastic Age Sales, Inc., b, c.  
Polymer Corp., The, a, c, d, e, g.  
Raybestos-Manhattan, Inc., f.  
Raytheon Mfg. Co., b.  
Rogers Corp., b thru g.  
Rubbercraft Corp. of California, f.  
Russell Reinforced Plastics Corp., e.  
Ryan Aeronautical Co., g.  
St. Regis Paper Co., Panelite Div., d, e, g.  
Sealectric Switch & Relay Corp., g.  
Silicone Insulation, Inc., c, d, e, g.  
Silicones Div.-Union Carbide Corp., f.  
Skinner Precision Products, c, g.  
Stanley-Judd Div.-The Stanley Works, g.  
Stover Co., Inc., The, g.  
Stevens Products, Inc., g.  
Strat-O-Seal Mfg. Co., f.  
Superior Sealite & Ceramic Corp., a thru d, g.  
Sylvania Electric Products Inc., Parts Div., g.  
Taylor Fibre Co., d, e, g.  
Thermal Refractories Corp., a, b, c.  
H. I. Thompson Fiber Glass Co., g.  
Topper Mfg. Co., Inc., a thru g.  
Union Asbestos & Rubber Co., c, e.  
United Mineral & Chemical Corp., b.  
United States Rubber Co., c.  
Varflex Corp., c, f.  
Warren Wire Co., c, e.  
Wasley Products, Inc., g.  
Western Felt Works & Acadia Synthetic Products Div., e.  
Western Gold & Platinum Co., a, b, c.  
Westinghouse Electric Corp., e.  
Wilmington Fibre Specialty Co., c, d, e, g.  
Zippertubing Co., The, c.



ALATORS

- a. Antenna Insulators & Spring Assemblies
- b. Bead
- c. Bearing
- d. Con Liner
- e. Ceramic
- f. Cord
- g. Electric
- h. Fabricated
- i. Feed Through
- j. Feeder Spreader
- k. Fused Quartz
- l. Glass Banded Mica
- m. High Dielectric Paper
- n. HV Power Line
- o. Laminated
- p. Metallized Bushing
- q. Mica
- r. Molded
- s. Plastic
- t. Rods
- u. Sheets
- v. Shack
- w. Shack & Vibration
- x. Sleeve
- y. Standoff
- z. Strain
- al. Test Clip
- bl. Thermal
- cl. Thermocouple
- dl. Tower
- el. Transmitting Antenna

AC ELECTRONICS DIV., GENERAL MOTORS CORP., c-1.

- AP Inc., i, r, s
- Accurate Electronics Corp., Dept. D, a, h, i, m, a, r, s, y
- Accro Gasket Corp., r, s
- Accro Research Instrument Co. Inc., c-1.
- Accrolite Electronics Corp., a, h, i, a, s, x, y, z
- Accrolite Plastics Supply Corp., b, c, h, i, l, m, a, q, r, thru x
- Accromat Electronic Hardware Co. Inc., i, s
- American Aeroplasts, l, s, t, w
- American Agile Corp., r, thru u
- American Latex Products Corp., r, s
- American Lava Corp., e, y, z
- American Molded Products Co., r, s
- American Plastics Co., Inc., s, t
- American Specialists Co., The, a
- American Corrosive Metal Products Co., Inc., r, s, m
- American Electronics, Inc., i, r, s, y
- American Research Corp., s, v, w
- American Seal Co., i, y
- American Spark Plug Co., Inc., a, e, m, q, a, s, G Corp., The, e
- American Sales Co., m, n
- A. Beauchaine H Sons Inc., r, s
- Amindex Filter Div., Bendix Aviation Corp., v, w
- Amrogen Carbide Co., e, h
- Amtril H. Biggs Co., f, b-1
- Amymo Mfg. Co., Inc., e, r, u, v, w, b-1
- Amradio Radio Co., Inc., a, e, i, j, s, x, y, z, a-1, e-1
- Amny Mfg. Corp., r, thru u
- Amorden Chemical Co., s
- Amor Metallurgical & Chemical Co., k, q
- Amor Brand & Co., Inc., s, x
- Amoristol Co., The, c-1, d-1.
- Amorshings, Inc., v, w
- Amorliffe Co., Inc., a, s, w
- Amorbridge Thermionic Corp., e, i, s
- Amorburundum Co., Latrobe Plant, Refractories Div., b, e, g, thru j, p, r, t, u, x, y, z, c-1.
- Amorburundum Co., Refractories Div., e
- Amorcentralab, Div.-Globe-Union, b, e, g, i, p, t, x, y
- Amor enamel Co., i, p, y
- Amor emplast, Inc., c, d, h, r, thru u, x, e-1.
- Amoricago Gasket Co., s
- Amoraveland Container Co., The, s, x
- Amorlonal Rubber Corp., t, u, w
- Amorlumbia Products Co., a, a, s, t, x, z, e-1.
- Amorlmc Plastics Inc., h, l, a, s
- Amorcommercial Plastics & Supply Corp., s, t, u
- Amorintinental Diamond Fibre Corp., a, q, t, u, x
- Amorintinental Rubber Works, r
- Amorining Glass Works, e, g, i, k
- Amorione Packing Co., b, i, s, t, u, x, y
- AmorIM Research Corp., s, t, u
- Amorlyon Aircraft Products, Inc., a, s
- Amorlyon Rubber Co., The, r, s
- Amorlly Dptics Co., Ltd., k
- Amorlto Chemical Works, Inc., e, k
- Amorlonis Chemical Co., g, s
- Amorlmonite Products Mfg. Co., e, t, u
- Amorlelectric Materials Co., s, x
- Amorlion Corp., s
- AmorlCo Ceramics Co., b, e, s, y, z, c-1.
- AmorlDu Pont De Nemours & Co. Inc., a, u
- Amorlramic Products Inc., e
- Amorlelectric Auto-Lite Co., The, e
- Amorlelectric Insulation Co., Inc., g, h, a, s, t, u, y
- Amorlelectric Refractories Co., The, e
- Amorlelectronic Mechanics, Inc., i, l
- Amorleloid Co., Inc., The, r, s, u
- Amorlerson & Cuming, Inc., s, t, u
- Amorlerson Plastics Corp., b, c, d, g, h, i, l, a, q, thru j, x
- Amorlab Inc., w

- Engelhard Industries, Inc., e, c-1.
- Enrie Resistor Corp., e
- Fluorulon Labs., Inc., s, t, u
- Ford Radio & Mica Corp., q
- Fornica Corp., h, a, s, t, u, x
- Franklin Fibre-Lamite Corp., h, a, s, t, u
- Frenchtown Porcelain Co., e, i, p
- Furone Plastics, Inc., a, g, h, q, r
- Garde Mfg. Co., i, r, s, y
- General American Transportation Corp., r, s
- General Cement Mfg. Co., Div.-Textron, Inc., a, r, y, z, a-1.
- General Electric Co., Apparatus Sales Div., e, n, r, d-1.
- General Electric Co., Insulator Dept., a, e, g, n, y, z, d-1, e-1.
- General Plastics Corp. of New Jersey, a, s, u
- Gering Products, Inc., u
- Gladding, McBean & Co., a, e, g, i, p, t, u, x, y, b-1, c-1.
- Glassel Products Co., Inc., i, y
- Globar Plant, Refractories Div.-The Carborundum Co., c-1.
- Goe Engrg. Co., e, i, y
- Claud S. Gordon Co., b-1, c-1.
- Grant Chemical Co., Inc., s
- Haveg Industries, Inc., c, d, e, g, h, i, k, l, a, q, thru u, b-1.
- Hays Mfg. Co., h, a, q, r, t, y
- Heyman Mfg. Co., f, z
- Hobson Brothers, Inc., i, t
- Holex, Inc., i
- Homalite Corp., The, g, r, thru u
- Houghton Laboratories, Inc., s, t, u
- Huntington Rubber Mills, w
- Hydro Molding Co., Inc., r, s
- I-T-E Circuit Breaker Co., g
- ITT Federal Div., International Telephone & Telegraph Corp., i
- Integrated Mica Corp., l, a, q, u
- Isolantite Mfg. Corp., a, b, e, g, thru j, p, r, t, y, z, i-1.
- Jan Hardware Mfg. Co., Inc., n, x, y
- Janco Corp., a
- Jessall Plastics, s, t
- Joelin Mfg. Co., i, r, s, y
- Jodee Plastics Co., h, l, a, d, s, t, u, x
- Johns-Manville, m, t, thru x, b-1
- Johns-Manville Sales Corp., g, m, r, s, b-1
- E. F. Johnson Co., a, i, j, y, z, e-1
- J. W. Johnson & Co., Inc., v, w
- Keystone Electronics Corp., h
- Kip Electronics Corp., b, e, r, s, y
- Lamtex Industries, Inc., a, p, s, u, x
- Landsverk Electrometer Co., The, r, s
- Lone Star Plastics Co., Inc., a, r, s
- Thomas J. Long, Inc., h, a, s, t, u
- Loutham Mfg. Co., The, Div.-Ferro Corp., e
- MB Mfg. Co., w
- M & Q Plastic Products, s, t
- Manfield Fabricators Inc., h, a, s, u
- Mark Products Co., a
- Maryland Lava Co., a, b, c, e, g, i, s, thru z, c-1.
- \*MC CORMICK SELPH ASSOCIATES, i
- J. E. Menaugh Co., x
- Mercury Tool & Mfg. Corp., h
- Metalizing Co. of Los Angeles Inc., e
- Mica Fabricating Co., k, l, a, q, thru u, x
- Mica Insulator Div.-Minnesota Mining & Mfg., Co., q, thru u
- Micafact Products Inc., l
- Minneapolis-Honeywell Regulator Co., Industrial Product Group, c-1.
- Minneapolis-Honeywell Regulator Co., Ordnance Div., e, r, s
- Minnesota Mining & Mfg. Co., a, b, e, g, i, m, a, q, thru u, x, b-1.
- Minnesota Rubber Co., h, r
- \*MIRAX CHEMICAL PRODUCTS CORP., METAL CONTAINER DIV., d, s, w
- Mitronics Inc., e, i, p
- Monogram Precision Industries, d, e
- Morotola Inc., Military Electronics Div., e
- Mueller Electric Co., a-1
- Mullanbach Div.-Electric Machinery Mfg. Co., g, s
- NRC Equipment Corp., b-1
- National Beryllia Corp., b, e, b-1, c-1.
- National Ceramic Co., e, i, y, z
- National Tel-Tronics Corp., s, t, u, x
- National Vulcanized Fibre Co., g, h, a, s, t, u
- New England Laminates Co., Inc., a, u
- New England Tape Co., Div.-United-Carr Fastener Corp., i, s, x
- M. M. Newman, Corp., s
- Northern Plastics Corp., u
- Norton Co., e, b-1, c-1
- Norton Co., Neff Products Dept., e
- Pacific Scientific Co., w
- Peerless Products Industries, g, h, r, x
- Penn Fibre & Specialty Co., Inc., g, h, m, a, s, t, u
- Permax Products Div., Chisholm-Ryder Co., Inc., a
- Perry Plastics, Inc., s
- Pilgrim Products Inc., g, n, r, s, t, w
- Plastic Age Sales, Inc., a, r, s
- Polymer Corp., The, c, h, s, t, u, y
- Precision Sheet Metal, Inc., h
- Raybestos-Manhattan, Inc., Pa., s
- Raytheon Mfg. Co., e
- Rex Corp., The, Sub-American Enka, s, x, b-1
- Robinson Technical Products, Inc., v, w
- Rogers Corp., g, h, m, a, r, thru u
- Milton Ross Metals Co., The, i, a, r, s, x, y, z
- Rubbercraft Corp. of California, r, w

- Russell Reinforced Plastics Corp., a, s
- St. Regis Paper Co., Panelyte Div., a, s, t, u
- Sanford Plastics Corp., s, t, u, x
- D. A. Schultz Co., h
- Silicone Insulation, Inc., b, d, g, h, a, r, thru u, x, b-1.
- Sinclair Mfg. Co., h, a, s
- Skinner Precision Products, x
- Sparto Mfg. Co., Div.-U. S. Ceramic Tile Co., s, x
- Spaulding Fibre Co., Inc., m, a, s, t, u
- Spruce Pine Mica Co., Inc., g, m, q
- Stanley-Judd Div.-The Stanley Works, a, a-1
- Staver Co., Inc., The, h, a, w
- Stevens Products, Inc., h, a, r
- Strat-o-Seal Mfg. Co., i
- Superior Cable Corp., x
- Superior Swallow & Ceramic Corp., b, e, r, s, y
- Swedlow Inc., a, r, s, u
- Sylvania Electric Products Inc., Parts Div., q, r, s
- Taylor Fibre Co., a, s, t
- Technical Appliance Corp., y
- Thermal Refractories Corp., b, c, e, b-1, c-1
- Thermo Electric Co., Inc., c-1
- Thompson Engrg. Co., The, Missile Products Div., k
- Torwico Electronics, Inc., i
- Turbo Products, Inc., s
- Ucinite Co., The, Div.-United-Carr Fastener Corp., w
- United Asbestos & Rubber Co., h, a, o, b-1
- United Mineral & Chemical Corp., e, l, q
- United States Rubber Co., w, x, b-1
- Universal Moulded Products Corp., r, s
- Valpey Clay Corp., k
- Victor R. F. & Microwave Co., a, s
- Waterbury Companies, Inc., q, r
- West Instrument Corp., c-1
- Western Coating Co., s
- Western Felt Works & Acadia Synthetic Products Div., s, u
- Western Gold & Platinum Co., d
- Westinghouse Electric Corp., l, q
- Wilmington Fibre Specialty Co., s, t, u
- Wind Turbine Co., a, h, i, j, s, y, z, d-1, e-1
- Winder Aircraft Corp. of Florida, h
- Yardley Plastics Co., s
- Zippertubing Co., The, s, x, b-1.

INTEGRATORS, ELECTRONIC

- Airborne Instruments Lab., Div.-Cutler-Hammer, Inc.
- Allegany Instrument Co., Inc.
- Analytical Instruments, Inc.
- Antlab Inc.
- Bendix Computer, Div.-Bendix Aviation Corp.
- Briggs Associates, Inc.
- Bristol Co., The
- Burton-Rodgers, Inc.
- Chesapeake Instrument Corp.
- Colorado Research Corp.
- Consolidated Diesel Electric Corp.
- Dalmator Div., Yuba Consolidated Industries, Inc.
- Di-An Controls, Inc.
- Donner Scientific Co.
- Dymec Inc.
- Elocor, Inc.
- Eldorado Electronics
- Electro Instruments, Inc.
- Emerson Electric Mfg. Co., The, Electronics & Avionics Div.
- Federal Mfg. & Engrg. Corp.
- Feedback Controls, Inc.
- Fischer & Porter Co.
- Graflex Inc.
- Hazeltine Electronics Div.-Hazeltine Corp.
- Helipot Div.-Beckman Instruments Inc.
- I-L-S Instrument Div., The Meriam Instrument Co.
- ITT Labs.
- \*KEARFOTT CO., INC.
- Land-Air Inc.
- Leary, Inc.
- Leary, Inc., Grand Rapids Div.
- Libroscope Inc.
- W. L. Maxson Corp., The
- Minneapolis-Honeywell Regulator Co., Industrial Product Group
- Miratel, Inc.
- Morse Instrument Co., The
- Morotola Inc., Military Electronics Div.
- Philco Corp., Government & Industrial Div.
- Power-Tronic Systems Inc.
- Radiation, Inc.
- Raymond Engrg. Lab., Inc.
- Reeves Instrument Corp.
- Research Appliance Co.
- Scientific-Atlanta, Inc.
- Sequoia Wire & Cable Co., Div.-Mondrel Industries, Inc.
- Servomechanisms, Inc.
- Spectrum Instruments, Inc.
- Stanley Aviation Corp.
- Summers Gyroscope Co.
- Sun Electric Corp., Aeronautical Div.
- U. S. Industries, Inc.
- U. S. Science Corp., Div.-Topp Industries, Inc.
- Variation Associates
- Waldorf Electronics Div.-F.C. Huyck & Sons
- Webcor, Inc., Government Div.
- Weston Instruments, Div.-Doystrom, Inc.

INTERCOMMUNICATION SYSTEMS

- Barker Sales Co.
- Bendix Radio Div., Bendix Aviation Corp.
- Bliss Electronic Corp.

Pioneer-Tongue Labs., Inc.  
 Bogen-Presto Co., Div.-Stegler Corp., The  
 Chalcó Engng. Corp.  
 Continental Mfg., Inc.  
 Cooper Development Corp., Sub.-Marquardt Aircraft Co.  
 Dayton Aviation Radio & Equipment Corp.  
 Du Kane Corp.  
 Electronic Communications, Inc.  
 Executone, Inc.  
 Federal Mfg. & Engrg. Corp.  
 Feiler Engrg. & Mfg. Co.  
 Fidelity Amplifier Co.  
 Flush Wall Radio Co.  
 General Precision Lab. Inc.  
 Gilfillan Bros. Inc.  
 ITT-Kellogg  
 Lane Electronics Mfg. Corp.  
 Litton Industries, Maryland Div.  
 J. M. Loge, Sound Engineers  
 Miraflex, Inc.  
 Motorola Inc., Military Electronics Div.  
 National Pneumatic Co., Inc., Holtzer-Cabot Divs.  
 North Electric Co.  
 Perry Plastics, Inc.  
 Philco Corp., Government & Industrial Div.  
 Precise Development Corp.  
**\*RHEEM MFG. CO., DEFENSE & TECHNICAL PRODUCTS DIV.**  
 Specialty Engrg. & Electronics Co.  
 Stromberg-Carlson Div.-General Dynamics Corp.  
 Talk-A-Phone Co.  
 Telectro Industries Corp.  
 Television Utilities Corp.  
 U. S. Science Corp., Div.-Topp Industries, Inc.  
 Webcor, Inc., Government Div.

#### INTERFERENCE EQUIPMENT, RF

Double E Products Co.  
 Hallett Mfg., Co.  
 Hallowcrafters  
 Hazeltine Electronics Div.-Hazeltine Corp.  
 ITT Federal Div., International Telephone & Telegraph Corp.  
 ITT Labs  
 Interference Measurement Laboratory, Inc.  
 Jansky & Bailey, Inc.  
 Litton Industries, Maryland Div.  
 Motorola Inc., Military Electronics Div.  
 Philco Corp., Government & Industrial Div.  
 Topco Group, Thompson-Ramo-Wooldridge Inc.  
 Telectro Industries Corp.

#### INTERNAL POWER SUPPLY SYSTEMS, MISSILE

**\*BENDIX AVIATION CORP., HAMILTON DIV.**

#### INTERVALOMETERS

Atlas Precision Products, Co.  
 Bell & Howell Co.  
 Bendix-Pacific Div., Bendix Aviation Corp.  
 Brown Engrg. Co., Inc.  
 Bulow Electric Co.  
 Cedar Engrg. Div.-Control Data Corp.  
 Chicago Aerial Industries, Inc.  
 Cooper Development Corp., Sub.-Marquardt Aircraft Co.  
 Daystrom Pacific Div.-Daystrom, Inc.  
 Destron Co.  
 Di-An Controls, Inc.  
 Elgin Micronics Div.-Elgin National Watch Co.  
 Elgin Micronics, West Coast Div.-Elgin National Watch Co.  
**\*A. W. HAYDON CO., THE**  
 Hycon Mfg. Co.  
 Jordan Electronics, Div.-Victoreen Instrument Co.  
 Revere Corp. of America  
 Telectro Industries Corp.  
 Tempo Instrument Inc.  
 Textron Corp.  
 Traid Corp.  
 Trio Laboratories, Inc.  
 U. S. Science Corp., Div.-Topp Industries, Inc.  
 Webcor, Inc., Government Div.  
 Western Design, Div.-U.S. Industries, Inc.; Santa Barbara Div.

#### INVERTERS

a. DC-AC  
 b. Measurement  
 c. Power Supply  
 d. Rectifier

ACF Industries Inc., a.  
 Accurate Instrument Co., a.  
 Aerojet-General Corp., a thru d.  
 Aerolab Development Co., a thru d.  
 Airborne Accessories Corp., a.  
 Alto Scientific Co., Inc., a.  
 Amelco, Inc., c.  
 American Electronics, Inc., a, c.  
 American Missile Products Co., Inc., a, c.  
 American Research & Mfg. Corp., a, c.  
**\*ARNOUX CORP., a, c, d.**  
 Bendix Aviation Corp., Red Bank Div., a thru d.  
 Bendix Aviation Corp., York Div., a, c.  
 Bogue Electric Mfg. Co., a, c, d.  
 Bristol Co., The, a, b.  
 Brown Engrg. Co., Inc., a, b, c.  
 Brunswick Instruments, a.  
 Carruthers & Fernandez, Inc., a, c, d.  
 Chalcó Engrg. Corp., a, c, d.  
 Chrysler Corp., Defense Operations Div.

Consolidated Avionics Corp., a thru d.  
 Consolidated Diesel Electric Corp., a, c.  
 Continental Electric Co., Inc., a.  
 Cornell-Dubilier Electric Corp., a, c.  
 Cubic Corp., d.  
 Curtiss-Wright Corp., Research Div.  
 Dalmator Div., Yuba Consolidated Industries, Inc., a, c, d.  
 Daven Co., The, a, c, d.  
 Davenport Mfg. Co., a, c.  
 Dresser Industries, Inc., a, c, d.  
 Eicor Div.-Scranton, b.  
 Electronic Research Associates, Inc., a, c.  
 Electro Products Laboratories, Inc., a, c.  
 Engineered Magnetics, Div.-Gulton Industries, Inc., a, b, c.  
 Fairfield Engrg. Corp.  
 Ferratron Electronics Co., Inc., a, c.  
 Freed Transformer Co., Inc., a, c.  
 General Electric Co., Apparatus Sales Div., a, c, d.  
 Georator Corp., a, c.  
 Geotronic Labs. Inc., a.  
 Green Rectifier Co., c, d.  
 Guided Missile Div.-De Havilland Aircraft Canada, Ltd., a, c.  
 Gulton Industries, Inc., a.  
 Hallamere Electronics Co., a.  
 Hartner Electric Co., The, a, c.  
 Hoover Electric Co., a.  
 Industrial Test Equipment Co., c.  
 International Research Associates, a.  
 Jack & Heintz, Inc., a, c, d.  
 Jordan Electronics, Div.-Victoreen Instrument Co., a.  
 Kaiser Aircraft & Electronics, Div.-Kaiser Industries Corp., a, c.  
 La Roe Instruments, Inc., a, c.  
 Leach Corp., a, c.  
 Lear, Inc., a, c.  
 Leland Airborne Products, Div.-American Machine & Foundry Co., a, c, d.  
 Litton Industries, Maryland Div., a.  
 Magnetic Controls Co., a, c.  
 W. L. Maxson Corp., The  
 Minneapolis-Honeywell Regulator Co., Industrial Product Group, a.  
 Minneapolis-Honeywell Regulator Co., Ordnance Div., a, c, d.  
 Motorola Inc., Military Electronics Div., a.  
 Heinz Mueller Eng. Co., Inc.  
 National Pneumatic Co., Inc., Holtzer-Cabot Divs., a, c.  
 Networks Electronic Corp., a, c.  
 Ohio Semiconductors, Inc., a.  
 D. W. Dnan & Sons Inc., a, c.  
 Pacific Magnetic Corp., a, c, d.  
 Perkin Engrg. Corp., a thru d.  
 Perry Plastics, Inc., c.  
 Pesco Products Div.-Borg-Warner Corp., a.  
 Power Supplies Inc., a, c, d.  
 Power Sources, Inc., a, c, d.  
 Redmond Co., Inc., a.  
**\*RHEEM MFG. CO., DEFENSE & TECHNICAL PRODUCTS DIV., a.**  
 Rixon Electronics Inc., a.  
 Royal Industries, Inc., a.  
 Sangamo Electric Co., a, c.  
 Sequoia Wire & Cable Co., Div.-Mandrel Industries, Inc., a, c, d.  
 Servomechanisms, Inc., a.  
 Sorenson & Co., Inc., a, c.  
 Spectrol Electronics Corp., a, c.  
 Talley Corp., The, a, c, d.  
 Tapco Group, Thompson-Ramo-Wooldridge Inc., a.  
 Technical Apparatus Builders, a thru d.  
 Technology Instrument Corp., a.  
 Terado Co., a, c.  
 Torwico Electronics, Inc., a.  
 Trans Electronics, Inc., a, c.  
 Transonic, Inc., a, c, d.  
 United Control Corp., a, d.  
 U. S. Science Corp., Div.-Topp Industries, Inc., c.  
 Varo Mfg. Co., Inc., a, c.  
 Western Design, Div.-U.S. Industries, Inc.; Santa Barbara Div., a.  
 Western Gear Corp., a, c, d.  
 Westinghouse Electric Corp., a, c, d.  
 Wincharger Corp., Sub.-Zenith Radio Corp., a, c.

#### ION TRAPS

Philco Co., Government & Industrial Div.

#### IRONS, SOLDERING

See SOLDERING IRONS

#### ISOLATORS, MICROWAVE

Airtron Inc., Div.-Litton Industries  
 Canoga Div., Underwood Corp.  
 DBM Research Corp.  
 Diamond Antenna & Microwave Corp.  
 Douglas Microwave Co., Inc.  
 ITT Labs.  
 J-V-M Microwave Co.  
**\*KEARFOTT CO., INC., MICROWAVE DIV.**  
 Litton Industries, Inc.  
 Lockheed Aircraft Corp., Missiles & Space Div.  
 Microwave Associates, Inc.  
 Monogram Precision Industries  
 Motorola Inc., Military Electronics Div.  
 N.R.K. Mfg. & Engrg. Co.  
 Philco Corp., Government & Industrial Div.  
 Polytechnic Research & Development Co., Inc.  
 Radar Design Corp.

Sage Labs, Inc.  
 Sperry Microwave Electronics Co., Div.-Sperry Rand Corp.  
 Sylvania Electric Products Inc., Special Tube Operations  
 Tomor Electronics, Inc.  
 Victor R. F. & Microwave Co.

#### JACK PANEL ASSEMBLIES

Accurate Electronics Corp., Dept. D  
 Aerodex, Inc.  
 Aerolite Electronics Corp.  
 Aerovox Corp.  
 Audio Development Co.  
 Automatic Electric Sales Corp.  
 Barker Sales Co.  
 Berco Engrg. Corp.  
 Bud Radio Inc.  
 Cermody Corp.  
 Coaxial Connector Co. Inc.  
 Coils-Electronics  
 Croname Inc.  
 Donner Scientific Co.  
 Electrical Insulation Co., Inc.  
 Electrocraft, Inc.  
 Electromath Corp.  
 Electro-Mechanical Products Co.  
**\*ETS-HOKIN & GALVAN**  
 First Electronic Corp., The  
 Fletcher Mfg. Co., Inc., The  
 Foto-Video Labs, Inc.  
 Good Electronic Corp.  
 Harco Labs, Inc.  
 Paul Hardeman, Inc.  
 ITT-Kellogg  
 Jan Hardware Mfg. Co., Inc.  
 Jodee Plastics Co.  
 Keystone Electronics Corp.  
 Mid-West Metal Products, Inc.  
 Minneapolis-Honeywell Regulator Co., Industrial Div.  
 Minneapolis-Honeywell Regulator Co., Industrial Product Group  
 Modelectric Products Corp.  
 Mullenbach Div.-Electric Machinery Mfg. Co.  
 National Pneumatic Co., Inc., Holtzer-Cabot Divs.  
 North Electric Co.  
 Paraplegics Mfg. Co., Inc.  
 Raveeno Metal Products, Div.-Standard Screw Co.  
 Reinhold Engrg. & Plastics Co.  
 Milton Ross Metals Co., The  
 Skyline Electric & Mfg. Co.  
 Standard Electric Time Co., The  
 Stromberg-Carlson Div.-General Dynamics Corp.  
 Switchcraft, Inc.  
 Telectro Industries Corp.  
 United Aircraft Products, Inc.  
 Waltham Horological Corp.

#### JACKS

Accurate Electronics Corp., Dept. D  
 Aerovox Corp.  
 Alden Products Co.  
 Amatom Electronic Hardware Co. Inc.  
 Audio Development Co.  
 Automatic Electric Sales Corp.  
 Barker Sales Co.  
 Cambridge Thermionic Corp.  
 Coaxial Connector Co. Inc.  
 Colson Corp., The  
 Crown Controls Co., Inc.  
 Crowncliff & Co. Inc.  
 Electrocraft, Inc.  
 General Cement Mfg. Co., Div.-Textron, Inc.  
 Globe Hoist Co.  
 Harco Labs, Inc.  
 Holland Hitch Co.  
 Hoover Electric Co.  
 Horkey-Moore Associates  
 Huffer Corp., The  
 Indust. Prod.-Danbury Knudsen Div. Amphenol-Bal Electronics Corp.  
 ITT-Kellogg  
 Javex Electronics  
 E. F. Johnson Co.  
 Howard B. Jones Div.-Cinch Mfg. Corp.  
 Keystone Electronics Corp.  
 Walter Kidde & Co., Inc., Aviation Div.  
 Lear, Inc.  
 P. R. Mallory & Co. Inc.  
 Minneapolis-Honeywell Regulator Co., Industrial Div.  
 Minneapolis-Honeywell Regulator Co., Industrial Product Group  
 National Pneumatic Co., Inc., Holtzer-Cabot Divs  
 National Tel-Tronics Corp.  
 North Electric Co.  
 Paul Nurches Co.  
 Raytheon Mfg. Co.  
 Regent Jack Mfg. Co., Inc.  
 Milton Ross Metals Co., The  
 Rotary Lift Co., Div.-Dover Corp.  
 Sancer Corp.  
 Specialty Engrg. & Electronics Co.  
 Standard Electric Time Co., The  
 Stromberg-Carlson Div.-General Dynamics Corp.  
 Superelex Electronics Corp.  
 Switchcraft, Inc.  
 Templeton, Kenly & Co.  
 Ucinite Co., The, Div.-United-Carr Fastener Corp.  
 U. S. Industries, Inc.  
 Vard Inc.

W-S Fittings Works, Forge & Fittings Div., H. K. Porter Co. Inc. Waltham Horological Corp.

### T ENGINE DIAPHRAGMS

See DIAPHRAGMS, JET ENGINE

### T ENGINE IGNITERS

See IGNITERS, JET ENGINE

### T ENGINE NOZZLE DIAPHRAGMS

See DIAPHRAGMS, JET ENGINE NOZZLE

### T ENGINE TAILPIPES

See TAILPIPES, JET ENGINE

### T ENGINES

### AIRESEARCH MFG. CO., DIV.-THE GARRETT CORP.

Curtiss-Wright Corp., Research Div.  
Curtiss-Wright Corp., Wright Aeronautical Div.  
General Electric Co., Apparatus Sales Div.  
A. W. Kellogg Co., The  
Marquardt Aircraft Co.  
Smith-Morris Corp.  
Solar Aircraft Co.  
Westinghouse Electric Corp.

### WELLS

Federal Screw Products Inc.  
Hamilton Watch Co.-Industrial Div.  
Jugo P. Keller, Jr.  
Jordan Co., New Products Dept.  
Phoenix-American Co.  
Swiss Jewel Co.  
United Mineral & Chemical Corp.  
Alpey Crystal Corp.  
Waltham Precision Instrument Co.

### JEWELS, GLASS

Richard H. Bird & Co., Inc.  
Inflight Corp.  
General Electric Co., Apparatus Sales Div.  
Grimes Mfg. Co.  
Phoenix-American Co.  
Alpey Crystal Corp.

### JNT ASSEMBLIES

Aero Supply Mfg. Inc.  
Atlantic Instrument Corp., Sub-American Electronics, Inc.  
Aeromac Aviation  
Hixson Co., Sub-Food Machinery & Chemical Corp.  
Unbar-Kapelle Inc.-Aircraft Components Div.  
**FLEXONICS CORP., AERONAUTICAL DIV.**  
Arman Div., Aeroquip Corp.  
N. R. K. Mfg. & Engrg. Co.  
National Utilities Corp.  
Pitasecki Aircraft Corp.  
Smith-Morris Corp.  
Solar Aircraft Co.  
Solman Devices Corp.  
Variety Aircraft Corp.

### JNTS

- a. Ball
- b. Swivel
- c. Torsion
- d. Universal

Accessory Products Co., Div.-Textron Inc., a thru d.  
Allegany Instrument Co., Inc., a  
American Aeroparts, a thru d.  
Aeromac Machine & Tool Co., The, d  
Atlantic Instrument Corp., Sub-American Electronics, Inc., a  
Arco Mfg. Co., a, b  
Hixson Co., Sub-Food Machinery & Chemical Corp., b  
Aeromac-Air Products, Div.-A S R Products Corp., b  
Components Corp., a, b  
Consolidated Diesel Electric Corp.  
Crosby Products Div., a  
Curtiss-Wright Joint Co., Inc., d  
Curtiss-Wright Corp.-South Bend Div., a  
Versey Engrg. Co., a, b  
Packendorff & Co. Inc., a  
Mount Aircraft Fitting Co., b  
Unbar-Kapelle Inc.-Aircraft Components Div., a thru c  
Ssex Mfg. Co., Inc., b  
Vervey Flexible Coupling Co., d  
Clock Mfg. Co., Inc., d  
Arman Div., Aeroquip Corp., d  
National Utilities Corp., b  
P. W. Jordan, a, b  
C. Design Corp., Sub.-Benrus Watch Co., Inc., a thru d  
Rts Engrg. Co., Inc., d  
Perless Machine Co., b  
Ann-Michigan Mfg. Corp., a  
Crawwell-Standard Corp., d  
Hir Aircraft Corp., a  
An Aeronautical Co., a, d  
Agent Engrg. Corp., c  
Dial Corp., b  
Hir Corp., d  
Solar Aircraft Co., a  
Smithwest Products Co., a, b, c  
Solman Devices Corp., a  
United Supply Co., a, b

Vard Inc., a, b, c  
Waste King Corp., Technical Products Div., a, b, c

### JUMPERS, BONDING

AMP Inc.  
Aerolite Electronics Corp.  
Best Aircraft Co.  
Bimbach Radio Co., Inc.  
Century Fasteners Corp.  
Entron, Inc.  
First Electronics Corp., The  
Hallett Mfg., Ca.  
Janco Corp.  
Madelectric Products Corp.  
New England Electrical Works, Inc.

### JUNCTION BOXES & PANELS

A & P Metal Products Mfg. Corp.  
Abalan Precision Mfg. Corp.  
Accurate Electronics Corp., Dept. D  
Adept Industries Inc.  
Aerodex, Inc.  
Aerolite Electronics Corp.  
Alpitect, Inc.  
Anchor Metal Spinning Co., The  
Associated Engineers, Inc.  
Brooks & Perkins, Inc.  
Bud Radio Inc.  
Coble Electric Products Inc.  
Chrysler Corp., Defense Operations Div.  
Coaxial Connector Co. Inc.  
Coils-Electronics  
Colonial Aircraft Corp.  
Consolidated Productions, Inc.  
Daven Co., The  
Dayton Aviation Radio & Equipment Corp.  
Electro-Mechanical Products Co.  
Federal Mfg. & Engrg. Corp.  
Firestone Tire & Rubber Co., The, Guided Missile Div.

Fletcher Mfg. Co., Inc., The  
General Electric Co., Apparatus Sales Div.  
Grimes Mfg. Co.  
Hardman Tool & Engrg. Co.  
Ludwig Harold Mfg. Co.  
Minneapolis-Honeywell Regulator Co., Industrial Product Group

### \*MIRAX CHEMICAL PRODUCTS CORP., METAL CONTAINER DIV.

Matorola Inc., Military Electronics Div.  
Mullenbach Div.-Electric Machinery Mfg. Co.  
Paraplegics Mfg. Co., Inc.  
Pitasecki Aircraft Corp.  
C. F. Roark Welding & Engrg. Co., Inc.  
Skyline Electric & Mfg. Co.  
Specialty Engrg. & Electronics Co.  
Suffolk Products Corp.  
Twin Coach Co., Aircraft-Missiles  
United Aircraft Products, Inc.  
Variety Aircraft Corp.

### JUNCTIONS, HYBRID, MICROWAVE

Aircam Inc. of New Jersey  
Airtrom Inc., Div.-Litton Industries  
Alford Mfg. Co.  
Antenna & Radome Research Associates  
W. A. Beauchaine & Sons Inc.  
Bendix Aviation Corp., York Div.  
Coaxial Connector Co. Inc.  
Cooper Development Corp., Sub.-Marquardt Aircraft Co.  
Demornay-Bonardi  
Douglas Microwave Co., Inc.  
John Gombos Co., Inc.  
I-T-E Circuit Breaker Co.  
Indus. Prod.-Danbury Knudsen Div. Amphenol-Borg Electronics Corp.  
J-V-M Microwave Co.  
Litton Industries, Inc.  
Meridian Metalcraft, Inc.  
Microwave Associates, Inc.  
Monogram Precision Industries  
N. R. K. Mfg. & Engrg. Co.  
Nardo Microwave Corp., The  
Omega Labs., Inc.  
Philco Corp., Government & Industrial Div.  
Partchester Instrument Corp.  
Radar Design Corp.  
Sage Labs, Inc.  
Special Instruments Div., British Industries Corp.  
Telerod Mfg. Corp.  
Wheeler Laboratories, Inc.

### KEYERS

Applied Science Corp. of Princeton  
Barker Sales Co.  
Cooper Development Corp., Sub.-Marquardt Aircraft Co.  
Dayton Aviation Radio & Equipment Corp.  
Foto-Video Labs, Inc.  
General Devices, Inc.  
General Precision Lab. Inc.  
Grimes Mfg. Co.  
Jordan Electronics, Div.-Victoreen Instrument Co.  
Kauke & Co.  
Litton Industries, Maryland Div.  
Minneapolis-Honeywell Regulator Co., Ordnance Div.  
Motorola Inc., Military Electronics Div.  
Munston Mfg. & Service, Inc.  
National Pneumatic Co., Inc., Holtzer-Cabot Divs.  
Nuclear Products-Erco Div.-ACF Industries, Inc.

Radar Relay, Inc.  
Radiation, Inc.  
Seeburg Corp., The  
Suffolk Products Corp.  
Teletrome Mfg. Corp.  
Telectro Industries Corp.  
Tawaco Electronics  
United Central Corp.  
Webcor, Inc., Government Div.  
Winder Aircraft Corp. of Florida

### KEYERS & COUPLERS

Barker Sales Co.  
Bendix Aviation Corp., York Div.  
Dayton Aviation Radio & Equipment Corp.  
National Pneumatic Co., Inc., Holtzer-Cabot Divs.  
Radiation, Inc.  
Telectro Industries Corp.

### KEYS & CODING EQUIPMENT

Barker Sales Co.  
CGS Labs., Inc.  
Dayton Aviation Radio & Equipment Corp.  
General Devices, Inc.  
E. F. Johnson Co.  
Kauke & Co.  
Matorola Inc., Military Electronics Div.  
National Pneumatic Co., Inc., Holtzer-Cabot Divs.  
North Electric Co.  
Soroban Engrg., Inc.  
Stramberg-Carlson Div.-General Dynamics Corp.  
Telectro Industries Corp.  
Vitro Labs.  
Western Design, Div.-U. S. Industries, Inc.; Santa Barbara Div.  
Winzen Research Inc.

### KILOVOLTMETERS

Associated Research, Inc.  
Beede Electrical Instrument Co. Inc.  
Bristol Co., The  
Davenport Mfg. Co.  
Dal Electronics Corp.  
Electro Instruments, Inc.  
Electro-Tech Equipment Co.  
Ferranti Electric Inc.  
General Electric Co., Apparatus Sales Div.  
Jennings Radio Mfg. Corp.  
Keithley Instruments, Inc.  
Meters Inc.  
Minneapolis-Honeywell Regulator Co., Industrial Product Group  
National Electronics  
New England Scientific Instruments Co.  
Rawson Electrical Instrument Co.  
Shallcross Mfg. Co.  
Sun Electric Corp., Aeronautical Div.  
Wahlne, Inc.  
Weston Instruments, Div.-Daystrom, Inc.

### KITS

- a. Geiger Counter
- b. Modification
- c. Portable Lighting
- d. Test Equipment

Aerojet-General Corp., d  
Anton Electronic Labs., Inc., a  
Associated Research, Inc., d  
Atlas Precision Products, Co., d  
A. Biedeman, Inc., d  
Borden Chemical Co.  
Burton-Rogers, Inc., d  
Centronix Inc., d  
Consolidated Diesel Electric Corp., Western Div., d  
Continental Technical Service, Inc., d  
Cooper Development Corp., Sub.-Marquardt Aircraft Co., c  
Cornelius Co., The, Aero Div., b, d  
Curtiss-Wright Corp., Research Div., d  
Double E Products Co., b, c, d  
Douglas Microwave Co., Inc., d  
Eastern Specialty Co., The, d  
Electro Products Laboratories, Inc., d  
Electro Instrument Co., Inc. (EICO), d  
FXR, Inc., d  
Federal Mfg. & Engrg. Corp., b  
First Electronics Corp., The, b, d  
Foto-Video Labs., Inc., d  
Gardner Laboratory, Inc., d  
Good Electronic Corp., b  
Gordon Enterprises, c, d  
Green Rectifier Co., d  
Harco Labs., Inc., d  
E. Vernon Hill & Co., d  
Hufford Corp., The, d  
Hycon Mfg. Co., d  
Kahn & Co., Inc., d  
Kaiser Aircraft & Electronics, Div.-Kaiser Industries Corp., d  
Koehler Aircraft Products Co., b  
Land-Air Inc., a  
Lear, Inc., d  
Lear, Inc., Grand Rapids Div., d  
W. L. Maxson Corp., The, b  
Merz Engrg., Inc., d  
Nuclear-Chicago Corp., a  
Paco Electronics Co., Inc., d  
Parker-Hartford Corp., The, b  
Peschel Electronics, Inc., d  
Pioneer Industries Div., Almar-York Co. Inc., d

Precise Development Corp., a, d.  
Ravenna Metal Products, Div.-Standard Screw Co., d.  
Republic Aviation Corp., b.  
Republic Mfg. Co., d.  
Ryan Aeronautical Co., d.  
Seco Mfg. Co., d.  
Sel-Rex Corp., d.  
Sequoia Wire & Cable Co.-Div.-Mandrel Industries, Inc., d.  
Special Projects Lab., Food Machinery & Chemical Corp., d.  
Specialty Engrg. & Electronics Co., a thru d.  
Squires Gage Co., d.  
Stanley Aviation Corp., d.  
State Testing Lab. Inc., d.  
Sterling Precision Corp., Instrument Div., d.  
Sun Electric Corp., Aeronautical Div., d.  
Superec Electronics Corp., b.  
Tolley Corp., The, b, d.  
Telectro Industries Corp., d.  
United Aircraft Products, Inc., b, d.  
United Mfg. Co., Div., The W. L. Maxson Corp., d.  
Variety Aircraft Corp., d.

#### **KLAYSTRON TUBE CHECKERS See CHECKERS, KLAYSTRON TUBE**

#### **LACQUERS**

Ambroid Co., Inc.  
Arco Co., The  
Bios Labs., Inc.  
Cooper Industries, Inc.  
Dennis Chemical Co.  
Emerson & Cuming, Inc.  
Fidelity Chemical Products Corp.  
Grant Chemical Co., Inc.  
Krytox, Inc.  
Maas & Woldstein Co.  
Marblatte Corp., The  
Micro-Circuits Co.  
Midland Industrial Finishes Co.  
Organic Products Co.  
Polymer Corp., The  
Thomas Electronics, Inc.  
Trio Chemical Works, Inc.  
United States Plywood Corp.  
Vorc Co., The  
Waldom Electronics Inc.

#### **LADDERS, FUELING**

Ainslie Corp.  
Alad Aluminum Ladder Corp.  
American Aeroparts  
Ballymore Co.  
Borrett-Christie Co.  
Bill-Jex Inc.  
Colonial Aircraft Corp.  
Cromer Mfg. & Engrg., Inc.  
Ludwig Honold Mfg. Co.  
Mercury Tool & Mfg. Corp.  
Dpelika Welding, Machine & Supply Inc.  
Schaffer Air Industries, Inc.  
Skyline Products, Inc.  
Thiokol Chemical Corp.  
Western Arc Welding, Inc.

#### **LAMINATED SHIMS See SHIMS, LAMINATED**

#### **LAMINATES**

Air Logistics Corp.  
Allied Plastics Supply Corp.  
American Printed Circuits Co., Inc.  
American Silver Co.  
Carl H. Biggs Co.  
Bridgeport Brass Co.  
Chemold Co.  
Continental Diamond Fibre Corp.  
Cordo Chemical Corp.  
Crystal-X Corp.  
Curtiss-Wright Corp., Research Div.  
E. I. Du Pont De Nemours & Co. Inc.  
Duralith Corp.  
Electrical Insulation Co., Inc.  
Emerson Plastics Corp.  
Formica Corp.  
Franklin Fibre-Lamitex Corp.  
General Plastics Corp. of New Jersey  
Goodyear Aircraft Corp.  
Hardman Tool & Engrg., Co.  
Haskelite Mfg. Corp.  
Haveg Industries, Inc.  
International Resistance Co.  
Joelin Mfg. Co.  
Jodee Plastics Co.  
Johns-Manville  
Lamtex Industries, Inc.  
Lone Star Plastics Co. Inc.  
Thomas J. Long, Inc.  
Mica Insulator Div.-Minnesota Mining & Mfg. Co.  
Minnesota Mining & Mfg. Co.  
Monogram Precision Industries  
Narmco Mfg. Co.  
National Vulcanized Fibre Co.  
New England Laminates Co., Inc.  
Northern Plastics Corp.  
Panel Engrg. Corp.  
Penn Fibre & Specialty Co., Inc.  
Plastic Age Sales, Inc.  
Raybestos-Manhattan, Inc.

Raybestos-Manhattan, Inc., Po.  
Reinhold Engrg. & Plastics Co.  
Republic Aviation Corp.  
Rogers Corp.  
Milton Ross Metals Co., The  
Russell Reinforced Plastics Corp.  
St. Regis Paper Co., Panelyte Div.  
Sierracin Corp., The  
Silicone Insulation, Inc.  
Spaulding Fibre Co., Inc.  
Standard Metals Corp.  
Stevens Products, Inc.  
Swedlow Inc.  
Taylor Fibre Co.  
United States Chemical Milling Corp.  
United States Plywood Corp.  
United States Rubber Co.  
Universal Moulded Products Corp.  
Virginia Plak Co.  
Western Tool & Mfg. Co., The  
Westinghouse Electric Corp.  
Zippertubing Co., The

#### **LAMINATIONS, TRANSFORMER**

Allegheny Ludlum Steel Corp.  
American Printed Circuits Co., Inc.  
G-L Electronics Co., Inc.  
Johns-Manville  
Mica Insulator Div.-Minnesota Mining & Mfg. Co.  
Westinghouse Electric Corp., Metals Plant

#### **LAMINATORS, PLASTIC HIGH PRESSURE**

Adept Industries Inc.  
Allied Plastics Supply Corp.  
American Aerophysic Corp.  
American Printed Circuits Co., Inc.  
Chemold Co.  
Collins Engrg. Corp.  
Continental Diamond Fibre Corp.  
Dayton Aircraft Products, Inc.  
Duralith Corp.  
Electrical Insulation Co., Inc.  
Emeloid Co., Inc., The  
Engineered Plastics, Inc.  
Forley & Loetscher Mfg. Co., Plastics Div.  
Formica Corp.  
Franklin Fibre-Lamitex Corp.  
Hardman Tool & Engrg. Co.  
Haveg Industries, Inc.  
Homolite Corp., The  
Hull Corp.  
Joelin Mfg. Co.  
Kerco Products  
Lamtex Industries, Inc.  
Lone Star Plastics Co. Inc.  
Mica Insulator Div.-Minnesota Mining & Mfg. Co.  
Monrovia Aviation Corp.  
National Vulcanized Fibre Co.  
New England Laminates Co., Inc.  
Panel Engrg. Corp.  
Perry Plastics, Inc.  
Piasecki Aircraft Corp.  
Plastic Age Sales, Inc.  
Raybestos-Manhattan, Inc.  
Raybestos-Manhattan, Inc., Po.  
Republic Aviation Corp.  
Rogers Corp.  
Milton Ross Metals Co., The  
St. Regis Paper Co., Panelyte Div.  
Sierracin Corp., The  
Spaulding Fibre Co., Inc.  
Swedlow Inc.  
Taylor Fibre Co.  
H. I. Thompson Fiber Glass Co.  
United States Chemical Milling Corp.  
Universal Moulded Products Corp.  
Virginia Electronics Co., Inc.  
Virginia Plak Co.

#### **LAMPS, INFRA-RED**

Chicago Miniature Lamp Works  
Collins Engrg. Corp.  
Eagle Electric Mfg. Co. Inc.  
Edmund Scientific Co.  
Engelhard Industries, Inc.  
Fisher Scientific Co.  
Kemlite Laboratories, Inc.  
Miskello Infra-Red Co., The  
Monogram Precision Industries  
Radiant Lamp Corp.  
Westinghouse Electric Corp.

#### **LAMPS, SUPERVOLTAGE**

A. D. W. Corp.  
Blowers Inc.  
Chicago Miniature Lamp Works  
Collins Engrg. Corp.  
Eagle Electric Mfg. Co. Inc.  
Ericson Mfg. Co., The  
Gordon Enterprises  
Mico Instrument Co.  
Radiant Lamp Corp.  
Shannon Luminous Materials Co.  
Strat-D-Seal Mfg. Co.

#### **LAMPS, PROJECTION**

Gordon Enterprises  
Jones & Lamson Machine Co.  
Radiant Lamp Corp.

Sequoia Wire & Cable Co., Div.-Mandrel Industries, Inc.  
Westinghouse Electric Corp.

#### **LAMPS, ULTRA-VIOLET**

\*ULTRA-VIOLET PRODUCTS, INC.

#### **LANDING AIDS, ELECTRONIC**

Belock Instrument Corp.  
Bendix Radio Div., Bendix Aviation Corp.  
DBM Research Corp.  
Dayton Aviation Radio & Equipment Corp.  
Electronic Communications, Inc.  
Giffill Bros. Inc.  
Hazeltine Electronics Div.-Hazeltine Corp.  
Kemlite Laboratories, Inc.  
Land-Air Inc.  
Lear, Inc.  
Lear, Inc., Grand Rapids Div.  
Litton Industries, Maryland Div.  
Minneapolis-Honeywell Regulator Co.-Aeronautical Div.  
Motorola Inc., Military Electronics Div.  
Northrop Corp., The, Nortronics Div.  
Philco Corp., Government & Industrial Div.  
Raytheon Mfg. Co., Government Equipment Div.  
\*RHEEM MFG. CO., DEFENSE & TECHNICAL PRODUCTS DIV.  
Thiokol Chemical Corp.  
U. S. Science Corp., Div.-Topp Industries, Inc.  
Virginia Electronics Co., Inc.  
Westinghouse Electric Corp.

#### **LANDING GEAR ASSEMBLIES**

\*BENDIX PRODUCTS DIV., BENDIX AVIATION CORP.

Bruce Engrg. Co.  
Colonial Aircraft Corp.  
Cromer Mfg. & Engrg., Inc.  
Electrol Inc.  
Holland Hitch Co.  
Hydra-Power Corp.  
Interstate Engrg. Corp.  
Kaiser Aircraft & Electronics, Div.-Kaiser Industries Corp.  
Kanorr Corp.  
Langren Aircraft Co., Inc.  
Mercury Tool & Mfg. Corp.  
Nebel Machine Tool Corp.  
Newbrook Machine Corp.  
Phillips Aviation Co.-Morples Geors  
Piasecki Aircraft Corp.  
Sargent Engrg. Corp.  
Talley Corp., The  
United Mfg. Co., The  
U. S. Industries, Inc.  
Vord Inc.  
Western Gear Corp.  
Wise Aerodynamics, Inc.

#### **LANDING GEAR RETRACTORS**

See RETRACTORS, LANDING GEAR

#### **LANDING GEAR SHOCK ABSORBERS**

See SHOCK ABSORBERS, LANDING GEAR

#### **LANDING SYSTEMS, AIRBORNE**

See AIRBORNE LANDING SYSTEMS

#### **LANDING SYSTEMS, GROUND**

See GROUND LANDING SYSTEMS

#### **LANDING SYSTEMS, INSTRUMENT**

American Aeroparts  
\*AVCO MFG. CORP., CROSLLEY DIV.  
Belock Instrument Corp.  
Centronix Inc.  
Dayton Aviation Radio & Equipment Corp.  
Hazeltine Electronics Div.-Hazeltine Corp.  
ITT Labs.  
ITT-Kellogg  
Korda Industries  
Land-Air Inc.  
Lear, Inc.  
Lear, Inc., Grand Rapids Div.  
Litton Industries, Maryland Div.  
Minneapolis-Honeywell Regulator Co.-Aeronautical Div.  
Motorola Inc., Military Electronics Div.  
Raytheon Mfg. Co., Government Equipment Div.  
Telectro Industries Corp.  
U. S. Science Corp., Div.-Topp Industries, Inc.  
Westinghouse Electric Corp.

#### **LATCHES**

Adams Rite Mfg. Co.  
American Aeroparts  
Anchor Metal Spinning Co., The  
Bud Radio Inc.  
Burklyn Co.  
Camloc Fastener Corp.  
Capital City Mfg. Co.  
Component Corp.  
Dimco-Gray Co.  
Hughes Tool Co., Aircraft Div.  
Kaiser Aircraft & Electronics, Div.-Kaiser Industries Corp.  
Monogram Precision Industries  
National Lock Co.  
Reinhold Engrg. & Plastics Co.

Richards-Wilcox Mfg. Co.  
Scavill Mfg. Co.  
Simmonds Aeracesories, Inc.  
Stanley-Judd Div.-The Stanley Works  
United States Chemical Milling Corp.  
United Supply Co.

## ITCHES, BALL see BALL LATCHES

## ITCHES, BENCH

American Aeraparts  
Barrett-Christie Co.  
Clousing Div.-Atlas Press Co.  
Hardinge Brothers, Inc.  
Carl Hirschmann Co., Inc.  
R. K. Lebland Machine Tool Co.  
Luis Levin & Son, Inc.  
Red Lion Cabinet Co., Redca Tool Div.  
Rivett Lathe & Grinder Inc.  
Joseph T. Ryerson & Son, Inc.  
York Tool Co.  
Ransmores Corp.

## LINCHERS, AIRBORNE ROCKET

ACF Industries Inc.  
Accessory Products Co., Div.-Textron Inc.  
Acco Equipment Div., American Chain & Cable Co., Inc.  
Aerajet-General Corp.  
Aerona Mfg. Corp.  
Aircraft Armaments, Inc.  
American Machine & Foundry Co., Government Products Group  
American Machine & Foundry Co., Greenwich associated Engineers, Inc.  
Atlantic Research Corp.  
Basic Tool Industries, Inc.  
Breeze Carparations, Inc.  
Bridgepart Brass Co.  
Colonial Aircraft Corp.  
Cooper Development Corp., Sub.-Marquardt Aircraft Co.  
Diversey Engrg. Co.  
Dresser-Idaco Co., Div.-Dresser Industries, Inc.  
Emerson Electric Mfg. Co., The, Electronics & Avionics Div.  
General Electric Co., Missile & Space Vehicle Dept.  
Hoover Electric Co.  
Harkey-Moore Associates  
Industrial Tools Mfg. Corp., Sub.-Pendleton Tool Industries, Inc.  
Intercontinental Mfg. Co., Inc.  
Kaiser Aircraft & Electronics, Div.-Kaiser Industries Corp.  
Kellogg Co., The  
Kelsey-Hayes Co.  
Kemp Aero Products  
Land-Air Inc.  
Langren Aircraft Co., Inc.  
Marquardt Aircraft Co.  
Mc L. Maxson Corp., The  
McDowell-Wellman Companies, The  
Mechanics Universal Joint Div., Borg-Warner Corp.  
**\*MIRAX CHEMICAL PRODUCTS CORP., ELECTRO-MECHANICAL PRODUCTS DIV.**  
Monogram Precision Industries  
Newbrook Machine Corp.  
Northrop Corp.  
Northrop Corp., The, Northronics Div.  
Dpelika Welding, Machine & Supply Inc.  
Drandane Div.-Food Machinery & Chemical Corp.  
Pacific Coast Engrg. Co.  
Philips & Davies Inc.  
Pioneer Tool & Engrg. Co.  
Pittsburgh-Des Moines Steel Co.  
Portland Copper & Tank Works Inc.  
Project Fabrication Corp.  
Ravenna Metal Products, Div.-Standard Screw Co.  
Red Lion Cabinet Co., Redca Tool Div.  
Regent Jck Mfg. Co., Inc.  
Republic Aviation Corp.  
**\*RHEEM MFG. CO., DEFENSE & TECHNICAL PRODUCTS DIV.**  
Royal Industries, Inc.  
Sanocar Corp.  
Sargent Engrg. Corp.  
Space Corp.  
Stainless Inc.  
Stearns-Roger Mfg. Co.  
Talley Corp., The  
Tapco Group, Thompson-Rama-Wooldridge Inc.  
Thiokol Chemical Corp.  
Trailmobile Inc.  
Turbo Products, Inc.  
Twin Coach Co., Aircraft-Missiles  
U. S. Industries, Inc.  
Van Zelm Associates, Inc.  
Vard Inc.  
Washington Aluminum Co., Inc.  
Waste King Corp., Technical Products Div.  
Wayne Pump Co., The, Div.-Symington Wayne Corp.  
Western Gear Corp.

## LINCHERS, GROUND BASED MISSILES

ACF Industries Inc.  
Accessory Products Co., Div.-Textron Inc.  
Acco Equipment Div., American Chain & Cable Co., Inc.  
Aerajet-General Corp.  
Aerolab Development Co.  
Aerona Mfg. Co.  
Aer Logistics Corp.  
Aircraft Armaments, Inc.  
Acco Products, Inc.  
American Car & Foundry, Div.-ACF Industries, Inc.  
American Machine & Foundry Co., Government Products Group  
American Machine & Foundry Co., Greenwich plied Design Co.  
Associated Engineers, Inc.  
Atlantic Research Corp.  
Austin-Western, Constr. Equip. Div.-Baldwin-Lima-Hamilton Corp.  
Ker Industrial Trucks, Div.-Dtis Elevator Co.  
Basic Tool Industries, Inc.  
Cooper Precision Products Inc.  
W. Bliss Co.  
Wesker, Inc., Defense Dept.

Breeze Carparations, Inc.  
Brown Engrg. Co., Inc.  
C. B. Christiansen Co.  
Cleveland Pneumatic Industries, Inc.  
Conco Engrg. Works  
Consolidated Diesel Electric Corp., Western Div.  
Cooper Development Corp., Sub.-Marquardt Aircraft Co.  
Cramer Mfg. & Engrg., Inc.  
Curtiss-Wright Corp., Santa Barbara Div.  
Diversey Engrg. Co.  
Dresser Industries, Inc.  
Dresser Mfg. Div., Dresser Industries, Inc.  
Dresser-Idaco Co., Div.-Dresser Industries, Inc.  
Dynamic Devices, Inc.  
Emerson Electric Mfg. Co., The, Electronics & Avionics Div.  
FWD Corp.  
Fairchild Astrionics Div., Fairchild Engine & Airplane Corp.  
Farrel Birmingham Co. Inc.  
Fruehauf Trailer Co., Military Equipment Div.  
Fulton-Irgon Corp., The  
G. W. Galloway Co.  
General Electric Co., Missile & Space Vehicle Dept.  
Goodyear Aircraft Corp.  
Hardman Tool & Engrg. Co.  
Ludwig Hanold Mfg. Co.  
Hoover Electric Co.  
Harkey-Moore Associates  
Hussmann Aircraft Div.  
ITT Labs.  
Industrial Tools Mfg. Corp., Sub.-Pendleton Tool Industries, Inc.  
Ingersoll Kalamazoo Div., Borg-Warner Corp.  
Intercontinental Mfg. Co., Inc.  
Interstate Engrg. Corp.  
Jack & Heintz, Inc.  
Kaiser Aircraft & Electronics, Div.-Kaiser Industries Corp.  
M. W. Kellogg Co., The  
Kelsey-Hayes Co.  
Kemp Aero Products  
Land-Air Inc.  
Langren Aircraft Co., Inc.  
Marquardt Aircraft Co.  
Mc L. Maxson Corp., The  
McDowell-Wellman Companies, The  
Mechanics Universal Joint Div., Borg-Warner Corp.  
**\*MIRAX CHEMICAL PRODUCTS CORP., ELECTRO-MECHANICAL PRODUCTS DIV.**  
Monogram Precision Industries  
Newbrook Machine Corp.  
Northrop Corp.  
Northrop Corp., The, Northronics Div.  
Dpelika Welding, Machine & Supply Inc.  
Drandane Div.-Food Machinery & Chemical Corp.  
Pacific Coast Engrg. Co.  
Philips & Davies Inc.  
Pioneer Tool & Engrg. Co.  
Pittsburgh-Des Moines Steel Co.  
Portland Copper & Tank Works Inc.  
Project Fabrication Corp.  
Ravenna Metal Products, Div.-Standard Screw Co.  
Red Lion Cabinet Co., Redca Tool Div.  
Regent Jck Mfg. Co., Inc.  
Republic Aviation Corp.  
**\*RHEEM MFG. CO., DEFENSE & TECHNICAL PRODUCTS DIV.**  
Royal Industries, Inc.  
Sanocar Corp.  
Sargent Engrg. Corp.  
Space Corp.  
Stainless Inc.  
Stearns-Roger Mfg. Co.  
Talley Corp., The  
Tapco Group, Thompson-Rama-Wooldridge Inc.  
Thiokol Chemical Corp.  
Trailmobile Inc.  
Turbo Products, Inc.  
Twin Coach Co., Aircraft-Missiles  
U. S. Industries, Inc.  
Van Zelm Associates, Inc.  
Vard Inc.  
Washington Aluminum Co., Inc.  
Waste King Corp., Technical Products Div.  
Wayne Pump Co., The, Div.-Symington Wayne Corp.  
Western Gear Corp.  
Wheland Co., The  
Wickfield, Inc.

## LAUNCHING DEVICES, ROCKET

### See ROCKET LAUNCHING DEVICES

## LAUNCHING PLATFORMS

Acco Equipment Div., American Chain & Cable Co., Inc.  
Aerajet-General Corp.  
Air Logistics Corp.  
Alco Products, Inc.  
**\*ALUMINUM SAFETY PRODUCTS, INC.**  
American Car & Foundry, Div.-ACF Industries, Inc.  
American Machine & Foundry Co., Government Products Group  
American Machine & Foundry Co., Greenwich  
Astronautics Engrg. Co.  
Basic Tool Industries, Inc.  
Beaver Precision Products Inc.  
E. W. Bliss Co.

Chicago Bridge & Iron Co.  
Conca Engrg. Works  
Cooper Development Corp., Sub.-Marquardt Aircraft Co.  
Crane Carrier Corp.  
Cramer Mfg. & Engrg., Inc.  
Dresser Industries, Inc.  
Dresser-Idaco Co., Div.-Dresser Industries, Inc.  
Emerson Electric Mfg. Co., The, Electronics & Avionics Div.  
FWD Corp.  
Fruehauf Trailer Co., Military Equipment Div.  
G. W. Galloway Co.  
Hardman Tool & Engrg. Co.  
Harkey-Moore Associates  
Huffard Corp., The  
ITT Labs.  
Industrial Tools Mfg. Corp., Sub.-Pendleton Tool Industries, Inc.  
Jack & Heintz, Inc.  
Kaiser Aircraft & Electronics, Div.-Kaiser Industries Corp.  
Kemp Aero Products  
Langren Aircraft Co., Inc.  
Managrom Precision Industries  
Newbrook Machine Corp.  
Northrop Corp.  
Dpelika Welding, Machine & Supply Inc.  
Pacific Coast Engrg. Co.  
Pioneer Tool & Engrg. Co.  
Pittsburgh-Des Moines Steel Co.  
Portland Copper & Tank Works Inc.  
Project Fabrication Corp.  
Red Lion Cabinet Co., Redca Tool Div.  
Regent Jck Mfg. Co., Inc.  
Royal Industries, Inc.  
Sanocar Corp.  
Space Corp.  
Stainless Inc.  
Stearns-Roger Mfg. Co.  
Thiokol Chemical Corp.  
Turbo Products, Inc.  
Twin Coach Co., Aircraft-Missiles  
U. S. Industries, Inc.  
Van Zelm Associates, Inc.  
Washington Aluminum Co., Inc.  
Wayne Pump Co., The, Div.-Symington Wayne Corp.  
**\*R. D. WERNER CO., INC.**  
Western Gear Corp.  
Wheland Co., The

## LEAD FOIL

### See FOIL, LEAD

## LEAD SHIELDS

### See SHIELDS, LEAD

## LEADS, TEST

Aerolite Electronics Corp.  
Anchor Specialty Mfg. Co. Inc.  
Birnback Radio Co., Inc.  
Bud Radio Inc.  
Cable Electric Products Inc.  
Devcon Corp.  
Durable E Products Co.  
Eastern Specialty Co., The  
Electro-Tech Equipment Co.  
First Electronics Corp., The  
Hallett Mfg. Co.  
Keystone Electronics Corp.  
National Electronics  
Paul Nurches Co.  
Poca Electronics Co., Inc.  
Paroplegics Mfg. Co., Inc.  
Pamona Electronics Co., Inc.  
Precision Apparatus Co., Inc.  
Stanley-Judd Div.-The Stanley Works  
Thomas Electronics, Inc.  
Western International Co.  
Westwood Cable Corp.

## LEATHER HANDLES

### See HANDLES, LEATHER

## LENSES

- a. Inspection
- b. Motion Picture
- c. Optical
- d. RF
- e. Zoom

American Optical Co., Instrument Div., a, c  
Atlantic Research Corp., c  
Seman Bache & Co., a, b, c  
**\*BAUSCH & LOMB OPTICAL CO., a, b, c**  
Bell & Howell Co., a, thru e  
Brooks & Perkins, Inc., d  
Buhl Optical Co., a, b, c  
Burke & James Inc., a, b, c  
Camera Mart Inc., The, b, c, e  
Cameraflex Corp., b, c  
DBM Research Corp., d  
Davidson Mfg. Co., Inc., c  
Dell Optics Co., Ltd., a, b, c, e  
Diamond Antenna & Microwave Corp., d  
Eastman Kodak Co., a, b, c  
Edmund Scientific Co.  
**\*ELECTROSNAP CORP., c**  
Elgeet Optical Co., Inc., b, c  
Emerson & Cuming, Inc., d  
J. W. Fecker, Inc., a thru d

Goertner Scientific Corp., The, **c**  
 General Scientific Equipment Co., **a**  
 Gordon Enterprises, **a** thru **e**  
 Hayward Scientific Glass Corp., **a, b, c**  
 Jones & Lamsan Machine Co., **c**  
 Kallmorgen Optical Corp., **b, c**  
 Kallsman Instrument Corp., Sub-Standard Coil Products Co. Inc., **c**  
 Lancaster Glass Corp., **c**  
 McMillan Industrial Corp., **d**  
 Meridian Metalcraft, Inc., **d**  
 Monogram Precision Industries, **a**  
 Northrop Corp., **c, d, e**  
 Northrop Corp., The, Nortronics Div., **c, d**  
 D & S Research, Inc., **c**  
 Pacific Optical Corp., **a** thru **e**  
 Pacific Universal Products Corp., **c**  
 Perkin-Elmer Corp., **a, c, e**  
 Republic Lens Co. Inc., **a, c, d**  
 Seiscor Mfg. Co., **e**  
 Sperry Microwave Electronics Co., Div.-Sperry Rand Corp., **d**  
 Sterling Glass Corp., **a**  
 Sterling-Howard Corp., **b, c, e**  
 Traid Corp., **b, c, e**  
 Universal Unlimited, Inc., **c**  
 Valpey Crystal Corp., **c**  
 Wellensack Optical Co., **a** thru **e**  
 Zenith Optical Laboratory, **c**  
 Zoomar Inc., **c, e**

**LENSES, PRISMS, MIRRORS**

American Cystoscope Makers, Inc.  
 American Instrument Co., Inc.  
 American Optical Co., Instrument Div.  
 Atlantic Research Corp.  
 Semon Bache & Co.  
**\*BAUSCH & LOMB OPTICAL CO.**  
 Bell & Howell Co.  
 Buhl Optical Co.  
 Burke & James Inc.  
 Camera Mart Inc., The  
 Chicago Aerial Industries, Inc.  
 Corning Glass Works  
 Davidson Mfg. Co., Inc.  
 Eastman Kodak Co.  
 Edmund Scientific Co.  
**\*ELECTROSNAP CORP.**  
**\*ENGIS EQUIPMENT CO.**  
 J. W. Fecker, Inc.  
 Fish-Schurman Corp.  
 Gaertner Scientific Corp., The  
 Gordon Enterprises  
 Hayward Scientific Glass Corp.  
 Kallmorgen Optical Corp.  
 Kallsman Instrument Corp., Sub-Standard Coil Products Co. Inc.  
 Kopp Glass, Inc.  
 Lancaster Glass Corp.  
 Liberty Mirror Div., Libbey-Dwens-Ford Glass Co.  
 Minneapolis-Honeywell Regulator Co., Ordnance Div.  
 Monogram Precision Industries  
 National Spectrographic Labs., Inc.  
 Northrop Corp.  
 Northrop Corp., The, Nortronics Div.  
 D & S Research, Inc.  
 Pacific Optical Corp.  
 Pacific Universal Products Corp.  
 Perkin-Elmer Corp.  
 Republic Lens Co. Inc.  
 Seiscor Mfg. Co.  
 Singer Mfg. Co., The, Military Products Div.  
 Sterling Glass Corp.  
 Traid Corp.  
 Valpey Crystal Corp.  
 Wellensack Optical Co.  
 Zenith Optical Laboratory  
 Zoomar Inc.

**LEVELS**

**\*BALCRANK, INC., MACHINE TOOL DIV.**

**LIGHT SUPPLIES**

Burke & James Inc.  
 Cooper Industries, Inc.  
 Edgerton, Germeshausen & Grier, Inc.  
 Grimes Mfg. Co.  
 Soderberg Mfg. Co., Inc.  
 Technical Apparatus Builders

**LIGHTING, COLD CATHODE**

Acme Electric Corp.  
 American Printed Circuits Co., Inc.  
 Crouse-Hinds Co.  
 Kemlite Laboratories, Inc.  
 Julian A. McDermott Corp.

**LIGHTING CONTROL CONSOLES**

See **CONSOLES, LIGHTING CONTROL**

**LIGHTING EQUIPMENT, EMERGENCY**

Anchor Metal Spinning Co., The  
 Consolidated Diesel Electric Corp.  
 Consolidated Diesel Electric Corp., Western Div.  
 Cooper Development Corp., Sub-Marquardt Aircraft Co.  
 Exide Industrial Div.-The Electric Storage Battery Co.

General Scientific Equipment Co.  
 Grimes Mfg. Co.  
 International Flammont Machinery Co., Inc.  
 Kemlite Laboratories, Inc.  
 Julian A. McDermott Corp.  
**\*MOTOR GENERATOR CORP.**  
 D. W. Dnan & Sons Inc.  
 Soderberg Mfg. Co., Inc.  
 Terodo Co.  
 Wallace & Tiernan Inc.  
 Wincharger Corp., Sub-Zenith Rodio Corp.  
 Winpower Mfg. Co.

**LIGHTING EQUIPMENT, PRESET PANELS**

American Printed Circuits Co., Inc.  
 Anchor Metal Spinning Co., The  
**\*ELECTROSNAP CORP.**  
 Kilgen Aircraft Div.  
 Korry Mfg. Co.  
 Mullenbach Div.-Electric Machinery Mfg. Co.  
 Panel Engrg. Corp.  
 Radar Relay, Inc.  
 Soderberg Mfg. Co., Inc.  
 Sun Dial Corp.

**LIGHTING EQUIPMENT, TOWER**

Crouse-Hinds Co.  
 General Electric Co., Apparatus Sales Div.  
 Hughey & Phillips, Inc.  
 Kemlite Laboratories, Inc.  
 Julian A. McDermott Corp.  
 Soderberg Mfg. Co., Inc.  
 Specialty Engrg. & Electronics Co.  
 Westinghouse Electric Corp.  
 Wind Turbine Co.

**LIGHTNING ARRESTERS**

Airtron Inc., Div.-Litton Industries  
 American Missile Products Co., Inc.  
 Dale Products, Inc.  
 Dayton Aircraft Products, Inc.  
 Garde Mfg. Co.  
 General Electric Co., Apparatus Sales Div.  
 General Electric Co., Insulator Dept.  
 Westinghouse Electric Corp.

**LIGHTS**

**a. Arc**  
**b. Black**  
**c. Dial, Panel & Pilot**  
**d. Flood**  
**e. Fluorescent**  
**f. Glow**  
**g. Incandescent**  
**h. Indicator**  
**i. Jewel Pilot**  
**j. Miniature**  
**k. Neon Test**  
**l. Photoelectric Source**  
**m. Signal**  
**n. Spot**  
**o. Stroboscopic Source**  
 A. D. W. Corp., **e, g**  
 Aerolab Development Co., **a**  
 Aerolite Electronics Corp., **c, h** thru **k, m**  
 Alden Products Co., **c, h, i**  
 American Machine & Foundry Co., Greenwich, **c, h, j**  
 American Printed Circuits Co., Inc., **c, f, h** thru **k, m**  
 Amglo Corp., **f, m, a**  
 Anchor Metal Spinning Co., The, **d, m, n**  
 Associated Engrg. & Mfg. Corp., **g**  
 Bell & Howell Co., **l**  
 Carl H. Biggs Co., **e**  
 Brunswick Instruments, **k**  
 Burke & James Inc., **a**  
 Carling Electric, Inc., **c**  
 Chicago Miniature Lamp Works, **b, c, f, g, h, j** thru **m**, **o**  
 Cooper Development Corp., Sub-Marquardt Aircraft Co., **a, d, n**  
 Crouse-Hinds Co., **d, m, n**  
 Davenport Mfg. Co., **a**  
 Day-Ray Products, Inc., **e**  
 Dialight Corp., **c, f** thru **k, m**  
 Dryomatic Corp., **m**  
 Eagle Electric Mfg. Co. Inc., **c, g, k**  
 Eder Instrument Co., Inc., **i**  
 Edgerton, Germeshausen & Grier, Inc., **a**  
 Eldema Corp., **c, f** thru **k**  
**\*ELECTROSNAP CORP.**, **c, g, h, j**  
 Electronic Control Corp., **l**  
 Etched Products Corp., **c**  
 Ferranti Electric Inc., **f, a**  
 General Electric Co., Apparatus Sales Div., **c, d, e**, **i, j**  
 Gordon Enterprises, **a, d, f, m, n**  
 Graflex Inc., **a**  
 Green Rectifier Co., **h, i**  
 Grimes Mfg. Co., **c, d, e, g** thru **i, m, n**  
 Herzog Miniature Lamp Works, Inc., **c, g, h, j, l, m**  
 Hudson Lamp Co., **f, g, j**  
 Kemlite Laboratories, Inc., **b, a**  
 Korry Mfg. Co., **c, e, h, l, j, m**  
 Leecraft Mfg. Co., Inc., **c, g, h, j, k, m**  
 Luminous Resins Inc., **b**  
 Magnaflex Corp., **b**  
 Marco Industries Co., **c, f, h, i, j**  
 Master Specialties Co., **h**  
 Menlo Research Lab., **e**  
 Miller Dial & Nameplate Co., **c, e, f, g**

Minneapolis-Honeywell Regulator Co.-Aeronautical Div., **a**  
 National Pneumatic Co., Inc., Holtzer-Cobat Div., **a**  
 Dxfard Components, Inc., **c, f, g, h, j, k**  
 Penn Keystone Corp., **h**  
 Photobell Co., Inc., **k**  
 Photomatia, Inc., **l**  
 Plasteck, Inc., **c, g, j**  
 Pyle-National Co., The, **d**  
 Q. O. S. Corp., **b**  
 Radar Relay, Inc., **g**  
 Schauer Mfg. Corp., **k**  
 Shannon Luminous Materials Co., **b**  
 Signalite Inc., **f**  
 Sloan Co., The, **h, j**  
 Soderberg Mfg. Co., Inc., **b** thru **h, m, n**  
 Sperry Piedmont Co.-Div.-Sperry Rand Corp., **n**  
 Ucinite Co., The, Div.-United-Carr Fastener Corp., **c, h, i, j**  
**\*ULTRA-VIOLET PRODUCTS, INC.**, **b**  
 Westinghouse Electric Corp., **d, e, g, h, j**  
 Westinghouse Electric Corp., Lamp Div., **a** thru **a**

**LINERS**

**a. Can**  
**b. Combustion Chamber**  
**c. Combustion Chamber, Gas**  
**d. Turbine Engine**  
**e. Metal**  
**f. Rocket Engine**  
 A & P Metal Products Mfg. Corp., **e**  
 Aerojet-General Corp., **f**  
 Aerolab Development Co., **f**  
 Aerona Mfg. Corp., **b** thru **e**  
 Allied Plastics Supply Corp., **a**  
 American Aluminum Co., **a, e**  
 American Rocket Co., **f**  
 Anchor metal Spinning Co., The, **e**  
 Atlantic Research Corp., **f**  
 B. H. Aircraft Co., Inc., **e**  
 Bemis Brothers Bag Co., **a**  
 Benson Mfg. Co., The, **b, e**  
 J. Bishop & Co., Platinum Works, **f**  
 Borden Chemical Co., **a**  
 Bridgeport Brass Co., **a, e**  
 Brooks & Perkins, Inc., **e**  
 Colfibe Co., Inc., **b**  
 Corborandum Co., Refractories Div., **b**  
 Christie Machine Works, **b, d, f**  
 Cooper Development Corp., Sub-Marquardt Aircraft Co., **b, c, e, f**  
 Cornell Deep Drawing Co., Div.-Lanes Industries Corp., **a, e**  
 Crystal-X Corp., **a**  
 Curtiss-Wright Corp., Research Div., **b, c, f**  
 Curtiss-Wright Corp., Wright Aeronautical Div., **a** thru **f**  
 Diversey Engrg. Co., **e, f**  
 Double E Products Co., **a**  
 Dresser Mfg. Div., Dresser Industries, Inc., **b** thru **h**  
 Dunbar-Kapke Inc.-Aircraft Components Div., **a**  
 Dynamic Devices, Inc., **f**  
 Dyna-Therm Chemical Corp., **a** thru **f**  
 Emerson Plastics Corp., **a**  
 Farwell Metal Fabricating, **a**  
 Finn Aeronautical Div., T. R. Finn & Co., Inc., **b**, **f**  
**\*FLEXONICS CORP., AERONAUTICAL DIV.**  
 General American Transportation Corp., **a**  
 Havg Industries, Inc., **a, b, c, f**  
 Hewitt-Robins, Inc., **b**  
 Houston Fearless Corp.  
 Hupp Aviation Co., **a** thru **d, f**  
**\*JANITROL AIRCRAFT DIV., SURFACE COMBUSTION CORP.**, **b, d**  
 Jaclin Mfg. Co., **f**  
 Johns-Manville  
 Kaiser Metal Products, Inc.-Fleetwings Div., **d**  
 Kanarr Corp., **f**  
 C. B. Kaupp & Sons, Inc., **b, d**  
 M. W. Kellogg Co., The, **b, e, f**  
 Kling Metal Spinning & Stamping Co., **a**  
**\*LAVELLE AIRCRAFT CORP.**, **b, d, e**  
 Mercury Tool & Mfg. Corp., **e**  
**\*MIRAX CHEMICAL PRODUCTS CORP., METAL CONTAINER DIV.**, **a, e**  
 Monogram Precision Industries, **a, c**  
 National Beryllia Corp., **b, c, f**  
 Norton Co., **b**  
 Penn-Michigan Mfg. Corp., **b, c**  
 Plastic-Age Sales, Inc., **b**  
 Porcelain Copper Tank Works Inc., **b** thru **f**  
 Precision Sheet Metal, Inc., **a, e**  
 Pressed Steel Tank Co., **b, c, e, f**  
 Reaction Motors Div., Thiokol Chem. Corp., **b, f**  
 Reinhold Engrg. & Plastics Co., **b, c, f**  
 Rimak, Inc., **e**  
 C. F. Roark Welding & Engrg. Co., Inc., **b, c, d, f**  
 Ryan Aeronautical Co., **a** thru **e**  
 Smith-Morris Corp., **a** thru **e**  
 Solar Aircraft Co., **b, e, f**  
 Stackpole Carbon Co., **f**  
 Stainless Inc., **e**  
 Stainless Steel Products, Inc., **b** thru **e**  
 Standard-Thomson Corp., Clifford Mfg. Co. Div., **a, c, e, f**  
 Swedlow Inc., **b, f**  
 Thermal Refractories Corp., **b**  
 H. I. Thompson Fiber Glass Co., **b, f**  
 Topper Mfg. Co., Inc., **b, f**  
 C. W. Torngren Co., Inc., **a**

urbo Products, Inc., d  
wigg Industries, a thru e.  
nited States Rubber Co., f.  
eathinghouse Electric Corp., d  
aung Development Div., Hercules Powder Co., b, c.

## LIES, SLOTTED

ircam Inc.  
irmcom Inc. of New Jersey  
lford Mfg. Co.  
alifornia Technical Industries, Div.-Textron Inc.  
axial Connector Co. Inc.  
emonay-Banardi  
iamond Antenna & Microwave Corp.  
auglas Microwave Co., Inc.  
nrg. Associates  
XR, Inc.  
abriell Ca., The, Goblrel Electronics Div.  
allicrafters  
ewlett-Packard Co.  
TT Labs.  
eridian Metalcraft, Inc.  
arda Microwave Corp., The  
mega Labs, Inc.  
lytechnic Research & Development Co., Inc.  
phm & Haas Co., Redstone Arsenal Research Div.  
ige Labs, Inc.  
electro Industries Corp.  
lerad Mfg. Corp.  
ilks Precision Instrument Co., Inc.  
ight Engrg. Co.

## LKS, ANTENNA

nslie Corp.  
rtron Inc., Div.-Litton Industries  
tomation Dynamics Corp.  
iamond Antenna & Microwave Corp.  
abriell Ca., The, Gabriel Electronics Div.  
illicrafters  
nco Corp.  
rk Products Co.  
idiatronics, Inc.  
nley-Judd Div.-The Stanley Works  
ioical Chemical Corp.

## LJID BINDERS e BINDERS, LIQUID

## LJID FUELED MISSILE BOOSTERS e BOOSTERS, MISSILE, LIQUID FUELED

## LJID FUELS

ariat-General Corp.  
LLIED CHEMICAL CORP., GENERAL  
CHEMICAL DIV.  
lived Chemical Corp., Nitrogen Div.  
\*AMERICAN POTASH & CHEMICAL CORP.  
hland Dil & Refining Co.  
lary Chemical Co.  
ad Machinery & Chemical Corp.  
iquidometer Corp., The  
heson Co., Inc., The  
in Mathieson Chemical Corp., Energy Div.  
nsalt Chemicals Corp.  
hm & Haas Co., Redstone Arsenal Research Div.  
ll Chemical Corp., Industrial Chemicals Div.  
cial Projects Lab., Food Machinery & Chemical  
Corp.  
mount Instrument Co.

## LID LEVEL MEASURING DEVICES

rojet-General Corp.  
cience, Inc.  
Equipment Corp.  
onic Instrument Corp., Sub-American Electronics,  
nc.  
omation Products, Inc.  
ien, Inc.  
ndix Aviation Corp., Pioneer-Centrol Div.  
lue Electric Mfg., Co.  
lton Auto Gage Co., The  
ywer, Inc., Defense Dept.  
eze Corporations, Inc.  
lston Co., The  
laks Rotometer Co.  
lflow Corp.  
Diametrics Corp.  
Dynamic Controls Corp.  
Electric Auto-Lite Co., The  
lcher & Porter Co.  
lcher Governor Co.  
lcher Research Lab., Inc.  
leral Electric Co., Apporotus Soles Div.  
leral Electric Co., X-Ray Dept.  
ledy Electronics Co.  
lches Tool Co., Aircraft Div.  
l-d-Air Inc.  
\*ALLACE O. LEONARD, INC.  
Liquidometer Corp., The  
lnetrol, Inc.  
Mon-Neilon  
lneapolis-Honeywell Regulator Co., Aeronautical  
Div.  
lneapolis-Honeywell Regulator Co., Industrial Div.  
lneapolis-Honeywell Regulator Co., Industrial  
product Corp.  
lnonal Electronics  
lre Corp. of America  
lrol Industries, Inc.  
lmonds Aerocosmics, Inc.

Space Corp.  
Sterns-Roger Mfg. Co.  
Trans-Sonics, Inc.  
Trimount Instrument Co.  
United Aircraft Products, Inc.  
Victory Engrg. Corp.  
Wallace & Tiernan Inc.

## LIQUID NITROGEN

Air Reduction Sales Co., Div.-Air Reduction Co., Inc.  
\*AIRESEARCH MFG. CO., DIV.-THE GARRETT  
CORP.  
Hafman Labs., Inc.  
Linde Co., Div.-Union Carbide Corp.  
Liquidometer Corp., The  
Sterns-Roger Mfg. Co.  
Trionics Corp.

## LIQUID OXYGEN

Air Reduction Sales Co., Div.-Air Reduction Co., Inc.  
\*AIRESEARCH MFG. CO., DIV.-THE GARRETT  
CORP.  
Linde Co., Div.-Union Carbide Corp.  
Liquidometer Corp., The  
Sterns-Roger Mfg. Co.

## LIQUID OXYGEN VAPORIZERS See VAPORIZERS, LIQUID OXYGEN

## LIQUID PROPELLANTS, ROCKET See PROPELLANTS, LIQUID, ROCKET

## LOCATORS

a. Cable & Line Fault  
b. Metal Flaw  
c. Non-Metal Flaw  
d. Open-Short  
Associated Research, Inc., a  
Barker Sales Co., a  
James G. Biddle Co., a  
Branson Instruments, Inc., b, c  
Consolidated Diesel Electric Corp., a, d  
Curtiss-Wright Corp., Research Div., b, c  
Davenport Mfg. Co., a  
J. W. Dice Co., b  
Dit-Mco, Inc., Electronics Div., a, c  
Fisher Research Lab., Inc., a  
Leeds & Northrup Co., a  
Magnaflex Corp., b, c  
Menlo Research Lab., b  
Peschel Electronics, Inc., a, d  
Shallcross Mfg. Co., a  
Sorensen & Co., Inc., a  
Tobe Deutschmann Corp., a

## LOCK BOLTS See BOLTS, LOCK

## LOCKNUTS

Abbott Screw & Mfg. Co.  
All Specs Corp.  
Barrett-Christie Co.  
Best Aircraft Corp.  
Calinoy-Div.-Illinois Tool Works  
Capitol City Mfg. Co.  
Century Fasteners Corp.  
Cooper Industries, Inc.  
Corbin Products Div.  
R. C. Dudek & Co.  
Eaton Mfg. Co., Reliance Div.  
Elastic Stop Nut Corp. of America  
Eljoy Corp.  
Federal Screw Products Inc.  
Hi-Shear Rivet Tool Co.  
Koyner Mfg. Co., Inc.  
Lamson & Sessions Co., The  
National Screw & Mfg. Co., The  
PIC Design Corp., Sub.-Benrus Watch Co., Inc.  
Rotton Mfg. Co., The  
Republic Steel Corp.  
SKF Industries, Inc.  
Standard Locknut & Lockwasher Inc.  
Standard Pressed Steel Co.  
\*TOWNSEND CO., CHERRY RIVET DIV.  
United Supply Co.  
Waltham Precision Instrument Co.  
Waterbury Pressed Metal Co., The

## LOCKS

a. Dial  
b. General  
c. Hydraulic  
d. Shaft  
Adams Rite Mfg. Co., b  
Adel Precision Products of California, Div.-  
General Metals Corp., c  
Amatom Electronic Hardware Co. Inc., a, d  
Birnboch Radio Co., Inc., a, d  
Bud Radio Inc., a  
Cambridge Thermionic Corp., a  
Goe Engrg. Co., d  
Hoskel Engrg. & Supply Co., c  
E. F. Johnson Co., a  
Kemp Aero Products, c  
Keystone Electronics Corp., a, d  
Litton Industries, U.S. Engrg. Co., Div., a  
National Lock Co., a, b  
Dmego Electronic Corp., d  
PIC Design Corp., Sub.-Benrus Watch Co., Inc.,  
a, d  
Rinco, Inc., a, d

Ronsen Hydraulic Units Corp., c  
Waldam Electronics Inc., a, d  
Yale & Towne Mfg. Co., The, Government  
Defense Products Div., a, b

## LORAN SYSTEMS

Bendix Radio Div., Bendix Aviation Corp.  
General Communication Co.  
Hazeltine Electronics Div.-Hazeltine Corp.  
ITT Labs.  
Jansky & Bailey, Inc.  
W. L. Maxson Corp., The  
Philco Corp., Government & Industrial Div.  
Piascecki Aircraft Corp.  
Polarad Electronics Corp.  
Telectra Industries Corp.

## LOW TEMPERATURE DISCHARGE EQUIPMENT See DISCHARGE EQUIPMENT, LOW TEMPERATURE

## LUBRICANTS

Acheson Colloids Co., Div.-Acheson Industries, Inc.  
All Specs Corp.  
Alpha Molykate Corp., The  
\*AMERICAN POTASH & CHEMICAL CORP.  
Anderson Dil & Chemical Co., Inc.  
Armitie Labs.  
George Basch Co., The  
Caig Labs.  
Curtiss-Wright Corp., Research Div.  
Delta Chemical Works, Inc.  
\*DOW CORNING CORP.  
Ed-Berl Products, Inc.  
Esso Standard Dil Ca.  
Everlube Corp.  
Grafal Colloids Corp.  
Hamilton Watch Co.-Industrial Div.  
E. F. Houghtan & Co.  
Kano Labs.  
Keltite Corp.  
Lockyer Corp.  
Minnesota Mining & Mfg. Co.  
New York & New Jersey Lubricant Co.  
Protective Coatings, Inc.  
Quietrale Co.  
Silicones Div.-Union Carbide Corp.  
G. W. Smith & Sons, Inc.  
Special Projects Lab., Food Machinery & Chemical  
Corp.  
Topper Mfg. Co., Inc.

## LUBRICATING DEVICES

\*BALCRANK INC., MACHINE TOOL DIV.  
Curtiss-Wright Corp., Research Div.  
Gardner-Denver Co.  
Gits Brothers Mfg. Co.  
Gray Co., Inc.  
Honnifin Co., Div.-Parker-Hannifin Corp.  
Hills-Mc Cann Co.  
United Aircraft Products, Inc.  
Wespre Corp.

## LUG SWAGGERS, TERMINAL See TERMINAL LUG SWAGGERS

## LUGS

AMP Inc.  
Accurate Electronics Corp., Dept. D  
Alloc, Inc.  
Amatom Electronic Hardware Co. Inc.  
American Aeroports  
Best Aircraft Corp.  
Birnboch Radio Co., Inc.  
Cambridge Thermionic Corp.  
Century Fasteners Corp.  
Dolmore Corp.  
Dante Electric Mfg. Co.  
Emmco Plastic Fabricators - Div.-E. M. McCorthy  
Machine Co.  
Federal Screw Products Inc.  
Goe Engrg. Co.  
Hobson Brothers, Inc.  
Keystone Electronics Corp.  
Kulka Electric Corp.  
Molco Mfg. Co.  
Mercury Tool & Mfg. Corp.  
Sealectric Switch & Relay Corp.  
Sinclair Mfg. Co.  
Stanley-Judd Div.-The Stanley Works  
Thompson-Bremer & Co.  
Waldam Electronics Inc.  
Zierick Mfg. Corp.

## LUGS, CABLE-ELECTRIC

AMP Inc.  
American Aeroports  
Best Aircraft Corp.  
Birnboch Radio Co., Inc.  
Burndy Corp., Dmoton Div.  
Century Fasteners Corp.  
Dante Electric Mfg. Co.  
Electric Auto-Lite Co., The  
Emmco Plastic Fabricators - Div.-E. M. McCorthy  
Machine Co.  
Hallett Mfg., Co.  
Keystone Electronics Corp.  
C. Sjoberg & Son  
Stanley-Judd Div.-The Stanley Works

Waldom Electronics Inc.  
Zierick Mfg. Corp.

### MACH LIMIT SWITCHES

Aerotec Corp., The  
Bendix Aviation Corp., Pioneer-Central Div.  
Cale Electric Co.  
Consolidated Controls Corp.  
Consolidated Diesel Electric Corp.  
Control Engrg. Co., Div. Jervis B. Webb Co.  
Cooper Development Corp., Sub-Marquardt Aircraft Co.  
Crystal-X Corp.  
Curtiss-Wright Electronics Div., IML Branch  
Cutler-Hammer Inc.  
Daner Scientific Co.  
\*ELECTROSNAP CORP.  
G. M. Giannini & Co., Inc.  
Kollman Instrument Corp., Sub-Standard Coil Products Co. Inc.  
\*WALLACE O. LEONARD, INC.  
Marquardt Aircraft Co.  
Minneapolis-Honeywell Regulator Co.-Aeronautical Div.  
Sealetric Switch & Relay Corp.  
Servomechanisms, Inc.  
Specialties, Inc.  
U. S. Science Corp., Div.-Tapp Industries, Inc.  
Waste King Corp., Technical Products Div.

### MACHINE PARTS, HIGH PRECISION

#### \*LAVEZZI MACHINE WORKS

### MACHINE PRODUCTS SCREW

#### See SCREW, MACHINE PRODUCTS

### MACHINES

a. Abrasive Cutting  
b. Air Conditioning  
c. Balancing  
d. Bending  
e. Blueprint  
f. Capacitor Manufacturing  
g. Cleaning  
h. Coil Winding  
i. Counting  
j. Crystal Manufacturing & Finishing  
k. Cutting  
l. Diecasting  
m. Electric Soldering  
n. Electron Tube  
o. Electronic Balancing  
p. Electronic Transcribing  
q. Engraving & Profiling  
r. Forming  
s. Glass Working  
t. Hermetic Sealing  
u. Impregnating  
v. Lamination Stacking  
w. Marking  
x. Metal Forming  
y. Modular & Automatic Assembly  
z. Photocopy & Whiteprint  
a1. Plastic Press  
b1. Riveting  
c1. Shock Testing  
d1. Soldering  
e1. Tube Manufacturing  
f1. Vibration Fatigue Testing  
g1. Weighing  
h1. Wire Stripping

ACF Industries Inc., x, b-1.  
A&P Metal Products Mfg. Corp., x  
Acromark Co., The, q, a-1.  
Adept Industries Inc., w.  
Aircraft Tools, Inc., b-1.  
\*AIRESEARCH MFG. CO., DIV.-THE GARRETT CORP., b.

All American Tool & Mfg. Co., f-1.  
Allen Tool Corp.  
Allied Research Products, Inc., g.  
Alloys Unlimited Inc., d-1.  
American Electronics, Inc., Toller & Cooper Div., 1.  
American Instrument Co., Inc., a.  
American Machine & Foundry Co., Government Products Group, h, i, y, g-1.  
American Machine & Foundry Co., Greenwich, h, u.  
American Optical Co., Instrument Div., s.  
R. B. Annis Co., c, o.  
Artes Engrg. Co., k, w-1.  
Associated American Winding Co., Inc., f, h.  
Associated Engrg. & Mfg. Corp., n, s, t, e-1.  
Associated Engineers, Inc., y.  
\*ASSOCIATED TESTING LABS., INC., c-1, f-1.  
Astrovac Corp., i, m, v, d-1.  
Atlantic Instrument Corp., Sub-American Electronics, Inc., x.  
Leon J. Barrett Co., The, f, q, u.  
Barrett-Christie Co., a, c.  
Bendix Aviation Corp., Pioneer-Central Div., g.  
E. W. Bliss Co., x, a-1.  
Bronson Ultrasonic Corp., g.  
Bristol Co., The, y.  
Brown Engrg. Co., Inc., v, y, b-1.  
CDC Control Services, Inc., g-1.  
Cedar Engr. Div.-Control Data Corp., h.  
Chambersburg Engrg. Co., r, x-1.  
Chicago Pneumatic Tool Co., b-1.  
Cincinnati Cleaning & Finishing Machinery, g.  
Cincinnati Milling Machine Co., The, x.

Cincinnati Shaper Co., The, r, x.  
Cleveland Automatic Machine Co., l.  
Clover Industries, Inc., x.  
Cobehrn, Inc., g.  
Columbia Research & Development Corp., v.  
Consolidated Electrodynamics Corp., c-1.  
Consolidated Electrodynamics Corp., Rochester Div., c-1.  
Continental Technical Service, Inc., h, v.  
Control Data Corp., h.  
Cosa Corp., c, q, x, f-1.  
Covel Mfg. Co., a.  
Dean & Benson Research, Inc., c, a.  
Decker Corp., The, c, a.  
Delsen Corp., g-1.  
Denison Engrg. Div., American Brake Shoe Co., a-1, c-1, f-1.  
W. C. Dillon & Co., Inc., g-1.  
Diversey Engrg. Co., x.  
Dynametrics Corp., c, g-1.  
Eastman Kodak Co., z.  
Eisler Engrg. Co., Inc., a, h, k, m, r, s, t, d-1, e-1.  
Electro Technical Products Div. Sun Chemical Corp., u.

### \*ENGIS EQUIPMENT CO., q.

Falstrom Co., x, y.  
Farrel Birmingham Co. Inc., k, a-1.  
Federal Tool Engrg. Co., x, h-1.  
Felker Mfg. Co., a.  
Ferrotherm Co., The, d-1.  
Finnell System, Inc., g.  
Fish-Schurman Corp., s.  
Freedom Electric Co., Inc., a, w, b-1.  
Forsberg Mfg. Co., The, l, x, b-1.  
Gardner-Denver Co., b-1.  
General Electro-Mechanical Corp., b-1.  
Duncon M. Gillies Co. Inc., w.  
Globe Electrical Mfg. Co., q, a-1.  
Gordon Enterprises, e, z.  
George Garton Machine Co., q, w.  
Grant Chemical Co., Inc., g.  
Green Instrument Co., q.  
Gremco, Inc., b.  
Grotus Machine Work, Inc., r, x.  
Gulton Industries, Inc., h.  
Hannifin Co., Div.-Parker-Hannifin Corp., x, b-1, e-1.  
Howard Scientific Glass Corp., g.  
High Speed Hammer Co., Inc., The, w, b-1, h-1.  
High Vacuum Equipment Corp., i, n, u.  
Carl Hirschmann Co., Inc., h, j, q, x, c-1, f-1.  
Hi-Shear Rivet Tool Co., b-1.  
Hobbs Mfg. Co., k.  
P. R. Hoffman Co., j, k.  
Hufford Corp., The, d, r, x, a-1, c-1.  
Hull Corp., f, u, a-1.  
Hussmann Aircraft Div., b.  
Hydraulic Press Mfg. Co., The, Div.-Koehring Co., l, r, x, a-1.  
Ideal Industries, Inc., h-1.  
Impact-D-Graph Corp., The, c-1.  
Induction Heating Corp., l, d-1.  
Industrial Winding Machinery Corp., h.  
Intercontinental Mfg. Co., Inc., x.  
International Research & Development Corp., c.  
Invincible Vacuum Cleaner Mfg. Co., g.  
Kanorr Corp., q.  
Kinney Mfg. Div., The New York Air Brake Co., n, t, u, e-1.  
L. A. B. Corp., c-1, f-1.  
Lapointe Machine Tool Co., The, x.  
Lemert Engrg. Co., Inc., b-1.  
Litton Engrg. Labs., s.  
Lodge & Shipley Co., The, x, z.  
MB Mfg. Co., f-1.  
Marlo Coil Co., b.  
Jos. H. Matthews & Co., w.  
Mc Dowell-Wellman Companies, The, x, b-1.  
Merz Engrg., Inc., w.  
Mico Instrument Co., q.  
Miller Dial & Nomenclature Co., x, z.  
Minnesota Mining & Mfg. Co., z.  
Monade Inc., w.  
Monogram Precision Industries, x, e-1.  
Montgomery Engrg. Co., x, b-1.  
Robert E. Morris Co., The, j.  
NRC Equipment Corp., j, u.  
National Ultrasonic Corp., g.  
Nebel Machine Tool Corp., h, x.  
Newbrook Machine Corp., m, r, x, d-1, e-1, f-1.  
Noble & Westbrock Mfg. Co., The, w.  
Norton Co., q, l.  
Norton Co., New Products Dept., q, k.  
Nuclear Products-Erco Div.-ACF Industries, Inc., x, b-1.

Diver Corp., The, r, x.  
Diver Corp., The-A.B. Farquhar Div., a-1.  
D'Neil-Irwin Mfg. Co., d, r, x, a-1.  
Dnsrud Machine Works, Inc., q.  
Pacific Scientific Co., f-1.  
Paragon-Revolute Corp., e, z.  
Peck & Harvey Mfg. Corp., z.  
Peerless Photo Products Inc., z.  
Philips & Davies Inc., d.  
Photobell Co., Inc., l.  
Pines Engrg. Co., Inc., d.  
Pioneer Tool & Engrg. Co., c, d, h.  
H. K. Porter Co., Inc., d, k, z.  
Potter Aeronautical Corp., l.  
H. P. Preis Engraving Machine Co. q, w.  
Pryor Marking Products, w.  
Ranshoff, Co., g.  
Raytheon Mfg. Co., b.

Red Point Corp., u.  
Reeve Electronics, Inc., m, t, d-1.  
Robat Industries Inc., l.  
Roll Formed Products Co., x.  
Roovers-Latsch Corp., w.  
Rotex Punch Co., Inc., d, x.  
Joseph T. Ryerson & Son, Inc., d, k, r, x.  
Schaevitz Engrg., c-1.  
Selectric Switch & Relay Corp., v, h-1.  
Sheffield Corp., The, Sub-Bendix Aviation Corp., y.  
Spectra-Strip Wire & Cable Corp., w.  
Squires Gage Co., c, x.  
State Testing Lab. Inc., c-1, f-1.  
Stratos, Div.-Fairchild Engine & Airplane Corp., b.  
W. Whitney Stueck, Inc., d, k, r, x.  
Surface Combustion Corp., b.  
Thiokol Chemical Corp., g-1.  
Thomas Electronics, Inc., n, e-1.  
Thomas Instrument Co., h-1.  
Timley Labs., Inc., s.  
Torrington Co., The, x.  
Trane Co., The, b.  
Transmores Corp., x, a-1.  
United Shoe Machinery Corp., Ordnance Dept., y.  
U. S. Industries, Inc., x, y, a-1.  
Universal Mfg. Co., Inc., h.  
Vapor Blast Mfg. Co., a, g.  
Veet Industries, a-1.  
Verson Allsteel Press Co., r, x.  
Vilter Mfg. Co., The, b.  
Wales Stripit Inc., Unit of Houdaille Industries, Inc., x.  
Weighing & Control Components, Inc., g-1.  
Westinghouse Electric Corp., b.  
Westlake Plastics Co., a-1.  
Wheelabrator Corp., g.  
Woolf Aircraft Products, Inc., x.  
York Corp., b.  
Zippertubing Co., The, e-1.

### MACHINING, METAL

#### See METAL MACHINING

### MACHMETERS

#### \*AIRESEARCH MFG. CO., DIV.-THE GARRETT CORP.

American Electronics, Inc., Toller & Cooper Div.  
Bendix Aviation Corp., Pioneer-Central Div.  
A. Biederman, Inc.  
Consolidated Diesel Electric Corp.  
Daystrom Pacific Div., Daystrom, Inc.  
Kollman Instrument Corp., Sub-Standard Coil Products Co. Inc.  
\*WALLACE O. LEONARD, INC.  
Minneapolis-Honeywell Regulator Co.-Aeronautical Div.  
Servomechanisms, Inc.  
Specialties, Inc.  
Waldorf Electronics, Div.-F.C. Huyck & Sons  
Wallace & Tiernan Inc.

### MAGNETIC ANALYSIS EQUIPMENT

R. B. Annis Co.  
Di-An Controls, Inc.  
J. W. Dice Co.  
Harvey-Wells Electronics Inc.  
Magnoflux Corp.  
Rese Engrg., Inc.

### MAGNETIC CLUTCHES

#### See CLUTCHES, MAGNETIC

### MAGNETIC MODULATORS

#### See MODULATORS, MAGNETIC

### MAGNETIC STRIPE FILM

#### See FILM, MAGNETIC STRIPE

### MAGNETIC TAPE DUPLICATORS

#### See DUPLICATORS, MAGNETIC TAPE

### MAGNETIZERS & DEMAGNETIZERS

R. B. Annis Co.  
Cinema Engrg.  
Crucible Steel Co. of America  
Electronic Brazing Co.  
General Electric Co., Apparatus Sales Div.  
General Electric Co., Metallurgical Products Dept.  
Green Rectifier Co.  
Indiana Steel Products Co., The  
Kinexox Div.-Electrometrom Co.  
Libroscope Inc.  
Magnaflex Corp.  
Montgomery Engrg., Co.  
Palo Alto Engrg. Co.  
Quintron Transformer Corp.  
Raytheon Mfg. Co.  
Technical Apparatus Builders

### MAGNETOMETERS

R. B. Annis Co.  
Device Development Corp.  
General Electric Co., Apparatus Sales Div.  
Magnaflex Corp.  
Minneapolis-Honeywell Regulator Co., Boston Div.  
Ohio Semiconductors, Inc.  
Varian Associates

### MAGNETOS & PARTS

American Bosch Armo Corp.  
Bendix Aviation Corp., Scintilla Div.



General Electric Co., Metallurgical Products Dept.  
E. Menough Co.

**NETS**

erovox Corp.  
rnold Engrg. Co., The  
arker Sales Co.  
ructible Steel Co. of America  
ndum Scientific Co.  
riez Mfg. Co.  
erovox Corp. of America  
amilton Watch Co.-Industrial Div.  
diana Steel Products Co., The  
E. Menough Co.  
ational Moldite Co.  
ebel Machine Tool Corp.  
ackpole Carbon Co.  
lman Devices Corp.  
estinghouse Electric Corp., Metals Plant

**NETS, ELECTRO**

llied Control Co., Inc.  
arruthers & Fernandez, Inc.  
oils-Electronics  
ructible Steel Co. of America  
evice Development Corp.  
erovox Corp. of America  
arvey-Wells Electronics Inc.  
oover Electric Co.  
J. Houlihan Co.  
eetronics, Inc.  
odelectric Products Corp.  
ickering & Co., Inc.  
alley Corp., The  
arian Associates

**NETS, FOCUSING**

hristie Machine Works  
ructible Steel Co. of America  
erovox Corp. of America  
olo Alto Engrg. Co.  
arian Associates

**NETS, PERMANENT**

erovox Corp.  
rnold Engrg. Co., The  
arker Sales Co.  
ram Metallurgical & Chemical Co.  
riez Mfg. Co.  
erovox Corp. of America  
eneral Electric Co., Metallurgical Products Dept.  
amilton Watch Co.-Industrial Div.  
diana Steel Products Co., The  
E. Menough Co.  
ational Moldite Co.  
ackpole Carbon Co.  
lman Devices Corp.  
estinghouse Electric Corp., Metals Plant

**IFOLDS**

a. Air System  
b. Fuel  
c. Ignition  
d. Intake & Exhaust  
e. Nitrogen  
f. Oxygen  
g. Primer

erogroup Corp., Jackson Div., b  
ircraft Mechanics, Inc., a, b, d  
merican Tube Bending Co., Inc., d  
o Equipment Corp., e, f  
H. Aircraft Co., Inc., a, b, d  
**BEATON & CORBIN MFG. CO., THE**, a, b, c, d, f  
**BENDIX AVIATION CORP., HAMILTON DIV.**, b  
endix Aviation Corp., Scintilla Div., c  
enson Mfg., Co., The, a, d  
owser, Inc., Defense Dept., b  
eeze Corporations, Inc., c  
lifornia Aircraft Products, b  
pital City Mfg. Co., a, g  
rmaac Aviation, a, b, d thru g  
lonial Aircraft Corp., a, b, d  
oper Development Corp., Sub-Marquardt Aircraft  
Co., b  
riss-Wright Corp., Santa Barbara Div.  
riss-Wright Corp., Wright Aeronautical Div., a, b,  
d, g  
esser Mfg. Div., Dresser Industries, Inc., d  
nbar-Kapelle Inc.-Aircraft Components Div., a, b, d  
**FLEXONICS CORP., AERONAUTICAL DIV.**, a  
W. Galloway Co., a, b, e, f  
llett Mfg., Co., c  
ghland Rim Machine Works Inc., d  
lman Labs., Inc., e, f  
rdwig Honold Mfg. Co., a, d  
uston Fearless Corp., b, e  
ernational Pump & Machine Works, e, f  
iser Aircraft & Electronics, Div.-Kaiser Industries  
Corp., a, d thru g  
**LAVELLE AIRCRAFT CORP.**, a, b  
wis & Saunders, b, d thru g  
nde Co., Div.-Union Carbide Corp., e, f  
theson Co., Inc., The, e, f  
rcury Tool & Mfg. Corp., d  
nogram Precision Industries, a, b, c, d  
ygen Equipment & Service Co., e, f  
rts Engrg. Co., Inc., a, b, d, f  
nn-Michigan Mfg. Corp., d  
ritan Compressed Gas Corp., Aviation Div., f  
d Lion Cabinet Co., Redco Tool Div., d

Republic Mfg. Co., a  
Resistoflex Corp., b, e, f  
Precision Sheet Metal, Inc., a, d, e  
C. F. Roark Welding & Engrg. Co., Inc., a, e  
Robbins Aviation, Inc., a, e, f  
Ryan Aeronautical Co., a, d  
Sargent Engrg. Corp., a, b, e, f  
Sivalco Systems Corp., d, e, f  
Smith-Morris Corp., a thru f  
ainless Steel Products, Inc., a thru g  
Standard-Thomson Corp., Clifford Mfg. Co. Div., d  
Stratos, Div.-Fairchild Engine & Airplane Corp., a  
Superior Air Products Co., f  
Tolley Corp., The, a  
Twin Coach Co., Aircraft-Missiles, d  
United Aircraft Products, Inc., a, b  
Veet Industries, b  
Waste King Corp., Technical Products Div., a, d, e,  
f  
Woolf Aircraft Products, Inc., a thru g

**MANIPULATORS, NUCLEAR**

American Machine & Foundry Co., Government  
Products Group  
American Machine & Foundry Co., Greenwich  
American Research & Mfg. Corp.  
Beaver Precision Products Inc.  
Forrel Birmingham Co. Inc.  
Greer Hydraulics, Inc.

**MANOMETERS**

Bristol Co., The  
Centronix Inc.  
Consolidated Electrodynamics Corp.  
Dynamics Corp.  
Fisher Scientific Co.  
Flow Corp.  
E. Vernon Hill & Co.  
Meriam Instrument Co.  
Minneapolis-Honeywell Regulator Co., Industrial  
Product Group  
Royal Industries, Inc.  
Scientific Instrument Co.  
Trimout Instrument Co.  
Wallace & Tiernan Inc.  
Western Arc Welding, Inc.

**MARKERS, CODE & TAB**

See **CODE & TAB MARKERS**

**MARKING SERVICE, WIRE**

See **WIRE MARKING SERVICE**

**MASKS, APERTURE, TUBE**

American Research & Mfg. Corp.  
Bimbach Radio Co., Inc.  
Croname Inc.  
Falstrom Co.  
Milton Ross Metals Co., The  
Waldam Electronics Inc.

**MASS RATE FLOWMETERS**

See **FLOWMETERS, MASS RATE**

**MATERIALS HANDLING EQUIPMENT**

Acco Equipment Div., American Chain & Cable Co.,  
Inc.  
Aerodex, Inc.  
Air Logistics Corp.  
Aluminum Co. of America  
**\*ALUMINUM SAFETY PRODUCTS, INC.**  
American Machine & Foundry Co., Government  
Products Group  
American Machine & Foundry Co., Greenwich  
Associated Engineers, Inc.  
Baker Industrial Trucks, Div.-Oris Elevator Co.  
Barrett-Christie Co.  
Basic Tool Industries, Inc.  
Brooks & Perkins, Inc.  
Albert H. Cayne Equipment Corp.  
Chain Belt Co.  
Clark Equipment Co.  
Colson Corp., The  
Columbia Research & Development Corp.  
Conco Engrg. Works  
Consolidated Diesel Electric Corp.  
Continental Technical Service, Inc.  
Cramer Mfg. & Engrg., Inc.  
Delsen Corp.  
Deluxe Metal Products Co.  
Dresser Mfg. Div., Dresser Industries, Inc.  
Econoweld Corp.  
Elwell-Parker Electric Co., The  
FWD Corp.  
Fairbanks Co., The  
G. W. Galloway Co.  
Globe Hoist Co.  
Gyrex Corp., The  
Hallicratters  
Hapman Conveyors, Inc.  
Hardman Tool & Engrg., Co.  
Hewitt-Robins, Inc.  
Hufford Corp., The  
Hyster Co.  
Industrial Tools Mfg. Corp., Sub-Pendleton Tool  
Industries, Inc.  
Ingersoll Kalamazoo Div., Borg-Warner Corp.  
Jeffrey Mfg. Co., The  
Link-Belt Co.  
Magline Inc.  
Mc Dowell-Wellman Companies, The

**\*MIRAX CHEMICAL PRODUCTS CORP., METAL CONTAINER DIV.**

Monogram Precision Industries  
National Vulcanized Fibre Co.  
Nelson Labs., Inc.  
Nuclear Products-Erco Div.-ACF Industries, Inc.  
Oliver Corp., The-A. B. Farquhar Div.  
O'Neil-Irwin Mfg. Co.  
Dpelika Welding, Machine & Supply Inc.  
Drance Div.-Food Machinery & Chemical Corp.  
H. K. Porter Co., Inc.  
R & R Engrg. Co.  
Rapids-Standard Co., Inc., The  
Regent Jack Mfg. Co., Inc.  
Revolver Co.  
Richardson Scale Co.  
Richards-Wilcox Mfg. Co.  
Robbins & Myers, Inc., Hoist & Crane Div.  
Rotary Lift Co., Div.-Dover Corp.  
Royal Industries, Inc.  
Sage Equipment Co. Inc.  
Skyline Products, Inc.  
Special Projects Lab., Food Machinery & Chemical  
Corp.  
Thayer Scale Corp.  
Trailmobile Inc.  
Unit Crane & Shovel Corp.  
United States Chemical Milling Corp.  
Van Zelm Associates, Inc.  
Wayne Pump Co., The, Div.-Symington Wayne Corp.  
**\*R. D. WERNER CO., INC.**  
Albert Westing & Sons Inc.

**MATRIXES COMPUTER**

Aeronutronic Systems, Inc., Sub-Ford Motor Co.  
American Felt Co.  
Control Data Corp.  
Di-An Controls, Inc.  
Erie Resistor Corp.  
Ferroxube Corp. of America  
Libroscope Inc.  
Motorola Inc., Military Electronics Div.  
Radiation, Inc.  
Thayer Scale Corp.

**MEASUREMENT INDUCTANCE SPECIALTIES**

See **INDUCTANCE SPECIALTIES, MEASUREMENT**

**MEASUREMENT SERVOS**

See **SERVOS, MEASUREMENT**

**MEASURING CELLS, FORCE**

See **FORCE MEASURING CELLS**

**MEASURING DEVICES, LIQUID LEVEL**

See **LIQUID LEVEL MEASURING DEVICES**

**MEASURING EQUIPMENT, DISTANCE**

See **DISTANCE MEASURING EQUIPMENT**

**MEASURING EQUIPMENT, PRESSURE**

**\*AIRESEARCH MFG. CO., DIV.-THE GARRETT CORP.**  
Bristol Co., The  
Brush Instruments, Div.-Clevite Corp.  
Colvin Labs., Inc.  
Consolidated Diesel Electric Corp.  
Consolidated Electrodynamics Corp.  
Continental Technical Service, Inc.  
Cooper Development Corp., Sub-Marquardt Aircraft  
Co.  
Curtiss-Wright Electronics Div., IMI Branch  
Decker Corp., The  
Dynamics Corp.  
Thomas A. Edison Ind. Instrument Div.-McGraw-  
Edison Co.  
Endevco Corp.  
Fisher Scientific Co.  
General Electric Co., Apparatus Sales Div.  
E. Vernon Hill & Co.  
Intercontinental Dynamics Corp.  
Interstate Engrg. Corp.  
Kin Tel Div.-Cohu Electronics, Inc.  
Midwestern Instruments, Inc.  
Minneapolis-Honeywell Regulator Co., Industrial  
Product Group  
Photon Instrument Co.  
Radiation, Inc.  
Rahn Instruments, Div.-American Machine & Metals,  
Inc.  
Rosemont Engrg. Co.  
Sanborn Co.  
Schaevitz Engrg.  
Scientific Instrument Co.  
Specialties, Inc.  
Steel City Testing Machines, Inc.  
Sun Electric Corp., Aeronautical Div.  
Systron Corp.  
Technology Instrument Corp.  
Telechrome Mfg. Corp.  
Thayer Scale Corp.  
Trans-Sonics, Inc.  
United Electric Controls Co.  
U. S. Science Corp., Div.-Topp Industries, Inc.  
Winzen Research Inc.

**MEASURING EQUIPMENT, TEMPERATURE**

See **TEMPERATURE MEASURING EQUIPMENT**

**MEASURING EQUIPMENT, VIBRATION**

American Research & Mfg. Corp.  
Applied Science Corp. of Princeton

B & K Instruments, Inc.  
 Brush Instruments, Div.-Clevite Corp.  
 Chrysler Corp., Defense Operations Div.  
 Consolidated Electrodynamics Corp.  
 Decker Corp., The  
 Electro Products Laboratories, Inc.  
 Endevco Corp.  
 Epic, Inc.  
 Gaertner Scientific Corp., The  
 Inso Co., Div.-Barry Controls Inc.  
 Kohn & Co., Inc.  
 Kay Electric Co.  
 Land-Air Inc.  
 MB Mfg. Co.  
 Midwestern Instruments, Inc.  
 Minneapolis-Honeywell Regulator Co.-Davies Labs.  
 Div.  
 Pacific Scientific Co.  
 Photon Instrument Co.  
 Radiation, Inc.  
 Schaevitz Engrg.  
 H. H. Scott, Inc.  
 Southwestern Industrial Electronics Co.  
 Space Corp.  
 Sun Electric Corp., Aeronautical Div.  
 Systron Corp.  
 Technology Instrument Corp.  
 Tel-Instrument Electronics Corp.  
 United Electrodynamics, Inc.  
 U. S. Science Corp., Div.-Topp Industries, Inc.

#### MEASURING EQUIPMENT, VSWR

Alford Mfg. Co.  
 Barker Sales Co.  
 Barker & Williamson Inc.  
 California Technical Industries, Div.-Textron Inc.  
 Cubic Corp.  
 Demorony-Bonardi  
 Engrg. Associates  
 FXR, Inc.  
 Hewlett-Packard Co.  
 Kay Electric Co.  
 Polarad Electronics Corp.  
 Radar Design Corp.  
 Sperry Microwave Electronics Co., Div.-Sperry Rand  
 Corp.  
 Telectro Industries Corp.  
 Webcor, Inc., Government Div.

#### MEASURING INSTRUMENTS, THRUST See THRUST MEASURING INSTRUMENTS

#### MECHANICAL CABLE ASSEMBLIES See CABLE ASSEMBLIES, MECHANICAL

#### MECHANICAL OR HAND TOOLS See TOOLS, HAND OR MECHANICAL

#### MECHANICAL RECEIVER TUNING DEVICES See TUNING DEVICES, RECEIVER MECHANICAL

#### MECHANICAL & VACUUM ENGINE CONTROLS See ENGINE CONTROLS, MECHANICAL & VACUUM

#### MECHANISM UNITS, RETRACTING See RETRACTING, MECHANISM UNITS

#### MEGAPHONES, ELECTRONIC Davenport Mfg. Co. Gordon Enterprises Motorola Inc., Military Electronics Div.

#### MEGOhmmeters, VACUUM TUBE

Associated Research, Inc.  
 Brush Instruments, Div.-Clevite Corp.  
 Dresser Industries, Inc.  
 Electro-Tech Equipment Co.  
 Freed Transformer Co. Inc.  
 Greibach Instruments Corp.  
 Industrial Instruments Inc.  
 Keithley Instruments, Inc.  
 Leeds & Northrup Co.  
 MacLead & Hanopol, Inc.  
 Paco Electronics Co., Inc.  
 Precise Development Corp.  
 Precision Apparatus Co., Inc.  
 Slaughter Co., Inc.  
 Telectro Industries Corp.  
 Weston Instruments, Div.-Daystrom, Inc.

#### MEMORY a. Crystal b. Drums c. Multi-Core Magnetics d. Systems e. Tape Loop f. Tubes

ACF Industries Inc., b.  
 Aeronautics Systems, Inc., Sub.-Ford Motor Co.,  
 b, c, d.  
 Airtronics International Corp., b.  
 American Missile Products Co., Inc., b.  
 Anaheim Electronics Co., Inc., e.  
 Barker Sales Co., b, d.  
 Bell & Gossett Co., e.  
 Bendix Computer, Div.-Bendix Aviation, Corp., b, c,  
 d.  
 Burroughs Corp., b, c, d.  
 Centronix Inc., d.  
 Christie Machine Works, b.

Communications Research Co., d.  
 Computer Control Co., Inc., d.  
 Consolidated Controls Corp., b, d.  
 Control Engrg. Co., Div. Jervis B. Webb Co., b, d.  
 DBM Research Corp., e.  
 Di-An Controls, Inc., b, c, d.  
 Donner Scientific Co., d.  
 Dresser Industries, Inc., b, d.  
 Thomas A. Edison Ind. Instrument Div.-McGraw-  
 Edison Co., d.  
 Erie Resistor Corp., d.  
 Ferranti Electric Inc., b, d.  
 Ferroxcube Corp. of America, c.  
 Forbes & Wagner, Inc., c.  
 General Electric Co., Computer Dept., c, d.  
 General Transistor Western Corp., b, e.  
 Haller, Raymond & Brown Inc. Div., Singer Mfg., Co.,  
 d.  
 Hamilton Watch Co.-Industrial Div., b.  
 Hughes Aircraft Co., b, e.  
 IIT Labs.-Ft. Wayne, f.  
 Instrumentation Div.-Ampex Corp., e.  
 Instruments for Industry, Inc., a.  
 \*KEARFOTT CO., INC., c.  
 Kilgen Aircraft Div., d.  
 Librascope Inc., b, c, d.  
 Mica Insulator Div.-Minnesota Mining & Mfg. Co., f.  
 Midwestern Instruments, Inc., b, d, e.  
 Milgo Electronic Corp., c.  
 Minneapolis-Honeywell Regulator Co., Davies Labs.  
 Div., e.  
 Minneapolis-Honeywell Regulator Co., Industrial  
 Product Group, e.  
 Minneapolis-Honeywell Regulator Co., Ordnance  
 Div., d.  
 Minnesota Mining & Mfg. Co., e.  
 Monarch Bearing Co. Inc., b.  
 Motorola Inc., Military Electronics Div., a, c, d.  
 National Cash Register Co., The, Electronics Div.,  
 b, d.  
 Northrop Corp., b, c, d.  
 Northrop Corp., The, Nortronics Div., b, d.  
 Philco Corp., Government & Industrial Div., c, d, e.  
 Power-Tronic Systems Inc., d.  
 Precision Methods & Machines Div.-Textron Inc., b.  
 Raytheon Mfg. Co., f.  
 Servomechanisms, Inc.  
 Tapco Group, Thompson-Ramo-Wooldrige Inc., b.  
 Telechrome Mfg. Corp., e.  
 Telectro Industries Corp., d, e, f.  
 Vard Inc., b.  
 Viro Labs., c, d.  
 Wong Labs, Inc., c, d, e.  
 Webcor, Inc., Government Div., d, e.  
 Winzen Research Inc., e.  
 Wright Engrg. Co., b.

METAL ANODES  
 See ANODES, METAL

METAL CHASSIS  
 See CHASSIS, METAL

METAL CLAD SHEETS  
 Aerona Mfg. Corp.  
 Allegheny Ludlum Steel Corp.  
 Allied Plastics Supply Corp.  
 Alloys Unlimited Inc.  
 Aluminum Co. of America  
 American Printed Circuits Co., Inc.  
 American Silver Co.  
 J. Bishop & Co., Platinum Works  
 Bram Metallurgical & Chemical Co.  
 Bridgeport Brass Co.  
 Continental Diamond Fibre Corp.  
 Curtiss-Wright Corp., Marquette Div.  
 Curtiss-Wright Corp., Propeller Div.  
 Curtiss-Wright Corp., Research Div.  
 Delta Chemical Works, Inc.  
 E. I. Du Pont De Nemours & Co., Inc.  
 Engelhard Industries, Inc.  
 Engelhard Industries Inc., D. E. Makepeace Div.  
 Etched Products Corp.  
 Firestone Tire & Rubber Co., The, Guided Missile  
 Div.  
 General Plastics Corp. of New Jersey  
 Gladding, McBean & Co.  
 Hupp Aviation Co.  
 Kanarr Corp.  
 Kelsey-Hayes Co.  
 Metals & Controls Corp., General Plate Div.  
 Met-L-Wood Corp.  
 Minnesota Mining & Mfg. Co.  
 Monogram Precision Industries  
 National Vulcanized Fibre Co.  
 New England Laminates Co., Inc.  
 Pilgrim Products Inc.  
 Red Lion Cabinet Co., Redco Tool Div.  
 Republic Metals Corp.  
 Standard Metals Corp.  
 Taylor Fibre Co.  
 U. S. Steel Supply Div., United States Steel Corp.  
 United States Chemical Milling Corp.  
 United States Plywood Corp.

#### METAL ANODES See ANODES, METAL

#### METAL CHASSIS See CHASSIS, METAL

METAL CLAD SHEETS  
 Aerona Mfg. Corp.  
 Allegheny Ludlum Steel Corp.  
 Allied Plastics Supply Corp.  
 Alloys Unlimited Inc.  
 Aluminum Co. of America  
 American Printed Circuits Co., Inc.  
 American Silver Co.  
 J. Bishop & Co., Platinum Works  
 Bram Metallurgical & Chemical Co.  
 Bridgeport Brass Co.  
 Continental Diamond Fibre Corp.  
 Curtiss-Wright Corp., Marquette Div.  
 Curtiss-Wright Corp., Propeller Div.  
 Curtiss-Wright Corp., Research Div.  
 Delta Chemical Works, Inc.  
 E. I. Du Pont De Nemours & Co., Inc.  
 Engelhard Industries, Inc.  
 Engelhard Industries Inc., D. E. Makepeace Div.  
 Etched Products Corp.  
 Firestone Tire & Rubber Co., The, Guided Missile  
 Div.  
 General Plastics Corp. of New Jersey  
 Gladding, McBean & Co.  
 Hupp Aviation Co.  
 Kanarr Corp.  
 Kelsey-Hayes Co.  
 Metals & Controls Corp., General Plate Div.  
 Met-L-Wood Corp.  
 Minnesota Mining & Mfg. Co.  
 Monogram Precision Industries  
 National Vulcanized Fibre Co.  
 New England Laminates Co., Inc.  
 Pilgrim Products Inc.  
 Red Lion Cabinet Co., Redco Tool Div.  
 Republic Metals Corp.  
 Standard Metals Corp.  
 Taylor Fibre Co.  
 U. S. Steel Supply Div., United States Steel Corp.  
 United States Chemical Milling Corp.  
 United States Plywood Corp.

METAL FORMING PRESSES  
 See PRESSES, METAL FORMING

METAL GRILLES  
 See GRILLES, METAL

METAL MACHINING  
 Abalon Precision Mfg. Corp.

Aerodex, Inc.  
 Aerona Mfg. Corp.  
 Aircraft Precision Products, Inc.  
 Allen Tool Corp.  
 Amatom Electronic Hardware Co. Inc.  
 American Non Gran Bronze Co.  
 Anchor Metal Spinning Co., The  
 Anchor Specialty Mfg. Co. Inc.  
 Arnolt Corp.  
 Astronautics Engrg. Co.  
 B. H. Aircraft Co., Inc.  
 W. A. Beauchoin & Sons Inc.  
 Bergen Carbide Co.  
 Bland Burner Co., The  
 E. W. Bliss Co.  
 Bridgeport Brass Co.  
 Brown Engrg. Co., Inc.  
 Bruce Engrg. Co.  
 Brush Beryllium Co., The  
 California Aircraft Products  
 Capital City Mfg. Co.  
 Carmac Aviation  
 Chicago Screw Co., The, Div.-Standard Screw Co.  
 C. B. Christiansen Co.  
 Christie Machine Works  
 Continental Technical Service, Inc.  
 Cooper Development Corp., Sub.-Marquardt Aircraft  
 Co.  
 Crompton & Knowles Corp.  
 Curtiss-Wright Corp.-Marquette Div.  
 Curtiss-Wright Corp.-Propeller Div.  
 Curtiss-Wright Corp.-Wright Aeronautical Div.  
 Diversey Engrg. Co.  
 Dresser Industries, Inc.  
 Electro-Mechanical Products Co.  
 Electronic Parts Mfg. Co., Inc.  
 Elzee Metal Products Co., Inc.  
 Etched Products Corp.  
 Farrel Birmingham Co. Inc.  
 Farwell Metal Fabricating  
 Federal Machine Co. Inc.  
 Fletcher Mfg. Co., Inc., The  
 Freeman Co., The  
 GAR Mfg. Corp.  
 Gordon Enterprises  
 Graflex Inc.  
 Hardman Tool & Engrg. Co.  
 Highland Rim Machine Works Inc.  
 Hufford Corp., The  
 Hughes Tool Co., Aircraft Div.  
 Hupp Aviation Co.  
 Intercontinental Mfg. Co., Inc.  
 Kaiser Aircraft & Electronics, Div.-Kaiser Industri-  
 Corp.  
 Kanarr Corp.  
 M. W. Kellogg Co., The  
 Kelsey-Hoyes Co.  
 Kalcast Industries-Div. Thompson Ramo Wooldrige  
 Inc.  
 E. Knigsflew Stamping & Tool Co.  
 Ladish Co.  
 La Pointe Industries Inc.  
 \*LAVEZZI MACHINE WORKS  
 Lux Clock Mfg. Co., Inc.  
 Mercury Tool & Mfg. Corp.  
 Meridian Metalcraft, Inc.  
 Merz Engrg., Inc.  
 Monogram Precision Industries  
 National Research Corp.  
 Nordberg Mfg. Co.  
 Dnsrud Machine Works, Inc.  
 Pacific Coast Engrg. Co.  
 Papesch & Kilstad, Inc.  
 Parts Engrg. Co., Inc.  
 Phillips & Davies Inc.  
 Piasecki Aircraft Corp.  
 Portland Copper & Tank Works Inc.  
 Precision Shapes, Inc.  
 R & R Engrg. Co.  
 Ravenna Metal Products, Div.-Standard Screw Co.  
 Red Devil Mfg. Co.  
 Red Lion Cabinet Co., Redco Tool Div.  
 Edw. Renneburg & Sonos Co.  
 Rimak, Inc.  
 C. F. Roark Welding & Engrg. Co., Inc.  
 Rohr Aircraft Engrg. Co.  
 Ryan Aeronautical Co.  
 Sheffield Corp., The, Sub.-Bendix Aviation Corp.  
 Sinclair Mfg. Co.  
 Specialties Mfg. Co., Inc.  
 Stainless Steel Products, Inc.  
 Stanley Aviation Corp.  
 Taft-Peirce Mfg. Co., The  
 Teiner Engrg. Corp.  
 Texas Metal & Mfg. Co., Inc.  
 Arthur Tickle Engrg. Works, Inc.  
 Turbo Products, Inc.  
 United Aircraft Products, Inc.  
 United Mfg. Co., The  
 United Plating Works  
 Washington Machine & Tool Works, Inc.  
 Wayne Pump Co., The, Div.-Symington Wayne Corp.  
 Western Iron & Foundry Co., Inc.  
 Wheland Co., The  
 Wilks Precision Instrument Co., Inc.

METAL TO METAL ADHESIVES  
 See ADHESIVES, METAL TO METAL

**METAL NEEDLES**  
**ee NEEDLES, METAL**

**METAL OR PLASTIC PLATES**  
**ee PLATES, METAL OR PLASTIC**

**METAL TREATING**

erodex, Inc.  
 eronca Mfg. Corp.  
 autom Electronic Hardware Co. Inc.  
 . W. Bliss Co.  
 rooks & Perkins, Inc.  
 rown Engrg. Co., Inc.  
 alifornia Aircraft Products  
 hicago Screw Co., The, Div.-Standard Screw Co.  
 romption & Knowles Corp.  
 urtiss-Wright Corp.-Wright Aeronautical Div.  
 iversey Engrg. Co.  
 resser Industries, Inc.  
 ertrotherm Co., The  
 rflex Inc.  
 igh Vacuum Equipment Corp.  
 ertcontinental Mfg. Co., Inc.  
 elite Corp.  
 . W. Kellogg Co., The  
 olcast Industries-Div. Thompson Ramo Wooldridge  
 Inc.  
 ux Clock Mfg. Co., Inc.  
 etalestro Lab.  
 kite Products, Inc.  
 Josecki Aircraft Corp.  
 rtland Copper & Tank Works Inc.  
 nschoff, Co.  
 d Lion Cabinet Co., Redco Tool Div.  
 imak, Inc.  
 hr Aircraft Corp.  
 yon Aeronautical Co.  
 lectronic Plating Co., Inc., Div.-Spectranome  
 Plating Co., Inc.  
 ainless Steel Products, Inc.  
 anley Aviation Corp.  
 erner Engrg. Corp.  
 nited Plating Works  
 . S. Industries, Inc.  
**VALL COLMONOY CORP., STAINLESS  
 PROCESSING DIV.**  
 ve Industries

**METALLIC BUSHINGS**  
**ee BUSHINGS, METALLIC**

**METALLIC EXTRUSIONS**  
**ee EXTRUSIONS, METALLIC**

**METALLIC FITTINGS**  
**ee FITTINGS, METALLIC**

**METALLIC GASKETS**  
**ee GASKETS, METALLIC**

**METALLIC MOUNTINGS**  
**ee MOUNTINGS, METALLIC**

**METALLIC PAINT**  
**ee PAINT, METALLIC**

**METALLIC SLEEVES**  
**ee SLEEVES, METALLIC**

**METEOROLOGICAL EQUIPMENT, ELECTRONIC**

rolab Development Co.  
 merican Machine & Foundry Co., Government Products  
 Group  
 otation Dynamics Corp.  
 J Electronics, Borg-Warner Corp.  
 ckman & Whitley, Inc., Missile Products Div.  
 ndix Aviation Corp., Friez Instrument Div.  
 oper Development Corp., Sub-Marquardt Aircraft  
 Co.  
 itex Corp.  
 rratron Electronics Co., Inc.  
 o Pointe Industries Inc.  
 torola Inc., Military Electronics Div.  
 adiation, Inc.  
 . C. Stewart  
 pco Group, Thompson-Ramo-Wooldridge Inc.  
 ele-Dynamics Inc.  
 ctory Engrg. Corp.

**METEOROLOGICAL INSTRUMENTS**

rolab Development Co.  
 igital Instrument Co.  
 J Electronics, Borg-Warner Corp.  
 ckman & Whitley, Inc., Missile Products Div.  
 ndix Aviation Corp., Friez Instrument Div.  
 oper Development Corp., Sub-Marquardt Aircraft  
 Co.  
 truments Corp., The  
 neapolis-Honeywell Regulator Co., Industrial  
 Product Group  
 torola Inc., Military Electronics Div.  
 igital Instrument Co.  
 . C. Stewart  
 pco Group, Thompson-Ramo-Wooldridge Inc.  
 ele-Dynamics Inc.  
 ilitated Electrodynamics, Inc.  
 illace & Tiernan Inc.

**METAL SHUNTS**  
**ee SHUNTS, METAL**

**METERS**

a. Acceleration  
 b. Ammeter  
 c. Ammeter RF  
 d. Attenuation  
 e. Audio  
 f. Cable Testing  
 g. Capacitance  
 h. Conductance  
 i. Counting Rate  
 j. Counting Rate, Nuclear  
 k. D Arsonval  
 l. Decibel  
 m. Deflection  
 n. Deviation  
 o. Distortion & Noise  
 p. Dosimeter  
 q. Dosimeter, Nuclear  
 r. Elapsed Time  
 s. Electrometer  
 t. Electronic Micrometer  
 u. Events-Per-Unit-Time  
 v. Exposure for Film  
 w. Field Strength  
 x. Flow  
 y. Flutter  
 z. Flux  
 o1. FM Deviation  
 o1. Footcandle  
 c1. Frequency  
 d1. Galvanometer  
 e1. Goniometer  
 f1. Grid Dip  
 g1. Impedance  
 h1. Industrial  
 i1. Infrared  
 j1. Intermodulation  
 k1. Kilovolt  
 l1. Kilowatt  
 m1. Light  
 n1. Megohm  
 o1. Microfarad  
 p1. Microvolt  
 q1. Microwave  
 r1. Milliamper  
 s1. Millivolt  
 t1. Modulation  
 u1. Moisture, Electronic  
 v1. Multimeter  
 w1. Multiplier  
 x1. Noise, Electrical Measurement  
 y1. Ohm  
 z1. Output, Electrical Measurement  
 o2. Output, RF  
 b2. Panel  
 c2. PH Meters, Recorders & Compotators  
 d2. Phase  
 e2. Photoelectric Reflection  
 f2. Power Output  
 g2. Pressure  
 h2. Pyrameter  
 i2. Q  
 j2. Radiation, Nuclear  
 k2. Rate  
 l2. Ratio  
 m2. Recording  
 n2. RF Power  
 o2. Snap Around  
 p2. Sound Level  
 q2. Spectral  
 r2. Standing Wave Ratio  
 s2. Tachometer  
 t2. Tension  
 u2. Thermocouple  
 v2. Thermometer  
 w2. Thrust  
 x2. Time  
 y2. Torque  
 z2. Ultra-Violet  
 o3. Vacuum Tube Volt  
 b3. Vibrating Reed  
 c3. Vibration  
 d3. Viscosity, Electronic  
 e3. Volt-Ohm, Electronic  
 f3. Watt  
 g3. Watt-Hour  
 h3. Wave  
 i3. Wow & Flutter  
 j3. X-Ray Intensity

Acromog Inc., c-1  
 Acton Labs. Inc., g-1, d-2, a-3  
 Actuator Products Div., Geotronics Corp., u, h-1,  
 b-2, k-1, s-2  
 Advanced Products Co., The, r, x-2  
 Ad-Yu Electronics Lab., Inc., c-1, d-2  
 Aero Instrument Co., r, c-1, x-2, b-3  
 Aerojet-General Corp., i-1  
 Aircom Inc., c-1, q-1, r-2  
 Aircom Inc. of New Jersey, c-1, q-1, r-2  
**\*AIRESEARCH MFG. CO., DIV.-THE GARRETT  
 CORP., w-2**  
 Airguide Instrument Co., v-2  
 Airpax Electronics Inc., Seminole Div., i, c-1, h-1, s-2,  
 i-3  
 Allied Research Products, Inc., b  
 Amelco, Inc., e-1  
 Ameroc Inc., h-3  
 American Aeroparts, o, b, c, r, x  
 American Machine & Foundry Co., Government Products  
 Group, o, c-1, f-2, f-3  
 American Machine & Foundry Co., Greenwich  
 American Measurement & Control, Inc., x

American Missile Products Co., Inc., g  
 Amplifier Corp. of America, n, y, i-3  
 Amthor Testing Instrument Co., Inc., m-2, s-2  
 Analytical Measurements, Inc., c-2  
 Antenna & Radome Research Associates, d  
 Anton Electronic Labs., Inc., b, i, j, k, r, n-1, v-1,  
 b-2, i-2, a-3, i-3  
 Assembly Products, Inc., b, c, k, h-1, m-1, p-1, r-1,  
 s-1, y-1, b-2, h-2, u-2, a-3, e-3, f-3  
 Associated Research, Inc., f, k-1, n-1, v-1, y-1, e-3  
 Astronatics Engrg. Co., x  
 Audio Instrument Co., Inc., j-1  
 Automation Products, Inc., d-3  
 Avion, Inc., x  
 Avo Ltd., b, v-1, e-3  
 Avtron Mfg., Inc., a-1, c-1, t-1  
 Axler Associates Inc., i-1, z-2  
 B & F Instruments, Inc., t-2, w-2, y-2  
 B & H Instrument Co., Inc., c-1, s-1, h-2, s-2, u-2  
 B & K Instruments, Inc., e-1, n-1, p-2, c-3  
 Boird-Atomic Inc., j, u, i-2, g-2  
 Bellontine Labs., Inc., g, v-1, a-3  
 Barker & Williamson, Inc., o, c-1, f-1, a-2, n-2, r-2  
 Beckman Instruments, Inc., Berkeley Div., r, u, c-1,  
 y-1, s-2, x-2, e-3  
 Beckman-Scientific & Process Instruments Div., c-2  
 Beckman & Whitley, Inc., Missile Products Div., u-2  
 Beede Electrical Instrument Co. Inc., b, c, k, l, r,  
 d-1, k-1, n-1, s-1, b-2, h-2, p-2, s-2, x-2  
 Bendix Aviation Corp., Pioneer-Central Div., x  
 Bendix Aviation Corp., York Div., e-3  
 Bergen Labs., Inc., r, v-1  
 Bevo Lab., Inc., f, i, r, u, j-3  
 James G. Biddle Co., d-1, n-1, y-1, s-2, b-3  
 A. Biederman, Inc., b-2, s-1  
 Boonton Radio Corp., i-2  
 Bowser, Inc., Defense Dept., x, h-1  
 Briggs Associates, Inc., h-3  
 Bristol Co., The, b, i, k, n, r, s, u, x, c-1, d-1, h-1,  
 k-1, l-1, n-1, p-1, r-1, s-1, u-1, y-1, b-2, c-2, f-2,  
 g-2, h-2, m-2, s-2, u-2, v-2, x-2, d-3  
 Brooks Rotometer Co., x  
 Brunswick Instruments, n-2  
 Brush Instruments, Div.-Clevis Corp., o, k thru n, u,  
 d-1, g-1, h-1, p-1, s-1, t-1, u-1, y-1, a-2, m-2, p-2,  
 s-2 thru x-2  
 Budd Stanley Co. Inc., c-1, q-1  
 Budelman Electronics Corp., a-1, x-1  
 California Technical Industries, Div.-Textron Inc., f,  
 e-1, r-2  
 Cambridge Instrument Co., Inc., k, p, z, c-2  
 Centronix Inc., i  
 Chemalloy Electronics Corp., q-1  
 Chesapeake Instrument Corp., g-1  
 Collins Engrg. Corp., b  
 Columbia Electric Mfg. Co., b  
 Com-Air Products, Div.-A-S R Products Corp., x  
 Conax Corp., u-2  
 Consolidated Controls Corp., g-2, w-2, y-2  
 Consolidated Diesel Electric Corp., g-2, v-2  
 Consolidated Electrodynamics Corp., d, u-1, g-2, c-3  
 Convaiv-Instruments, Div.-General Dynamics Corp.,  
 s-1  
 Cornell-Dubilier Electric Corp., g  
 Cramer Controls Corp., r, x-2  
 Cubic Corp., k-1, n-1, p-1, y-1, i-2, f-3  
 Curtiss-Wright Corp., Research Div., j  
 DBM Research Corp.,  
 D. & R. Ltd., i-3  
 Doven Co., The, e, l, o, e-1, x-1, f-2, p-2, a-3, e-3  
 Dayton Mfg. Co., f, k-1, n-1, x-1, p-2  
 Dayton Pacific Div.-Daystrom, Inc., o, s-1, g-2,  
 h-2, w-2  
 DeJur-Amsco Corp., Electronic Sales Div., b, k, l, r,  
 v, k-1, m-1, n-1, s-1, v-1, z-1, b-2, p-2  
 Del Electronics Corp., k-1, w-1  
 Demoray-Bonardi, c-1, q-1  
 Device Development Corp., z  
 Diamond Antenna & Microwave Corp., c-1, q-1, h-3  
 J. W. Dice Co., t, n-1, y-1  
 W. C. Dillon & Co., Inc., t-2, v-2  
 Dimco-Gray Co., x-2  
 Divco-Wayne Electronics Div., Divco-Wayne Corp.,  
 c-1  
 Donner Scientific Co., o, a, y, w-1, i-3  
 Douglas Microwave Co., Inc., c-1, q-1, n-2  
 Dresser Industries, Inc., n-1, r-1, w-1, y-1, a-3, e-3  
 M. Ducommun Co., x-2  
 Duront Mfg. Co., h-1  
 Dynamics Instrumentation Co., Div.-Alberhill Corp.,  
 p-1, s-1  
 Dytronics Co., d-2  
 Eastern Specialty Co., The, d-2  
 Thomas A. Edison Ind. Instrument Div.-McGraw-  
 Edison Co., k, e-1, g-1, g-2, i-2, y-2  
 Eldorado Electronics, r, e-2, i-2, x-2  
 Electric Auto-Lite Co., The, b  
 Electric Design & Mfg. Co., b, k, k-1, r-1, s-1, b-2  
 Electric Instruments, Inc., b, g, k-1, n-1, a-1, p-1, r-1,  
 s-1, y-1, i-2, u-2, e-3  
 Electro Precision Corp., u  
 Electro Products Laboratories, Inc., s-2  
 Electronic Applications, Inc., g, n, o, s, y, a-1, c-1,  
 j-1, y-1, i-3  
 Electronic Engrg. Co. of California, u, x-2  
 Electronic Instrument Co., Inc. (EICO), a-3, e-3  
 Electronics of Clearfield, Inc., n-2, a-3, f-3  
 Electro-Tech Equipment Co., b, k, r, b-1, c-1, d-1,  
 k-1 thru m-1, n-1, s-1, v-1, w-1, y-1, b-2, h-2,  
 m-2, a-2, p-2, s-2, u-2, v-2, x-2, b-3, e-3, f-3  
 Elgin Micronics Div.-Elgin National Watch Co., o, r,  
 x-2

Empire Products Sales Corp., d, a, w, t-1, x-1.  
Engg. Associates, c-1, i-2, r-2.  
Epig, Inc., b, f, g, r, s, c-1, d-1, g-1, n-1, a-1, p-1,  
r-1, s-1, h-1, r-2, u-2, b-3, c-3.  
Erdco Engrg. Corp., f, c.  
Eric Resistor Corp., j, r, u, x, c-1.  
Etched Products Corp., b-2.  
FXR Inc., d, p, q-1, t-1, x-1, l-2, r-2, h-3.  
Federal Mfg. & Engrg. Corp., c-1.  
Federal Products Corp., t.  
Ferranti Electric Inc., k-1, d-3, g-3.  
Fischer & Porter Co., i, u, x, c-1, h-1, g-2, k-2, l-2,  
m-2.  
Fisher Research Lab., Inc., q, s-1, u-1, x-1, i-2, a-3,  
c-3.  
Fisher Scientific Co., c-2, h-2, v-2.  
Flow Corp., x, p-1, s-1, f-2.  
Flow Measurements Corp., x.  
John Fluke Mfg. Co., Inc., q-3.  
Fried Transformer Co., Inc., i-2.  
Gardner Laboratory, Inc., c-2, e-2, h-2, v-2.  
General Communication Co., b, k, r.  
General Electric Co., Apparatus Sales Div., b, k, r,  
v, x, c-1, d-1, h-1, k-1, l-1, m-1, r-1, s-1, z-1, a-2,  
f-2, h-2, i-2, m-2, n-2 a-2, s-2, u-2 thru x-2, f-3,  
g-3, j-3.  
General Electric Co., X-Ray Dept., e-1, j-3.  
Gordon Enterprises, r, v, b-1, m-1, x-2.  
Greibach Instruments Corp., b, k, d-1, n-1, r-1, s-1,  
v-1, y-1, b-2, u-2, e-3.  
Guided Missile Div.-DeHavilland Aircraft of Canada,  
Ltd., n.  
Hagan Chemicals & Controls, Inc., x, g-2.  
Halter, Roymond & Brown Inc. Div., Singer Mfg. Co.,  
i-1.  
Hallikainen Instruments, d-3, e-3.  
Hamilton Watch Co.-Industrial Div., r, x-2.  
Hammel-Dahl Div.-General Controls Co., x.  
\*A. W. HAYDON CO., THE, r, x-2.  
Hays Corp., The, g-2.  
Helipot Div.-Beckman Instruments Inc., b, c-1, b-2.  
Hewlett-Packard Co., b, c, d, h, l, m, n, r, u, a-1,  
g-1, h-1, p-1 thru t-1, a-2, m-2, r-2, s-2, a-3,  
j-3.  
John W. Hobbs Corp., Div.-Stewart-Warner Corp., r.  
Hoyt Electrical Instrument Works, Burton Rogers  
Co., b, k, l, r-1, s-1, a-2.  
Humphrey, Inc., a.  
Hycon Mfg. Co., v, x-1, e-2.  
I-L-S Instrument Div., The Meriam Instrument Co., r,  
u, x, s-2.  
Ideal Precision Meter Co., Inc., b, e, k, l, r-1, s-1,  
a-2.  
Illinois Testing Laboratories, Inc., h-2, u-2, v-2.  
Impact-D-Graph Corp., The, a.  
Industrial Control Co., r-1, s-1.  
Industrial Instruments Inc., f, n-1.  
Industrial Test Equipment Co., d-2, i-2, a-3.  
Industrial Timer Corp., x-2.  
Industrial Winding Machinery Corp., t-2.  
Inertia Switch, Inc., u.  
Instrument Labs., z-1, a-3, e-3.  
Instruments Corp., The, s-2.  
International Instruments Inc., b, k, l, r-1, s-1, b-2.  
International Register Co., d-2.  
International Research & Development Corp., c-3.  
Jennings Radio Mfg. Corp., k-1.  
Kahn & Co., Inc., g, c-1, s-2.  
Kauke & Co., s-1.  
Kay Electric Co., e, f, l, a, y, c-1, p-1, x-1, a-2, i-2,  
n-2, p-2, a-3, c-3, i-3.  
\*KEARFOOT CO., INC.  
Keithley Instruments, Inc., s, k-1, n-1, p-1, s-1, v-1,  
a-3, e-3.  
Kin Tel Div.-Cohu Electronics, Inc., d-1, p-1, r-1,  
s-1, x-1, p-2.  
Kollsman Instrument Corp., Sub.-Standard Coil  
Products Co., Inc., s-2, w-2.  
Korda Industries, x.  
Harold Kruger Instruments, c-2.  
Lampkin Labs., Inc., M. R. Div., n, a-1, c-1, t-1.  
Land-Air Inc., i, p, q, u, x, c-1, k-2, q-2, c-3.  
Londis & Gyr Inc., g-3.  
Londsverk Electrometer Co., The, i-2.  
Luvio Laboratories Inc., c-1.  
Leeds & Northrup Co., f, g, h, b-1, d-1, g-1, n-1, p-1,  
r-1, s-1, y-1, c-2, h-2, m-2, u-2, v-2.  
\*WALLACE O. LEONARD, INC., a.  
\*LEWIS ENGRG. CO., THE, h-2, u-2, v-2.  
Librascope Inc., x.  
Ling Electronics, Inc., c-3.  
MB Mfg. Co., c-3.  
MacLeod & Hanopol, Inc., g.  
Magnetic Instrument Co., Inc., g, p, q, w-1, i-1, k-2,  
l-2, u-2.  
Magtrol, Inc., y-2.  
Marconi Instruments, g, n, a, a-1, i-1, n-1, a-1, u-1,  
x-1, y-1, z-1, a-2, f-2, h-2, n-2, q-2, a-3, e-3, f-3,  
h-3.  
Marion Instrument Div., b, k, l, r, r-1, s-1, b-2.  
Moxon-Neilan, Inc., x, m-2.  
Motheson Co., Inc., The, g-2.  
W. L. Moxson Corp., The, x.  
Measurements Div., McGraw Edison Co., f-1, j-1.  
Menlo Research Lab., p, q, c-2, j-2.  
Meridian Metalcraft, Inc., q-1.  
Meters Inc., b, k, l, d-1, k-1, n-1, r-1, s-1, v-1, y-1,  
b-2, h-2, s-2, v-2.  
Metronix, Inc., Sub.-Assembly Products, Inc., g, s-1,  
x-2, d-3.  
Mica Insulator Div.-Minnesota Mining & Mfg. Co.,  
i-3.

Mico Instrument Co., h-3.  
Microwave Associates, Inc., c-1, q-1.  
Midwestern Instruments, Inc., y.  
Millistec Corp., c-1.  
Minico Products, Inc., w-2.  
Minneapolis-Honeywell Regulator Co., Boston Div.,  
d-1, p-1.  
Minneapolis-Honeywell Regulator Co., Davies Labs.  
Div., y.  
Minneapolis-Honeywell Regulator Co., Industrial  
Div., k, x, c-1, d-1, h-1, h-2, p-1, r-1, s-1, u-1, c-2, f-2,  
g-2, h-2, m-2, s-2, u-2, v-2, w-2, y-2.  
Minneapolis-Honeywell Regulator Co., Industrial  
Product Group, b, f, g, h, k thru n, s, t, x, y, b-1,  
c-1, d-1, g-1, h-1, k-1, l-1, n-1, a-1, p-1, r-1, s-1, u-1,  
v-1, w-1, y-1, z-1, b-2, c-2, d-2, f-2, g-2, h-2, i-2,  
m-2, n-2, u-2, v-2, w-2, f-3, i-3, j-3.  
Monogram Precision Industries, q-1.  
Motorola Inc., Military Electronics Div., a-1, j-1, t-1,  
r-2.  
George L. Nankervis Co., x, h-1, y-2.  
Narda Microwave Corp., The, g-1, q-1, l-2, r-2.  
National Electronics, b, c, k, l, b-1, c-1, d-1, h-1,  
k-1 thru n-1, p-1, r-1, s-1, v-1, y-1, b-2, f-2, m-2,  
s-2, v-2, b-3, f-3, g-3.  
National Instrument Laboratories, Inc., x.  
National Spectrographic Labs., Inc., p-2.  
New England Scientific Instruments Co., b, k, c-1,  
d-1, k-1, l-1, n-1, a-1, r-1, s-1, u-1, d-2, m-2, s-2,  
v-2, w-2, f-3, g-3.  
Non-Linear Systems, Inc., s-1, y-1, e-3.  
North Atlantic Industries, Inc., d-2, a-3.  
North Hills Electric Co., Inc., i-2.  
Northeastern Engrg. Inc., c-1.  
Nuclear Corp. of America, j-2.  
Nuclear-Chicago Corp., j, q, s, j-2, b-3.  
Paul Nurches Co., r-1, b-2.  
Dhio Semiconductors, Inc., z, f-2, f-3.  
Pace Electrical Instruments Co., Inc., b, k, l, d-1,  
h-1, r-1, s-1, b-2.  
Pacific Scientific Co., a, t-2, u-2, v-2, c-3.  
Paco Electronics Co., Inc., v-1, a-3, e-3.  
Palmer Thermometers, Inc., v-2.  
Patterson, Moos Div.-Universal Winding Co., Inc., i-1.  
Parkin-Elmer Corp., i-1.  
Peschel Electronic, Inc., f, h-1, k-1.  
Phaoston Instrument & Electronic Co., b, k, k-1,  
r-1, s-1, v-1, b-2.  
Philo Corp., Government & Industrial Div.  
Phillips Aviation Co.-Maples Gears, x.  
Photobell Co., Inc., i, g-1, k-1, l-1, r-1, s-1, v-1,  
y-1, a-2, f-3.  
Photocon Research Products, l.  
Photovolt Corp., c-2, e-2.  
Photron Instrument Co., u, d-1, m-2.  
Physics Research Laboratories, Inc., b, d-1, l-1,  
n-1, r-1, s-1, v-1, y-1, a-2, f-3.  
Picker X-Ray Corp., i-2, j-3.  
Pioneer Tool & Engrg. Co., e thru h, l thru a, w, g-1,  
n-1 thru t-1, x-1, z-1, a-2, c-2, u-2, e-3.  
Polarad Electronics Corp., w, q-1, l-2, n-2, r-2.  
Polytechnic Research & Development Co., Inc., c-1,  
r-2.  
Portchester Instrument Corp., c-1, q-1.  
Potter Aeronautical Corp., i, u, x, k-2, l-2, s-2.  
Power-Tronic Systems Inc., a, m, n, w, x, z, a-1, c-1,  
f-2, y-2, f-3.  
Precision Development Corp., b thru e, g, l, s, d-1, f-1,  
g-1, k-1, l-1, a-1 thru t-1, v-1, w-1, y-1, z-1, a-2, m-2,  
n-2, a-3, f-3, g-3.  
Precision Apparatus Co., Inc., v-1, a-3, e-3.  
Pyrometer Instrument Co., Inc., h-2, u-2, v-2.  
Q. V. S. Inc., b, c, k, l, d-1, k-1, r-1, b-2, u-2.  
Quan-Tech Labs., a, h-3.  
Radar Design Corp., q-1, h-3.  
Radiation Instrument Development Lab., Inc., i, j, q,  
l-2.  
Rawson Electronic Instrument Co., b, k, z, k-1, r-1,  
s-1, v-1, u-2, f-3.  
Revere Corp. of America, x.  
Rixon Electronics Inc., x-1.  
Rochester Mfg. Co., Inc., b.  
Milton Roy Co., c-2.  
Arthur C. Ruge Associates, Inc., v-2.  
Sage Labs., Inc., h-3.  
Sanborn Co., n, c-1, g-2, f-3.  
Santogmo Electric Co., g-3.  
Santa Barbara Research Center, i-1.  
Schutte & Koerting Co., x.  
Scientific Instrument Co., g-2, v-2.  
Scientific-Atlanta, Inc., l, a-2.  
H. H. Scott, Inc., e, l, a, p-2, c-3.  
Secc Mfg. Co., a-3.  
Shellcross Mfg. Co., f, k, l, d-1, k-1, n-1, y-1.  
Simpson Electric Co., b, c, k, l, r, w, d-1, k-1, l-1,  
r-1, s-1, v-1, w-1, h-1, b-2, u-2, v-2, c-3, f-3.  
Slaughter Co., Inc., l.  
A. O. Smith Corp., Smith-Erie Div., x.  
Snap-On-Tools Corp., s-2.  
Solar Aircraft Co., c-1.  
Solartion Inc., x-1, z-1, c-2, d-2.  
Southwestern Industrial Electronics Co., g, h, l, a,  
s, d-1, g-1, h-1, k-1, n-1, p-1, s-1, t-1, y-1, c-2,  
s-2, u-2, a-3, e-3.  
Space Corp., w-2.  
Specioty Engrg. & Electronics Co., p, q, v-1, i-2.  
Sperry Microwave Electronics Co., Div.-Sperry Rand  
Corp., q-1, f-2.  
Standard Controls, Inc., x, g-2.  
Stoddard Aircraft Radio Co., Inc., w.  
Strand Engrg. Co., q.  
H. W. Sullivan Ltd., e-1, s-1, w-1.

Sun Electric Corp., Aeronautical Div., b thru e, k, l,  
r, d-1, k-1, r-1, s-1, t-1, z-1, a-2, b-2, n-2, u-2.  
B. K. Swane Mfg. Co., y-2.  
Syston Corp., h, i, r, u, x, a-1, c-1, d-2, g-2, k-2,  
l-2, s-2, w-2, z-2, y-2.  
W. A. Taylor & Co., c-2.  
Technical Apparatus Builders, b, k, s, h-1, r-1, s-1,  
w-1.  
Technology Instrument Corp., g-1, d-2, g-2, a-3, e-3.  
Telera Industries Corp., w, x-1, y-1, p-2, a-3.  
Telrad Mfg. Corp., c-1, q-1.  
Teletronic Lab. Inc., c-1.  
Tempo Instrument Inc., x-2.  
Tenston, Inc., t-2.  
Thermo Electric Co., Inc., s-1, h-2, u-2.  
Thielok Instrument Corp., d-2.  
Thiokol Chemical Corp., z.  
Thwing-Albert Instrument Co., h-2, u-2, v-2.  
Torque Controls Inc., r-2, y-2.  
Towaco Electronics, n.  
Trans-Sonics, Inc., x, g-2, v-2.  
Trio Laboratories, Inc., n-1, d-2, a-3.  
Triplett Electrical Instrument Co., b, c, k, l, k-1,  
n-1, r-1, s-1, v-1, x-1, y-1, z-1, a-2, a-3, e-3, f-3.  
Varo Mfg. Co., Inc., c-1, s-2.  
Victor R. F. & Microwave Co., q-1, z-1, d-2, h-3.  
Wacline, Inc., b, a, e, k, l, r, s, c-1, k-1, r-1, s-1,  
v-1, y-1, z-1, a-2, b-2, n-2, p-2, s-2, u-2, x-2.  
Waldom Electronics Inc., c, k, l, r, s, y-1, a-2.  
Wallace & Tiernan Inc., x, c-2, g-2, w-2, y-2.  
Walham Electronics Corp., a-1, t-1, e-3.  
Walham Engrg., Inc., a, r, x-2.  
Walham Precision Instrument Co., r, x-2.  
Wang Labs., Inc., c-1.  
Wauh Engrg. Co., x, s-2.  
Waveline, Inc., c-1, q-1, r-2.  
Weinschel Engrg., n-2.  
Weksler Instruments Corp., g-2, v-2.  
West Instrument Corp., h-1, r-1, s-1, t-2, m-2, u-2,  
v-2.  
Westberg Mfg. Co., s-2.  
Westinghouse Electric Corp., b, k-1, l-1, r-1, s-1,  
y-1, z-1, i-2, u-1, e-3, f-3, g-3, i-3, j-3.  
Weston Instruments, Div.-Daystrom, Inc., b, c, g, i,  
k, l, r, t, v, z, b-1, d-1, f-1, g-1, k-1 thru n-1, p-1,  
r-1 thru w-1, y-1, z-1, b-2, d-2, k-2, l-2, m-2, a-2,  
p-2, s-2, u-2, v-2, a-3, e-3, f-3.  
Westronics Inc., x, c-1, h-1, c-2, g-2, h-2, i-2 thru  
m-2, s-2, t-2, u-2, w-2, x-2, d-3.  
Wintronic, d-2.  
Wollensok Optical Co., v, b-1.  
Yellow Springs Instrument Co., The, v-2.  
Zoomer Inc., b-1, m-1, e-2.  
**MICA PLATE & SHEET**  
Allied Plastics Supply Corp.  
Bram Metallurgical & Chemical Co.  
Continental Diamond Fibre Corp.  
Ford Radio & Mica Corp.  
Integrated Mica Corp.  
Magnetic Shield Div., Perfection Mica Co.  
Mica Fabricating Co.  
Miccrafit Products Inc.  
Minnesota Mining & Mfg. Co.  
Spruce Pine Mico Co., Inc.  
Sylvania Electric Products Inc., Parts Div.  
United Mineral & Chemical Corp.  
Westinghouse Electric Corp.  
**MICROMANOMETERS**  
Consolidated Electrodynamics Corp.  
Dynametrics Corp.  
Flow Corp.  
Wallace & Tiernan Inc.  
**MICROMETERS, ELECTRONIC**  
Curtiss-Wright Corp., Electronics Div.  
J. W. Dice Co.  
Electro Products Laboratories, Inc.  
Federal Products Corp.  
Land-Air Inc.  
Precision Development Corp.  
Weston Instruments, Div.-Daystrom, Inc.  
**MICRO-OHMETERS**  
Associated Research, Inc.  
Avtron Mfg., Inc.  
James G. Biddle Co.  
Curtiss-Wright Corp., Electronics Div.  
J. W. Dice Co.  
Electro Instruments, Inc.  
Leeds & Northrup Co.  
**MICROPHONE CONNECTORS**  
See CONNECTORS, MICROPHONE  
**MICROPHONE STANDS**  
See STANDS, MICROPHONE  
**MICROPHONES**  
Atlantic Research Corp.  
B & K Instruments, Inc.  
Curtiss-Wright Corp., Research Div.  
Electronic Applications, Inc.  
General Cement Mfg. Co., Div.-Textron, Inc.  
General Coil Products Corp.  
International Research Associates  
Ling Electronics, Inc.  
National Pneumatic Co., Inc., Holtzer-Cobot Div.  
Perry Plastics, Inc.  
Photocon Research Products  
Roonwell Corp.

ture Brothers, Inc.  
niversal Microphone Co.

**OSCOPES, ELECTRON**  
struments Div.-Philips Electronics, Inc.  
ew England Scientific Instruments Co.  
hilco Corp., Government & Industrial Div.  
electrome Mfg. Corp.

**OSCOPES, OPTICAL**  
merican Optical Co., Instrument Div.  
**\*BAUSCH & LOMB OPTICAL CO.**  
uhl Optical Co.  
der Instrument Co., Inc.  
dmund Scientific Co.  
**ENGLIS EQUIPMENT CO.**  
isher Scientific Co.  
aertner Scientific Corp., The  
rdon Enterprises  
ieco, Inc.  
ew England Scientific Instruments Co.  
pto-Metric Tools, Inc.

**MICROWAVE ABSORBERS**  
CF Industries Inc.  
tacom Inc.  
ttron Inc., Div.-Litton Industries  
hemalloy Electronics Corp.  
BM Research Corp.  
emornay-Bonardi  
uglas Microwave Co., Inc.  
merson & Cuming, Inc.  
ilmoim Corp.  
F. Goodrich Co., The  
ieco, Inc.  
ckhead Aircraft Corp., Missiles & Space Div.  
ckMill Industrial Corp.  
icrowave Associates, Inc.  
onogram Precision Industries  
adar Design Corp.

**MICROWAVE ACCESSORIES**  
CF Industries Inc.  
Education Research Corp.  
inslie Corp.  
tacom Inc.  
tacom Inc. of New Jersey  
tircraft Armaments, Inc.  
ttron Inc., Div.-Litton Industries  
ford Mfg. Co.  
lited Research & Engrg., Div.-Allied Record Mfg.  
Co.  
nerac Inc.  
merican Machine & Foundry Co., Government  
Products Group  
merican Machine & Foundry Co., Greenwich  
lennica & Radome Research Associates  
ologic Instrument Corp., Sub-American  
Electronics, Inc.  
A. Beauchaine & Sons Inc.  
ndix Aviation Corp., York Div.  
ggart Mfg. Corp.  
dd Stanley Co. Inc.  
udelman Electronics Corp.  
lifornia Technical Industries, Div.-Textron Inc.  
hemalloy Electronics Corp.  
emornay-Bonardi  
amond Antenna & Microwave Corp.  
uglas Microwave Co., Inc.  
lectronic Communications, Inc.  
sin Electronics Corp.  
merson & Cumings, Inc.  
npire Products Sales Corp.  
ngelhard Industries, Inc.  
ngig-Associates  
R, Inc.  
abriel Co., The, Gabriel Electronics Div.  
neral Communication Co.  
ewlett-Packard Co.  
ouston Fearless Corp.  
lter J. Hyatt Co., The  
E Circuit Breaker Co.  
T Labs.

**HEARFOTT CO., INC., MICROWAVE DIV.**  
tton Industries, Inc.  
ckhead Aircraft Corp., Missiles & Space Div.  
rked Products Co.  
rvidian Metalcraft, Inc.  
tacob  
icrowave Associates, Inc.  
onogram Precision Industries  
torala Inc., Military Electronics Civ.  
R. K. Mfg. & Engrg. Co.  
nega Labs., Inc.  
ilco Corp., Government & Industrial Div.  
lytechnic Research & Development Co., Inc.  
adar Design Corp.  
diatronics, Inc.  
seves Instrument Corp.  
ge Labs., Inc.  
nders Associates, Inc.  
ecial Instruments Div., British Industries Corp.  
and Engrg. Co.  
tppo Group, Thompson-Ramo-Wooldridge Inc.  
herad Mfg. Corp.  
thermal Refractories Corp.  
rbo Machine Co.  
vin Coach Co., Aircraft-Missiles  
vited Aircraft Products, Inc.  
rrian Associates

Victor R. F. & Microwave Co.  
Walworth Co. Electronics Div.  
Waveline, Inc.  
Weinschel Engrg.

**MICROWAVE ASSEMBLIES**  
See ASSEMBLIES, MICROWAVE

**MICROWAVE COUPLERS, DIRECTIONAL**  
See COUPLERS, DIRECTIONAL, MICROWAVE

**MICROWAVE FLANGES**  
See FLANGES, MICROWAVE

**MICROWAVE HORNS**  
See HORNS, MICROWAVE

**MICROWAVE ISOLATORS**  
See ISOLATORS, MICROWAVE

**MICROWAVE PARABOLAS**  
See PARABOLAS, MICROWAVE

**MICROWAVE PASSIVE REPEATERS**  
See REPEATERS, PASSIVE, MICROWAVE

**MICROWAVE REPEATERS**  
See REPEATERS, MICROWAVE

**MICROWAVE SHUTTERS**  
See SHUTTERS, MICROWAVE

**MICROWAVE SLOING LOAOS**  
See SLOING LOAOS, MICROWAVE

**MICROWAVE TRANSMISSION LINES**  
See TRANSMISSION LINES, MICROWAVE

**MIORFRAME SECTIONS**  
American Machine & Foundry Co., Government  
Products Group  
Benson Mfg. Co., The  
Clark-Aiken Co., The  
Diversey Engrg. Co.  
Dresser Mfg. Div., Dresser Industries, Inc.  
Fletcher Mfg. Co., Inc., The  
Ludwig Honold Mfg. Co.  
M. W. Kellogg Co., The  
Longren Aircraft Co., Inc.  
Mercury Tool & Mfg. Corp.  
Monogram Precision Industries  
Piasceki Aircraft Corp.  
Royal Industries, Inc.  
Solar Aircraft Co.  
Tapco Group, Thompson-Ramo-Wooldridge Inc.  
Turbo Products, Inc.

**MIORFRAME SECTIONS, AXIAL FLOW**  
Dresser Mfg. Div., Dresser Industries, Inc.  
Fletcher Mfg. Co., Inc., The  
Monogram Precision Industries  
Piasceki Aircraft Corp.  
Tapco Group, Thompson-Ramo-Wooldridge Inc.  
Turbo Products, Inc.

**MILITARY TEST UNITS, ACCELERATION**  
See TEST UNITS, ACCELERATION, MILITARY

**MILLIOHMMETERS**  
Associated Research, Inc.  
James G. Biddle Co.  
Bristol Co., The  
Buhl Optical Co.  
Curtiss-Wright Corp., Electronics Div.  
Electro Instruments, Inc.  
Greiboch Instruments Corp.  
Keithley Instruments, Inc.  
National Electronics  
New England Scientific Instruments Co.  
Shalleross Mfg. Co.  
Weston Instruments, Div.-Daystrom, Inc.

**MIRRORS, INSPECTION**  
Semon Bach & Co.  
**\*BAUSCH & LOMB OPTICAL CO.**  
Blowers Inc.  
Buhl Optical Co.  
Corbin Products Div.  
Dell Optics Co., Ltd.  
Eell Instrument Co., Inc.  
**\*ELECTROSNAP CORP.**  
**\*ENGLIS EQUIPMENT CO.**  
J. W. Fecker, Inc.  
Liberty Mirror Div., Libbey-Owens-Ford Glass Co.  
O & S Research, Inc.  
Pacific Universal Products Corp.  
Republic Lens Co. Inc.  
Singer Mfg. Co., The, Military Products Div.  
Sterling Glass Corp.  
Tinsley Labs., Inc.  
Ullman Devices Corp.

**MIRRORS, PRISMS, LENSES**  
See LENSES, PRISMS, MIRRORS

**MIRRORS, SPECIAL PURPOSE**  
America Optical Co., Instrument Div.  
Atlantic Research Corp.  
Semon Bache & Co.  
**\*BAUSCH & LOMB OPTICAL CO.**  
Blowers Inc.  
Corning Glass Works

Davidson Mfg., Co., Inc.  
Dell Optics Co., Ltd.  
**\*ELECTROSNAP CORP.**  
J. W. Fecker, Inc.  
Gaertner Scientific Corp., The  
Gordon Enterprises  
Green Rectifier Co.  
Hallier, Raymond & Brown Inc. Div., Singer Mfg. Co.  
Kallmergen Optical Corp.  
Liberty Mirror Div., Libbey-Owens-Ford Glass Co.  
Northrop Corp., The Norronics Div.  
D & S Research, Inc.  
Optical Coating Lab., Inc.  
Pacific Universal Products Corp.  
Red Lion Cabinet Co., Redco Tool Div.  
Republic Aviation Corp.  
Republic Lens Co. Inc.  
Singer Mfg. Co., The, Military Products Div.  
Sterling Glass Corp.  
Ullman Devices Corp.  
Valpey Crystal Corp.  
Van Keuren Co.  
Wallensok Optical Co.  
Zenith Optical Laboratory

**MISSILE BOOSTERS**  
Aerolab Development Co.  
Alco Products, Inc.  
American Machine & Foundry Co., Government  
Products Group  
Astrodyne, Inc.  
Atlantic Research Corp.  
Auto Specialties Mfg. Co., Inc.  
E. W. Bliss Co.  
Bridgeport Brass Co.  
California Aircraft Products  
Chrysler Corp., Defense Operations Div.  
Cooper Development Corp., Sub-Marquardt Aircraft  
Co.  
Curtiss-Wright Corp.-Wright Aeronautical Div.  
Diversey Engrg. Co.  
Dresser Mfg. Div., Dresser Industries, Inc.  
Dynamic Devices, Inc.  
Electric Heater Co., The  
Ferris-Mfg. Co., The  
Fulton-Irgon Corp., The  
General Electric Co., Apparatus Sales Div.  
Hahn & Clay  
Hercules Powder Co.  
Hicks Corp., The  
Hufford Corp., The  
Ingersoll Kalamazoo Div., Borg-Warner Corp.  
Kaiser Metal Products, Inc.-Fleetwings Div.  
M. W. Kellogg Co., The  
Lockheed Aircraft Corp., Missiles & Space Div.  
Newbrook Machine Corp.  
Norris-Thermador Corp.  
Orlikon Tool & Arms Corp. of America  
Portland Copper & Tank Works Inc.  
Pressed Steel Tank Co.  
Reaction Motors Div., Thiokol Chem. Corp.  
Red Lion Cabinet Co., Redco Tool Div.  
Republic Aviation Corp.  
**\*RHEEM MFG. CO., OEFENSE & TECHNICAL  
PRODUCTS DIV.**  
Rohm & Haas Co., Redstone Arsenal Research Div.  
Solar Aircraft Co.  
Thiokol Chemical Corp.  
Twin Coach Co., Aircraft-Missiles  
United States Chemical Milling Corp.  
Universal Moulded Products Corp.  
West Industries  
Waste King Corp., Technical Products Div.  
Wayne Pump Co., The, Div.-Symington Wayne Corp.  
Wheland Co., The

**MISSILE CONTROL GOVERNORS**  
See GOVERNORS, MISSILE CONTROL

**MISSILE FIRE STANOS**  
See FIRE STANDS, MISSILE

**MISSILE FRAMES**  
ACF Industries Inc.  
Aerojet-General Corp.  
Aerolab Development Co.  
Aerona Mfg. Corp.  
American Car & Foundry, Div.-ACF Industries, Inc.  
American Machine & Foundry Co., Government  
Products Group  
Basco Metal Products, Inc.  
Basic Tool Industries, Inc.  
Benson Mfg., Co., The  
E. W. Bliss Co.  
Brooks & Perkins, Inc.  
Chrysler Corp., Defense Operation Div.  
Clark-Aiken Co., The  
Colonial Aircraft Corp.  
Cooper Development Corp., Sub-Marquardt Aircraft  
Co.  
Cromer Mfg. & Engrg., Inc.  
Curtiss-Wright Corp., Santa Barbara Div.  
Diversey Engrg. Co.  
Dresser Mfg. Div., Dresser Industries, Inc.  
Electric Heater Co., The  
Fairchild Astrionics Div., Fairchild Engine &  
Airplane Corp.  
Farwell Metal Fabricating  
Ferris-Mfg., The  
Fletcher Mfg. Co., Inc., The  
General Electric Co., Missile & Space Vehicle  
Dept.

Goodyear Aircraft Corp.  
Ludwig Harold Mfg. Co.  
Horky-Moore Associates  
Hufford Corp., The  
Hughes Aircraft Co.  
Intercontinental Mfg. Co., Inc.  
Kaiser Aircraft & Electronics, Div.-Kaiser Industries Corp.  
Kaiser Metal Products, Inc.-Fleetwings Div.  
M. W. Kellogg Co., The  
Kentucky Metal Products Co.  
Ladish Co.

**\*LAVELLE AIRCRAFT CORP.**  
Lockheed Aircraft Corp., Missiles & Space Div.  
Lingren Aircraft Co., Inc.  
Martin Co., The, Denver Div.  
Mercury Tool & Mfg. Corp.  
Minneapolis-Honeywell Regulator Co., Ordnance Div.  
Minnesota Mining & Mfg. Co.  
Monogram Precision Industries  
Monrovia Aviation Corp.  
Narmco Mfg. Co.  
Northrop Corp., The, Nortronics Div.  
Opelika Welding, Machine & Supply Inc.  
Piasecki Aircraft Corp.  
Portland Copper & Tank Works Inc.  
Precision Shapes, Inc.  
Precision Sheet Metal, Inc.  
Red Lion Cabinet Co., Redco Tool Div.  
Republic Aviation Corp.

**\*RHEEM MFG. CO., DEFENSE & TECHNICAL PRODUCTS DIV.**  
Rohr Aircraft Corp.  
Royal Industries, Inc.  
Ryan Aeronautical Co.  
Santa Anita Engrg. Co.  
Sequoia Wire & Cable Co., Div.-Mandrel Industries, Inc.  
Stanley Aviation Corp.  
Tapco Group, Thompson-Ramo-Wooldrige Inc.  
Turbo Products, Inc.  
Twig Industries  
U. S. Industries, Inc.  
Universal Moulded Products Corp.  
Wayne Pump Co., The, Div.-Symington Wayne Corp.  
Welded Construction Inc.  
Wheland Co., The

**MISSILE SYSTEMS, AUTOMATIC CHECK-OUT EQUIPMENT**

**\*BENDIX PRODUCTS DIV., BENDIX AVIATION CORP.**

**MISSILES, GROUND CHECK-OUT EQUIPMENT**

**\*AC ELECTRONICS DIV., GENERAL MOTORS CORP.**  
ACF Industries Inc.  
Accessory Products Co., Div.-Textron Inc.  
Acco Equipment Div., American Chain & Cable Co. Inc.  
Acromag Inc.  
Adler Electronics, Inc.  
Aeroco Mfg. Corp.  
Aircraft Armaments, Inc.

**\*AIRESEARCH MFG. CO., DIV.-THE GARRETT CORP.**  
Alto Scientific Co., Inc.  
Amelco, Inc.  
American Bosch Arma Corp.  
American Electronics, Inc.  
American Machine & Foundry Co., Government Products Group  
Arnold Corp.  
Associated Engineers, Inc.  
Atlas Precision Products Co.  
Avion, Inc.  
Avtron Mfg., Inc.  
Beck Tool Industries, Inc.  
Bushman-Systems Div.  
Bell Aircraft Corp., Niagara Frontier Div.  
Belock Instrument Corp.  
Bendix Aviation Corp., Eclipse-Pioneer Div.  
Bendix Aviation Corp., York Div.  
Bendix Products Div., Missiles, Bendix Aviation Corp.  
Bendix Rodio Div., Bendix Aviation Corp.  
Bendix Utica Div., Bendix Aviation Corp.  
Benson Mfg., Co., The  
Bernco Engrg. Corp.  
Bogue Electric Mfg. Co.  
Brown Engrg. Co., Inc.  
Burton-Rodgers, Inc.  
California Technical Industries, Div.-Textron Inc.  
Chalco Engrg. Corp.  
Chicago Aerial Industries, Inc.  
Chrysler Corp., Defense Operations Div.  
Collins Radio Co.  
Colonial Aircraft Corp.  
Components Corp.  
Consolidated Diesel Electric Corp.  
Control Engrg. Co., Div. Jervis B. Webb Co.  
Cooper Development Corp., Sub.-Marquardt Aircraft Co.  
Craig Systems, Inc.  
Cromet Mfg. & Engrg., Inc.  
Curtiss-Wright Electronics Div., IMI Branch  
Curtiss-Wright Corp., Santa Barbara Div.  
Dolmator Div., Yuba Consolidated Industries, Inc.  
Data-Control Systems, Inc.  
Datron Electronics, Div.-Mid-Continent Mfg. Co., Inc.  
Dynamics Corp.  
Electro Instruments, Inc.

**\*ELECTROSNAP CORP.**  
Electro-Mechanical Products Co.  
Electronic Communications, Inc.  
Emerson Electric Mfg. Co., The, Electronics & Avionics Div.  
Emerson Radio & Phonograph Corp.  
Fairchild Astrionics Div., Fairchild Engine & Airplane Corp.  
Firestone Tire & Rubber Co., The, Guided Missile Div.  
Ford Instrument Co., Div.-Sperry Rand Corp.  
G. W. Galloway Co.  
General Communication Co.  
General Electric Co., Apparatus Sales Div.  
General Electric Co., Computer Dept.  
General Electric Co., Missile & Space Vehicle Dept.  
Gilfillan Bros. Inc.  
Goodyear Aircraft Corp.  
Gordon Enterprises  
Greer Hydraulics, Inc.  
Gremco, Inc.  
Guided Missile Div.-DeHavilland Aircraft of Canada, Ltd.  
Hallicrofters  
Hamilton Standard, Div.-United Aircraft Corp.

**\*A. W. HAYDON CO., THE**  
Hazeltine Electronics Div.-Hazeltine Corp.  
Heiland Div.-Minneapolis-Honeywell Hufford Corp., The  
Hughes Aircraft Co.  
Walter J. Hyatt Co., The  
Hycan Mfg. Co.  
ITT Federal Div., International Telephone & Telegraph Corp.  
Industrial Engrg. Corp.  
Industrial Tools Mfg. Corp., Sub.-Pendleton Tool Industries, Inc.  
Intercontinental Dynamics Corp.  
Jack & Heintz, Inc.  
Jeta, Inc.  
Kohn & Co., Inc.  
Kaiser Aircraft & Electronics, Div.-Kaiser Industries Corp.

**\*KEARFOTT CO., INC.**  
Kollmorgen Optical Corp.  
Leach Corp.  
Lear, Inc.  
Lear, Inc., Grand Rapids Div.  
Lockheed Aircraft Corp., Missiles & Space Div.  
Marquardt Aircraft Co.  
Martin Co., The, Denver Div.  
Master Specialties Co.  
W. L. Maxson Corp., The  
Milgo Electronic Corp.  
Minneapolis-Honeywell Regulator Co.-Aeronautical Div.  
Minneapolis-Honeywell Regulator Co., Industrial Product Group  
Minneapolis-Honeywell Regulator Co., Ordnance Div.  
Monogram Precision Industries  
Motorola Inc., Military Electronics Div.  
George L. Nankervis Co.  
Northrop Corp., The, Nortronics Div.  
Nuclear Products-Erco Div.-ACF Industries, Inc.  
On Mark Couplings, Inc.  
Optimized Devices, Inc.  
Dtis Elevator Co., Electronic Div.

**\*PACKARD-BELL ELECTRONICS CORP.**  
Ralph M. Parsons Co., The, Electronics Div.  
Perkin-Elmer Corp.  
Philco Corp., Government & Industrial Div.  
Polaroid Electronics Corp.  
Radiation, Inc.  
Ramo-Wooldrige Div., Thompson-Ramo-Wooldrige of Calif.  
Raytheon Mfg. Co., Government Equipment Div.  
Republic Aviation Corp.

**\*RHEEM MFG. CO., DEFENSE & TECHNICAL PRODUCTS DIV.**  
Royal Industries, Inc.  
Rucker Co., The  
Sargent Engrg. Corp.  
Schaffer Air Industries, Inc.  
Seeburg Corp., The  
Sequoia Wire & Cable Co.-Div.-Mandrel Industries, Inc.  
Servo Corp. of America  
Servomechanisms, Inc.  
Singer Mfg. Co., The, Military Products Div.  
Skiastron Electronics & Television Corp.  
Space Corp.  
Specialties, Inc.  
Sperry Microwave Electronics Co., Div.-Sperry Rand Corp.  
Stanley Aviation Corp.  
Stratos, Div.-Fairchild Engine & Airplane Corp.  
Stromberg-Carlson Div.-General Dynamics Corp.  
Sun Electric Corp., Aeronautical Div.  
Syston Corp.  
Talley Corp., The  
Tapco Group, Thompson-Ramo-Wooldrige Inc.  
Tele-Dynamics Inc.  
Theta Instrument Corp.  
Thiokol Chemical Corp.  
United Aircraft Products, Inc.  
United Control Corp.  
United Electrodynamics, Inc.  
United Mfg. Co., Div., The W. L. Maxson Corp.  
U. S. Industries, Inc.  
U. S. Science Corp., Div.-Topp Industries, Inc.  
Varo Mfg. Co., Inc.  
Vickers Inc., Div.-Sperry Rand

Vickers Inc., Marine & Ordnance Dept., Machinery Hydraulics Div.  
Victor Adding Machine Co.  
Virginia Electronics Co., Inc.  
Vitro Labs.  
Waldorf Electronics, Div.-F. C. Huyck & Sons  
Waste King Corp., Technical Products Div.  
Wayne Pump Co., The, Div.-Symington Wayne Corp.  
Webcor, Inc., Government Div.  
Welded Construction Inc.  
Western Design, Div.-U. S. Industries, Inc.; Santa Barbara Div.  
Western Geor Corp.  
Wintronics

**MISSILES, GROUND HANDLING EQUIPMENT, MISSILES**  
See GROUND HANDLING EQUIPMENT, MISSILES

**MISSILES GUIDANCE EQUIPMENT**  
See GUIDANCE EQUIPMENT, MISSILES

**MOBILE COMPRESSOR ASSEMBLIES**  
See COMPRESSOR ASSEMBLIES, MOBILE

**MODULATORS, MAGNETIC**  
American Research & Mfg. Corp.  
Bradley Semiconductor Corp.  
Emerson Radio & Phonograph Corp.  
General Magnetics, Inc.  
Guided Missile Div.-DeHavilland Aircraft of Canada, Ltd.  
ITT Federal Div., International Telephone & Telegraph Corp.  
Lear, Inc.  
Levinthal Electronic Products, Inc.  
Monogram Precision Industries  
Networks Electronic Corp.  
Pioneer Tool & Engrg. Co.  
RS Electronics Corp.  
Southwestern Industrial Electronics Co.  
Sperry Microwave Electronics Co., Div.-Sperry Rand Corp.  
Talley Corp., The  
Telechrome Mfg. Corp.  
Torwico Electronics, Inc.  
Tranconic, Inc.  
Webcor, Inc., Government Div.  
Westbury Electronics Inc.  
Weston Instruments, Div.-Daystrom, Inc.

**MODULATORS, PHASE**  
Bradley Semiconductor Corp.  
Centronix Inc.  
Cooper Development Corp., Sub.-Marquardt Aircraft Co.  
Crosby Laboratories, Inc.  
Geotronic Labs., Inc.  
ITT Federal Div., International Telephone & Telegraph Corp.  
**\*KEARFOTT CO., INC., MICROWAVE DIV.**  
Lear, Inc., Grand Rapids Div.  
W. L. Maxson Corp., The  
Mirotel, Inc.  
Monogram Precision Industries  
Motorola Inc., Military Electronics Div.  
Pioneer Tool & Engrg. Co.  
Telechrome Mfg. Corp.  
Victor R. F. & Microwave Co.

**MODULATORS, PULSE**  
AMP Inc.  
Alto Scientific Co., Inc.  
Amerac Inc.  
FXR, Inc.  
Federal Mfg. & Engrg. Corp.  
Hewlett-Packard Co.  
ITT Federal Div., International Telephone & Telegraph Corp.  
**\*KEARFOTT CO., INC., MICROWAVE DIV.**  
Levinthal Electronic Products, Inc.  
Magnetic Research Corp.  
Manson Labs., Inc.  
Marconi Instruments  
W. L. Maxson Corp., The  
Mirotel, Inc.  
Monogram Precision Industries  
Motorola Inc., Military Electronics Div.  
Dmege Labs., Inc.  
RS Electronics Corp.  
Systems Inc.  
Talley Corp., The  
Telechrome Mfg. Corp.  
Vorton Associates  
Weinschel Engrg.

**MOLDED PLASTIC GRILLES**  
See GRILLES, MOLDED PLASTIC

**MOLDERS, PLASTIC**  
Accurate Electronics Corp., Dept. D  
Aptronics International Corp.  
American Aerophysics Corp.  
American Molded Products Co.  
Associated Engrg. Corp.  
Brook Molding Corp.  
Chemold Co.  
Chemplast, Inc.  
Chicago Molded Products Corp.  
Collectron Corp.  
Curtiss-Wright Corp.-Utica Div.  
Dimco-Gray Co.

Emerson Plastics Corp.  
 First Electronics Corp., The  
 Fletcher Mfg. Co., Inc., The  
 Flextrak Co.  
 Form-It Products, Inc.  
 Gards Mfg. Co.  
 Hardman Taal & Engng., Co.  
 Javeg Industries, Inc.  
 Jydo Molding Co., Inc.  
 Juelin Mfg. Co.  
 Kerco Products  
 K. Koch & Sons  
 K & Q Plastics Products  
 Minnesota Mining & Mfg. Co.  
 Molding Corp. of America  
 M. Ney Co., The  
 Nylon Plastics, Inc.  
 Plastic Age Sales, Inc.  
 Wilson Ross Metals Co., The  
 Russell Reinforced Plastics Corp.  
 I. Regis Paper Co., Panelyte Div.  
 Vlyania Electric Products Inc., Parts Div.  
 Universal Moulded Products Corp.

**MOLYBDENUM SHEETS**  
**See SHEETS, MOLYBDENUM**

**MONITORING EQUIPMENT, TRANSMISSION**

American Machine & Foundry Co., Government Products Group  
 American Machine & Foundry Co., Greenwich  
 Bendix Radio Div., Bendix Aviation Corp.  
 Centronix Inc.  
 Consolidated Electrodynamics Corp.  
 James Cunningham Son & Co., Inc.  
 Douglas Microwave Co., Inc.  
 Electronic Communications, Inc.  
 Gommorlund Mfg. Co., Inc.  
 Helipot Div.-Beckman Instruments Inc.  
 IT Labs.  
 IT-Kellogg  
 Lauke & Co.  
 Minneapolis-Honeywell Regulator Co., Davies Labs. Div.  
 Minneapolis-Honeywell Regulator Co., Industrial Product Group, d, e, g.  
 Miratel, Inc.  
 Motorola Inc., Military Electronics Div.  
 National Pneumatic Co., Inc., Holtzer-Cobot Divs.  
 Philca Corp., Government & Industrial Div.  
 Portchester Instrument Corp.  
 Radar Design Corp., h.  
 Royal Industries, Inc., b.  
 Scan Instrument Corp., The, i.  
 Scientific-Atlanta, Inc., h.  
 Setchell-Carlson Inc., e.  
 Sperry Microwave Electronics Co., Div.-Sperry Rand Corp., d, h.  
 Systron Corp., d, g.  
 Television Utilities Corp., k.  
 Theta Instrument Corp., g.  
 Tarwica Electronics, Inc., d.  
 Towaca Electronics Co., d.  
 U. S. Science Corp., Div.-Tapp Industries, Inc., b, g, h.  
 Varian Associates, a, d, g, h, k.  
 Waltham Electronics Corp., a, f.  
 Waterman Products Co., Inc., d, f, k.  
 Webcor, Inc., Government Div., d.  
 Wintronics, g, j.

**MONOPROPELLANTS**

Aerajet-General Corp.  
 Air Products, Inc.  
 Allied Chemical Corp., Nitrogen Div.  
 American Rocket Co.  
 Atlantic Research Corp.  
 Becco Chemical Div.-Food Machinery & Chemical Corp.  
 Dynamic Devices, Inc.  
 Fulton-Irgon Corp., The  
 Dlin Motheson Chemical Corp., Energy Div.  
 Pennsalt Chemicals Corp.  
 Rohm & Haas Co., Redstone Arsenal Research Div.  
 Shell Chemical Corp., Industrial Chemicals Div.  
 Special Projects Lab., Food Machinery & Chemical Corp.  
 Thiokol Chemical Corp.  
 Topper Mfg. Co., Inc.

**MOTION PICTURE PROCESSING EQUIPMENT**  
**See PROCESSING EQUIPMENT, MOTION PICTURE**

**MOTOR BRUSHES**  
**See BRUSHES, MOTOR**

**MOTOR & GENERATOR BLOWERS**  
**See BLOWERS, MOTOR & GENERATOR**

**MOTOR & GENERATOR CLUTCHES**  
**See CLUTCHES, MOTOR & GENERATOR**

**MOTOR GENERATOR SETS, AC-DC**  
**\*MOTOR GENERATOR CORP.**

**MOTOR & GENERATOR STATORS**  
**See STATORS, MOTOR & GENERATOR**

**MOTORS**  
 a. Clock  
 b. Control  
 c. Electric  
 d. Fluid  
 e. Fractional HP  
 f. Hydraulic  
 g. Hysteresis  
 h. Instrument  
 i. Miniature  
 j. Servo  
 k. Timing-Regulated, Constant Speed  
 l. Turntable  
 m. Universal

ACF Industries Inc., f.  
 Adel Precision Products of California, Div.-General Metals Corp., d, e, f.  
 Advanced Products Co., The, a, e, g, h, i, k.  
 Airborne Accessories Corp., c, e, j.  
 \*AIRESEARCH MFG. CO., DIV.-THE GARRETT CORP., b, c, e, g thru k.  
 Air-Marine Motors, Int., c, e, g, h.  
 Alco Valve Co., c, e, f.  
 R. C. Allen Aircraft Instr. Div., R. C. Allen Bus. Machines, Inc., c, g, h, i.  
 American Aerogots, c, d, f, j.  
 American Bosch Arm Co., b thru f, j.  
 American Brake Shoe Co., f.  
 American Broke Shoe Co., Kellogg Div., f.  
 American Electronics, Inc., b, c, e, g thru k.  
 American Electronics, Incorporated, j.  
 American Electronics, Inc.-Instrument Div., j.  
 American Machine & Foundry Co., Government Products Group, d, f.  
 American Measurement & Control, Inc., i, j.  
 American Rocket Co.  
 Anglo Corp., b, k.  
 Ashland Electric Products, Inc., c, e, g.  
 Atlantic Instrument Corp., Sub.-American Electronics, Inc., h.  
 Barber-Colman Co., b, c, e, i, j, l.  
 Bendix Aviation Corp., Eclipse-Pioneer Div., b, h, i, j.  
 \*BENDIX AVIATION CORP., HAMILTON DIV., d, f, l, j.

Bendix Aviation Corp., Mantrose Div., e.  
 Bendix Aviation Corp., Red Bank Div., e.  
 Bendix-Pacific Div., Bendix Aviation Corp., c, e, f, j.  
 Bodine Electric Co., a, b, c, e, g, h, i, k, m.  
 Bague Electric Mfg. Co., i.  
 Borg Equipment Div., Amphenol-Borg Electronics Corp., e, h.  
 Bristol Motors Div.-Vocaline Co., of America, Inc., k.  
 Brook Motor Corp., c.  
 CELCD (Constantine Engrg. Labs. Co.), e, g, i, j, m.  
 Cedar Engrg. Div.-Control Data Corp., a, b, c, e, g thru j.  
 Chicago Pneumatic Tool Co., b, e.  
 Clifton Precision Products Co., Inc., h, j.  
 Commercial Shearing & Stamping Co., f.  
 Continental Electric Co., Inc., c.  
 Control Data Corp., c, e, g, i, j.  
 Cornelius Co., The, Aero Div., c thru f.  
 Cramer Controls Corp., a, b, i.  
 Dalmator Div., Yuba Consolidated Industries, Inc., b, c, e, g thru j, m.  
 Daystrom Transcoil Div., Daystrom Inc., j.  
 Delco-Remy Div., General Motors Corp., c.  
 Diehl Mfg. Co., c, e, h, i, j.  
 Dresser Mfg. Div., Dresser Industries, Inc.  
 Dumant Aircraft Fitting Co., j.  
 Eastern Industries Inc., F.  
 Thomas A. Edison Inc. Instrument Div.-McGraw-Edison Co., c, h thru k.  
 Eicar Div.-Scranton, c, e, g, m.  
 Electric Auto-Lite Co., The, c, e.  
 Electric Machinery Mfg. Co., c.  
 Electric Motors & Specialties, Inc., c, e.  
 Electric Products Co., The, c.  
 Electronic Applications, Inc., e, g.  
 Electronic Communications, Inc., b, c, e, j.  
 Elgin Micronics Div.-Elgin National Watch Co., a, g, i, k.  
 El Roy Motor Co., Inc., e, i, j, l.  
 Ford Instrument Co., Div.-Sperry Rand Corp., h, i.  
 G-M Lobs. Inc., e, h, l, j.  
 General Electric Co., Apporotus Sales Div., b thru g, j, m.  
 Globe Industries, Inc., b, c, e, g thru k, m.  
 Groflex Inc., i, j, k.  
 Greenleaf Mfg. Div., The, Mondrel Ind. Inc., h, j.  
 Grimes Mfg. Co., e.  
 Guided Missile Div.-DeHavilland Aircraft of Canada, Ltd., c.  
 Hamilton Standard, Div.-United Aircraft Corp., f.  
 Hamilton Watch Co., a, k.  
 Hamilton Watch Co.-Industrial Div., a, i.  
 Hannifin Co., Div.-Parker-Hannifin Corp., d.  
 Honsen Mfg. Co. Inc., a, b, c, e, h, i, k.  
 Hoskel Engrg. & Supply Co., f.  
 \*A. W. HAYDON CO. THE, a, b, c, g, h, i, k.  
 Hoydon Div.-General Time Corp., a, b, e, g, h, i, k.  
 Helipot Div.-Beckman Instruments Inc., j.  
 Hertner Electric Co., The, b, c, e, g thru k.  
 E. Vernon Hill & Co., i.  
 Holtzer-Cobot Div., National Pneumatic Co., Inc., b, c, e, g thru k.  
 Hoover Electric Co., b, c, e, g thru k, m.  
 Hughes Tool Co., Aircraft Div., a.  
 Hupp Aviation Co., f.  
 Hydraulic Press Mfg. Co., The, Div.-Koehring Co., f.  
 Induction Motors Corp., b, c, e, g thru l.  
 Inghram Co., The, a, g.  
 Instrument Motors, a, b, d, f thru j, l.  
 International Register Co., a, c, h, i, k.  
 Jack & Heintz, Inc., c, e.  
 \*KEARFOTT CO., INC., b, c, e thru j.  
 Kelsey-Hayes Co., c, d, e.  
 Ketay Dept., Narden Div., United Aircraft Corp., j.  
 Korda Industries, d, f.  
 Lamb Electric Co., The, Div.-American Machine & Metals, Inc., b, c, e, g, i, j, l, m.  
 Land-Air Inc., b, i.  
 Lear, Inc., b thru j.  
 Lear, Inc., Grand Rapids Div., b, c, e, h, i, j.  
 Lear Inc., Lear-Romec Div., c thru f, j.  
 Leland Airborne Products, Div.-American Machine & Foundry Co., j.  
 Lundy Mfg. Corp., b, c, e, g, h, i.  
 Luther Mfg. Co., b, e, g thru j.  
 Lux Clock Mfg. Co., Inc., a.  
 Minneapolis-Honeywell Regulator Co., Aeronautical Div., e, g, j.  
 Minneapolis-Honeywell Regulator Co., Industrial Div., h, j.  
 Minneapolis-Honeywell Regulator Co., Industrial Product Group, h, j.  
 Minneapolis-Honeywell Regulator Co., Ordnance Div., g.  
 Motor Appliance Corp., c, e.  
 Motordyne Inc., b, c, e, g thru m.  
 Motoresearch Co.  
 Heinz Mueller Eng. Co., Inc., c, e.  
 National Pneumatic Co., Inc., Holtzer-Cobot Divs., b, c, e, g thru k.  
 Dil-Dyne, Inc., d, f.  
 P. S. P. Engrg. Co., Div.-Induction Motors Corp., j.  
 Packard Electric Div.-General Motors Corp., c, e.  
 Paragon Electric Co., a, b, k.  
 PESCO Products Div.-Borg-Warner Corp., c, e, f.  
 Pioneer Tool & Engrg. Co., j.  
 Power Supplies, Inc., i.  
 Rocine Hydraulics & Machinery Inc., f.  
 Raymond Engrg. Lab., Inc., k.  
 Redmond Co., Inc., c, e, l.  
 Safety Electrical Equipment Corp., b, c, e

Sangamo Electric Co., a, c, g, i, k.  
 Sargent Engrg. Corp., d, f, i.  
 Servomechanisms, Inc., Mechairal Div., b, g thru k.  
 Sigma Instruments, Inc., h, i.  
 Singer Mfg. Co., The, Military Products Div., b, c, e, i, k.  
 Small Motors Inc., b, c, e, h, i, j, m.  
 A. D. Smith Corp., c, e, m.  
 Special Projects Lab., Food Machinery & Chemical Corp., d.  
 Stratots, Div.-Fairchild Engine & Airplane Corp., d, f.  
 Talley Corp., The, b, c, e.  
 Tapco Group, Thompson-Ramo-Wooldridge Inc., f, j.  
 Task Corp., c, e.  
 Universal Electric Co., b, c, e, h, i, j, m.  
 Vickers Inc., Div.-Sperry Rand, d, f, i.  
 Vickers Inc., Marine & Ordnance Dept., Machinery Hydraulics Div., f.  
 Waltham Engrg. Corp., k.  
 Waterlow Div., The New York Air Brake Co., d, f, j.  
 Western Design, Div.-U. S. Industries, Inc.; Santa Barbara Div., b, c, e, f, g, k.  
 Western Gear Corp., c, e, i, j.  
 Westinghouse Electric Corp., c, e, i, m.  
 Weston Hydraulics Ltd.-Sub., Borg-Warner Corp., j.  
 Wincharger Corp., Sub.-Zenith Radio Corp., e, m.  
 Zenith Radio Corp., c, e.

## MOTORS, AC-DC

\*ELECTRICAL ENGRG. & MFG. CORP.

## MOUNTING STRIPS

See STRIPS, MOUNTING

## MOUNTINGS, METALLIC

Alpitect, Inc.  
 American Aeroports  
 Anchor Metal Spinning Co., The  
 B. H. Aircraft Co., Inc.  
 Barry Controls Inc.  
 Bergen Carbide Co.  
 E. W. Bliss Co.  
 Bruce Engrg. Co.  
 Bud Radio Inc.  
 Byrne Doors Inc.  
 California Aircraft Products  
 Capital City Mfg. Co.  
 Clark-Aiken Co., The  
 Colonial Aircraft Corp.  
 Cornell Deep Drawing Co., Div.-Lanes Industries Corp.  
 Diversey Engrg. Co.  
 Federal Shock Mount Corp.-Div. The Korfund Co., Inc.  
 B. F. Goodrich Industrial Products Co.  
 J. W. Johnson & Co., Inc.  
 Kling Metal Spinning & Stamping Co.  
 Kolcast Industries-Div. Thompson Ramo Wooldridge Inc.  
 Ladish Co.  
 Mercury Tool & Mfg. Corp.  
 \*MIRAX CHEMICAL PRODUCTS CORP., METAL CONTAINER DIV.  
 Monogram Precision Industries  
 Penn Keystone Corp.  
 Piasecki Aircraft Corp.  
 Precision Shapes, Inc.  
 Edw. Renneburg & Sons Co.  
 Robinson Technical Products, Inc.  
 Stanley-Judd Div.-The Stanley Works  
 Stone City Products Co.  
 Teiner Engrg. Corp.  
 United Mfg. Co., The  
 U. S. Industries, Inc.  
 United States Chemical Milling Corp.  
 Variety Aircraft Corp.

## MOUNTINGS, NON-METALLIC

Allied Plastics Supply Corp.  
 American Aeroports  
 American Latex Products Corp.  
 Barry Controls Inc.  
 Bushings, Inc.  
 Colonial Aircraft Corp.  
 Continental Rubber Works  
 Cornell Deep Drawing Co., Div.-Lanes Industries Corp.  
 Crystal-X Corp.  
 Dayton Rubber Co., The  
 Diversey Engrg. Co.  
 Dow-Elco, Inc.  
 Federal Shock Mount Corp.-Div. The Korfund Co., Inc.  
 General American Transportation Corp.  
 Gladding, McBean & Co.  
 B. F. Goodrich Industrial Products Co.  
 Hamilton Kent Mfg. Co.  
 Jadee Plastics Co.  
 Johns-Manville  
 J. W. Johnson & Co., Inc.  
 Minnesota Rubber Co.  
 \*MIRAX CHEMICAL PRODUCTS CORP., METAL CONTAINER DIV.  
 Norton Co., New Products Dept.  
 Orchar Industries, Inc., Actionflex Div.  
 Piasecki Aircraft Corp.  
 Rubbercraft Corp. of California  
 A. T. Stevens Co.  
 Thermal Refractories Corp.  
 United States Rubber Co.

## MOUNTINGS, VIBRATION & SHOCK

American Aeroports  
 American Latex Products Corp.  
 Anchor Metal Spinning Co., The  
 Applied Design Co.  
 Barry Controls Inc.  
 Bushings, Inc.  
 Champion Co., The  
 Colonial Rubber Co.  
 Continental Rubber Works  
 Dayton Rubber Co., The  
 Dow-Elco, Inc.  
 Federal Shock Mount Corp.-Div. The Korfund Co., Inc.  
 Felters Co., The  
 Finn Aeronautical Div., T. R. Finn & Co., Inc.  
 B. F. Goodrich Industrial Products Co.  
 Hamilton Kent Mfg. Co.  
 Johns-Manville  
 J. W. Johnson & Co., Inc.  
 Walter Kilde & Co., Inc., Aviation Div.  
 Litton Industries, Inc.  
 Litton Industries, Maryland Div.  
 Lord Mfg. Co.  
 Lyon Van & Storage Co., Aircraft Div.  
 MB Mfg. Co.  
 Mc Dowell-Wellman Companies, The  
 Menasco Mfg. Co.  
 Minnesota Rubber Co.  
 \*MIRAX CHEMICAL PRODUCTS CORP., METAL CONTAINER DIV.  
 Orchar Industries, Inc., Actionflex Div.  
 Raybestos-Manhattan, Inc.  
 Roberts Toledo Rubber Co., The  
 Robinson Technical Products, Inc.  
 Rubbercraft Corp. of California  
 A. T. Stevens Co.  
 Ucinite Co., The, Div.-United-Carr Fastener Corp.  
 U. S. Industries, Inc.  
 United States Rubber Co.

## MOUNTS

American Aeroports  
 Anchor Metal Spinning Co., The  
 Antlab Inc.  
 Barry Controls Inc.  
 E. W. Bliss Co.  
 Bruce Engrg. Co.  
 Bushings, Inc.  
 Capital City Mfg. Co.  
 Champion Co., The  
 Colonial Aircraft Corp.  
 Cromer Mfg. & Engrg., Inc.  
 Diversey Engrg. Co.  
 Dresser Mfg. Div., Dresser Industries, Inc.  
 Federal Machine Co., Inc.  
 Federal Shock Mount Corp.-Div. The Korfund Co., Inc.  
 B. F. Goodrich Industrial Products Co.  
 Hamilton Kent Mfg. Co.  
 J. W. Johnson & Co., Inc.  
 Kolcast Industries-Div. Thompson Ramo Wooldridge Inc.  
 Ladish Co.  
 Lord Mfg. Co.  
 MB Mfg. Co.  
 Mercury Tool & Mfg. Corp.  
 \*MIRAX CHEMICAL PRODUCTS CORP., METAL CONTAINER DIV.  
 Pacific Scientific Co.  
 Piasecki Aircraft Corp.  
 Edw. Renneburg & Sons Co.  
 Robinson Technical Products, Inc.  
 Rubbercraft Corp. of California  
 Stainless Inc.  
 United Mfg. Co., The  
 Variety Aircraft Corp.  
 Vinco Corp.  
 Winder Aircraft Corp. of Florida

## MOUNTS, ENGINE

ACF Industries Inc.  
 Aircraft Mechanics, Inc.  
 American Aeroports  
 American Machine & Foundry Co., Government Products Group  
 Anchor Metal Spinning Co., The  
 Applied Design Co.  
 Barry Controls Inc.  
 Basic Tool Industries, Inc.  
 E. W. Bliss Co.  
 Bruce Engrg. Co.  
 Bushings, Inc.  
 Capital City Mfg. Co.  
 Champion Co., The  
 Clark-Aiken Co., The  
 Colonial Aircraft Corp.  
 Colonial Rubber Co.  
 Cromer Mfg. & Engrg., Inc.  
 Curtiss-Wright Corp.-Wright Aeronautical Div.  
 Diversey Engrg. Co.  
 Dow-Elco, Inc.  
 Dresser Mfg. Div., Dresser Industries, Inc.  
 B. F. Goodrich Industrial Products Co.  
 Houston Fearless Corp.  
 J. W. Johnson & Co., Inc.  
 Kaiser Aircraft & Electronics, Div.-Kaiser Industries Corp.  
 Kanarr Corp.  
 Kolcast Industries-Div. Thompson Ramo Wooldridge Inc.

Ladish Co.

## \*LAVELLE AIRCRAFT CORP.

Lord Mfg. Co.  
 MB Mfg. Co.  
 Mercury Tool & Mfg. Corp.  
 Oliver Corp., The  
 Pacific Scientific Co.  
 Piasecki Aircraft Corp.  
 Red Lion Cabinet Co., Redco Tool Div.  
 A. O. Smith Corp.  
 Solar Aircraft Co.  
 Southwest Products Co.  
 Stainless Inc.  
 Twin Coach Co., Aircraft-Missiles  
 Western Aluminum Co., Inc.  
 Westman Arc Welding, Inc.

## MOUNTS, SHOCK

American Aeroports  
 American Latex Products Corp.  
 Anchor Metal Spinning Co., The  
 Applied Design Co.  
 Barry Controls Inc.  
 Bushings, Inc.  
 Champion Co., The  
 Colonial Rubber Co.  
 Dayton Rubber Co., The  
 Dow-Elco, Inc.  
 Federal Shock Mount Corp.-Div. The Korfund Co., Inc.  
 Finn Aeronautical Div., T. R. Finn & Co., Inc.  
 B. F. Goodrich Industrial Products Co.  
 Hamilton Kent Mfg. Co.  
 Johns-Manville  
 J. W. Johnson & Co., Inc.  
 Kolcast Industries-Div. Thompson Ramo Wooldridge Inc.  
 Lord Mfg. Co.  
 MB Mfg. Co.  
 \*MIRAX CHEMICAL PRODUCTS CORP., METAL CONTAINER DIV.  
 Orchar Industries, Inc., Actionflex Div.  
 Pacific Scientific Co.  
 Roberts Toledo Rubber Co., The  
 Robinson Technical Products, Inc.  
 Rubbercraft Corp. of California  
 Southwest Products Co.  
 A. T. Stevens Co.  
 United States Rubber Co.  
 Winder Aircraft Corp. of Florida

## MOUNTS, THERMISTOR

Advanced Electronics, Inc.  
 Aerodes, Inc.  
 Colonial Rubber Co.  
 J. W. Johnson & Co., Inc.  
 Omega Labs, Inc.  
 Sperry Microwave Electronics Co., Div.-Sperry Rand Corp.  
 Telerad Mfg. Corp.  
 Wilks Precision Instrument Co., Inc.  
 Yellow Springs Instrument Co., The

## MUFFLER ASSEMBLIES, HEATER

See HEATER MUFFLER ASSEMBLIES

## MUFFLERS, JET ENGINE INTAKE & EXHAUST

Allied Witan Co., Inc.  
 Curtiss-Wright Corp., Research Div.  
 Curtiss-Wright Corp., Wright Aeronautical Div.  
 Diversey Engrg. Co.  
 Dresser Mfg. Div., Dresser Industries, Inc.  
 Eihart Mfg. Co., Maxim Div.  
 Finn Aeronautical Div., T. R. Finn & Co., Inc.  
 Industrial Acoustics Co., Inc.  
 Kaiser Aircraft & Electronics, Div.-Kaiser Industries Corp.  
 Mercury Tool & Mfg. Corp.  
 Portland Copper & Tonk Works Inc.  
 Edw. Renneburg & Sons Co.  
 \*RHEEM MFG. CO., DEFENSE & TECHNICAL PRODUCTS DIV.  
 Rohr Aircraft Corp.  
 Smith-Morris Corp.  
 Stainless Steel Products, Inc.  
 Vard Inc.

## MUFFS

Allied Witan Co., Inc.  
 Colonial Aircraft Corp.  
 Curtiss-Wright Corp.-Wright Aeronautical Div.  
 Piasecki Aircraft Corp.  
 Ryan Aeronautical Co.  
 Thiokol Chemical Corp.

## MULTIPLEX SYSTEMS

\*ARNOLD CORP.  
 Barker Sales Co.  
 Bell & Gossett Co.  
 Budelman Electronics Corp.  
 Centronix Inc.  
 Collins Radio Co.  
 Cubic Corp.  
 Data-Control Systems, Inc.  
 Electro Tec Corp.  
 Electronic Communications, Inc.  
 General Devices, Inc.  
 General Electric Co., Computer Dept.  
 Hallcrafters  
 ITT Federal Div., International Telephone & Telegraph Corp.



Instrument Development Labs., Inc.  
 Moore Associates, Inc.  
 Motorola Inc., Military Electronics Div.  
**\*PACKARD-BELL ELECTRONICS CORP.**  
 Philca Corp., Government & Industrial Div.  
 Radiation, Inc.  
 Railway Communications Inc.  
 Raytheon Mfg. Co.  
 Raytheon Mfg. Co., Government Equipment Div.  
 Rixan Electronics Inc.  
 Stromberg-Carlson Div.-General Dynamics Corp.  
 Telechrome Mfg. Corp.  
 Tele-Dynamics Inc.  
 Transco Products, Inc.

**AMPLIFIERS**  
 a. Crystal  
 b. Diode  
 c. Electronic  
 d. Frequency  
 e. Magnetic  
 f. Meter  
 g. Servo

Aircam Inc., a.  
 Amelco, Inc., d.  
 Amerco Inc., d.  
 American Electronics, Inc., d.  
 American Research & Mfg. Corp., c, d, e.  
 Atlas Precision Products Co., g.  
 Avco Ltd., f.  
 Beckman Instruments, Inc., Berkeley Div., c, g.  
 Bergen Labs., Inc.  
 Centronix Inc., c.  
 Chadwick-Helmuth Co., c.  
 Clary Dynamics, c.  
 Coils-Electronics, g.  
 Galtor Div., Yuba Consolidated Industries, Inc.,  
 g.  
 Javen Co., The, f.  
 Joystrom Pacific Div.-Daystrom, Inc., g.  
 Jemoray-Bonardi, d.  
 Jervice Development Corp., c, e.  
 Ji-An Controls, Inc., c.  
 Janner Scientific Co., c, g.  
 Jouglous Microwave Co., Inc., a, d.  
 Thomas A. Edison Ind. Instrument Div.-McGrow-  
 Edison Co., g.  
 Electro Precision Corp., g.  
 Electronic Applications, Inc., d.  
 Electronic-Tech Equipment Co., f.  
 Feedback Controls, Inc., g.  
 General Electric Co., Computer Dept.  
 General Magnetics, Inc., e.  
 Good Electronic Corp., c, d.  
 Gyrex Corp., The, d.  
 Hamilton Standard Div.-United Aircraft Corp.  
 Hoover Electric Co., g.  
 Hyatt J. Hyatt Co., The, g.  
 L-S Instrument Div., The Meriom Instrument Co., d.  
 Industrial Test Equipment Co., c.  
 Instruments for Industry, Inc., c, d.  
**KEARFOTT CO., INC., g.**  
 Land-Air Inc., g.  
 Magnetic Instrument Co., Inc., g.  
 Manson Labs., Inc., d.  
 Microwave Associates, Inc., a, b, c.  
 Minneapolis-Honeywell Regulator Co., Industrial  
 Product Group, g.  
 Monogram Precision Industries, d.  
 Moran Instrument Corp., g.  
 Motorola Inc., Military Electronics Div., a thru d.  
 Newton Co., The, c.  
 Ernest Norman Laboratories, c.  
 George A. Philbrick Researches, Inc., c.  
 Hilco Corp., Government & Industrial Div.  
 Physics Research Laboratories, Inc., f.  
 Precision Resistor Co. Inc., f.  
 Radar Design Corp., d.  
 Reeves Instrument Corp., b, c, g.  
 Resdel Engrg. Corp., a, d.  
 Rollcross Mfg. Co., f.  
 Simpson Electric Co., f.  
 Specialty Engrg. & Electronics Co., b, c.  
 Sperry Electronic Tube Div., Sperry Rand Corp., d.  
 Apco Group, Thompson-Ramo-Woodridge Inc.  
 Technical Apparatus Builders, d, e, f.  
 Telechrome Mfg. Corp., c, d.  
 Elerad Mfg. Corp., d.  
 Weston Hydraulics Ltd.-Sub., Borg-Warner Corp., g.  
 Weston Instruments, Div.-Doystrom, Inc., f.

**MULTIVIBRATORS, VIBRATORS**  
 See VIBRATORS, MULTIVIBRATORS,

**NETS, SPECIAL**  
 Illuminum Co. of America  
 Anti-Corrosive Metal Products Co., Inc.  
 Opewell Mfg. Co.  
 Chase Brass & Copper Co., Inc.  
 Corbin Products Div.  
 John Hossoll, Inc.  
 Lumitronic Engrg. Co.  
 Republic Steel Corp.  
 Air Stainless Screw Co.

**NETS, SPECIAL**  
 Bromark Co., The  
 Dept Industries Inc.  
 Project-General Corp.  
 I Specs Corp.

Allied Plastics Supply Corp.  
 Alpitac, Inc.  
 American Aeroparts  
 Bendix Aviation Corp., York Div.  
 W. H. Brady Co.  
 Burton-Rodgers, Inc.  
 Cleveland Metal Specialties Co., Electronics Div.  
 Conn-Craft Co.  
 Crane Inc.  
 Crystal-M Corp.  
 Henry G. Dietz Co., Inc.  
 Duralith Corp.  
 Electric Auto-Lite Co., The  
 Electrical Insulation Co., Inc.  
 Eljay Corp.  
 Emeloid Co., Inc., The  
 Emerson Plastics Corp.  
 Emcco Plastic Fabricators - Div.-E. M. McCarthy  
 Machine Co.  
 Erie Resistor Corp.  
 Fisher & Crome  
 Industrial Engravers, Inc.  
 Jodee Plastics Co.  
 Keil Engrg. Products  
 Kerco Products  
 Thomas J. Lang, Inc.  
 Maryland Etching Co. Inc.  
 Jas. H. Matthews & Co.  
 Metalphoto Corp.  
 Mica Insulator Div.-Minnesota Mining & Mfg. Co.  
 Mico Instrument Co.  
 Miller Dial & Nameplate Co.  
 Minnesota Mining & Mfg. Co.  
 New England Etching & Plating Co., Inc.  
 Panel Engrg. Corp.  
 Park Nameplate Co., Inc.  
 Pee-Cee Tape & Label Co.  
 Penn Fibre & Specialty Co., Inc.  
 Q-Circuits, Div.-Etching Co. of Calif.  
 Roovers-Lotsch Corp.  
 Milton Ross Metals Co., The  
 D. A. Schultz Co.  
 Scioto Sign Co.  
 Specialty Engrg. & Electronics Co.  
 Topflight Corp.  
 United States Radium Corp.  
 Virginia Plak Co.  
 Waldom Electronics Inc.  
 Westlake Plastics Co.  
 Wilks Precision Instrument Co., Inc.

**NAVIGATION CALLING SYSTEMS, SELECTIVE**  
 See CALLING SYSTEMS, SELECTIVE,  
 NAVIGATION

**NAVIGATION DOMES**

American Aeroparts  
 American Optical Co., Instrument Div.  
 Corning Glass Works  
 Fletcher Mfg. Co., Inc., The  
 Hughes Tool Co., Aircraft Div.  
 Hull Corp.  
 Kaiser Aircraft & Electronics, Div.-Kaiser  
 Industries Corp.  
 Monogram Precision Industries  
 National Pneumatic Co., Inc., Holtzer-Cobot Divs.  
 Plastic Age Sales, Inc.  
 Reinhold Engrg. & Plastics Co.  
 Silicone Insulation, Inc.  
 Swedlow Inc.

**NAVIGATION EQUIPMENT, GROUND**

ACF Industries Inc.  
 American Missile Products Co., Inc.  
 Armo Div., American Bosch Armo Corp.  
 Atlas Precision Products, Co.  
 Bell Aircraft Corp., Niagara Frontier Div.  
 Bendix Aviation Corp., York Div.  
 Communications Research Co.  
 Craig Systems, Inc.  
 Data-Control Systems, Inc.  
 Dayton Aviation Radio & Equipment Corp.  
 Fairchild Astrionics Div., Fairchild Engine &  
 Airplane Corp.  
 Gillfillan Bros. Inc.  
 Hazeltine Electronics Div.-Hazeltine Corp.  
**\*KEARFOTT CO., INC.**  
 Litton Industries, Maryland Div.  
 W. L. Maxson Corp., The  
 Motorola Inc., Military Electronics Div.  
 Philca Corp., Government & Industrial Div.  
 Raytheon Mfg. Co., Government Equipment Div.  
 Seiscor Mfg. Co.  
 Specialty Engrg. & Electronics Co.  
 Stromberg-Carlson Div.-General Dynamics Corp.  
 Thiokol Chemical Corp.  
 U. S. Science Corp., Div.-Topp Industries, Inc.  
 Winder Aircraft Corp. of Florida

**NAVIGATION SYSTEMS**

**\*AC ELECTRONICS DIV., GENERAL MOTORS  
 INC.**  
 ACF Industries Inc.  
 American Bosch Arma Corp.  
 Atlas Precision Products Co.  
 Baird-Atomic, Inc.  
 Bell Aircraft Corp., Niagara Frontier Div.  
 Bendix Aviation Corp., Eclipse-Pioneer Div.  
 Bendix Radio Div., Bendix Aviation Corp.  
 Bendix-Pacific Div., Bendix Aviation Corp.  
 Centronix Inc.  
 Collins Radio Co.

Communications Research Co.  
 Dayton Aviation Radio & Equipment Corp.  
 Electronic Communications, Inc.  
 Emerson Electric Mfg. Co., The, Electronics &  
 Avionics Div.  
 Emerson Radio & Phonograph Corp.  
 Fairchild Astrionics Div., Fairchild Engine &  
 Airplane Corp.  
 Feedback Controls, Inc.  
 Ford Instrument Co., Div.-Sperry Rand Corp.  
 General Electric Co., Missile & Space Vehicle Dept.  
 General Precision Lab. Inc.  
 Gillfillan Bros. Inc.  
 Hazeltine Electronics Div.-Hazeltine Corp.  
 Hoffman Labs. Div., Hoffman Electronics Corp.  
 Hughes Aircraft Co.  
 Hydra-Power Corp.  
 International Business Machines Corp.-Military  
 Products Div.  
**\*KEARFOTT CO., INC.**  
 Land-Air Inc.  
 Lane Electronics Mfg. Corp.  
 Lear, Inc.  
 Lear, Inc., Grand Rapids Div.  
 Libroscope Inc.  
 Litton Industries, Inc.  
 Litton Industries, Maryland Div.  
 W. L. Maxson Corp., The  
 Minneapolis-Honeywell Regulator Co.-Aeronautical  
 Div.  
 Motorola Inc., Military Electronics Div.  
 Northrop Corp.  
 Northrop Corp., The, Nartronics Div.  
 Philca Corp., Government & Industrial Div.  
 Power-Tronic Systems Inc.  
 Radiation, Inc.  
 Ramo-Woodridge Div., Thompson Rama Woodridge  
 of Calif.  
 Raytheon Mfg. Co., Government Equipment Div.  
 Ryan Aeronautical Co.  
 Seiscor Mfg. Co.  
 Servo Corp. of America  
 Sperry Gyroscope Co., Marine Div., Div.-Sperry Rand  
 Corp.  
 Sperry Piedmont Co.-Div.-Sperry Rand Corp.  
 Stromberg-Carlson Div.-General Dynamics Corp.  
 Summers Gyroscope Co.  
 Thiokol Chemical Corp.  
 U. S. Industries, Inc.  
 Winder Aircraft Corp. of Florida

**NEEDLES, DIAMOND**

United Mineral & Chemical Corp.

**NEEDLES, METAL**

Audio Devices, Inc.  
 Capital City Mfg. Co.  
 Electronic Parts Mfg. Co., Inc.  
 Monogram Precision Industries  
 Sphinx-American Co.  
 Torrington Co., The

**NEEDLES, STEEL**

Audio Devices, Inc.  
 Duotone Co., Inc.  
 Koydon Engrg. Corp., The  
 Sphinx-American Co.  
 Torrington Co., The

**NETWORKS**

a. Crossover  
 b. Directional Antenna Phasing  
 c. Matching  
 d. Potted  
 e. Pulse Farming

AMP Inc., e.  
 Airtrom Inc., Div.-Litton Industries, b.  
 Airtronics International Corp., e.  
 Alford Mfg. Co., c.  
 Atlas Precision Products, Co., e.  
 Audio Development Co., a, c, d.  
 Axel Electronics, e.  
 Barker Sales Co., a.  
 Blonder-Tongue Labs., Inc., a, e.  
 CELCO (Constantine Engrg. Labs. Co.), a thru e.  
 Cornell-Dubilier Electric Corp., e.  
 Corson Electric Mfg. Corp., e.  
 Dole Products, Inc., d.  
 Daven Co., The, c.  
 Double E Products Co., a thru e.  
 Dresser Industries, Inc., d.  
 Electronic Applications, Inc., a.  
 Entron, Inc., c.  
 FXR, Inc., e.  
 Filtron Co., Inc., d, e.  
 Forbes & Wagner, Inc., e.  
 General Electric Co., Apparatus Sales Div., e.  
 Gudeman Co. of California, Inc., The, Monrovia  
 Div., e.  
 Walter J. Hyatt Co., The, a thru e.  
 Instruments for Industry, Inc., a, c.  
 JFD Electronics Corp., e.  
 Jensen Mfg. Co., a, c.  
 E. F. Johnson Co., c.  
**\*KEARFOTT CO., INC., a, b, c.**  
 Mecco, Inc., c, d.  
 Minneapolis-Honeywell Regulator Co.-Dovies  
 Labs. Div., e.  
 Motorola Inc., Military Electronics Div., d.  
 NYT Electronics, Inc., a, i, e.

National Pneumatic Co., Holtzer-Cobot Div., b, c, d.  
 Networks Electronic Corp., c, d.  
 Ralph M. Parsons Co., The, Electronics Div., a.  
 Perry Plastics, Inc., a.  
 Power-Tronic Systems Inc., a, c, d.  
 Milton Ross Metals Co., The, d.  
 Shallcross Mfg. Co., d.  
 Strömberg-Carlson Div.-General Dynamics Corp., a.  
 Technical Apparatus Builders, a.  
 Telechrome Mfg. Corp., d, e.  
 Telectro Industries Corp., a, b, c.  
 Tobe Deutschmann Corp., e.  
 Transco Products, Inc., c.  
 Trionics Corp., d.  
 University Loudspeakers, Inc., a.  
 Vanguard Electronics Co., d, e.  
 Webcor, Inc., Government Div., d, e.

**NITROGEN GASES**  
 See GASES, NITROGEN

**NITROGEN, LIQUID**  
 See LIQUID NITROGEN

**NOISE SUPPRESSORS**  
 See SUPPRESSORS, NOISE

**NON-FLEXIBLE DUCTS**  
 See DUCTS, NON-FLEXIBLE

**NON-METALLIC BUSHINGS**  
 See BUSHINGS, NON-METALLIC

**NON-METALLIC EXTRUSIONS**  
 See EXTRUSIONS, NON-METALLIC

**NON-METALLIC FITTINGS**  
 See FITTINGS, NON-METALLIC

**NON-METALLIC GASKETS**  
 See GASKETS, NON-METALLIC

**NON-METALLIC MOUNTINGS**  
 See MOUNTINGS, NON-METALLIC

**NON-METALLIC SLEEVES**  
 See SLEEVES, NON-METALLIC

**NOZZLE ASSEMBLIES**

ACF Industries Inc.  
 Aerolab Development Co.  
 American Bosch Arma Corp.  
 American Car & Foundry, Div.-ACF Industries, Inc.  
 American Machine & Foundry Co., Government Products Group  
 Astrodyne, Inc.  
 Atlantic Instrument Corp., Sub.-American Electronics, Inc.  
 Auto Specialties Mfg. Co., Inc.  
 B. H. Aircraft Co., Inc.  
 \*BEATON & CORBIN MFG. CO., THE  
 \*BENDIX PRODUCTS DIV., BENDIX AVIATION CORP.  
 Buckeye Iron & Brass Works  
 California Aircraft Products  
 \*CAMERON IRON WORKS, INC.  
 Carmoc Aviation  
 Christie Machine Works  
 Cleveland Pneumatic Industries, Inc.  
 Cooper Development Corp., Sub.-Marquardt Aircraft Co.  
 Crystal-X Corp.  
 Curtiss-Wright Corp.-Wright Aeronautical Div.  
 Diversey Engrg. Co.  
 Dresser Mfg. Div., Dresser Industries, Inc.  
 Electro-Mechanical Products Co.  
 Engineered Products Co., The  
 Federal Machine Co. Inc.  
 Fletcher Mfg. Co., Inc., The  
 Giannini Plasmadyne Corp.  
 Havg Industries, Inc.  
 Herlo Engrg. Corp.  
 Houston Fearless Corp.  
 Hufford Corp., The  
 Hupp Aviation Co.  
 Hydrodyne Corp., Skinner Seal Div.  
 Ingersoll Kalamazoo Div., Borg-Warner Corp.  
 Intercontinental Mfg. Co., Inc.  
 Kaiser Aircraft & Electronics, Div.-Kaiser Industries Corp.  
 M. W. Kelllogg Co., The  
 Kolcast Industries-Div. Thompson-Ramo-Wooldridge Inc.  
 Marman Div., Aeroquip Corp.  
 Marquardt Aircraft Co.  
 Mercury Tool & Mfg. Corp.  
 National Beryllio Corp.  
 Newbrook Machine Corp.  
 Norris-Thermador Corp.  
 Norton Co., New Products Dept.  
 Parker-Hartford Corp., The  
 Parts Engrg. Co., Inc.  
 Plastic Age Sales, Inc.  
 Portland Copper & Tank Works Inc.  
 Precision Sheet Metal, Inc.  
 Red Lion Cabinet Co., Redco Tool Div.  
 \*RHEEM MFG. CO., DEFENSE & TECHNICAL PRODUCTS DIV.  
 Rohn Aircraft Corp.  
 Royal Industries, Inc.  
 Ryan Aeronautical Co.  
 Smith-Morris Corp.  
 Solor Aircraft Co.  
 Stainless Steel Products, Inc.  
 Stalker Corp., The  
 Tapco Group, Thompson-Ramo-Wooldridge Inc.  
 H. J. Thompson Fiber Glass Co.  
 Turbo Products, Inc.  
 Twigg Industries  
 Vard Inc.  
 Waste King Corp., Technical Products Div.  
 Western Gear Corp.  
 Young Development Div., Hercules Powder Co.

**NOZZLE DIAPHRAGMS**

ACF Industries Inc.  
 Aerolab Development Co.  
 American Machine & Foundry Co., Government Products Group  
 Astrodyne, Inc.  
 Cleveland Pneumatic Industries, Inc.  
 Cooper Development Corp., Sub.-Marquardt Aircraft Co.  
 Curtiss-Wright Corp.-Wright Aeronautical Div.  
 Diversey Engrg. Co.  
 Dresser Mfg. Div., Dresser Industries, Inc.  
 Fletcher Mfg. Co., Inc., The  
 Havg Industries, Inc.  
 Herlo Engrg. Corp.  
 Houston Fearless Corp.  
 Hupp Aviation Co.  
 Jolin Mfg. Co.  
 Kaiser Aircraft & Electronics, Div.-Kaiser Industries Corp.  
 Kolcast Industries-Div. Thompson Ramo Wooldridge Inc.  
 National Beryllio Corp.  
 Parts Engrg. Co., Inc.  
 Portland Copper & Tank Works Inc.  
 \*RHEEM MFG. CO., DEFENSE & TECHNICAL PRODUCTS DIV.  
 Ryan Aeronautical Co.  
 Solor Aircraft Co.  
 Stalker Corp., The  
 Tapco Group, Thompson-Ramo-Wooldridge Inc.  
 H. J. Thompson Fiber Glass Co.  
 Turbo Products, Inc.  
 Twigg Industries  
 United States Rubber Co.  
 Vard Inc.

**NOZZLES**

a. Exhaust  
 b. Exhaust, Metallic  
 c. Fuel Injection  
 d. Rocket, Movable  
 ACF Industries Inc., c.  
 Aerojet-General Corp., a.  
 Aerolab Development Co., a, b.  
 Aeroscience, Inc.  
 Aircraft Mechanics, Inc., a, b.  
 Aircraft Precision Products, Inc., a, b.  
 Alco Products, Inc., b.  
 American Bosch Arma Corp., c.  
 American Car & Foundry, Div.-ACF Industries, Inc., a.  
 American Machine & Foundry Co., Government Products Group, a, b.  
 Anchor Metal Spinning Co., The, a, b.  
 Arde-Portland, Inc., a, b.  
 Associated Engineers, Inc., c.  
 Astrodyne, Inc., b.  
 Atlantic Instrument Corp., Sub.-American Electronics, Inc., c.  
 Auto Specialties Mfg. Co., Inc., a.  
 B. H. Aircraft Co., Inc., a, b, c.  
 Baldwin Mfg. Co., Inc., The, c.  
 \*BENDIX PRODUCTS DIV., BENDIX AVIATION CORP., d.  
 Benson Mfg. Co., The, a.  
 California Aircraft Products, a, c.  
 \*CAMERON IRON WORKS, INC., a, b.  
 Carbone Corp., The, a.  
 Corborundum Co., Refractories Div., a.  
 Carmac Aviation  
 Celco (Constantine Engrg. Labs Co.), a.  
 Christie Machine Works, a.  
 Cleveland Pneumatic Industries, Inc., a, b, c.  
 Con-Air Products, Div.-A S R Products Corp., c.  
 Cooper Development Corp., Sub.-Marquardt Aircraft Co., a, b, c.  
 Curtiss-Wright Corp.-South Bend Div., c.  
 Curtiss-Wright Corp.-Wright Aeronautical Div., a, b, c.  
 Diversey Engrg. Co., a, b.  
 Dresser Industries, Inc., a, b.  
 Dresser Mfg. Div., Dresser Industries, Inc., a, b.  
 Eddington Metal Specialty Co., c.  
 Electro-Mechanical Products Co., c.  
 Emerson Plastics Corp., a.  
 Engineered Products Co., The, a.  
 Federal Machine Co., Inc., a.  
 Finn Aeronautical Div., T. R. Finn & Co., Inc., a, b.  
 Fletcher Mfg. Co., Inc., The, a, b, c.  
 \*FLEXONICS CORP., AERONAUTICAL DIV., a.  
 Gladding, McBean & Co., a.  
 Havg Industries, Inc., a.  
 Herlo Engrg. Corp.

Hicks Corp., The, b.  
 Highland Rim Machine Works Inc., c.  
 Houston Fearless Corp., c.  
 Hufford Corp., The, a.  
 Hupp Aviation Co., a, c.  
 Hydrodyne Corp., Skinner Seal Div., a, b.  
 Ingersoll Kalamazoo Div., Borg-Warner Corp., a, b.  
 Intercontinental Mfg. Co., Inc., a.  
 Jolin Mfg. Co., c.  
 Kaiser Aircraft & Electronics, Div.-Kaiser Industries Corp., a, b.  
 Kaiser Metal Products, Inc.-Fleetwings Div., a.  
 Konarr Corp., a, b.  
 M. W. Kelllogg Co., The, a, b, c.  
 Kelsey-Hayes Co., a, b.  
 Kolcast Industries-Div. Thompson Ramo Wooldridge Inc., a, b, c.  
 Kordo Industries, c.  
 Lodish Co., a, b.  
 Lomtex Industries, Inc., a.  
 \*LAVELLE AIRCRAFT CORP., b.  
 Marquardt Aircraft Co., a, b.  
 Mercury Tool & Mfg. Corp., a.  
 Metal Fabricators Corp., a, c.  
 Minnesota Mining & Mfg. Co., a.  
 Morganite, Inc., a.  
 National Airoil Burner Co., c.  
 National Beryllio Corp., a, b, c.  
 Newbrook Machine Corp., a, b, c.  
 Norris-Thermador Corp., a, b.  
 Norton Co., a.  
 Norton Co., New Products Dept., a, b.  
 Oerlikon Tool & Arms Corp. of America, a.  
 Ohio Carbon Co., The, a.  
 Parker Aircraft Co., c.  
 Parker-Hartford Corp., The, a, b, c.  
 Parts Engrg. Co., Inc., a, b, c.  
 Plastic Age Sales, Inc., a.  
 Portland Copper & Tank Works Inc.  
 Precision Sheet Metal Co., a, b.  
 Reaction Motors Div., Thiokol Chem. Corp., a, b, c.  
 Red Lion Cabinet Co., Redco Tool Div.  
 Reinhold Engrg. & Plastics Co., a.  
 \*RHEEM MFG. CO., DEFENSE & TECHNICAL PRODUCTS DIV., a, b.  
 C. F. Roark Welding & Engrg. Co., Inc., a, b.  
 Rocketdyne Div.-North American Aviation, Inc., a.  
 Rohn Aircraft Corp., a, b.  
 Ransom Hydraulic Units Corp., c.  
 Royal Industries, Inc., a.  
 Ryan Aeronautical Co., a, b.  
 Silicone Insulation, Inc., a.  
 Smith-Morris Corp., a, b, c.  
 Solor Aircraft Co., a.  
 Special Projects Lab., Food Machinery & Chemical Corp., a, c.  
 Sproyng Systems Co.  
 Squiers Gage Co., a, b, c.  
 Stainless Inc., a, b.  
 Stainless Steel Products, Inc., a, b.  
 Stalker Corp., The, a.  
 Swedlow Inc., c.  
 Tapco Group, Thompson-Ramo-Wooldridge Inc., a, b, c.  
 Teiner Engrg. Corp., a.  
 Thermal Refractories Corp., a.  
 H. J. Thompson Fiber Glass Co.  
 C. W. Torngren Co., Inc., a.  
 Tube-Turns Div., Chemetron Corp., b.  
 Turbo Products, Inc., a, b.  
 Twigg Industries, a, b, c.  
 United Aircraft Products, Inc., c.  
 Universal Moulded Products Corp., a.  
 Vard Inc., a, b, c.  
 Vest Industries, c.  
 Waste King Corp., Technical Products Div., a, b.  
 Westinghouse Electric Corp., Metals Plant, b.  
 Wheland Co., The, a.  
 Young Development Div., Hercules Powder Co., a.

**NUCLEAR**

a. Analyzers, Coincidence  
 b. Analyzers, Neutron Absorption  
 c. Analyzers, Spectrum  
 d. Assemblies, Shield  
 e. Badges, Radiation  
 f. Controls, Reactor  
 g. Counters  
 h. Crystals  
 i. Detectors  
 j. Indicators, Radiation  
 k. Manipulators  
 l. Meters, Counting Rate  
 m. Meters, Dosimeter  
 n. Meters, Nuclear Radiation  
 o. Processors, Catalytic Flow Rate  
 p. Shielding, Radiation  
 q. Tubes, Scintillation  
 r. Tubes, Geiger Counter  
 ACF Industries Inc., d, p.  
 Adept Industries Inc., a.  
 Aerojet-General Corp., f.  
 Aerotec Corp., The, f.  
 Alptec, Inc., p.  
 American Electronics, Inc., American Nuclear Div., c, d, e, g thru i, l, n, p, q, r.  
 American Lava Corp., b.  
 American Machine & Foundry Co., Government Products Group, f, k.  
 American Smelting & Refining Co., p.  
 Anton Electronic Labs., Inc., b, g, i, j, l, m, n, r.

Assembly Products, Inc., l, m.  
 Baird-Atomic, Inc., a, c, d, f thru j, l, m, n, p, q.  
 Baird-Roy Products, Inc., d, p.  
**BAUSCH & LOMB OPTICAL CO.**, i, j, m, n.  
 Beaver Precision Products Inc., f.  
 Bell & Howell Co., m.  
**BENDIX PRODUCTS DIV., BENDIX AVIATION CORP.**, f.  
 Bevo Labs., Inc., a, b, c.  
 Bios Labs., h.  
 E. W. Bliss Co., k.  
 Brooks & Perkins, Inc., d, p.  
 Central Electronic Mfrs., Div.-Nuclear Corp. of America, q.  
 Corning Glass Works, d, e, i, p.  
 Curtiss-Wright Corp., Electronics Div., f, i, j.  
 Curtiss-Wright Corp., Research Div., f, g.  
 Diverser Engrg. Co., d, f, k.  
 Division Lead Co., p.  
 Eastman Kodak Co., e.  
 Edgerton, Germeshausen & Grier, Inc., f, i, j, m, n.  
 Eldorado Electronics, a, c, g, n.  
 Emerson & Cuming, Inc., p.  
 Eng. Inc., i, l, n.  
 XR, Inc., c, n.  
 Fisher Research Lab., Inc., i, j.  
 Flow Corp., h.  
 Ford Instrument Co., Div.-Sperry Rand Corp., f.  
 Genalex Div.-British Industries Corp., a, r.  
 General Electric Co., X-Ray Dept., c.  
 Gidding, McBean & Co., p.  
 Greer Hydraulics, Inc., k.  
 Hallett Mfg. Co., p.  
 Harley-Moore Associates, k.  
 L.S. Instrument Div., The Meriam Instrument Co., l.  
 ITT Labs.-Ft. Wayne, i.  
 Johns-Manville Sales Corp., p.  
 Jordan Electronics, Div.-Victoreen Instrument Co., i, j, n.  
 Keithley Instruments, Inc., f.  
 Land-Air Inc., i, j.  
 Roe Instruments, Inc., g.  
 Leeds & Northrup Co., f.  
 Levinthal Electronic Products, Inc., h.  
 Lithium Corp. of America, Inc., p.  
 Marquardt Aircraft Co., f.  
 Menlo Research Lab., g, i, j, n.  
 Minneapolis-Honeywell Regulator Co., Davies Labs. Div., f, l.  
 Minneapolis-Honeywell Regulator Co., Industrial Div., f.  
 Minneapolis-Honeywell Regulator Co., Industrial Product Group, f, n.  
 National Beryllia Corp., d.  
 National Lead Co., d.  
 National Spectrographic Labs., Inc., c.  
 Norton Co., New Products Dept., p.  
 Nuclear Corp. of America, c, d, g, i, j, l, m, n.  
 Nuclear Products-Erco Div.-ACF Industries, Inc., f.  
 Nuclear-Chicago Corp., d, e, g thru j, l, m, n, p, q, r.  
 Orbit Instrument Corp., f.  
 Pacific Coast Engrg. Co., d, p.  
 Patterson, Moss Div. - Universal Winding Co., Inc., g, i, j, m.  
 Piosceki Aircraft Corp., i, l, m, n.  
 Pilot Chemicals, Inc., h.  
 Portland Copper & Tonk Works Inc., d.  
 Precision Methods & Machines Div.-Textron Inc., f.  
 R & R Engrg. Co., d, p.  
 Radiation Instrument Development Lab., Inc., a, c, f thru j, l, m, p, q, r.  
 Raytheon Mfg. Co., c, r.  
 Rayco Group, Thompson-Ramo-Wooldrige Inc., d, f, k.  
 Regis Paper Co., Panelyte Div., p.  
 Smith-Morris Corp., g.  
 Specialty Engrg. & Electronics Co., i, j.  
 Spectrum Instruments, Inc., c.  
 Stanley Aviation Corp., f, g, i, j.  
 Sver Co., Inc., The, p.  
 Swams-Roger Mfg. Co.  
 Rand Engrg. Co., i.  
 Romberg-Carlson Div.-General Dynamics Corp., f.  
 Strams Inc., n.  
 Stron Corp., g.  
 Teco Group, Thompson-Ramo-Wooldrige Inc., d, f, k.  
 Teflex Inc., f.  
 Twenty-First Century Electronics, Inc., i, j.  
 U. S. Industries, Inc., k.  
 Varian Inc., f.  
 Electronics Inc., f, j.  
 Wood Counter Lab., g, i, q, r.  
 Wuppertung Co., The, d, p.

**NUCLEAR PRODUCTS**

- 1. Analyzers, Coincidence
- 2. Analyzers, Neutron Absorption
- 3. Analyzers, Spectrum
- 4. Assemblies, Shield
- 5. Badges, Radiation
- 6. Chambers, Alpha
- 7. Counters, Alpha
- 8. Counters, Radiation
- 9. Counters, Scintillation
- 10. Crystal, Scintillation
- 11. Detectors, Scintillation
- 12. Equipment, Nuclear Radiation
- 13. Indicators, Radiation
- 14. Spectrometers
- 15. Tubes, Gamma Ray
- 16. Tubes, Geiger Counter
- 17. Tubes, Scintillation

ACF Industries Inc.  
 Adept Industries Inc., e.  
 Aerotec Corp., The, l.  
 Alpitec, Inc., d.  
 American Electronics, Inc., e, h, i.  
 American Electronics, Inc., American Nuclear Div., c, d, e, h thru q.  
 American Lovo Corp., b.  
 Anton Electronic Labs., Inc., f, g, h, l, m, a, p.  
 Applied Radiation Corp., l.  
 Baird-Atomic, Inc., a thru d, f thru k, m thru q.  
**BAUSCH & LOMB OPTICAL CO.**, e, m, n.  
 Bevo Lab., Inc., a, b, c, l.  
 James G. Biddle Co., n.  
 Bios Labs., Inc., i.  
 Brooks & Perkins, Inc., d.  
 Cambridge Filter Corp., l.  
 Central Electronic Mfrs., Div.-Nuclear Corp. of America, q.  
 Consolidated Electrodynamics Corp., c, n.  
 Corning Glass Works, e.  
 Curtiss-Wright Corp., Electronics Div., m.  
 Eastman Kodak Co., e.  
 Edgerton, Germeshausen & Grier, Inc., l, m.  
 Eldorado Electronics, a, c, h, l, m.  
 Engr. Associates, g.  
 FXR, Inc., c.  
 Fisher Research Lab., Inc., h, j.  
 Ford Instrument Co., Div.-Sperry Rand Corp.  
 Genalex Div.-British Industries Corp., a, p, q.  
 General Electric Co., X-Ray Dept., c, n, a.  
 Glass Engrg. Div. Broun-Knecht-Heimann-Co., p.  
 Hallett Mfg. Co., c.  
 Harvey-Wells Electronics Inc., n.  
 High Voltage Engr. Corp., l.  
 Harley-Moore Associates, l.  
 Instruments Div.-Philips Electronics, Inc., i, k, p.  
 International Electronic Research Corp., h, l, m.  
 Kollmorgen Optical Corp., l.  
 Land-Air Inc., h, l, m.  
 Lo Roe Instruments, Inc., h.  
 Levinthal Electronic Products, Inc., j.  
 Magnetic Instrument Co. Inc., i, k.  
 Menlo Research Lab., h, i, k.  
 Minneapolis-Honeywell Regulator Co., Industrial Product Group, a, l.  
 National Lead Co., d.  
 National Spectrographic Labs., Inc., c, n.  
 Norton Co., New Products Dept., d.  
 Nuclear Corp. of America, c, f thru n.  
 Nuclear-Chicago Corp., c thru q.  
 Pacific Coast Engrg. Co., d.  
 Patterson, Moss Div. - Universal Winding Co., Inc., l.  
 Piosceki Aircraft Corp., h, i.  
 Picker X-Ray Corp., e.  
 Pilot Chemicals, Inc., i, j, k.  
 Portland Copper & Tonk Works Inc., f.  
 R & R Engrg. Co., d.  
 Radiation Instrument Development Lab., Inc., a, c, g thru q.  
 Raytheon Mfg. Co., c, p.  
 Riggs Nuclear Corp., h, l, m.  
 Ryan Aeronautical Co., d.  
 St. John X-Ray Lab., e.  
 Scientific Engrg. Labs., Inc., l.  
 Smith-Morris Corp., c, d.  
 Specialty Engrg. & Electronics Co., l, m.  
 Spectrum Instruments, Inc., c.  
 Stanley Aviation Corp., h, i, k, m.  
 Topco Group, Thompson-Ramo-Wooldrige Inc., d, l.  
 Twenty-First Century Electronics, Inc., l.  
 U. S. Industries, Inc.  
 Varian Associates, n.  
 N. Wood Counter Lab., g, h, i, k, a, p.

**NUCLEAR RADIATION EQUIPMENT**  
 See RADIATION EQUIPMENT, NUCLEAR

**NUCLEAR SEALERS**  
 See SEALERS, NUCLEAR

**NUTS, SELF-LOCKING**

Abbott Screw & Mfg. Co.  
 Aero Bolt & Screw Co., Inc.  
 All Specs Corp.  
 Allmetal Screw Products Co., Inc.  
 Anti-Corrosive Metal Products Co., Inc.  
 Atlas Screw & Specialty Co.  
 Barrett-Christie Co.  
 Best Aircraft Corp.  
 Boots Aircraft Nut Corp.  
 Century Fasteners Corp.  
 Columbia Nut & Bolt Co., Inc.  
 Cooper Industries, Inc.  
 Corbin Products Div.  
 Curtiss-Wright Corp., Research Div.  
 R. C. Dudek & Co.  
 Eaton Mfg. Co., Reliance Div.  
 Elastic Stop Nut Corp. of America  
 Grip Nut Co.  
 Hi-Shear Rivet Tool Co.  
 Jacobson Nut Mfg. Corp.  
 Kaynar Mfg. Co., Inc.  
 Klincher Locknut Corp.  
 Lamson & Sessions Co., The  
 Luxon Aircraft Supply Co.  
 J. I. Morris Co.  
 National Screw & Mfg. Co., The  
 Republic Steel Corp.  
 Serwell Tools Corp.  
 Shur-Lok Corp.  
 Standard Locknut & Lockwasher Inc.  
 Standard Pressed Steel Co.  
 Star Stainless Screw Co.

Tinnerman Products, Inc.  
**\*TOWNSEND CO., CHERRY RIVET DIV.**  
 United Supply Co.  
 Waltham Precision Instrument Co.

**OIL COOLERS**  
 See COOLERS, OIL

**OIL SEPARATORS**  
 See SEPARATORS, OIL

**OIL-COOLING ENGINES**  
 See ENGINES, OIL-COOLING

**OMNIRANGE**

Allied International Co.  
 Atlas Precision Products, Co.  
 Bendix Radio Div., Bendix Aviation Corp.  
 Collins Radio Co.  
 Dayton Aviation Radio & Equipment Corp.  
 Hazeltine Electronics Div.-Hazeltine Corp.  
 ITT Labs.  
 Jansky & Bailey, Inc.  
 Litton Industries, Inc.  
 Litton Industries, Maryland Div.  
 Motorola Inc., Military Electronics Div.  
 Philco Corp., Government & Industrial Div.  
 Servo Corp. of America  
 Systems Inc.  
 Telectro Industries Corp.  
 Theto Instrument Corp.  
 U. S. Science Corp., Div.-Topp Industries, Inc.

**OMNIRANGE RECEIVERS**

Allied International Co.  
 Bendix Radio Div., Bendix Aviation Corp.  
 Collins Radio Co.  
 Dayton Aviation Radio & Equipment Corp.  
 Electronic Communications, Inc.  
 Hoffman Labs. Div., Hoffman Electronics Corp.  
 ITT Labs.  
 Leor, Inc.  
 Lear, Inc., Grand Rapids Div.  
 Litton Industries, Maryland Div.  
 Livingston Electronic Corp.  
 Motorola Inc., Military Electronics Div.  
 Philco Corp., Government & Industrial Div.  
 Telectro Industries Corp.  
 U. S. Science Corp., Div.-Topp Industries, Inc.

**OPERATOR, VALVE**  
 See VALVE OPERATOR

**OPTICAL EQUIPMENT & SPECIALTIES**

American Cystoscope Makers, Inc.  
 American Machine & Foundry Co., Government Products Group  
 American Optical Co., Instrument Div.  
 Andersen Labs.  
 Atlantic Research Corp.  
 Baird-Atomic, Inc.  
 Bell & Howell Co.  
 Boonton Radio Corp.  
 Buhl Optical Co.  
 Cameroflex Corp.  
 Chrysler Corp., Defense Operations Div.  
 Consolidated Electrodynamics Corp.  
 Covel Mfg. Co.  
 Davidson Mfg. Co., Inc.  
 Eastman Kodak Co.  
 Edmund Scientific Corp.  
**\*ELECTROSNAP CORP.**  
 Elget Optical Co., Inc.  
**\*ENGIS EQUIPMENT CO.**  
 J. W. Fecker, Inc.  
 Goerner Scientific Corp., The  
 General Scientific Equipment Co.  
 Gordon Enterprises  
 Graflex Inc.  
 Haller, Raymond & Brown Inc. Div., Singer Mfg. Co.  
 Hayward Scientific Glass Corp.  
 ITT Labs.  
 Kern Instruments, Inc.  
 Kinney Mfg. Div., The New York Air Brake Co.  
 Kollmorgen Optical Corp.  
 Land-Air Inc.  
 Landsverk Electrometer Co., The  
 Lanox Instrument Co.  
 Librascope Inc.  
 List Development Co., Inc.  
 National Spectrographic Labs., Inc.  
 Northrop Corp., The, Nartonics Div.  
 Optical Coating Lab., Inc.  
 Pacific Universal Products Corp.  
 Perkin-Elmer Corp.  
 Philco Corp., Government & Industrial Div.  
 Process & Instruments  
 Republic Lens Co. Inc.  
 Seiscor Mfg. Co.  
 Sterling Glass Corp.  
 Telectro Industries Corp.  
 Tinsley Labs., Inc.  
 Traid Corp.  
 Valpey Crystal Corp.  
 Van Keuren Co.  
 Zenith Optical Laboratory  
 Zoomar Inc.

**OPTICAL MICROSCOPES**  
 See MICROSCOPES, OPTICAL

**OPTICAL PYROMETERS**  
See PYROMETERS, OPTICAL

**OSCILLATORS**

- a. Audia
  - b. Audia Fork Controlled
  - c. Audia Frequency
  - d. Cavity
  - e. Code
  - f. Crystal
  - g. Grid Dip
  - h. Grid Dip-High Frequency & VHF
  - i. Microwave
  - j. Oven Crystal Central
  - k. Pulse
  - l. Pushbutton
  - m. Radio Frequency
  - n. RF
  - a. Strain-Gage FM, Voltage-Controlled
  - p. Sweep
  - q. Tuning Fork
  - r. Ultra-Low Frequency
  - s. Ultrasonic
  - t. Video Pattern
  - u. Video Range
- Accurate Instrument Co., a, b, c, q.  
Adler Electronics, Inc., d, i, n, r.  
Aerogel-General Corp.  
Aerolab Development Co., a.  
Aetno Electronics Corp., r, s.  
Aerone Instruments Lab., Div.-Cutler-Hammer, Inc., d, m, n.  
Aircorn Inc., i, p.  
Alfred Electronics, i, p.  
Amelco, Inc., e, m, n, q.  
Amerac Inc., d, i, k.  
American Machine & Foundry Co., Government Products Group, c.  
American Machine & Foundry Co., Greenwich, i, k, m, n.  
American Missile Products Co., Inc., a.  
Amplifier Corp. of America, b, q.  
Andersen Labs., a, b, c, f, i, k, l, o, p, r.  
Antlab Inc., b.  
Applied Radiation Corp., d, i.  
Arenberg Ultrasonic Lab., Inc., k, s.  
B & K Instruments, Inc., a, c.  
Barker Sales Co., f.  
Barker & Williamson Inc., a, c, g, h.  
Rex Bassett, Inc., g, h, i, m, n.  
Bell & Gossett Co., a, b, k, q.  
Bendix Aviation Corp., York Div., i, k.  
James G. Biddle Co., c.  
Blonder-Tongue Labs., Inc., t, u.  
Briggs Associates, Inc., a.  
Brush Instruments, Div.-Clevite Corp., a.  
Bud Radio Inc., e.  
Bulova Watch Co., Electronics Div., a, e, f, j, k, m, n.  
CGS Labs., Inc., d, i.  
California Technical Industries, Div.-Textron Inc., i.  
Carol Electronics Corp., a, c.  
Centronix Inc., g, b, m, n, a.  
Chalco Engrg. Corp., a, c, a.  
Chrysler Corp., Defense Operations Div., d, i.  
Coils-Electronics, a.  
Cooper Development Corp., Sub.-Marquardt Aircraft Co., n.  
Crosby Laboratories, Inc., n.  
Curtis-Wright Corp., Research Div., s.  
Data-Control Systems, Inc., a.  
Daven Co., The, e, f, p, s.  
Di-An Controls, Inc., b, i.  
Donner Scientific Co., a, c, r.  
Dorsett Labs., Inc.  
Doty Acoustica Electronic Labs., a, c.  
Douglas Microwave Co., Inc., d, i.  
Dresser Industries, Inc., a, c, p, r.  
Dymec Inc., a.  
Electronic Communications, Inc., i, m, n.  
Electronic Engrg. Co. of California, a, f, k.  
Electronic Instrument Co., Inc. (EICD), a, c, g, h, l, m, p.  
Electronics Div., Von Norman Industries Inc., d, i, m, n.  
Electronics International Co., a, c.  
Elgin Micronics Div.-Elgin National Watch Co., a, b.  
Engrg. Associates, a, c, i, m, n, r.  
Enso, Inc., a.  
Entron, Inc., m, n.  
FXR, Inc., p.  
Federal Mfg. & Engrg. Corp., a, d, i, k, m.  
Ferratron Electronics Co., Inc., f.  
Fisher Research Labs., Inc., c, m.  
Foto-Video Labs., Inc., t, u.  
General Communication Co., i, n.  
General Devices, Inc., a, b, k, m, n, a.  
General Electric Co., Apparatus Sales Div., m, n, s.  
John Gombos Co., Inc., d, i.  
Good Electronic Corp., f, a.  
Gyrex Corp., The, b, q.  
Hammarlund Mfg. Co., Inc., a, c.  
Hewlett-Packard Co., a, c, i, m, n, p, r, s, u.  
Hill Electronics, Inc., c, f, j, m, r, s.  
ITT Federal Div., International Telephone & Telegraph Corp., g, i, k, m, n.  
Industrial Test Equipment Co., a, b, c, l, p, q.  
Instrument Labs., a, c.  
Instruments For Industry, Inc., i, m, n.  
International Electronic Research Corp., a, c.  
J-V-H Microwave Co., i, l.  
E. F. Johnson Co., i, m, n.  
Kauke & Co., a.

- Kay Electric Co., a, c, f, i, k, m, n, p, r thru u.  
\*KEARFOTT CO., INC., d, i.  
Kin Tel Div.-Cohu Electronics, Inc., s.  
Kinevox Div.-Electromation Co., k.  
Lampkin Labs., Inc., M.R. Div., m.  
La Pointe Industries Inc., d, i.  
Lavoie Laboratories Inc., j.  
Leor, Inc., m, n.  
Levinthal Electronic Products, Inc., i, k.  
Lifton Industries, Maryland Div.  
MF Electronics Co., a, c.  
Manson Labs., Inc., f, j, m.  
Marconi Instruments, c, i, m, n, p, s.  
Massa Div.-Cohu Electronics, Inc., s.  
Mc Kenna Labs., s.  
Measurements Div., Mc Grow Edison Co., f, g, h.  
Microwave Associates, Inc., i.  
Midwestern Instruments, Inc., a.  
Miratel, Inc., a, k, m, n, u.  
Monogram Precision Industries, h, i.  
Motorola Inc., Military Electronics Div., a thru n, p, q, s, u.  
Narda Ultrasonics Corp., The, s.  
National Pneumatic Co., Inc., Holtzer-Cabot Divs., a, c, f, m, n, p.  
Networks Electronic Corp., s.  
Networks Electronic Corp., a, c.  
Ernest Norman Laboratories, f, j.  
Northeast Electronics Corp., a, c, k, r.  
Northern Engrg. Laboratories, Inc., f, j.  
Paco Electronics Co., Inc., m, n.  
Philco Corp., Government & Industrial Div., a, c, i, k, m thru p, u.  
Piasecki Aircraft Corp., a, c.  
Polarad Electronics Corp., i, k.  
Portchester Instrument Corp., d, f, i.  
Power-Tronic Systems Inc., a, b, c, i, p, q, r.  
Precision Development Corp., a, c, e, g, h, m, n, p, r, s, t.  
Precision Apparatus Co., Inc., a, m, n, p.  
Radar Design Corp., i, m, n.  
Radiophone Co., Inc., s.  
Radionics, Inc., k, s.  
Reeves-Hoffman Div., c, f, j.  
Resdel Engrg. Corp., d, f, l.  
Rese Engrg., Inc., k.  
Riverbank Labs., Dept.-Engrg., b, q.  
Rixon Electronics Inc., a, c.  
Rollan Electric Co., a.  
Scientific-Atlanta, Inc., i.  
Southwestern Industrial Electronics Co., a.  
Specialty Engrg. & Electronics Co., a, k.  
Spectrum Instruments, Inc., a, c, r.  
Sperry Electronic Tube Div., Sperry Rand Corp., d, i.  
H. W. Sullivan Ltd., a, b, c.  
Syston Corp., c.  
Tapco Group, Thompson-Ramo-Wooldridge Inc., b, f, q.  
Technitrol Engrg. Co., p, u.  
Telechrome Mfg. Corp., c, a, t, u.  
Telectro Industries Corp., a, c, i thru n.  
Tele-Dynamics Inc., a.  
Telrad Mfg. Corp., d, i.  
Teletronics Lab. Inc., l.  
Tel-Instrument Electronics Corp., a, b, c, f, j, l, m, n, p, q, t.  
Telonic Industries, Inc., a, c, d, f, k, m, n, p.  
Trionics Corp., a, s.  
Triplet Electrical Instrument Co., n, p.  
United Electrodynamics, Inc., a.  
U. S. Science Corp., Div.-Topp Industries, Inc., a, n.  
Valpey Crystal Corp., f, j.  
Varian Associates, d, i, m, n.  
Varil-L Co., Inc., p.  
Varo Mfg. Co., Inc., b, c, q.  
Victor R. F. & Microwave Co., q.  
Walkirt Co., a, b, c, f, j, q.  
Walham Electronics Corp., n, p.  
Wang Labs., Inc., k.  
Waveline, Inc., i.  
Weinischel Engrg., b, d, i, n.  
Wilks Precision Instrument Co., Inc., i.

**OSCILLOGRAPHS**

- a. Cathode Ray
  - b. Cathode Ray Camera
  - c. Cathode Ray Recording, Multi-Channel
  - d. Direct Writing
  - e. Multi-Channel
  - f. Multi-Element
  - g. Portable
  - h. Projection
  - i. Radar
  - j. Recording
  - k. Transient Study
- Acton Labs. Inc., d, e.  
Advanced Electronics Mfg. Corp., a.  
Allegany Instrument Co., Inc., a, c, e, k.  
Applied Science Corp. of Princeton, j.  
Brush Instruments, Div.-Clevite Corp., a thru j.  
Centronix Inc., c thru g, j, k.  
Century Electronics & Instruments, Inc., d, e, g, j.  
Chicago Aerial Industries, Inc., b.  
Consolidated Electrodynamics Corp., a, b, c thru g, j.  
Data-Control Systems, Inc., e.  
Dresser Industries, Inc., a, c thru g, j, k.  
E. I. Du Pont De Nemours & Co., Inc., Photo Products Dept., i.  
Edgerton, Gershenhausen & Grier, Inc., a, b, c, j.  
Edin-Div.-Epsco, Inc., d, e, g, i.  
Electro-Medical Lab., Inc., d.  
Electronic Tube Corp., a, b, c.  
Epic, Inc., i, o.  
General Electric Co., Apparatus Sales Div., a, e, f, g, j, k.

- General Electric Co., X-Ray Dept., b.  
Gordan Enterprises, b, c, g.  
Hamilton Watch Co., Hothaway Instrument Div., a, c.  
Hamilton Watch Co., Industrial Div., j.  
Heiland Div.-Minneapolis-Honeywell, d thru g, i, k.  
Hogan Laboratories, Inc., e, f, j.  
Hughes Aircraft Co., d, g.  
ITT Labs.-Ft. Worth, a, b, h, i, k.  
Industrial Television Inc., a.  
Land-Air Inc., a, g.  
Legris Co.  
Lumatron Electronics, Inc., b, i.  
Magnetic Instrument Co., Inc., d.  
Massa Div.-Cohu Electronics, Inc., d thru g, j, k.  
Midwestern Instruments, Inc., d, e, g, j.  
Minneapolis-Honeywell Regulator Co., Industrial Product Group, d thru g, j, k.  
Miratel, Inc., a, i.  
Motorola Inc., Military Electronics Div., i.  
New England Scientific Instruments Co., c, f, j, k.  
Offner Electronics Inc., d, e, g, j.  
Paco Electronics Co., Inc., a.  
Photon Instrument Co., d thru g, j.  
Precision Development Corp., a, c, e, g, k.  
Precision Apparatus Co., Inc., a.  
Sanborn Co., a, c, d, e, i.  
Scientific-Atlanta, j.  
Seiscor Mfg. Co., e, j.  
Southwestern Industrial Electronics Co. Strand Engrg. Co., b, i.  
Sun Electric Corp., Aeronautical Div., d, e, f, i, k.  
Technology Instrument Corp., d, e, g, j.  
Waterman Products Co., Inc., a, e, g, i, j.  
Wollensak Optical Co., j, k.

**OSCILSCOPE, SCALES**  
See SCALES, OSCILSCOPE

**OSCILLOGRAPHS**

- a. Cathode Ray
  - b. Cathode Ray-Multiple Channel
  - c. Portable
  - d. Portable Projection
- Carol Electronics Corp., a, c.  
Daven Co., The, a.  
Divco-Wayne Electronics, Div.-Divco-Wayne Corp., a, c.  
Dresser Industries, Inc., a, b, c.  
Edgerton, Gershenhausen & Grier, Inc., a.  
Edin-Div.-Epsco, Inc., c.  
Electro Instruments, Inc., a.  
Electronic Industries, c.  
Electronic Instrument Co., Inc. (EICD), a, b.  
Electronic Tube Corp., a, b, c.  
Electro-Tech Equipment Co., a, c.  
Foto-Video Labs., Inc., a.  
General Communication Co., a, b.  
Hewlett-Packard Co., a, b, c.  
ITT Labs.-Ft. Worth, a.  
Industrial Television Inc., a.  
Kaiser Aircraft & Electronics, Div.-Kaiser Industries Corp., a, c.  
Kingston Electronics-Div.-Kingston Industries Inc., a.  
Land-Air Inc., a, c.  
Lavoie Laboratories Inc., a, b.  
Levinthal Electronic Products, Inc., b.  
Lumatron Electronics, Inc., a, b, c.  
Marconi Instruments, a.  
Miratel, Inc., a.  
Paco Electronics Co., Inc., a.  
Philco Corp., Government & Industrial Div., a, c.  
Pioneer Industries Div., Almar-York Co., Inc., a, c.  
Precision Development Corp., a, b, c.  
Precision Apparatus Co., Inc., a.  
Probescope Co., Inc., a.  
Railway Communications Inc., b.  
Sanborn Co., a, b.  
Scopes Co., Inc., The, a, b, c.  
Simpson Electric Co., a, c.  
Southwestern Industrial Electronics Co. Specialty Engrg. & Electronics Co., a.  
Telectro Industries Corp., a.  
Triplet Electrical Instrument Co., a, c.  
Waterman Products Co., Inc., a, b, c.  
Wright Engrg. Co., a, b.

**OUTLETS, ANTENNA**

- Entron, Inc.
- Javex Electronics
- E. F. Johnson Co.
- Mark Products Co.
- Technical Appliance Corp.

**OVENS**

- a. Crystal
  - b. Environmental Testing
  - c. Infra-Red Drying
  - d. Temperature Controlled
- Aerogel-General Corp., d.  
Aeronautical & Instrument Div., Robertshaw-Fulton Controls Co., a.  
American Felt Co., a.  
American Gas Furnace Co., d.  
American Instrument Co., Inc., b, d.  
\*ASSOCIATED TESTING LABS., INC., b, d.  
Astrovac Corp., b.  
Rex Bassett, Inc., a.  
Blue M Electric Co., b, d.  
Bulova Watch Co., Electronics Div., a.  
Central Scientific Co., d.

innati Cleaning & Finishing Machinery, a thru d.  
 lork Crystal Co.  
 ax & Co., Inc., a  
 urtiss-Wright Corp., Santa Barbara Div., b, d.  
 iversey Engr. Co., d.  
 l Roy Motor Co., Inc., a  
 isher Scientific Co., d.  
 arder Laboratory, Inc., b, d.  
 eneral Testing Labs., Inc., b, d.  
 rant Chemical Co., Inc., d.  
 rieve-Hendry Co., Inc., a, c.  
 arditie Co., Div. of American Marietta Co., b.  
 ul Hardeman, Inc., b.  
 evi-Duty Electric Co., b, d.  
 igh Vacuum Equipment Corp., b.  
 ull Corp., b.  
 unt Corp., The, a, d.  
 uppert, K. H., Co., b, d.  
 ernational Radiant Corp., b, d.  
 inney Mfg. Div., The New York Air Brake Co., b, d.  
 irk & Blum Mfg. Co., The, b, d.  
 avoit Laboratories Inc., a, d.  
 ages-Bralla & Associates, b, d.  
 ngenetic Controls Co., a.  
 nson Labs., Inc., a.  
 c Coy Electronics Co., a.  
 iskella Infra-Red Co., The, c.  
 issimers Inc., b.  
 atarola Inc., Military Electronics Div., a.  
 arthern Engr. Laboratories, Inc., a.  
 acific Scientific Co., d.  
 apesch & Kolstad, Inc., d.  
 iezo Crystal Co., a.  
 remier Research Labs., Inc., a, d.  
 & R Engr. Co., d.  
 eves-Hoffman Div., a.  
 ixian Electronics Inc., a.  
 ientific Engr. Labs., Inc., b, d.  
 las Corp. of America, d.  
 ate Testing Lab. Inc., b, d.  
 atikil, Inc., Div.-The J. E. Doyle Co., c.  
 J. Stokes Corp., a.  
 urface Combustion Corp., d.  
 emperature Engr. Corp., b, c, d.  
 enney Engr., Inc., b, d.  
 S. Industries, Inc., b.  
 alpey Crystal Corp., a, d.  
 altham Electronics Corp., a, d.  
 ight Electronics Inc., a.  
 ough Brothers Co., b, d.

**COILERS**

ir Products, Inc.  
**ALLIED CHEMICAL CORP., GENERAL CHEMICAL DIV.**  
 llied Chemical Corp., Nitrogen Div.  
 merican Rocket Co.  
 eeco Chemical Div.-Food Machinery & Chemical Corp.  
 scambia Chemical Corp.  
 ithium Corp. of America, Inc.  
 SA Research Corp.  
 lin Mathieson Chemical Corp., Energy Div.  
 ennsalt Chemicals Corp.  
 nell Chemical Corp., Industrial Chemicals Div.  
 ecial Projects Lab., Food Machinery & Chemical Corp.

**COGEN APPARATUS & BREATHING EQUIPMENT**

eronautical & Instrument Div., Robertshaw-Fulton Controls Co.  
**AIRESEARCH MFG. CO., DIV.-THE GARRETT CORP.**  
 ra Equipment Corp.  
 endix Aviation Corp., Pioneer-Central Div.  
 abrick Mfg. Corp.  
 ambridge Co.-Div.-Carrier Corp.  
 erbert Cooper Co., Inc.  
 isher Scientific Co.  
 eneral Scientific Equipment Co.  
 alter Kidde & Co., Inc., Aviation Div.  
 J. Koch & Sons  
 linde Co., Div.-Union Carbide Corp.  
 line Safety Appliances Co.  
 J. Monaghan Co., Inc.  
 ygen Equipment & Service Co.  
 uritan Compressed Gas Corp., Aviation Div.  
 red T. Roberts & Co.  
 cott Aviation Corp.  
 uperior Air Products Co.  
 inzen Research Inc.

**COGEN EQUIPMENT CONNECTOR**  
**ee CONNECTOR, OXYGEN EQUIPMENT**

**COGEN EQUIPMENT DEHYDRATORS**  
**ee DEHYDRATORS, OXYGEN EQUIPMENT**

**COGEN, LIQUID**  
**ee LIQUID OXYGEN**

**COGEN SYSTEMS & CONTROLS**

erajet-General Corp.  
 erotec Corp., The  
 ir Products, Inc.  
**AIRESEARCH MFG. CO., DIV.-THE GARRETT CORP.**  
 ro Equipment Corp.  
 Bendix Aviation Corp., Pioneer-Central Div.  
 abrick Mfg. Corp.

Bowser, Inc., Defense Dept.  
 Cambridge Co.-Div.-Carrier Corp.  
 Consolidated Contrals Corp.  
 Dynamic Devices, Inc.  
 Essex Mfg., Co., Inc.  
 G. W. Galloway Co.  
 Hagan Chemicals & Contrals, Inc.  
 Paul Hardeman, Inc.  
 Hofman Labs., Inc.  
**\*HYDRO-AIRE CO., DIV.-CRANE CO.**  
 Hydromatics, Inc.  
 Kahn & Co., Inc.  
 Walter Kidde & Co., Inc., Aviation Div.  
 Linde Co., Div.-Union Carbide Corp.  
 MSA Research Corp.  
 Minneapolis-Honeywell Regulator Co.-Aeronautical Div.  
 Oxygen Equipment & Service Co.  
 Paris Engr. Co., Inc.  
 Pne-Hydro Valve Corp.  
 Project Fabrication Corp.  
 Puritan Compressed Gas Corp., Aviation Div.  
 Research Controls  
 Sargent Engr. Corp.  
 Scott Aviation Corp.  
 Sterns-Roger Mfg. Co.  
 Superior Air Products Co.  
**\*ULTRA-VIOLET PRODUCTS, INC.**  
 United Electric Controls Co.  
 Vinson Mfg. Co., Inc.  
 Winzen Research Inc.

**PACK SETS**

Collins Radio Co.  
 Double E Products Co.  
 Electronic Communications, Inc.  
 ITT Labs.  
 L E L, Inc.  
**\*MIRAX CHEMICAL PRODUCTS CORP., METAL CONTAINER DIV.**  
 Motorola Inc., Military Electronics Div.  
 Telectro Industries Corp.  
 Winder Aircraft Corp. of Florida

**PACKAGING, ELECTRONIC EQUIPMENT, SERVICE ONLY**

Applied Design Co.  
 Armour & Co., Armour Alliance Industries  
 Bendix Aviation Corp., York Div.  
 Carmody Corp.  
 Centronix Inc.  
 Champion Co., The  
 Cleveland Metal Specialties Co., Electronics Div.  
 Continental Technical Service, Inc.  
 Cooper Development Corp., Sub.-Marquardt Aircraft Co.  
 Craig Systems, Inc.  
 Crystal-X Corp.  
 Curtis-Wright Corp., Santa Barbara Div.  
 Double E Products Co.  
 Eckol Packaging Co.  
 Emerson Electric Mfg. Co., The, Electronics & Avionics Div.  
 First Electronics Corp., The  
 Ford Instrument Co., Div.-Sperry Rand Corp.  
 Good Electronic Corp.  
 Lyon Van & Storage Co., Aircraft Div.  
 Ralph M. Parsons Co., The, Electronics Div.  
 Pneumafil Corp.  
 Reinhold Engrg. & Plastics Co.  
 Roberts Industries Inc.  
 Sheltered Workshops  
 Skylyne, Inc.  
 Specialty Engrg. & Electronics Co.  
 Topper Mfg. Co., Inc.  
 Vendorlator Mfg. Co.  
 Wintronics

**PACKAGING MATERIALS**

Allied Plastics Supply Corp.  
 Applied Design Co.  
 Bemis Brothers Bag Co.  
 Champion Co., The  
 Colonial Rubber Corp.  
 Crystal-X Corp.  
 Dayton Rubber Co., The  
 Dow Chemical Co., The  
 Entab Inc.  
 Fidelity Chemical Products Corp.  
 General Box Co.  
 Gering Products, Inc.  
 Gilman Brothers Co., The  
 B. F. Goodrich Co., The  
 Krylon, Inc.  
 Lyon Van & Storage Co., Aircraft Div.  
 Minnesota Mining & Mfg. Co.  
 Moosinee Paper Mills Co.  
 Plastic Film Co., Inc.  
 Pry Welding & Mfg., Inc.  
 Roberts Industries Inc.  
 Seal-Peel, Inc.  
 Thiokol Chemical Corp.  
 United States Plywood Corp.  
 Vendorlator Mfg. Co.  
 Western Coating Co.  
 Winzen Research Inc.  
 Young & Rioux Woodworking Co., Inc.  
 Zophar Mills Inc.

**PAINT, METALLIC**

Arco Co., The  
 Bel Fuse Inc.  
 Borden Chemical Co.  
 Samuel Cabot Inc.  
 Carboline Co.  
 Cooper Industries, Inc.  
 Dennis Chemical Co.  
 B. F. Drakenfeld & Co., Inc.  
 E. I. Du Pont De Nemours & Co., Inc.  
 Dyna-Therm Chemical Corp.  
 Emerson & Cuming, Inc.  
 Fidelity Chemical Products Corp.  
 Krylon, Inc.  
 Maas & Waldstein Co.  
 Micro-Circuits Co.  
 Organic Products Co.  
 Prutex-A-Cate, Inc.  
 Varac Co., The

**PAINTS**

Arco Co., The  
 Borden Chemical Co.  
 Samuel Cabot Inc.  
 Carboline Co.  
 Cooper Industries, Inc.  
 Dennis Chemical Co.  
 E. I. Du Pont De Nemours & Co. Inc.  
 Dyna-Therm Chemical Corp.  
 Maas & Waldstein Co.  
 Micro-Circuits Co.  
 Midland Industrial Finishes Co.  
 Minnesota Mining & Mfg. Co.  
 National Lead Co.  
 Protex-A-Cate, Inc.  
 United States Varnish Co.  
 Varac Co., The  
 Waldam Electronics Inc.

**PAINTS, FLUORESCENT & PHOSPHORESCENT**

**\*ULTRA-VIOLET PRODUCTS, INC.**

**PANEL ASSEMBLIES, JACK**

**See JACK PANEL ASSEMBLIES**

**PANEL BOARDS, ELECTRIC**

Accurate Electronics Corp., Dept. D.  
 Aerodex, Inc.  
 Aerolite Electronics Corp.  
 Allied Plastics Supply Corp.  
 Allis-Chalmers  
 American Electronics, Inc., Toller & Cooper Div.  
 Anchor Metal Spinning Co., The  
 Anchor Specialty Mfg. Co. Inc.  
 Bernco Engr. Corp.  
 Carmody Corp.  
 Chrysler Corp., Defense Operations Div.  
 Cole Electric Co.  
 Comco Plastics Inc.  
 Continental Diamond Fibre Corp.  
 Continental Technical Service, Inc.  
 Control Engr. Co., Div.-Jervis B. Webb Co.  
 Cutler-Hammer Inc.  
 Devco Engr. Inc.  
 Electromath Corp.  
 Electro-Mechanical Products Co.  
**\*ELECTROSAP CORP.**  
 Eljay Corp.  
 Emmco Plastic Fabricators-Div.-E. M. McCarthy Machine Co.  
 First Electronics Corp., The  
 General Electric Co., Apparatus Sales Div.  
 Good Electronic Corp.  
 Gunnar Laboratories  
 Paul Hardeman, Inc.  
 A. F. Holden Co., The  
 I-T-E Circuit Breaker Co.  
 Jeto, Inc.  
 Johns-Manville  
 Johns-Manville Sales Corp.  
 Kelsey-Hayes Co.  
 Kennedy Van Saun Mfg. & Engrg. Corp.  
 Keystone Electronics Corp.  
 Kirk & Blum Mfg. Co., The  
 Mansfield Fabricators Inc.  
 Miller Dial & Nameplate Co.  
 Mullenbach Div.-Electric Machinery Mfg. Co.  
 George L. Nankervis Co.  
 National Electronics  
 National Pneumatic Co., Inc., Holtzer-Cabot Divs.  
 North Electric Co.  
 Panel Engr. Corp.  
 Projects Unlimited Inc.  
 Richardson Scale Co.  
 Rimak, Inc.  
 St. Regis Paper Co., Panelyte Div.  
 Schaffer Air Industries, Inc.  
 Standard Electric Time Co., The  
 Talley Corp., The  
 Taylor Electric Inc.  
 Telectro Industries Corp.  
 Tucson Instrument Corp.  
 United Aircraft Products, Inc.

**PANELS**

- a. Fibre
- b. Instrument
- c. Jack
- d. Receiver & Transmitter
- e. Relay Rack
- f. Wood & Plywood

A & P Metal Products Mfg. Corp., a.  
 Accurate Electronics Corp., Dept. D, a, b, c.  
 Ackerman Engravers, Inc., b.  
 Acramark Co., The, b.  
 Aerolite Electronics Corp., a, b, c.  
 Allied Plastics Supply Corp., a.  
 Alpitex, Inc., c, d, e.  
 Amphenol Connector Div., Amphenol-Borg Electronics Corp., c.  
 Anchor Metal Spinning Co., The  
 Anchor Specialty Mfg. Co., Inc., b thru f.  
 Audio Development Co., c.  
 Belock Instrument Corp., b.  
 Bergen Carbide Co., b.  
 Bristol Co., The, b.  
 Bud Radio Inc., b thru e.  
 Canodan Radium & Uranium Corp., b.  
 Carmody Corp., b, c, e, f.  
 Centranix, Inc., d.  
 Chemold Co., a.  
 Coaxial Connector Co., Inc., c.  
 Camco Plastics Inc., a.  
 Continental Diamond Fibre Corp., a.  
 Cornell Deep Drawing Co., Div.-Lanes Industries Corp., b.  
 Craig Systems, Inc., b, e.  
 Cramex Inc., b.  
 Dahlstrom Metallic Daar Co., c, d, e.  
 Dayton Aviation Radio & Equipment Corp., b, d.  
 Detronic Industries, a, b, d.  
 Devco Engr. Inc., b.  
 Henry G. Dietz Co., Inc., b.  
 Donner Scientific Co., c.  
 Duralith Corp., a, b.  
 Electric Auto-Lite Co., The, b.  
 Electrical Insulation Co., Inc., a, b, c.  
 Electrocraft, Inc., c.  
 Electro-Mechanical Products Co., a thru e.  
 \*ELECTROSNAP CORP., a, b, f.  
 Eljay Corp., a thru e.  
 Elzee Metal Products Co., Inc., b thru e.  
 Emerson Plastics Corp., a.  
 Emmea Plastic Fabricators-Div.-E. M. McCarthy Machine Co., a, f.  
 Engineered Plastics, Inc., a, b.  
 Etched Products Corp., b.  
 \*ETS-HOKIN & GALVAN, b, c, e.  
 Falstrom Co., b.  
 Fischer & Parter Co., b.  
 Fisher & Crame, a thru e.  
 Fletcher Mfg. Co., Inc., The, a thru f.  
 Foto-Video Labs, Inc., b, c.  
 Franklin Fibre-Lamitex Corp., a.  
 Gunnar Laboratories, a, e.  
 Hagan Chemicals & Controls, Inc., b.  
 Harco Labs., Inc., c.  
 Ludwig Honold Mfg. Co., d.  
 Industrial Engr. Corp., b.  
 Industrial Engravers, Inc., b.  
 Intercontinental Dynamics Corp., b.  
 ITT-Kellogg, c, e.  
 Jodee Plastics Co.  
 Johns-Manville, a.  
 Kohn & Co., Inc., b.  
 Kerco Products, b.  
 Keystone Electronics Corp., a, c.  
 Kirk & Blum Mfg. Co., The, b, e.  
 Liss Products, Inc., a, f.  
 Thomas J. Long, Inc., a thru f.  
 R. H. Lynch Mfg. Co., b, e.  
 Monsfield Fabricators Inc., a.  
 Maryland Etching Co. Inc., b, d.  
 Met-L-Wood Corp., f.  
 Mid-West Metal Products, Inc., d, e.  
 Miller Dial & Nameplate Co., b.  
 Minneapolis-Honeywell Regulator Co., Industrial Div., b, c.  
 Minneapolis-Honeywell Regulator Co., Industrial Product Group, b, c.  
 Minnesota Mining & Mfg. Co., a.  
 \*MIRAX CHEMICAL PRODUCTS CORP., ELECTRO-MECHANICAL PRODUCTS DIV., b.  
 Monogram Precision Industries, a, e, f.  
 Mullenbach Div.-Electric Machinery Mfg. Co., c.  
 Notional Electronics, b.  
 National Pneumatic Co., Inc., Holtzer-Cobot Divs., c, d, e.  
 North Electric Co., c, e.  
 Panel Engr. Corp., a, b, d.  
 Papesch & Kolstod, Inc., b.  
 Penn Fibre & Specialty Co., Inc., a.  
 Pilgrim Products Inc., b.  
 Plasteck, Inc., b.  
 Pneumatil Corp., b.  
 Premier Metal Products Co., e.  
 Prereg Mfg. Inc., a thru d.  
 Projects Unlimited Inc., c, d, e.  
 Q-Circuits, Div.-Etching Co. of Calif., b.  
 Railway Communications Inc., e.  
 Ravenna Metal Products, Div.-Standard Screw Co., c.  
 Reinhold Engr. & Plastics Co., a.  
 Edw. Renneburg & Sons Co., b.  
 Rimok, Inc., a thru e.  
 Rogers Corp., a.  
 Smith-Morris Corp., b.  
 Space Corp., b.  
 Spaulding Fibre Co., Inc., a.  
 Stanley Aviation Corp., a, c.  
 Sun Dial Corp., b, c.  
 Switchcraft, Inc., c.  
 Trimount Instrument Co., b.  
 Tucson Instrument Corp., b.  
 United States Radium Corp., b.

Universal Moulded Products Corp., a, f.  
 Universal Unlimited, Inc., b, d.  
 Waldam Electronics Inc., b.  
 Waltham Haralographic Corp., c.  
 Watson Mfg. Co., Inc., b.  
 Westronics Inc., b.  
 Wilmington Fibre Specialty Co., a.  
 Wyco Metal Products, e.  
 Young & Rioux Manufacturing Co., Inc., f.

**PANELS, PATCH**  
 See PATCH PANELS

**PAPER, INSULATION**

Allied Plastics Supply Corp.  
 Auburn Mfg. Co., The  
 Carborundum Co., Refractories Div.  
 Electrical Insulation Co., Inc.  
 Franklin Fibre-Lamitex Corp.  
 Integrated Mica Corp.  
 Jodee Plastics Co.  
 Johns-Manville  
 Johns-Manville Soles Corp.  
 Thomas J. Long, Inc.  
 Monsfield Fabricators Inc.  
 Mico Insulator Div.-Minnesota Mining & Mfg., Co.  
 Minnesota Mining & Mfg. Co.  
 Monogram Precision Industries  
 Masine Paper Mills Co.  
 Natva Corp.  
 Penn Fibre & Specialty Co., Inc.  
 Pilgrim Products Inc.  
 Rogers Corp.  
 Peter J. Schweitzer Div.  
 Spaulding Fibre Co., Inc.,  
 Union Asbestos & Rubber Co.  
 Wilmington Fibre Specialty Co.

**PAPER, RECORDING**

Alfax Paper & Engr. Co.  
 Bristol Co., The  
 E. I. Du Pont De Nemours & Co. Inc.  
 E. I. Du Pont De Nemours & Co. Inc., Photo Products Dept.  
 Eastman Kodak Co.  
 Hagan Laboratories, Inc.  
 Minneapolis-Honeywell Regulator Co., Industrial Div.  
 Minneapolis-Honeywell Regulator Co., Industrial Product Group  
 Minnesota Mining & Mfg. Co.  
 Sanborn Co.  
 Peter J. Schweitzer Div.

**PAPERS, FACSIMILE RECORDING**

Alfax Paper & Engr. Co.  
 Hagan Laboratories, Inc.  
 Kay Electric Co.  
 Minnesota Mining & Mfg. Co.

**PARABOLAS, MICROWAVE**

Alpor Mfg. Corp.  
 American Machine & Foundry Co., Greenwich  
 Brooks & Perkins, Inc.  
 Bulow Electric Co.  
 Dresser Industries, Inc.  
 Houston Fearless Corp.  
 ITT Labs.  
 Intercontinental Mfg. Co., Inc.  
 J-V-M Microwave Co.  
 D. S. Kennedy & Co.  
 Mork Products Co.  
 McMillon Industrial Corp.  
 Monogram Precision Industries  
 Philco Corp., Government & Industrial Div.  
 Rodiation, Inc.  
 Republic Aviation Corp.  
 Sperry Microwave Electronics Co., Div.-Sperry Rond Corp.  
 Teiner Engr. Corp.

**PARACHUTE HARDWARE**

Amotom Electronic Hardware Co., Inc.  
 American Aluminum Co.  
 Capewell Mfg. Co.  
 Cormac Aviation  
 Century Fasteners Corp.  
 Cooper Development Corp., Sub.-Marquardt Aircraft Co.  
 Corbin Products Div.  
 \*FLEXONIC CORP., AERONAUTICAL DIV.  
 Gentex Corp.  
 \*HARTFORD MACHINE SCREW CO., DIV.-STANDARD SCREW CO.  
 H. Koch & Sons  
 Pacific Scientific Co.  
 Pioneer Parachute Co., Inc.  
 Precision Shapes, Inc.

**PARACHUTES**

Cooper Development Corp., Sub.-Marquardt Aircraft Co.  
 Gentex Corp.  
 Pioneer Parachute Co., Inc.  
 Reliance Mfg. Co.-Industrial Products & Parachute Div.  
 Stanley Aviation Corp.

**PARTICLE ACCELERATORS**  
 See ACCELERATORS, PARTICLE

**PASSIVE MICROWAVE REPEATERS**  
 See REPEATERS, PASSIVE, MICROWAVE

**PASTE & CEMENT, GASKET**  
 See GASKET PASTE & CEMENT

**PASTE, SILVER**  
 See SILVER PASTE

**PATCH CORDS**

AMP Inc.  
 Aerolite Electronics Corp.  
 Alden Products Co.  
 Amatom Electronic Hardware Co. Inc.  
 Associated Engr. Corp.  
 Atlantic Instrument Corp., Sub.-American Electronics, Inc.  
 Audio Development Co.  
 W. A. Beauchain & Sons Inc.  
 Bernca Engr. Corp.  
 Birnbach Radio Co., Inc.  
 Coaxial Connector Co. Inc.  
 Detronic Industries  
 Electromech Corp.  
 Entron, Inc.  
 First Electronics Corp., The  
 ITT-Kellogg  
 Milgo Electronic Corp.  
 National Pneumatic Co., Holtzer-Cobot Divs.  
 North Electric Co.  
 Paul Nurches Co.  
 Milton Ross Metals Co., The  
 Sequa Wire & Cable Co.-Div.-Mandrel Industries, Inc.  
 Switchcraft Inc.  
 Telectro Industries Corp.  
 Vector Electronic Co.  
 Virginia Electronics Co., Inc.  
 Waltham Horological Corp.  
 Webcor, Inc., Government Div.  
 Western International Co.  
 Westwood Cable Corp.

**PATCH CORDS, CONNECTORS**

AMP Inc.  
 Aerolite Electronics Corp.  
 Audio Development Co.  
 W. A. Beauchaine & Sons Inc.  
 Birnbach Radio Co., Inc.  
 Coaxial Connector Co. Inc.  
 Detronic Industries  
 First Electronics Corp., The  
 Milgo Electronic Corp.  
 National Pneumatic Co., Inc., Holtzer-Cobot Divs.  
 North Electric Co.  
 Milton Ross Metals Co., The  
 Switchcraft, Inc.  
 Telectro Industries Corp.  
 Virginia Electronics Co., Inc.  
 Waltham Horological Corp.  
 Western International Co.  
 Westwood Cable Corp.

**PATCH CORDS, STUDIO**

Audio Development Co.  
 First Electronics Corp., The  
 Mullenbach Div.-Electric Machinery Mfg. Co.  
 Notional Pneumatic Co., Inc., Holtzer-Cobot Divs.  
 Switchcraft, Inc.  
 Virginia Electronics Co., Inc.  
 Westwood Cable Corp.

**PATCH PANELS**

AMP Inc.  
 Aerolite Electronics Corp.  
 Amelco, Inc.  
 American Missile Products Co., Inc.  
 Audio Development Co.  
 Cambridge Thermionic Corp.  
 Duralith Corp.  
 Electrocraft, Inc.  
 Engineered Plastics, Inc.  
 \*ETS-HOKIN & GALVAN  
 First Electronics Corp., The  
 Kilgen Aircraft Div.  
 Kirk & Blum Mfg. Co., The  
 Milgo Electronic Corp.  
 Miller Dial & Nameplate Co.  
 Mullenbach Div.-Electric Machinery Mfg. Co.  
 National Pneumatic Co., Inc., Holtzer-Cobot Divs.  
 North Electric Co.  
 Switchcraft, Inc.  
 United Electrodynamics, Inc.  
 United States Radium Corp.  
 Vector Electronic Co.  
 Virginia Electronics Co., Inc.  
 Waltham Horological Corp.  
 Webcor, Inc., Government Div.  
 Western International Co.

**PEDESTALS**

ACF Industries Inc.  
 Adept Industries Inc.  
 Alpor Mfg. Corp.  
 American Machine & Foundry Co., Government Products Group  
 American Machine & Foundry Co., Greenwich  
 Anchor Metal Spinning Co., The  
 Antlab Inc.  
 Atlas Precision Products Co.  
 Bostic Tool Industries, Inc.

ospital City Mfg. Co.  
iversey Engrg. Co.  
abriel Co., The, Gabriel Electronics Div.  
oodyear Aircraft Corp.  
ouston Fearless Corp.  
T-E Circuit Breaker Co.  
josecki Aircraft Corp.  
remier Metal Products Co.  
w. Renneburg & Sons Co.  
ientific-Atlanta, Inc.  
iner Engrg. Corp.  
hited Shoe Machinery Corp., Ordnance Dept.  
hyme Pump Co., The, Div.-Symington Wayne Corp.  
estern Gear Corp.

**PERISCOPE TYPE SEXTANTS**  
**SEXTANTS, PERISCOPE TYPE**

**PERMANENT MAGNETS**  
**MAGNETS, PERMANENT**

**PIEZOMETERS, HIGH H**  
Niokol Chemical Corp.

**PIEZOMETERS, RF**  
Niokol Chemical Corp.

**PHASE MODULATORS**  
**MODULATORS, PHASE**

**PIEZOMETERS**

Logistics Corp.  
tronics Co.  
ic, Inc.  
milton Watch Co.-Industrial Div.  
ustrial Test Equipment Co.  
opp Inc.  
ms Clarke Co., Div.-Vitro Corp. of America  
w England Scientific Instruments Co.  
rth Atlantic Industries, Inc.  
iscor Mfg. Co.  
eto Instrument Corp.  
o Laboratories, Inc.  
ston Instruments, Div.-Daystrom, Inc.  
tronics

**PHASING & COUPLING UNITS**  
**COUPLING & PHASING UNITS**

**PHOSPHORS, FLUORESCENT COMPOUNDS**  
**FLUORESCENT COMPOUNDS, PHOSPHORS**

**PHOTO ETCHED COMPONENTS**

urate Electronics Corp., Dept. D.  
ept Industries Inc.  
ndix Aviation Corp., York Div.  
shed Products Corp.  
ndsverk Electrometer Co., The  
ryland Etching Co. Inc.  
arola Inc., Military Electronics Div.  
acific Moulded Products  
Circuits, Div.-Etching Co. of Calif.  
ited States Chemical Milling Corp.  
ysep Corp.  
ith Optical Laboratory

**PHOTOCELLS & PHOTOTUBES**

erican Elite, Inc.  
irex Corp.  
tman Kodak Co.  
erton, Germeshausen & Grier, Inc.  
c, Inc.  
fronti Electric Inc.  
eral Electric Co., Apparatus Sales Div.  
erol Electrodynamics Corp.  
flex Inc.  
tman Electronics Corp., Semiconductor Div.  
Labs.-Ft. Wayne  
International Rectifier Corp.  
J. Electronics Corp.  
flico Corp., Government & Industrial Div.  
ronic Semi Conductor Corp.  
R Corp., The, Sub-American Enka  
Sling Precision Corp., Instrument Div.

**PHOTOELECTRIC CELLS**

irex Corp.  
tman Kodak Co.  
erton, Germeshausen & Grier, Inc.  
lectron-Radar Products  
c, Inc.  
fronti Electric Inc.  
eral Electric Co., Apparatus Sales Div.  
tman Electronics Corp., Semiconductor Div.  
Labs.-Ft. Wayne  
J. Electronics Corp.  
Ma Balancing, Inc.  
ta-Crystals, Inc.  
tton Instruments, Div.-Daystrom, Inc.

**PHOTOELECTRIC COLORIMETERS**  
**COLORIMETERS, PHOTOELECTRIC**

**PHOTOFLASH EQUIPMENT, ELECTRONIC**

arican Speedlight Corp.  
Bttie-Coleman, Inc.  
ries Beseler Co.  
e & Jones Inc.  
dwick-Helmuth Co.  
Denport Mfg. Co.

Edgerton, Germeshausen & Grier, Inc.  
Elicor Div.-Scranton  
General Electric Co., X-Ray Dept.  
Gordon Enterprises  
Graflex Inc.  
Heiland Div.-Minneapolis-Honeywell  
Indikon Co., Inc., The  
Kemlite Laboratories, Inc.  
Madelectric Products Corp.  
Nems Clarke Co., Div.-Vitro Corp. of America  
Sterling-Howard Corp.  
Technical Apparatus Builders

**PHOTOGRAPHIC EQUIPMENT**

Bor-Ray Products, Inc.  
Bell & Howell Co.  
Charles Beseler Co.  
Burke & James Inc.  
Camera Mart Inc., The  
Cameraflex Corp.  
Chadwick-Helmuth Co.  
Chicago Aerial Industries, Inc.  
Eastman Kodak Co.  
Edgerton, Germeshausen & Grier, Inc.  
Ejeget Optical Co., Inc.  
J. W. Fecker, Inc.  
Federal Mfg. & Engrg. Corp.  
Flight Research, Inc.  
General Electric Co., X-Ray Dept.  
General Photo Products Co., Inc.  
Gordon Enterprises  
Graflex Inc.  
Houston Fearless Corp.  
Jansky & Bailey, Inc.  
Land-Air Inc.  
Logetronics Inc.  
Lux Clock Mfg. Co., Inc.  
Metalphoto Corp.  
Mitchell Camera Corp.  
Morse Instrument Co., The  
Neumade Products Corp.  
Optomechanisms Inc.  
Poragon-Revolute Corp.  
Peck & Harvey Mfg. Corp.  
Peerless Photo Products Inc.  
Reed Research Inc.  
Sequoa Wire & Cable Co., Div.-Mandrel Industries, Inc.  
Sterling-Howard Corp.  
Traid Corp.  
Transmares Corp.  
Vought Co.  
Weston Instruments, Div.-Daystrom, Inc.  
Wallensak Optical Co.  
Zoomar Inc.

**PHOTOGRAPHIC MATERIALS, SPECTROGRAPHIC INSTRUMENTS**

**\*BAUSCH & LOMB OPTICAL CO.**  
E. I. Du Pont De Nemours & Co. Inc.  
Eastman Kodak Co.  
General Electric Co., X-Ray Dept.  
Gordon Enterprises  
National Spectrographic Labs., Inc.  
New England Scientific Instruments Co.  
Vought Co.

**PHOTOGRAPHIC MATERIALS, X-RAY FILMS**

Eastman Kodak Co.  
General Electric Co., X-Ray Dept.  
Gordon Enterprises

**PHOTOMETERS**

Eldorado Electronics  
J. W. Fecker, Inc.  
Fisher Scientific Co.  
National Spectrographic Labs., Inc.  
Optomechanisms Inc.  
Photovolt Corp.  
Process & Instruments  
Weston Instruments, Div.-Daystrom, Inc.  
Zoomar Inc.

**PHOTOTUBES & PHOTOCELLS**  
**See PHOTOCELLS & PHOTOTUBES**

**PICKUP ARMS**

Duotone Co., Inc.  
H. H. Scott, Inc.  
Webcor, Inc., Government Div.

**PICKUPS**

**a. Industrial**  
**b. Pressure**  
**c. Temperature**  
**d. Vibration**

Aero Research Instrument Co. Inc., b, c  
**\*ARNOLD CORP., c**  
Atlantic Instrument Corp., Sub-American  
Electronics, Inc., c  
Atlantic Research Corp., b  
B & K Instruments, Inc., d  
Chesapeake Instrument Corp., d  
G. L. Collins Corp., b, d  
Consolidated Diesel Electric Corp., b, c  
Consolidated Electrodynamics Corp., b, d  
Curtiss-Wright Electronics Div., IMI Branch, b  
Datron Electronics, Div.-Mid-Continent Mfg., Inc., b  
Daystrom Pacific Div.-Daystrom, Inc., b, c  
Dresser Industries, Inc., b, c, d  
Electro Products Laboratories, Inc., a, d

Electronic Control Corp., c  
Endevco Corp., b, d  
Fischer & Porter Co., a, b, c  
Gulton Industries, Inc., b, c, d  
Kin Tel Div.-Cohu Electronics, Inc., b, d  
Kollsman Instrument Corp., Sub-Standard Coil  
Products Co. Inc., b  
Land-Air Inc., d  
Leeds & Northrup Co., c  
ME Mfg. Co., d  
Micrometrical Mfg. Co., d  
Minneapolis-Honeywell Regulator Co., Boston Div.,  
d  
Minneapolis-Honeywell Regulator Co., Industrial  
Div., a, b, c  
Minneapolis-Honeywell Regulator Co., Industrial  
Product Group, c  
Norwood Controls Unit Detroit Controls Div., b  
Pacific Scientific Co., c, d  
Rosemount Engrg. Co., b, c  
Arthur C. Ruge Associates, Inc., c  
Schaevitz Engrg., b  
H. H. Scott, Inc., d  
Standard Controls, Inc., b  
Starham Instruments, Inc., a, b  
Tel-Instrument Electronics Corp., d  
Thermo Electric Co., Inc., c  
Trans-Sonics, Inc., b, c  
Ultradyn, Inc., b  
Yellow Springs Instrument Co., The, c

**PILOT LIGHT ASSEMBLIES**

Accurate Electronics Corp., Dept. D  
Aerolite Electronics Corp.  
Alden Products Co.  
Amotom Electronic Hardware Co. Inc.  
American Machine & Foundry Co., Government  
Products Group  
Carlting Electric, Inc.  
Cutler-Hammer Inc.  
Dialight Corp.  
Eagle Electric Mfg. Co. Inc.  
Eldema Corp.  
**\*ELECTROSNAP CORP.**  
Electro-Tech Equipment Co.  
Fidelity Amplifier Co.  
General Electric Co., Apparatus Sales Div.  
Green Rectifier Co.  
Grimes Mfg. Co.  
E. F. Johnson Co.  
Korry Mfg. Co.  
Marco Industries Co.  
Scan Instrument Corp., The  
Signalite Inc.  
Telectro Industries Corp.  
Transistor Electronics Corp.

**PILOTS, AUTOMATIC**

Atlas Precision Products, Co.  
Bendix Aviation Corp., Eclipse-Pioneer Div.  
Fletcher Mfg. Co., Inc., The  
Hamilton Standard, Div.-United Aircraft Corp.  
ITT Labs.  
Leair, Inc.  
Leair, Inc., Grand Rapids Div.  
Minneapolis-Honeywell Regulator Co.-Aeronautical  
Div.  
Northrop Corp.  
Philco Corp., Government & Industrial Div.  
Ryan Aeronautical Co.  
Servomechanisms, Inc.  
Southwestern Industrial Electronics Co.  
Sperry Forragut Co., Div.-Sperry Rand Corp.  
Sperry Piedmont Co.-Div.-Sperry Rand Corp.

**PINS, TUBULAR**

American Brass Co., The  
Baldwin Mfg. Co. Inc., The  
Blond Burner Co., The  
Cooper Industries, Inc.  
Elastic Stop Nut Corp. of America  
Keystone Electronics Corp.  
Standard Pressed Steel Co.  
United Mfg. Co., The

**PITOT TUBES**

Aero Research Instrument Co. Inc.  
Aitronics International Corp.  
Flow Corp.  
E. Vernon Hill & Co.  
Peerless Machine Co.  
Precision Sheet Metal, Inc.  
Servomechanisms, Inc.  
Wilks Precision Instrument Co., Inc.

**PLASTIC, ELECTRICALLY CONDUCTIVE**

American Aerophysics Corp.  
American Insulator Corp.  
American Printed Circuits Co., Inc.  
Brillhart Plastics Corp.  
Brook Molding Corp.  
Crystal-X Corp.  
DBM Research Corp.  
Dayton Aircraft Products, Inc.  
Emerson & Cuming, Inc.  
Franklin Fibre-Lamitex Corp.  
Furane Plastics Corp. of New Jersey  
Goodyear Tire & Rubber Co., The, Aviation  
Products Div.

Grant Chemical Co., Inc.  
Haveg Industries, Inc.  
Haughton Laboratories, Inc.  
Jessall Plastics  
Lebec Chemical Corp.  
Lane Star Plastics Co., Inc.  
Marblette Corp., The  
Micro-Circuits Co.  
Minnesota Mining & Mfg. Co.  
New England Tape, Div.-United-Carr Fastener Corp.  
Republic Aviation Corp.  
W. S. Shamban & Co.  
Sierracin Corp., The  
Silicone Insulation, Inc.  
Swedlow Inc.  
Topper Mfg. Co., Inc.  
Waterbury Companies, Inc.  
Zippertubing Co., The

#### PLASTIC LIGHTING PLATES

See PLATES, PLASTIC, LIGHTING

#### PLASTIC MOLDERS

See MOLDERS, PLASTIC

#### PLASTICS FABRICATORS & FINISHERS

Accurate Electronics Corp., Dept. D.  
Adept Industries Inc.  
Aerolite Electronics Corp.  
Air Logistics Corp.  
Aircraft Precision Products, Inc.  
Allied Plastics Supply Corp.  
American Aerophysics Corp.  
American Agile Corp.  
American Latex Products Corp.  
American Rocket Co.  
Anchor Specialty Mfg. Co. Inc.  
Apex Reinforced Plastics, Div.-White Sewing Machine Corp.  
Associated Engrg. Corp.  
Atkins & Merrill, Inc.  
Auburn Mfg. Co., The  
W. A. Beauchaine & Sons Inc.  
Blossom Mfg. Co. Inc.  
Bonny Mfg. Corp.  
Brilliant Plastics Corp.  
Calflite Co., Inc.  
Chemold Co.  
Chemplast, Inc.  
Chicago Gasket Co.  
Chicago Molded Products Corp.  
Colonial Aircraft Corp.  
Comco Plastics Inc.  
Conn-Croft Co.  
Continental Diamond Fibre Corp.  
Cornell Deep Drawing Co., Div.-Lanes Industries Corp.  
Crystal-X Corp.  
Curtiss-Wright Corp.-Utica Div.  
DBM Research Corp.  
Dayton Aircraft Products, Inc.  
Delta Products Div.-Air Accessories, Inc.  
Devcon Corp.  
Duble E Products Co.  
Duralith Corp.  
Electrical Insulation Co., Inc.  
Eljay Corp.  
Emeloid Co., Inc., The  
Emerson Plastics Corp.  
Emeco Plastic Fabricators Div. E. M. McCarthy Machine Co.  
Engineered Plastics, Inc.  
Eric Resistor Corp.  
Fabri-Form Co., The  
Fisher & Crome  
Fletcher Mfg. Co., Inc., The  
Flexrock Co.  
Formica Corp.  
Franklin Fibre-Lamitex Corp.  
Furone Plastics, Inc.  
GAR Mfg. Corp.  
General American Transportation Corp.  
General Gasket Inc.  
Gering Products, Inc.  
Globe Electrical Mfg. Co.  
Goodyear Aircraft Corp.  
Grant Chemical Co., Inc.  
Hamden Mfg. Co., Inc.  
Hardman Tool & Engrg. Co.  
Haveg Industries, Inc.  
Hoosier Tarpaulin & Canvas Goods Co., Inc.  
Haughton Laboratories, Inc.  
Jacfin Mfg. Co.  
Jodee Plastics Co.  
Johns-Manville  
Johns-Manville Sales Corp.  
Kerrco Products  
Keystone Electronics Corp.  
H. Koch & Sons  
Kurz-Kasch, Inc.  
Lamtex Industries, Inc.  
Liss Products, Inc.  
Lone Star Plastics Co. Inc.  
Thomas J. Long, Inc.  
Luminous Resins Inc.  
Lux Clock Mfg. Co., Inc.

Luzerne Rubber Co.  
M & Q Plastic Products  
Mansfield Fabricators Inc.  
Maryland Etching Co., Inc.  
Mc Millan Industrial Corp.  
Mica Insulator Div.-Minnesota Mining & Mfg., Co.  
Minneapolis-Honeywell Regulator Co., Industrial Product Group  
Minnesota Mining & Mfg. Co.  
\*MIRAX CHEMICAL PRODUCTS CORP., METAL CONTAINER DIV.  
J. J. Monaghan Co., Inc.  
Monrovia Aviation Corp.  
Mueller Brass Co.  
National Vulcanized Fibre Co.  
M. M. Newman Corp.  
Orange Products, Inc.  
Panel Engrg. Corp.  
Pearless Products Industries  
Penn Fibre & Specialty Co., Inc.  
Perry Plastics, Inc.  
Piosecki Aircraft Corp.  
Pilgrim Products, Inc.  
Plasteck, Inc.  
Plastic Age Sales, Inc.  
Polyken Sales Div., The Kendall Co.  
Polymer Corp., The  
Prewitt Aircraft Corp.  
Republic Aviation Corp.  
Resistoflex Corp.  
Rex Corp., The, Sub.-American Enko  
Rogers Corp.  
Russell Reinforced Plastics Corp.  
St. Regis Paper Co., Panelyte Div.  
Schlegel Mfg. Co.  
D. A. Schultz Co.  
Scientific-Atlanta, Inc.  
W. S. Shamban & Co.  
Sierracin Corp., The  
The Slip Ring Co. of America  
Sparta Mfg. Co., Div.-U.S. Ceramic Tile Co.  
Spaulding Fibre Co., Inc.  
Swedlow Inc.  
Sylvania Electric Products Inc., Parts Div.  
Taylor Electric Inc.  
H. I. Thompson Fiber Glass Co.  
Topper Mfg. Co., Inc.  
Tri-Point Plastics Inc.  
Turbo Products, Inc.  
U. S. Fiber & Plastics Corp.  
United States Chemical Milling Corp.  
Universal Moulded Products Corp.  
Virginia Plak Co.  
Vlchek Tool Co., The  
Westlake Plastics Co.  
Winzen Research Inc.  
Yardley Plastics Co.  
Young Development Div., Hercules Powder Co.  
Zippertubing Co., The

#### PLASTICS, REINFORCED

See REINFORCED PLASTICS

#### PLATE & SHEET MICA

See MICA, PLATE & SHEET

#### PLATES, INSTRUCTION

Acromark Co., The  
Adept Industries Inc.  
Allied Plastics Supply Corp.  
W. H. Brady Co.  
Croname Inc.  
Duralith Corp.  
Emeloid Co., Inc., The  
Industrial Engravers, Inc.  
Jodee Plastics Co.  
Maryland Etching Co. Inc.  
Jas. H. Matthews & Co.  
Miller Dial & Nameplate Co.  
Minnesota Mining & Mfg. Co.  
Monogram Precision Industries  
Q-Circuits, Div.-Etching Co. of Calif.  
Roovers-Lotsch Corp.  
D. A. Schultz Co.  
United States Radium Corp.  
Virginia Plak Co.  
Waterbury Companies, Inc.

#### PLATES, METAL OR PLASTIC

Acromark Co., The  
Adept Industries Inc.  
All Boro Metal Products Co., Inc.  
Allied Plastics Supply Corp.  
Aluminum Co. of America  
American Agile Corp.  
Aristocrat Plastics, Inc.  
Atkins & Merrill, Inc.  
Bergen Carbide Co.  
Carl H. Biggs Co.  
W. H. Brady Co.  
Bridgeport Brass Co.  
Bud Radio Inc.  
Challenge Machinery Co., The  
Chemplast, Inc.  
Continental Diamond Fibre Corp.  
Croname Inc.  
Division Lead Co.  
Dow Chemical Co., The  
Duralith Corp.  
Electrical Insulation Co., Inc.

Electro-Mechanical Products Co.  
Eljay Corp.  
Emeloid Co., Inc., The  
Emerson Plastics Corp.  
Eric Resistor Corp.  
Etched Products Corp.  
Farwell Metal Fabricating  
Ferris-Mfg. Co., The  
Fisher & Crome  
Fletcher Mfg. Co., Inc., The  
Franklin Fibre-Lamitex Corp.  
GAR Mfg. Corp.  
Industrial Engravers, Inc.  
International Nickel Co., The  
Javex Electronics  
Jodee Plastics Co.  
Kaiser Aluminum & Chemical Sales, Inc.  
Lamtex Industries, Inc.  
Lone Star Plastics Co. Inc.  
M & Q Plastic Products  
Maryland Etching Co. Inc.  
Jas. H. Matthews & Co.  
Metals & Controls Corp., General Plate Div.  
Miller Dial & Nameplate Co.  
Minnesota Mining & Mfg. Co.  
Monogram Precision Industries  
National Vulcanized Fibre Co.  
Perry Plastics, Inc.  
Plasteck, Inc.  
Polymer Corp., The  
Q-Circuits, Div.-Etching Co. of Calif.  
Roovers-Lotsch Corp.  
Milton Ross Metals Co., The  
Russell Reinforced Plastics Corp.  
Joseph T. Ryerson & Son, Inc.  
Sanford Plastics Corp.  
D. A. Schultz Co.  
Smith-Morris Corp.  
Stanley-Judd Div.-The Stanley Works  
Tranter Mfg., Inc.  
United States Radium Corp.  
Virginia Plak Co.  
Waldom Electronics Inc.  
Wrought Washer Mfg., Co.

#### PLATES, PLASTIC LIGHTING

Allied Plastics Supply Corp.  
W. H. Brady Co.  
Duralith Corp.  
Eljay Corp.  
Emeloid Co., Inc., The  
Fisher & Crome  
Jodee Plastics Co.  
Miller Dial & Nameplate Co.  
Panel Engrg. Corp.  
Perry Plastics, Inc.  
Plastic Age Sales, Inc.  
Russell Reinforced Plastics Corp.  
United States Radium Corp.

#### PLATFORMS, FIRING

Acco Equipment Div.- American Chain & Cable Co., Inc.  
\*ALUMINUM SAFETY PRODUCTS, INC.  
Chicago Bridge & Iron Co.  
Cooper Development Corp., Sub.-Merquardt Aircraft Co.  
Diversey Engrg. Co.  
Jack & Heintz, Inc.  
Kaiser Aircraft & Electronics, Div.-Kaiser Industries Corp.  
Land-Air Inc.  
Monogram Precision Industries  
Newbrook Machine Corp.  
Dpelika Welding, Machine & Supply Inc.  
Robot Industries Inc.  
Smith-Morris Corp.  
\*R. D. WERNER CO., INC.

#### PLATING, PRECIOUS METAL

Alloys Unlimited Inc.  
J. Bishop & Co., Platinum Works  
Bram Metallurgical & Chemical Co.  
Brooks & Perkins, Inc.  
Brown Engrg. Co., Inc.  
Cohan Engr Co. Inc.  
Electro Development Co.  
Engelhard Industries, Inc.  
Etched Products Corp.  
Graflex Inc.  
Kelsey-Hayes Co.  
Land-Air Inc.  
M-W Labs. Inc.  
Metaltech Lab.  
Metals & Controls Corp., General Plate Div.  
Pacific Scientific Co.  
Precision Electroplating Co.  
Precision Plating Co., Inc., The  
Q-Circuits, Div.-Etching Co. of Calif.  
Savage-Rowe Plating Co., Inc.  
Sel-Rex Corp.  
Slip Ring Co. of America  
Spectron Precision Plating Co., Inc., Div.-Spectranome Plating Co., Inc.  
Steel Improvement & Forge, The  
Sylvania Electric Products Inc., Parts Div.  
Technical Apparatus Builders  
United Plating Works  
United States Chemical Milling Corp.



## PLATING, TIN ZINC

Chlor Metal Co. Inc.  
Hicks & Perkins, Inc.  
Koran Engr Co. Inc.  
Kress-Wright Corp.-South Bend Div.  
Lflex Inc.  
L-Cann Chrome Co.  
Lisey-Hayes Co.  
L Clock Mfg. Co., Inc.  
Malectra Lab.  
Minnesota Mining & Mfg. Co.  
Precision Plating Co., Inc., The  
Sage-Rowe Plating Co., Inc.  
Self Improvement & Forge, The  
Technical Apparatus Builders  
United Electroplating & Mfg. Co.  
United Plating Works

## PLIERS

Frederick-Christie Co.  
Gardner & Spencer Co., The  
Hinter Taal Co.  
J. Morris Co.  
Jop-Dn-Tools Corp.  
Kohinoor, Inc.  
Litters, X-Y  
Lvac Corp.  
Lyon-Lehner Corp.  
Lstel Co., The  
Lush Instruments, Div.-Clevite Corp.  
Ltronix Inc.  
Lysler Corp., Defense Operations Div.  
Letro Instruments, Inc.  
Lmore Industries, Inc.  
Lford Corp., The  
Lustrial Engravers, Inc.  
Leds & Northrup Co.  
Lrscope Inc.  
Lgo Electronic Corp.  
Lneapolis-Honeywell Regulator Co., Industrial  
L Product Group  
L. Moseley Co.  
Lorola Inc., Military Electronics Div.  
Lw England Scientific Instruments Co.  
Lilco Corp., Government & Industrial Div.  
Ldiation, Inc.  
Lsborn Co.  
Lly Register Corp.  
Lochrome Mfg. Corp.  
L. S. Science Corp., Div.-Topp Industries, Inc.  
Ldor Electronics, Div.-F. C. Huyck & Sons  
Ltronics Inc.

## PLATTING BOARDS

### BOARDS, PLOTTING

### PLUG BOARDS

### BOARDS, PLUG

## PL-IN-CIRCUIT UNITS

Allyte Electronics Co.  
Alden Products Co.  
American Missile Products Co., Inc.  
Parker Sales Co.  
Pckman-Systems Div.  
Pndix Aviation Corp., York Div.  
Pnton-Rodgers, Inc.  
Pntrolab, Div.-Globe-Union  
Pntronix Inc.  
Pplo Engrg. Corp.  
Ple Electric Co.  
Plystrom Pacific Div.-Daystrom, Inc.  
PAn Controls, Inc.  
Patz Design & Mfg. Co.  
Pty Acoustica Electronic Labs.  
Psser Industries, Inc.  
Pctromath Corp.  
Pctronic Engrg. Co. of California  
Person Electronic Mfg. Co., The, Electronics &  
P Avionics Div.  
Ple Resistor Corp.  
Prranti Electric Inc.  
Pto-Video Labs., Inc.  
Pneral Electric Co., Computer Dept.  
Pod Electronic Corp.  
Pffmon Electronics Corp., Semiconductor Div.  
Pnd-Air Inc.  
P Electronics Co.  
Plorola Inc., Military Electronics Div.  
Pnational Pneumatic Co., Inc., Holtzer-Cabot Divs.  
**PACKARD-BELL ELECTRONICS CORP.**  
Porge A. Philbrick Researches, Inc.  
Pilco Corp., Government & Industrial Div.  
Precision Circuits, Inc.  
Pjects Unlimited, Inc.  
Pdiaphone Co. Inc.  
Pdiation, Inc.  
Pse Engrg., Inc.  
Pton Ross Metals Co., The  
Psocial Instruments Div., British Industries Corp.  
Ppper Mfg. Co., Inc.  
Ptro Labs.  
Ptkirt Co.  
Pbcor, Inc., Government Div.

## PLGS

- a. Computer Board
- b. Connector
- c. Dehydrator
- d. Expansion
- e. Hardware

- f. Metallic
- g. Non-Metallic
- h. Printed Circuit
- i. Telephone
- j. Terminal

AMP Inc., h, j.  
Accurate Electronics Corp., Dept. D, a, b, e thru h, j.  
Aerolite Electronics Corp., b.  
Alden Products Co., b.  
Amatom Electric Hardware Co. Inc., e, h, j.  
American Felt Co., g.  
American Missile Products Co., Inc., a.  
American Standard Products, Inc., b, e, f.  
Amphenal Connector Div., Amphenal-Borg  
Electronics Corp., b.  
Anton Electronic Labs., Inc., b.  
Armel Electronics, Inc., g, h.  
Arrow-Hart & Hegeman Electric Co., The, b.  
Atma Seal Co., j.  
Audio Development Co., l.  
W. A. Beauchaine & Sons Inc., b.  
Best Aircraft Corp., e.  
Birnback Radio Co., Inc., b, h, i, j.  
Bland Burner Co., The, e.  
Burndy Corp., Omaton Div., b, h, j.  
Burroughs Corp., a.  
Cable Electric Products Inc., b.  
Calinoy-Div.-Illinois Tool Works, e, f, g.  
Cambridge Thermionic Corp., a, b, h, j.  
**\*CANNON ELECTRIC CO.**, b.  
Carmac Aviation  
Centralab, Div.-Globe-Union, g, h.  
Century Fasteners Corp., b, e, f, j.  
Chandler Evans Corp., c.  
Clover Industries, Inc., b, f, g.  
Coaxial Connector Co. Inc., b, f.  
Cole Electric Co., a, b.  
Eagle Electric Mfg. Co. Inc., b.  
Elco Corp., b, h.  
Electrical Insulation Co., Inc., g.  
Electrocraft, Inc., b, i.  
Garde Mfg. Co., b, h.  
Gladding, McBean & Co., b, g, h.  
Good Electronic Corp., h.  
Harco Labs., Inc., b.  
Hobson Brothers, Inc., b, j.  
ITT-Kellogg, i.  
Javex Electronics, b, f, g.  
Joelin Mfg. Co., g.  
E. F. Johnson Co., b.  
Howard B. Jones Div.-Cinch Mfg. Corp., b.  
Keystone Electronics Corp., e, j.  
Kickhafer Mfg. Co., d.  
Korda Industries, b.  
Kulka Electric Corp., b.  
La Pointe Industries Inc., h.  
Litton Industries, U. S. Engrg. Co., Div., e, f, j.  
Malco Mfg. Co., h, j.  
P. R. Mallory & Co. Inc., a, b, e.  
J. E. Menough Co., g, j.  
Metal Textile Corp., Electronics Div., f.  
Milgo Electronic Corp., a.  
Minneapolis-Honeywell Regulator Co., Industrial  
L Product Group, g.  
National Pneumatic Co., Inc., Holtzer-Cabot Divs.,  
b, i, j.  
National Tel-Tronics Corp., i, j.  
North Electric Co., i.  
Norton Co., New Products Dept., g.  
**\*PACKARD-BELL ELECTRONICS CORP.**, a, h.  
Milton Ross Metals Co., The, b, h, j.  
Rubbercraft Corp. of California, g.  
Silicone Insulation, Inc., g.  
Slip Ring Co. of America, a.  
Specialty Engrg. & Electronics Co.  
Specialty Plug Corp. Co., g.  
Standard Electric Time Co., The, b.  
Stromberg-Carlson Div.-General Dynamics Corp., i.  
Superex Electronics Corp., i.  
Switchcraft, Inc., i.  
Tower Mfg. Corp., b.  
Transistor Electronics Corp., a.  
Ucinite Co., The, Div.-United-Carr Fastener Corp.,  
b, h, i.  
Vector Electronic Co., b.  
W-S Fittings Works, Forge & Fittings Div., H. K.  
Porter Co. Inc., f.  
Waldom Electronics Inc., j.  
Walworth Horological Corp., b, i.  
Webcor, Inc., Government Div., h.  
Western International Co., b, f, g, i.  
Wrought Washer Mfg., Co., d.

**PLYWOOD MANUFACTURERS**  
**\*AIRESEARCH MFG. CO. OF ARIZ.**  
Liss Products, Inc.  
United Electric Controls Co.  
United States Plywood Corp.  
Universol Moulded Products Corp.

**PNEUMATIC CONTROLS & SYSTEMS**  
Adel Precision Products of California, Div.-General  
Metals Corp.  
**\*AIRESEARCH MFG. CO., DIV.-THE GARRETT  
CORP.**  
Aro Equipment Corp.  
**\*ASSOCIATED TESTING LABS., INC.**  
Barber-Colman Co.  
**\*BENDIX AVIATION CORP., HAMILTON DIV.**  
Bendix Utica Div., Bendix Aviation Corp.  
Bristol Co., The

Cadillac Gage Co.  
Carruthers & Fernandez, Inc.  
Canaflow Corp.  
Consolidated Controls Corp.  
Consolidated Diesel Electric Corp.  
Cooper Development Corp., Sub.-Marquardt Aircraft  
Co.  
Camelius Co., The, Aero Div.  
Dresser Industries, Inc.  
Dumont Aircraft Fitting Co.  
Dynamic Controls Corp.  
Gardner-Denver Co.  
General Electric Co., Apparatus Sales Div.  
Graflex Inc.  
Greer Hydraulics, Inc.  
Hamilton Standard, Div.-United Aircraft Corp.  
Hannifin Co., Div.-Parker-Hannifin Corp.  
Haskel Engrg. & Supply Co.  
Walter J. Hyatt Co., The  
Hydra-Power Corp.  
Hydramatics, Inc.  
Integral Corp.  
Intercontinental Dynamics Corp.  
Interstate Engrg. Corp.  
Kahn & Co., Inc.  
**\*KEARFOTT CO., INC.**  
Walter Kidde & Co., Inc., Aviation Div.  
Koehler Aircraft Products Co.  
Lear, Inc.  
Leslie Co.  
Marotta Valve Corp.  
Marquardt Aircraft Co.  
Mason-Neilan  
McDowell-Wellman Companies, The  
Menasco Mfg. Co.  
Minneapolis-Honeywell Regulator Co., Industrial Div.  
Minneapolis-Honeywell Regulator Co., Industrial  
L Product Group  
National Instrument Laboratories, Inc.  
National Pneumatic Co., Inc., Holtzer-Cabot Divs.  
Ozone Metal Products Corp.  
Pacific Scientific Co.  
Pneu-Hydra Valve Corp.  
Pneumatil Corp.  
Reinhold Engrg. & Plastics Co.  
Ryan Aeronautical Co.  
Sargent Engrg. Corp.  
Scientific Instrument Co.  
Southwest Products Co.  
Stratos, Div.-Fairchild Engine & Airplane Corp.  
Surface Combustion Corp.  
Tactair Valve Div.-Aircraft Products Co.  
Talley Corp., The  
Tapco Group, Thompson-Ramo-Wooldrige Inc.  
Turbo Products, Inc.  
United Aircraft Products, Inc.  
United Control Corp.  
U. S. Science Corp., Div.-Topp Industries, Inc.  
Vinson Mfg. Co. Inc.  
Waldorf Fluid Systems, Div.-F. C. Huyck & Sons  
Webcor, Inc., Government Div.  
Westinghouse Air Brake Co., Industrial Products Div.  
Weston Hydraulics Ltd.-Sub., Borg-Warner Corp.  
Westronics Inc.

## PNEUMATIC STARTERS

See STARTERS, PNEUMATIC

## PNEUMATIC SYSTEMS RESERVOIRS

See RESERVOIRS, PNEUMATIC SYSTEMS

## POINTERS, DIAL

Adept Industries Inc.  
Atlas Precision Products, Co.  
Carmody Corp.  
Dale Products, Inc.  
Jodee Plastics Co.  
Lux Clock Mfg. Co., Inc.  
Maryland Etching Co. Inc.  
PIC Design Corp., Sub.-Bennur Watch Co., Inc.  
Panel Engrg. Corp.  
Research Development Mfg. Inc.  
Milton Ross Metals Co., The  
The United States Radium Corp.  
Waldom Electronics Inc.  
J. H. Winn Inc.

## PORTABLE COMPRESSORS

See COMPRESSORS, PORTABLE

## PORTABLE TRANSCEIVERS

See TRANSCEIVERS, PORTABLE

## POSITION INDICATORS

**\*AIRESEARCH MFG. CO., DIV.-THE GARRETT  
CORP.**  
Antlab Inc.  
Atlas Precision Products, Co.  
Bristol Co., The  
Centronix Inc.  
Chrysler Corp., Defense Operations Div.  
G. L. Collins Corp.  
Colorado Research Corp.  
Daystrom Pacific Div.-Daystrom, Inc.  
Electro Products Laboratories, Inc.  
Ferroni Electric Inc.  
General Electric Co., Aircraft Sales Div.  
**\*KEARFOTT CO., INC.**  
Land-Air Inc.  
Lear, Inc.  
Liquidometer Corp., The  
Minneapolis-Honeywell Regulator Co., Industrial  
Div.

Motorola Inc., Military Electronics Div.  
New England Scientific Instruments Co.  
PIC Design Corp., Sub.-Benrus Watch Co., Inc.  
Panel Engrg. Corp.  
Philco Corp., Government & Industrial Div.  
Raytheon Mfg. Co., Government Equipment Div.  
Scientific-Atlanta, Inc.  
Sermovematics, Inc.  
Tapco Group, Thompson-Ramo-Wooldridge Inc.  
U. S. Science Corp., Div.-Topp Industries, Inc.  
Waldorf Electronics, Div.-F. C. Huyck & Sons  
Wind Turbine Co.  
Wintronics

#### POTENTIOMETER TRIMMERS

Aero Electronics Corp.  
Amelco, Inc.  
Analogue Controls, Inc.  
Bourns Labs., Inc.  
Carter Mfg. Corp.  
Centralab, Div.-Globe-Union  
Clarostat Mfg. Co., Inc.  
Colvin Labs., Inc.  
Components Corp.  
Dole Products, Inc.  
Daystrom Pacific Div.-Daystrom, Inc.  
Edcliff Instruments  
Electromath Corp.  
Fairchild Controls Corp., Components Div.  
Gamewell Co.  
Helipot Div.-Beckman Instruments Inc.  
New England Instrument Co.  
Precision Line Inc.  
George Rattray & Co.  
Reon Resistor Corp.  
Rinco, Inc.  
Technology Instrument Corp.  
Wesrep Corp.

#### POTENTIOMETERS

a. Absolute Pressure  
b. Differential Pressure  
c. High Resistance  
d. High Voltage  
e. Induction  
f. Linear & Non-Linear Precision Carbon Film  
g. Linear & Non-Linear Precision Wire Wound  
h. Metallic Film  
i. Portable Instrument  
j. Precision  
k. Precision Auto-Transformer  
l. Precision Carbon Film  
m. Printed Circuit  
n. Rectilinear  
o. Slidewire

Ace Electronics Associates, Inc., g, j, n  
Allegheny Instrument Co., Inc., i  
American Electronics, Inc., e, j  
American Electronics, Incorporated, e  
American Electronics, Inc.-Instrument Div., e  
Analogue Controls, Inc., g, i, j  
Anton Electronic Labs., Inc., g, i, n, o  
B & H Instrument Co., Inc., g, i, j, a  
Bendix Aviation Corp., Friez Instrument Div., a  
Borg Equipment Div., Ampheloh-Borg Electronics Corp., g, j, n  
Bourns Labs., Inc., a, b, c, f, g, i, j, m, n  
Carter Mfg. Corp., g, j  
Centralab, Div.-Globe-Union, f, g, m, n, a  
Chicago Aerial Industries, Inc., g, i, j, m, n, a  
Clarostat Mfg. Co., Inc., c, d, f, g, i, j, m, n  
G. L. Collins Corp., e, k  
Colorado Research Corp.  
Colvin Labs., Inc., a, f, m  
Components Corp., g, i, j  
Computer Instruments Corp., a, b, c, f, j, l, n  
Continental Carbon, Div.-Wirt Co., g, m  
Control Circuits Inc., k  
Curtiss-Wright Corp., Electronics Div., g, j, m  
Dale Products, Inc.  
Darron Electronics, Div.-Mid-Continent Mfg. Co., Inc., i  
Daystrom Pacific Div.-Daystrom, Inc., c, g, h, j  
Daystrom Transicoil Div., Daystrom Inc., e, j  
DeJure-AmSCO Corp., Electronic Sales Div., c, g, i, n  
Delih Mfg. Co., g, j  
Edcliff Instruments, a thru d, g, j, m  
Electromath Corp., c, g, i, j  
Electro-Measurements Corp., g, j  
Electro-Mec Lab., Inc., g  
Electro-Tech Equipment Co., i  
Engelhard Industries, Inc., a  
Epic, Inc., i, j  
Fairchild Controls Corp., Components Div., a, b, g, h, n  
Formingdale Mfg. Corp., g, h, j  
Fischer & Porter Co., a, b  
Fisher Research Lab., Inc., i  
Gamewell Co., The, g, j  
G. M. Giannini & Co., Inc., a thru g, j, n, a  
Harco Labs., Inc., i  
Helipot Div.-Beckman Instruments Inc., c, e, g, h, j, n, o  
Hoffman Labs. Div., Hoffman Electronics Corp., n  
Hoover Electric Co., g, j  
Hughes Tool Co., Aircraft Div.  
Humphrey, Inc., g, i, m  
International Resistance Co., h, i  
Jovex Electronics, g  
\*KEARFOTT CO., INC., e  
Ketoy Dept., Norden Div., United Aircraft Corp., e thru a

Langevin Div., The W. L. Maxson Corp., k  
Leeds & Northrup Co., e, i, j, a  
Litton Industries, Inc., g  
P. R. Mallory & Co. Inc., f, g, h, m  
Markite Corp., c, f, j, n  
Minco Products, Inc., n  
Minneapolis-Honeywell Regulator Co., Aeronautical Div., g, j  
Minneapolis-Honeywell Regulator Co., Industrial Div., i, j, a  
Minneapolis-Honeywell Regulator Co., Industrial Product Group, a, b, c, i, j, o  
New England Instrument Co., g, n, o  
Dsborne Electronic Sales Corp., g  
Pacific Scientific Co., g, j, n  
Palo Alto Engrg. Co., g  
Perkin-Elmer Corp., k  
Physics Research Laboratories, Inc., i  
Pickering & Co., Inc., e  
Precision Line Inc., c, d, g, j, m, n, a  
Rahm Instruments, Div.-American Machine & Metals, Inc., a, b  
George Rattray & Co., g, j  
Rawson Electrical Instrument Co., g  
Raymond Engrg. Lab., Inc., g, j, k  
Reon Resistor Corp., c, m  
Rinco, Inc., g, i, j, a  
San Fernando Electric Mfg. Co., g, j, a  
Shallcross Mfg. Co., c, g, i  
Special Instruments Div., British Industries Corp., a, b  
Spectral Electronics Corp., c, d, g, j, m, a  
H. W. Sullivan Ltd., a  
Technique Associates Div., Duncan Electric Co., Inc., j  
Technology Instrument Corp., a thru a  
Thermo Electric Co., Inc., g, i, j  
Thwing-Albert Instrument Co., i  
Trans-Sonics, Inc., a, b  
Tucson Instrument Corp., g, i, n  
U. S. Science Corp., Div.-Topp Industries, Inc., c, g, j, k, n  
Vernistat Div., The Perkin-Elmer Corp., k  
Wesrep Corp., g, i, j, n, o  
Weston Instruments, Div.-Daystrom, Inc., h, j  
Westronics Inc., i  
Wright Engrg. Co., g, j, k

#### POTS, SOLDERING

Alloys Unlimited Inc.  
American Gas Furnace Co.  
Dee Electric Co.  
Electro-Tech Equipment Co.  
General Electric Co., Apparatus Sales Div.  
General Scientific Equipment Co.  
A. F. Holden Co., The  
Seal-Peel, Inc.  
Temperature Engrg. Corp.  
Waage Electric, Inc.

#### POTS & TANKS, HEATING

ACF Industries Inc.  
American Gas Furnace Co.  
Anchor Metal Spinning Co., The  
Brighton Corp.  
Electric Heater Co., The  
Fidelity Chemical Products Corp.  
General Electric Co., Apparatus Sales Div.  
A. F. Holden Co., The  
Hull Corp.  
Pacific Scientific Co.  
Reinhold Engrg. & Plastics Co.  
Rolock Inc.  
Seamless Products Co., Inc.  
Temperature Engrg. Corp.  
Waage Electric, Inc.  
Western Coating Co.

#### POWDERED METAL GEARS

See GEARS, POWDERED METAL

#### POWDERED METAL PARTS FABRICATORS

See FABRICATORS, POWDERED METAL PARTS

#### POWER ABSORBERS

Consolidated Diesel Electric Corp., Test Equip. Div.  
\*MAX CHEMICAL PRODUCTS CORP.,  
ELECTRO-MECHANICAL PRODUCTS DIV.  
Scientific Co.  
Sun Electric Corp., Aeronautical Div.  
Western Gear Corp.

#### POWER CONNECTORS

See CONNECTORS, POWER

#### POWER SOURCES, AUXILIARY

See AUXILIARY POWER SOURCES

#### POWER SOURCES, GROUND

a. Electric  
b. Hydraulic  
c. Mechanical  
d. Pneumatic  
e. Prime Movers

Adel Precision Products of California, Div.-General Metals Corp., b  
\*AIRESEARCH MFG. CO. OF ARIZ., e  
\*AIRESEARCH MFG. CO., DIV.-THE GARRETT CORP., a, d  
Allied International Co., a  
Amelco, Inc., a  
American Bosch Armo Corp., b

American Brake Shoe Co., b  
American Electronics, Inc., Electric Machinery & Equipment Div., a, d  
American Machine & Foundry Co., Greenwich, a, c, e  
Apex Reinforced Plastics, Div.-White Sewing Machine Corp., d  
Associated Engineers, Inc., b, c, d  
Banker Sales Co., e  
Bendix Aviation Corp., York Div., a  
Bendix Utica Div., Bendix Aviation Corp., b, c, d  
Bogue Electric Mfg. Co., a thru d  
Bulow Electric Co., a, b  
Cardinal Instrumentation Corp., a  
Chrysler Corp., Defense Operations Div.  
Consolidated Diesel Electric Corp., a thru d  
Continental Aviation & Engrg. Corp., d  
Cornelius Co., The, Aero Div., d  
Cummins Engine Co., Inc., e  
Curtiss-Wright Corp.-Utica Div., a, d, e  
Davenport Mfg. Co., a  
Delco-Remy Div., General Motors Corp., a  
Denison Engrg. Div., American Brake Shoe Co., b  
Dresser Industries, Inc., a, e  
Dumont Aircraft Fitting Co., b, d  
Eagle-Picher Co., The, a  
Eastern Industries Inc., b  
Electric Products Co., The, a  
Electro-Mechanical Products Co., a  
FWD Corp., a thru e  
Foote Bros. Gear & Machine Corp., c  
Gardner-Denver Co., d  
General Electric Co., Apparatus Sales Div., a, e  
Green Rectifier Co., a  
Greer Hydraulics, Inc., a thru d  
Guided Missile Div.-DeHavilland Aircraft of Canada, Ltd., a  
Hannifin Co., Div.-Parker-Hannifin Corp., b  
Hoskel Engrg. & Supply Co., b, d  
Hertner Electric Co., The, a, e  
Hoover Electric Co., a, c  
Hycon Mfg. Co., a, b, d  
Hydro-Power Corp., b, d  
Industrial Engrg. Corp., b  
International Ferromot Machinery Co., Inc., a, b, c  
Jock & Heintz, Inc., a, b, c  
Jeto, Inc., a thru e  
Kahn & Co., Inc., a, b, d  
\*KEARFOTT CO., INC., a  
Kelsay-Hayes Co., b  
Kemp Aero Products, b, c, d  
Leach Corp., a  
Lear, Inc., Grand Rapids Div., a  
Minneapolis-Honeywell Regulator Co., Ordnance Div., b  
\*MOTOR GENERATOR CORP., a  
Motoresearch Co., a  
Mullenbach Div.-Electric Machinery Mfg. Co., a  
Multi-Amp Corp., a  
Dil-Dyne, Inc., b  
D. W. Dnan & Sons Inc., a, e  
Perkin Engrg. Corp., a  
Power Supplies Inc., a  
Pre-Flite Industries Corp.-Sub.-Avco Corp., a thru  
Racine Hydraulics & Machinery Inc., b  
Red Lion Cabinet Co., Redco Tool Div., b  
Republic Aviation Corp., a  
Rucker Co., The, b, d  
Safety Electrical Equipment Corp., a  
Sargent Engrg. Corp., b, d  
Schaffer Air Industries, Inc., b  
Skyline Electric & Mfg. Co., o thru d  
Solar Aircraft Co., a, c, d, e  
Space Corp., b, e  
Stratos, Div.-Fairchild Engine & Airplane Corp., d  
Sun Electric Corp., Aeronautical Div., a, b, d  
Talley Corp., The, a, c, d  
Tapco Group, Thompson-Ramo-Wooldridge Inc., a, b, d

Technical Apparatus Builders, a  
Telectro Industries Corp., a  
United Aircraft Products, Inc., o thru d  
U. S. Relay Co., a  
Universal Metal Products, Inc., a  
Vickers Inc., Div.-Sperry Rand, b  
Vickers Inc., Marine & Ordnance Dept., Machinery Hydraulics Div., b  
Waste King Corp., Technical Products Div., c  
Waterstown Div., The New York Air Brake Co., b  
Western Gear Corp., o thru e  
Westinghouse Electric Corp., a, e  
\*WHITE DIESEL ENGINE DIV., THE WHITE MOTOR CO., e  
Wickfield, Inc., b, c, d  
Wincharger Corp., Sub.-Zenith Radio Corp., a

#### POWER SOURCES, PROPELLANT CARTRIDGES

\*PROPELLEX CHEMICAL DIV., CHROMALLOY CORP.

#### POWER SUPPLIES

a. AC  
b. DC  
c. Emergency, Mobile  
d. 400 CPS  
e. High Voltage  
f. Klystron  
g. Magnetic  
h. Regulated  
i. Seals  
j. Transmitter  
k. Tripler

I. Variable  
m. Voltage Regulated

**C ELECTRONICS DIV., GENERAL MOTORS CORP.**  
F Industries Inc., a, b, h  
IP Inc., h, l, m  
me Electric Corp., a, b, g, h, k, l, m  
rajet-General Corp., a, b, d, m  
rolab Development Co., a thru e, g thru m  
Logistics Corp., a, c, j, l, m  
Reduction Sales Co., Div.-Air Reduction Co.,  
inc., a, b,  
com Inc., f  
**IRESEARCH MFG. CO. OF ARIZ., a, b.**  
**IRESEARCH MFG. CO., DIV.-THE GARRETT CORP., a thru e, m.**  
pax Electronics Inc., Seminole Div., d  
co Products, Inc. c  
red Electronics, e, f, h, m  
ied International Co., a, b, c  
oScientific Co., Inc., k  
elco, Inc., a, b, d thru h, j thru m  
erican Electronics, Inc., a, b, d, e, g, h, k, l  
erican Electronics, Inc., Electric Machinery &  
Equipment Div., a, d, h, k, l, m  
erican Electronics, Inc., Teller & Cooper Div., a  
erican Machine & Foundry Co., Greenwich, m  
erican Missile Products Co., Inc., a, b, j, k, m  
erican Research & Mfg. Corp., a, b, d, e, g, h, k, m  
mplifier Corp. of America, a, b, d, h, k, l, m  
oheim Electronics Co., Inc., b, h, k, m  
plied Research Labs., Inc., a, b, e, l  
**RNOUX CORP., a, b, d, e, g, h, j, k, m.**  
sociated Engineers, Inc., h, k, m  
sociated Research, Inc., a, b, e  
tronics, Inc., c, g, k, l  
antic Research Corp., b, m  
os Engrg. Co., Inc., a thru m  
dio Development Co., a, b, d, h, k, m  
tomatic Switch Co., c  
booker Radio Engrg., Inc., b, j, k  
rker & Williamson Inc., a, b, e, k  
rwood Electronics Inc., a, b, d, h  
x Bassett, Inc., b, e, j, k, m  
**EHLMAN ENGRG. CO., a, d, l.**  
ll Aircraft Corp., Niagara Frontier Div., k  
lock Instrument Corp., a, b, d, e, j, k  
ndix Aviation Corp., Red Bank Div., a thru h,  
j thru m  
ndix Aviation Corp., York Div., d, e, h, j, k, m  
ndix Utica Div., Bendix Aviation Corp., a, b, d,  
o Lab., Inc., e, m  
gue Electric Mfg. Co., a thru d, f, g, j thru m  
ch Mfg. Corp., Div.-General Bronze, a thru e, g,  
h, k, l, m  
acke-Seib X-Ray Co., Inc., a, b, e, l  
own Engrg. Co., Inc., d, k  
delman Electronics Corp., a, b, j  
ova Watch Co., Electronics Div.  
low Electric Co., a, b, d, k  
ble Electric Products Inc., b  
lifornia Technical Industries, Div.-Textron Inc., f  
rdinal Instrumentation Corp., a, b, d thru h, k, l, m  
rol Electronics Corp., b  
ruthers & Fernandez, Inc., a, b, d, g, h, k, m  
co (Constatine Engrg. Labs. Co.), a, b, d thru h, k,  
m  
ntral Transformer Co., b, e  
alco Engrg. Corp., a, b, d, e, g, h, k, l, m  
icago Aerial Industries, Inc., a, h, l, m  
icago Standard Transformer Corp., k  
ristie Electric Corp., b, d, g, h, k, l  
L. Collins Corp., a  
lorado Research Corp., b, h, m  
mputer Engrg. Associates, Inc., a thru d, g, k  
nsolidated Avionics Corp., a thru l  
nsolidated Controls Corp., c  
nsolidated Diesel Electric Corp., a thru d, k  
nsolidated Diesel Electric Corp., Western Div.,  
a thru e, l, m  
nsolidated Electrodynamics Corp., a, b, d, h  
ntral Circuits Inc., a, b, e, k, l, m  
oper Development Corp., Sub.-Marquardt Aircraft  
Co., e, h, k  
bic Corp., f  
imms Engine Co., Inc., a thru d, m  
rtiss-Wright Corp., Electronics Div., a, b, d, h, m  
rtiss-Wright Corp., Research Div., b, l  
rtiss-Wright Corp., Santa Barbara Div., c  
rtiss-Wright Corp., Utica Div., c  
& R. Ltd., g, h  
lmator Div., Yuba Consolidated Industries, Inc., a,  
b, d, e, g, k, m  
to-Control Systems, Inc.  
tascan Inc., b, c, h, k, l, m  
ven Co., The, a thru e, g thru m  
venport Mfg. Co., a, b, e thru h, k, l, m  
yton Aircraft Products, Inc., e, l, m  
yton Aviation Radio & Equipment Corp., a, b, d,  
h, j, k, m  
l Electronics Corp., a thru e, h, k  
lco-Remy Div., General Motors Corp., a, b, h, k, m  
lco-Wayne Electronics, Div.-Divco-Wayne Corp.,  
a thru e, h, l  
nner Scientific Co., b, l, m  
rsett Labs., Inc., b, d, j, k, m  
rresser Industries, Inc., a thru e, h, i, k, l, m  
rresser Mfg. Div., Dresser Industries, Inc., b, h, m  
ynamic Controls Co., b, d, g, h, k, m  
agle-Picher Co., The, b  
icor Div.-Scronton, a, d, k

Elcor, Inc., b, e, h, k, l, m  
Electric Auto-Lite Co., The, b, e  
Electric Machinery Mfg. Co., d  
Electric Products Co., The, a thru d, l, m  
Electro Engrg. Works, a, b, d, e, h, j, l, m  
Electro Products Laboratories, Inc., b, l  
Electromoth Corp.  
Electro-Mechanical Products Co., a thru d, h, j, m  
Electronic Assembly Co., Inc., a thru h, j thru m  
Electronic Communications, Inc., a, b, d, e, g, h,  
j thru m  
Electronic Engrg. Co. of California, b, h, k, l, m  
Electronic Instrument Co., Inc. (EICO), k  
Electronic Research Associates, Inc., a, b, d, e, g,  
h, k, l, m  
Electronic Specialty Co., a, b, h, k  
Electronic Tube Corp., a, b, h, m  
Electronics of Clearfield, Inc., b  
Electronics International Co., a, d  
Electro-Tech Equipment Co., a, h, l, m  
Elgin Micronics, West Coast Div.-Elgin National  
Watch Co., a, b  
Emerson Radio & Phonograph Corp., a thru l  
Empire Products Sales Corp., a, f  
Endevco Corp., a, b  
Engineered Magnetics, Div.-Gulton Industries, Inc.,  
a thru d, g, h, j, k, m  
Engrg. Associates, e, f  
Enso, Inc., b, d, e, g  
Entron, Inc., h, m  
**\*ETS-HOKIN & GALYAN, a, b, c.**  
FXR, Inc., f  
Fairchild Astrionics Div., Fairchild Engine &  
Airplane Corp., a, b, d, h, l, m  
Fairfield Engrg. Corp., a, b, d, g, h, k-1, s-1,  
s-2  
Ferrotron Electronics Co., Inc., a, b, h, k, l, m  
First Electronics Corp., The, a, b, e thru h, k, l, m  
Fisher Research Lab., Inc., k  
John Fluke Mfg. Co., Inc., b, e, f, h, l, m  
Fluorocarbon Co., The, l  
Foto-Video Labs., Inc., b, e, h, m  
Freed Transformer Co., Inc., d, m  
General Communication Co., b  
General Devices, Inc., a, b, d, e, g, j thru l  
General Electric Co., Apparatus Sales Div., a thru e,  
g, h, k, l, m  
General Magnetics, Inc., g, m  
Georator Corp., a thru d, l, m  
Geotronic Labs., Inc., d, e, g, h, k, m  
Good Electronic Corp., a, b, h, l, m  
Good-All Electric Mfg. Co., a, b, c, e, f, h, j thru m  
Gordon Enterprises, a, b, d  
Goslin Electric & Mfg. Co., a, b, d thru h, j, k, m  
Green Rectifier Co., a, b, d thru h, l, m  
Green, Inc., a thru d, m  
Guided Missile Div.-DeHavilland Aircraft of Canada,  
Ltd., a thru d, g, h, k, m  
Gulton Industries, Inc., b, d, g, h, k, m  
Hagan Chemicals & Controls, Inc., b  
Hallicrafters, b, e, h, j, k, m  
Hamilton Standard, Div.-United Aircraft Corp.  
Harrison Labs., Inc., b, e, g, k, l, m  
Harvey-Wells Electronics Inc., a, e, g, j thru m  
Hertner Electric Co., The, a, b, d, e, h, l, m  
Hevi-Duty Electric Co., e, h, l  
Hewlett-Packard Co., a, f, l, m  
Hoffman Electronics Corp., Semiconductor Div., b  
Hoover Electric Co., a thru e, k, m  
Hughes Tool Co., Aircraft Div., c, h, l, m  
Hycan Mfg. Co., b, d, e, h, l, m  
**\*HYDRO-AIRE CO. DIV.-CRANE CO., a, b, k.**  
I-L-S Instrument Div., The Meriam Instrument Co.,  
d, l  
Industrial Television Inc., d  
Industrial Test Equipment Co., a, d, h, l, m  
Instruments For Industry, Inc., b, h, j, k, m  
International Electronic Research Corp., a, d  
International Ferromot Machinery Co., Inc., a thru d,  
h, m  
International Research Associates, a, b, d, f, g, j, k,  
l  
Interstate Electronics Corp., b  
itek Corp., l  
Jack & Heintz, Inc., a thru e, g, h, k, l, m  
Jansky & Bailey, Inc., b, h, m  
Jeto, Inc., a thru e  
Johnson Electronics Inc., j  
Jordan Electronics, Div.-Victoreen Instrument Co., a,  
b, d, k  
Kohn & Co., Inc., b  
Kaiser Aircraft & Electronics, Div.-Kaiser Industries  
Corp., d, h, k  
Kay Electric Co., k  
**\*KEARFOTT CO., INC., a thru d, h, m.**  
Keithley Instruments, Inc., b, h, l, m  
Kinney Mfg. Div., The New York Air Brake Co., a, b,  
e, h, l, m  
Kin Tel Div.-Cohu Electronics, Inc., b  
Kingston Electronics-Div.-Kingston Industries Inc.,  
m  
Lambda Electronics Corp., a, d, f, h, j thru m  
Land-Air Inc., a, b, d, e, j, l  
Langvin Div., The W. L. Maxson Corp., a, b, d, e, g,  
h, m  
Leach Corp., a, b, d, g, h, k, l, m  
Lear, Inc., a, b, d, g, h, k, m  
Lear, Inc., Grand Rapids Div., a, d  
Leeds & Northrup Co., m  
Leland Airborne Products, Div.-American Machine &  
Foundry Co., a thru e, g, h, l, m  
Levinhof Electronic Products, Inc., e, f, j

Litton Industries, Moryland Div., h  
Livingston Electronic Corp., j, k  
Macarr, Inc., a, b, g, h, l  
Magnetic Controls Co., a, b, d, g, h, k, m  
Magnetic Research Corp., b, d  
Manson Labs., Inc., a, b, e, f, h, j, l, m  
Marquardt Aircraft Co.  
Master Specialties Co., a, b, d, h, m  
W. L. Maxson Corp., The, h  
Menlo Research Lab., a  
Micromerital Mfg. Co.  
Sanford Miller Co., b, k  
Minneapolis-Honeywell Regulator Co., Boston Div.,  
a, d, m  
Minneapolis-Honeywell Regulator Co., Industrial  
Product Group, h, m  
Minneapolis-Honeywell Regulator Co., Ordnance  
Div., a, b, d, k, m  
Miratel, Inc., b, e, h, j, l, m  
Model Rectifier Corp., b, k, l  
Moran Instrument Corp., b, e, m  
Morse Instrument Co., The, b, m  
**\*MOTOR GENERATOR CORP., a thru e.**  
Motoresearch Co., a thru d, h, m  
Motorola Inc., Military Electronics Div., a, b, d thru  
h, j thru m  
Mucron Corp., a thru h, j thru m  
Heinz Mueller Eng. Co., Inc., b  
Mullenbach Div.-Electric Machinery Mfg. Co., b  
Multi-Amp Corp., a, b, e, g, h, l, m  
Munston Mfg. & Service, Inc., e, j, k  
NYT Electronics, Inc., a, b, d, e, g, h, j, k, m  
George L. Nankervis Co., a, b, d  
National Pneumatic Co., Inc., Holtzer-Cabot Div.,  
b, j, k, m  
Navigation Computer Corp., b  
Neff Instrument Corp., b, k  
Networks Electronic Corp., b, c, d, g, h, i, k, l, m  
Neutronic Associates, b, e, h, l, m  
North Electric Co., a, b, m  
North Hills Electric Co., Inc., b, e, h, l, m  
Northeast Electronics Corp., e, f, h, k, l, m  
Northrop Scientific Corp., e, f, m  
Northrop Corp., a thru h, k, l, m  
Paul Nurches Co., b, h, k, l, m  
Nuron Mfg. Co., Inc., a, b, g, j, k, l  
D. W. Onan & Sons Inc., a thru d, h, m  
Orbiton Co., Inc., k, m  
Pacific Magnetic Corp., a, b, d, g, h  
**\*PACKARD-BELL ELECTRONICS CORP., b, h, m.**  
Ralph M. Parsons Co., The, Electronics Div., b, d,  
e, m  
Patterson, Moos Div.-Universal Winding Co., Inc., a,  
b  
Perkin Engrg. Corp., a thru m  
Perry Plastics, Inc., a, b, d  
Peschel Electronics, Inc., a, b, d, e, f, l  
Pesco Products Div.-Borg-Warner Corp., a, b, c  
George A. Philbrick Researches, Inc., h  
Phileo Corp., Government & Industrial Div., a, b, c,  
e, f, h, j thru m  
Pioneer Tool & Engrg. Co., a, b, e  
Pollard Electronics Corp., f  
Polytechnic Research & Development Co., Inc., f  
Potter Co., The, b, d, e, h, m  
Power Designs Inc., a, b, d, f, h, k, l, m  
Power Sources, Inc., a thru d, g, h, k, l, m  
Power Supplies Inc., a thru e, g, h, j thru m  
Power-Tronic Systems Inc., a, b, d, k, l, m  
Precise Development Corp., a, b, e, h, k, l, m  
Q. O. S. Corp., e, j  
Quan-Tech Labs., b, h, k, m  
RS Electronics Corp., e, j, k  
Radiophone Co., Inc., b, h, j, k, m  
Radiation Dynamics, Inc., e  
Radiation, Inc., b  
Radiation Instrument Development Lab., Inc., e  
Ramo-Woolridge Div., Thompson Ramo Woolridge of  
Calif., a, b  
Rapid Electric Co., b, h, k, l  
Roytheon Mfg. Co., a, b, g, h, m  
Reflectone Corp., The, g, h, k, l, m  
Republic Aviation Corp., b, h, l, m  
**\*RHEEM MFG. CO., DEFENSE & TECHNICAL PRODUCTS DIV., d, i, m.**  
Rixon Electronics Inc., a, b, d, h, k  
Safety Electrical Equipment Corp., a thru d, h, m  
Sangamo Electric Co., a, b, d, e, h  
Schaevitz Engrg., a  
Scientific Engrg. Labs., Inc., e, l, m  
H. H. Scott, Inc., a, l  
Seco Mfg. Co., l  
Seeburg Corp., The, a, b, j, k, m  
Sel-Rex Corp., b, c, g, h, l, m  
Seymour Wire & Cable Co., Div.-Mandel Industries,  
Inc., a, b, h, k, l, m  
Servomechanisms, Inc.  
Servomechanisms, Inc., Mechatrol Div., d  
Shellcross Mfg. Co., b  
Sherman Instrument Electronics, Div.-Engrg. Design  
Inc., e  
Solor Aircraft Co., b  
Sorensen & Co., Inc., a thru e, g, h, j thru m  
Southwestern Industrial Electronics Co., a thru m  
Special Instruments Div., British Industries Corp., f  
Specialty Engrg. & Electronics Co., h, m, k  
Spectral Electronics Corp., a, b, d, e, h, k, m  
Sperry Microwave Electronics Co., Div.-Sperry Rand  
Corp., f  
State Testing Lab., Inc., a, b, h, l, m  
Stromberg-Carlson Div.-General Dynamics Corp.,  
Suffolk Products Corp.

Sun Electric Corp., Aeronautical Div., a, b  
Superior Electric Co., The, a, b  
Syntron Co., b, e, h, m  
Talley Corp., The, a, b, c, g, h, l, m  
Tapco Group, Thompson-Romo-Woodbridge Inc., a, b,  
c, d, i, m  
Technical Apparatus Builders, a thru m  
Teletra Industries Corp., a thru e, g, h, i thru m  
Tele-Dynamics Inc., k  
Telrad Mfg. Corp., f  
Tel-Instrument Electronics Corp., a, b, d, e, h, m  
Torwico Electronics, Inc., b, g, h, m  
Trans Electronics, Inc., a, b, d, e, h, k, l, m  
Transdyne Corp., a, b, d, h, l, m  
Turbo Machine Co., a, b, h, m  
United Electro-dynamics, Inc., a, b, d, h, i, k, m  
U. S. Industries, Inc., a, b, m  
U. S. Science Corp., Div.-Topp Industries, Inc., a, b,  
d, g, h, i thru m

Universal Electronics Co., b, d, e, g, h, k, l, m  
Varian Associates, b, d, e, f, h, l, m  
Vero Mfg. Co., Inc., a, b, d, e, h, k, m  
Video Instruments Co., Inc., b, d, h, k, l, m  
Virginia Electronics Co., Inc.  
Waldorf Electronics, Div.-F. C. Huyck & Sons, k  
Western Design, Div.-U. S. Industries, Inc.; Santa  
Barbara Div., a, b, d  
Western Gear Corp., a thru e, k, l, m  
Westinghouse Electric Corp., a, b  
Wheeler Electronic Corp., Sub.-Sperry Rand Corp., a,  
b, d, k

**\*WHITE DIESEL ENGINE DIV., THE WHITE  
MOTOR CO., a thru e, m**  
Wincharger Corp., Sub.-Zenith Radio Corp., a thru d,  
k

**POWER SYSTEMS, ELECTRIC**  
See **ELECTRIC POWER SYSTEMS**

**POWER UNITS, RECTIFIER**  
See **RECTIFIER POWER UNITS**

**PRECIOUS METAL PLATING**  
See **PLATING, PRECIOUS METAL**

**PRECIPITATORS, ELECTROSTATIC**

Air-Maze Corp.  
Bendix Utica Div., Bendix Aviation Corp.  
Dayton Aircraft Products, Inc.  
Koppers Co., Inc.  
Merix Chemical Co.  
Rodex Corp.  
Trion, Inc.  
Westinghouse Electric Corp.

**PRECISION APPROACH RADAR**  
See **RADAR, PRECISION APPROACH**

**PRECISION DRILL PRESSES**  
See **DRILL PRESSES, PRECISION**

**PRECISION GEARS**  
See **GEARS, PRECISION**

**PRE-SELECTORS**

Barker Sales Co.  
Bendix Aviation Corp., York Div.  
Electronic Communications, Inc.  
ITT Federal Div., International Telephone & Tele-  
graph Corp.  
Meridian Metalcraft, Inc.  
Motorola Inc., Military Electronics Div.  
Telrad Mfg. Corp.

**PRESET PANELS LIGHTING EQUIPMENT**  
See **LIGHTING EQUIPMENT, PRESET PANELS**

**PRESS FORGINGS**  
See **FORGINGS, PRESS**

**PRESSES, METAL FORMING**

American Brake Shoe Co.  
E. W. Bliss Co.  
Chambersburg Engrg. Co.  
Cincinnati Shaper Co., The  
Farral Birmingham Co. Inc.  
Hannifin Co., Div.-Parker-Hannifin Corp.  
Hufford Corp., The  
Hydraulic Press Mfg. Co., The, Div.-Koehring Co.  
Kenco Mfg. Co.  
E. Konigsloew Stamping & Tool Co.  
Montgomery Engrg., Co.  
Dliver Corp., The  
Dliver Corp., The-A. B. Farquhar Div.  
D'Neil Irwin Mfg. Co.  
Rorex Punch Co., Inc.  
Rucker Co., The  
Transmores Corp.  
United States Chemical Milling Corp.  
Verson Allsteel Press Co.  
Wales Stripit Inc., Unit of Houdaille Industries, Inc.  
Wasley Products, Inc.

**PRESSES, PUNCH**  
See **PUNCH PRESSES**

**PRESSURE INSTRUMENTS**

Aerotec Corp., The  
**\*AIRESEARCH MFG. CO., DIV.-THE GARRETT  
CORP.**  
Bendix Aviation Corp., Friez Instrument Div.  
Bristol Co., The  
Captive Seal Corp.  
Colvin Labs., Inc.

Consolidated Controls Corp.  
Consolidated Diesel Electric Corp.  
Consolidated Electrodynamics Corp.  
Curtiss-Wright Electronics Div., IML Branch  
Dynamics Corp.  
Electro-Mechanical Research, Inc.  
Fairchild Controls Corp., Components Div.  
Fischer & Porter Co.  
Fisher Governor Co.  
General Design  
Glasco Instrument Co.  
Hagan Chemicals & Controls, Inc.  
Industrial Engrg. Corp.  
Kahn & Co., Inc.  
Lear, Inc., Grand Rapids Div.

**\*WALLACE O. LEONARD, INC.**  
Mason-Neilan  
Matheson Co., Inc., The  
Meriam Instrument Co.  
Minneapolis-Honeywell Regulator Co., Industrial Div.  
Minneapolis-Honeywell Regulator Co., Industrial  
Product Group  
Rochester Mfg. Co. Inc.  
Sanborn Co.  
Scientific Instrument Co.  
Servomechanisms, Inc.  
Statham Instruments, Inc.  
A. U. Stone & Co., Inc.  
Technology Instrument Corp.  
Trans-Sonics, Inc.  
Trimount Instrument Co.  
Ultradyn, Inc.  
United Electric Controls Co.  
Wallace & Tiernan Inc.  
Weksler Instruments Corp.  
Wilks Precision Instrument Co., Inc.

**PRESSURE MEASURING EQUIPMENT**  
See **MEASURING EQUIPMENT, PRESSURE**

**PRESSURE RELIEF DEVICES—COLUMN FAILURE**  
**\*ANDERSON, GREENWOOD & CO.**

**PRESSURIZATION UNITS**

Accessory Products Co., Div.-Textron Inc.  
**\*AIRESEARCH MFG. CO. OF ARIZ.**  
**\*AIRESEARCH MFG. CO., DIV.-THE GARRETT  
CORP.**  
Aro Equipment Corp.  
Associated Engineers, Inc.  
Bar-Roy Products, Inc.  
Bendix Utica Div., Bendix Aviation Corp.  
Consolidated Diesel Electric Corp., Test Equip. Div.  
Cornelius Co., The, Aero Div.  
Desomatic Products, Inc.  
Hydromatics, Inc.  
Kahn & Co., Inc.  
Lear, Inc.  
**\*McCORMICK SELPH ASSOCIATES**  
N. R. K. Mfg. & Engrg. Co.

**PRESSURIZED CONNECTORS**  
See **CONNECTORS, PRESSURIZED**

**PRINTED CIRCUIT COPPER LAMINATES**  
See **COPPER LAMINATES, PRINTED CIRCUIT**

**PRINTED CIRCUIT SHEETS, METAL CLAD**  
See **SHEETS, METAL CLAD, PRINTED CIRCUIT**

**PRINTED CIRCUIT SOLDERING EQUIPMENT**  
See **SOLDERING EQUIPMENT, PRINTED CIRCUIT**

**PRINTED CIRCUITS**

**\*AC ELECTRONICS DIV., GENERAL MOTORS  
CORP.**  
ACF Industries Inc.  
Adept Industries Inc.  
Aerolite Electronics Corp.  
Amelco, Inc.  
American Printed Circuits Co., Inc.  
Arthur Ansley Mfg. Co.  
Bendix Aviation Corp., York Div.  
Brown Engrg. Co., Inc.  
Cleveland Metal Specialties Co., Electronics Div.  
Corning Glass Works  
Croname Inc.  
Dale Products, Inc.  
Dalnor Div., Yuba Consolidated Industries, Inc.  
Darsett Labs., Inc.  
Eaton Electronics Corp.  
Electrolab Inc.  
Emerson Electric Mfg. Co., The, Electronics &  
Avionics Div.  
Gladding, McBean & Co.  
Globe Electrical Mfg. Co.  
Good Electronic Corp.  
B. F. Goodrich Aviation Products  
ITT Federal Div., International Telephone & Tele-  
graph Corp.  
Integrated Mica Corp.  
ITT-Kellogg  
Keil Engrg. Products  
Lantex Industries, Inc.  
Land-Air Inc.  
La Pointe Industries Inc.  
Liton Industries, U. S. Engrg. Co., Div.  
Motorola Inc., Military Electronics Div.  
Panel Engrg. Corp.  
Philco Corp., Government & Industrial Div.  
Precision Development Corp.  
Printronic Corp.

Ravenna Metal Products, Div.-Standard Screw Co.  
Rogers Corp.  
Milton Ross Metals Co., The  
St. Regis Paper Co., Panelyte Div.  
D. A. Schultz Co.  
Stanley Aviation Corp.  
Stromberg-Carlson Div.-General Dynamics Corp.  
Technograph Printed Electronics, Inc.  
Union Products, Inc.  
United Aircraft Products, Inc.  
United States Chemical Milling Corp.  
Webcor, Inc., Government Div.  
Westinghouse Electric Corp.  
Zenith Optical Laboratory

**PRINTED, STAMPED, ETCHED CIRCUITS**  
See **CIRCUITS, PRINTED, STAMPED, ETCHED**  
**PROCES**

- a. Crystal
- b. High Frequency
- c. High Voltage
- d. Measurement
- e. Microwave
- f. Pilot Stratic
- g. Pressure
- h. Temperature

Advanced Electronics, Inc., g, h  
Aero Research Instrument Co. Inc., f, g, h  
Ainslie Corp., e  
Air Logistics Corp., h  
Aircorn Inc., a, e  
Aircorn Inc. of New Jersey, e  
Airtorn Inc., Div.-Liton Industries, e  
Allegany Instrument Co., Inc., h  
Allen Tool Corp.  
**\*ARNOUX CORP., h**  
Atlantic Instrument Corp., Sub.-American  
Electronics, Inc., h  
Bendix Aviation Corp., York Div., e  
Bogart Mfg. Corp., e  
Branson Instruments, Inc., a  
Budd Stanley Co. Inc., e  
Bulow Electric Co., h  
Cardinal Instrumentation Corp., h  
Chesapeake Instrument Corp., a  
Christie Machine Works, b, d  
Consolidated Controls Corp., h  
Consolidated Diesel Electric Corp., f, g, h  
Crescent Engrg. & Research Co., h  
Demarony-Bonardi, e  
Diamond Antenna & Microwave Corp., a, e  
Douglas Microwave Co., Inc., e  
E-Z-Hook Test Products  
Edcliff Instruments, f, g  
Electro-Mechanical Products Co., h  
Electronic Instrument Co., Inc. (EICO), a, b, c  
FXR, Inc., a, b, d, e  
Fenwal Electronics, Inc., h  
Fenwal Inc., h  
Ferrotherm Co., The, g, h  
Flow Corp., f, g, h  
General Electric Co., Apparatus Sales Div., h  
G. M. Giannini & Co., Inc., d, f, g, h  
John Gombos Co., Inc., e  
Cloud S. Gordon Co., g  
Harca Labs., Inc., f, g, h  
Hesco Engrg., h  
Hewlett-Packard Co., b, d, e  
Holex, Inc., d  
Illinois Testing Laboratories, Inc., h  
Industrial Television Inc., a  
International Resistance Co., e  
Interstate Engrg. Corp., g, h  
Javex Electronics, e  
Kay Electric Co., b  
**\*KEARFOTT CO., INC., e**  
Keithley Instruments, Inc., d  
Keystone Electronics Corp., c  
Leads & Northrup Co., h  
**\*LEWIS ENGRG. CO., THE, h**  
Magnaflex Corp., a, d  
Marconi Instruments, b, d  
Measurements Div., McGraw Edison Co., b, d  
Microlab, b, e  
Munston Mfg. & Service, Inc., b  
Narda Microwave Corp., The, e  
National Beryllia Corp., h  
Dmeqa Labs., Inc., e  
Pacific Scientific Co., h  
Paco Electronics Co., Inc., a, b, c  
Pioneer Industries Div., Almar-York Co. Inc., a  
Polytechnic Research & Development Co., Inc., e  
Precision Apparatus Co., Inc., a, b, c  
Projects Unlimited Inc.  
Radar Design Corp., e  
Rosemount Engrg. Co., g, h  
Arthur C. Ruge Associates, Inc., h  
Sage Labs., Inc., e  
Sanford Plastics Corp., b, c  
Scanco Controls, Inc., h  
Scala Radio Co., a, b, c  
Servomechanisms, Inc., f, g  
Sheffield Corp., The, Sub.-Bendix Aviation Corp., f  
Simpson Electronics Co., a, b, c, h  
Sperry Microwave Electronics Co., Div.-Sperry Rand  
Corp., e  
T-C Div., Dyna-Empire, Inc., h  
Telrad Mfg. Corp., e  
Temperature Engrg. Corp., h  
Thermal Refractories Corp., g, h  
Thermo Electric Co., Inc., h  
Turbo Machine Co., e

ited Central Corp., h.  
S. Science Corp., Div.-Topp Industries, Inc., g, h.  
ctor R. F. & Microwave Co., a, e.  
ctory Engrg. Corp., h.  
ste King Corp., Technical Products Div., f, g, h.  
erman Products Co., Inc., a, d.  
veline, Inc., e.  
ncar, Inc., Government Div.  
ntronics, c.  
llow Springs Instrument Co., The, h.

## PROJECTION LAMPS e LAMPS, PROJECTION

### PELLANT CASES, SOLID ROCKET

rojet-General Corp.  
ca Products, Inc.  
uminum Co. of America  
merican Aluminum Co.  
merican Cor & Foundry, Div.-ACF Industries, Inc.  
merican Machine & Foundry Co., Government Prod-  
ucts Group  
nchor Metal Spinning Co., The  
astrodyne, Inc.  
ntastic Research Corp.  
ker Perkins Inc.  
ll Aircraft Corp., Niagara Frontier Div.  
BENDIX PRODUCTS DIV., BENDIX AVIATION  
CORP.  
nson Mfg., Co., The  
W. Bliss Co.  
idgeport Brass Co.  
CAMERON IRON WORKS, INC.  
ompson Co., The  
ryles Corp., Defense Operations Div.  
oper Development Corp., Sub-Marquardt Aircraft  
Co.  
rtiss-Wright Corp.-Propeller Div.  
rtiss-Wright Corp.-Utica Div.  
rtiss-Wright Corp.-Wright Aeronautical Div.  
rvey Engrg. Co.  
esser Mfg. Div., Dresser Industries, Inc.  
nbar-Koppke Inc.-Aircraft Components Div.  
nbar-Koppke, Inc.  
F. Goodrich Aviation Products  
adyear Aircraft Corp.  
ohn & Cloy  
veg Industries, Inc.  
fford Corp., The  
ngersoll Kalamazoo Div., Borg-Worner Corp.  
ntercontinental Mfg. Co., Inc.  
siser Metal Products, Inc.-Fleetwings Div.  
norr Corp.  
W. Kellogg Co., The  
lsey-Hoyes Co.  
ntex Industries, Inc.  
LYCOMING DIV., AVCO MFG. CORP.  
rzed Engrg., Inc.  
nnesota Mining & Mfg. Co.  
ewbrook Machine Corp.  
orris-Thermodar Corp.  
rthrop Corp., The, Nortronics Div.  
lear Products-Erco Div.-ACF Industries, Inc.  
astic Age Sales, Inc.  
rtland Copper & Tank Works Inc.  
ressed Sheet Metal, Inc.  
ressed Steel Tank Co.  
ed Lion Cabinet Co., Redco Tool Div.  
inhold Engrg. & Plastics Co.

### PELLANT CHEMICALS, NITRATED

### PROPELLEX CHEMICAL DIV., CHROMALLOY

### CORP.

### PELLANT TANKS

### rojet-General Corp.

### ir Products, Inc.

### ca Products, Inc.

### uminum Co. of America

American Aluminum Co.  
American Machine & Foundry Co., Government Prod-  
ucts Group

Anchor Metal Spinning Co., The  
Bell Aircraft Corp., Niagara Frontier Div.

Benson Mfg. Co., The  
Bowser, Inc., Defense Dept.

Cambridge Co.-Div.-Carrier Corp.  
Champion Co., The  
Chemplast, Inc.

Chrysler Corp., Defense Operations Div.  
Cooper Development Corp., Sub-Marquardt Aircraft  
Co.

Cramer Mfg. & Engrg., Inc.  
Curtiss-Wright Corp.-Propeller Div.  
Curtiss-Wright Corp.-Wright Aeronautical Div.

Diversey Engrg. Co.  
Doyle & Rath Mfg. Co., Inc.  
Dresser Mfg. Div., Dresser Industries, Inc.

Hahn & Clay  
Paul Hardeman, Inc.  
Huffard Corp., The  
Ingersoll Kalamazoo Div., Borg-Worner Corp.

Joelin Mfg. Co.  
Kaiser Metal Products, Inc.-Fleetwings Div.  
M. W. Kellogg Co., The  
Lantex Industries, Inc.

Mercury Tool & Mfg. Corp.  
Minnesota Mining & Mfg. Co.  
\*MIRAX CHEMICAL PRODUCTS CORP., METAL  
CONTAINER DIV.

Newbrook Machine Corp.  
Nuclear Products-Erco Div.-ACF Industries, Inc.  
Opeliko Welding, Machine & Supply Inc.  
Portland Copper & Tank Works Inc.

Precision Sheet Metal, Inc.  
Pressed Steel Tank Co.  
Project Fabrication Corp.

Reaction Motors Div., Thiokol Chem. Corp.  
Edw. Renneburg & Sons Co.  
\*RHEEM MFG. CO., DEFENSE & TECHNICAL  
PRODUCTS DIV.

Rohr Aircraft Corp.  
Ryan Aeronautical Co.  
Santo Anita Engrg. Co.  
Scoffe Co.-Div.-Wilson Bros.

A. D. Smith Corp.  
Solar Aircraft Co.  
Stainless Steel Products, Inc.  
Stems-Roger Mfg. Co.

Tapco Group, Thompson-Ramo-Wooldridge Inc.  
Tigg Industries  
U. S. Industries, Inc.  
United States Chemical Milling Corp.

Universal Moulded Products Corp.  
Young Development Div., Hercules Powder Co.

Aerofjet-General Corp.  
Air Products, Inc.  
\*ALLIED CHEMICAL CORP., GENERAL  
CHEMICAL DIV.

Allied Chemical Corp., Nitrogen Div.  
American Rocket Co.  
Becco Chemical Div.-Food Machinery & Chemical  
Corp.

Bell Aircraft Corp., Niagara Frontier Div.  
Coltery Chemical Co.  
Escombia Chemical Corp.

Fulton-Irgon Corp., The  
Hercules Powder Co.  
Kaiser Metal Products, Inc.-Fleetwings Div.

Olin Mathieson Chemical Corp., Energy Div.  
Pennsolt Chemicals Corp.  
\*REDEL INC.

Rohm & Haas Co., Redstone Arsenal Research Div.  
Shell Chemical Corp., Industrial Chemical Div.  
Special Projects Lab., Food Machinery & Chemical  
Corp.

Aerofjet-General Corp.  
American Late Products Corp.  
\*AMERICAN POTASH & CHEMICAL CORP.

American Rocket Co.  
Amoco Chemicals Corp.  
Astrodyne, Inc.

Atlantic Research Corp.  
Coltery Chemical Co.  
Cooper Development Corp., Sub-Marquardt Aircraft  
Co.

Dynamic Devices, Inc.  
Escombia Chemical Corp.  
Foot Mineral Co.

Fulton-Irgon Corp., The  
B. F. Goodrich Aviation Products  
Hercules Powder Co.  
Kaiser Metal Products, Inc.-Fleetwings Div.

Derlikon Tool & Arms Corp. of America  
Olin Mathieson Chemical Corp., Energy Div.  
Pennsolt Chemicals Corp.

\*REDEL INC.  
Rohm & Haas Co., Redstone Arsenal Research Div.  
Shell Chemical Corp., Industrial Chemicals Div.  
Standard Dil Co. of Indiana

Topper Mfg. Co., Inc.  
United States Rubber Co.

Aerofjet-General Corp.  
Air Products, Inc.  
ca Products, Inc.  
uminum Co. of America

American Aluminum Co.  
American Machine & Foundry Co., Government Prod-  
ucts Group

Anchor Metal Spinning Co., The  
Bell Aircraft Corp., Niagara Frontier Div.

Benson Mfg. Co., The  
Bowser, Inc., Defense Dept.

Cambridge Co.-Div.-Carrier Corp.  
Champion Co., The  
Chemplast, Inc.

Chrysler Corp., Defense Operations Div.  
Cooper Development Corp., Sub-Marquardt Aircraft  
Co.

Cramer Mfg. & Engrg., Inc.  
Curtiss-Wright Corp.-Propeller Div.  
Curtiss-Wright Corp.-Wright Aeronautical Div.

Diversey Engrg. Co.  
Doyle & Rath Mfg. Co., Inc.  
Dresser Mfg. Div., Dresser Industries, Inc.

Hahn & Clay  
Paul Hardeman, Inc.  
Huffard Corp., The  
Ingersoll Kalamazoo Div., Borg-Worner Corp.

Joelin Mfg. Co.  
Kaiser Metal Products, Inc.-Fleetwings Div.  
M. W. Kellogg Co., The  
Lantex Industries, Inc.

Mercury Tool & Mfg. Corp.  
Minnesota Mining & Mfg. Co.  
\*MIRAX CHEMICAL PRODUCTS CORP., METAL  
CONTAINER DIV.

Aeroscience, Inc.  
Astrodyne, Inc.

Atlantic Research Corp.  
Bell Aircraft Corp., Niagara Frontier Div.  
Christie Machine Works

Curtiss-Wright Corp., Research Div.  
Curtiss-Wright Corp., Santa Barbara Div.  
Curtiss-Wright Corp., Wright Aeronautical Div.

Dynamic Devices, Inc.  
Fulton-Irgon Corp., The  
B. F. Goodrich Aviation Products

Hercules Powder Co.  
Marquardt Aircraft Co.  
\*McMORMICK SELPH ASSOCIATES

Pneu-Hydra Valve Corp.  
Reaction Motors Div., Thiokol Chem. Corp.  
\*REDEL INC.

Rocketdyne Div.-North American Aviation, Inc.  
Ryan Aeronautical Co.  
Special Projects Lab., Food Machinery & Chemical  
Corp.

Strong Scott Mfg. Co., The  
Tapco Group, Thompson-Ramo-Wooldridge Inc.  
Thiokol Chemical Corp.

PROTECTIVE SEALERS  
See SEALERS, PROTECTIVE

PSYCHO GALVANOMETERS  
Associated Research, Inc.  
Electro-Medical Lab., Inc.  
Dfner Electronics Inc.

PSYCHROMETERS  
Bendix Aviation Corp., Friez Instrument Div.  
Bristol Co., The  
Fisher Scientific Co.

General Scientific Equipment Co.  
E. Vernon Hill & Co.  
Minneapolis-Honeywell Regulator Co., Industrial Div.

Minneapolis-Honeywell Regulator Co., Industrial  
Product Group  
Palmer Thermometers, Inc.  
Precision Thermometer & Instrument Co.

Scientific Instrument Co.  
Specialty Engrg. & Electronics Co.  
Universal Dynamics Corp.  
Weksler Instruments Corp.

PUBLIC ADDRESS SYSTEMS  
Bliss Electronic Corp.  
Blonder-Tongue Labs., Inc.  
Budelman Electronics Corp.

Dorsett Labs., Inc.  
Dresser Mfg. Div., Dresser Industries, Inc.  
Du Kone Corp.  
Executone, Inc.

ITT-Kellogg  
Precise Development Corp.  
Stromberg-Carlson Div.-General Dynamics Corp.  
Telectro Industries Corp.

PULSATION CONTROL  
Consolidated Controls Corp.  
Consolidated Diesel Electric Corp.

PULSATION DAMPERS  
See DAMPERS, PULSATION

PULSE MODULATORS  
See MODULATORS, PULSE

PUMP SYSTEMS, FLUID METERING  
See FLUID METERING PUMP SYSTEMS

PUMPS  
a. Air  
b. Alcohol  
c. Booster  
d. Combination Air & Hydraulic  
e. Fuel  
f. Hydraulic, Fixed Displacement  
g. Hydrogen Peroxide  
h. Liquid Nitrogen  
i. Liquid Oxygen  
j. Metering  
k. Oil  
l. Oxygen Transfer  
m. Pneumatic  
n. Speed Density Metering  
o. Transfer  
p. Turbine  
q. Vacuum  
r. Water Injection  
s. Wobble

ACF Industries Inc., a, b, e, k, m, q, r.  
Adel Precision Products of California, Div.-General  
Metals Corp., b, c, e, f, k, a, p, r, s.  
Aerofjet-General Corp., g, h, i, k, p.  
Air Products, Inc., a, h, i, l, s.  
\*AIRESEARCH MFG. CO., DIV.-THE GARRETT  
CORP., c thru f, h, i, a, p, r.

American Aeroparts, a, b, c, e, f, j, q, s.  
American Bosch Arma Corp., e, j.  
American Brake Shoe Co., f.  
American Brake Shoe Co., Kellogg Div., f.  
American Felt Co., a, c, d, g, l.  
American Instrument Co., Inc., m.  
American Machine & Foundry Co., Greenwich, f.  
Applied Dynamics Corp., a, d, f.  
Aro Equipment Corp., q.

Associate Aircraft Tool & Mfg., Inc., a, c thru f, j, m, q  
 Associated Engrg. & Mfg. Corp., q  
 Associated Engineers, Inc., b, c, e, f, k, o  
 \*BALCRANT INC., MACHINE TOOL DIV., b, g, k, a  
 Beach-Russ Co., a, c, q  
 Bell Aircraft Corp., Niagara Frontier Div., c, p  
 Bell & Gossett Co., Marlow Pumps Div., b, c, k, a  
 \*BENDIX AVIATION CORP., HAMILTON DIV., f, g, k, m, q  
 Bendix-Pacific Div., Bendix Aviation Corp., f  
 Bendix Utica Div., Bendix Aviation Corp., a, b, c, e, f, g, i, k, m, p, q, r  
 Blackhawk Mfg. Co., f  
 Blackmer Pump Co., b, e, g, k, a  
 Bowser, Inc., Defense Dept., e, h, i  
 Byron-Jackson Pumps Inc., Sub.-Borg-Warner Corp., b, c, e, g thru m, o, p, r  
 Cambridge Co.-Div.-Corrier Corp., h, i, l  
 J. C. Carter Co., The, b, c, e, g, h, i, l, o, p, r  
 Central Scientific Co., q  
 Chondler Evans Corp., e, h, j, n, o, p, r  
 Chemump Corp., b, c, e, g, h, i, l, a  
 Chicago Pneumatic Tool Co., q  
 Christie Machine Works, e, l, p  
 Clark Equipment Co., f  
 Collins Engrg. Corp., i, r  
 Com-Air Products, Div.-A S R Products Corp., e, f, s  
 Commercial Shearing & Stamping Co., f  
 Components Corp., a, b, d, e, g thru k, m, o, q  
 Consolidated Electrodynamics Corp., Rochester Div., q  
 Cornelius Co., The, Aero Div., a, d, f, m, q  
 Croll-Reynolds Co. Inc., q  
 Curtiss-Wright Corp., Santa Barbara Div., a thru f, p, r  
 Deon & Benson Research, Inc., a  
 Deming Co., The, b, c, f, k, o, p, s  
 Denison Engrg. Div., American Brake Shoe Co., f, j, k  
 Dresser Industries, Inc., a, b, d thru i, k, l, m, p  
 Dumont Aircraft Fitting Co., g, h, l  
 Dynamic Filters Inc., c  
 Eastern Industries Inc., a thru g, j, k, a thru r  
 Eco Engrg. Co., b, f, g, j  
 Electronic Communications, Inc., e, o  
 Finell System, Inc., q  
 Fischer & Porter Co., j  
 Fisher Scientific Co., a, q  
 Gardner-Deser Co., a, d, f, m, q  
 Gardner Laboratory, Inc., a  
 General Electric Co., Apparatus Sales Div., c, e, p  
 Gorman-Rupp Co., The, a  
 Goulds Pumps Inc., b, c, e, g, h, i, k, a, r  
 Groy Co., Inc., b, k, m, a  
 Green Rectifier Co., q  
 Hamilton Standard, Div.-United Aircraft Corp., f, k  
 Hardman Tool & Engrg., Co., d, a  
 Haskel Engrg. & Supply Co., c, d, f, k, m  
 High Vacuum Equipment Corp., q  
 Hills-McCanna Co., j  
 Hofman Labs., Inc., h, i, l  
 Hoop Products Co., e, f  
 Hoover Electric Co., a thru i, k, a, p, r  
 Hull Corp., q  
 Hupp Aviation Co., f, a  
 Hydraulic Press Mfg. Co., The, Div.-Koehring Co., f  
 \*HYDRO-AIRE CO., DIV.-CRANE CO., a thru l, p, q  
 Hydrodyne Corp., Skinner Seal Div., e, g, h, i, p  
 Hydromatics, Inc., b, g, h, i  
 International Pump & Machine Works, q  
 Joy Mfg. Co., q  
 Kinney Mfg. Div., The New York Air Brake Co., c, j, a, q  
 Korda Industries, e, f, j, k, n  
 Harold Kruger Instruments, j  
 Lawrence Pumps Inc., b, g, h, i, l  
 Lear, Inc., a, b, c, e thru i, k, m, o, q, r, s  
 Lear, Inc., Grand Rapids Div., a, c thru f, j, k, o, q, r  
 Lear Inc., Lear-Romec Div., a thru s  
 Ledeen Inc., c, d  
 Leiman Brothers, Inc., a, c, q  
 Linde Co., Div.-Union Carbide Corp., h, i, l, a, p  
 Lihon Engrg. Labs., q  
 M. C. Mfg. Co., e  
 Marquardt Aircraft Co., e, r  
 J. J. Monaghan Co., Inc., a  
 NRC Equipment Co., p, q  
 Nash Engrg. Co., The, a thru e, g, h, i, l, a, q  
 National Airtol Burner Co., k, a  
 National Research Corp., q  
 Natl. Water Lift Co., Div.-Cleveland Pneumatic Industries, Inc., e, f  
 Nelson Vacuum Pump Co., q  
 Newton Hydraulic Tooling Co., f  
 W. H. Nichols Co., f, j, k, a  
 Northern Drindance Inc., Sub.-Northern Pump Co., e, f, k, a  
 Di-Dyne, Inc., f  
 Diver Corp., The, f  
 Dwatoma Tool Co., f  
 Dwyer Equipment & Service Co., q  
 Peerless Pump Div., Food Machinery & Chemical Corp., b, e, g, i  
 Penberthy Mfg. Co., q, r  
 Pennsylvania Pump & Compressor Co., q  
 Pesco Products Div.-Borg-Warner Corp., a thru g, i, k, p, q, r

H. K. Porter Co., Inc., f  
 Project Fabrication Corp., h, i, l, a  
 Pyles Industries, Inc., d  
 Quincy Compressor Co., q  
 Racine Hydraulics & Machinery Inc., f  
 Reaction Motors Div., Thiokol Chem. Corp., i, a, p  
 Red Point Corp., q  
 Republic Mfg. Co., f, j, k, s  
 Research Appliance Co., a, b, f, j, k  
 Rocketdyne Div.-North American Aviation, Inc., e, i  
 Milton Roy Co., j  
 Rucker Co., The, e, c  
 Sargent Co., Engrg., f  
 Schutte & Koerting Co., q  
 Scientific Engrg. Labs., Inc., q  
 Sier-Bath Gear & Pump Co., Inc., e, k, a  
 Sigmamotor, Inc., j  
 Solar Aircraft Co., f, p  
 Southwestern Industries, Inc., a, b, c, e, g, h, i, k, o, r  
 Special Projects Lab., Food Machinery & Chemical Corp., g  
 F. J. Stokes Corp., q  
 Stratos, Div.-Fairchild Engine & Airplane Corp., a, d, e, f, h, i, j, m  
 Superior Air Products Co., h, i, l, a  
 Tapco Group, Thompson-Ramo-Woolridge Inc., a thru i, k, m, q, r  
 Task Corp., a, b  
 Temperature Engrg. Corp., h, i  
 Thermech Engrg. Corp., h, i  
 Turbo Products, Inc., p  
 United Aircraft Products, Inc., s  
 United Supply Co., a, b  
 Varion Associates, q  
 Veeco Vacuum Corp., q  
 Vickers Inc., Div.-Sperry Rand, c, e, f  
 Vickers Inc., Marine & Ordnance Dept., Machinery Hydraulics Div., f  
 Waldorf Fluid Systems, Div.-F. C. Huyck & Sons, a, b, m  
 Wallace & Tiernan Inc., j  
 Watertown Div., The New York Air Brake Co., f  
 Wayne Pump Co., The, Div.-Symington Wayne Corp.  
 Whittaker Controls, Div.-Telecomputing Corp., b, e, k, o  
 Wilks Precision Instrument Co., Inc., b, c, k, a, r

**PUMPS, TURBO**  
 See TURBO PUMPS

**PUNCH PRESSES**

Acromark Co., The  
 E. W. Bliss Co.  
 Clover Industries, Inc.  
 Denison Engrg. Div., American Brake Shoe Co.  
 Montgomery Engrg., Co.  
 Diver Corp., The  
 Diver Corp., The-A. B. Farquhar Div.  
 D'Neil-Irwin Mfg. Co.  
 Popesch & Kolstad, Inc.  
 Rotex Punch Co., Inc.  
 Joseph T. Ryerson & Son, Inc.  
 U. S. Industries, Inc.  
 Verson Allsteel Press Co.  
 Wales Strippt Inc., Unit of Houdaille Industries, Inc.

**PUNCHES**

Acromark Co., The  
 Bergen Carbide Co.  
 Hughes Tool Co., Aircraft Div.  
 D'Neil-Irwin Mfg. Co.  
 Joseph T. Ryerson & Son, Inc.  
 Tally Register Corp.  
 Torrington Co., The  
 Wales Strippt Inc., Unit of Houdaille Industries, Inc.  
 Wilks Precision Instrument Co., Inc.  
 J. H. Williams & Co.

**PYROMETERS, OPTICAL**

Cooper Development Corp., Sub.-Marquardt Aircraft Co.  
 Electro-Tech Equipment Co.  
 Epic, Inc.  
 Fisher Scientific Co.  
 Claud S. Gordon Co.  
 Leeds & Northrup Co.  
 Pyrometer Instrument Co., Inc.  
 Thwing-Albert Instrument Co.

**PYROMETERS, RADIATION**

Aetna Electronics Corp.  
 Bristol Co., The  
 Electro-Tech Equipment Co.  
 Epic, Inc.  
 Leeds & Northrup Co.  
 Minneapolis-Honeywell Regulator Co., Industrial Div.  
 Minneapolis-Honeywell Regulator Co., Industrial Product Group  
 Perkin-Elmer Corp.  
 Pyrometer Instrument Co., Inc.  
 Servo Corp. of America

**PYROMETERS, RESISTANCE**

Aero Research Instrument Co. Inc.  
 B & H Instrument Co., Inc.  
 Bristol Co., The  
 Electro-Tech Equipment Co.  
 Epic, Inc.  
 General Electric Co., Apparatus Sales Div.  
 Claud S. Gordon Co.

Illinois Testing Laboratories, Inc.  
 Leeds & Northrup Co.  
 \*LEWIS ENGRG. CO., THE  
 Minneapolis-Honeywell Regulator Co., Industrial Div.  
 Minneapolis-Honeywell Regulator Co., Industrial Product Group  
 Arthur C. Ruge Associates, Inc.  
 T-C Div., Dyno-Empire, Inc.  
 Thermo Electric Co., Inc.  
 Thwing-Albert Instrument Co.  
 West Instrument Corp.

**PYROTECHNIC DEVICES**

\*AMERICAN POTASH & CHEMICAL CORP.

**RACKS**

- a. Cabinet
- b. Disc Storage
- c. Equipment
- d. Mounting & Relay

A & P Metal Products Mfg. Corp., a  
 Abolon Precision Mfg. Corp., a, d  
 Alden Products Co., a, d  
 Alpitec, Inc., a thru d  
 Amelco, Inc., a, d  
 American Aeroparts, a, b  
 American Aluminum Co., a thru d  
 American Machine & Foundry Co., Government Products Group, a, b, c  
 American Machine & Foundry Co., Greenwich, a, d  
 Anchor Metal Spinning Co., The, a thru d  
 Anchor Specialty Mfg. Co., Inc., a, c, d  
 Atkins & Merrill, Inc., a  
 Automatic Electric Sales Corp., d  
 Borrett-Christie Co., a, c  
 Barry Controls Inc., c, d  
 Basco Metal Products, Inc., a  
 Benson Mfg. Co., The, a  
 Brooks & Perkins, Inc., a  
 Bud Rodio Inc., a, d  
 Buffalo Metal Container Corp., a, b, c  
 Butler Mfg. Co.  
 Byrne Doors Inc., b, c, d  
 Carmody Corp., a, c  
 Albert H. Coyne Equipment Corp., a, c  
 Centronix Inc., d  
 Champion Co., The, a, b  
 Chrysler Corp., Defense Operations Div., a, d  
 Colonial Aircraft Corp., a thru d  
 Conco Engrg. Works, d  
 Cooper Industries, Inc., a, c  
 Craig Systems, Inc., c, d  
 Cutler Metal Products Co., a thru d  
 Dohlstrom Metallic Door Co., a  
 Detronic Industries, a, d  
 Devco Engrg. Inc., c, d  
 Du Kane Corp., c, d  
 Electro-Mechanical Products Co., a, d  
 Electronic Engrg. Co. of California, d  
 Elzee Metal Products Co., Inc., a thru d  
 \*ETS-HOKIN & GALVAN, d  
 Falstrom Co., a, c  
 Forwell Metal Fabricating, a, c, d  
 Ferris-Mfg. Co., The, a, b  
 Frick Gallagher Mfg. Co., The, c  
 Heiland Div.-Minneapolis-Honeywell, d  
 Ludwig Honold Mfg. Co., a thru d  
 Instrument Corp. of Fla., c  
 Intercontinental Dynamics Corp., c  
 ITT-Kellogg, c, d  
 Kaiser Aircraft & Electronics, Div.-Kaiser Industries Corp., a thru d  
 Kirk & Blum Mfg. Co., The, a, d  
 Lotstrand Co., The, b, c  
 R. H. Lynch Mfg. Co., a, d  
 Lynch Carrier Systems Inc., d  
 Mercury Tool & Mfg. Corp., a, b, c  
 Metal Fabricators Corp., a  
 Mid-West Metal Products, Inc., a thru d  
 \*MIRAX CHEMICAL PRODUCTS CORP., METAL CONTAINER DIV., a, c, d  
 Monogram Precision Industries, a thru d  
 National Pneumatic Co., Inc., Holtzer-Cabot Div., c, d  
 Neumade Products Corp., a, b  
 North Electric Co., d  
 Northeastern Engrg. Inc., a, c, d  
 Pic Design Corp., Sub.-Benrus Watch Co., Inc.  
 Pneumafil Corp., a thru d  
 Precision Sheet Metal, Inc., a  
 Premier Metal Products Co., a, b, c, d  
 Prerag Mfg. Inc., d  
 Radiotronics, Inc., a, d  
 Railway Communications Inc., d  
 Red Lion Cabinet Co., Redco Tool Div., a  
 Reinhold Engrg. & Plastics Co., a  
 Edw. Renneburg & Sons Co., a thru d  
 Republic Steel Corp., a  
 Rimak, Inc., a, c, d  
 Roberts Industries Inc., a, b, c  
 Roll Formed Products Co., a  
 Santa Anita Engrg. Co., a  
 Sequoia Wire & Cable Co.-Div.-Mondrel Industries, Inc., a thru d  
 Skyline Electric & Mfg. Co., a thru d  
 Skyline Products, Inc., a  
 Specialty Engrg. & Electronics Co., a  
 Stanley Aviation Corp., d  
 Stromberg-Carlson Div.-General Dynamics Corp., d  
 Teiner Engrg. Corp., a, d  
 Twin Coach Co., Aircraft-Missiles, a thru d  
 United Aircraft Products, Inc., a, c

Uj. Relay Cor., d  
V. Zelm Associates, Inc., d  
Vjetz Aircraft Corp., c, d  
Weld Construction Inc., c  
Wzlou Engrg. Co., a  
Wort Wesling & Sons Inc., c  
Wider Aircraft Corp. of Florida, c, d  
Wo Metal Products, a, c, d  
Yng & Rioux Woodworking Co., Inc., a

## AIR, AIRBORNE

A<sup>2</sup> Industries Inc.  
Ais Precision Products, Co.  
\***AVCO MFG. CORP., CROSLEY DIV.**  
B Aircraft Corp., Niagara Frontier Div.  
Bock Instrument Corp.  
Bdix-Pacific Div., Bendix Aviation Corp.  
Bdix Radio Div., Bendix Aviation Corp.  
Cogo Div., Underwood Corp.  
Cranix Inc.  
Dico-Wayne Electronics, Div., Divco-Wayne Corp.  
Electronic Communications, Inc.  
Eison Electronic Mfg. Co., The, Electronics & Avionics Div.  
Eison Radio & Phonograph Corp.  
Fchild Astrionics Div., Fairchild Engine & Airplane Corp.  
FJ Instrument Co., Div.-Sperry Rand Corp.  
Geral Communication Co.  
Gillan Bros. Inc.  
Gyear Aircraft Corp.  
Hicrafters  
Heltine Electronics Div.-Hazeltine Corp.  
Himan Labs. Div., Hoffman Electronics Corp.  
Hhes Aircraft Co.  
IT Federal Div., International Telephone & Telegraph Corp.  
IT Labs.  
Lion Industries, Inc.  
Lion Industries, Maryland Div.  
Lkheed Aircraft Corp., Missiles & Space Div.  
W. L. Maxson Corp., The  
Mogram Precision Industries  
Morala Inc., Military Electronics Div.  
Nhrap Corp., The, Nortronics Div.  
Pico Corp., Government & Industrial Div.  
Riation, Inc.  
Rihon Mfg. Co.  
Rihon Mfg. Co., Government Equipment Div.  
Rublic Aviation Corp.  
Rin Aeronautical Co.  
Siers Associates, Inc.  
Sitran Electronics & Television Corp.  
Svid Engrg., Inc.  
Tetra Industries Corp.  
Terad Mfg. Corp.  
Ued States Chemical Milling Corp.  
Un Associates  
Webcor, Inc., Government Div.  
Westinghouse Electric Corp.

## AIR BEACONS

A<sup>2</sup> Industries Inc.  
Ablab Development Co.  
Alco, Inc.  
African Machine & Foundry Co., Greenwich  
Aeno & Radame Research Associates  
Bdix Aviation Corp., York Div.  
Bdix-Pacific Div., Bendix Aviation Corp.  
Cogo Div., Underwood Corp.  
Cranix Inc.  
Cper Development Corp., Sub-Marquardt Aircraft Corp.  
CJ Research Corp.  
Dco-Wayne Electronics, Div.-Divco-Wayne Corp.  
Electronic Communications, Inc.  
Eison Radio & Phonograph Corp.  
Frotran Electronics Co., Inc.  
FJ Instrument Co., Div.-Sperry Rand Corp.  
Geral Communication Co.  
Geral Devices, Inc.  
Gillan Bros. Inc.  
Hjmare Electronics Co.  
Heltine Electronics Div.-Hazeltine Corp.  
Hion Mfg. Co.  
IT Federal Div., International Telephone & Telegraph Corp.  
IT Labs.  
Instruments for Industry, Inc.  
L L, Inc.  
Loie Laboratories Inc.  
Lion Industries, Inc.  
Lion Industries, Maryland Div.  
Lkheed Aircraft Corp., Missiles & Space Div.  
Marquardt Aircraft Corp.  
W. L. Maxson Corp., The  
Man Instrument Corp.  
Morala Inc., Military Electronics Div.  
\***ACKARD-BELL ELECTRONICS CORP.**  
Fch M. Parsons Co., The, Electronics Div.  
Pica Corp., Government & Industrial Div.  
Parad Electronics Corp.  
PElectronics Corp.  
Pliation, Inc.  
Pihon Mfg. Co., Government Equipment Div.  
Pives Instrument Corp.  
Pidel Engrg. Corp.  
Satran Electronics & Television Corp.  
Svid Engrg., Inc.  
Sling Precision Corp., Instrument Div.  
Tetra Industries Corp.

Telerad Mfg. Corp.  
Varian Associates  
Webcor, Inc., Government Div.  
Westinghouse Electric Corp.

## RADAR, PRECISION APPROACH

ACF Industries Inc.  
Atlas Precision Products, Co.  
\***AVCO MFG. CORP., CROSLEY DIV.**  
Aviation Textile Associates  
Bendix Radio Div., Bendix Aviation Corp.  
Centrix Inc.  
Gillfillan Bros. Inc.  
Hazeltine Electronics Div.-Hazeltine Corp.  
ITT Labs  
Litton Industries, Inc.  
Litton Industries, Maryland Div.  
Morala Inc., Military Electronics Div.  
Philco Corp., Government & Industrial Div.  
Raytheon Mfg. Co., Government Equipment Div.  
Telectro Industries Corp.  
Varian Associates  
Webcor, Inc., Government Div.  
Westinghouse Electric Corp.

## RADAR REFLECTORS

See REFLECTORS, RADAR

## RADAR, SURVEILLANCE

ACF Industries Inc.  
American Machine & Foundry Co., Government Products Group  
\***AVCO MFG. CORP., CROSLEY DIV.**  
Aviation Textile Associates  
Bell Aircraft Corp., Niagara Frontier Div.  
Belack Instrument Corp.  
Bendix Radio Div., Bendix Aviation Corp.  
Centrix Inc.  
Continental Electronics Mfg. Co.  
Edgerton, Germeshusen & Grier, Inc.  
Emerson Electric Mfg. Co., The, Electronics & Avionics Div.  
Empire Products Sales Corp.  
Ford Instrument Co., Div.-Sperry Rand Corp.  
Gillfillan Bros. Inc.  
Hazeltine Electronics Div.-Hazeltine Corp.  
Hoffman Labs. Div., Hoffman Electronics Corp.  
Hughes Aircraft Co.  
ITT Federal Div., International Telephone & Telegraph Corp.  
ITT Labs.  
Litton Industries, Inc.  
Litton Industries, Maryland Div.  
W. L. Maxson Corp., The  
Miller Associates  
Morala Inc., Military Electronics Div.  
Philco Corp., Government & Industrial Div.  
Radian, Inc.  
Raytheon Mfg. Co.  
Raytheon Mfg. Co., Government Equipment Div.  
Reeves Instrument Corp.  
Sanders Associates, Inc.  
Skyline Electric & Mfg. Co.  
Sperry Piedmont Co. - Div.-Sperry Rand Corp.  
Telectro Industries Corp.  
Telerad Mfg. Corp.  
U. S. Industries, Inc.  
Varian Associates  
Webcor, Inc., Government Div.  
Westinghouse Electric Corp.

## RADAR TEST SETS

Airborne Instruments Lab., Div.-Cutler-Hammer, Inc.  
American Electronic Labs., Inc.  
American Machine & Foundry Co., Government Products Group  
American Missile Products Co., Inc.  
Andersen Labs.  
Atlas Precision Products, Co.  
Aviation Textile Associates  
Bell Aircraft Corp., Niagara Frontier Div.  
Bendix Aviation Corp., York Div.  
Bendix Radio Div., Bendix Aviation Corp.  
Benco Engrg. Corp.  
CGS Labs., Inc.  
California Technical Industries, Div.-Textron Inc.  
Canaga Div., Underwood Corp.  
Centrix Inc.  
Chemalloy Electronics Corp.  
Cooper Development Corp., Sub-Marquardt Aircraft Corp.  
Dico-Wayne Electronics Div., Divco-Wayne Corp.  
Douglas Microwave Co., Inc.  
Electronic Communications, Inc.  
Emerson Electric Mfg. Co., The, Electronics & Avionics Div.  
Emerson Radio & Phonograph Corp.  
Engrg. Associates  
FXR, Inc.  
Fairchild Astrionics Div., Fairchild Engine & Airplane Corp.  
Geral Communication Co.  
Gillfillan Bros. Inc.  
Holicrafters  
Hazeltine Electronics Div.-Hazeltine Corp.  
Hoffman Labs. Div., Hoffman Electronics Corp.  
Hycan Mfg. Co.  
ITT Federal Div., International Telephone & Telegraph Corp.

ITT Labs  
Instruments for Industry, Inc.  
Kaiser Aircraft & Electronics, Div.-Kaiser Industries Corp.

Kay Electric Co.  
\***KEARFOTT CO., INC.**  
\***KEARFOTT CO., INC., MICROWAVE DIV.**  
Lockheed Aircraft Corp., Missiles & Space Div.  
Manson Labs., Inc.  
Marconi Instruments  
Marquardt Aircraft Corp.  
Miller Associates  
Missouri Research Labs., Inc.  
Morala Inc., Military Electronics Div.  
Nada Microwave Corp., The  
Northeastern Engrg., Inc.  
\***PACKARD-BELL ELECTRONICS CORP.**  
Philco Corp., Government & Industrial Div.  
Polarad Electronics Corp.  
Polytechnic Research & Development Co., Inc.  
Radar Design Corp.  
Radiation, Inc.  
Raytheon Mfg. Co., Government Equipment Div.  
Skiantron Electronics & Television Corp.  
Sperry Microwave Electronics Co., Div.-Sperry Rand Corp.  
Telectro Industries Corp.  
Telerad Mfg. Corp.  
Thomas Electronics, Inc.  
Twenty-First Century Electronics, Inc.  
Varian Associates  
Waldart Electronics Div.-F. C. Huyck & Sons  
Waveline, Inc.  
Webcor, Inc., Government Div.

## RADIATION BADGES

See BADGES, RADIATION

## RADIATION DETECTORS

Airborne Instruments Lab., Div.-Cutler-Hammer, Inc.  
Automation Dynamics Corp.  
B J Electronics, Borg-Warner Corp.  
Baird-Atomic, Inc.  
Beva Lab., Inc.  
A. Biederman, Inc.  
Centrix Inc.  
Eastman Kodak Co.  
General Electric Co., X-Ray Dept.  
Hoffman Labs. Div., Hoffman Electronics Corp.  
ITT Labs.  
ITT Labs.-Ft. Worth  
Jordan Electronics, Div.-Victoreen Instrument Co.  
Land-Air Inc.  
Landsverk Electrometer Co., The  
Lockheed Aircraft Corp., Missiles & Space Div.  
Minneapolis-Honeywell Regulator Co., Industrial Div.  
National Pneumatic Co., Inc., Haltzer-Cabar Divs.  
Nuclear Measurements Corp.  
Nuclear-Chicago Corp.  
Pisasecki Aircraft Corp.  
Radiation Instrument Development Lab., Inc.  
Sperry Microwave Electronics Co., Div.-Sperry Rand Corp.  
Stanley Aviation Corp.  
Telectro Industries Corp.  
Wintronic  
N. Wood Counter Lab.

## RADIATION EQUIPMENT, NUCLEAR

Applied Radiation Corp.  
Baird-Atomic, Inc.  
Beaver Precision Products Inc.  
Beva Lab., Inc.  
Cambridge Filter Corp.  
Centrix Inc.  
Communications Research Co.  
Curtiss-Wright Corp., Electronics Div.  
Curtiss-Wright Corp., Research Div.  
Edgerton, Germeshusen & Grier, Inc.  
General Electric Co., Apparatus Sales Div.  
High Voltage Engrg. Corp.  
ITT Labs.  
ITT Labs.-Ft. Worth  
Jordan Electronics, Div.-Victoreen Instrument Co.  
Kollmorgen Optical Corp.  
Land-Air Inc.  
Landsverk Electrometer Co., The  
Lockheed Aircraft Corp., Missiles & Space Div.  
Minneapolis-Honeywell Regulator Co., Industrial Product Group  
Newbrook Machine Corp.  
Nuclear Measurements Corp.  
Nuclear-Chicago Corp.  
Patterson Maas Div.-Universal Winding Co., Inc.  
Radiation Instrument Development Lab., Inc.  
Stanley Aviation Corp.  
United States Radium Corp.  
Westinghouse Electric Corp.

## RADIATION PYROMETERS

See PYROMETERS, RADIATION

## RADIATORS

Airborne Instruments Lab., Div.-Cutler-Hammer, Inc.  
Alpar Mfg. Corp.  
Dunham-Bush Inc.  
Engelhard Industries, Inc.  
Griscom-Russell Co., The  
Meridian Metalcraft, Inc.  
Tranter Mfg., Inc.  
United Aircraft Products, Inc.

**RADIATORS, COOLANT**

Aro Equipment Corp.  
Dunham-Bush Inc.  
E. I. Du Pont de Nemours & Co. Inc.  
Eastern Industries Inc.  
Griscam-Russell Co., The  
Tranter Mfg., Inc.  
United Aircraft Products, Inc.

**RADIATORS, ENGINE-COOLING**

Dryer-Hanson Div., National-U. S. Radiator Corp.  
Griscam-Russell Co., The  
South Wind Div., Stewart Warner Corp.  
United Aircraft Products, Inc.

**RADIATORS, OIL-COOLING**

American Aeroparts  
Dunham-Bush Inc.  
Griscam-Russell Co., The  
South Wind Div., Stewart Warner Corp.  
Tranter Mfg., Inc.  
United Aircraft Products, Inc.

**RADIO COMPASS INDICATORS**

Allied International Co.  
Bendix Aviation Corp., Eclipse-Pioneer Div.  
Collins Radio Co.  
ITT Labs.  
Lear, Inc., Grand Rapids Div.  
Litton Industries, Maryland Div.  
Magnovox Co., The  
Motorola Inc., Military Electronics Div.  
Telectro Industries Corp.  
Webcor, Inc., Government Div.

**RADIO DIRECTION FINOERS**

Allied International Co.  
\*AVCO MFG. CORP., CROSLEY DIV.  
Bendix Radio Div., Bendix Aviation Corp.  
Collins Radio Co.  
Dayton Aviation Radio & Equipment Corp.  
Hollifracrafters  
ITT Labs.  
Jonsky & Bailey, Inc.  
\*KEARFOTT CO., INC.  
Lane Electronics Mfg. Corp.  
Lear, Inc.  
Lear, Inc., Grand Rapids Div.  
Litton Industries, Maryland Div.  
Magnovox Co., The  
Munston Mfg. & Service, Inc.  
National Pneumatic Co., Inc., Holtzer-Cabot Divs.  
Philco Corp., Government & Industrial Div.  
Precision Development Corp.  
Raytheon Mfg. Co.  
Raytheon Mfg. Co., Government Equipment Div.  
Royal Industries, Inc.  
Servo Corp. of America  
Specialty Engrg. & Electronics Co.  
Sperry Piedmont Co.-Div.-Sperry Rand Corp.  
Telectro Industries Corp.  
U. S. Science Corp., Div.-Topp Industries, Inc.  
Webcor, Inc., Government Div.

**RADIO & INSTRUMENT GEARS**

See GEARS, RADIO & INSTRUMENT

**RADIO & RADAR ALTIMETERS**

See ALTIMETERS, RADIO & RADAR

**RADIOACTIVE CHEMICALS**

See CHEMICALS, RADIOACTIVE

**RADIOACTIVITY EQUIPMENT**

Beaver Precision Products Inc.  
Edgerton, Germeshausen & Grier, Inc.  
Hollifracrafters  
Jordan Electronics, Div.-Victoreon Instrument Co.  
Lund-Air Inc.  
Nuclear-Chicago Corp.  
Specialty Engrg. & Electronics Co.  
Stanley Aviation Corp.  
Telerad Mfg. Corp.  
United States Radium Corp.  
U. S. Science Corp., Div.-Topp Industries, Inc.  
N. Wood Counter Lab.

**RADIOSONOES**

American Printed Circuits Co., Inc.  
B J Electronics, Borg-Warner Corp.  
Bendix Aviation Corp., Friez Instrument Div.  
Cooper Development Corp., Sub.-Marquardt Aircraft Co.  
Daven Co., The  
Emerson Radio & Phonograph Corp.  
Ferrotron Electronics Co., Inc.  
ITT Federal Div., International Telephone & Telegraph Corp.  
ITT Labs.  
Lieco, Inc.  
Motorola Inc., Military Electronics Div.  
Reinhold Engrg. & Plastics Co.  
Space Corp.  
Tapco Group, Thompson-Ramo-Wooldrige Inc.  
Telectro Industries Corp.  
Tele-Dynamics Inc.  
U. S. Science Corp., Div.-Topp Industries, Inc.

**RADIOTELEPHONE TRANSMITTERS, PORTABLE & MOBILE**

See TRANSMITTERS, PORTABLE & MOBILE, RADIOTELEPHONE

**RADOMES**

Air Logistics Corp.  
Allied International Co.  
American Aeroparts  
American Insulator Corp.  
American Machine & Foundry Co., Greenwich  
Antenna & Radome Research Associates  
Atkins & Merrill, Inc.  
Berger Brothers Co., The  
Birdair Structures, Inc.  
Continental Co. Co., Inc.  
Cooper Development Corp., Sub.-Marquardt Aircraft Co.  
Corning Glass Works  
Curtiss-Wright Corp., Santa Barbara Div.  
C. R. Daniels, Inc.  
Diamond Antenna & Microwave Corp.  
Diversey Engrg. Co.  
Emerson & Cuming, Inc.  
Emerson Electric Mfg. Co., The, Electronics & Avionics Div.  
Emerson Plastics Corp.  
Fletcher Mfg. Co., Inc., The  
Gladding, McBeon & Co.  
B. F. Goodrich Industrial Products Co.  
Goodyear Aircraft Corp.  
Goodyear Tire & Rubber Co., The, Aviation Products Div.  
Honeycomb Co. of America, Inc.  
Houston Fearless Corp.  
Hughes Aircraft Co.  
Hughes Tool Co., Aircraft Div.  
Hull Corp.  
ITT Federal Div., International Telephone & Telegraph Corp.  
Kelsey-Hayes Co.  
Walter Kidde & Co., Inc., Aviation Div.  
H. Koch & Sons  
Lamtex Industries, Inc.  
Lone Star Plastics Co., Inc.  
Mark Products Co.  
McMillan Industrial Corp.  
Minneapolis Mfg. & Mfg. Co.  
Narmco Mfg. Co.  
National Beryllia Corp.  
Newbrook Machine Corp.  
Perry Plastics, Inc.  
Philco Corp., Government & Industrial Div.  
Piasecki Aircraft Corp.  
Plastic Age Sales, Inc.  
Republic Aviation Corp.  
\*RHEEM MFG. CO., DEFENSE & TECHNICAL PRODUCTS DIV.  
Russell Reinforced Plastics Corp.  
Silicone Insulation, Inc.  
Specialty Engrg. & Electronics Co.  
Teiner Engrg. Corp.  
Tel-Labs, Inc.  
H. I. Thompson Fiber Glass Co.  
Toppet Mfg. Co., Inc.  
United States Chemical Milling Corp.  
Universal Moulded Products Corp.  
Vibro Labs.  
Webcor, Inc., Government Div.  
Westinghouse Electric Corp.  
Young Development Div., Hercules Powder Co.

**RAM JET FLAMEHOLDERS**

See FLAMEHOLDERS, RAM JET

**RANGE ELECTRONS**

See FINOERS, RANGE

**RARE GASES**

See GASES, RARE

**RAW CRYSTALS**

See CRYSTALS, RAW

**REACTORS, SATURABLE**

American Research & Mfg. Corp.  
Audio Development Co.  
Ballustron Corp.  
Brach Mfg. Corp., Div.-General Bronze  
CGS Labs., Inc.  
Chicago Electronic Engrg. Co., Inc.  
Coil Co. of America  
Dresser Industries, Inc.  
Electro Engrg. Works  
Electronic Transformer Co., Inc.  
Ferranti Electric Inc.  
Foster Transformer Co.  
General Electric Co., Apparatus Sales Div.  
Green Rectifier Co.  
Guided Missile Div.-De Havilland Aircraft of Canada, Ltd.  
Hevi-Duty Electric Co.  
Industrial Transformer Corp.  
Keystone Products Co.  
Lear, Inc.  
Lindberg Engrg. Co.  
Magnetic Controls Co.  
Minitran Corp.  
Minneapolis-Honeywell Regulator Co., Industrial Product Group  
NYT Electronics, Inc.  
National Pneumatic Co., Inc., Holtzer-Cabot Divs.  
Osborne Electronic Sales Corp.  
Pacific Magnetic Corp.  
Perkin Engrg. Corp.  
Quotron Transformer Corp.  
Signal Transformer Co.

Technical Apparatus Builders  
Transformer Design, Inc. of Milwaukee  
Vari-I Co., Inc.  
Varo Mfg. Co., Inc.  
Warren Transformer Co., Inc.  
Westronics Inc.

**READOUT DEVICES, COMPUTER**

Advanced Electronics Mfg. Corp.  
Alwac Corp.  
American Electronics, Inc.  
Bendix Aviation Corp., Eclipse-Pioneer Div.  
Bendix Aviation Corp., York Div.  
Benson-Lehner Corp.  
Briggs Associates, Inc.  
Bristol Co., The  
Burroughs Corp.  
Centronix Inc.  
DBM Research Corp.  
Di-An Controls, Inc.  
Digitronics Corp.  
Dresser Industries, Inc.  
Electro Instruments, Inc.

**\*ELECTROSNAP CORP.  
\*A. W. HAYOON CO., THE**

Hazeltine Electronics Div.-Hazeltine Corp.  
ITT Labs.  
Librascope Inc.  
Milman Engrg. Co.  
Motorola Inc., Military Electronics Div.  
Philco Corp., Government & Industrial Div.  
Royal Industries, Inc.  
Sanborn Co.  
Shepard Laboratories, Inc.  
Skyline Electric & Mfg. Co.  
Sorabon Engrg. Inc.  
Tapco Group, Thompson-Ramo-Wooldrige Inc.  
Telectro Industries Corp.  
Union Switch & Signal, Div.-Westinghouse Air Brake Co.  
Varian Associates  
Vibro Labs.  
Wang Labs., Inc.  
Westronics Inc.

**RECEIVERS**

a. AM & FM Communication  
b. AM Fixed Frequency  
c. Communication  
d. Direction Finding, Navigation  
e. Distance Measuring, Navigation  
f. Diversity  
g. Diversity Reception  
h. Fixed Frequency  
i. FM  
j. FM Multiplex  
k. Frequency Shift  
l. Infra-Red, Navigation  
m. Microwave  
n. Mobile  
o. Portable & Mobile  
p. Radar  
q. Radiation  
r. Radio Communication  
s. Radio, Hand Powered Emergency  
t. Radio, Navigation  
u. Remote Pickup, Fixed  
v. Selective Signalling, Navigation  
w. Short Wave, Fixed  
x. Short Wave, Portable  
y. Single Side Band  
z. Transistor Operated  
a1. UHF  
b1. VHF  
c1. WWV

Adler Electronics, Inc., m, a-1.  
Aerojet-General Corp., l.  
Aerona Mfg. Corp., i, a-1.  
Airborne Instruments Lab., Div.-Culter-Hommer, Inc., h, m.  
Aircrom Inc., m, a-1.  
Aircrom Inc. of New Jersey, m.  
Airtroon Inc., Div.-Litton Industries, m.  
Allied International Co., a, thru d, m, n, o, r, w, x, b-1.  
Alto Scientific Co., Inc., a, b, i.  
Amelco, Inc., a thru d, g thru k, m, n, o, r thru u, w thru z, a-1, b-1, c-1.  
American Aeroparts  
American Electronics, Inc., Toller & Cooper Div., a, b, j.  
American Missile Products Co., Inc., p, z.  
Automation Dynamics Corp., m.  
\*AVCO MFG. CORP., CROSLEY DIV., a thru e, h, m, r, z, a-1, b-1.  
Bobcock Radio Engrg., Inc., a-1, b-1.  
Baird-Atomic, Inc., l.  
Barker Sales Co., a, b, c, f, g, h, j, k, m, n, o, r, w, a-1, b-1.  
Barker & Williamson Inc., g.  
Rex Bassett, Inc., b, c, h, n, o, w thru z.  
Bell Aircraft Corp., Niagara Frontier Div., m.  
Bendix Aviation Corp., York Div., e, m, p.  
Bendix Radio Div., Bendix Aviation Corp., a thru k, m thru p, r, z, a-1, b-1.  
Bendix-Pacific Div., Bendix Aviation Corp., p.  
Blonder-Tongue Labs., Inc., a, i.  
Bogen-Presto Co., Div.-Sieglar Corp., The, i, j.  
Bristol Co., The, h.  
Budelman Electronics Corp., a, b, c, h, i, j, m, r, a-1, b-1.  
CGS Labs., Inc., b-1.



anaga Div., Underwood Corp., m, p.  
antronic Inc., o thru k, m thru z, a-1, b-1, c-1.  
allins Radio Co., o thru j, l, m, n, r, t, v thru z,  
a-1, b-1, c-1.  
omunications Co., o, b, c, h, n, r, y, b-1.  
omunications Research Co., o, b, c, e thru h, n, r,  
y.  
ntinental Mfg., Inc., l, j.  
ony Laboratories, Inc., f, g, i, j, y.  
o-Control Systems, Inc., o, h, i, j, z.  
even Co., The, o, d, h, k, o, t, z, a-1, b-1.  
ytan Aviation Radio & Equipment Corp., o thru d,  
f, t, z, b-1.  
vco-Wayne Electronics, Div.-Divco-Wayne Corp.,  
o, c, h, p, a-1, b-1.  
stman Kadok Co., l.  
mund Scientific Co., l.  
ectronic Applications, Inc., i, j.  
ectronic Communications, Inc., o, b, c, h thru k, m,  
p, r, z, a-1, b-1.  
ectronic Research Associates, Inc., z.  
gin Micronics, West Coast Div.-Elgin National  
Watch Co., o, r.  
eason Electric Mfg. Co., The, Electronics &  
Aerionics Div., m, p.  
erson Radio & Phonograph Corp., o thru d, f, g, i,  
j, k, m thru p, r, s, t, z, a-1, b-1.  
pire Products Sales Corp., m, p, g.  
gry Associates, m, p, a-1, b-1, c-1.  
R, Inc., h, m, p, a-1, b-1.  
irchild Astrionics Div., Fairchild Engine & Air-  
plane Corp., m, p.  
rotatron Electronics Co., Inc., z.  
sher Research Lab., Inc., c, d, o, z.  
ush Wall Radio Co., a.  
neral Communication Co., m, p.  
heral Precision Lab. Inc., d, e, l.  
hillon Bros. Inc., p.  
sler Electric & Mfg. Co., a.  
lin, Raymond & Brown Inc. Div., Singer Mfg. Co.,  
y.  
licrafters, a, b, c, h, i, m thru p, r, w, y, z, a-1.  
mmarlund Mfg. Co., Inc., o thru d, f, g, h, k, m, n,  
p, r, u, v, w, y, a-1, b-1, c-1.  
zeltine Electronics Div.-Hazeltine Corp., c, e, i,  
n, p, r, t, a-1, b-1.  
ffman Labs. Div., Hoffman Electronics Corp., o,  
z, d, e, p, t, y, a-1, b-1.  
D. E. A., Inc., o, c, h, n.  
Federal Div., International Telephone & Tele-  
graph Corp., d thru h, k, l, m, p, r, t, y, z, a-1, b-1.  
F Labs., o thru z, a-1, b-1, c-1.  
ustrial Television Inc., z.  
truments for Industry, Inc., p, a-1, b-1.  
n Electronics Corp., g.  
sky & Bailey, Inc., c, r.  
ar Engrg. Corp., o thru d, m, n, r, a-1, b-1.  
iser Aircraft & Electronics, Div.-Kaiser Industries  
Corp., y.  
EARFOTT CO., INC., d, e, l thru o, t.  
EARFOTT CO., INC., MICROWAVE DIV., m.  
E L, Inc., b, h, m thru p, z, a-1, b-1.  
nd-Air Inc., o, b, e, r, v, z.  
ndsverk Electrometer Co., The, q.  
he Electronics Mfg. Corp., t, z.  
voie Laboratories Inc., c-1.  
aming Engrg., Inc., f, g, i, m, a-1, b-1.  
ar, Inc., o thru e, h, i, j, l, n, o, r, t, a-1, b-1.  
ar, Inc., Grand Rapids Div., d, r, t, b-1.  
an Industries, Maryland Div., c, e, j, m, p, y, b-1.  
lvingston Electronic Corp., b, z, b-1.  
kheed Aircraft Corp., Missiles & Space Div., i, j,  
l, m, p, g, z.  
navox Co., The, o, c, d, p, r, t, z, a-1.  
son Labs., Inc., c, a-1.  
can Instruments, o, b, c, h, i, r, w, x, a-1, b-1.  
L. Maxson Corp., The, d, g, k, m, p.  
lowave Associates, Inc., m, y.  
neapolis-Honeywell Regulator Co., Industrial  
Product Group, q.  
atel, Inc., o, b, c, i, m, n, o, r, w, x, y, a-1, b-1.  
hogram Precision Industries, m.  
hrola Inc., Military Electronics Div., o thru k, m,  
n, o, p, r thru z, a-1, b-1.  
yston Mfg. & Service, Inc., c, r, z.  
onal Microwave Corp., The, m, a-1.  
ional Pneumatic Co., Inc., Holtzer-Cabot Divs.,  
b, c, e, i, n, o, r, w thru z.  
ns Clarke Co., Div.-Vitro Corp. of America, o, b,  
y, h, i, r, a-1, b-1.  
CKARD-BELL ELECTRONICS CORP., o, d, y.  
y Plastics, Inc., c, n, o.  
co Corp., Government & Industrial Div., o thru p,  
thru z, a-1, b-1, c-1.  
rad Electronics Corp., m, p, t.  
chester Instrument Corp., m.  
ise Development Corp., b, d, i, j, z.  
ests Unlimited Inc., b, z.  
D. S. Corp., l.  
Electronics Corp., h, m, p, z, a-1.  
iation, Inc., i, j, m, p.  
iatronics, Inc., m.  
rio Specialty Mfg., Co., o.  
rway Communications Inc., n.  
rheon Mfg. Co., j, m, o, p.  
rhean Mfg. Co., Government Equipment Div., o  
ru z.  
rdel Engrg. Corp., a-1, b-1.  
ron Electronics Inc., c-1.  
aur C. Ruge Associates, Inc., k-1.  
nific-Atlanta, Inc., m, q.  
H. Scott, Inc., l, j.

Seeburg Corp., The, c.  
Seeley Electronics, o, b, h, i, n, r, b-1.  
Seisnor Mfg. Co., e, t.  
Sequa Wire & Cable Co.-Div.-Mandrell Industries,  
Inc., o, h thru k, z.  
Serna Corp. of America, o, d, l, a-1, b-1.  
Simmonds Aerocessories, Inc., h, a-1.  
Singer Mfg. Co., The, Military Products Div., l.  
Singer Electronics & Television Corp., p.  
Space Corp., o.  
Specialty Electric & Electronics Co., o, p, q.  
Sperry Gyroscope Co., Morine Div., Div.-Sperry Rand  
Corp., d, e.  
Sperry Microwave Electronics Co., Div.-Sperry Rand  
Corp., m.  
Sperry Piedmont Co.-Div.-Sperry Rand Corp., d, e, p,  
r, t.  
Stanley Aviation Corp., q.  
Stavid Engrg., Inc., m, p.  
Stoddard Aircraft Radio Co., Inc., a-1, b-1.  
Stromberg-Carlson Div.-General Dynamics Corp., o,  
c, d, e, l, n, o, r, t, u, y, z, a-1, b-1.  
Supertex Electronics Corp., z.  
Systems Inc., p, q.  
Tamar Electric, Inc., b, h, m, u, z.  
Telechrome Mfg. Corp., y, a-1, b-1, c-1.  
Telectro Industries Corp., o thru e, j, n thru q.  
Tele-Dynamics Inc., h, i, j, a-1.  
Telrad Mfg. Corp., m, p.  
Thiokol Chemical Corp., o thru e, n, o, r, t, v, w, x,  
a-1, b-1, c-1.  
U. S. Science Corp., Div.-Topp Industries, Inc., c, d,  
e, r, t, y, a-1, b-1.  
Varian Associates, m, p.  
Virginia Electronics Co., Inc., c, d, e, h, r, t.  
Webcor, Inc., Government Div., o thru z, a-1, b-1,  
c-1.  
Washinghouse Electric Corp., o, c.  
Zenith Radio Corp., c, d, i, o, r, x, y, z.

## RECEIVERS, OMNIRANGE

See OMNIRANGE RECEIVERS

## RECEIVING EQUIPMENT, VHF OMNIRANGE

Allied International Co.  
American Missile Products Co., Inc.  
Bendix Radio Div., Bendix Aviation Corp.  
Centronix Inc.  
Collins Radio Co.  
Dayton Aviation Radio & Equipment Corp.  
Electronic Communications, Inc.  
Emerson Radio & Phonograph Corp.  
Engrg. Associates  
Hoffman Labs. Div., Hoffman Electronics Corp.  
Hammarlund Mfg. Co. Inc.  
ITT Labs.  
Lear, Inc.  
Lear, Inc., Grand Rapids Div.  
Litton Industries, Inc.  
Litton Industries, Maryland Div.  
Livingston Electronic Corp.  
Motorola Inc., Military Electronics Div.  
Philco Corp., Government & Industrial Div.  
Sperry Piedmont Co.-Div.-Sperry Rand Corp.  
U. S. Science Corp., Div.-Topp Industries, Inc.

## RECORDERS

a. Antenna Pattern  
b. Binaural Tape  
c. Code  
d. Data  
e. Depth  
f. Disc  
g. Disc Magnetic  
h. Electronic Rotary Stylus  
i. Electronic Self-Balancing Recorders & Indicators  
j. Facsimile  
k. Film  
l. Film Stripe, Magnet  
m. Film Thickness  
n. Flight  
o. Flight Data  
p. Fluid Conductivity, Electronic  
q. Frequency  
r. Frequency Response  
s. Humidity, Electronic  
t. Liquid Level, Electronic  
u. Magnetic, Mobile Comm.  
v. Materials Thickness, Electronic  
w. Mechanical  
x. Millivolt  
y. Moisture, Electronic  
z. Oscillograph  
a1. Oxygen  
b1. Polar  
c1. Potentiometers  
d1. Power Level  
e1. Pressure, Electronic  
f1. Sound Level  
g1. Specific Gravity, Electronic  
h1. Strain  
i1. Tape & Wire  
j1. Telemetering  
k1. Temperature, Electronic  
l1. Timing  
m1. Torque, Electronic  
n1. Transient  
o1. Vacuum  
p1. Vibration  
q1. Weight, Electronic  
r1. XY  
ACF Industries, h-1.  
Actan Labs. Inc., z.  
Aeratron Systems, Inc., Sub.-Fard Motor Co., g.  
Air Logistics Corp., c, m, n.  
Airborne Instruments Lab., Div.-Cutler-Hammer, Inc.,  
o, b-1, r-1.  
Airpax Electronics Inc. Seminole Div., q.  
Allegany Instrument Co., Inc., d, z, e-1, h-1, k-1,  
m-1.  
Alwac Corp., r-1.  
Amelco, Inc., d, f-1, l-1.  
American Electronics, Inc., Toller & Cooper Div., o,  
t, f-1, q-1.  
American Machine & Foundry Co., Government  
Products Group, o, q, m-1, q-1.  
American Missile Products Co., Inc., o, z, j-1.  
Amplifier Corp. of America, i-1.  
Anlab Inc., o, b-1, d-1.  
Applied Science Corp. of Princeton, n, o, j-1.  
\*ARNOUX CORP., d, o, x.  
Associated Engrg. & Mfg. Corp., i-1.  
Atlas Precision Products Co., w.  
Audio-Master Corp., i-1.  
B & F Instruments, Inc., h-1, m-1.  
B & K Instruments, Inc., r, b-1, f-1, p-1.  
Barker Sales Co., j-1.  
Beckman Instruments, Inc., Berkeley Div., d, q,  
h-1.  
Beckman-Systems Div., d, j-1.  
Bendix-Pacific Div., Bendix Aviation Corp., j-1.  
Benson-Lehner Corp., d, k, n, r-1.  
Bogen-Presto Co., Div.-Sieglar Corp., The, b, i-1.  
Bowser, Inc., Defense Dept., y.  
Briggs Associates, Inc., c, d.  
Bristol Co., The, i, p, q, w, x, a-1, c-1, d-1, g-1, h-1,  
j-1, k-1, l-1, a-1, r-1.  
Broadcast Equipment Specialties Corp., i-1.  
Brush Instruments, Div.-Clevite Corp., h, n, o, p,  
r, u, x, z, e-1, h-1, j-1, p-1, q-1.  
Bulow Electric Co., t, i-1, f-1.  
Burke & James Inc., k.  
CDC Control Services, Inc., s, q-1.  
California Technical Industries, Div.-Textron Inc., a.  
Cambridge Instrument Co., Inc., a-1, l-1.  
Camera Mart Inc., The, k, l, i.  
Centronix Inc., c, d, e, h, r, u, z, a-1, b-1, j-1, l-1, m-1.  
Century Electronics & Instruments, Inc., d, o, z.  
Chesapeake Instrument Corp., o.  
Chicago Aerial Industries, Inc., d, k.  
Consolidated Electrodynamics Corp., d, n, o, u, y, z,  
a-1, e-1, h-1, i-1, j-1, p-1.  
Data-Control Systems, Inc., d, r, j-1.  
Datran Electronics, Div.-Mid-Continent Mfg., Inc.,  
h-1.  
Dresser Industries, Inc., d, r, z, j-1, m-1.  
M. Ducumun Co., l-1.  
Edgerton, Gernsheim & Grier, Inc., i-1, f-1.  
Edin-Div.-Epsco, Inc., z.  
Edwards Engrg. Co., b, n, o, i-1.  
Electro Instruments, Inc., r-1.  
Electronic Applications, Inc., b, q, i-1.  
Electronic Engrg. Co. of California, o, h-1, l-1, p-1.  
Electro-Tech Equipment Co., x.  
Emerson Radio & Phonograph Corp., u, i-1.  
Engrg. Associates, q, x.  
Epic, Inc., z, p-1.  
Esterline-Angus Co., Inc., The, x, l-1.  
FXR, Inc., q.  
Federal Mfg. & Engrg. Corp., i-1.  
Fischer & Porter Co., i, t, a-1, g-1, j-1, k-1.  
Fisher Research Lab., Inc., t, x, y, h-1.  
Flight Research, Inc., k.  
General Electric Co., Apparatus Sales Div., i, q, v,  
x, z, d-1, l-1.  
General Electric Co., Computer Dept., d.  
General Electric Co., X-Ray Dept., d, k, o.  
General Kinetics, Inc., i-1.  
General Precision Lab. Inc., k, a.  
General Scientific Equipment Co., c-1.  
Gilmore Industries, Inc., h-1, m-1, q-1, r-1.  
Gordan Enterprises, d, k, o, z, i-1.  
Graflex Inc., i-1.  
Green Rectifier Co., a-1.  
Gulton Industries, Inc., p-1.  
Hagan Chemicals & Controls, Inc., e-1, h-1.  
Hallamere Electronics Co., i-1.  
Hallcrafters, q.  
Hamilton Watch Co.-Industrial Div., z.  
Hays Corp., The, a-1.  
Heiland Div.-Minneapolis-Honeywell, z.  
High Vacuum Equipment Corp., a-1.  
Hoffman Labs. Div., Hoffman Electronics Corp., o.  
Hogan Laboratories, Inc., d, j, n, o, w, z, b-1, f-1.  
Hull Corp., a-1.  
ITT Labs., d, j, n, o, q, r.  
Industrial Instruments Inc., p, a-1.  
Instrumentation Div.-Ampex Corp., c, d, n, o, u, f-1,  
j-1.  
Instruments Corp., The, s, j-1.  
Kinevox Div.-Electronation Co., d, k.  
Land-Air Inc., d, j-1.  
Leach Corp., d, o, i-1, j-1.  
Leeds & Northrup Co., o, d, i, p, s, t, x, o-1 thru e-1,  
h-1, k-1, q-1, r-1.  
Librascope Inc., r-1.  
Liquidometer Corp., The, t.  
Litton Industries, Inc., f, g, j, j-1.  
Livingston Electronic Corp., b.

MB Mfg. Co., p-1.  
 Magnaflex Corp., m, v, h-1.  
 Magnavox Co., The, e, r-1.  
 Magnetic Instrument Co. Inc., i, t.  
 Markite Corp., e-1.  
 Massa Div., Cahu Electronics, Inc., d, a, r, z, n-1.  
 W. L. Maxson Corp., The, k.  
 Merz Engrg., Inc., v.  
 Mid-Century Instrumatic Corp., d, z.  
 Midwestern Instruments, Inc., b, d, k, n, o, z, h-1,  
 i-1, j-1.  
 Miles Reproducer Co. Inc., k, i-1.  
 Milgo Electronic Corp., d, r-1.  
 Minicom Div., Minnesota Mining & Mfg. Co., a, i-1,  
 j-1, n-1, p-1.  
 Mine Safety Appliances Co., a-1.  
 Minicord Corp. of America, i-1.  
 Minneapolis-Honeywell Regulator Co.-Davies Labs.  
 Div., d, n, a, u, i-1, j-1.  
 Minneapolis-Honeywell Regulator Co., Industrial  
 Div., d, i, p, q, s, t, y, c-1, e-1, g-1, h-1, i-1, k-1,  
 o-1, r-1.  
 Minneapolis-Honeywell Regulator Co., Industrial  
 Product Group, i, n thru q, s, t, x, y, z, c-1 thru  
 k-1, m-1 thru r-1.  
 Minnesota Mining & Mfg. Co., b, d, l, u, i-1, j-1.  
 F. L. Moseley Co., i, x, c-1, r-1.  
 Motorola Inc., Military Electronics Div., d, k, j-1,  
 r-1.  
 NRC Equipment Corp., o-1.  
 National Electronics, d-1.  
 National Research Corp., o-1.  
 New England Scientific Instruments Co., x, z, n-1.  
 Northeastern Engrg. Inc., q.  
 Northrop Corp., o.  
 Norton Associates, Inc., l.  
 Norwood Controls Unit Detroit Controls Div., t, e-1,  
 h-1, j-1, k-1.  
 Nuclear Products-Erco Div.-ACF Industries, Inc., r-1.  
 Offer Electronics Inc., x, z, h-1.  
 Orbitran Co., Inc., q-1.  
 Pacific Scientific Co., p-1.  
 \*PACKARD-BELL ELECTRONICS CORP., i-1.  
 Peirce Dictation Systems, i-1.  
 Photon Instrument Co., d, a, r, z, h-1.  
 Potter Aeronautical Corp., g-1.  
 Radiophone Co. Inc., j-1.  
 Radiation, Inc.  
 Raymond Engrg. Lab., Inc., i-1, i-1.  
 Research Appliance Co., d, i, e-1, k-1.  
 Richardson Scale Co., q-1.  
 Royal Industries, Inc., g, i.  
 Sanborn Co., q, r, z, d-1, e-1, f-1, h-1, i-1, q-1, r-1.  
 Schaevitz Engrg., r-1.  
 Scientific-Atlanta, Inc., a, b-1.  
 Seiscor Mfg. Co., z.  
 Shepard Laboratories, Inc., i-1.  
 Singer Mfg. Co., The, Military Products Div., w, i-1,  
 j-1.  
 Somers Brass Co. Inc., i-1.  
 Soroban Engrg., Inc., c, d, w, i-1.  
 Southwestern Industrial Electronics Co., d, i-1.  
 Space Corp., t.  
 Strand Engrg. Co., k.  
 Sun Electric Corp., Aeronautical Div., a, z.  
 Systron Corp., q, e-1, h-1, j-1 thru m-1, q-1.  
 Tapco Group, Thompson-Ramo-Woodridge Inc., z.  
 Technology Instrument Corp., q, r, z, c-1, e-1.  
 Telechrome Mfg. Corp., i, x.  
 Telectro Industries Corp., a thru d, i, n, o, u, i-1,  
 j-1, r-1.  
 Thermo Electric Co., Inc., k-1.  
 Thwing-Albert Instrument Co., k-1, r-1.  
 Traid Corp., k, n, o.  
 Universal Dynamics Corp., s.  
 Varian Associates, i, x, c-1, k-1.  
 Victor Adding Machine Co., n, w.  
 Victory Engrg. Corp., k-1.  
 Vitro Labs., e, d.  
 Waldorf Electronics, Div.-F. C. Huyck & Sons, r-1.  
 Wang Labs., Inc., d.  
 Waste King Corp., Technical Products Div., d, n, a.  
 Webcor, Inc., Government Div., b, c, d, n, a, u, i-1.  
 West Instrument Corp., x, c-1, e-1, k-1.  
 Weston Instruments, Div.-Daystrom, Inc., i, q, s, v,  
 w, x, c-1, e-1, k-1, o-1.  
 Westronics Inc., o, d, e, i, p, q, s, t, x, y, a-1, c-1 thru  
 h-1, k-1, m-1, p-1, q-1, r-1.  
 Wright Engrg. Co., a.  
 Yellow Springs Instrument Co., The, k-1.

#### RECORDERS, AIRBORNE FILM

Applied Science Corp. of Princeton  
 Chicago Aerial Industries, Inc.  
 Consolidated Electrodynamics Corp.  
 Eastman Kodak Co.  
 Flight Research, Inc.  
 Gordon Enterprises  
 Hallcrafters  
 Hycon Mfg. Co.  
 Kinevox Div.-Electromation Co.  
 Magnasync Mfg. Co., Ltd.  
 Magnavox Co., The  
 Midwestern Instruments, Inc.  
 Specialties, Inc.  
 Sun Electric Corp., Aeronautical Div.  
 Traid Corp.

#### RECORDERS, AIRBORNE MAGNETIC

American Electronics, Inc.  
 Audio-Master Corp.  
 B J Electronics, Borg-Warner Corp.

Broadcast Equipment Specialties Corp.  
 Centronix Inc.  
 Consolidated Electrodynamics Corp.  
 Edwards Engrg. Co.  
 Elgin Micronics Div.-Elgin National Watch Co.  
 Emerson Radia & Phonograph Corp.  
 Federal Mfg. & Engrg. Corp.  
 General Precision Lab. Inc.  
 Graflex Inc.  
 Hallcrafters  
 Instrumentation Div.-Ampex Corp.  
 Kinevox Div.-Electromation Co.  
 Leach Corp.  
 Litton Industries, Inc.  
 Magnasync Mfg. Co., Ltd.  
 Midwestern Instruments, Inc.  
 Minicom Div., Minnesota Mining & Mfg. Co.  
 Minneapolis-Honeywell Regulator Co.-Davies Labs.  
 Div.  
 Minneapolis-Honeywell Regulator Co., Industrial  
 Product Group  
 Minnesota Mining & Mfg. Co.  
 \*PACKARD-BELL ELECTRONICS CORP.  
 Peirce Dictation Systems  
 Seeburg Corp., The  
 Space Corp.  
 Sun Electric Corp., Aeronautical Div.  
 Telectro Industries Corp.  
 Victor Adding Machine Co.  
 Webcor, Inc., Government Div.  
 Winzen Research Ind.

#### RECORDING DRIVERS See DRIVERS, RECORDING

#### RECORDING PAPER See PAPER, RECORDING

#### RECTIFIER POWER UNITS

Applied Radiation Corp.  
 Consolidated Diesel Electric Corp.  
 Control Circuit, Inc.  
 Dresser Industries, Inc.  
 General Electric Co., Apparatus Sales Div.  
 Green Rectifier Co.  
 Guided Missile Div.-De Havilland Aircraft of Canada,  
 Ltd.  
 ITT Federal Div., International Telephone & Tele-  
 graph Corp.  
 Kahn & Co., Inc.  
 Land-Air Inc.  
 Meteor Production Engrg., Inc.  
 Sanford Miller Co.  
 \*MIRAX CHEMICAL PRODUCTS CORP.,  
 ELECTRO-MECHANICAL PRODUCTS DIV.  
 Motorresearch Co.  
 Parkin Engrg. Corp.  
 Peschel Electronics, Inc.  
 Precise Development Corp.  
 Rapid Electric Co.  
 Republic Aviation Corp.  
 Schauer Mfg. Corp.  
 Sel-Rex Corp.  
 A. O. Smith Corp.  
 Syntro Corp.  
 Talley Corp., The  
 Technical Apparatus Builders  
 Tel-Instrument Electronics Corp.  
 Winder Aircraft Corp. of Florida

#### RECTIFIERS

a. Copper Oxide  
 b. Electronic Tube  
 c. Germanium  
 d. Mercury Arc  
 e. Metal Sulphide  
 f. Metallic Oxide  
 g. Metallic, Power Supplies  
 h. Metallic Stack  
 i. Selenium  
 j. Silicon  
 k. Titanium  
 l. Tube  
 m. Tube Rectifying Units

Aeroproject-General Corp.  
 Aerolob Development Co.,  
 Allied Research Products, Inc., i, j.  
 Allis-Chalmers, c, i, j, m.  
 American Elite, Inc., b, l.  
 Astronics, Inc., g.  
 Audio Devices, Inc., j.  
 Audio Devices, Inc.-Rectifier Div., j.  
 Bendix Aviation Corp., Red Bank Div., b, j.  
 Bendix Aviation Corp.-Semiconductor Products, Red  
 Bank Div., j.  
 Bogue Electric Mfg. Co., g, j.  
 Bradley Semiconductor Corp., a, f thru j.  
 Britton Electronics Corp., i, j.  
 CBS-Hytron, Div.-Columbia Broadcasting System, Inc.,  
 b, i.  
 Christie Electric Corp., g.  
 Clark Electronic Labs., e, i, j, l.  
 Columbus Electronics Corp., j.  
 Conant Labs., a, i.  
 Consolidated Diesel Electric Corp., b, g, l, m.  
 Continental Electronics Mfg. Co., m.  
 Control Circuits Inc., i.  
 Davenport Mfg. Co., m.  
 Dresser Industries, Inc., m.  
 Edgerton, Germeshausen & Grier, Inc., l.  
 Eitel-McCullough, Inc., l.  
 Electronic Communications, Inc., m.

Electro-Tech. Equipment Co., i.  
 Erie Resistor Corp., c, j.  
 Finney Co., The, l.  
 General Electric Co., Apparatus Sales Div., d, g.  
 Good-All Electric Mfg. Co., c, i, j.  
 Green Rectifier Co., c, f thru j, m.  
 Hoffman Electronics Corp., Semiconductor Div., j.  
 Hughes Aircraft Co., j.  
 International Rectifier Corp., c, h, i, j.  
 International Resistance Co., l.  
 Knopp Inc.  
 Ling Electronics, Inc., b, l.  
 P. R. Mallory & Co. Inc., e, j.  
 Meteor Production Engrg., Inc., i, j, m.  
 Sanford Miller Co., g thru j.  
 Model Rectifier Corp., g.  
 Motorola Inc., Military Electronics Div., c, j.  
 Multi-Amp Corp., c, e, g.  
 North American Electronics Inc., h, j.  
 Pacific Semiconductors, Inc., j.  
 Peschel Electronics, Inc., m.  
 Power Supplies Inc., g, m.  
 Precise Development Corp., g.  
 Radio Industries, Inc., i.  
 Rapid Electric Co., b, f, j.  
 Raytheon Mfg. Co., j, l.  
 Rectico, Inc., a, d thru j.  
 Rex Corp., The, Sub-American Enko, h.  
 Schauer Mfg. Corp., a, f, g, h.  
 Sperry Semiconductor Div., Sperry Rand Corp., j.  
 State Testing Lab. Inc., c, i.  
 Strong Scott Mfg. Co., The, m.  
 Sylvania Electric Products Inc., Semiconductor Div.,  
 c, j.  
 Syntro Corp., g thru j.  
 Technical Apparatus Builders, a thru l.  
 Thermosen Inc., j.  
 Transmores Corp.  
 Trans-Sil Corp., f, g, h, j.  
 Union Switch & Signal, Div.-Westinghouse Air Brake  
 Co., a.  
 U. S. Semiconductor Products, Inc., j.  
 United States Dynamics Corp., b, c, g, j.  
 Wesrep Corp., j.  
 Westinghouse Electric Corp., a, c, d, i, j.  
 Weston Instruments, Div.-Daystrom, Inc., a.  
 Winder Aircraft Corp. of Florida, g.

#### REDUCERS, SHAFT

Arch Gear Works Inc.  
 Diversey Engrg. Co.  
 Lovejoy Flexible Coupling Co.  
 Lundy Mfg. Corp.  
 Talley Corp., The  
 Western Gear Corp.

#### REFLECTED & TRANSMITTED LIGHT SCANNERS See SCANNERS, REFLECTED & TRANSMITTED LIGHT

#### REFLECTORS, RADAR

Ainstie Corp.  
 Atlas Precision Products Co.  
 Brooks & Perkins, Inc.  
 Diamond Antenna & Microwave Corp.  
 Gillfillan Bros. Inc.  
 Haller, Raymond & Brown Inc., Div.-Singer Mfg. Co.  
 I-T-E Circuit Breaker Co.  
 ITT Federal Div., International Telephone &  
 Telegraph Corp.  
 \*LAVELL AIRCRAFT CORP.  
 Mc Millan Industrial Corp.  
 Narco Mfg. Co.  
 Plastic Age Sales, Inc.  
 Precision Sheet Metal, Inc.  
 Radiation, Inc.  
 C.W. Torgren Co., Inc.  
 Turbo Machine Co.  
 Winder Aircraft Corp. of Florida  
 Winzen Research Inc.

#### REFRIGERATION EQUIPMENT, AIRBORNE

#### \*AIRESEARCH MFG. CO., DIV.-THE GARRETT CORP.

Alco Valve Co.  
 American Aeroparts  
 Bendix Utica Div., Bendix Aviation Corp.  
 Eastern Industries Inc.  
 Ellis & Watts Products, Inc.  
 Hallcrafters  
 Hamilton Standard, Div.-United Aircraft Corp.  
 Hydromatics, Inc.  
 Monrovia Aviation Corp.  
 Mueller Brass Co.  
 Northrop Corp.  
 Reinhold Engrg. & Plastics Co.  
 Strytes Electrical Equipment Corp.  
 Stratons, Div.-Fairchild Engine & Airplane Corp.  
 United Aircraft Products, Inc.  
 Universal Dynamics Corp.  
 Waste King Corp., Technical Products Div.  
 Winzen Research Inc.

#### REFRIGERATION EQUIPMENT, GROUND \*AIRESEARCH MFG. CO., DIV.-THE GARRETT CORP.

Alco Valve Co.  
 American Air Filter Co., Defense Products Div.  
 \*ASSOCIATED TESTING LABS., INC.  
 Bendix Utica Div., Bendix Aviation Corp.  
 Bogue Electric Mfg. Co.

rier Corp.  
nsolidated Diesel Electric Corp., Western Div.  
ll-Reynolds Co. Inc.  
yle & Rath Mfg. Co., Inc.  
yer-Hanson Div., National-U.S. Radiator Corp.  
sser Industries, Inc.  
stem Industries Inc.  
is & Watts Products, Inc.  
emco, Inc.  
licrafters  
ilton Standard, Div.-United Aircraft Corp.  
ll Hardeman, Inc.  
G. Hakanson Co., Inc.  
ghes Tool Co., Aircraft Div.  
ll Corp.  
romatics, Inc.  
truments Div.-Philips Electronics, Inc.  
ternational Radiant Corp.  
hison Cold Storage Door Co.  
Heat, Inc.  
ee-Brallo & Associates  
havia Aviation Corp.  
eller Brass Co.  
neer Industries Div., Almar-York Co. Inc.  
enzo Metal Products, Div.-Standard Screw Co.  
ety Electrical Equipment Corp.  
ing Precision Corp., Instrument Div.  
atos, Div.-Foirchild Engine & Airplane Corp.  
ermo King Corp.  
ver Mfg. Corp.  
nter Mfg., Inc.  
ed Aircraft Products, Inc.  
lversal Dynamics Corp.  
ver Mfg. Co., The  
hthouse Electric Corp.  
nk Corp.

## MATERIALS

Air  
Air Combustion  
Air Pressure  
Battery Charging  
Cable Tension  
Coolant  
Demand Oxygen  
Frequency  
Fluid Flow  
Fuel Flow  
Fuel Pressure  
Generator  
Hydraulic Pressure  
Liquid Level  
Manifold Pressure  
Oil Cooler  
Oil Pressure  
Oil Pump Flow  
Oil Temperature  
Oxygen  
Temperature  
Vacuum Systems  
Voltage Frequency  
Voltage Regulators & Stabilizers  
Water Injection  
Water Metering  
Industries Inc., b, c, h, j, k, q, w thru z  
essory Products Co., Div.-Textron Inc., a, b, c, i,  
thru a, s, t  
Electric Corp., d, x  
ation Research Corp., a, c, i, j, m  
A. Precision Products of California, Div.-General  
etals Corp., m, q, r  
Supply Mfg. Inc., i, j, k, m, n, q, r, y, z  
ject-General Corp., i, j, k, m, n  
lob Development Co., h, w, x  
ec Corp., The, a, b, c, i, j, k, m, n, q  
roducts, Inc., c, g, i  
Reduction Sales Co., Div.-Air Reduction Co., Inc.

RESEARCH MFG. CO. OF ARIZ., a, c, i, s, u  
RESEARCH MFG. CO., DIV.-THE GARRETT  
GRP., a, c, f thru k, p, q, s, t, u  
ir, Inc., a, c, g, i, m, q, t  
ico, Inc., h  
ican Aeroports, e, g thru k, a thru u  
ican Electronics, Inc., Electric Machinery &  
quipment Div., h, l, w, x  
ican Instruments Co., Inc., u  
ican Research & Mfg. Corp., x  
lifter Corp. of America, x  
led Dynamics Corp., a, c  
Equipment Corp., a, c, g, t  
onatics Engrg. Co., i, j  
ation Products, Inc., n  
er-Corman Co., u  
Ray Products, Inc., u  
ett-Christie Co., a, c, i, u  
ow Mfg. Corp., a, c, i, m  
ix Aviation Corp., Pioneer-Central Div., g, n, t  
ix Aviation Corp., Red Bank Div., d, h, l, w, x  
NDIX PRODUCTS DIV., BENDIX AVIATION  
GRP., j, k  
ix-Pacific Div., Bendix Aviation Corp., i, m  
ix Utica Div., Bendix Aviation Corp., a, c, i, j,  
a Lab., Inc., w, x  
iederman, Inc., g  
ick Mfg. Corp., a, c, e, j, m  
je Electric Mfg. Co., d, h, l, n, u, w, x

Broch Mfg. Corp., Div.-General Bronze, x  
Breeze Corporations, Inc., a  
Brooks Rotamer Co., i, j, n, r, z  
Carleton Aviation Co., a, b, c, i, j, k, m, a, t, y, z  
Carruthers & Fernandez, Inc., w, x  
J. C. Carter Co., The, i, j, k, n, y, z  
A. W. Cash Valve Mfg. Corp., k, m, q, s, t, u  
Central Electronic Mfrs., Div.-Nuclear Corp. of  
America, v  
Central Transformer Co., x  
Chandler Evans Corp., a, c, f, i, j, k, m, q, y, z  
Clary Dynamics, a, b, c, g, i, k, m, n, q, t, y, z  
Com-Air Products, Div.-A S R Products Corp., a,  
i, m, q  
Components Corp., a, c, i, j, k, n, q, r, z  
Conaflor Corp., a, b, c, q  
Consolidated Controls Corp., a, c, i, j, k, m, q, s,  
u, v  
Consolidated Diesel Electric Corp., a, b, c, i, j,  
k, m, a thru s, u, v  
Controls Co. of America, i, n  
Cornelius Co., The, Aero Div., a, c, v  
Daven Co., The, h, w, x  
Davenport Mfg. Co., x  
Deica-Remy Div., General Motors Corp., d, i, x  
Denison Engrg. Div., American Brake Shoe Co.,  
m, q, r  
Donner Scientific Co., Inc.  
Dresser Industries, Inc., i, j, x  
R. C. Dudek & Co., x  
Dumont Aircraft Fitting Co., c, i, m  
Dynamic Controls Corp., i, m, n, u  
Electric Auto-Lite Co., The, l  
Electric Regulator Corp., d, h, k, l, m, r, w, x  
Electrol Inc., m  
Electro-Mechanical Products Co., d, l, j  
Electronic Research Associates, Inc., w, x  
Electro-Tech Equipment Co., x  
Engineered Magnetics, Div.-Gulton Industries, Inc.,  
d, x  
Fairfield Engrg. Corp., h, x  
Fidelity Instrument Corp., h, l, w, x  
Firewel Co., Inc., The, g  
Fischer & Porter Co., c, i, j, k, m, n, q, a, s, t, u, z  
Fisher Governor Co., a, c, i, k, m, t, y  
General Electric Co., Apparatus Sales Div., h, l, u,  
w, x  
General Scientific Equipment Co., g, t  
Gits Brothers Mfg. Co., a  
Goslin Electric & Mfg. Co., w, x  
Gray Co., Inc., a, c, i, k, l  
Green Rectifier Co., d, v, x  
Grove Valve & Regulator Co., a, c, i, k, m, q, r, y, z  
Guided Missile Div.-De Havilland Aircraft of Canada,  
Ltd., d, h, l, w, x  
Hagan Chemicals & Controls, Inc., a, c, i, j, k, m, n,  
p, s, t, z  
Hallcrafters, x  
Hamilton Standard, Div.-United Aircraft Corp., a, c, h,  
w, x  
Honnifin Co., Div.-Parker-Hannifin Corp., a, c, m  
High Vacuum Equipment Corp., v  
E. Vernon Hill & Co., u, w  
Hoffman Electronics Corp., Semiconductor Div., x  
Hoke Inc., a, c, i  
Hughes Tool Co., Aircraft Div.  
Hull Corp., v  
Hydra-Power Corp., i, m, q  
\*HYDRO-AIRE CO., DIV.-CRANE CO., a, c, i, j, l,  
w, x  
Hydrodyne Corp., Skinner Seal Div., c, i, j, k, m  
Hydromatics, Inc., i, j, k, m  
ITT Federal Div., International Telephone &  
Telegraph Corp., h  
Industrial Engrg. Corp., m  
Integral Corp., a, m  
Interstate Engrg. Corp., c, i, k  
Jack & Heintz, Inc., h, l, w, x  
\*JANITROL AIRCRAFT DIV., SURFACE COMBUS-  
TION CORP., a, b, c, k, v  
Kemp Aero Products, a, c, g, i, j, k, m, q, t, u  
Walter Kidde & Co., Inc., Aviation Div., a, c  
Kinney Mfg. Div., The New York Air Brake Co., v  
Koller Co., k, m  
Korda Industries, i, j, k, a  
Leach Corp., h, w, x  
Leor, Inc., v  
Leeds & Northrup Co., u  
Leland Airborne Products, Div.-American  
Machine & Foundry Co., d, h, l, w, x  
\*WALLACE O. LEONARD, INC., a, c, g, i, k, m, n,  
q, t, v  
Leslie Co., a, c, l, j, k, m, n, q, s, u  
Linde Co., Div.-Union Carbide Corp., t  
M. C. Mfg. Co., m  
Magnetic Controls Co., x  
Marotto Valve Corp., a, c, i, k, m, t  
Jos. P. Marsh Corp., u  
Moson-Neilon, b, i, k, m, n, u  
Motheson Co., Inc., The, c, t  
Metals & Controls Corp., Spencer Div., u  
Meteor Production Engrg., Inc., d  
Mine Safety Appliances Co., g  
Minitron Corp., x  
Minneapolis-Honeywell Regulator Co., Industrial Div.,  
i, k, m, n, s  
Minneapolis-Honeywell Regulator Co., Industrial  
Product Group, a, c, h thru k, n, a, u, w, z  
Mucan Corp., d  
National Instrument Laboratories, Inc., i  
National Research Corp., v  
Notional Spectrographic Labs., Inc., w, x

National Welding Equipment Co., a  
Networks Electronic Corp., x  
Ernest Norman Laboratories, h  
North American Electronics Inc., x  
Dhmart Corp., The, n  
Dil-Dyne, Inc., m, q, r  
Oxygen Equipment & Service Co., g, t, v  
Dzone Metal Products Corp., i, m  
Pacific Scientific Co., e  
Papesch & Kolstad, Inc., u  
Parker Aircraft Co., a, b, c, i, j, k, m, n, a, u  
Penberthy Mfg. Co., n  
Perkin Engrg. Corp., d, h, l, w, x  
Pneu-Hydro Valve Corp., a, c, g, i, j, k, m, t  
Power Designs Inc., d, x  
Power Sources, Inc., h, w, x  
Power Supplies Inc., d, l, w, x  
Power-Tronic Systems Inc., w, x  
Process & Instruments, v  
Puritan Compressed Gas Corp., Aviation Div., g, t  
Pyles Industries, Inc., a  
Pyrometer Instrument Co., Inc., u  
Racine Hydraulics & Machinery Inc., a, q, r  
Randall Engrg. Corp., a, c, i, m, t  
Raytheon Mfg. Co., x  
Reaction Motors Div., Thiokol Chem. Corp., i, j, k  
Republic Mfg. Co., c, m, q  
Research Appliance Co., v  
Research Controls, a, c, j, i  
Renson Hydraulic Units Corp., c, m  
Safety Electrical Equipment Corp., d, l, v, w  
Sorgent Engrg. Corp., a, c, i, m, q, r  
Scico Controls, Inc., s, u  
Scientific Instrument Co., c, u  
Sequoia Wire & Cable Co., Div.-Mandel Industries,  
Inc., x  
Simmonds Aeroaccessories, Inc., i, j, n  
A. O. Smith Corp., Smith-Erie Div., i  
Sorensen & Co., Inc., h  
South Wind Div., Stewart Worner Corp., p  
Special Instruments Div., British Industries Corp.,  
x  
Specialty Engrg. & Electronics Co., w, x  
Spectral Electronics Corp., h, w  
Standard-Thomson Corp., Clifford Mfg. Co. Div., p, r,  
s  
Sterling Precision Corp., Instrument Div., x  
A. U. Stone & Co., Inc., i, j, k, m, q, r, z  
Stroats, Div.-Foirchild Engine & Airplane Corp., a, c,  
i, j, u  
Superior Electric Co., The, x  
Surface Combustion Corp., c  
Tapco Group, Thompson-Ramo-Wooldrige Inc.,  
h thru l, w, y  
Technical Apparatus Builders, d, w, x  
Tel-Instrument Electric Corp., u  
Temperature Engrg. Corp., u, v  
Torwico Electronics, Inc., x  
Transitron Electronic Corp., x  
Trasonic, Inc., w, x  
United Aircraft Products, Inc., a, c, f, i, j, k, m, n,  
p thru s, u, v, w, y  
United Control Corp., s, u  
United Electric Controls Co., a, c, g, k thru v  
U. S. Science Corp., Div.-Topp Industries, Inc., h  
Vap-Air Aeronautical Products Div., Vapor Heating  
Corp., c  
Veeco Vacuum Corp., v  
Vickers Inc., Marine & Drdnance Dept., Machinery  
Hydraulics Div., m  
Victory Engrg. Corp., t, u  
Vinson Mfg. Co. Inc., c, i, j, k, m, n, q, r, t  
Waldorf Fluid Systems, Div.-F.C. Huyck & Sons,  
o, c, i, j, k, m, o, r, v  
Wallace & Tiernan Inc., c  
Western Design, Div.-U.S. Industries, Inc., Sonto  
Borboro Div., x  
Westinghouse Air Brake Co., Industrial Products  
Div., c  
Westinghouse Electric Corp., w, x  
Weston Hydraulics Ltd.-Sub., Borg-Warner Corp., a,  
c, i, k, m  
Yellow Springs Instrument Co., The, u

## REINFORCED PLASTICS

Aero Gasket Corp.  
Aeroject-General Corp.  
Air Logistics Corp.  
Allied Plastics Supply Corp.  
American Printed Circuits Co., Inc.  
Apex Reinforced Plastics, Div.-White Sewing  
Machine Corp.  
Aristocrat Plastics, Inc.  
Atkins & Merrill, Inc.  
Carl H. Biggs Co.  
Bonny Mfg. Corp.  
Colfibe Co., Inc.  
Chemold Co.  
Chemplast, Inc.  
Chicago Gasket Co.  
Cincinnati Milling Machine Co., The  
Collins Engrg. Corp.  
Colonial Aircraft Corp.  
Continental Con Co., Inc.  
Continental Diamond Fibre Corp.  
Cornell Deep Drawing Co., Div.-Lones Industries  
Corp.  
Crystal-X Corp.  
Curtiss-Wright Corp., Santa Barbara Div.  
Curtiss-Wright Corp., Utica Div.  
DBM Research Corp.  
Dayton Aircraft Products, Inc.

Delta Products Div.-Air Accessories, Inc.  
 Dixon Corp.  
**\*DOW CORNING CORP.**  
 Durez Plastics Div.-Hooker Chemical Corp.  
 Electrical Insulation Co., Inc.  
 Electra Technical Products Div., Sun Chemical Corp.  
 Eljay Corp.  
 Emerson & Cuming, Inc.  
 Emerson Plastics Corp.  
 Emico Plastic Fabricators -Div.-E. M. McCarthy Machine Co.  
 Fischer & Porter Co.  
 Fletcher Mfg. Co., Inc., The  
 Fluorocarbon Co., Inc.  
 Franklin Fibre-Mittell Corp.  
 Fruehauf Trailer Car., Military Equipment Div.  
 Gaike Corp.  
 General Plastics Corp. of New Jersey  
 Goodyear Aircraft Corp.  
 Hardman Tool & Engrg. Co.  
 Howe Industries, Inc.  
 Homalite Corp., The  
 Hughes Tool Co., Aircraft Div.  
 Integrated Mica Corp.  
 Jarvis Corp.  
 Jaclyn Mfg. Co.  
 Jadee Plastics Co.  
 Johns-Manville  
 Johns-Manville Sales Corp.  
 Kerco Products  
 Walter Kidde & Co., Inc., Aviation Div.  
 H. Koch & Sons  
 Lantex Industries, Inc.  
 Liss Products, Inc.  
 Magee-Bralla & Associates  
 McMillan Industrial Corp.  
 Mica Insulator Div.-Minnesota Mining & Mfg. Co.  
 Minnesota Mining & Mfg. Co.  
 National Vulcanized Fibre Co.  
 New England Laminates Co., Inc.  
 Perry Plastics, Inc.  
 Piasecki Aircraft Corp.  
 Plastic Age Sales, Inc.  
 Prewitt Aircraft Co.  
 Raybestos-Manhattan, Inc., Pa.  
 Reinhold Engrg. & Plastics Co.  
 Republic Aviation Corp.  
 Resistoflex Corp.  
 Rex Corp., The, Sub.-American Enka  
 Rogers Corp.  
 Russell Reinforced Plastics Corp.  
 Joseph T. Ryerson & Son, Inc.  
 Scientific-Atlanta, Inc.  
 Silicane Insulation, Inc.  
 Skydyme, Inc.  
 Spaulding Fibre Co., Inc.  
 Specialty Engrg. & Electronics Co.  
 Stevens Products, Inc.  
 Stratats, Div.-Fairchild Engine & Airplane Corp.  
 Swedlow Inc.  
 H. L. Thompson Fiber Glass Co.  
 Tapper Mfg. Co., Inc.  
 Trianics Corp.  
 United States Chemical Milling Corp.  
 United States Rubber Co.  
 Veet Industries  
 Waterbury Companies, Inc.  
 Wenzlau Engrg. Co.  
 Western Tool & Mfg. Co., The  
 Zippertubing Co., The

## RELAYS

a. Audio Operated  
 b. Capacitance  
 c. Coaxial  
 d. Contact  
 e. Cross-Bar  
 f. D Arsonval  
 g. Differential  
 h. Electronic, Resistance Activated  
 i. Frequency Selective  
 j. High Voltage  
 k. Impulse  
 l. Keying & Break-In  
 m. Latching  
 n. Mercury  
 o. Meter  
 p. Microwave  
 q. Overfrequency  
 r. Overload  
 s. Overvoltage & Undervoltage  
 t. Photoelectric  
 u. Plate Circuit  
 v. Polarized  
 w. Power  
 x. Reverse Current  
 y. RF  
 z. Rotary  
 a1. Sensitive  
 b1. Sequence  
 c1. Stepping  
 d1. Subminiature  
 e1. Synchronizing, Transfer  
 f1. Telephone  
 g1. Temperature Compensated  
 h1. Thermal  
 i1. Thermostatic Delay  
 j1. Time Delay  
 k1. Timing  
 l1. Under Frequency  
 m1. Vacuum Contact  
 n1. Vibrating Reed Type

A-G-A Div., Elastic Stop Nut Corp. of America, j-1.  
 Acra Div., Robertshaw-Fulton Controls, w.  
 Acramag Inc., x.  
 Advance Relays, Electronics Div., Elgin National Watch Co., c, d, e, i, k, l, q, t, v, y, z, b-1, c-1, e-1, g-1, h-1, i-1.  
 Advanced Electronics, Inc., a.  
 Advanced Products Co., The, j-1, k-1.  
 Ad-Yu Electronics Lab., Inc., o-1.  
 Aerolite Electronics Corp., o-1.  
 Aircom Inc., p.  
 All American Engrg. Co., j-1.  
 Allied Control Co., Inc., c, g, j thru n, r, s, u thru x, z, o-1, d-1, f-1, g-1, i-1, k-1, m-1.  
 Alta Scientific Co., Inc., j-1, k-1.  
 American Aeraparts, x, i-1, j-1, k-1.  
 American Instrument Co., Inc., o-1, j-1.  
 American Machine & Foundry Co., Government Products Group  
 Arrow-Hart & Hegeman Electric Co., The, d, m, r, s, w, o-1, h-1, i-1, j-1.  
 Artisan Electronics Corp., a, d, g, j thru m, r thru x, z, o-1, b-1, c-1, g-1, j-1.  
 Assembly Products, Inc., f, a, s, o-1.  
 Automatic Electric Sales Corp., d, k, m, n, v, b-1, c-1, f-1, j-1, k-1.  
 Automatic Switch Co., g, i, m, p, r, w, x, o-1, j-1.  
 Autotron, Inc., t.  
 Babcock Radio Engrg., Inc., o-1, d-1.  
 Babcock Relays, Inc., b, d, g, m, n, r, s, u thru x, z, o-1, d-1, e-1, f-1.  
 Barber-Calman Co., l, m, v, o-1.  
 Barker Sales Co., e, k thru p, o-1 thru d-1, f-1, g-1, j-1.  
 Baso Inc., o-1, d-1, g-1, j-1.  
 James G. Biddle Co., l, n-1.  
 Branson Corp., r, s, u, v, w, z, d-1, g-1 thru k-1.  
 Bristol Co., The, g, v, o-1, d-1, g-1, m-1, n-1.  
 Central Electronic Mfrs., Div.-Nuclear Corp. of America, m-1.  
 C. P. Clare & Co., k thru n, u, v, o-1 thru d-1, f-1, j-1.  
 Clark Electronic Labs., d-1.  
 Cails-Electronics, b.  
 Camar Electric Co., k, l, m, t, w, o-1, d-1, f-1, j-1.  
 Central Engrg. Co., Div.-Jervis B. Webb Co., j-1.  
 Couch Ordnance, Inc., u, z, o-1, d-1.  
 Cramer Controls Corp., j-1, k-1.  
 James Cunningham Son & Co., Inc., e.  
 Curtiss-Wright Corp., Electronics Div., h-1, i-1, j-1, k-1.  
 Curtiss-Wright Electronics Div., IMI Branch, k, m, w, d-1, j-1, k-1.  
 Cutler-Hammer Inc., d, g, h, r, w, o-1, b-1, j-1, k-1.  
 Datascan Inc., h.  
 Delcog-Remy Div., General Motors Corp., m, w, z, d-1.  
 Destron Co., j-1, k-1.  
 Douglas Microwave Co., Inc., p.  
 Durakool, Inc., n, j-1, k-1.  
 Durant Mfg. Co., t.  
 Ebert Electronics Corp., h, m, n, q, w, o-1, j-1, m-1.  
 Electro Tec Corp., d, w, z, z-1.  
 Electro-Mechanical Products Co., g, r, x.  
 Electro-Mechanical Specialties Co., Inc., d, e, g, h, i, k, m, q, s, u, v, w, z, b-1, c-1, d-1, g-1, j-1.  
 Electronic Control Corp., h, r, t, j-1.  
 Electronic Research Associates, Inc., s.  
 Electronic Specialty Co., c, a, s, x, d-1, j-1, k-1, l-1.  
 Electron-Radar Products, n.  
 Electro-Switch & Controls, Inc., s, v, w, o-1, d-1, f-1, g-1, j-1.  
 Electro-Tech Equipment Co., f, k, m, n, a, t, w, o-1, thru d-1, f-1, i-1, j-1, k-1.  
 Elgin Micronics Div.-Elgin National Watch Co., i-1, k-1.  
 Engrg. Associates, v, f-1, j-1, j-1.  
 Essex Wire Corp., b, d, e, h, j, k, r, x, o-1, f-1, h-1.  
 Farmer Electric Products Co., Inc., h.  
**\*FILTERS, INC.**, m, r, w, z, d-1.  
 Fisher Scientific Co., h.  
 G-V Controls Inc., i, q, r, s, g-1 thru l-1.  
 General Automatic Corp., d, g, k, l, m, r, s, u, w, o-1, f-1, g-1, j-1.  
 General Communication Co., c, p, y.  
 General Electric Co., Apparatus Sales Div., k, q thru t, w, x, b-1, d-1, g-1, h-1, j-1, k-1, l-1.  
 Globe Electrical Mfg. Co., d, l, m, u, w, z, o-1, f-1, g-1, j-1.  
 Gordas Corp., n.  
 Green Rectifier Co., s.  
 Guardian Electric Mfg. Co., d, h thru m, q, z, o-1 thru d-1, f-1, h-1, j-1, k-1, l-1.  
 Gulston Industries, Inc., i.  
 Gyrex Corp., The, i.  
 Haledy Electronics Co., d, n, t, w.  
 Hamilton Watch Co.-Industrial Div., j-1, k-1.  
 Hamlin, Inc., n, o-1.  
 Hart Mfg. Co., The, d, h, k, m, v, w, o-1, b-1, d-1.  
 Hartman Electrical Mfg. Co., The, g, i, k, m, q, a, s, v, w, x, o-1, b-1, d-1, e-1, j-1, k-1, l-1.  
**\*A. W. HAYDON CO., THE**, b-1, j-1, k-1.  
 Heinemann Electric Co., r, j-1.  
 Hi-G Inc., z, o-1, d-1, g-1.  
 Hillburn Electronic Products Co., d, e, j thru m, r, t thru w, o-1 thru d-1, f-1.  
 Hi-Spec Electronics Corp., l, u, w, o-1.  
 Hughes Aircraft Co., h-1.  
**\*HYDRO-AIRE CO., DIV.-CRANE CO.**, j-1.  
 Imtra Corp., m, c-1, f-1.

Industrial Timer Corp., h-1, j-1, k-1.  
 Iron Fireman Mfg. Co., Electronics Div., k, m, z, o-1, d-1.  
 ITT-Kellag, f-1.  
 Jack & Heintz, Inc., q, r, s, w, x, j-1, l-1.  
 Jaidinger Mfg. Car., Inc., g, k, m, u, o-1, d-1, j-1, n-1.  
 Jennings Radio Mfg. Corp., c, r, m-1.  
 Jordan Electronics, Div.-Victoreen Instrument Co., s, j-1, k-1.  
 Kaiser Aircraft & Electronics, Div.-Kaiser Industrie Corp., b, h, w.  
 Kurman Electric Co., Div.-Norburne Corp., a, d, e, g, h, j, k, l, p, r thru w, y, o-1, d-1, f-1, j-1.  
 Land-Air Inc., k, z, b-1, c-1.  
 Leach Corp., d, g, j thru m, q, r, s, u, v, w, y, z, b-1, d-1, f-1, i-1 thru l-1.  
 Leaming Engrg., Inc., a.  
 G. H. Leland, Inc., z, c-1.  
 Liquidimeter Corp., The, o-1.  
 Luthar Mfg. Co., v, d-1.  
 Magnecraft Electric Co., c, d, e, g, j thru m, r, s, u, w, z, o-1, d-1, f-1, j-1.  
 Magnetic Devices, Inc., c, m, v, z, o-1.  
 P. R. Mollary & Co., Inc., o-1, b-1, d-1, k-1.  
 Monitor Instrument Div., c, f, o-1.  
 Master Specialties Co., b-1, j-1.  
 Metals & Controls Corp., Spencer Div., q, r, s, h-1, i-1.  
 Miratel, Inc., a.  
 Monogram Precision Industries, p.  
 Motorola Inc., Military Electronics Div., p, y, n-1.  
 Narda Microwave Corp., The, p.  
 E. V. Noybar Labs, Inc., r, s, u, w, j-1.  
 Networks Electronic Corp., i, q, r, s, x, h-1, i-1, l-1.  
 North Electric Co., e, h, k, l, m, r, s, v, w, z, o-1 thru f-1, j-1, m-1.  
 Pacific Scientific Co., d-1.  
 Paragon Electric Co., j-1, k-1.  
 Penn Keystone Corp., v, o-1, d-1, m-1.  
 Penta Labs., Inc., m-1.  
 Peschel Electronics, Inc., h, j.  
 Phaestron Instrument & Electronic Co., o-1.  
 Philco Corp., Government & Industrial Div., h thru p, y, d-1, f-1, j-1.  
 Photobell Cal. Inc., a, b, h, i, j, t, j-1, k-1.  
 Photo-Crystals, Inc., n.  
 Photomat, Inc., t.  
 Joseph Pollak Corp., c, d, g, i, p, s, w, o-1, f-1, g-1.  
 Potter & Brumfield Inc., c, j, l, t thru w, o-1, c-1, d-1, f-1.  
 Precise Development Corp., h.  
 Precision Thermometer & Instrument Co., o-1.  
 Price Electric Corp., c, d, i, l, q, s, u, w, y, z, o-1, d-1, f-1, j-1.  
 Projects Unlimited Inc., a.  
 Q. V. S. Inc., a.  
 Radar Relay, Inc., o-1, d-1.  
 Raymond Engrg. Lab., Inc., j-1.  
 Relay Sales Inc., c, d, e, g, j thru n, u thru x, z, o-1 thru d-1, f-1, h-1, j-1, k-1.  
 Relays, Inc., k, l, s, u, w, x, o-1, d-1, f-1.  
 Research Appliance Co., h, m-1.  
 Revere Corp. of America, n-1.  
 M. H. Rhodes, Inc., j-1.  
 Rixan Electronics Inc., h.  
 Safety Electrical Equipment Corp., x.  
 St. Regis Paper Co., Panelyte Div.  
 Sealelectric Switch & Relay Corp., e, h, w, c-1, f-1.  
 Sequoia Wire & Cable Co., Div.-Mandel Industries, Inc., j-1, k-1.  
 Sigma Instruments, Inc., g, l, m, s thru w, o-1, d-1, g-1.  
 Simpson Electric Co., f, a.  
 Standard Electromagnetics, Inc., k, l, m, r, t, u, w, x, z, o-1 thru d-1, f-1, k-1.  
 Stanley Aviation Corp., c-1.  
 Stramberg-Carlson Div.-General Dynamics Corp., f-1.  
 Struthers-Dunn, Inc., j thru n, r, s, u, w, x, y, o-1 thru d-1, h-1 thru k-1, m-1.  
 Technique Associates Div., Duncan Electric Co., Inc., h-1.  
 Teletra Instruments Corp., a, b, c, u, z.  
 Telerad Mfg. Corp., p.  
 Tempo Instrument Inc., s, j-1, k-1.  
 Teroda Co., d, r, o-1.  
 Tetrax Corp., f, r.  
 Thialco Chemical Corp., y.  
 Thoracic Electronics, Inc., g, i, m, q, s, v, x, o-1, j-1, l-1.  
 Transco Products, Inc., c, p, y.  
 Triplett Electronic Instrument Co., f.  
 George Ulmer Co., h-1, i-1, j-1.  
 Union Switch & Signal, Div.-Westinghouse Air Brake Co., k, z, d-1.  
 United Aircraft Products, Inc., g-1 thru t, u.  
 U. S. Relay Co., d, e, g thru i, m, q, r, t, u, v, y, o-1, b-1, d-1, f-1, g-1, h-1, j-1, k-1, l-1.  
 United Supply Co.  
 Vap-Air Aeronautical Products Div., Vapor Heating Corp., d, w.  
 Vapo Mfg. Co., Inc., j, i-1.  
 Vemaline Products Co., j-1, k-1.  
 Victory Engrg. Corp., b, h, o-1, d-1, g-1, h-1, j-1, l-1.  
 Video Instruments Co., Inc., n.  
 Wallace & Tiernan Inc., i.  
 Waltham Engrg. Corp., j-1.  
 Webor, Inc., Government Div., o-1, b-1, c-1, j-1.  
 Weston Instruments, Div.-Daystrom, Inc., f, g, i, m, q, s, t, v, w, o-1, d-1, g-1.  
 Wheeler Electronic Corp., Sub.-Speery Rand Corp., w.

Electrical Signals Inc., c, l, m, r, v, w, a-1, d-1, f-1.  
C. Wilson & Co., j-1.  
Electronic Corp., The, d, m, w, f-1, k-1.  
Inner Electronic Devices, t.  
Smith Electric Co., j-1, k-1.

#### EASE MECHANISMS

American Machine & Foundry Co., Government Products Group  
Applied Design Co.  
Cushman & Whitley, Inc., Missile Products Div.  
Klyn Co.  
Powell Mfg. Co.  
Components Corp.  
Consolidated Diesel Electric Corp.  
Cooper Development Corp., Sub-Marquardt Aircraft Co.  
Innell Deep Drawing Co., Div.-Lones Industries Corp.  
Mont Aircraft Fitting Co.  
Electro-Mechanical Products Co.  
Edmond Tool & Engrg. Co.  
Ks Corp., The  
Lex, Inc.  
W. Kellogg Co., The  
Koch & Sons  
**CORMICK SELPH ASSOCIATES**  
1. Water Lift Co., Div.-Cleveland Pneumatic Industries, Inc.  
Brook Machine Corp.  
Lific Scientific Co.  
Secki Aircraft Corp.  
Diamond Engrg. Lab., Inc.  
Inhold Engrg. & Plastics Co.  
Aerobion Aviation Corp.  
H. Rhodes, Inc.  
Spot Industries Inc.  
Shley Aviation Corp.  
Tley Corp., The  
Electro Industries Corp.  
D Inc.  
Nietz Aircraft Corp.  
Whittington Technological Associates Inc.  
Wyes Precision Instrument Co., Inc.  
Wizen Research Inc.

#### CONTROL SYSTEMS

#### CONTROL SYSTEMS, REMOTE CONTROL

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Precision Sheet Metal, Inc.  
Pressed Steel Tank Co.  
Racine Hydraulics & Machinery Inc.  
Red Lion Cabinet Co., Redco Tool Div.  
\*RHEEM MFG. CO., DEFENSE & TECHNICAL PRODUCTS DIV.  
Ronson Hydraulic Units Corp.  
Rucker Co., The  
Santa Anita Engrg. Co.  
Sorgent Engrg. Corp.  
Stainless Steel Products, Inc.  
Stratos, Div.-Fairchild Engine & Airplane Corp.  
United Aircraft Products, Inc.  
Universal Metal Products, Inc.  
Vickers Inc., Div.-Sperry Rand  
Vickers Inc., Marine & Ordnance Dept., Machinery Hydraulics Div.  
Watertown Div., The New York Air Brake Co.  
Wise Aerodraulics, Inc.

#### RESERVOIRS, PNEUMATIC

American Machine & Foundry Co., Government Products Group  
Associated Engineers, Inc.  
Bendix-Pacific Div., Bendix Aviation Corp.  
Bendix Utico Div., Bendix Aviation Corp.  
Components Corp.  
Cooper Development Corp., Sub-Marquardt Aircraft Co.  
Cornelius Co., The, Aero Div.  
Dumont Aircraft Fitting Co.  
Haskel Engrg. & Supply Co.  
Hydrodyne Corp., Skinner Seal Div.  
Kohn & Co., Inc.  
Kaiser Aircraft & Electronics, Div.-Kaiser Industries Corp.  
Walther Kidde & Co., Inc., Aviation Div.  
Natl. Water Lift Co., Div.-Cleveland Pneumatic Industries, Inc.  
Pressed Steel Tank Co.  
\*RHEEM MFG. CO., DEFENSE & TECHNICAL PRODUCTS DIV.  
Ronson Hydraulic Units Corp.  
Rucker Co., The  
Santa Anita Engrg. Co.  
Stratos, Div.-Fairchild Engine & Airplane Corp.  
United Aircraft Products, Inc.

#### RESISTANCE PYROMETERS

See PYROMETERS, RESISTANCE

#### RESISTANCE THERMOMETERS

See THERMOMETERS, RESISTANCE

#### RESISTANCE THERMOMETER BULBS

\*ARNOUX CORP.  
Avnet Corp.  
Bristol Co., The  
Fisher Scientific Co.  
Hallikainen Instruments  
Illinois Testing Laboratories, Inc.  
Leeds & Northrup Co.  
\*LEWIS ENGRG. CO., THE  
Minneapolis-Honeywell Regulator Co., Industrial Div.  
Minneapolis-Honeywell Regulator Co., Industrial Product Group  
Rasmont Engrg. Co.  
Arthur C. Ruge Associates, Inc.  
Thermo Electric Co., Inc.  
Trans-Sonics, Inc.  
United Control Corp.

#### RESISTORS

a. Borecarbon  
b. Composition, Variable  
c. Carbon Film  
d. Decade  
e. Deposited Carbon  
f. Encapsulated  
g. Film  
h. Fixed Composition  
i. Fixed Wire-Wound  
j. Fuse  
k. Glass  
l. High Frequency  
m. High Temperature  
n. High Voltage  
o. Inorganic, Fixed  
p. Miniature Variable  
q. Negative Temperature Coefficient  
r. Photo Sensitive  
s. Plug-in-Tube  
t. Precision  
u. Printed Circuit  
v. Printed Strip  
w. Rectilinear  
x. Silicone  
y. Subminiature  
z. Tape  
a1. Temperature Sensitive  
b1. Variable Composition  
c1. Variable, Miniature  
d1. Variable Wire Wound  
e1. Wire Wound  
Ace Coil & Electronics Co., i, e-1.  
Adept Industries Inc., u, x.  
Aero Electronics Corp., c-1, d-1.  
Aerovox Corp., c thru f, t, e-1.  
Allies Products Corp., e, f, g, t.  
Analogue Controls, Inc., e-1, d-1.  
\*ARNOUX CORP., a-1.  
Avnet Corp., i.  
Axel Electronics, f, i, m, q, t, u, a-1, e-1.  
Axler Associates Inc., g.  
Bourns Labs., Inc., b, c, f, b-1, c-1, d-1.  
Bradford Components, Inc., f, i, j, l thru a, q, t, y, d-1, e-1.  
Carborundum Co., Refractories Div., f, h, m, y.  
Centralab, Div.-Globe-Union, b, e, f, h, m, p, t, u, w, b-1 thru e-1.  
Cinema Engrg., f, t, y, e-1.  
Clark Electronic Labs.  
Claroat Mfg. Co., Inc., b thru g, i, j, m thru p, t, u, b-1 thru e-1.  
Computer Instruments Corp., b, w, b-1.  
Continental Carbon, Div.-Wirt Co., e thru i, a, p, q, t, d-1, e-1.  
Corning Glass Works, f, g, k thru a, t, u.  
Date Products, Inc., a, c, e, f, g, i, m, n, o, t, x, y, e-1.  
Daven Co., The, f, g, i, k, m, t, x, y, a-1, e-1.  
Eastman Kodak Co., r.  
Electra Mfg. Co., c, e, f, g, l, m, q, t, u, y.  
Electro Instruments, Inc., d, f, i, t.  
Electromath Corp., e-1, d-1.  
Electro-Measurements Inc., d, i, t, e-1.  
Electro-Mec Lab. Inc., i, d-1.  
Electronic Applications, Inc., c, e, m, n.  
Erie Resistor Corp., c, e thru h, n, t, y.  
Ferroxcube Corp. of America, q, a-1.  
Fidelity Amplifier Co., d.  
Filmohm Corp., g, k, l, m, u, v, z.  
Ford Instrument Co., Div.-Sperry Rand Corp., e-1.  
Fugle-Miller Labs. Inc., i, t, e-1.  
GAR Mfg. Corp., e-1.  
General Cement Mfg. Co., Div.-Tetron, Inc., c, e.  
General Electric Co., Apparatus Sales Div., i, a, d-1, e-1.  
General Electric Co., Metallurgical Products Dept., a-1.  
General Transistor Corp., i, t, u, e-1.  
Globar Plant, Refractories Div.-The Carborundum Co., h, l thru a, q, y, a-1.  
Gray Instrument Co., d, i, e-1.  
Gunnar Laboratories, e-1.  
Havey Industries, Inc., m, x.  
Hellipot Div.-Beckman Instruments Inc., i, t, e-1.  
Humphrey, Inc., w, e-1, d-1, e-1.  
Huntington Rubber Mills, x.  
Industrial Instruments Inc., d.  
Instrument Resistors Co., d, i, l, m, a, t, y, a-1, e-1.  
International Resistance Co., a, b, c, e thru q, t, u, x, b-1, d-1, e-1.  
Joclin Mfg. Co., z.  
Julie Research Labs., Inc., f, t, e-1.  
Key Resistor Corp., c, e, f, g, l, m, t, u, y.  
Keystone Carbon Co., q.  
Lectrahm, Inc., i, j, l, n, u, x, a-1, d-1, e-1.  
Leeds & Northrup Co., d, t.  
Legris Co., a thru z, a-1 thru e-1.  
Liss Products, Inc.  
P. R. Mollory & Co. Inc., c, h, i, l, m, a, p, u, w, y, e-1, d-1, e-1.  
Mepco, Inc., c thru g, i, a, q, t, u, x, y, e-1.  
Miller Electro-Research Labs., t.  
Minneapolis-Honeywell Regulator Co., Industrial Product Group, i, l, n, o, a, t, a-1, e-1.  
Minnesota Mining & Mfg. Co., a-1.  
Mullenbach Div.-Electric Machinery Mfg. Co., i, a, e-1.  
National Beryllia Corp., m.  
National Coil Co., e-1.  
Networks Electronic Corp., k, a-1.  
Non-Linear Systems, Inc., f, i, t.  
Ohio Carbon Co., The, h, i, j.  
Phaoston Instrument & Electronic Co., c.  
Precision, Inc., f, i, t, u, y, a-1, e-1.  
Precision Resistor Co. Inc., d, f, i, j, n, a, t, u, x, y, a-1, e-1.  
Pyrofilm Resistor Co., Inc., c, e, f, g, k thru n, t, y.  
R. C. L. Mfg. Co., f, i, t, e-1.  
Reon Resistor Corp., d, f, i, l, m, q, s thru v, a-1, b-1, c-1, e-1.  
Resistors, Inc., i, d-1, e-1.  
Rinco, Inc., i, d-1, e-1.  
Rogers Corp., u.  
Rosemount Engrg. Co., a-1.  
Arthur C. Ruge Associates, Inc., a-1.  
Sage Electronics Corp., e-1.  
Shalite Mfg. Co., d, f, i, n, a, t, u, e-1.  
Shalite, Inc., f, i, t, u, y.  
Spectral Electronics Corp., c-1, d-1, e-1.  
Stackpole Carbon Co., b.  
States Co., The, q.  
H. W. Sullivan Ltd., d, t.  
Sun Electric Corp., Aeronautical Div., a.  
Technology Instrument Corp., a thru i, m, n, p, q, s, t, u, w, y, c-1, d-1, e-1.  
Tel-Labs, Inc., d, f, i, a, q, t, u, x, a-1, e-1.  
Tepra Electric Corp., i, t, x, y, e-1.  
Topper Mfg. Co., Inc., m.  
Trionics Corp., y.  
Tucson Instrument Corp., i, p, t, c-1, d-1, e-1.  
United Mineral & Chemical Corp., e, c, d-1, e-1.  
U. S. Science Corp., Div.-Topp Industries, Inc., p, w, d-1.  
Velury Engrg. Corp., q, a-1.  
Welwyn International Inc., c thru g, i, l thru a, q, t, y, d-1, e-1.  
Weston Instruments, Div.-Daystrom, Inc., g, i, n, t.

## RESOLVERS

Accessory Products Co., Div.-Textron Inc.  
Airdome Parts Co.  
American Basch Arma Corp.  
American Electronics, Inc.  
American Electronics, Incorporated  
American Electronics, Inc.-Instrument Div.  
Arma Div., American Basch Arma Corp.  
Beckman Instruments, Inc., Berkeley Div.  
Bendix Aviation Corp., Eclipse-Pioneer Div.  
Chico Engr. Corp.  
Clifton Precision Products Co., Inc.  
Computer Instruments Corp.  
Control Data Corp.  
Dalmator Div., Yuba Consolidated Industries, Inc.  
Daystrom Transicoil Div., Daystrom Inc.  
Diehl Mfg. Co.  
Electro Precision Corp.  
Hamilton Watch Co.-Industrial Div.  
Induction Motors Corp.  
\*KEARFOTT CO., INC.  
Kearfott Dept., Norden Div., United Aircraft Corp.  
Lard-Air Inc.  
Lear, Inc.  
Lear, Inc., Grand Rapids Div.  
Luther Mfg. Co.  
Milgo Electronic Corp.  
Networks Electronic Corp.  
Power-Tronic Systems Inc.  
Reeves Instrument Corp.  
Scientific-Atlanta, Inc.  
Singer Mfg. Co., The, Military Products Div.  
United Mineral & Chemical Corp.  
Western Gear Corp.  
Weston Instruments, Div.-Daystrom, Inc.

## RESTRICTORS, HYDRAULIC SYSTEMS

Astronautics Engr. Co.  
Benbow Mfg. Corp.  
Bendix-Pacific Div., Bendix Aviation Corp.  
Coruthers & Fernandez, Inc.  
Clary Dynamics  
Haskel Engr. & Supply Co.  
Walter J. Hyatt Co., The  
Integral Corp.  
Interstate Engr. Corp.  
Kaiser Aircraft & Electronics, Div.-Kaiser Industries Corp.  
Kemp Aero Products  
Newbrook Machine Corp.  
Ozane Metal Products Corp.  
Pneu-Hydro Valve Corp.  
Ranson Hydraulic Units Corp.  
Sargent Engr. Corp.  
A. U. Stone & Co., Inc.  
Tactair Valve Div.-Aircraft Products Co.  
United Aircraft Products, Inc.  
Vickers Inc., Marine & Ordnance Dept., Machinery Hydraulics Div.  
Vinson Mfg. Co. Inc.

## RETRACTING, MECHANISM UNITS

Actuator Products Div., Geartronics Corp.  
American Machine & Foundry Co., Government Products Group  
Bendix Utica Div., Bendix Aviation Corp.  
Clary Dynamics  
Colonial Aircraft Corp.  
Electro-Mechanical Products Co.  
Haskel Engr. & Supply Co.  
Haaver Electric Co.  
Kaiser Aircraft & Electronics, Div.-Kaiser Industries Corp.  
Kemp Aero Products  
Lear, Inc.  
\*McCORMICK SELPH ASSOCIATES  
Menasco Mfg. Co.  
Natl. Water Lift Co., Div.-Cleveland Pneumatic Industries, Inc.  
Newbrook Machine Corp.  
Plasecki Aircraft Corp.  
Sargent Engr. Corp.  
Smith-Morris Corp.  
Wise Aerodraulics, Inc.

## RETRACTORS, LANDING GEAR

Bendix Utica Div., Bendix Aviation Corp.  
Clary Dynamics  
Colonial Aircraft Corp.  
Haskel Engr. & Supply Co.  
Haaver Electric Co.  
Kansar Corp.  
Kemp Aero Products  
Lear, Inc.  
Menasco Mfg. Co.  
Natl. Water Lift Co., Div.-Cleveland Pneumatic Industries, Inc.  
Ranson Hydraulic Units Corp.  
Sargent Engr. Corp.  
Smith-Morris Corp.  
United Mfg. Co., The  
Weston Hydraulics Ltd.-Sub., Borg-Warner Corp.  
Wise Aerodraulics, Inc.

## REVERBERATION UNITS

Ling Electronics, Inc.

## RF INTERFERENCE EQUIPMENT

See INTERFERENCE EQUIPMENT, RF

## RF PERMEATERS

See PERMEATERS, RF

## RHEOSTATS

James G. Biddle Co.  
Clark Electronic Labs.  
Clarostat Mfg. Co., Inc.  
Components Corp.  
Cutler-Hammer Inc.  
Deju-Amsco Corp., Electronic Sales Div.  
Electro-Tech Equipment Co.  
Foredom Electric Co., Inc.  
General Electric Co., Apparatus Sales Div.  
Gunnar Laboratories  
P. R. Mallory & Co. Inc.  
National Spectrographic Labs., Inc.  
Riverbank Labs., Dept.-Engrs.  
Superior Electric Co., The  
Technology Instrument Corp.

## RIGID SHAFTS

See SHAFTS, RIGID

## RIGID WAVEGUIDES

See WAVEGUIDES, RIGID

## RINGS

a. Carbon Packing  
b. Clamping  
c. Collector  
d. Expansion  
e. Hydraulic Back-Up  
f. Oil Sealing  
g. Retainer  
h. Scraper  
i. Sealing  
j. Shock Absorber  
k. Slip  
l. Slip & Brush Assemblies  
m. Special

Ace Products Co., g, h  
Advance Carb. & Electric Mfg. Co., a, k, l  
Advanced Products Co., The, f, i  
Aera Bolt & Screw Co., Inc., e, f, h, i  
Airflyte Electronics Co., k, l  
All Specs Corp., e thru i  
Allied Plastics Supply Corp., a thru g, i thru m  
Alloys Unlimited Inc., m  
Alpitect, Inc.  
American Aeroparts, j  
American Standard Products, Inc., m  
American Welding & Mfg. Co., The, m  
Atlantic Instrument Corp., Sub.-American Electronics, Inc., k, l, m  
Auburn Mfg. Co., The, e, f, i, j  
Austel Brothers, Inc., b  
Bacon Industries, Inc., m  
Ball Machine Products Co., The, g  
California Aircraft Products  
California Spring Co., Inc., m  
Capewell Mfg. Co., m  
Capital City Mfg. Co., f, g, m  
Carbone Corp., The, a, l  
Carmac Aviation  
Cartrisal Corp., i  
Century Fasteners Corp., e thru h  
Chemplast, Inc., h  
Chicago Gasket Co., m  
Chicago Rowhide Mfg. Co., e, f, i  
Christie Machine Works, m  
Cleveland Welding Div.-American Machine & Foundry Co., m  
Components Corp., f, i  
Computer Instruments Corp., b, k  
Continental Rubber Works, f  
C. Lee Cook Co., Airtamic Products Div., a, d, e, f, h, i, m  
Carbin Products Div., f thru i, m  
Crystal-X Corp., g, i, m  
Curtiss-Wright Corp.-Wright Aeronautical Div., c, d, f thru i, m  
Dackendorff & Co. Inc., b, m  
Dresser Mfg. Div., Dresser Industries, Inc., a, b, g, i, m  
Eaton Mfg. Co., Reliance Div., b, g  
Edgewater Steel Co., m  
Electric Heater Co., The, m  
Electrical Insulation Co., Inc., m  
Electro Development Co., k, l  
Electro Tec Corp., c, k, l, m  
Electro-Mechanical Products Co., c, k, l  
Emerson Plastics Corp., e, f, i  
Engelhard Industries Inc., D. E. Makepeace Div., c, k, l  
Federal Machine Co. Inc., m  
Fletcher Mfg. Co., Inc., The, c  
Flexrock Co., e  
Fluoracarbon Co., The, e, h, i, k  
General Gasket Inc., e, f, i, m  
Gibson Electric Co., c, k  
Gashen Rubber Co., Inc., f, i  
Graphite Metallizing Corp., a, c, f, i, k, l  
Halogen Insulator & Seal Corp., e, g, i  
Haskel Engr. & Supply Co., e, f, h, i  
Helwig Carbon Products, Inc., a  
E. F. Houghton & Co., e, h, i  
Huntington Rubber Mills, g  
Hydrazine Corp., Skinner Seal Div., a, f, i, j  
Industrial Retaining Ring Co., g  
Johns-Manville, a, e thru i, m  
Konarr Corp., m  
King Fifth Wheel Co., m

Ladish Co., m  
Lucas Aircraft Supply Co., g, i  
Machine Products Div., New Haven Trap Rock Co., b, f, g, i, m  
Magnetic Seal Corp., f, i  
Mercury Tool & Mfg. Corp., b, c, e, g  
Metals & Controls Corp., General Plate Div., c, k, l  
Minnesota Rubber Co., f, h, i, m  
Maran Co., i, m  
Morganite, Inc., a, f, i, k, l  
National Utilities Corp., b  
Nippert Electric Products Co., The, k  
Ohio Carbon Co., The, a, f, i  
Oil-Dyne, Inc., e, f  
Pacific Cut Washer Co., f, i, m  
Pacific Scientific Co., k, l, m  
Parker Seal Co., Div.-Parker-Hannifin Corp., i  
Penn Fibre & Specialty Co., Inc., e, f, g, i, j, l  
Penn-Michigan Mfg. Corp., c  
Research Development Mfg. Inc., g, m  
Roberts Toledo Rubber Co., The, f, g, i, j  
Robinson Technical Products, Inc., j  
Rogers Corp., e  
Milton Ross Metals Co., The, k, l, m  
Rubbercraft Corp. of California, f, i, m  
Ryan Aeronautical Co., c  
St. Marys Carbon Co., a, f, i, l  
Schaevitz Engrg., j, k  
Seamless Products Co., Inc., g  
Simonds Saw & Steel Co., g, h, k, m  
Skycraft Tool Engr. Co., e, h, m  
Slip Ring Co. of America, c, k, l  
Smith-Morris Corp., b, c, g, i  
Sparta Mfg. Co., Div.-U.S. Ceramic Tile Co., e, f, i, m  
Stackpole Carbon Co., a, i, k, l  
Standard Metals Corp., c  
Stanley-Judd Div.-The Stanley Works, b, c, d, g thru k, m  
Staver Co., Inc., The, b, e, i, m  
Stein Seal Co., a, f, i  
Teiner Engr. Corp., b, i  
Thermech Engr. Corp., e thru i  
Turbo Products, Inc., e, f, g, i, m  
United Aircraft Products, Inc., e, f, i, m  
U. S. Hammered Piston Ring Co., Inc., d thru i, m  
U. S. Science Corp., Div.-Topp Industries, Inc., k  
Veet Industries, m  
Walbar Machine Products Inc., f, i  
Waldes Kohinor, Inc., g, m

## RIVETS, BLIND

Adam Metal Supply Inc.  
American Aeroparts  
Auto-Valve Inc.  
Best Aircraft Corp.  
Century Fasteners Corp.  
Callins Engr. Corp.  
Deutsch Fastener Corp.  
B. F. Goodrich Aviation Products  
Hi-Shear Rivet Tool Co.  
Huck Mfg. Co.  
Gea. E. Kaercher Co.  
Lucas Aircraft Supply Co.  
National Screw & Mfg. Co., The  
Southco Div., South Chester Corp.  
Star Expansion  
\*TOWNSEND CO., CHERRY RIVET DIV.  
United Shoe Machinery Corp., Ordnance Dept.

## RIVETS, EXPLOSIVE

American Aeroparts  
Atlantic Research Corp.

## ROCKET ENGINE HIGH TEMPERATURE MATERIALS

\*BENDIX PRODUCTS DIV., BENDIX AVIATION CORP.

## ROCKET FUELS, SOLID

See SOLID ROCKET FUELS

## ROCKET LAUNCHING DEVICES

ACF Industries Inc.  
Accessory Products Co., Div.-Textron Inc.  
Aerajet-General Corp.  
Aerolab Development Co.  
Aerona Mfg. Corp.  
Aeroscience, Inc.  
Aircraft Armaments, Inc.  
Alca Products, Inc.  
American Car & Foundry, Div.-ACF Industries, Inc.  
American Machine & Foundry Co., Government Products Group  
Apex Reinforced Plastics, Div.-White Sewing Machine Corp.  
Astradyne, Inc.  
Astronautics Engr. Co.  
Atlantic Research Corp.  
Bell Aircraft Corp., Niagara Frontier Div.  
E. W. Bliss Co.  
Bridgeport Brass Co.  
Champion Co., The  
Cleveland Pneumatic Industries, Inc.  
Cooper Development Corp., Sub.-Marquardt Aircraft Co.  
Curtiss-Wright Corp., Santa Barbara Div.  
Diversey Engr. Co.  
Dynamic Devices, Inc.  
Emerson Electric Mfg. Co., The, Electronics & Avionics Div.

Federal Machine Co. Inc.  
Gabriel Co., The-Talca Engr. Co. Div.  
G. W. Galloway Co.  
General Electric Co., Missile & Space Vehicle Dept.  
Goodyear Aircraft Corp.  
Hardman Tool & Engr. Co.  
Halex, Inc.  
Hughes Tool Co., Aircraft Div.  
Jack & Heintz, Inc.  
Kaiser Aircraft & Electronics, Div.-Kaiser Industries Corp.  
M. W. Kellogg Co., The  
Walter Kidde & Co., Inc., Aviation Div.  
Land-Air Inc.  
Langren Aircraft Co., Inc.  
Lundy Mfg. Corp.  
W. L. Maxson Corp., The  
**\*MIRAX CHEMICAL PRODUCTS CORP.,  
ELECTRO-MECHANICAL PRODUCTS DIV.**  
Monogram Precision Industries  
Newbrauk Machine Corp.  
Northrap Corp., The, Nartronic Div.  
Ordnance Div.-Food Machinery & Chemical Corp.  
Piasceki Aircraft Corp.  
Edw. Renneburg & Sons Co.  
Republic Aviation Corp.  
**\*RHEEM MFG. CO., DEFENSE & TECHNICAL  
PRODUCTS DIV.**  
Rahm & Haas Co., Redstone Arsenal Research Div.  
Stanley Aviation Corp.  
Tapco Group, Thompson-Rama-Wooldridge Inc.  
Thiakal Chemical Corp.  
Trailmobile Inc.  
Universal Moulded Products Corp.  
Vard Inc.  
Washington Technological Associates Inc.  
Waste King Corp., Technical Products Div.  
Welded Construction Inc.  
Western Gear Corp.  
Wheland Co., The

## RACKETS

Aerajet-General Corp.  
Aerolab Development Co.  
Alca Products, Inc.  
American Machine & Foundry Co., Government Products Group  
American Racket Co.  
Arde-Portland, Inc.  
Astradyne, Inc.  
Atlantic Research Corp.  
**\*AVCO MFG. CORP., CROSLLEY DIV.**  
Bell Aircraft Corp., Niagara Frontier Div.  
Brooks & Perkins, Inc.  
Cooper Development Corp., Sub.-Marquardt Aircraft Corp.  
Curtiss-Wright Corp.-Wright Aeronautical Div.  
Diversey Engr. Co.  
Dynamic Devices, Inc.  
Gabriel Co., The-Talca Engr. Co. Div.  
General Electric Co., Missile & Space Vehicle Dept.  
Hercules Powder Co.  
Hughes Tool Co., Aircraft Div.  
M. W. Kellogg Co., The  
**\*MCDORMICK SELPH ASSOCIATES**  
Norris-Thermador Corp.  
Northrap Corp., The, Nartronic Div.  
Din Mathieson Chemical Corp., Energy Div.  
Reaction Motors Div., Thiakal Chem. Corp.  
Red Lion Cabinet Co., Redco Tool Div.  
**\*REDEL INC.**  
Republic Aviation Corp.  
Special Projects Lab., Food Machinery & Chemical Corp.  
Stanley Aviation Corp.  
Thiakal Chemical Corp.  
Universal Moulded Products Corp.  
Veet Industries

## R END BEARINGS

American Aeroports  
Bearing Inspection, Inc.  
Century Fasteners Corp.  
Callins Engr. Corp.  
Curtiss-Wright Corp.-Wright Aeronautical Div.  
Packardair & Co. Inc.  
Treeman Co., The  
Mercury Tool & Mfg. Corp.  
Way Bearing Co., Inc.  
Southwest Products Co.

## R ELLED PRINTED CIRCUIT COPPER STRIPS

### REDEL INC.

## RATORS

All Products Co.  
Antlab Inc.  
Atlas Precision Products Co.  
Arnell-Dubilier Electric Corp.  
Brown Controls Co., Inc.  
General Devices, Inc.  
Loover Electric Co.  
J. F. Johnson Co.  
Land-Air Inc.  
**\*RHEEM MFG. CO., DEFENSE & TECHNICAL  
PRODUCTS DIV.**  
Abot Industries Inc.  
Alley Corp., The  
Beta Instrument Corp.

Western Gear Corp.  
Wind Turbine Co.

## ROTOR ASSEMBLIES, GAS TURBINE ENGINE

American Machine & Foundry Co., Government Products Group  
Christie Machine Works  
Curtiss-Wright Corp., Santa Barbara Div.  
Curtiss-Wright Corp., Wright Aeronautical Div.  
Dresser Industries, Inc.  
M. W. Kellogg Co., The  
Kelsey-Hayes Co.  
Merz Engr., Inc.  
Salar Aircraft Co.  
Talley Corp., The  
Tapco Group, Thompson-Rama-Wooldridge Inc.  
Turbo Products, Inc.  
Veet Industries

## ROTOR CASTINGS

American Aeroports  
American Brake Shoe Co.  
Astronautics Engr. Co.  
Celco, Constantine Engr. Labs. Co.  
Curtiss-Wright Corp.-Wright Aeronautical Div.  
Dresser Industries, Inc.  
Kalcass Industries, Div.-Thompson Rama Wooldridge Inc.

## ROTOR S

Astronautics Engr. Co.  
Celco, Constantine Engr. Labs. Co.  
Christie Machine Works  
Crown Controls Co., Inc.  
Curtiss-Wright Corp.-Wright Aeronautical Div.  
Dresser Industries, Inc.  
Hoover Electric Co.  
Merz Engr., Inc.  
Heinz Mueller Eng. Co. Inc.  
National Pneumatic Co., Inc., Holtzer-Cabot Div.  
Parker-Hartford Corp., The  
Piasceki Aircraft Corp.  
Talley Corp., The  
Tapco Group, Thompson-Rama-Wooldridge Inc.  
Veet Industries

## RUDDERS

Brooks & Perkins, Inc.  
Colonial Aircraft Corp.  
Continental Can Co., Inc.  
Haveg Industries, Inc.  
Intercontinental Mfg. Co., Inc.  
Jarvis Corp.  
Javelin Aircraft Co. Inc.  
Kaiser Aircraft & Electronics, Div.-Kaiser Industries Corp.  
**\*LAVELLE AIRCRAFT CORP.**  
Langren Aircraft Co., Inc.  
Monogram Precision Industries  
Norma Mfg. Co.  
Piasceki Aircraft Corp.  
Precision Sheet Metal, Inc.  
**\*RHEEM MFG. CO., DEFENSE & TECHNICAL  
PRODUCTS DIV.**  
Ryan Aeronautical Co.  
Santa Anita Engr. Co.  
Twin Coach Co., Aircraft-Missiles  
Wheland Co., The  
Winder Aircraft Corp. of Florida

## RUNNING GEAR SYSTEMS

- Air-Borne Tractors
- Missile Launchers
- Missile Refuelers

**\*NEWAY EQUIPMENT CO.**

## SAFETY EQUIPMENT

Air Reduction Sales Co., Div.-Air Reduction Co., Inc.  
**\*AIRESEARCH MFG. CO., DIV.-THE GARRETT  
CORP.**  
Ampco Metal, Inc.  
Apex Reinforced Plastics, Div.-White Sewing Machine Corp.  
Aro Equipment Corp.  
**\*AVCO MFG. CORP., CROSLLEY DIV.**  
Aviation Textile Associates  
Copewell Mfg. Co.  
David Clark Co., Inc.  
Cooper Industries, Inc.  
Davis Instruments  
Electronic Control Corp.  
Ericson Mfg. Co., The  
Fisher Scientific Co.  
General Scientific Equipment Co.  
Gentex Corp.  
Hardman Tool & Engr. Co.  
**\*HAWKS DRINKING FAUCET CO.**  
Hamalite Corp., The  
Industrial Tools Mfg. Corp., Sub.-Pendleton Tool Industries, Inc.  
Johns-Manville  
Julian A. McDermott Corp.  
Medical Supply Co.  
Micro Switch, Div.-Minneapolis-Honeywell Reg. Co.  
Mine Safety Appliances Co.  
Pacific Scientific Co.  
Reinhold Engr. & Plastics Co.  
Roovers-Lotsch Corp.  
Rose Mfg. Co.  
Scott Aviation Corp.

Sperry Piedmont Co., Div.-Sperry Rand Corp.  
Stanley Aviation Corp.  
Washington Technological Associates Inc.  
Wintronic

## SALT BATHS

American Gas Furnace Co.  
**\*ASSOCIATED TESTING LABS., INC.**  
Gardner Laboratory, Inc.  
General Electric Co., Apparatus Sales Div.  
Hallikainen Instruments  
Hevi-Duty Electric Co.  
A. F. Halden Co., The  
Lindberg Engr. Co.  
Papesch & Kolstad, Inc.  
Sargeant & Wilbur Heat Treating Corp.  
Temperature Engr. Corp.

## SAPPHIRE CRYSTALS

See CRYSTALS, SAPPHIRE

## SATURABLE REACTORS

See REACTORS, SATURABLE

## SAWS

Aircraft Tools, Inc.  
Bergen Carbide Co.  
Black & Decker Mfg. Co., The  
Copewell Mfg. Co.  
Covel Mfg. Co.  
De Walt Tool Co., American Machine & Foundry Co.  
Hunter Tool Co.  
Narwalk Cutter Sharpening Co.  
Radial Cutter Mfg. Corp.  
Simonds Saw & Steel Co.  
Snap-on-Tools Corp.  
W. Whitney Stueck, Inc.  
Syntron Co.  
Transmares Corp.

## SCALES, OSCILLOSCOPE

Adept Industries Inc.  
Duralith Corp.

## SCANNERS, REFLECTED & TRANSMITTED LIGHT

E. W. Bliss Co.  
Gordan Enterprises  
Perkin-Elmer Corp.  
Philca Corp., Government & Industrial Div.  
Photobell Co., Inc.  
Plastic Age Sales, Inc.  
Singer Mfg. Co., The, Military Products Div.  
Telescope Mfg. Corp.

## SCOOFS

American Agile Corp.  
Barrett-Christie Co.  
Benson Mfg. Co., The  
**\*RHEEM MFG. CO., DEFENSE & TECHNICAL  
PRODUCTS DIV.**

## SCREW DRIVERS

Barrett-Christie Co.  
Billings & Spencer Co., The  
Burklyn Co.  
Chicago Pneumatic Tool Co.  
Farsberg Mfg. Co., The  
Gardner-Denver Co.  
Handicraft Tools, Inc., Div.-X-Acto, Inc.  
Hunter Tool Co.  
Jo-Line Tools, Inc.  
Kelsey-Hayes Co.  
J. E. Menaugh Co.  
Moody Machine Products Co., Inc.  
Overload Control Co.  
Owatanna Tool Co.  
Snap-on-Tools Corp.  
Stanley-Judd Div.-The Stanley Works  
J. H. Williams & Co.

## SCREW, MACHINE PRODUCTS

ACF Industries Inc.  
Abalon Precision Mfg. Corp.  
Abbott Screw & Mfg. Co.  
Actuator Products Div., Geartronics Corp.  
Adam Metal Supply Inc.  
Aero Bolt & Screw Co., Inc.  
Airdome Parts Co.  
All Specs Corp.  
Allied Plastics Supply Corp.  
Allmetal Screw Products Co., Inc.  
Alpine Electronic Components, Inc.  
Aluminum Co. of America  
Amatom Electronic Hardware Co. Inc.  
American Hinge Corp.  
American Screw Co.  
American Standard Products, Inc.  
Anti-Corrosive Metal Products Co., Inc.  
Anray Aircraft Associates, Inc.  
Atlas Screw & Specialty Co.  
Auburn Spark Plug Co., Inc.  
Baldwin Mfg. Co., Inc., The  
Ball Machine Products Co., The  
Bar-Wark Mfg. Co., Inc.  
Bergen Carbide Co.  
Best Aircraft Corp.  
Bland Burner Co., The  
Bristol Co., The  
Capital City Mfg. Co.

Carmac Aviation  
Century Fasteners Corp.  
Chemplast, Inc.  
Chicago Screw Co., The, Div.-Standard Screw Co.  
Coaxial Connector Co., Inc.  
Columbia Nut & Bolt Co., Inc.  
Corbin Products Div.  
Curtiss-Wright Corp.-Wright Aeronautical Div.  
Dockendorf & Co., Inc.  
Eastern Specialty Co., The  
Electrical Insulation Co., Inc.  
Electronic Parts Mfg. Co., Inc.  
Federal Screw Products Inc.  
Farsberg Mfg. Co., The  
GAR Mfg. Corp.  
Gae Engrg. Co.  
Gardon Enterprises  
Hamilton Watch Co.-Industrial Div.

**\*HARTFORD MACHINE SCREW CO., DIV.-STANDARD SCREW CO.**

Harvey Aluminum  
Hi-Lo Manufacturing Corp.  
L. S. Mfg. Co.  
Lamsom & Sessions Co., The  
Litton Industries, U.S. Engrg. Co., Div.  
Lucas Aircraft Supply Co.  
Lux Clack Mfg. Co., Inc.  
J. E. Menough Co.  
Mercury Air Parts Co., Inc.  
Mercury Tool & Mfg. Corp.  
Maran Co.  
J. I. Morris Co.  
Napoleon Products Co., The  
National Lock Co.  
National Screw & Mfg. Co., The  
Precision Shapes, Inc.  
Prospect Screw Machine Products  
Ravenna Metal Products, Div.-Standard Screw Co.  
Red Devil Mfg. Co.  
Research Development Mfg. Inc.  
C. F. Roark Welding & Engrg. Co., Inc.  
Scovill Mfg. Co.  
Seamless Products Co., Inc.  
Sinclair Mfg. Co.  
Skinner Precision Products  
Sphinx-American Co.  
Standard Gage Co., Inc.  
Standard Pressed Steel Co.  
Stanley-Judd Div.-The Stanley Works  
Star Stainless Screw Co.  
Swift Jewel Co.  
Trioair Products Corp.  
United Mfg. Co., The  
U. S. Industries, Inc.  
Vemoline Products Co.  
Western Automatic Machine Screw Co., Div.-Standard Screw Co.  
Westfield Metal Products Co., Inc.  
J. H. Winn Inc.

**SCREWS, SELF-TAPPING**

Abbott Screw & Mfg. Co.  
Adom Metal Supply Inc.  
All Specs Corp.  
Allmetal Screw Products Co., Inc.  
American Screw Co.  
Anti-Corrosive Metal Products Co., Inc.  
Atlas Screw & Specialty Co.  
Barrett-Christie Co.  
Best Aircraft Corp.  
Calinoy-Div.-Illinois Tool Works  
Camcar Screw & Mfg. Co., Div.-Textron Industries, Inc.  
Century Fasteners Corp.  
Continental Screw Co.  
Corbin Products Div.  
Eaton Mfg. Co., Reliance Div.  
Federal Screw Products Inc.  
General American Transportation Corp.  
H. M. Harper Co.  
Holub Industries, Inc.  
Lomsom & Sessions Co., The  
Lucas Aircraft Supply Co.  
J. I. Morris Co.  
National Lead Co.  
National Lock Co.  
National Screw & Mfg. Co., The  
Star Stainless Screw Co.  
Thompson-Bremer & Co.  
Torrington Co., The  
Waldom Electronics Inc.

**SCREWS, SET**

Abbott Screw & Mfg. Co.  
Aero Bolt & Screw Co., Inc.  
All Specs Corp.  
Allen Mfg. Co.  
Allmetal Screw Products Co., Inc.  
Aluminum Co. of America  
American Screw Co.  
Anti-Corrosive Metal Products Co., Inc.  
Atlas Screw & Specialty Co.  
Barrett-Christie Co.  
Best Aircraft Corp.  
Bristol Co., The  
Calinoy-Div.-Illinois Tool Works  
Century Fasteners Corp.  
Chase Brass & Copper Co., Inc.  
Chicago Screw Co., The, Div.-Standard Screw Co.  
Corbin Products Div.  
Federal Screw Products Inc.  
H. M. Harper Co.

**\*HARTFORD MACHINE SCREW CO., DIV.-STANDARD SCREW CO.**

Lamsom & Sessions Co., The  
Lucas Aircraft Supply Co.  
Mercury Air Parts Co., Inc.  
J. I. Morris Co.  
National Lead Co.  
National Lock Co.  
National Screw & Mfg. Co., The  
PIC Design Corp., Sub.-Benrus Watch Co., Inc.  
Sphinx-American Co.  
Standard Pressed Steel Co.  
Star Stainless Screw Co.  
Waldom Electronics Inc.  
Western Automatic Machine Screw Co., Div.-Standard Screw Co.

**SCREWS, STANDARD**

Abbott Screw & Mfg. Co.  
Aero Bolt & Screw Co., Inc.  
Alden Products Co.  
All Specs Corp.  
Allen Mfg. Co.  
Allmetal Screw Products Co., Inc.  
Aluminum Co. of America  
American Screw Co.  
Anti-Corrosive Metal Products Co., Inc.  
Atlas Screw & Specialty Co.  
Best Aircraft Corp.  
Calinoy-Div.-Illinois Tool Works  
Camcar Screw & Mfg. Co., Div.-Textron Industries, Inc.  
Century Fasteners Corp.  
Chandler Products Corp.  
Chicago Screw Co., The, Div.-Standard Screw Co.  
Continental Screw Co.  
Corbin Products Div.  
Eaton Mfg. Co., Reliance Div.  
Federal Screw Products Inc.  
General American Transportation Corp.  
Hamilton Watch Co.-Industrial Div.  
H. M. Harper Co.

**\*HARTFORD MACHINE SCREW CO., DIV.-STANDARD SCREW CO.**

Hydro Molding Co., Inc.  
Lamsom & Sessions Co., The  
Lucas Aircraft Supply Co.  
National Lead Co.  
National Lock Co.  
National Screw & Mfg. Co., The  
PIC Design Corp., Sub.-Benrus Watch Co., Inc.  
Screw Corp.  
Star Stainless Screw Co.  
Torrington Co., The  
Waldom Electronics Inc.  
Western Automatic Machine Screw Co., Div.-Standard Screw Co.

**SEALERS, FUEL & OIL TANK**

Armstrong Cork Co.  
Carl H. Biggs Co.  
Borden Chemical Co.  
Curtiss-Wright Corp., Research Div.  
Delto Chemical Works, Inc.  
Dennis Chemical Co.  
Dresser Mfg. Div., Dresser Industries, Inc.  
Grant Chemical Co., Inc.  
Hydrodyne Corp., Skinner Seal Div.  
Johns-Manville  
Minnesota Mining & Mfg. Co.  
Minnesota Mining & Mfg. Co.-Adhesives, Coating & Sealers Div.  
Monogram Precision Industries  
Presstite Div., American-Marietta Products Research Co.  
**\*REDEL INC.**  
Thickal Chemical Corp.  
United Aircraft Products, Inc.  
United States Rubber Co.

**SEALERS, NUCLEAR**

Borden Chemical Co.  
Components Corp.  
Hydrodyne Corp., Skinner Seal Div.  
Parker Seal Co., Div.-Parker-Honifin Corp.  
United Aircraft Products, Inc.

**SEALERS, PROTECTIVE**

Armstrong Cork Co.  
Carl H. Biggs Co.  
Borden Chemical Co.  
Clover Industries, Inc.  
Devcon Corp.  
Dresser Mfg. Div., Dresser Industries, Inc.  
Finnell System, Inc.  
Grant Chemical Co., Inc.  
Johns-Manville  
Kelsey-Hoyes Co.  
Marblette Corp., The  
Minnesota Mining & Mfg. Co.  
Minnesota Mining & Mfg. Co.-Adhesives, Coating & Sealers Div.  
New England Tape Co., Div.-United-Corr Fastener Corp.  
Presstite Div., American-Marietta Products Research Co.  
Seal-Peel, Inc.  
Silicones Div.-Union Carbide Corp.  
Western Coating Co.

**SEALING, SERVICE, HERMETIC**

Electra-Seal Corp.  
Graflex Inc.  
Johns-Manville  
Mitrone Inc.  
Milton Ross Metals Co., The  
Selectric Switch & Relay Corp.  
Seal-Peel, Inc.  
Strat-o-Seal Mfg. Co.

**SEALS**

- a. Carbon
- b. Ceramic-to-Metal
- c. Dust Excluder
- d. Grease & Oil
- e. Hermetic & Pressurized
- f. Hydraulic
- g. Insulating
- h. Metal-to-Glass
- i. Missile
- j. Oil
- k. Pipe Joint
- l. Pump
- m. Pump-Mechanical
- n. Shaft
- o. Special Purpose

Advance Carbon & Electric Mfg. Co., a.  
Advanced Products Co., The, b, d, e, f, h thru k, a.  
Aero Gasket Corp., f, g, i.  
Aircraft Precision Products, Inc., i, n, a.  
Allegheny Ludlum Steel Corp., h.  
Allied Plastics Supply Corp., d, f, g, j thru a.  
Alloy Bellows Inc., l, n.  
Alloys Unlimited Inc., h.  
Amatom Electronic Hardware Co. Inc., c.  
American Aeroports, c, d, f, h, m.  
American Felt Co., c, d.  
American Lava Corp., b.  
American Optical Co. Instrument Div., h.  
Amphenol Connector Div., Amphenol-Borg Electronics Corp., h.  
Anchor Packing Co., The, i, n.  
Armite Labs.  
Associated Engrg. & Mfg. Corp., h.  
Astronautics Engrg. Co., a.  
Atmo Seal Co., h.  
Auburn Mfg. Co., The, c, f thru i, k, l, a.  
B G Corp., The, b.  
Bacon Industries, Inc., g.  
Barrett-Christie Co., k, l, m.  
Bellofram Corp., e, f, i, a.  
Carl H. Biggs Co., b, h, i, j, n, a.  
J. Bishop & Co., Platinum Works, h.  
Bonny Mfg. Corp., g, o.  
Borden Chemical Co., h.  
Byron-Jackson Pumps Inc., f, l thru a.  
Capitol City Mfg. Co., b, f, i, j, n, o.  
Corbone Corp., The, a, m, n.  
Carborundum Co., Lotrobe Plant, Refractories Div., b, e, g, h, o.  
Carborundum Co., Refractories Div., b, e, h.  
Cartriseal Corp., a thru f, i, j, l thru a.  
Centrolab, Div.-Globe-Union, b, l, m.  
Ceramoseal, Inc., b, h.  
Chemplast, Inc., f, g, l thru a.  
Chicago Gasket Co., g, m, o.  
Chicago Rawhide Mfg. Co., a thru d, f, i, j, l thru a.  
Chicago-Allis Mfg. Corp., c, d, j, n.  
Cleveland Graphite Bronze, Div.-Clevite Corp., a, j, m, n.  
Cover Industries, Inc., c.  
Components Corp., d, e, f, i thru m.  
C. Lee Cook Co., Airtomic Products Div., a, d, f, i, j, l thru o.  
Corning Glass Works, b, h.  
Crane Packing Co., d, f, j thru n.  
Curtiss-Wright Corp., Research Div., b, g.  
Dodge Electric Co., Inc., b, e, h.  
C. R. Daniels, Inc., d.  
Delto Chemical Works, Inc., a, b, f, h, k, a.  
Demorony-Bonardi, h.  
Devcon Corp., b, g, h, k, a.  
Diamonite Products Mfg. Co., a.  
**\*DIVERSEY ENGRG. CO., i, a.**  
Dixon Corp., a.  
Dresser Mfg. Div., Dresser Industries, Inc., f.  
Durometallic Corp., a, b, m, n.  
Firestone Tire & Rubber Co., The, Guided Missile Div., f.  
Fischer & Porter Co., h.  
Fluorocarbon Co., The, c thru g, i thru n.  
Frenchtown Porcelain Co., b.  
Furone Plastics, Inc., b, e thru h, j, k.  
Fusite Corp., g, h.  
Garde Mfg. Co., e.  
Gits Brothers Mfg. Co., a thru d, j, l thru a.  
Glodding, McBean & Co., b.  
Gloss Engrg. Div. Brown-Knecht-Heimann Co., h.  
Glosseal Products Co., Inc., b, h.  
B. F. Goodrich Aviation Products, e.  
Grant Chemical Co., Inc., g, h, k, a.  
Graphite Metallizing Corp., o, d, j, l thru a.  
Greene, Tweed & Co., a thru a.  
B. H. Hadley, Inc., i.  
Halogen Insulator & Seal Corp., f.  
Hoskie Engrg. & Supply Co., f, j.  
Helwig Carbon Products, Inc., a.  
High Vacuum Equipment Corp., a.  
Holex, Inc., b.  
E. F. Houghton & Co., f.  
Houghton Laboratories, Inc., h.  
Huntington Rubber Mills, c.



hydrodyne Corp., Skinner Seal Div., a, b, d, e, f, h, i, j, l thru o.  
 Integral Corp., f.  
 oclin Mfg. Co., d, e, f, i, j, l thru o.  
 ohms-Manville, b thru h, j thru o.  
 onmetal Inc., a.  
 entucky Metal Products Co., a.  
 oppers Co., Inc., Metal Products Div., n.  
 ear, Inc., Lear-Romec Div., l, m, n.  
 erner, Inc., c thru f, i thru o.  
 itan Engrg. Labs., b.  
 ivingston Electronic Corp., e, h.  
 achine Products Div., New Haven Trap Rock Co., n.  
 agnetic Seal Corp., a thru d, i, j, l thru o.  
**MCCORMICK SELPH ASSOCIATES, h.**  
 etallizing Co. of Los Angeles Inc., b.  
 etals & Controls Corp., General Plate Div., b, h.  
 etoplast Co. Inc., b, h.  
 innesato Mining & Mfg. Co., b, c, h, i.  
 innesato Rubber Co., c thru f, i, l thru o.  
 itronics Inc., b.  
 oran Co., e, o.  
 organtite, Inc., a.  
 otional Beryllia Corp., b.  
 otional Utilities Corp., a.  
 etworks Electronic Corp., e, g, h, i, o.  
 ortan Co., New Products Dept., b, m.  
 ) & S Research, Inc., h.  
 sia Carbon Co., The, a, d, l, n.  
 il-Dyne, Inc., f, l.  
 rchard Industries, Inc., Actianflex Div., i, n, o.  
 rctic Universal Products Corp., h.  
 orker Seal Co., Div.-Parker-Hannifin Corp., c thru f, i thru n.  
 lastic Age Sales, Inc., b.  
 olymer Corp., Th, g, i, o.  
 oducts Research Co., h, o.  
 orts Toledo Rubber Co., The, d, f, l, o.  
 iltan Rass Metals Co., The, b, e, g, h.  
 ubber Teck Inc., d, e, f, k, o.  
 ubbercraft Corp. of California, c, g.  
 y, Marys Carbon Co., a, d, f, g, i, l thru o.  
 chlegel Mfg. Co., c, h, o.  
 ealectric Switch & Relay Corp., e.  
 ealor Corp., a, d, e, f, i thru o.  
 ilicone Seals, Inc., e.  
 orta Mfg. Co., Div.-U.S. Ceramic Tile Co., a.  
 eptial Projects Lab., Food Machinery & Chemical Corp., l.  
 eptially Plug & Cap. Co., c, o.  
 eackplate Carbon Co., a.  
 ein Seal Co., a, d, i, m, n, o.  
 yntron Co., i, m, n, o.  
 ermal Refractories Corp., b.  
 hermech Engrg. Corp., c thru g, i thru o.  
 ronics Corp., b, o.  
 nited Aircraft Products, Inc., d, e, f, i thru m, o.  
 . S. Hommered Piston Ring Co., Inc., d, f, i, l, o.  
 nited States Rubber Co., c, d, i, k.  
 ocium Research Co., a.  
 ickers Inc., Marine & Drdnonce Dept., Mochinery  
 ydraulics Div., l.  
 icator Mfg. & Gasket Co., o thru d, i, l thru o.  
 orren Components, Div.-EL-Tronics, Inc., h.  
 nzen Research Inc., e.  
 -Pando Corp., b, c, f, k.  
 ephor Mills Inc., g, k, o.

#### SELECTIVE CALLING APPARATUS

arker Soles Co.  
 endix Radio Div., Bendix Aviation Corp.  
 ollins Radio Co.  
 u Kone Corp.  
 D.E.A., Inc.  
 EM Electronics Corp.  
 onsky & Boiley, Inc.  
 otorolo Inc., Military Electronics Div.  
 otional Pneumatic Co., Inc., Holtzer-Cobot Divs.  
 hilco Corp., Government & Industrial Div.  
 inger Mfg. Co., The, Military Products Div.  
 lectro Industries Corp.

#### S.F.-LOCKING NUTS

ee NUTS, SELF-LOCKING

#### S.F.-TAPPING SCREWS

ee SCREWS, SELF-TAPPING

#### SISING DEVICES

**\*AIRESEARCH MFG. CO., DIV.-THE GARRETT CORP.**  
 mericon Instrument Co., Inc.  
 mericon Machine & Foundry Co., Government Products Group  
 mericon Machine & Foundry Co., Greenwich  
 ro Equipment Corp.  
 ionic Instrument Corp., Sub.-American  
 lectronics Inc.  
 oird-Atomic, Inc.  
 endix Aviation Corp., Friez Instrument Div.  
 ristal Co., The  
 handler Evons Corp.  
 hicago Aerial Industries, Inc.  
 . L. Collins Corp.  
 onsolidated Diesel Electric Corp.  
 onner Scientific Co.  
 ostman Kodok Co.  
 erguson, Gerneshousen & Grier, Inc.  
 lectro Products Laboratories, Inc.  
 eneral Precision Lab. Inc.  
 . M. Giannoni & Co., Inc.

B. F. Goodrich Aviation Products  
 Hoffman Electronics Corp., Semiconductor Div.  
 Hughes Tool Co., Aircraft Div.  
 ITT Labs.  
 Inertia Switch, Inc.  
**\*KEARFOIT CO., INC.**  
 Land-Air Inc.  
 Lear, Inc., Grand Rapids Div.  
 Libroscope Inc.  
 Massa Div.-Cohu Electronics, Inc.  
 Mergenthaler Linotype Co.  
 Minco Products, Inc.  
 Mine Safety Appliances Co.  
 Minneapolis-Honeywell Regulator Co., Industrial  
 Product Group

Motorola Inc., Military Electronics Div.  
 Ohio Semiconductors, Inc.  
 Pacific Scientific Co.  
 Peschel Electronics, Inc.  
 Philco Corp., Government & Industrial Div.  
 Photobell Co., Inc.  
 Power-Tronic Systems Inc.  
 Radiation, Inc.  
 Revere Corp. of America  
 Arthur C. Ruge Associates, Inc.  
 Sargent Engrg. Corp.  
 Servomechanisms, Inc.  
 Shannon Luminous Materials Co.  
 Sheffield Corp., The, Sub.-Bendix Aviation Corp.  
 Specialties, Inc.  
 Standard-Thomson Corp., Clifford Mfg. Co. Div.  
 Stanley Aviation Corp.  
 Tapco Corp., Thompson-Ramo-Wooldridge Inc.  
 Trans-sonics, Inc.  
 U.S. Science Corp., Div.-Tapp Industries, Inc.  
 Victory Engrg. Corp.  
 Washington Technological Associates Inc.  
 Waste King Corp., Technical Products Div.  
 Webcar, Inc., Government Div.  
 Westronics Inc.

#### SEPARATION DEVICES

Aircraft Armaments, Inc.  
**\*AIRESEARCH MFG. CO., DIV.-THE GARRETT CORP.**  
 American Machine & Foundry Co., Government  
 Products Group  
 Atlantic Research Corp.  
 Beckman & Whitley, Inc., Missile Products Div.  
 Bendix Filter Div., Bendix Aviation Corp.  
 Cooper Development Corp., Sub.-Marquardt Aircraft  
 Co.  
**\*ELECTROSNAP CORP.**  
 Essex Mfg. Co., Inc.  
 Gemisco, Inc.  
 Halex, Inc.  
 Warner Lewis Co., Div.-Fram Corp.  
 Newbrook Machine Corp.  
 Precision Sheet Metal, Inc.  
 Raymond Engrg. Lab., Inc.  
 Reinhold Engrg. & Plastics Co.  
 M. H. Rhodes, Inc.  
 Selos Corp. of America  
 Sheffield Corp., The, Sub.-Bendix Aviation Corp.  
 Stanley Aviation Corp.  
 Thiokol Chemical Corp., Hunter-Bristol Div.

#### SEPARATORS, OIL

**\*AIRESEARCH MFG. CO., DIV.-THE GARRETT CORP.**  
 Aro Equipment Corp.  
 Bendix Utico Div., Bendix Aviation Corp.  
 Briggs Filtration Co., The  
 Hormon Equipment Co.  
 Lear Inc., Lear-Romec Div.  
 Newbrook Machine Corp.  
 Purolator Products Inc.  
 Selos Corp. of America  
 Shorples Corp., The  
 Sterling Precision Corp., Instrument Div.  
 United Aircraft Products, Inc.

#### SERVICING EQUIPMENT, BATTERY

See BATTERY SERVICING EQUIPMENT

#### SERVD MECHANISM CONTROL SYSTEMS

ACF Industries Inc.  
 Aero Supply Mfg. Inc.  
 Aeroflex Corp., The, Aeroflex Labs. Div.  
 Aerono Mfg. Corp., Baltimore Facility  
 Air Logistics Corp.  
 Airborne Accessories Corp.  
**\*AIRESEARCH MFG. CO., DIV.-THE GARRETT CORP.**  
 Amelco, Inc.  
 American Bosch Armo Corp.  
 American Electronics, Incorporated  
 American Machine & Foundry Co., Government  
 Products Group  
 American Machine & Foundry Co., Greenwich  
 American Measurement & Control, Inc.  
 Armo Div., American Bosch Armo Corp.  
 Astronautics Engrg. Co.  
 Atlontic Instrument Corp., Sub.-American Electronics,  
 Inc.  
 Atlas Precision Products, Co.  
 Avien, Inc.  
 Barber-Colman Co.  
 Beaver Precision Products Inc.  
 Bell Aircraft Corp., Niagara Frontier Div.  
 Belock Instrument Corp.  
 Bendix Aviation Corp., Eclipse-Pioneer Div.

#### \*BENDIX AVIATION CORP., HAMILTON DIV.

Bendix-Pacific Div., Bendix Aviation Corp.  
 Bendix Radio Div., Bendix Aviation Corp.  
 Bogue Electric Mfg. Co.  
 Bristol Co., The  
 Bulow Electric Co.  
 CDC Control Services, Inc.  
 Cadillac Gage Co.  
 Carmody Corp.  
 Cedar Engrg. Div.-Control Data Corp.  
 Centronix Inc.  
 Chalco Engrg. Corp.  
 Chandler Evans Corp.  
 Clifton Precision Products Co., Inc.  
 Consolidated Controls Corp.  
 Consolidated Diesel Electric Corp.  
 Crescent Engrg. & Research Co.  
 Curtiss-Wright Corp., Propeller Div.  
 Curtiss-Wright Corp., Research Div.  
 Dalmator Div., Yuba Consolidated Industries, Inc.  
 Doystrom Pacific Div.-Doystrom, Inc.  
 Doystrom Transcoil Div., Doystrom Inc.  
 Delco-Remy Div., General Motors Corp.  
 Donner Scientific Co.  
 Dresser Industries, Inc.  
 Dumont Aircraft Fitting Co.  
 Eastern Industries Inc.  
 Electro Precision Corp.  
 Electronic Communications, Inc.  
 Emerson Electric Mfg. Co., The, Electronics &  
 Avionics Div.  
 Exact Engrg. & Mfg. Inc.  
 FAE Instrument Co.  
 Fairchild Astrionics Div., Fairchild Engine & Air-  
 plane Corp.  
 J. W. Fecker, Inc.  
 Feedback Controls, Inc.  
 Ford Instrument Co., Div.-Sperry Rand Corp.  
 General Electric Co., Apparatus Sales Div.  
 General Electric Co., Missile & Space Vehicle Dept.  
 G. M. Giannoni & Co., Inc.  
 Graflex Inc.  
 Greer Hydraulics, Inc.  
 Guided Missile Div.-DeHovilland Aircraft of Canada,  
 Ltd.  
 Gulton Industries, Inc.  
 Hallam Electronic Co.  
 Hamilton Standard, Div.-United Aircraft Corp.  
 Haskel Engrg. & Supply Co.  
 Helipat Div.-Beckman Instruments Inc.  
 Hoffman Labs. Div., Hoffman Electronics Corp.  
 Hoover Electric Co.  
 Walter J. Hyott Co., The  
 Hydra-Power Corp.  
 Inertia Switch, Inc.  
 Integral Corp.  
 Intercontinental Dynamics Corp.  
 Interstate Engrg. Corp.  
 Jordan Co., Inc., The  
**\*KEARFOIT CO., INC.**  
 Kelsey-Hoyes Co.  
 Kemp Aero Products  
 Walter Kidde & Co., Inc., Aviation Div.  
 Land-Air Inc.  
 Lear, Inc.  
 Lear, Inc., Grand Rapids Div.  
 Lear, Inc., Lear-Romec Div.  
 Libroscope Inc.  
 Ling Electronics, Inc.  
 Litton Industries, Maryland Div.  
 Mergenthaler Linotype Co.  
 Micro Gee Products, Inc.  
 Minneapolis-Honeywell Regulator Co., Aeronautical  
 Div.  
 Minneapolis-Honeywell Regulator Co., Industrial  
 Div.  
 Minneapolis-Honeywell Regulator Co., Industrial  
 Product Group  
 Minneapolis-Honeywell Regulator Co., Ordnance  
 Div.  
 Moog Valve Co., Inc.  
 Moron Instrument Corp.  
 Natl. Water Lift Co., Div.-Cleveland Pneumatic  
 Industries, Inc.  
 Networks Electronic Corp.  
 Northrop Corp.  
 Dize Elevator Co., Electronic Div.  
 Dzone Metal Products Corp.  
 PIC Design Corp., Sub.-Benrus Watch Co., Inc.  
 Philco Corp., Government & Industrial Div.  
 Power-Tronic Systems Inc.  
 Radiation, Inc.  
 Reeves Instrument Corp.  
 Reflectone Corp., The  
 Reinhold Engrg. & Plastics Co.  
 Republic Aviation Corp.  
 Royal Industries, Inc.  
 Sanders Associates, Inc.  
 Sargent Engrg. Corp.  
 Servo Corp. of America  
 Servomechanisms, Inc.  
 Singer Mfg. Co., The, Military Products Div.  
 Specialties, Inc.  
 Spectrol Electronics Corp.  
 Sperry Fo-roguet Co., Div.-Sperry Rand Corp.  
 Stanley Aviation Corp.  
 Sterling Precision Corp., Instrument Div.  
 Strotos, Div.-Fairchild Engine & Airplane Corp.  
 Suffolk Products Corp.  
 Summers Gyroscope Co.  
 Sun Electric Corp., Aeronautical Div.  
 Systems Inc.  
 Tolley Corp., The  
 United Shoe Machinery Corp., Ordnance Dept.

U. S. Science Corp., Div.-Topp Industries, Inc.  
Vard Inc.  
Vickers Inc., Div.-Sperry Rand  
Vickers, Inc., Marine & Ordnance Dept., Machinery  
Hydraulics Div.  
Waldorf Electronics Div.-F.C. Huyck & Sons  
Webcar, Inc., Government Div.  
Western Gear Corp.  
Westinghouse Electric Corp.  
Weston Hydraulics Ltd.-Sub., Borg-Warner Corp.  
Westronics Inc.  
Wintronic

#### SERVOS, MEASUREMENT

Air Logistics Corp.  
American Electronics, Incorporated  
American Machine & Foundry Co., Government  
Products Group  
American Measurement & Control, Inc.  
Atlas Precision Products, Co.  
Avien, Inc.  
B & H Instrument Co., Inc.  
Bristol Co., The  
Bulow Electric Co.  
Chandler Evans Corp.  
Datron Electronics, Div.-Mid-Continent Mfg., Inc.  
Daystrom Pacific Div.-Daystrom, Inc.  
Daystrom Transcinal Div., Daystrom Inc.  
Electro Precision Corp.  
Exact Engrg. & Mfg. Inc.  
FAE Instrument Corp.  
Feedback Controls, Inc.  
General Electric Co., Apparatus Sales Div.  
G. M. Giannini & Co., Inc.  
Graflex Inc.  
Hamilton Standard, Div.-United Aircraft Corp.  
Helipad Div.-Beckman Instruments Inc.  
Hoover Electric Co.  
\*KEARFOTT CO., INC.  
\*WALLACE O. LEONARD, INC.  
Minneapolis-Honeywell Regulator Co., Industrial Div.  
Minneapolis-Honeywell Regulator Co., Industrial  
Product Group  
Moran Instrument Corp.  
F. L. Maseley Co.  
New England Scientific Instruments Co.  
Norwood Controls Unit Detroit Controls Div.  
Philco Corp., Government & Industrial Div.  
Power-Tronic Systems Inc.  
Reeves Instrument Corp.  
Royal Industries, Inc.  
Serva Corp. of America  
Servomechanisms, Inc.  
Stratos, Div.-Fairchild Engine & Airplane Corp.  
Sun Electric Corp., Aeronautical Div.  
Telechrome Mfg. Corp.  
Western Gear Corp.  
Weston Hydraulics Ltd.-Sub., Borg-Warner Corp.  
Westronics Inc.

#### SET SCREWS

See SCREWS, SET

#### SEXTANTS, PERISCOPE TYPE

Baird-Atomic, Inc.  
A. Biederman, Inc.  
Gordon Enterprises

#### SHAFT EXTENSIONS

See EXTENSIONS, SHAFT

#### SHAFT REDUCERS

See REDUCERS, SHAFT

#### SHAFTS, FLEXIBLE

Actuator Products Div., Geartronic Corp.  
American Aeroparts  
Barrett-Christie Co.  
Bendix Utica Div., Bendix Aviation Corp.  
Birnback Radio Co., Inc.  
Bud Radio Inc.  
Carmac Aviation  
B. W. Elliott Mfg. Co., Inc.  
E. F. Johnson Co.  
Leair, Inc.  
Lear, Inc., Grand Rapids Div.  
Parts Engrg. Co., Inc.  
Standard-Thomson Corp., Clifford Mfg. Co. Div.  
F. W. Stewart Corp.  
Strong Scott Mfg. Co., The

#### SHAFTS, RIGID

Amatam Electronic Hardware Co. Inc.  
American Aeroparts  
Atlas Precision Products, Co.  
Baldwin Mfg. Co. Inc., The  
Birnback Radio Co., Inc.  
Bruce Engrg. Co.  
Butler Mfg. Co.  
Carmac Aviation  
Curtiss-Wright Corp.-Wright Aeronautical Div.  
Finn Aeronautical Div., T. R. Finn & Co., Inc.  
Highland Rim Machine Works Inc.  
International-Nickel Co., The  
E. F. Johnson Co.  
Konarr Corp.  
Kelsey-Hayes Co.  
Kling Metal Spinning & Stamping Co.  
Ladish Co.  
\*LAVELLE AIRCRAFT CORP.

#### \*LAVEZZI MACHINE WORKS

Mercury Air Parts Co., Inc.  
Mercury Tool & Mfg. Corp.  
PIC Design Corp., Sub.-Benrus Watch Co., Inc.  
Pisceski Aircraft Corp.  
Research Development Mfg. Inc.  
\*RHEEM MFG. CO., DEFENSE & TECHNICAL  
PRODUCTS DIV.  
Joseph T. Ryerson & Son, Inc.  
St. Regis Paper Co., Panelyte Div.  
Strong Scott Mfg. Co., The  
C. W. Tarngren Co., Inc.  
Tube-Turns Div., Chemetron Corp.  
United Mfg. Co., The  
Western Gear Corp.  
Western Iron & Foundry Co., Inc.

#### SHAFTS, TURBINES

See Turbine Shafts

#### SHEET METAL PARTS

ACF Industries Inc.  
A & P Metal Products Mfg. Corp.  
Abalon Precision Mfg. Corp.  
Aeradex, Inc.  
Aeranca Mfg. Corp.  
Ainslie Corp.  
Brooks & Perkins, Inc.  
Conco Engrg. Works  
Cornell Deep Drawing Co., Div.-Lones Industries  
Corp.  
Curtiss-Wright Corp., Santa Barbara Div.  
Dahlstrom Metallic Door Co.  
Detranic Industries  
Dow Chemical Co., The  
Droyer-Hanson Div., National-U. S. Radiator Corp.  
Dresser Industries, Inc.  
Aircraft Tools, Inc.  
Alpitem, Inc.  
Aluminum Co. of America  
Amatam Electronic Hardware Co. Inc.  
Amitec Aeroparts  
American Aluminum Co.  
American Machine & Foundry Co., Government Pro-  
ducts Group  
Anchor Metal Spinning Co., The  
Arnalt Corp.  
B. H. Aircraft Co., Inc.  
Benson Mfg. Co., The  
Bergen Corbide Co.  
Brooks & Perkins, Inc.  
Bruce Engrg. Co.  
Bud Radia Inc.  
Byrne Doors Inc.  
California Aircraft Products  
Carmac Aviation  
Centronix Inc.  
Colonial Aircraft Corp.  
Electric Heater Co., The  
Electro-Mechanical Products Co.  
Eljay Corp.  
Elzee Metal Products Co., Inc.  
Essex Mfg. Co., Inc.  
Farwell Metal Fabricating  
Ferris-Mfg. Co., The  
Fletcher Mfg. Co., Inc., The  
\*FLEXONICS CORP., AERONAUTICAL DIV.  
Fleeter Laboratory, Inc.  
Gasket Mfg. Co., Inc.  
Gordon Enterprises  
Green Rectifier Co.  
Hardman Tool & Engrg. Co.  
Highland Rim Machine Works Inc.  
Houston Fearless Corp.  
Hufford Corp., The  
Hughes Tool Co., Aircraft Div.  
Philip A. Hunt Co.  
Hupp Aviation Co.  
Intercontinental Mfg. Co., Inc.  
\*JANITROL AIRCRAFT DIV., SURFACE  
COMBUSTION CORP.  
Kaiser Aircraft & Electronics, Div.-Kaiser Industries  
Corp.  
C. B. Kaupp & Sons, Inc.  
Kelsey-Hayes Co.  
Kirk & Blum Mfg. Co., The  
\*LAVEZZI MACHINE WORKS  
Leitch-Huard Corp.  
Lofstrand Co., The  
Langren Aircraft Co., Inc.  
R. H. Lynch Mfg. Co.  
Lyncoach & Truck Co. Inc.  
Mercury Tool & Mfg. Corp.  
Metal-Glass Products Co.  
Mid-West Metal Products, Inc.  
\*MIRAX CHEMICAL PRODUCTS CORP., METAL  
CONTAINER DIV.  
Manogram Precision Industries  
Manrovia Aviation Corp.  
Mueller Brass Co.  
Newbrauk Machine Corp.  
Nuclear Products-Era Div.-ACF Industries, Inc.  
Opelika Welding, Machine & Supply Inc.  
Peerless Products Industries  
Penn-Michigan Mfg. Corp.  
Pisceski Aircraft Corp.  
Portland Copper & Tank Works Inc.  
Precision Sheet Metal, Inc.  
R & R Engrg. Co.  
Radiatronics, Inc.  
Red Lion Cabinet Co., Redco Tool Div.  
Edw. Renneburg & Sons Co.

Rimak, Inc.  
C. F. Roark Welding & Engrg. Co., Inc.  
Rahr Aircraft Corp.  
Roll Formed Products Co.  
Ryan Aeronautical Co.  
Ryan Anito Engrg. Co.  
Snow Metal Products Corp.  
Skyline Electric & Mfg. Co.  
Skyline Products, Inc.  
Specialties Mfg. Co., Inc.  
Stainless Steel Products, Inc.  
Sylvania Electric Products Inc., Parts Div.  
Roland Teiner Co., Inc.  
Teiner Engrg. Corp.  
Transue & Williams Steel Forging Corp.  
Turbo Products, Inc.  
Twig Industries  
United Aircraft Products, Inc.  
United States Chemical Milling Corp.  
Universal Metal Products Inc.  
Variety Aircraft Corp.  
Wayne Foundry & Stamping Co.  
Westbury Electronics Inc.  
Western ARC Welding, Inc.  
Woolf Aircraft Products, Inc.

#### SHEETS, METAL CLAD

See METAL CLAD SHEETS

#### SHEETS, METAL CLAD, PRINTED CIRCUIT

American Printed Circuits Co., Inc.  
Electrical Insulation Co., Inc.  
Etched Products Corp.  
Ferris-Mfg. Co., The  
Formica Corp.  
Franklin Fibre-Lamitex Corp.  
General Plastics Corp. of New Jersey  
Glodding, McBean & Co.  
L. Painte Industries Inc.  
Mica Insulator Div.-Minnesota Mining & Mfg., Co.  
Miller Dial & Nameplate Co.  
Minnesota Mining & Mfg. Co.  
National Vulcanized Fibre Co.  
New England Laminates Co., Inc.  
Northern Plastics Corp.  
Pilgrim Products Inc.  
Ragers Corp.  
Taylor Fibre Co.  
United States Chemical Milling Corp.

#### SHEETS, MOLYBDENUM

Bram Metallurgical & Chemical Co.  
Delta Chemical Works, Inc.  
Elmet Div.-North American Philips Co., Inc.  
Finn Aeronautical Div., T. R. Finn & Co., Inc.  
General Electric Co., Lamp Metals & Components  
Dept.  
Metals & Controls Corp., General Plate Div.  
Universal-Cyclaps Steel Corp.  
Westinghouse Electric Corp., Metals Plant

#### SHELTERS, TRAILERS, VANS

Ace Engrg. & Machine Co., Inc.  
Aeranca Mfg. Corp.  
American Car & Foundry, Div.-ACF Industries, Inc.  
Applied Design Co.  
Berger Brothers Co., The  
Birdair Structures, Inc.  
Brooks & Perkins, Inc.  
Butler Mfg. Co.  
Cormody Corp.  
Colonial Aircraft Corp.  
Cooper Development Corp., Sub.-Marquardt Aircraft  
Co.  
Craig Systems, Inc.  
Dresser Industries, Inc.  
Fruehauf Trailer Co., Military Equipment Div.  
Goodyear Aircraft Corp.  
Gramm Trailer Corp.  
Ludwig Harold Mfg. Co.  
Lyncoach & Truck Co. Inc.  
Magline Inc.  
Metal-Glass Products Co.  
\*MIRAX CHEMICAL PRODUCTS CORP., METAL  
CONTAINER DIV.  
Manogram Precision Industries  
Manrovia Aviation Corp.  
Nuclear Products-Era Div.-ACF Industries, Inc.  
Opelika Welding, Machine & Supply Inc.  
Perfection Industries, Div.-Hupp Corp.  
Pisceski Aircraft Corp.  
Red Lion Cabinet Co., Redco Tool Div.  
Trailmobile Inc.  
Turbo Products, Inc.  
United Aircraft Products, Inc.  
Welded Construction Inc.  
Winzen Research Inc.

#### SHIELDING

- Cathode Ray Tube
- Coil
- Electrostatic
- Heat
- Ignition
- Lead
- Lead, Nuclear
- Magnetic
- Radiation
- Radiation, Nuclear
- Rubber
- Sheet or Screen

m. Solid  
 n. Transformer  
 o. Tube

Acc Engrg. & Machine Co., Inc., b, k, l.  
 ACF Industries Inc., i, j.  
 Aerojet-General Corp., d.  
 Alloys Unlimited Inc., g.  
 Alpha Metals, Inc., f.  
 Alpitec, Inc., h, i, j.  
 American Brass Co., The, c.  
 American Smelting & Refining Co., f, g, i, j.  
 Atlas E-E Corp., o.  
 Auburn Mfg. Co., The, e, k.  
 Auburn Spark Plug Co., Inc., e.  
 Augat Brothers, Inc., o.  
 Bar-Ray Products, Inc., f, g, i, j.  
 Belmont Smelting & Refining Works, Inc., f, g, i, j.  
 Birnbach Radio Co., Inc., e.  
 Birtcher Corp., The, o.  
 Borden Chemical Co., e.  
 Breeze Corporations, Inc.  
 Braaks & Perkins, Inc., i, j.  
 Brush Beryllium Co., The, i, j.  
 Connecticut Hard Rubber Co., The, k.  
 Co-Operative Industries, Inc., e.  
 Corning Glass Works, i, j.  
 Crystal-X Corp., j, l.  
 Curtiss-Wright Corp., Research Div., i, j.  
 Dean Products, Inc., d, i.  
 Devcan Corp., f, g, k.  
 Division Lead Co., f, g, i, j, l, m.  
 Dynacor, Inc., h.  
 Edgerton, Gerneshausen & Grier, Inc., o, j.  
 Elco Corp., o.  
 Electrical & Mechanical Design Co., e.  
 Electronic Tube Corp., o.  
 Emerson & Cuming, Inc., i, j.  
 Farrell Birmingham Co. Inc., f, g, i, j.  
 Flexible Metal Hase Mfg. Co.  
 Furane Plastics, Inc., i, j, k, m, n.  
 Gladding, McBean & Co., i, j.  
 Goodyear Tire & Rubber Co., The, Aviation Products Div., i, k.  
 Hallett Mfg., Co., b thru j.  
 Hayward Scientific Glass Corp., i.  
 Huntington Rubber Mills, k.  
 International Electronic Research Corp., o.  
 Jan Hardware Mfg. Co., Inc., o, h, n, o.  
 Jansky & Bailey, Inc., i.  
 Johns-Manville, d, l, o.  
 Johns-Manville Sales Corp., d, i, j.  
 E. F. Johnson Co., o.  
 Kling Metal Spinning & Stamping Co., n, o.  
 Lithium Corp. of America, Inc., i, j, l, m.  
 Magnetic Shield Div. Perfection Mica Co., o, b, g, m, n.  
 Magnetics Inc., o, b, h, o.  
 P. R. Mallory & Co. Inc., i, j, m.  
 McMillan Industrial Corp., i, l, m.  
 J. E. Menaugh Co., e.  
 Metal Textile Corp., Electronics Div., a thru e, h, n, o.  
 Metaplast Ca. Inc., c.  
 Methode Mfg. Corp., o.  
 Minnesota Mining & Mfg. Co., d, l.  
 National Beryllia Corp., d, i, j, o.  
 National Lead Co., f, g, i, j.  
 New York Rubber Corp., k.  
 Newark Wire Cloth Co., e, l.  
 Norton Ca., d, i, j.  
 Nuclear-Chicago Corp., g, i, j.  
 Omega Electronic Corp., o, h, n, o.  
 R & R Engrg. Co., j.  
 Radiation Instrument Development Lab., Inc., j.  
 Ray Proof Corp., o, c, g, i, l, l.  
 Rimak, Inc., o, b, h, n, o.  
 Rubbercraft Corp. of California, k.  
 Ryan Aeronautical Co., d, j.  
 St. Regis Paper Co., Panelyte Div., l.  
 Shielding Inc., c, h, l, m.  
 Stover Co., Inc., The, b, f, g, k, o.  
 Swedlaw Inc., d.  
 Teiner Engrg. Corp., o, o.  
 Teletra Industries Corp., i, j.  
 Topotron, Inc., c, h, l, m.  
 Tronter Mfg., Inc., d.  
 Universal Unlimited, Inc., o, i.  
 Warren Wire Co., e.  
 Waterman Products Co., Inc., o.  
 Western Tool & Mfg. Co., The, i, j.  
 Westinghouse Electric Corp., Metals Plant, h.  
 Zippertubing Co., The, c thru i, l, o.

**HELOS, LEAD**  
 Alloys Unlimited Inc.  
 Alpha Metals, Inc.  
 American Smelting & Refining Co.  
 Anchor Metal Ca. Inc.  
 Belmont Smelting & Refining Works, Inc.  
 Devcan Corp.  
 Division Lead Ca.  
 Elco Corp.  
 Emerson & Cuming, Inc.  
 Farrell Birmingham Co. Inc.  
 Hallett Mfg., Co.  
 Hayward Scientific Glass Corp.  
 National Lead Ca.  
 Nuclear-Chicago Corp.  
 Ray Proof Corp.  
 Star Expansion  
 Stover Co., Inc., The  
 Zippertubing Co., The

**SHIMS, ADJUSTING**  
 Acme Mfg. & Gasket Co.  
 Aero Gasket Corp.  
 American Silver Ca.  
 Auburn Mfg. Ca., The  
 Gasket Mfg. Ca. Inc.  
 General Gasket Inc.  
 \*LAMINATEO SHIM CO.  
 PIC Design Corp., Sub.-Benrus Watch Ca., Inc.  
 Staver Ca., Inc., The  
 TA Mfg. Corp.  
 Wilmington Fibre Specialty Co.  
 Wrought Washer Mfg., Ca.

**SHIMS, LAMINATEO**  
 Aera Gasket Corp.  
 Allied Plastics Supply Corp.  
 Alloys Unlimited Inc.  
 American Aeroparts  
 American Aluminum Ca.  
 Auburn Mfg. Ca., The  
 Electrical Insulation Co., Inc.  
 Emerson Plastics Corp.  
 Gasket Mfg. Co. Inc.  
 General Box Ca.  
 Jadee Plastics Ca.  
 \*LAMINATEO SHIM CO.  
 Metals & Controls Corp., General Plate Div.  
 PIC Design Corp., Sub.-Benrus Watch Co., Inc.  
 Pacific Cut Washer Co.  
 Silicane Insulation, Inc.  
 Stover Ca., Inc., The  
 TA Mfg. Corp.

**SHIPPING CONTAINERS**  
 Alca Products, Inc.  
 Allison Steel Mfg. Co.  
 American Car & Foundry, Div.-ACF Industries, Inc.  
 American Machine & Foundry Ca., Government Products Group  
 American Machine & Foundry Co., Greenwich Applied Design Ca.  
 Arnolt Corp.  
 Bosca Metal Products, Inc.  
 Carmady Corp.  
 Champion Ca., The  
 Clark Equipment Co.  
 Clover Industries, Inc.  
 Continental Technical Service, Inc.  
 Crystal-X Corp.  
 Curtiss-Wright Corp., Santa Barbara Div.  
 Dresser Mfg. Div., Dresser Industries, Inc.  
 FWD Corp.  
 Federal Shack Mount Corp.-Div. The Korfund Ca., Inc.  
 Fruehout Trailer Ca., Military Equipment Div.  
 General Box Ca.  
 Goodyear Aircraft Corp.  
 Hardman Tool & Engrg. Ca.  
 Ludwig Harold Mfg. Co.  
 Intercontinental Mfg. Co., Inc.  
 Jeta, Inc.  
 Jet-Heat, Inc.  
 M. W. Kellogg Co., The  
 Kirk & Blum Mfg. Ca., The  
 H. Koch & Sons  
 Lofstrand Ca., The  
 Lyan Van & Storage Ca., Aircraft Div.  
 \*MIRAX CHEMICAL PRODUCTS CORP., METAL CONTAINER DIV.  
 Monogram Precision Industries  
 Piasecki Aircraft Corp.  
 Partland Copper & Tank Works Inc.  
 Precision Sheet Metal, Inc.  
 Pressed Steel Tank Co.  
 Pry Welding & Mfg., Inc.  
 \*RHEEM MFG. CO., DEFENSE & TECHNICAL PRODUCTS DIV.  
 Roberts Industries Inc.  
 Thiokol Chemical Corp.  
 Vendorlotor Mfg. Co.  
 Washington Technological Associates Inc.  
 Weber Aircraft Corp.  
 Zippertubing Co., The

**SHOCK ABSORBER CORO & RINGS**  
 American Aeroparts  
 J. W. Johnson & Co., Inc.

**SHOCK ABSORBER LANOING GEAR**  
 American Aeroparts  
 \*BENOIX PRODUCTS DIV., BENOIX AVIATION CORP.  
 Cleveland Pneumatic Industries, Inc.  
 Colonial Aircraft Corp.  
 Electral Inc.  
 Garrett Corp., The, Air Cruisers Div.  
 Hydra-Power Corp.  
 J. W. Johnson & Co., Inc.  
 Menasca Mfg. Co.  
 Ranson Hydraulic Units Corp.  
 Taylor Devices, Inc.  
 U. S. Industries, Inc.  
 Washington Technological Associates Inc.

**SHOCK MOUNTS**  
 American Aeroparts  
 American Machine & Foundry Co., Government Products Group

American Machine & Foundry Co., Greenwich  
 Anchor Metal Spinning Co., The  
 Applied Design Ca.  
 \*AVCO MFG. CORP., CROSLLEY DIV.  
 Barry Controls Inc.  
 Bushings, Inc.  
 Capital City Mfg. Co.  
 Champion Ca., The  
 Cleveland Pneumatic Industries, Inc.  
 Collins Engrg. Corp.  
 Cooper Industries, Inc.  
 Crown Controls Ca., Inc.  
 Daw-Elco, Inc.  
 Federal Shack Mount Corp.-Div. The Korfund Ca., Inc.  
 Finn Aeronautical Div., T. R. Finn & Co., Inc.  
 B. F. Goodrich Industrial Products Ca.  
 Johns-Manville  
 J. W. Johnson & Co., Inc.  
 Lord Mfg. Co.  
 MB Mfg. Co.  
 \*MIRAX CHEMICAL PRODUCTS CORP., METAL CONTAINER DIV.  
 Orchard Industries, Inc., Actianflex Div.  
 Pacific Scientific Co.  
 Robinson Technical Products, Inc.  
 Rubbercraft Corp. of California  
 Taylor Devices, Inc.  
 Western Felt Works & Acadia Synthetic Products Div.

**SHOCK TUBES**  
 American Instrument Ca., Inc.  
 Anchor Metal Spinning Ca., The  
 Astravac Corp.  
 Cleveland Pneumatic Industries, Inc.  
 Dresser Industries, Inc.  
 Electric Steel Foundry Ca.  
 General Electric Co., Apparatus Sales Div.  
 Orchard Industries, Inc., Actianflex Div.  
 Rubbercraft Corp. of California  
 U. S. Industries, Inc.  
 Zippertubing Co., The

**SHOCK TUNNELS**  
 Astrovac Corp.  
 General Electric Ca., Apparatus Sales Div.  
 Partland Copper & Tank Works Inc.  
 Edw. Renneburg & Sons Ca.  
 Zippertubing Ca., The

**SHOCK & VIBRATION MOUNTINGS**  
 See MOUNTINGS, VIBRATION & SHOCK

**SHOWERS, DRENCH & PORTABLE ORENCH**  
 \*HAWS DRINKING FAUCET CO.

**SHUNTS, METER**  
 American Aeroparts  
 Avo Ltd.  
 Beede Electrical Instrument Ca. Inc.  
 General Electric Co., Apparatus Sales Div.  
 Janca Corp.  
 Minneapolis-Honeywell Regulator Co., Industrial Product Group  
 National Electronics  
 Precision Development Corp.  
 Precision Resistor Ca. Inc.  
 Simpson Electric Co.  
 H. W. Sullivan Ltd.  
 Weston Instruments, Div.-Daystrom, Inc.

**SHUTTERS, MICROWAVE**  
 Aircam Inc. of New Jersey  
 Airtran Inc., Div.-Littan Industries  
 Bogart Mfg. Corp.  
 Douglas Microwave Ca., Inc.  
 FXR, Inc.  
 J-V-M Microwave Ca.  
 Monogram Precision Industries  
 Motorola Inc., Military Electronics Div.  
 Omega Labs., Inc.  
 Radar Design Corp.  
 Telerad Mfg. Corp.  
 Waveline, Inc.

**SIGNAL TRACERS**  
 See TRACERS, SIGNAL

**SIGNALLING DEVICES**  
 American Machine & Foundry Co., Government Products Group  
 Barker Sales Co.  
 Bendix Radio Div., Bendix Aviation Corp.  
 Bil-Jax Inc.  
 Centranix Inc.  
 DBM Research Corp.  
 Drymatic Corp.  
 General Precision Lab. Inc.  
 Graflex Inc.  
 JEM Electronics Corp.  
 Kemlite Laboratories, Inc.  
 Karry Mfg. Co.  
 Leatronics, Inc.  
 Motorola Inc., Military Electronics Div.  
 Philco Corp., Government & Industrial Div.  
 Teletra Industries Corp.  
 Transistor Electronics Corp.  
 United Control Corp.  
 Vitro Labs.  
 Webcor, Inc., Government Div.

## SILVER PASTE

Alloys Unlimited Inc.  
All-State Welding Alloys Co., Inc.  
American Silver Co.  
DBM Research Corp.  
B. F. Drexler & Co., Inc.  
Eastern Smelting & Refining Corp.  
Engelhard Industries, Inc.  
Micro-Circuits Co.  
Joseph E. Podgor Co., Inc.

## SKID & SLED CONNECTORS See CONNECTORS, SKID & SLED

## SIMULATORS, FLIGHT

ACF Industries Inc.  
American Machine & Foundry Co., Government Products Group  
American Missile Products Co., Inc.  
Bell Aircraft Corp., Niagara Frontier Div.  
Belock Instrument Corp.  
Bendix Computer, Div.-Bendix Aviation Corp.  
Burton-Rodgers, Inc.  
California Technical Industries, Div.-Textron Inc.  
Centronix Inc.  
Chalco Engrg. Corp.  
Colorado Research Corp.  
Curtiss-Wright Corp., Electronics Div.  
Donner Scientific Co.  
Electro-Mechanical Products Co.  
Emerson Electric Mfg. Co., The, Electronics & Avionics Div.  
Fairchild Astrionics Div., Fairchild Engine & Airplane Corp.  
Federal Mfg. & Engrg. Corp.  
Federal Scientific Corp.  
Gillilan Bros. Inc.  
Goodyear Aircraft Corp.  
ITT Federal Div., International Telephone & Telegraph Corp.  
ITT Labs.  
International Radiant Corp.  
Kaiser Aircraft & Electronics, Div.-Kaiser Industries Corp.  
Marquardt Aircraft Co.  
Micro Gee Products, Inc.  
Motorola Inc., Military Electronics Div.  
Nuclear Products-Erco Div.-ACF Industries, Inc.  
Otis Elevator Co., Electronic Div.  
Philco Corp., Government & Industrial Div.  
Piasecki Aircraft Corp.  
Power-Tronic Systems Inc.  
Radiation, Inc.  
Ramo-Woolldridge Div., Thompson-Ramo-Woolldridge of Calif.  
Reflectone Corp., The  
**\*RHEEM MFG. CO., DEFENSE & TECHNICAL PRODUCTS DIV.**  
Tapco Group, Thompson-Ramo-Woolldridge, Inc.  
Task Corp.  
Telectro Industries Corp.  
Transyene Corp.  
Waldorf Electronics, Div.-F. C. Huyck & Sons  
Westgate Lab., Inc.

## SLEEVES, METALLIC

Airdome Parts Co.  
American Aluminum Co.  
American Brake Shoe Co.  
American Standard Products, Inc.  
Ampco Metal, Inc.  
Anchor Metal Spinning Co., The  
Atlantic Instrument Corp., Sub.-American Electronics, Inc.  
B. H. Aircraft Co., Inc.  
Baldwin Mfg. Co., Inc., The  
Capital City Mfg. Co.  
Carmac Aviation  
Century Fasteners Corp.  
Diversey Engrg. Co.  
Division Lead Co.  
Dresser Mfg. Div., Dresser Industries, Inc.  
Electric Steel Foundry Co.  
Haynes Stellite Co., Div.-Union Carbide Corp.  
Kirk & Blum Mfg. Co., The  
Kolcast Industries-Div. Thompson Ramo Woolldridge Inc.  
Mercury Tool & Mfg. Corp.  
Metal Textile Corp., Electronics Div.  
Mitrronics Inc.  
Edw. Renneburg & Sons Co.  
Rimak, Inc.  
St. Marys Carbon Co.  
Sinclair Mfg. Co.  
Smith-Morris Corp.  
Specialty Engrg. & Electronics Co.  
Stanley-Judd Div.-The Stanley Works  
Tube-Turns Div., Chemtron Corp.  
United Mfg. Co., The  
Wilmington Fibre Specialty Co.  
Zippertubing Co., The

## SLEEVES, NON-METALLIC

Aeroquip Corp., Jackson Div.  
Allied Plastics Supply Corp.  
Amatom Electronic Hardware Co. Inc.  
American Brake Shoe Co.  
Auburn Mfg. Co., The  
Auburn Spark Plug Co., Inc.  
Birnbach Radio Co., Inc.  
William Brand & Co., Inc.

Carmac Aviation  
Centralab, Div.-Globe-Union  
Chemplast, Inc.  
Chicago Gasket Co.  
Continental Diamond Fibre Corp.  
Continental Rubber Works  
Crystal-X Corp.  
Diamonite Products Mfg. Co.  
Duramic Products, Inc.  
Electrical Insulation Co., Inc.  
Emerson Plastics Corp.  
Emmco Plastic Fabricators - Div.-E. M. McCarthy Machine Co.  
Franklin Fibre-Lamitex Corp.  
General Gasket Inc.  
General Plastics Corp. of New Jersey  
Gering Products, Inc.  
Gladding, McBean & Co.  
Graphite Metallizing Corp.  
Isolanite Mfg. Corp.  
Jessell Plastics  
Jodee Plastics Co.  
Johns-Manville  
Lamtex Industries, Inc.  
M & Q Plastic Products  
J. E. Menough Co.  
Metal Textile Corp., Electronics Div.  
Mica Insulator Div.-Minnesota Mining & Mfg. Co.  
Minnesota Mining & Mfg. Co.  
National Beryllia Corp.  
National Utilities Corp.  
New England Tape Co., Div.-United-Corr Fastener Corp.

Orchard Industries, Inc., Actionflex Div.  
Penn Fibre & Specialty Co., Inc.  
Pilgrim Products Inc.  
Polymer Corp., The  
Resistoflex Corp.  
Rubbercraft Corp. of California  
St. Marys Carbon Co.  
Sanford Plastics Corp.  
Silicone Insulation, Inc.  
Sinclair Mfg. Co.  
Sparta Mfg. Co., Div.-U.S. Ceramic Tile Co.  
United Mfg. Co., The  
United States Rubber Co.  
Varflex Corp.  
Wilmington Fibre Specialty Co.  
Wire Co. of America, Inc.  
Zippertubing Co., The

## SLEEVES, TUBE

Airdome Parts Co.  
All Specs Corp.  
Allied Plastics Supply Corp.  
Ampco Metal, Inc.  
Anchor Metal Spinning Co., The  
Arnov Aircraft Associates, Inc.  
B. H. Aircraft Co., Inc.  
**\*BEATON & CORBIN MFG. CO., THE**  
William Brand & Co., Inc.  
Bridgeport Brass Co.  
Capital City Mfg. Co.  
Carmac Aviation  
Centralab, Div.-Globe-Union  
Century Fasteners Corp.  
Continental Diamond Fibre Corp.  
Crown Controls Co., Inc.  
Dresser Mfg. Div., Dresser Industries, Inc.  
Electric Steel Foundry Co.  
General Cement Mfg. Co., Div.-Textron, Inc.  
Kolcast Industries-Div. Thompson Ramo Woolldridge Inc.  
Lamtex Industries, Inc.  
M & Q Plastic Products  
Metal Textile Corp., Electronics Div.  
Minnesota Mining & Mfg. Co.  
Monogram Precision Industries  
Orchard Industries, Inc., Actionflex Div.  
Penn Fibre & Specialty Co., Inc.  
Raybestos-Manhattan, Inc., Pa.  
Sanford Plastics Corp.  
Silicone Insulation, Inc.  
Stanley-Judd Div.-The Stanley Works  
Sylvania Electric Products Inc., Parts Div.  
Varflex Corp.  
Zippertubing Co., The

## SLEEVING

Aeroquip Corp., Jackson Div.  
Allied Plastics Supply Corp.  
Ampco Metal, Inc.  
Anchor Metal Spinning Co., The  
Birnbach Radio Co., Inc.  
William Brand & Co., Inc.  
Capital City Mfg. Co.  
Carmac Aviation  
Centralab, Div.-Globe-Union  
Chemplast, Inc.  
Division Lead Co.  
Federal Machine Co. Inc.  
General Cement Mfg. Co., Div.-Textron, Inc.  
General Plastics Corp. of New Jersey  
Johns-Manville  
Lamtex Industries, Inc.  
Minnesota Mining & Mfg. Co.  
Natvar Corp.  
New England Tape Co., Div.-United-Corr Fastener Corp.  
Permacel  
Polymer Corp., The  
Raybestos-Manhattan, Inc., Pa.

Sanford Plastics Corp.  
Sparta Mfg. Co., Div.-U.S. Ceramic Tile Co.  
Spectra-Strip Wire & Cable Corp.  
Varflex Corp.  
Zippertubing Co., The

## SLIDES

Capital City Mfg. Co.  
Chassis-Trak, Inc.  
Grant Pulley & Hardware Corp.  
Monogram Precision Industries  
Precision Shapes, Inc.  
Stanley-Judd Div.-The Stanley Works  
Universal Metal Products Inc.  
Watson Mfg. Co., Inc.

## SLIDES, INDUSTRIAL

American Machine & Foundry Co., Greenwich  
Grant Pulley & Hardware Corp.  
Precision Shapes, Inc.  
Universal Metal Products Inc.  
Watson Mfg. Co., Inc.

## SLIDING LOADS, MICROWAVE

Aircorn Inc. of New Jersey  
Bogart Mfg. Corp.  
Demomay-Bonardi  
Douglas Microwave Co., Inc.  
F.R.R., Inc.  
ITT Labs.  
Lieco, Inc.  
Meridian Metalcraft, Inc.  
Microlab  
Monogram Precision Industries  
N.R.K. Mfg. & Engrg. Co.  
Narda Microwave Corp., The  
Omega Labs., Inc.  
Sage Labs., Inc.  
Telerod Mfg. Corp.  
Waveline, Inc.

## SLIP RING ASSEMBLIES

Advance Carbon & Electric Mfg. Co.  
American Machine & Foundry Co., Government Products Group  
American Machine & Foundry Co., Greenwich  
Anderson Machine & Tool Co.  
Atlantic Instrument Corp., Sub.-American Electronics, Inc.  
Breeze Corporations, Inc.  
Collectron Corp.  
Electro Development Co.  
Electro Tec Corp.  
Electro-Mechanical Products Co.  
Electro-Miniatures Corp.  
Engelhard Industries, Inc.  
Engelhard Industries Inc., D. E. Makepeace Div.  
Graphite Metallizing Corp.  
Iron Fireman Mfg. Co., Electronics Div.  
Kelsey-Hayes Co.  
Magnetic Controls Co.  
Metals & Controls Corp., General Plate Div.  
Motorola Inc., Military Electronics Div.  
J. M. Ney Co., The  
Northrop Corp.  
Pacific Scientific Co.  
Piasecki Aircraft Corp.  
Milton Ross Metals Co., The  
Schaevitz Engrg.  
Slip Ring Co. of America  
Superior Carbon Products, Inc.  
Union Products, Inc.  
U. S. Science Corp., Div.-Topp Industries, Inc.

## SLOTTED LINES See LINES, SLOTTED

## SMALL BLOWERS See BLOWERS, SMALL

## SNIPS

Hunter Tool Co.  
H. K. Porter Co., Inc.  
Snap-on-Tools Corp.

## SOLDER

- a. Aluminum
- b. Indium
- c. Lead-Tin
- d. Platinum
- e. Printed Circuit
- f. Rings & Prefrms
- g. Silver

Curtiss-Wright Corp., Research Div.  
DBM Research Corp., g  
Dalweld Co. Inc., a, f, g  
Delta Chemical Works, Inc., a thru g  
Division Lead Co., b, c, e, f  
M. W. Dunton Co., Inc., The, c, e, f, g  
Eastern Smelting & Refining Corp., d, g  
Accurate Specialties Co. Inc., a thru g  
Adam Metal Supply Inc., a  
Alloys Unlimited Inc., a thru d, f, g  
All-State Welding Alloys Co., Inc., a, f, g  
Alpha Metals, Inc., a, b, c, e, f  
Aluminum Co. of America, a  
American Brazing Alloys Co., a, f, g  
American Silver Co., d, f, g  
American Smelting & Refining Co., a, b, c, e  
American Solder & Flux Co., a

Anchar Metal Co. Inc., a thru g.  
Barker Sales Co., a  
Barrett-Christie Co., a, c  
Belmont Smelting & Refining Works, Inc., a, b, c, f, g.  
Bow Solder Products Co., Inc., a, b, c, e, f.  
Chase Brass & Copper Co., Inc., c, g.  
Chemalloy Electronics Corp., a  
Engelhard Industries, Inc., g.  
General Cement Mfg. Co., Div.-Textron, Inc., e.  
Globe Automatic Sprinkler Div., The Fyr-Fyter Co., c.

Indium Corp. of America, The, b, f.  
Johnson Mfg. Co., Inc., a, c, f.  
London Chemical Co., Inc., c, e, g.  
Metallizing Co. of Los Angeles Inc., a.  
Metals & Controls Corp., General Plate Div., d, g.  
Mico Instrument Co., c.  
Mueller Sales Co., c, g.  
Multicare Sales Corp., c, g.  
National Lead Co., c.  
New York Solder Co., Inc., c.  
Savage-Rowe Plating Co., Inc., c.  
Standard Metals Corp., f, g.  
Staver Co., Inc., The, f.  
Teiner Engrg. Corp., a, b, c.  
United Wire & Supply Corp., f, g.  
Wildberg Bros. Smelting & Refining Co., d, g.

#### OLDER POTS

American Gas Furnace Co.  
Barrett-Christie Co.  
Dee Electric Co.  
Delto Chemical Works, Inc.  
Eisler Engrg. Co., Inc.  
Electro-Tech Equipment Co.  
General Electric Co., Apparatus Sales Div.  
Special Instruments Div., British Industries Corp.  
Temperature Engrg. Corp.  
Woage Electric, Inc.

#### OLDERING EQUIPMENT, PRINTED CIRCUIT

Dee Electric Co.  
Division Lead Co.  
Ideal Industries, Inc.  
Ranshoff, Co.  
Edward Segal  
Unger Electric Tools, Inc.

#### OLDERING EQUIPMENT, ULTRASONIC

Gulton Industries, Inc.  
Massa Div.-Cohu Electronics, Inc.  
Wye Industries

#### OLDERING GUNS

Barrett-Christie Co.  
Bow Solder Products Co., Inc.  
Electro-Tech Equipment Co.  
Fisher Scientific Co.  
Ideal Industries, Inc.  
Metallizing Co. of Los Angeles Inc.  
Snap-on-Tools Corp.  
Unger Electric Tools, Inc.

#### OLDERING IRONS

American Electrical Heater Co.  
Barrett-Christie Co.  
Bow Solder Products Co., Inc.  
Electro-Tech Equipment Co.  
Fisher Scientific Co.  
General Electric Co., Apparatus Sales Div.  
Ideal Industries, Inc.  
Linde Co., Div.-Union Carbide Corp.  
National Specialties Co., Inc.  
M. M. Newman Corp.  
Selas Corp. of America  
Snap-on-Tools Corp.  
Unger Electric Tools, Inc.

#### OLDERING IRON STANDS

American Electrical Heater Co.  
Barrett-Christie Co.  
Unger Electric Tools, Inc.

#### OLDERING IRON TIPS

American Electrical Heater Co.  
Barrett-Christie Co.  
Chase Brass & Copper Co., Inc.  
Electro-Tech Equipment Co.  
National Specialties Co., Inc.  
M. M. Newman Corp.  
Snap-on-Tools Corp.  
Unger Electric Tools, Inc.

#### OLDIDS

a. Control  
b. Linear  
c. Rotary  
d. Sub-Miniature

A.P.W. Co., a, b, d  
Amelco, Inc., a  
American Aeroparts, b, c  
American Measurement & Control, Inc., a thru d  
Applied Dynamics Corp., a, b  
Artisan Electronics Corp., a, b  
Automatic Electric Sales Corp., b  
Automatic Switch Co., a  
Automation Instruments Inc., a

#### \*BENDIX PRODUCTS DIV., BENDIX AVIATION CORP., a

Bendix-Pacific Div., Bendix Aviation Corp., b.  
Caltron Products Co., a  
\*CANNON ELECTRIC CO., b, d  
Carnthers & Fernandez, Inc., a thru d  
Coils-Electronics, b.  
Cole-Hershe Co.  
Comar Electric Co., b, d  
Control Circuits Inc.  
Controls Co. of America, b.  
Cutler-Hammer Inc., a  
Dolmotor Div., Yuba Consolidated Industries, Inc., b.  
Dynamic Controls Corp., a, b, d  
Electric Auto-Lite Co., The, a  
Electro-Mechanical Products Co., a  
Electro-Mechanical Specialties Co., Inc., a, c, d  
Electro-Tech Equipment Co., a, b  
Forbes & Wagner, Inc.  
General Electric Co., Apparatus Sales Div., a  
Gordon Enterprises, a, b, c  
Gordian Electric Mfg. Co., a thru d  
Hamilton Standard, Div.-United Aircraft Corp., a, b  
Hoover Electric Co., a thru d  
Induction Motors Corp., a, b, d  
Integral Corp., a  
Jack & Heintz, Inc., b  
Johnson Electronics Inc., b  
\*KOONTZ-WAGNER ELECTRIC CO., INC., a, b, d  
Lond-Air Inc., c  
Lear, Inc., Grand Rapids Div., d  
Leatronics, Inc., a thru d  
G. H. Leland, Inc., c  
G. W. Lisk Co., Inc., a, b, d  
Meletron Corp., b  
Modelectric Products Corp., d  
National Pneumatic Co., Inc., Holtzer-Cobot Div., a, b  
E. V. Naybor Labs., Inc., b, d  
P. S. P. Engrg. Co., Div.-Induction Motors Corp., b, d  
Penn Keystone Corp., d  
Pickering & Co., Inc., a thru d  
Douglas Randall Inc., o, b  
Tolley Corp., The, a, b, c  
Telectro Industries Corp., b  
Tranco Products, Inc., b  
Trombeta Solenoid Corp., a, b  
United Aircraft Products, Inc., a, b, c, d  
U. S. Reley Co., a, b  
Webcor, Inc., Government Div., a thru d  
Wheeler Electronic Corp., Sub-Sperry Rand Corp., a  
Winatic Corp., The, a, b, d  
Z & W Mfg. Corp., b.

#### \*KOONTZ-WAGNER ELECTRIC CO., INC., a, b, d

#### \*LEARNER ELECTRIC CO., INC., a, b, d

#### \*LEONARD ELECTRIC CO., INC., a, b, d

#### \*LEONARD ELECTRIC CO., INC., a, b, d

#### \*LEONARD ELECTRIC CO., INC., a, b, d

#### \*LEONARD ELECTRIC CO., INC., a, b, d

#### \*LEONARD ELECTRIC CO., INC., a, b, d

#### \*LEONARD ELECTRIC CO., INC., a, b, d

#### \*LEONARD ELECTRIC CO., INC., a, b, d

#### \*LEONARD ELECTRIC CO., INC., a, b, d

#### \*LEONARD ELECTRIC CO., INC., a, b, d

#### \*LEONARD ELECTRIC CO., INC., a, b, d

#### \*LEONARD ELECTRIC CO., INC., a, b, d

#### \*LEONARD ELECTRIC CO., INC., a, b, d

#### \*LEONARD ELECTRIC CO., INC., a, b, d

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#### \*LEONARD ELECTRIC CO., INC., a, b, d

#### \*LEONARD ELECTRIC CO., INC., a, b, d

#### \*LEONARD ELECTRIC CO., INC., a, b, d

#### \*LEONARD ELECTRIC CO., INC., a, b, d

#### \*LEONARD ELECTRIC CO., INC., a, b, d

#### \*LEONARD ELECTRIC CO., INC., a, b, d

#### \*LEONARD ELECTRIC CO., INC., a, b, d

#### \*LEONARD ELECTRIC CO., INC., a, b, d

#### \*LEONARD ELECTRIC CO., INC., a, b, d

#### \*LEONARD ELECTRIC CO., INC., a, b, d

#### \*LEONARD ELECTRIC CO., INC., a, b, d

#### \*LEONARD ELECTRIC CO., INC., a, b, d

#### \*LEONARD ELECTRIC CO., INC., a, b, d

#### \*LEONARD ELECTRIC CO., INC., a, b, d

Roytheon Mfg. Co., Government Equipment Div.  
Rohm & Haas Co., Redstone Arsenal Research Div.  
Sangamo Electric Co.  
Stromberg-Carlson Div.-General Dynamics Corp.  
Thiokol Chemical Corp.  
Westinghouse Electric Corp.

#### SOUND EQUIPMENT TURNTABLES

See TURNTABLES, SOUND EQUIPMENT

#### SOUND REPRODUCTION EQUIPMENT BRUSHES

See BRUSHES, SOUND REPRDUCTION EQUIPMENT

#### SOUND SYSTEMS, COMPLETE

Centronix Inc.  
Du Kane Corp.  
Executone, Inc.  
ITT Labs.  
ITT-Kelllogg  
Lane Electronics Mfg. Corp.  
Ling Electronics, Inc.  
Midwestern Instruments, Inc.  
Philco Corp., Government & Industrial Div.  
Teiner Engrg. Corp.  
Telectro Industries Corp.  
University Loudspeakers, Inc.  
Webcor, Inc., Government Div.

#### SOUNDING GRENADES

\*AMERICAN PD TASH & CHEMICAL CORP.

#### SPACERS

Aero Bolt & Screw Co., Inc.  
Allied Plastics Supply Corp.  
American Aeroparts  
Auburn Mfg. Co., The  
Capital City Mfg. Co.  
Century Fasteners Corp.  
Crystal-X Corp.  
Diversey Engrg. Co.  
Electro-Mechanical Products Co.  
Garde Mfg. Co.  
General Gasket Inc.  
Hupp Aviation Co.  
Lodish Co.  
Litton Industries, U.S. Engrg. Co., Div.  
Mercury Tool & Mfg. Corp.  
Mid-West Metal Products, Inc.  
Stover Co., Inc., The

#### SPADE BOLTS

See BDLTS, SPADE

#### SPEAKER COILS

See COILS, SPEAKER

#### SPEAKER CONES

See CONES, SPEAKER

#### SPEAKER GRILLE CLDTHS

See CLDTHS, SPEAKER GRILLE

#### SPEAKER GRILLS

See GRILLS, SPEAKER

#### SPEAKER PROJECTOR HORNS

See HORNS, SPEAKER PROJECTOR

#### SPEAKERS

Barker Sales Co.  
Duton Co., Inc.  
Electronic Applications, Inc.  
General Coil Products Corp.  
Jensen Mfg. Co.  
Ling Electronics, Inc.  
Oxford Components, Inc.  
Perkin-Elmer Corp.  
Perry Plastics, Inc.  
Philco Corp., Government & Industrial Div.  
University Loudspeakers, Inc.  
Zenith Radio Corp.

#### SPECIAL DEVICES

\*McCDRMICK SELPH ASSOCIATES

#### SPECIAL PURPOSE COLDRIMETERS

See COLDRIMETERS, SPECIAL PURPOSE

#### SPECTROMETERS

American Electronic Labs., Inc.  
Applied Research Labs., Inc.  
\*BAUSCH & LOMB OPTICAL CD.  
Beckman-Scientific & Process Instruments Div.  
Central Scientific Co.  
Consolidated Electrodyamics Corp.  
Davidson Mfg., Co., Inc.  
\*ENGIS EQUIPMENT CD.  
Epic, Inc.  
Fisher Scientific Co.  
General Electric Co., X-Ray Dept.  
General Electrodynamics Corp.  
Gianinni Plasmadyne Corp.  
Jarrell-Ash Co.  
Nuclear-Chicago Corp.  
Perkin-Elmer Corp.  
Process & Instruments  
Radiation Instrument Development Lab., Inc.  
Varian Associates

**SPECTROGRAPHIC INSTRUMENTS, PHOTOGRAPHIC MATERIALS**  
See **PHOTOGRAPHIC MATERIALS, SPECTROGRAPHIC INSTRUMENTS**

**SPECTROPHOTOMETERS**

American Electronic Labs., Inc.  
Applied Physics Corp.  
\***BAUSCH & LOMB OPTICAL CO.**  
Beckman-Scientific & Process Instruments Div.  
Bristol Co., The  
Central Scientific Co.  
\***ENGIS EQUIPMENT CO.**  
Fisher Scientific Co.  
General Electric Co., Apparatus Sales Div.  
Giannini Plasmadyne Corp.  
Jarell-Ash Co.  
Perkin-Elmer Corp.  
Process & Instruments

**SPECTROSCOPIC EQUIPMENT**

\***BAUSCH & LOMB OPTICAL CO.**  
Consolidated Electrodynamics Corp.  
\***ENGIS EQUIPMENT CO.**  
Fisher Scientific Co.  
General Electric Co., X-Ray Dept.  
Giannini Plasmadyne Corp.  
Gardner Enterprises  
Jarell-Ash Co.  
Land-Air Inc.  
New England Scientific Instruments Co.  
Perkin-Elmer Corp.

**SPLICING EQUIPMENT**

Kinevax Div.-Electromation Co.  
Minnesota Mining & Mfg. Co.  
Robins Industries Corp.  
Shepard Laboratories, Inc.

**SPOT WELDERS**

See **WELDERS, SPOT**

**SPOTTING CHARGES**

\***AMERICAN POTASH & CHEMICAL CORP.**

**SPRING SUSPENSION SYSTEMS**

\***NEWAY EQUIPMENT CO.**

**SPRINGS**

- a. Antenna Tension
- b. Grounding Antenna
- c. Hardware
- d. Instrument Hairsprings
- e. Knob
- f. Precision

Ace Spring Mfg. Co., Inc., a, b, c, e, f.  
Amatom Electronic Hardware Co. Inc., c.  
American Aeroparts, a thru f.  
American Steel Foundries, Hammond Div.  
W. L. Barrett Co., The, a thru f.  
Birnbach Radio Co., Inc., a thru f.  
California Spring Co., Inc., a thru e.  
John Chatillon & Sons, d, f.  
Consolidated Controls Corp., f.  
Consolidated Diesel Electric Corp., f.  
General Cement Mfg. Co., Div.-Textron, Inc., e.  
Gerbet Hairspring Co., d.  
Gordon Enterprises, d, f.  
Hunter Spring Co., Div.-American Machine & Metals, Inc., f.  
Leetronics, Inc., a, b, e, f.  
J. E. Menough Co., f.  
Mid-West Spring Mfg. Co., f.  
Minnesota Mining & Mfg. Co.  
\***MIRAX CHEMICAL PRODUCTS CORP., METAL CONTAINER DIV.**  
J. M. Ney Co., The, f.  
PIC Design Corp., Sub.-Benrus Watch Co., Inc., d, e, f.  
Pisasecki Aircraft Corp.  
Reliable Spring & Wire Forms Co., a, b, c, e, f.  
Rockwell-Standard Corp., c, f.  
Skinner Precision Products  
Sphinx-American Co., d, f.  
Stanley-Judd Div.-The Stanley Works, a thru f.  
Swiss Jewel Co., d.  
Wind Turbine Co., a.

**SPROCKETS, FILM**

\***LAVEZZI MACHINE WORKS**

**SQUIBS**

Aerogel-General Corp.  
Atlantic Research Corp.  
Bendix-Pacific Div., Bendix Aviation Corp.  
Components Corp.  
Dynamic Devices, Inc.  
Halex, Inc.  
Land-Air Inc.  
Librascope Inc.  
\***MCCORMICK SELPH ASSOCIATES**  
Olin Mathieson Chemical Corp., Energy Div.  
\***PROPELLEX CHEMICAL DIV., CHROMALLOY CORP.**  
Raymond Engrs. Lab., Inc.  
\***REDEL INC.**  
Space Corp.  
Taylor Devices, Inc.  
Winzen Research Inc.

**STABILIZERS**

Aeronca Mfg. Corp.  
Continental Can Co., Inc.  
Intercontinental Mfg. Co., Inc.  
Kaiser Aircraft & Electronics, Div.-Kaiser Industries Corp.  
Karmca Mfg. Co.  
Pawer-Tronic Systems Inc.  
Precision Sheet Metal, Inc.  
\***RHEEM MFG. CO., DEFENSE & TECHNICAL PRODUCTS DIV.**  
Ryan Aeronautical Co.  
Santa Anita Engrg. Co.  
Sperry Gyroscope Co., Marine Div., Div.-Sperry Rand Corp.  
Sperry Piedmont Co. - Div.-Sperry Rand Corp.  
Technical Apparatus Builders

**STACKS**

Benson Mfg., Co., The  
Colonial Aircraft Corp.  
Kaiser Aircraft & Electronics, Div.-Kaiser Industries Corp.  
Newbrook Machine Corp.  
Penn-Michigan Mfg. Corp.  
Pittsburgh-Des Moines Steel Co.  
\***RHEEM MFG. CO., DEFENSE & TECHNICAL PRODUCTS DIV.**  
Ryan Aeronautical Co.  
Stainless Steel Products, Inc.  
Western Iron & Foundry Co., Inc.

**STAMPED PARTS**

\***LAMINATED SHIM CO.**

**STAMPED PARTS, TUBE**

Acrarmark Co., The  
Allied Plastics Supply Corp.  
American Aeroparts  
Anchor Metal Spinning Co., The  
B. H. Aircraft Co., Inc.  
Bergen Carbide Co.  
California Spring Co., Inc.  
Emmco Plastic Fabricators - Div.-E. M. McCarthy Machine Co.  
Franklin Fibre-Lamitex Corp.  
Kaiser Aircraft & Electronics, Div.-Kaiser Industries Corp.  
Kelsey-Hayes Co.  
Kling Metal Spinning & Stamping Co.  
E. Konigsloew Stamping & Tool Co.  
Monogram Precision Industries  
Newbrook Machine Corp.  
Pacific Cut Washer Co.  
Peerless Products Industries  
Penn-Michigan Mfg. Corp.  
Precision Sheet Metal, Inc.  
Rimak, Inc.  
Rockwell-Standard Corp.  
Stainless Steel Products, Inc.  
Stanley-Judd Div.-The Stanley Works  
Sylvania Electric Products Inc., Parts Div.  
Teiner Engrg. Corp.  
Universal Metal Products Inc.  
Winder Aircraft Corp. of Florida  
Woodworth Specialties Corp.  
Wolf Aircraft Products, Inc.

**STAMPS**

Acrarmark Co., The  
Adept Industries Inc.  
American Aeroparts  
Jas. H. Matthews & Co.  
Monogram Precision Industries  
Noble & Westbrook Mfg. Co., The  
Parker-Hartford Corp., The  
Pryor Marking Products  
Stanley-Judd Div.-The Stanley Works

**STANDARD SCREWS**

See **SCREWS, STANDARD**

**STANDARDS**

- a. Capacitance
- b. Equipment, Calibration
- c. Frequency
- d. Inductance
- e. Laboratory Time
- f. Phase
- g. Resistance
- h. Temperature
- i. Time
- j. Voltage

Accurate Instrument Co., c, e, i.  
Acton Labs. Inc., f.  
Airtronics International Corp., b.  
Avion, Inc., i.  
Avtron Mfg., Inc., b.  
Rex Bassett, Inc., c.  
Beckman Instruments, Inc., Berkeley Div., c.  
A. Biederman, Inc., b, g, i.  
Bantoon Radio Corp.  
Borg Equipment Div., Amphenol-Borg Electronics Corp., c, e, i.  
Bristol Co., The, b.  
Bulova Watch Co., Electronics Div., b, c, e, i, j.  
Consolidated Controls Corp., j.  
Daven Co., The, g.  
Davenport Mfg. Co., b, j.  
Divco-Wayne Electronics, Div.-Divco-Wayne Corp., c.

Donner Scientific Co., j.  
Dytronics Co., b, f.  
Electra-Measurements Inc., a, g.  
Electronic Applications, Inc., c.  
Electronic Engrg. Co. of California, e, i.  
Engrg. Associates, c, e, i.  
Erie Resistor Corp., c.  
FXR, Inc., b, c.  
Federal Mfg. & Engrg. Corp., b.  
General Communication Co., b.  
Good Electronic Corp., a thru d, g, h, i.  
Good-All Electric Mfg. Co., a.  
Gyrex Corp., The, c, e, i.  
Hewlett-Packard Co., c, e, i.  
Hoffman Electronics Corp., Semiconductor Div., j.  
I-L-S Instrument Div., The Meriam Instrument Co., c.  
Industrial Test Equipment Co., b, c, f.  
Kin Tel Div.-Cahu Electronics, Inc., j.  
Knopp Inc., b, j.  
Land-Air Inc., b, f.  
Lavaie Laboratories Inc., c.  
Leeds & Northrup Co., a, d, g, h, j.  
Mac Lead & Hanopol, Inc., a.  
Manson Labs., Inc., c.  
Minneapolis-Honeywell Regulator Co., Industrial Product Group, c, b, d, g, i.  
George L. Nonkervis Co., b.  
National Instrument Laboratories, Inc., b.  
Networks Electronic Corp., j.  
New England Scientific Instruments Co., a, d, g.  
Ernest Norman Laboratories, c, e, i.  
Northeastern Engrg. Inc., c.  
Physics Research Laboratories, Inc., g.  
Polytechnic Research & Development Co., Inc., c.  
Portchester Instrument Corp., c.  
Precise Development Corp., a, d, g, j.  
Riverbank Labs., Dept.-Engrg., c.  
Rosemount Engrg. Co., h.  
Arthur C. Ruger Associates, Inc., h.  
Shallcross Mfg. Co., g.  
Simpson Electric Co., j.  
H. W. Sullivan Ltd., a thru e, g, i.  
Technical Apparatus Builders, j.  
Technology Instrument Corp., a, f.  
Telctra Industries Corp., a.  
Textron Corp., c, e, i.  
Theta Instrument Corp., f.  
Trans-Sonics, Inc., h.  
United Aircraft Products, Inc., h.  
United States Radium Corp., b.  
Voro Mfg. Co., Inc., c.  
Wallace & Tiernan Inc., b.  
Weinschel Engrg., b.  
Weston Instruments, Div.-Daystrom, Inc., b, j.

**STANDS, IRON, SOLDERING**  
See **SOLDERING IRON STANDS**

**STANDS, MICROPHONE**

B & K Instruments, Inc.  
Bil-Jox, Inc.  
General Cement Mfg. Co., Div.-Textron, Inc.  
Gordon Enterprises  
Mercury Tool & Mfg. Corp.  
Specialty Engrg. & Electronics Co.

**STANDS, TEST**

ACCO Equipment Div., American Chain & Cable Co. Inc.  
Aerodex, Inc.  
Aerogel-General Corp.  
Air Logistics Corp.  
Alden Products Co.  
American Instrument Co., Inc.  
Anchor Specialty Mfg. Co. Inc.  
Associated Engineers, Inc.  
\***ASSOCIATED TESTING LABS., INC.**  
Astronautics Engrg. Co.  
Avtron Mfg., Inc.  
Bil-Jox, Inc.  
Centronix Inc.  
Champion Co., The  
C. B. Christiansen Co.  
Colonial Aircraft Corp.  
Colson Corp., The  
The Columbia Research & Development Corp.  
Consolidated Diesel Electric Corp.  
Continental Technical Service, Inc.  
Cont'l Engrg. Co., Div. Jervis B. Webb Co.  
Cornelius Co., The, Aero Div.  
Curtiss-Wright Corp., Research Div.  
Diversey Engrg. Co.  
Douglas Microwave Co., Inc.  
Dresser Industries, Inc.  
Electro-Mechanical Products Co.  
Engrg. Associates  
Erdco Engrg. Corp.  
FXR, Inc.  
Farwell Metal Fabricating  
General Electric Co., Apparatus Sales Div.  
Greer Hydraulics, Inc.  
Grenco, Inc.  
Hamilton Standard, Div.-United Aircraft Corp.  
Paul Hardeman, Inc.  
Hardman Tool & Engrg. Co.  
Haskel Engrg. & Supply Co.  
Hufford Corp., The  
Hughes Tool Co., Aircraft Div.  
Hycan Mfg. Co.  
Industrial Engrg. Corp.

intercontinental Dynamics Corp.  
Jamison Cold Storage Door Co.  
Jeto, Inc.  
Kahn & Co., Inc.  
Kirk & Blum Mfg. Co., The  
Korda Industries  
Lond-Air Inc.  
Lear, Inc.  
Machine Products Div., New Haven Trap Rock Co.  
Mercury Tool & Mfg. Corp.  
Merz Engrg., Inc.  
Metal Fabricators Corp.  
Mid-West Metal Products, Inc.  
**MIRAX CHEMICAL PRODUCTS CORP.,  
ELECTRO-MECHANICAL PRODUCTS DIV.**  
Monogram Precision Industries  
George L. Nonkervis Co.  
Newbrook Machine Corp.  
Opeliko Welding, Machine & Supply Inc.  
Peschel Electronics, Inc.  
Philco Corp., Government & Industrial Div.  
Precision Sheet Metal, Inc.  
Regent Jack Mfg. Co., Inc.  
Robot Industries Inc.  
Rucker Co., The  
Rancor Corp.  
Rargent Engrg. Corp.  
Schaeffer Air Industries, Inc.  
Scientific Engrg. Co.  
Smith-Morris Corp.  
Stainless Inc.  
State Testing Lab., Inc.  
Terns-Roger Mfg. Co.  
Union Electric Corp., Aeronautical Div.  
Technical Apparatus Builders  
Thiokol Chemical Corp.  
United Aircraft Products, Inc.  
United Mfg. Co., Div., The W. L. Moxson Corp.  
Washington Technological Associates Inc.  
Welded Construction Inc.  
**R. D. WERNER CO., INC.**  
Western Gear Corp.

Special Projects Lab., Food Machinery & Chemical Corp.  
Thiokol Chemical Corp.  
Vickers Inc., Div.-Sperry Rand  
Watertown Div., The New York Air Brake Co.  
Western Gear Corp.  
Westinghouse Electric Corp.

**STARTERS, PNEUMATIC**

Accessory Products Co., Div.-Textron Inc.  
**\*AIRESEARCH MFG. CO. OF ARIZ.**  
**\*AIRESEARCH MFG. CO., DIV.-THE GARRETT CORP.**  
American Aeroports  
Apex Reinforced Plastics, Div.-White Sewing Machine Corp.  
Bendix-Pacific Div., Bendix Aviation Corp.  
Bendix Utico Div., Bendix Aviation Corp.  
Consolidated Diesel Electric Corp.  
General Electric Co., Apparatus Sales Div.  
Gremco, Inc.  
Hamilton Standard, Div.-United Aircraft Corp.  
Kahn & Co., Inc.  
Walter Kidde & Co., Inc., Aviation Div.  
Solar Aircraft Co.

**STARTERS, ROCKET ENGINE**

Accessory Products Co., Div.-Textron Inc.  
Aerojet-General Corp.  
Astradyne, Inc.  
Atlantic Research Corp.  
Bendix Utico Div., Bendix Aviation Corp.  
Consolidated Diesel Electric Corp.  
Cooper Development Corp., Sub.-Marquardt Aircraft Co.  
Diversey Engrg. Co.  
Dynamic Devices, Inc.  
Jack & Heintz, Inc.  
**\*McCORMICK SELPH ASSOCIATES**  
Dlin Mathieson Chemical Corp., Energy Div.  
**\*PROPELLEX CHEMICAL DIV., CHROMALLOY CORP.**  
Reaction Motors Div., Thiokol Chem. Corp.  
Rocketdyne Div.-North American Aviation, Inc.  
Solar Aircraft Co.  
Thiokol Chemical Corp.  
Thiokol Chemical Corp., Hunter-Bristol Div.

**STARTING SYSTEMS & CONTROLS**

**\*AIRESEARCH MFG. CO. OF ARIZ.**  
**\*AIRESEARCH MFG. CO., DIV.-THE GARRETT CORP.**  
American Bosch Arma Corp.  
**\*BENDIX PRODUCTS DIV., BENDIX AVIATION CORP.**  
Bendix Utico Div., Bendix Aviation Corp.  
Consolidated Diesel Electric Corp.  
Cornelius Co., The, Aero Div.  
General Electric Co., Apparatus Sales Div.  
Hamilton Standard, Div.-United Aircraft Corp.  
Hoover Electric Co.  
Jack & Heintz, Inc.  
Kahn & Co., Inc.  
Korda Industries  
**\*RHEEM MFG. CO., DEFENSE & TECHNICAL PRODUCTS DIV.**  
Robot Industries Inc.  
Spoce Corp.  
Stainless Steel Products, Inc.  
Topco Group, Thompson-Ramo-Woolldridge Inc.  
Technical Apparatus Builders  
Vickers Inc., Div.-Sperry Rand  
Watertown Div., The New York Air Brake Co.

**STATIC DISCHARGERS**

See DISCHARGERS, STATIC

**STATIC ELIMINATORS**  
Emerson Electric Mfg. Co., The, Electronics & Avionics Div.  
Goodyear Tire & Rubber Co., The, Aviation Products Div.  
Merix Chemical Co.  
Philco Corp., Government & Industrial Div.  
Thiokol Chemical Corp.  
United States Radium Corp.

**STATORS, MOTOR & GENERATOR**

Bogue Electric Mfg., Co.  
Consolidated Diesel Electric Corp.  
Dresser Mfg. Div., Dresser Industries, Inc.  
General Electric Co., Apparatus Sales Div.  
Hoover Electric Co.  
Jack & Heintz, Inc.  
Leland Airborne Products, Div.-American Machine & Foundry Co.  
Notional Pneumatic Co., Inc., Holtzer-Cobot Divs.  
Precision, Inc.  
**\*RHEEM MFG. CO., DEFENSE & TECHNICAL PRODUCTS DIV.**  
Tolley Corp., The  
Westinghouse Electric Corp.  
Winchinger Corp., Sub.-Zenith Radio Corp.

**STEEL NEEDLES**

See NEEDLES, STEEL

**STILLS & DEMINERALIZERS**

Bornstead Still & Sterilizer Co.  
Butler Mfg. Co.

Fisher Scientific Co.  
Opeliko Welding, Machine & Supply Inc.  
Spoce Corp.  
Winzen Research Inc.

**STIMULATORS**

Electro-Medical Lab., Inc.  
Enesco, Inc.  
Mast Development Co., Inc.  
Northrop Corp., The, Nortronics Div.  
Singer Mfg. Co., The, Military Products Div.  
Waldorf Electronics, Div.-F.C. Huyck & Sons

**STOOLS & BENCHES**

Borrett-Christie Co.  
Albert H. Coyne Equipment Corp.  
Cooper Industries, Inc.  
Snap-on-Tools Corp.  
Standard Pressed Steel Co.

**STORAGE BOXES**

See BOXES, STORAGE

**STORAGE CONTAINERS**

American Machine & Foundry Co., Government Products Group  
Anchor Metal Spinning Co., The  
Applied Design Co.  
Arde-Portland, Inc.  
Basco Metal Products, Inc.  
Basic Tool Industries, Inc.  
Brooks & Perkins, Inc.  
Butler Mfg. Co.  
Cambridge Co., Div.-Carrier Corp.  
Albert H. Coyne Equipment Corp.  
Champion Co., The  
Electric Heater Co., The  
Elzee Metal Products Co., Inc.  
Farwell Metal Fabricating  
Fletcher Mfg. Co., Inc., The  
General Box Co.  
Gremco, Inc.  
Ludwig Hanold Mfg. Co.  
Jeto, Inc.  
Kirk & Blum Mfg. Co., The  
H. Koch & Sons  
Linde Co., Div.-Union Carbide Corp.  
Lyon Van & Storage Co., Aircraft Div.  
Mercury Tool & Mfg. Corp.  
**\*MIRAX CHEMICAL PRODUCTS CORP., METAL CONTAINER DIV.**  
Monogram Precision Industries  
Opeliko Welding, Machine & Supply Inc.  
Ordnance Div.-Food Machinery & Chemical Corp.  
Precision Sheet Metal, Inc.  
Pressed Steel Tank Co.  
Pry Welding & Mfg., Inc.  
**\*RHEEM MFG. CO., DEFENSE & TECHNICAL PRODUCTS DIV.**  
Royal Industries, Inc.  
Texas Metal & Mfg. Co., Inc.  
United Aircraft Products, Inc.  
United States Chemical Milling Corp.  
Vendlator Mfg. Co.  
Washington Technological Associates Inc.

**STORAGE UNITS**

Anchor Metal Spinning Co., The  
Borrett-Christie Co.  
Deluxe Metal Products Co.  
**\*MIRAX CHEMICAL PRODUCTS CORP., METAL CONTAINER DIV.**  
**\*RHEEM MFG. CO., DEFENSE & TECHNICAL PRODUCTS DIV.**  
Snap-on-Tools Corp.  
Special Projects Lab., Food Machinery & Chemical Corp.  
Standard Pressed Steel Co.

**STRAIN RELIEFS**

Accessory Products Co., Div.-Textron Inc.  
Heyman Mfg. Co.  
Penn Fibre & Specialty Co., Inc.  
Milton Ross Metals Co., The

**STRAINERS**

Aero Supply Mfg. Inc.  
Bendix Filter Div., Bendix Aviation Corp.  
A. W. Cosh Valve Mfg. Corp.  
Commercial Filters Corp.  
Cuno Engrg. Corp., The  
Dumont Aircraft Fitting Co.  
Lodish Co.  
Leslie Co.  
Jos. P. Marsh Corp.  
Michigan Wire Cloth Co.  
Mueller Brass Co.  
Newark Wire Cloth Co.  
DPW-Jordan  
Purulator Products Inc.  
Republic Mfg. Co.  
Sproyng Systems Co.  
Teiner Engrg. Corp.  
Yornoll-Waring Co.

**STRIPPERS, WIRE**

See WIRE STRIPPERS

## STRIPS, GROUNDING

Accurate Electronics Corp., Dept. D  
American Silver Co.  
Double E Products Co.  
Kulka Electric Corp.  
Smith-Morris Corp.  
Teiner Engrg. Corp.

## STRIPS, MOUNTING

Accurate Electronics Corp., Dept. D  
Celco, Constantine Engrg. Labs. Co.  
Double E Products Co.  
Keystone Electronics Corp.  
Kulka Electric Corp.  
Mitronics Inc.  
Rimak, Inc.  
Sangamo Electric Co.  
Smith-Morris Corp.  
Teiner Engrg. Corp.  
Tri-Dex Co.

## STRIPS, TERMINAL

See TERMINAL STRIPS

## STROBOSCOPE, SYNCHRONIZER

Chadwick-Helmuth Co.  
Graflex Inc.  
Kemlite Laboratories, Inc.  
Technical Apparatus Builders  
Winkler Labs.

## STROBOSCOPES

Astronics, Inc.  
Boulton Instrument Corp.  
Chadwick-Helmuth Co.  
Edgerton, Gernsmaisen & Grier, Inc.  
Electronic Brazing Co.  
Epic, Inc.  
Graflex Inc.  
Kemlite Laboratories, Inc.  
Slaughter Co., Inc.  
Sun Electric Corp., Aeronautical Div.  
Technical Apparatus Builders  
Western Gear Corp.

## STRUCTURES

- a. Aircraft
- b. Aluminum & Stainless Steel Honeycomb
- c. Missile

\*AVCO MFG. CORP., NASHVILLE DIV.

## STUDIO PATCH CORDS

See PATCH CORDS, STUDIO

## SUBMINIATURIZATION SERVICES

Aerolab Development Co.  
Allays Unlimited Inc.  
Cleveland Metal Specialties Co., Electronics Div.  
Consolidated Diesel Electric Corp.  
Cooper Development Corp., Sub.-Marquardt Aircraft Co.  
Curtiss-Wright Corp., Electronics Div.  
Dockendorff & Co. Inc.  
Electro Development Co.  
Elgin Micronics Div.-Elgin National Watch Co.  
Emerson Electric Mfg. Co., The, Electronics & Avionics Div.  
Erie Resistor Corp.  
Ferrotran Electronics Co., Inc.  
Instruments For Industry, Inc.  
\*KEARFOOT CO., INC.  
Land-Air Inc.  
Lear, Inc.  
Livingston Electronic Corp.  
Motorola Inc., Military Electronics Div.  
Northrop Corp.  
Philco Corp., Government & Industrial Div.  
Sperry Farragut Co., Div.-Sperry Rand Corp.  
Technology Instrument Corp.  
Telechrome Mfg. Corp.  
Topper Mfg. Co., Inc.  
United Aircraft Products, Inc.  
Walkirt Co.

## SUPERSONIC EQUIPMENT

Aeronca Mfg. Corp.  
Aeroscience, Inc.  
Bendix Radio Div., Bendix Aviation Corp.  
Consolidated Diesel Electric Corp.  
Emerson Electric Mfg. Co., The, Electronics & Avionics Div.  
Maico Electronics, Inc.  
Marquardt Aircraft Co.  
Massa Div.-Cohu Electronics, Inc.  
Philco Corp., Government & Industrial Div.  
Waste King Corp., Technical Products Div.

## SUPPORTS, TUBE

Anchor Metal Spinning Co., The  
Best Aircraft Corp.  
Capital City Mfg. Co.  
Mercury Tool & Mfg. Corp.  
National Beryllia Corp.

## SUPPRESSORS, NOISE

Air Logistics Corp.  
All-Tronics, Inc.  
Continental Carbon, Div.-Wirt Co.  
Curtiss-Wright Corp., Research Div.

Erie Resistor Corp.  
Hallett Mfg., Co.  
Philco Corp., Government & Industrial Div.  
Precision Sheet Metal, Inc.  
Rohr Aircraft Corp.  
Space Corp.

## SURFACE FINISH CONTROLS

See CONTROLS, SURFACE FINISH

## SURVEILLANCE RADAR

See RADAR, SURVEILLANCE

## SWITCH, GUARDS

Anchor Metal Spinning Co., The  
Cutter-Hammer Inc.  
Grimes Mfg. Co.  
Vemaline Products Co.

## SWITCH INERTIA

American Machine & Foundry Co., Government Products Group  
Cedar Engrg. Div.-Control Data Corp.  
Delco-Remy Div., General Motors Corp.  
Diamond Antenna & Microwave Corp.  
Donner Scientific Co.  
\*ELECTROSNAIP CORP.  
Elgin Micronics Div.-Elgin National Watch Co.  
Elgin Micronics, West Coast Div.-Elgin National Watch Co.  
Era Engrg. Inc.  
Haydon Switch, Inc.  
Hoffman Labs. Div., Hoffman Electronics Corp.  
Instrument Development Labs., Inc.  
Walter Kilde & Co., Inc., Aviation Div.  
Pacific Scientific Co.  
Raymond Engrg. Lab., Inc.

## SWITCHES

- a. Acceleration
- b. Air Ram
- c. Aneroid
- d. Alarm
- e. Automatic
- f. Automatic Transfer
- g. Circuit Breaker
- h. Commutation, for Telemetering
- i. Contact
- j. Control
- k. Crossbar
- l. Decade
- m. Duplex
- n. Electronic
- o. Float
- p. Foot
- q. Hermetically Sealed
- r. Hydraulic
- s. Ignition
- t. Impact
- u. Indicating
- v. Jack
- w. Key
- x. Knife
- y. Limit
- z. Liquid Oxygen Control
- o1. Mach Limit
- b1. Mechanical Control
- c1. Mercury
- d1. Microphone
- e1. Microwave
- f1. Miniature
- g1. Oil Immersed
- h1. Plunger
- i1. Pressure
- j1. Printed Circuit
- k1. Pulse
- l1. Pushbutton
- m1. Rodia
- n1. Remote Control
- o1. Reset
- p1. Rotary
- q1. Rotary Chopper
- r1. Rotary Sampling
- s1. Rotary Selector
- t1. Safety
- u1. Slide
- v1. Snap Action
- w1. Specialty
- x1. Step Type
- y1. Sub-Miniature
- z1. Tap
- a2. Telemetering
- b2. Temperature Control
- c2. Thermal
- d2. Timing
- e2. Taggle
- f2. Transformer
- g2. Transistor
- h2. Vacuum
- i2. Wavechange Receiver
- j2. Wavechange Transmitter
- k2. Waveguide
- l2. Waveguide Microwave

ACF Industries Inc., a, r, g-1, i-1, y-1, h-2  
A-G-A Div., Elastic Stop Nut Corp. of America, d-2  
Acro Div., Robertshaw-Fulton Controls, x, h-1, l-1, v-1, x-1, y-1  
Anderson Research Corp., a thru f, b-1, e-1, t-1, k-2, l-2  
Adept Industries Inc., j-1  
Advanced Products Co., The, d-2  
Aero Instrument Co., b, r, i-1, h-2

Aero Supply Mfg. Inc., a  
Aerolab Development Co., h, n, d-2, g-2  
Aerolite Electronics Corp., y  
Aerotec Corp., The, b, c, d, a, r, u, z, a-1, g-1, i-1, t-1  
Aircrom Inc., e-1, t-2  
Aircrom Inc. of New Jersey, e-1, k-2, l-2  
Aircraft Controls Co., Div., Gorn Electric Co., Inc., b, c, f, a, r, z, a-1, i-1, b-2  
Airflyte Electronics Co., h, j-1, p-1, q-1, r-1, y-1, o-2  
Airtone Inc., Div.-Littion Industries, e-1, k-2, l-2  
Alford Mfg. Co., e, u  
Allied Control Co., Inc., l-1, y-1, e-2, h-2  
Allied International Co., a, e-1, v-1, w-1, x-1  
Alloy Bellows Inc., j, f-1, i-1  
Alto Scientific Co., Inc., h, n, d-2  
Amelco, Inc., j-1  
American Aeroparts, a, b, g  
American Machine & Foundry Co., Government Products Group, a  
American Missile Products Co., Inc., a-2  
Analogue Controls, Inc., y  
Andrew Corp., k-2, l-2  
Applied Science Corp. of Princeton, h, n, a-2  
Arch Gear Works Inc., y, a-1, b-1  
\*ARNOUX CORP., e, h, n, a-2, b-2  
Arrow-Hart & Hegeman Electric Co., The, e, f, i, j, n, a, p, t, u, w, x, y, b-1, c-1, f-1, h-1, i-1, l-1 thru p-1, s-1 thru w-1, z-1, c-2, d-2, e-2  
Associated Engineers, Inc., d  
Astronautics Engrg. Co., r  
Atlas Precision Products, Co., b-1, d-2  
Automatic Electric Sales Corp., e, f, i, j, a, u, v, g-1, j-1, k-1, n-1, p-1, x-1  
Avnet Corp., e, f, j, n, b-1, e-1, n-1  
Barber-Colman Co., b-2  
Barker Sales Co., h, k, v, w, p-1, s-1, x-1, a-2  
Barton Instrument Corp., u  
Barwood Electronics Inc., p  
Beckman & Whitley, Inc., Missile Products Div., a  
Bell & Gossett Co., g-2  
Belock Instrument Corp., a, j, n, u, b-1, i-1, n-1, a-2, e-2  
Benbow Mfg. Corp., i-1  
Bendix Aviation Corp., Friez Instrument Div., c, i-1, d-2  
Bendix Aviation Corp.-Montrose Div., i-1  
Bendix Aviation Corp., Pioneer-Central Div., b, z, o-1  
Bendix Aviation Corp., York Div., n  
Bendix-Pacific Div., Bendix Aviation Corp., a-2  
Benco Engrg. Corp., c-1, d-2  
A. Biederman, Inc., a  
Bimbach Radio Co., Inc., x, l-1, p-1, u-1, e-2  
Bobrick Mfg. Corp., r, i-1  
Bogart Mfg. Corp., e-1, l-2  
Bronson Corp., d, e, f, c-2, d-2  
Bridgeport Thermostat Div., Robertshaw-Fulton Controls Co., i-1  
Bristol Co., The, d, e, h, j, o, i-1, n-1, p-1, s-1, o-2, b-2, d-2, h-2  
Budd Stanley Co. Inc., e-1  
Cable Electric Products Inc., g, n-1, w-1, e-2  
Cadillac Gage Co., l-1  
\*CANNON ELECTRIC CO., a, p-1, w-1  
Capitol Machine Co., The, j, w, l-1  
Capital Seal Corp., i-1  
Carleton Aviation Co., i-1  
Carling Electric, Inc., j, a, p, b-1, f-1, h-1, l-1, p-1, u-1, v-1, e-2  
Cedar Engrg. Div.-Control Data Corp., a  
Central Electronic Mfrs., Div.-Nuclear Corp. of America, h-2, k-2, l-2  
Centralab, Div.-Globe-Union, h, i, j, l, n, b-1, f-1, l-1, p-1, s-1, u-1, y-1  
Century Electronics & Instruments, Inc., c, j, a, r, z, i-1  
Cinema Engrg., p-1  
C. P. Clare & Co., q, w, x-1  
Closstat Mfg. Co., Inc., i, j, f-1, m-1, s-1, v-1, i-2  
Cleveland Metal Specialties Co., Electronics Div., j-1  
Cole Electric Co., f, a, o-1, w-1, x-1  
Cole-Heegee Co., d, p, s, w, i-1, l-1, n-1, p-1, t-1, e  
Coleman Engrg. Co., Inc., i-1  
Collectron Corp., h, f-1, p-1 thru s-1  
Collins Engrg. Corp., g  
Collins Radio Co., l-2  
Colvin Labs, Inc., h-1, m-1  
Com-Air Products, Div.-A SR Products Corp., i-1  
Comar Electric Co., i  
Components Corp., d, y-1  
Computer Instruments Corp., h, i, f-1, p-1, u-1  
Consolidated Controls Corp., b, c, d, r, a-1, i-1, b-2, c-2, h-2  
Consolidated Diesel Electric Corp., b thru f, j, n, a, r, u, z, b-1, i-1, b-2, c-2, g-2, h-2  
Consolidated Electrodynamics Corp., Rochester Div., h-2  
Continental Carbon, Div.-Wirt Co., u-1  
Control Data Corp., c-2  
Controls Co. of America, y, b-1, i-1, j-1, p-1, s-1, v  
Cooper Development Corp., Sub.-Marquardt Aircraft Co., a  
Cornelius Co., The, Aero Div., i-1  
Cornell Deep Drawing Co., Div.-Lanes Industries Corp., d, i, j, a, p, q, y, h-1, l-1, t-1, v-1, e-2  
Cramer Controls Corp., i, k-1, d-2  
Crescent Engrg. & Research Co., a  
Croname Inc., i-1



ductible Steel Co. of America, h  
 James Cunningham Sons & Co., Inc., k, l-1, m-1, n-1,  
 w-1, a-2, b-2  
 Jurtiss-Wright Corp., Electronics Div., c-2  
 Jurtiss-Wright Electronics Div., IMI Branch, i-1, a-2  
 Jushman Precision Industries, e, h, i, q, f-1, f-1,  
 m-1, p-1, q-1, r-1, w-1, y-1, a-2, g-2  
 Juttler-Hammer Inc., d thru g, i, l, n thru q, y, a-1,  
 f-1, h-1, i-1, l-1, m-1, n-1, p-1, s-1 thru v-1, y-1,  
 b-2, d-2, e-2  
 Kaven Co., The, h, i, j, l, f-1, f-1, p-1, r-1, u-1, x-1,  
 y-1, z-1, a-2  
 Kaystrom Pacific Div.-Daystrom, Inc., a, c, a-1, i-1  
 Kelco-Remy Div., General Motors Corp., a  
 relay-Bonardi, e-1, k-2, l-2  
 Kestron Co., d-2  
 Ketrac Industries, n, x-1  
 Kisan Antenna & Microwave Corp., e-1, k-2, l-2  
 K-T Controls, Inc., n, g-2  
 Knapp G. Dietz Co., Inc., b, i-1, d-2, h-2  
 Knott-Grey Co., d-2  
 Kanner Scientific Co., a, c  
 Kaugus Microwave Co., Inc., e-1, k-2, l-2  
 Kurokai, Inc., c-1  
 Kynaptic Controls Corp., i-1, b-2, c-2  
 Kagle Electric Mfg. Co. Inc., m, x, c-1, p-1, v-1, e-2  
 Kasten Specialty Co., The, s-1, z-1  
 Kern Electronics Corp., a, q, c-1, h-1, v-1, w-1, h-2  
 Kibel-McCullough, Inc., h-2  
 Kidema Corp., u, f-1, l-1, y-1, g-2  
 Klectro Development Co., p-1, s-1, y-1  
 Klectro Products Laboratories, Inc., y  
 Klectro Tech., h, i, m, q, t, f-1, k-1, p-1 thru  
 s-1, y-1, a-2, d-2  
 Klectrocraft, Inc., i, j, v, w, d-1, f-1, l-1, w-1, e-2  
 Klectro-Mechanical Products Co., a, g, i, j, n, y, b-1,  
 h-1, i-1, k-1, n-1, w-1, b-2  
 Klectro-Mechanical Research, Inc., h, a-2  
 Klectro-Mechanical Specialties Co., Inc., a, b-1, f-1,  
 p-1 thru s-1, x-1, y-1, d-2  
 Klectro-Miniatures Corp., h, p-1, q-1, r-1, a-2  
 Klectron-Radar Products, c  
 Klectro-Seal Corp., a  
**ELECTROSNAP CORP.**, o, j, q, u, y, z, b-1, f-1,  
 h-1, i-1, k-1, l-1, m-1, a-1, p-1, s-1, t-1, v-1 thru  
 y-1, e-2  
 E-Tech Equipment Co., o, p, u, y, c-1, f-1, v-1,  
 y-1, d-2, e-2  
 Elgin Micronics Div.-Elgin National Watch Co., a, t,  
 d-2  
 Elgin Micronics, West Coast Div.-Elgin National  
 Watch Co., a, t  
 Emerson Electric Mfg. Co., The, Electronics &  
 Avionics Div., e-1  
 Engelhard Industries Inc., D. E. Mokepece Div., h,  
 p-1, q-1, r-1, s-1  
 Enr Engng. Inc., a  
 Essex Mfg. Co., Inc., b, a, r, z, i-1, n-1, s-1, u-1,  
 a-2  
**EXR, Inc.**, e-1, p-1, k-2, l-2  
 Exner Electric Products Co., Inc., y  
 Exnal, Inc., d, j, b-2, c-2  
 Extron Electronics Co., Inc., g-2  
 Exo-Video Labs., Inc., k-1, n-1  
 Exonik Co., b, c, r, z, i-1  
 Exomas Electric Co., i, o, p, y, i-1, l-1  
 -V Controls Inc., b-2, c-2, d-2  
 General Cement Mfg. Co., Div.-Textron, Inc., l-1, p-1,  
 u-1, e-2  
 General Communication Co., n, e-1, k-2, l-2  
 General Devices, Inc., a, d, e, h, i, j, m, n, q, t thru  
 w, a-1, e-1, f-1 thru m-1, o-1 thru r-1, x-1, z-1, b-2  
 General Electric Co., Apparatus Sales Div., e, f, g,  
 i, j, q, x, y, g-1, h-1, i-1, l-1, n-1, o-1, p-1, v-1,  
 d-2 thru h-2, h-2  
 Genisco, Inc., a  
 Genisco, Inc., Instrument Div., q, h  
 M. Giannini & Co., Inc., a-1, i-1  
 Gibson Electric Co., i  
 Gilliland Bros. Inc.  
 Gossco Instrument Co., i-1  
 Gohn Gombos Co., Inc., e-1  
 God Electronic Corp., l, j-1  
 G. F. Goodrich Aviation Products, i-1  
 Gordos Corp., e-1  
 Graphite Metallizing Corp., h, p-1, q-1  
 Gray Instrument Co., l  
 Guardian Electric Mfg. Co., i, j, q, f-1, l-1, n-1, v-1,  
 w-1, y-1  
 Guided Missile Div.-De Havilland Aircraft of Canada,  
 Ltd., b, r, i-1  
 Hamilton Watch Co.-Industrial Div., d-2  
 Hamlin, Inc., q, u, c-1, f-1, y-1, h-2  
 Hammarlund Mfg. Co., Inc., i, p-1, s-1  
 Hart Mfg. Co., The, e, i, n, q, p-1, s-1, u-1, v-1,  
 b-2, e-2  
**A. W. HAYDON CO., THE**, e, f, h, n-1, x-1, a-2, d-2  
 Hayden Switch, Inc., a, c, q, t, u, y, b-1, f-1, h-1, i-1,  
 j-1, w-1, y-1, e-2  
 Hay Vacuum Equipment Corp., h-2  
 Verman Hill & Co., b-2  
 H. W. Hobbs Corp., Div.-Stewart-Wamer Corp., i-1,  
 d-2  
 Hoffman Electronics Corp., Semiconductor Div., e, l,  
 n, i-1, k-1  
 Humphrey, Inc., t  
 H. Hyatt Co., The, r, e-1  
**HYDRO-AIRE CO., DIV.-CRANE CO.**, a  
 Hydromatics, Inc., q, u, z, b-1  
 I-T-E Circuit Breaker Co., g, k-2, l-2  
 Illinois Testing Laboratories, Inc., b-2  
 Itra Corp., x-1  
 Indusl. Prod.-Danbury Knudsen Div. Amphenol-  
 Borg Electronics Corp., n, w-1, e-2, k-2  
 Industrial Timer Corp., c-2, d-2  
 Inertia Switch, Inc., o, a, f, u, f-1, n-1, a-1, t-1, v-1,  
 w-1  
 Instrument Development Labs., Inc., f, h, q, j-1, r-1,  
 a-2  
 International Instruments Inc., f-1, s-1  
 International Register Co., v-1, d-2  
 Jaidinger Mfg. Co., Inc., v-1  
 Janco Corp., q, y, f-1, p-1  
 Jansky & Bailey, Inc., n  
 Javex Electronics, i, m-1, p-1  
 Jennings Radio Mfg. Corp., h-2  
 Kahn & Co., Inc., e, j, n, b-1  
 Kouke & Co., a-2  
**\*KEARFOTT CO., INC., MICROWAVE DIV.**, e-1  
 Kemp Aero Products, r, z  
 Walter Kidde & Co., Inc., Aviation Div., t, i-1  
 Kilgen Aircraft Div., k, n-1  
 Kinney Mfg. Div., The New York Air Brake Co., h-2  
 H. Kach & Sons, w-1, d-2  
 Kollstrom Instrument Corp., Sub.-Standard Coil  
 Products Co., Inc., c, a-1, i-1, a-2  
 Kulka Electric Corp., n, e-2  
 Land-Air Inc., j, b-1, p-1, s-1, x-1, a-2, d-2  
 Landis & Gyr Inc., d-2  
 Lear, Inc.  
 Lear, Inc., Grand Rapids Div., w-1  
 Lear Inc., Lear-Romec Div., r, i-1  
 Lee Co., The  
 Leeds & Northrup Co., l, w, l-1, p-1, s-1, z-1, e-2  
 G. H. Leland, Inc., q, n-1, o-1, s-1  
**\*WALLACE O. LEONARD, INC.**, i-1  
**\*LEWIS ENGRG. CO., THE**, s-1  
 Lican Switch & Control Div., Illinois Tool Works, q,  
 y, f-1, h-1, l-1, o-1, p-1, s-1, v-1, y-1, d-2, e-2, h-2  
 Lieco, Inc., e-1, i-2, i-2, k-2, l-2  
 Littan Industries, Inc., q-1  
 Livingston Electronic Corp., p, q, c-2, d-2, j-2  
 Magnavox Co., The, a  
 Magneatrol, Inc., q, z, z  
 P. R. Mallory & Co., Inc., e, f, i, j, l, n, q, v, y, b-1,  
 f-1, h-1, i-1, j-1, l-1, m-1, o-1, p-1, q-1, t-1, u-1,  
 v-1, y-1, z-1, d-2, e-2  
 Marco Industries Co., u, f-1, l-1  
 Mason-Neilan, i-1, h-2  
 Mc Gill Mfg. Co., Inc., Bearing Div., l-1, e-2  
 Meletron Corp., b, c, r, i-1, p-1, v-1, h-2  
 Meridian Metalcraft, Inc., e-1, k-2, l-2  
 Metals & Controls Corp., Spencer Div., g, i, n, o, q,  
 y, b-1, f-1, l-1, p-1, v-1, b-2, c-2  
 Micro Switch, Div.-Minneapolis-Honeywell Reg. Co.,  
 p, q, u, y, b-1, c-1, f-1, h-1, k-1, l-1, m-1, o-1, p-1,  
 s-1 thru u-1, y-1, b-2, c-2, e-2  
 Microwave Associates, Inc., e-1, i-2, j-2, k-2, l-2  
 Miller-Robinson Co., l-1  
 Minneapolis-Honeywell Regulator Co., Boston Div.,  
 q, y  
 Minneapolis-Honeywell Regulator Co., Industrial  
 Product Group, v, w, g-1, p-1, r-1, s-1, x-1, b-2  
 Minneapolis-Honeywell Regulator Co., Ordnance Div.,  
 a, n, g-2  
 Monogram Precision Industries, n, e-1, q-1, k-2, l-2  
 Donald P. Mossman, Inc., w, l-1  
 Motorola Inc., Military Electronics Div., e-1, k-2, l-2  
 N.R.K. Mfg. & Engrg. Co., k-2  
 George L. Nankervis Co., y  
 National Pneumatic Co., Inc., Haltzer-Cobot Divs.,  
 v, w  
 Nelson Labs., Inc., j, b-1  
 Networks Electronic Corp., n, w-1, c-2, g-2  
 Newark Controls Co., a, i-1, h-2  
 North Electric Co., e, f, h, k thru k, n, q, w, l-1, n-1,  
 p-1, x-1, a-2, d-2  
 Dha Semiconductors, Inc., n  
 Oil-Dyne, Inc., r, i-1  
 Pacific Scientific Co., o, p-1 thru s-1  
 Paragon Electric Co., d-2  
 Penta Labs., Inc., h-2  
 Peschel Electronics, Inc., n, g-1  
 Philco Corp., Government & Industrial Div.  
 Phillips Aviation Co.-Marples Gears, a  
 Photobell Co., Inc., n, a-2, d-2  
 Photon Research Products, a  
 Photo-Crystals, Inc., c-1  
 Pickering & Co., Inc., a  
 Joseph Pallak Corp., g, i, j, q, s, w, f-1, l-1, p-1,  
 s-1, v-1, e-2  
 Portchester Instrument Corp., e-1, k-2  
 Precision Circuits, Inc., i-1  
 Printronics Corp., i-1  
 Radar Design Corp., e-1, l-2  
 Radar Relay, Inc., c-1, l-1  
 Radiation, Inc., h, n, a-2  
 Rauland Corp., The, g-2  
 Raymond Engrg. Lab., Inc., a, t  
 Raytheon Mfg. Co., k-2  
 Reed Research Inc., q  
 Republic Mfg. Co., r  
 Research Appliance Co., h-2  
 Revere Corp. of America, o, q  
 M. H. Rhodes, Inc., d-2  
 Ripley Co., Inc., n  
 Roanwell Corp., d-1, l-1  
 Robot Industries Inc., e, i, c-1, n-1  
 Rogers Corp., j-1  
 Ronson Hydraulic Units Corp., r, i-1  
 Milton Ross Metals Co., The, i-1, p-1, y-1  
 Rotran Mfg. Co., t-1  
 Sage Labs., Inc., e-1  
 St. Regis Paper Co., Panelyte Div., j-1

**SWITCHING COMMUTATORS**  
 See COMMUTATORS, SWITCHING

**SWITCHING EQUIPMENT, ANTENNA**

Aircam Inc.  
 Alford Mfg. Co.  
 American Machine & Foundry Co., Government  
 Products Group  
 Andrew Corp.  
 Atlas Precision Products, Co.  
 Babcock Radio Engrg. Inc.  
 Bendix Aviation Corp., York Div.  
 Electro Tec Corp.  
 Houston Fearless Corp.  
 Lear, Inc., Grand Rapids Div.  
 Microwave Associates, Inc.  
 Manogram Precision Industries  
 National Pneumatic Co., Inc., Haltzer-Cobot Divs.  
 Philco Corp., Government & Industrial Div.  
 Radionics, Inc.  
 Telectro Industries Corp.  
 Transca Products, Inc.  
 Wind Turbine Co.

## SWITCHING EQUIPMENT, CAMERA

C. P. Clare & Co.  
Electronic Engrs. Co. of California  
Elgin Microelectronics, West Coast Div., Elgin National Watch Co.  
Flight Research, Inc.  
General Precision Lab, Inc.  
Houston Fearless Corp.  
Hycan Mfg. Co.  
ITT-Kellogg  
Land-Air Inc.  
Philco Corp., Government & Industrial Div.  
Singer Mfg. Co., The, Military Products Div.

## SYNCHRONIZER STROBOSCOPE See STROBOSCOPE, SYNCHRONIZER

## SYNCHROS

Allis-Chalmers  
American Electronics, Inc.  
American Electronics, Incorporated  
American Machine & Foundry Co., Government Products Group  
Bendix Aviation Corp., Eclipse-Pioneer Div.  
Bendix Aviation Corp.-Montrase Div.  
Clifton Precision Products Co., Inc.  
Daystrom Transcoil Div., Daystrom Inc.  
Ford Instrument Co., Div.-Sperry Rand Corp.  
General Electric Co., Apparatus Sales Div.  
Hamilton Watch Co.-Industrial Div.  
Helipot Div.-Beckman Instruments Inc.  
Hoffman Labs. Div., Hoffman Electronics Corp.  
Induction Motors Corp.  
\*KEARFOTT CO., INC.  
Ketay Dept., Norden Div., United Aircraft Corp.  
Kollsman Instrument Corp., Sub-Standard Coil Products Co. Inc.  
Land-Air Inc.  
Lear, Inc.  
Luther Mfg. Co.  
Minneapolis-Honeywell Regulator Co., Boston Div.  
P. S. P., Engrs. Co., Div.-Induction Motors Corp.  
Servomechanisms, Inc., Mechatron Div.  
Solartron Inc.

## SYNCHROSCOPES

Edgerton, Gernsmausen & Grier, Inc.  
FXR, Inc.  
General Communication Co.  
General Electric Co., Apparatus Sales Div.  
Kollsman Instrument Corp., Sub-Standard Coil Products Co. Inc.  
Polarad Electronics Corp.  
Waterman Products Co., Inc.  
Weston Instruments, Div.-Daystrom, Inc.

## SYSTEMS, MULTIPLEX See MULTIPLEX SYSTEMS

## SYSTEMS, NAVIGATION See NAVIGATION SYSTEMS

## SYSTEMS, PROPULSION See PROPULSION SYSTEMS

## SYSTEMS, PUBLIC ADDRESS See PUBLIC ADDRESS SYSTEMS

## SYSTEMS, REMOTE CONTROL

Aerona Mfg. Corp.  
Allis-Chalmers  
American Machine & Foundry Co., Government Products Group  
American Machine & Foundry Co., Greenwich  
Atlas Precision Products, Co.  
Automatic Electric Sales Corp.  
Babcock Radio Engrs., Inc.  
Bendix Instrument Corp.  
Bendix Aviation Corp., Eclipse-Pioneer Div.  
Bendix Aviation Corp., York Div.  
Bliss Electronic Corp.  
Bristol Co., The  
Collins Radio Co.  
Consoflow Corp.  
Consolidated Diesel Electric Corp.  
Cutler-Hammer Inc.  
Dolmator Div., Yubo Consolidated Industries, Inc.  
Data-Control Systems, Inc.  
Dayton Aviation Radio & Equipment Corp.  
Dresser Industries, Inc.  
Edgerton, Gernsmausen & Grier, Inc.  
Electronic Engrs. Co. of California  
\*ELECTROSNAP CORP.  
FAE Instrument Corp.  
Feedback Controls, Inc.  
General Devices, Inc.  
General Electric Co., Apparatus Sales Div.  
Gordon Enterprises  
Hamilton Standard, Div.-United Aircraft Corp.  
Hommerlund Mfg., Co., Inc.  
Paul Hardeman, Inc.  
Haskel Engrs. & Supply Co.  
ITT Labs.  
Intercontinental Dynamics Corp.  
Kohn & Co., Inc.  
\*KEARFOTT CO., INC.  
Kilgen Aircraft Div.  
Land-Air Inc.  
Lear, Inc.  
Lear, Inc., Grand Rapids Div.  
Lundy, Mfg. Corp.

Milgo Electronic Corp.  
Minneapolis-Honeywell Regulator Co., Industrial Product Group  
Motorola Inc., Military Electronics Div.  
Nelson Labs., Inc.  
North Electric Co.  
Philco Corp., Government & Industrial Div.  
Raytheon Mfg. Co., Government Equipment Div.  
Ryan Aeronautical Co.  
Sequoia Wire & Cable Co., Div.-Mandrel Industries, Inc.  
Soraban Engrs., Inc.  
Technical Apparatus Builders  
Thermo Electric Co., Inc.  
Tranco Products, Inc.  
United Electric Controls Co.  
Vard Inc.  
Waldorf Electronics, Div.-F.C. Huyck & Sons  
Washington Technological Associates Inc.  
Weston Hydraulics Ltd.-Sub., Borg-Warner Corp.  
Westronics Inc.

## TABS

Aeromark Co., The  
Adept Industries Inc.  
Breeze Corporations, Inc.  
Colonial Aircraft Corp.  
Eljay Corp.  
Intercontinental Mfg. Co., Inc.  
Roovers-Lotsch Corp.  
Santa Anita Engrs. Co.  
Twin Coach Co., Aircraft-Missiles  
Zippertubing Co., The

## TABS, DIAL ACCESS

Adept Industries Inc.  
Eljay Corp.

## TABS, TRIM See TRIM TABS

## TACHOMETERS

Aeromark Inc.  
Actuator Products Div., Geartronics Corp.  
Airguide Instrument Co.  
American Electronics, Inc.  
American Electronics, Inc.-Instrument Div.  
American Machine & Foundry Co., Greenwich  
Amstar Timing Instrument Co., Inc.  
Associated Research, Inc.  
Atlas Precision Products, Co.  
B & H Instrument Co., Inc.  
Bendix Aviation Corp., Eclipse-Pioneer Div.  
Boulton Instrument Corp.  
Bristol Co., The  
Diehl Mfg. Co.  
Electronics Div., Van Norman Industries Inc.  
Epic, Inc.  
General Electric Co., Apparatus Sales Div.  
Ideal Industries, Inc.  
Kollsman Instrument Corp., Sub-Standard Coil Products Co. Inc.  
Metrion Instrument Co.  
Minneapolis-Honeywell Regulator Co., Industrial Div.  
Minneapolis-Honeywell Regulator Co., Industrial Product Group  
Heinz Mueller Eng. Co. Inc.  
National Electronics  
Potter Aeronautical Corp.  
Servomechanisms, Inc., Mechatron Div.  
Singer Mfg. Co., The, Military Products Div.  
Talley Corp., The  
Waltham Precision Instrument Co.  
Waugh Engrs. Co.  
Weston Instruments, Div.-Daystrom, Inc.  
Westronics Inc.

## TACHOMETERS, ELECTRONIC

Airguide Instrument Co.  
American Machine & Foundry Co., Greenwich  
Astronetics, Inc.  
B & H Instrument Co., Inc.  
Crown Controls Co., Inc.  
Dymec, Inc.  
Electric Auto-Lite Co., The  
Electro Products Laboratories, Inc.  
Erie Resistor Corp.  
G-M Labs. Inc.  
Kohn & Co., Inc.  
Kollsman Instrument Corp., Sub-Standard Coil Products Co., Inc.  
Minneapolis-Honeywell Regulator Co., Industrial Product Group  
Potter Aeronautical Corp.  
Slaughter Co., Inc.  
Talley Corp., The  
Varo Mfg. Co., Inc.  
Waugh Engrs. Co.  
Westronics Inc.

## TAILPIPIES, JET ENGINE

ACF Industries Inc.  
Basic Tool Industries, Inc.  
Curtiss-Wright Corp.-Wright Aeronautical Div.  
Dresser Industries, Inc.  
Dresser Mfg. Div., Dresser Industries, Inc.  
Dunbar-Kapelle Inc.-Aircraft Components Div.  
Intercontinental Mfg. Co., Inc.  
Kaiser Aircraft & Electronics, Div.-Kaiser Industries Corp.

Kaiser Metal Products, Inc. - Fleetwings Div.  
Kanorr Corp.

\*LAVELLE AIRCRAFT CORP.  
Mercury Tool & Mfg. Corp.  
Newbrook Machine Corp.  
Penn-Michigan Mfg. Corp.  
Pisosecki Aircraft Corp.  
Portland Copper & Tank Works Inc.  
Precision Sheet Metal, Inc.  
\*RHEEM MFG. CO., DEFENSE & TECHNICAL PRODUCTS DIV.  
Rohr Aircraft Corp.  
Ryan Aeronautical Co.  
Smith-Morris Corp.  
Solar Aircraft Co.  
South Wind Div., Stewart Warner Corp.  
Stainless Steel Products, Inc.  
C. W. Tongren Co., Inc.  
Turbo Products, Inc.  
Twin Coach Co., Aircraft-Missiles

## TANK SEALERS, FUEL & OIL See SEALERS, FUEL & OIL TANK

## TANKS

- a. Auxiliary
- b. Auxiliary Drop
- c. Fuel
- d. Liquid Nitrogen
- e. Liquid Oxygen
- f. Liquefied Gas Storage
- g. Low Temperature
- h. Oil
- i. Self-Sealing
- j. Transportation & Storage

ACF Industries Inc., d, e, f, j.  
Aerjet-General Corp., d, e, f.  
Aerona Mfg. Corp., a, b, c, f, j.  
Air Logistics Corp., j.  
Air Products, Inc., d thru g.  
\*AIRESEARCH MFG. CO., DIV.-THE GARRETT CORP., d, e, f.  
Alco Products, Inc., c thru g.  
Alsop Engrs. Corp., j.  
Aluminum Co. of America, a, b, c, j.  
American Aeroports, a, b, c.  
American Agile Corp., g.  
American Aluminum Co., a.  
American Car & Foundry, Div.-ACF Industries, Inc., a, e, f, h, j.  
American Machine & Foundry Co., Government Products Group, a, b, c.  
Anchor Metal Spinning Co., The, a, b.  
Apex Reinforced Plastics, Div.-White Sewing Machine Corp., f.  
Aro Equipment Corp., d thru g.  
B. H. Aircraft Co., Inc., h.  
Basco Metal Products, Inc., j.  
Basic Tool Industries, Inc., a, b, c, j.  
Bendix Utica Div., Bendix Aviation Corp., d, e.  
Benson Mfg., Co., The, a thru h, j.  
Brighton Corp., d, e, f, j.  
Brooks & Perkins, Inc., c, d, e, g, h.  
Butler Mfg. Co.  
Cambridge Co.-Div.-Carrier Corp., d thru g, j.  
Chemald Co., a, b, g, j.  
Chicago Bridge & Iron Co., c thru h.  
Colonial Aircraft Corp., a, c.  
Conco Engrs. Works, a, j.  
Curtiss-Wright Corp.-Wright Aeronautical Div.  
D K Mfg. Co., d, e, f.  
Doyle & Roth Mfg. Co., Inc., c thru g, j.  
Dresser Mfg. Div., Dresser Industries, Inc., j.  
Electric Heater Co., The, j.  
Emerson Electric Mfg. Co., The, Electronics & Avionics Div., a, c.  
FWD Corp., c, j.  
G. W. Galloway Co., c thru g, j.  
General American Transportation Corp., c, d, e, g, h.  
B. F. Goodrich Aviation Products, c, i.  
Goodyear Tire & Rubber Co., The, Aviation Products Div., a, c, g thru j.  
Hahn & Cloy, d thru h, j.  
Paul Hardeman, Inc., d thru g.  
Hardman Tool & Engrs. Co., a, b, c.  
Harris Refrigeration Co., g.  
Holman Labs., Inc., d thru g.  
Ludwig Harold Mfg. Co., a, b, c, h, j.  
Houston Fearless Corp., a, h.  
Hupp Aviation Co., e.  
International Pump & Machine Works, d, e.  
Javelin Aircraft Co. Inc., a thru g.  
Joelin Mfg. Co., a.  
Kaiser Aircraft & Electronics, Div.-Kaiser Industries Corp., a thru e, h, j.  
Kaiser Metal Products, Inc.-Fleetwings Div., a.  
Kaiser Steel Corp., Fabricating Div., e.  
Kanorr Corp., b.  
M. W. Kellogg Co., The, a thru g.  
Kirk & Blum Mfg. Co., The, j.  
Ladish Co., d, e.  
Lamtex Industries, Inc., c, j.  
\*LAVELLE AIRCRAFT CORP., a, h.  
Linde Co., Div.-Union Carbide Corp., d thru g.  
Longen Aircraft Co., Inc., a, b, c, g, j.  
Menasco Mfg. Co., d thru g.  
Mercury Tool & Mfg. Corp., h, j.  
\*MIRAX CHEMICAL PRODUCTS CORP., METAL CONTAINER DIV., a, c, j.  
John Mohr & Sons, d, e, g, i.  
Monogram Precision Industries, a, b, j.  
Monrovia Aviation Corp., a, b, c.

National Tube Div.-United States Steel Corp., d, e, f,  
 Newbrook Machine Corp., a, b, d thru h.  
 Nooter Corp., j.  
 Norris-Thermador Corp., b, d, e.  
 Nuclear Products-Erco Div.-ACF Industries, Inc., a.  
 Oplika Welding, Machine & Supply Inc., c, f, h, j.  
 Piasecki Aircraft Corp., a, b, c, h, i.  
 Pittsburgh-Des Moines Steel Co., d thru h, j.  
 Portland Copper & Tank Works Inc., e, f, g.  
 Precision Sheet Metal, Inc., a thru g, j.  
 Pressed Steel Tank Co., a, c thru f, j.  
 Project Fabrication Corp., c thru g, j.  
 R & R Engrg. Co., j.  
 Reaction Motors Div., Thiokol Chem. Corp., c, e.  
 Regent Jax Mfg. Co., Inc., h.  
 Reinhold Engrg. & Plastics Co., a, b, c.  
 Edw. Renneburg & Sons Co., a, c, h.  
**RHEEM MFG. CO., DEFENSE & TECHNICAL PRODUCTS DIV., a, c thru h.**  
 Rohr Aircraft Corp., a thru e, g.  
 Ronan & Kunz, Inc., d thru g, j.  
 Royal Industries, Inc., a thru e, g, h, j.  
 Ryan Aeronautical Co., a, b, c, h.  
 Sandberg-Serrell Corp., j.  
 Sandoz Anito Engrg. Co., a, b, c, h.  
 Seafair Co.-Div.-Wilson Bros., c, j.  
 Seamless Products Co., Inc., h.  
 Shaw Metal Products Corp., c, h.  
 Skyline Products, Inc., c, h.  
 Smith-Morris Corp., a, b, c, h.  
 Solar Aircraft Co., c, h.  
 Spaco Corp., j.  
 Stainless Steel Products, Inc., a, c, d, e, h.  
 Standard Steel Corp., d thru g, j.  
 Stearns-Roger Mfg. Co., c thru g, j.  
 Superior Air Products Co., d thru g, j.  
 Tapco Group, Thompson-Roma-Waaldrige Inc., d thru g.  
 Trailmobile Inc., c, j.  
 Twin Coach Co., Aircraft-Missiles, a, b, h, j.  
 United Aircraft Products, Inc., a, b, c, g thru j.  
 J. S. Industries, Inc.  
 United States Chemical Milling Corp., b, c.  
 United States Rubber Co., c, i, j.  
 Universal Molded Products Corp., b.  
 Universal Unlimited, Inc., j.  
 Washington Aluminum Co., Inc., e, j.  
 Weber Aircraft Corp., a thru e, h.  
 Western ARC Welding, Inc., d, e, g.  
 Westline Products Div.-Western Lithograph Co., h.  
 Winder Aircraft Corp. of Florida, a, b.  
 Woolf Aircraft Products, Inc., c, h.

**JKS, PROPELLANT**  
 See PROPELLANT TANKS

**RES**

a. Asbestos  
 b. Coated & Impregnated  
 c. Electrical Insulation  
 d. Fabric  
 e. Friction  
 f. Heat Resistant  
 g. Plastic  
 h. Pressure Sensitive  
 i. Recording  
 j. Rubber, Natural & Synthetic  
 k. Test

Accurate Mfg. Co., c, e, g, j.  
 Adept Industries Inc., h.  
 Aero Leather Products Co., d, e.  
 Allied International Co., a thru h, j.  
 Allied Plastics Supply Corp., a thru h, j.  
 American Aeroparts, h, j.  
 American Super-Temperature Wires, Inc., g.  
 Ampex Magnetic Tape, i.  
 Arnold Engrg. Co., The, i.  
 Auburn Mfg. Co., The, a, c, g, j.  
 Audio Devices, Inc., i.  
 Barrett-Christie Co., a, c, j.  
 Bemis Brothers Bag Co., h.  
 Carl H. Biggs Co., b, f, g.  
 Bishop Mfg. Corp., c, e, h, j.  
 Bonny Mfg. Corp., c, g.  
 Borden Chemical Co., c, f, g.  
 V. H. Brady Co., h.  
 Carborundum Co., Refractories Div., f.  
 Chemold Co., b, d, g.  
 Chemplast, Inc., c, f, g.  
 Chicago Gasket Co., c, g, h.  
 Colonial Rubber Co., j.  
 Connecticut Hard Rubber Co., The, b, c, d, f, h.  
 Continental Diamond Fibre Corp., b, c, d, f.  
 Continental Rubber Works, c, e, g, j.  
 Cooper Industries, Inc., c.  
 Crystal-X Corp., g.  
 Dilectrix Corp., c, h.  
 Dixon Corp., g.  
 A. W. Dunton Co. Inc., The, c, e.  
 Duotone Co., Inc., i.  
 E. I. Du Pont De Nemours & Co. Inc., b, c, h, j.  
 Duracore Corp., b, d, g, h, j.  
 Electro Technical Products Div. Sun Chemical Corp., b, c, h.  
 Flexrock Co., g.  
 Fluorocarbon Co., The, g.  
 Franklin Fibre-Lamitex Corp., c, g, h.  
 Gotke Corp., a.  
 General Plastics Corp. of New Jersey, b, f, h.  
 Gerling Products, Inc., g, h.

B. F. Goodrich Industrial Products Co., j.  
 Greene, Tweed & Co., b, d, f, j.  
 Halogen Insulator & Seal Corp., g.  
 Haveg Industries, Inc., b, f, g.  
 Huntington Rubber Mills, j.  
 Integrated Mico Corp., b, c, f.  
 Jessell Plastics, g.  
 Jaclin Mfg. Co., b, c, f, g, h.  
 Johns-Manville, a thru h, j.  
 Johns-Manville Sales Corp., a thru h.  
 Labelon Tape Co., Inc., g, h.  
 Livingston Electronic Corp., i, k.  
 M & Q Plastic Products, g.  
 Mico Insulator Div.-Minnesota Mining & Mfg., Co., b, c.  
 Minicom Div., Minnesota Mining & Mfg. Co., i.  
 Minnesota Mining & Mfg. Co., a thru k.  
 Monogram Precision Industries, b, j.  
 Motorola Inc., Military Electronics Div., i.  
 Motor Corp., b, c, g.  
 New England Tape Co., Div.-United-Carr Fastener Corp., g.  
 New York Rubber Corp., j.  
 Dkanite Co., The, Subsidiary of Kennecott Copper Corp., c, e, g, j.  
 Oradio Industries, Inc., i.  
 Pee Dee Tape & Label Co., f, h.  
 Permacel, b thru h, j, k.  
 Plastic Age Sales, Inc., g.  
 Polyken Sales Div., The Kendall Co., b, c, d, f, g, h.  
 Polymer Corp., The, c, g, h.  
 H. K. Porter Co., Inc., Thermoid Div., c, d, e, h.  
 Products Research Co., b.  
 Raybestos-Manhattan, Inc., a, c, g, j.  
 Raybestos-Manhattan, Inc., Pa., a, b, c, f, g, j.  
 Rubbercraft Corp. of California, j.  
 Schlegel Mfg. Co., d.  
 Simplex Wire & Cable Co., c, j.  
 Somers Brass Co. Inc., i.  
 Sparto Mfg. Co., Div.-U.S. Ceramic Tile Co., b, c, g.  
 A. T. Stevens Co., b, d.  
 Technical Tape Corp., b, c, f, g, h.  
 Thermehc Engrg. Corp., g.  
 H. J. Thompson Fiber Glass Co., a.  
 Turbo Products, Inc., c, g.  
 United Asbestos & Rubber Co., a, b, f.  
 United States Rubber Co., a thru e, j.  
 Western Felt Works & Acadia Synthetic Products Div., j.  
 Westinghouse Electric Corp., b.  
 Westline Products Div.-Western Lithograph Co., h.  
 Zipper tubing Co., The, a, b, c, d, f, g.

**TARGET DEVICES**

Aerolab Development Co.  
 Aerona Mfg. Corp.  
 Aircraft Armaments, Inc.  
 American Machine & Foundry Co., Government Products Group  
 Andersen Labs.  
 Astrodyne, Inc.  
 Bell Aircraft Corp., Niagara Frontier Div.  
 Belock Instrument Corp.  
 Benson Mfg., Co., The  
 Bulow Electric Co.  
 Burton-Rodgers, Inc.  
 Centronix Inc.  
 Colonial Aircraft Corp.  
 Cooper Development Corp., Sub.-Marquardt Aircraft Co.  
 Curtiss-Wright Corp., Sonto Barbara Div.  
 DBM Research Corp.  
 Dynamic Devices, Inc.  
 Emerson & Cuming, Inc.  
 Gordon Enterprises  
 Walter J. Hyatt Co., The  
 Intercontinental Mfg. Co., Inc.  
 Monogram Precision Industries  
 Monrovia Aviation Corp.  
 Motorola Inc., Military Electronics Div.  
 Nuclear Products-Erco Div.-ACF Industries, Inc.  
 Philco Corp., Government & Industrial Div.  
 Piasecki Aircraft Corp.  
 Raytheon Mfg. Co., Government Equipment Div.  
 Republic Aviation Corp.  
 Royal Industries, Inc.  
 Ryan Aeronautical Co.  
 Singer Mfg. Co., The, Military Products Div.  
 Squiers Gage Co.  
 Stanley Aviation Corp.  
 Telectro Industries Corp.  
 Twin Coach Co., Aircraft-Missiles  
 U. S. Industries, Inc.  
 Waltham Engrg. Corp.  
 Winzen Research Inc.

**TELEMETERING, GUIDED MISSILE**  
 See GUIDED MISSILE TELEMETERING

**TELEVISION GUN MOUNTS**  
 See GUN MOUNTS, TELEVISION

**TEMPERATURE CONTROL SYSTEMS**

Airborne Accessories Corp.  
**\*AIRESEARCH MFG. CO., DIV.-THE GARRETT CORP.**  
 Airtemp Div., Chrysler Corp.  
 American Air Filter Co., Defense Products Div.  
 American Instrument Co., Inc.  
 American Machine & Foundry Co., Government Products Group

Andersen Labs.  
**\*ARNOUX CORP.**  
**\*ASSOCIATED TESTING LABS., INC.**  
 Atlantic Instrument Corp., Sub-American Electronics, Inc.  
 Avien, Inc.  
 Barber-Colman Co.  
 Bar-Ray Products, Inc.  
**\*BENDIX PRODUCTS DIV., BENDIX AVIATION CORP.**  
 Bendix Utica Div., Bendix Aviation Corp.  
 Bogue Electric Mfg., Co.  
 Bristol Co., The  
 CDC Control Services, Inc.  
 Carrier Corp.  
 Components Corp.  
 Consolidated Controls Corp.  
 Consolidated Diesel Electric Corp.  
 Crown Controls Co., Inc.  
 Dalmator Div., Yuba Consolidated Industries, Inc.  
 Data-Control Systems, Inc.  
 Daystrom Pacific Div.-Daystrom, Inc.  
 Dean & Benson Research, Inc.  
 Electronic Control Corp.  
 Electronic Processes Corp. of California  
 Electro-Tech Equipment Co.  
 Ellis & Watts Products, Inc.  
 Emerson Electric Mfg. Co., The, Electronics & Avionics Div.  
 Fenwal Inc.  
 Fischer & Porter Co.  
 General Electric Co., Apparatus Sales Div.  
 Claud S. Gordon Co.  
 Gulian Industries, Inc.  
 Hagon Chemicals & Controls, Inc.  
 Hallikainen Instruments  
 Hamilton Standard, Div.-United Aircraft Corp.  
 Hesco Engrg.  
 Hoover Electric Co.  
 Illinois Testing Laboratories, Inc.  
 Jet-Heat, Inc.  
**\*KEARFOTT CO., INC.**  
 Lear, Inc.  
 Leeds & Northrup Co.  
 Leslie Co.  
 Magnetic Controls Co.  
 Mason-Nielan  
 Minneapolis-Honeywell Regulator Co.-Aeronautical Div.  
 Minneapolis-Honeywell Regulator Co., Industrial Div.  
 Minneapolis-Honeywell Regulator Co., Industrial Product Group  
 New England Scientific Instruments Co.  
 Norwood Controls Unit Detroit Controls Div.  
 DPW-Jordan  
 Perkin-Elmer Corp.  
 Projects Unlimited Inc.  
 Pyrometer Instrument Co., Inc.  
 Arthur C. Ruge Associates, Inc.  
 Scientific Engrg. Labs., Inc.  
 Scientific Instrument Co.  
 Servomechanisms, Inc.  
 Spaco Corp.  
 Spencer Div., Metals & Controls Corp.  
 Standard-Thomson Corp., Clifford Mfg. Co. Div.  
 Stevens Mfg. Co., Inc.  
 Strotos, Div.-Fairchild Engine & Airplane Corp.  
 Sun Electric Corp., Aeronautical Div.  
 Temperature Engrg. Corp.  
 Thermo Electric Co., Inc.  
 Tranter Mfg., Inc.  
 United Aircraft Products, Inc.  
 United Control Corp.  
 United Electric Controls Co.  
 U. S. Science Corp., Div.-Topp Industries, Inc.  
 Vapor-Air Aeronautical Products Div., Vapor Heating Corp.  
 Victory Engrg. Corp.  
 West Instrument Corp.  
 Western Design, Div.-U.S. Industries, Inc.; Sonto Barbara Div.  
 Weston Instruments, Div.-Doystrom, Inc.  
 Westronics Inc.  
 Wilcolator Co., The  
 Winzen Research Inc.  
 Yellow Springs Instrument Co., The

**TEMPERATURE MEASURING EQUIPMENT**

Aero Research Instrument Co. Inc.  
 Aerojet-General Corp.  
 Airguide Instrument Co.  
 Allegory Instrument Co., Inc.  
 American Instrument Co., Inc.  
**\*ARNOUX CORP.**  
 Atlantic Instrument Corp., Sub-American Electronics, Inc.  
 Avien, Inc.  
 B G Corp., The  
 B & H Instrument Co., Inc.  
 Baird-Atomic, Inc.  
 Beckman & Whitley, Inc., Missile Products Div.  
**\*BENDIX PRODUCTS DIV., BENDIX AVIATION CORP.**  
 Bristol Co., The  
 Brown Engrg. Co., Inc.  
 Consolidated Controls Corp.  
 Consolidated Diesel Electric Corp.  
 Curtiss-Wright Corp., Princeton Div.  
 Data-Control Systems, Inc.  
 Daystrom Pacific Div.-Daystrom, Inc.  
 W. C. Dillon & Co., Inc.  
 Electric Auto-Lite Co., The

Electronic Processes Corp. of California  
Electro-Tech Equipment Co.  
Epic, Inc.  
Fenwal Inc.  
Fischer & Porter Co.  
Fisher Scientific Co.  
General Electric Co., Apparatus Sales Div.  
Claude S. Gordon Co.  
Gray Instrument Co.  
Gulton Industries, Inc.  
Hagan Chemicals & Controls, Inc.  
Hallikainen Instruments  
Harco Labs., Inc.  
Harris Refrigeration Co.  
Hesco Engrg.  
Illinois Testing Laboratories, Inc.  
Kahn & Co., Inc.  
**\*KEARFOTT CO., INC.**  
Leeds & Northrup Co.  
**\*LEWIS ENGRG. CO., THE**  
Mason-Neilan  
Mergenthaler Linotype Co.  
Meters Inc.  
Minco Products, Inc.  
Minneapolis-Honeywell Regulator Co.-Aeronautical Div.  
Minneapolis-Honeywell Regulator Co., Industrial Div.  
Minneapolis-Honeywell Regulator Co., Industrial Product Group  
National Beryllia Corp.  
National Electronics  
New England Scientific Instruments Co.  
North Atlantic Industries, Inc.  
Pacific Scientific Co.  
Perkin-Elmer Corp.  
Projects Unlimited Inc.  
Pyrometer Instrument Co., Inc.  
Revere Corp. of America  
Rochester Mfg. Co. Inc.  
Royco Instruments, Inc.  
Arthur C. Ruge Associates, Inc.  
Scientific Instrument Co.  
Servomechanisms, Inc.  
T-C Div., Dyna-Empire, Inc.  
Technique Associates Div., Duncan Electric Co., Inc.  
Thermo Electric Co., Inc.  
Thwing-Albert Instrument Co.  
Trans-sonics, Inc.  
United Electric Controls Co.  
Victory Engrg. Corp.  
West Instrument Corp.  
Weston Instruments, Div.-Daystrom, Inc.  
Westronics Inc.  
Winzen Research Inc.  
Yellow Springs Instrument Co., The

#### TEMPERATURE RESISTANCE BULBS

Aero Research Instrument Co. Inc.  
Allegheny Instrument Co., Inc.  
American Aeroparts  
**\*ARNOUD CORP.**  
Barber-Colman Co.  
Bristol Co., The  
Consolidated Diesel Electric Corp.  
Electronic Processes Corp. of California  
Electro-Tech Equipment Co.  
Fisher Scientific Co.  
Hallikainen Instruments  
Hesco Engrg.  
Illinois Testing Laboratories, Inc.  
Leeds & Northrup Co.  
**\*LEWIS ENGRG. CO., THE**  
Minneapolis-Honeywell Regulator Co., Industrial Div.  
Minneapolis-Honeywell Regulator Co., Industrial Product Group  
New York Coil Co.  
Pacific Scientific Co.  
Arthur C. Ruge Associates, Inc.  
Servomechanisms, Inc.  
T-C Div., Dyna-Empire, Inc.  
Thermo Electric Co., Inc.  
Thwing-Albert Instrument Co.  
Trans-sonics, Inc.  
United Control Corp.  
West Instrument Corp.  
Weston Instruments, Div.-Daystrom, Inc.

#### TEMPERATURE RESISTANT BULBS See BULBS, TEMPERATURE RESISTANT

#### TEMPERATURE WARNING UNITS See WARNING UNITS, TEMPERATURE

#### TENSIONS, COIL WINDING

Allied Control Co., Inc.  
Boulin Instrument Corp.  
Coil Winding Equipment Co.  
Rollan Electric Co.  
T-C Div., Dyna-Empire, Inc.

#### TERMINAL BLOCKS

AMP Inc.  
Accurate Electronics Corp., Dept. D  
Adept Industries Inc.  
Allied Plastics Supply Corp.  
American Aeroparts  
Armel Electronics, Inc.  
Audio Development Co.  
Automatic Electric Sales Corp.

Carmac Aviation  
Century Fasteners Corp.  
Cutler-Hammer Inc.  
Detronic Industries  
Double E Products Co.  
Electrical Insulation Co., Inc.  
Eljay Corp.  
Emerson Plastics Corp.  
Emmco Plastic Fabricators - Div.-E. M. McCarthy Machine Co.  
Fisher & Crame  
General Electric Co., Apparatus Sales Div.  
General Products Corp.  
Gordon Enterprises  
ITT-Kelllogg  
Janca Corp.  
Jadee Plastics Co.  
Howard B. Jones Div.-Cinch Mfg. Corp.  
Keystone Electronics Corp.  
Kulka Electric Corp.  
Lercos Electronics, Inc.  
Litton Industries, U.S. Engrg. Co., Div.  
Thomas J. Long, Inc.  
Molding Corp. of America  
National Pneumatic Co., Inc., Holtzer-Cabot Divs.  
National Tel-Tronics Corp.  
Piasecki Aircraft Corp.  
Pilgrim Products Inc.  
Milton Ross Metals Co., The  
St. Regis Paper Co., Panelyte Div.  
Silicone Insulation, Inc.  
Slip Ring Co. of America  
States Co., The

#### TERMINAL BOARDS

AMP Inc.  
Accurate Electronics Corp., Dept. D  
Adept Industries Inc.  
Aerolite Electronics Corp.  
Alac, Inc.  
Alden Products Co.  
Allied Plastics Supply Corp.  
Amotam Electronic Hardware Co. Inc.  
American Aeroparts  
Anchor Metal Spinning Co., The  
Armel Electronics, Inc.  
Cambridge Thermionic Corp.  
Cleveland Metal Specialties Co., Electronics Div.  
Comco Plastics Inc.  
Cutler-Hammer Inc.  
Dalmore Corp.  
Detronic Industries  
Double E Products Co.  
Electrical Insulation Co., Inc.  
Electro-Mechanical Products Co.  
Eljay Corp.  
Emerson Plastics Corp.  
Emmco Plastic Fabricators - Div.-E. M. McCarthy Machine Co.  
Engineered Plastics, Inc.  
**\*ETS-HOKIN & GALVAN**  
Fidelity Amplifier Co.  
Fisher & Crame  
General Electric Co., Apparatus Sales Div.  
General Products Corp.  
Globe Electrical Mfg. Co.  
Gordon Enterprises  
Hamden Mfg. Co., Inc.  
Hobson Brothers, Inc.  
Jadee Plastics Co.  
Johns-Manville  
Howard B. Jones Div.-Cinch Mfg. Corp.  
Keystone Electronics Corp.  
Kulka Electric Corp.  
Lercos Electronics, Inc.  
Litton Industries, U.S. Engrg. Co., Div.  
Thomas J. Long, Inc.  
Molding Corp. of America  
National Pneumatic Co., Inc., Holtzer-Cabot Divs.  
National Tel-Tronics Corp.  
Panel Engrg. Corp.  
Penn Fibre & Specialty Co., Inc.  
Piasecki Aircraft Corp.  
Pilgrim Products Inc.  
Printronics Corp.  
Rimak, Inc.  
Milton Ross Metals Co., The  
Russell Reinforced Plastics Corp.  
St. Regis Paper Co., Panelyte Div.  
Silicone Insulation, Inc.  
Slip Ring Co. of America  
States Co., The  
Tri-Dex Co.  
Vector Electronic Co.  
Virginia Electronics Co., Inc.

#### TERMINAL LUG SWAGGERS

AMP Inc.  
Alac, Inc.  
Alden Products Co.  
Amotam Electronic Hardware Co. Inc.  
American Aeroparts  
Cambridge Thermionic Corp.  
Electrical Insulation Co., Inc.  
Keystone Electronics Corp.  
Kulka Electric Corp.  
Lercos Electronics, Inc.  
Litton Industries, U.S. Engrg. Co., Div.  
Edward Segal  
Thompson-Bremer & Co.  
Waldom Electronics Inc.

#### TERMINAL STRIPS

AMP Inc.  
Accurate Electronics Corp., Dept. D  
Aerolite Electronics Corp.  
Alac, Inc.  
Alden Products Co.  
Allied Plastics Supply Corp.  
Amotam Electronic Hardware Co. Inc.  
American Aeroparts  
American Printed Circuits Co., Inc.  
Armel Electronics, Inc.  
Automatic Electric Sales Corp.  
Birnback Radio Co., Inc.  
Cambridge Thermionic Corp.  
Carmac Aviation  
Century Fasteners Corp.  
Cutler-Hammer Inc.  
Detronic Industries  
Double E Products Co.  
Duralith Corp.  
Electric Terminal Corp.  
Electrical Insulation Co., Inc.  
Electro-Tech Equipment Co.  
Eljay Corp.  
Emerson Plastics Corp.  
Emmco Plastic Fabricators - Div.-E. M. McCarthy Machine Co.  
Fisher & Crame  
General Products Corp.  
Gladding, McBean & Co.  
Helipot Div., Beckman Instruments Inc.  
Hobson Brothers, Inc.  
ITT-Kelllogg  
Industrial Engravers, Inc.  
Jadee Plastics Co.  
Howard B. Jones Div.-Cinch Mfg. Corp.  
Kulka Electric Corp.  
Lercos Electronics, Inc.  
Litton Industries, Inc.  
Litton Industries, U.S. Engrg. Co., Div.  
Thomas J. Long, Inc.  
Molding Corp. of America  
National Pneumatic Co., Inc., Holtzer-Cabot Divs.  
National Tel-Tronics Corp.  
North Electric Co.  
Pilgrim Products Inc.  
Milton Ross Metals Co., The  
St. Regis Paper Co., Panelyte Div.  
Sangamo Electric Co.  
Sealelectric Switch & Relay Corp.  
Silicone Insulation, Inc.  
Slip Ring Co. of America  
Stanley-Judd Div.-The Stanley Works  
Teiner Engrg. Corp.  
Tri-Dex Co.  
Vector Electronic Co.  
Waldom Electronics Inc.  
Westline Products Div., Western Lithograph Co.

#### TERMINALS

- a. Hermetically Sealed
- aa. High Pressure Electric
- b. Miniature & Subminiature
- c. Snap
- d. Solderless
- e. Standoff
- f. Wire & Cable

AMP Inc., a, b, d, f  
Accurate Electronics Corp., Dept. D, b, d, e  
Alac, Inc., b, d, e  
Alden Products Co., b  
All Specs Corp., b, f  
Alpine Electronic Components, Inc., b, d, e  
Amotam Electronic Hardware Co. Inc., b, e, f  
American Aeroparts, c, f  
Armel Electronics, Inc., b, e  
Armo Seal Co., a  
B G Corp., The  
Baldwin Mfg. Co., Inc., The  
Best Aircraft Corp., f  
Birnback Radio Co., Inc., b, e, f  
Burdny Corp., Amotam Div., b, d, f  
Cambridge Thermionic Corp., b, e  
**\*CANNON ELECTRIC CO., b, e**  
Carborundum Co., Latrobe Plant, Refractories Div., a, b, e  
Century Fasteners Corp., b, d, f  
Ceramaseal, Inc., a, e  
Cole-Hersee Co., d, f  
Dalmore Corp., e  
Dante Electric Mfg. Co., d, f  
Diamondite Products Mfg. Co., e  
Electric Terminal Corp., f  
Emmco Plastic Fabricators - Div.-E. M. McCarthy Machine Co.  
Erie Resistor Corp., e  
Frenchtown Porcelain Co., a, b  
Freeman Co., The, f  
Fusite Corp., a, b, e  
Garde Mfg. Co., a, b, d, e  
Gladding, McBean & Co., a, e  
Goe Engrg. Co., b, e  
Hallett Mfg., Co., f  
Harco Labs., Inc., f  
Hobson Brothers, Inc., d  
Hohlex, Inc., a  
Hollingsworth Co., Solderless Terminal Div., d  
Janco Corp., f  
Javex Electronics, d  
Joelin Mfg. Co., a, b, d, e, f  
Howard B. Jones Div.-Cinch Mfg. Corp.

emedy Aircraft Supply Co., f.  
 eystone Electronics Corp., b, d, e.  
 ulko Electric Corp., f.  
 erco Electronics, Inc., a thru f.  
 itton Industries, Inc., b thru e.  
 itton Industries, U.S. Engr. Co., Div., b, e, f.  
 ivingston Electronic Corp., a.  
 undey Associates Inc., a, b, d, e.  
 olco Mfg. Co., b thru f.  
 onger Electric Co., b, d.  
**Mc CORMICK SELPH ASSOCIATES, a, aa.**  
 l. E. Menaugh Co., f.  
 ercury Air Parts Co., Inc., b.  
 icrodot Inc., b, f.  
 imnesota Mining & Mfg. Co., a.  
 itronics Inc., a.  
 olding Corp. of America, a, b, e.  
 rank W. Morse Co., f.  
 otional Coil Co., b.  
 otional Tel-Tronics Corp., e.  
 etworks Electronic Corp., a, b, e.  
 orth Electric Co., a, b, d, f.  
 acific Cut Washer Co., b, d.  
 ilgrim Products Inc., b, e, f.  
 imok, Inc., b thru e.  
 ilton Ross Metals Co., The, a, b, e, f.  
 ilcone Products Co., d.  
 ilcone Seals, Inc., a, e.  
 i, Sjoberg & Son, b, d, f.  
 here Co. Inc., The, a, b, e.  
 tonley-Judd Div.-The Stanley Works, c, d, f.  
 dwin B. Stimpson Co., Inc., f.  
 rot-o-Seal Mfg. Co., a, b, e.  
 ompson-Bremer & Co., f.  
 orwico Electronics, Inc., a.  
 riad Transformer Corp., a.  
 ri-Point Plastics Inc., e.  
 actor Electronic Co., b, d, e.  
 oldom Components Inc., d, f.  
 aren Components, Div. El-Tronics, Inc., a.  
 sesep Corp., b.  
 inchester Electronics, Inc., a thru e.  
 errick Mfg. Corp., c, f.

**MINATIONS**

AMP Inc.  
 Alford Mfg. Co.  
 Ceramoseal, Inc.  
 Diamond Antenna & Microwave Corp.  
 Empire Products Sales Corp.  
 Entron, Inc.  
**ETS-HOKIN & GALVAN**  
 Lunday Associates Inc.  
 Langer Electric Co.  
 Meridian Metalcraft, Inc.  
 Microlab  
 Omega Labs., Inc.  
 Portchester Instrument Corp.  
 Radar Design Corp.  
 Sperry Microwave Electronics Co., Div.-Sperry Rand Corp.  
 Weinschel Engrg.

**ST CHAMBERS, ENVIRONMENTAL**

American Instrument Co., Inc.  
 American Research Corp.  
 Anchor Specialty Mfg. Co., Inc.  
**ASSOCIATED TESTING LABS., INC.**  
 Astrovac Corp.  
 Atlas Engrg. Corp.  
 Avtron Mfg., Inc.  
 Bell Aircraft Corp., Niagara Frontier Div.  
 Blue M Electric Co.  
 CDC Control Services, Inc.  
 Carrier Corp.  
 Chicago Bridge & Iron Co.  
 Cincinnati Sub Zero Products  
 Conrad, Inc.  
 Consolidated Electrodynamics Corp., Rochester Div.  
 Delco Design Engineers, Inc.  
 Environmental Equipment Co.  
 S. W. Galloway Co.  
 Gardner Laboratory, Inc.  
 General Testing Labs., Inc.  
 Guardia Co., Div. of American Marietta Co.  
 Paul Hardeman, Inc.  
 Harris Refrigeration Co.  
 Hoskel Engrg. & Supply Co.  
 High Vacuum Equipment Corp.  
 Hughes Tool Co., Aircraft Div.  
 Hull Corp.  
 Luppert, K. H., Co.  
 Instruments Div.-Philips Electronics, Inc.  
 International Radiant Corp.  
 Omision Cold Storage Door Co.  
 Metal Fabricators Corp.  
 Kissimee Inc.  
 John Mohr & Sons  
 Murphy & Miller Inc.  
 IRC Equipment Corp.  
 Newbrook Machine Corp.  
 Pittsburgh-Des Moines Steel Co.  
 Project Fabrication Corp.  
 Sandberg-Serreil Corp.  
 Scientific Engrg. Labs., Inc.  
 Pace Corp.  
 Standard Cabinet Co.  
 State Testing Lab. Inc.  
 J. J. Stokes Corp.  
 Temperature Engrg. Corp.  
 Tenney Engrg., Inc.

Washington Technological Associates Inc.  
 Webber Engrg. Corp.

**TEST CHAMBERS, FLIGHT SIMULATION**

American Machine & Foundry Co., Government Products Group  
 American Research Corp.  
 Atlas Engrg. Corp.  
 Bell Aircraft Corp., Niagara Frontier Div.  
 Bendix Products Div.-Missiles, Bendix Aviation Corp.  
 A. Biederman, Inc.  
 Bulow Electric Co.  
 CDC Control Services, Inc.  
 California Technical Industries, Div.-Textron Inc.  
 Conrad, Inc.  
 Epic, Inc.  
 General Testing Labs., Inc.  
 Guardian Electric Mfg. Co.  
 Guardia Co., Div. of American Marietta Co.  
 Paul Hardeman, Inc.  
 Hughes Tool Co., Aircraft Div.  
 International Radiant Corp.  
 Missimers Inc.  
 NRC Equipment Corp.  
 Newbrook Machine Corp.  
 Pittsburgh-Des Moines Steel Co.  
 Project Fabrication Corp.  
 Raytheon Mfg. Co., Government Equipment Div.  
 Rotafest Labs., Inc.  
 Royal Industries, Inc.  
 Scientific Engrg. Labs., Inc.  
 Smith-Morris Corp.  
 F. J. Stokes Corp.  
 Temperature Engrg. Corp.  
 Tenney Engrg., Inc.  
 Thompson-Ramo-Wooldrige Products Co., The

**TEST EQUIPMENT**

- a. Accelerator
- b. Altitude Simulating
- c. Aural
- d. Aviation
- e. Centrifuge
- f. Combustion
- g. Electrical
- h. Electronic
- i. Environmental
- j. Flight
- k. Humidity
- l. Hypersonic
- m. Ignition
- n. Impact
- o. Microwave
- p. Oxygen System
- q. Pneumatic
- r. Temperature
- s. Vibration

**\*AC ELECTRONICS DIV., GENERAL MOTORS CORP., h**

ACI Industries Inc.  
 Accessory Controls & Equipment Corp., q.  
 Actuation Research Corp., q.  
 Advanced Electronics, Inc., g, h, r, s.  
 Aero Research Instrument Co. Inc., r.  
 Aerodex, Inc., d.  
 Aeroflex Corp., The, Aeroflex Labs. Div., b, g, h, i.  
 Aerojet-General Corp., a, b, d, f, r.  
 Aerolab Development Co., d, j.  
 Aerescience, Inc.  
 Air Logistics Corp., g, h.  
 Airborne Instruments Lab., Div.-Cutler-Hammer, Inc., j, a.  
 Aircam Inc., a.  
 Aircam Inc. of New Jersey, a.  
 Aircro, Inc., i, k, r.  
 Airguide Instrument Co., k.  
 Airpax Electronics Inc. Seminole Div., d, g, h.  
 Airtron Inc., Div.-Litton Industries, a.  
 Aitronics International Corp.  
 All American Tool & Mfg. Co., s.  
 Allegany Instrument Co., Inc., h.  
 Allen Tool Corp.  
 Allied International Co., d, h.  
 Amelco, Inc., g, h.  
 Amerac Inc., a.  
 American Bosch Armo Corp., g, h.  
 American Electronics, Inc., Teller & Cooper Div., b.  
 American Felt Co., i, k, q, r.  
 American Instrument Co., Inc., h, i, k, r.  
 American Machine & Foundry Co., Government Products Group, a, e, g, h, i.  
 American Measurement & Control, Inc., g, h.  
 American Research Corp., b, i, k, r.  
 American Research & Mfg. Corp., s.  
 Anthor Testing Instrument Co., Inc., p.  
 Anaheim Electronics Co., Inc., h.  
 Analogue Controls, Inc., h.  
 Anchor Specialty Mfg. Co. Inc., a, b, d, e, g thru k, m, o thru s.  
 Andersen Labs., g, h.  
 Applied Science Corp. of Princeton, d, j.  
 Arde-Portland, Inc., b, l, r.  
 Arenberg Ultrasonic Lab., Inc., h.  
**\*ARNOUX CORP., r.**  
 Aro Equipment Corp., p.  
 Associated Engineers, Inc., d, f, g, h, j, m, q, r.  
 Associated Research, Inc., g, h.  
**\*ASSOCIATED TESTING LABS., INC., a, b, c, e thru i, k, m, n, q, r, s.**  
 Astrovac Corp., b, i, j, k, r, s.  
 Atlas Coil Inc., h.

Atlas Precision Products, Co., d, g, h.  
 Automation Instruments Inc., h.  
**\*AVCO MFG. CORP., CROSLY DIV., h.**  
 Avo Ltd., g, h.  
 Avtron Mfg., Inc., d, g, h, i.  
 B & F. Instruments, Inc., j, s.  
 B G Corp., The, m.  
 B & H Instrument Co., Inc., d, r.  
 Babbcock Radia Engrg., Inc., j.  
 Baird-Atomic, Inc., h.  
 Ballantine Labs., Inc., h.  
 Barker & Williamson Inc., h.  
 Barry Controls Inc., d, g, h, i, n, s.  
 Basic Tool Industries, Inc., r, s.  
 Rex Bassett, Inc., h.  
 Bearing Inspection, Inc.  
 Beckman Instruments, Inc., Berkeley Div., a.  
 Beckman-Spino Div., e, i.  
 Belock Instrument Corp., j.  
 Bendix Aviation Corp., Eclipse-Pioneer Div.  
 Bendix Aviation Corp., Pioneer-Central Div., d, p.  
 Bendix Aviation Corp., Red Bank Div., g thru j, o.  
 Bendix Aviation Corp., York Div., g, h, j, a.

**\*BENDIX PRODUCTS DIV., BENDIX AVIATION CORP., h**

Bendix Products Div.-Missiles, Bendix Aviation Corp., a, f, g.  
 Bendix Radio Div., Bendix Aviation Corp., h, a.  
 Bendix Ufca Div., Bendix Aviation Corp., g, h, q.  
 Beva Labs, Inc., h.  
 A. Biederman, Inc., a, f, g, h, p.  
 Bliss Electronic Corp., h.  
 Blue M Electric Co., i, k, r.  
 Bogue Electric Mfg. Co., h.  
 Briggs Associates, Inc., h, s.  
 Bristol Co., The, q, r.  
 Brown Engrg. Co., Inc., h, q.  
 Brush Instruments, Div.-Cleive Corp., a, h, i, r.  
 Bulow Electric Co., a.  
 Burr-Brown Research Corp., h.  
 Burroughs Corp., h.  
 Burton-Rodgers, Inc., b, d.  
 CDC Control Services, Inc., b, d, i, j, k, q, r, s.  
 CGS Labs., Inc., h.  
 California Technical Industries, Div.-Textron Inc., b, g, h, j, a.  
 Captive Seal Corp., q.  
 Centronix Inc., g, h.  
 Chadwick-Helmuth Co., i.  
 John Chotillon & Sons, n.  
 Chemalloy Electronics Corp., a.  
 Chicago Aerial Industries, Inc., i.  
 Cincinnati Sub-Zero Products, b, h, i, k, r.  
 Conrad, Inc., b, g, i, j, k, r, s.  
 Consolidated Avionics Corp., c, s.  
 Consolidated Diesel Electric Corp., d, g, q, r.  
 Consolidated Diesel Electric Corp., Test Equip. Div., d, f.  
 Consolidated Diesel Electric Corp., Western Div., g, q.  
 Consolidated Electrodynamics Corp., a, d, h, i, j, n, s.  
 Continental Technical Service, Inc., b, d, g, h, j, q.  
 Control Engrg. Co., Div. Jervis B. Webb Co., d, g, h, q.  
 Cooper Development Corp., Sub-Marquardt Aircraft Co., h, i, a, q.  
 Cornelius Co., The, Aero Div., q.  
 Cubic Corp., h, a.  
 Curtiss-Wright Corp.-Princeton Div., l, r.  
 Datron Electronics, Div.-Mid-Continent Mfg. Co., Inc., h, i.  
 Daven Co., The, g, h, i, r.  
 Davenport Mfg. Co., g, h.  
 Daystrom Pacific Div.-Daystrom, Inc., d, g, h.  
 Dayton Aviation Radio & Equipment Corp., h.  
 Delsen Corp., g.  
 Delco Design Engineers, Inc., i, r.  
 Demornay-Bonardi, a.  
 Development Engrg. Co., Inc., i.  
 Diamond Antenna & Microwave Corp., a.  
 DI-AN Controls, Inc., h.  
 DIT-MCO, Inc., Electronics Div., d, g, h.  
 Divco-Wayne Electronics, Div.-Divco-Wayne Corp., g, h.  
 Diversify Engrg. Co., f.  
 Donner Scientific Co., a, h.  
 Douglas Microwave Co., Inc., a.  
 Dresser Industries, Inc., g, h.  
 Dymec Inc., a.  
 Dynamic Devices, Inc., p, q.  
 Dytronics Co., h.  
 Eastern Specialty Co., The, g, h.  
 Edgerton, Germeshausen & Grier, Inc., g, h, a.  
 Eldorado Electronics, h.  
 Electro Instruments, Inc., h.  
 Electro Precision Corp., h.  
 Electromath Corp., g, h.  
 Electro-Mechanical Products Co., b, g, h.  
 Electronic Communications, Inc., h, a.  
 Electronic Tube Corp., h.  
 Electronics Div., Van Norman Industries Inc., h, a.  
 Electro-Tech Equipment Co., g, h, r.  
 Elsin Electronics Corp., h.  
 Emerson Electric Mfg. Co., The, Electronics & Avionics Div., d, g, h, j, a.  
 Empire Products Sales Corp., h, a.  
 Endevo Corp., i, s.  
 Engrg. Associates, g, h, a.  
 Environmental Equipment Co., b, i, k, r, s.  
 Epic, Inc., k, r, s.  
 Ewold Instruments, i, s.

FXR, Inc., h, o  
 Fairchild Astronics Div., Fairchild Engine & Airplane Corp., g, h, o  
 Federal Mfg. & Engrg. Corp., d, h, o  
 Federal Products Corp., f, g  
 Fisher & Porter Co., h, i, q, r  
 Fisher Research Lab., Inc., h, s  
 Fisher Scientific Co., e, f, r  
 Flow Corp., h  
 John Fluke Mfg. Co., Inc., h  
 Foto-Video Labs., Inc., h  
 Furane Plastics, Inc., g  
 Gairner Scientific Corp., The, s  
 Gardner Laboratory, Inc., i, k  
 General Communication Co., h, o  
 General Electric Co., Apparatus Sales Div., d, g, l  
 General Electric Co., Missile & Space Vehicle Dept., g, h  
 General Electric Co., X-Ray Dept., h  
 General Testing Labs., Inc., o, e, g thru k, m, n, q, r, s  
 Genisco, Inc., o, e, i, s  
 Genisco, Inc., Instrument Div., o  
 Giannini Plosmodyne Corp., b, l  
 Gillilan Bros., Inc., h  
 Gordon Enterprises, d, h, s  
 Green Rectifier Co., d, g  
 Greer Hydraulics, Inc., g, h, i, q  
 Grieve-Hendry Co., Inc., r  
 Guardian Electric Mfg. Co., d, g  
 Guardite Co., Div. of American Marietta Co., b, i, k, r  
 Guided Missile Div., De Havilland Aircraft of Canada, Ltd., d, g, h  
 Gulton Industries, Inc., s  
 Hollomere Electronics Co., b, j  
 Hollicrofters, h, o  
 Hollikainen Instruments, r  
 Hamilton Standard, Div.-United Aircraft Corp., g, l  
 Henco Labs., r  
 Paul Hardeman, Inc.  
 Harris Refrigeration Co., b, i, k, r  
 Hasel Engg. & Supply Co., b, q, r  
 Hazeltine Electronics Div.-Hazeltine Corp., h, a  
 Helipat Div.-Beckman Instruments Inc., g  
 Hewi-Duty Electric Co., f, r  
 Hewlett-Packard Co., h, o  
 Hicks Corp., The, o, i  
 High Vacuum Equipment Corp., b  
 High Voltage Engrg. Corp., o, l  
 E. Vernon Hill & Co., i, k  
 Carl Hirschmann Co., Inc., s  
 Hoffman Labs. Div., Hoffman Electronics Corp., h  
 C. G. Hokanson Co., Inc., i, k, r  
 Huffard Corp., The, s  
 Hughes Tool Co., Aircraft Div., h  
 Hull Corp., i  
 Huppert, K. H., Co., r  
 Walter J. Hyatt Co., The, o, a  
 Hycon Mfg. Co., e  
 I-L-S Instrument Div., The Meriam Instrument Co., h  
 I-T-E Circuit Breaker Co., o  
 I.T.T.-Kellogg, g  
 Illinois Testing Laboratories, Inc., r  
 Impact-D-Groph Corp., The, h, m, s  
 Industrial Control Co., Inc., s  
 Industrial Engrg. Corp., b, g, h, q  
 Industrial Instruments Inc., h  
 Industrial Test Equipment Co., h  
 Inertia Switch, Inc., n  
 Infrared Industries Inc., h  
 Inscoc Co., Div.-Barry Controls Inc., s  
 Instrumentation Div.-Ampex Corp., i, l  
 Instruments For Industry, Inc., h, o  
 Intercontinental Dynamics Corp., b, d, h, i, q  
 International Equipment Co., f  
 International Ferment Machinery Co., Inc., g  
 International Pump & Machine Works, b  
 International Radiant Corp., b, i, k, r  
 Itenco, Inc., b, i, k, r  
 J.V.-M Microwave Co., o  
 Jon Hardwore Mfg. Co., Inc., h, i, n  
 J. W. Johnson & Co., Inc., s  
 Kahn & Co., Inc., g, h, k, q, r, s  
 Kaiser Aircraft & Electronics, Div.-Kaiser Industries Corp., b, h, i  
 Kauke & Co., j  
 Koy Electric Co., o, s  
 \*KEARFOTT CO., INC., d, g thru i, o, q, r  
 \*KEARFOTT CO., INC., MICROWAVE DIV., o  
 Keithley Instruments, Inc., h  
 Kinney Mfg. Div., The New York Air Brake Co., b, i  
 Kingston Electronics Div.-Kingston Industries Inc., h  
 Knopp Inc., g  
 L. A. B. Corp., l, n, s  
 Lamkin Labs., Inc., M. R. Div., h  
 Land-Air Inc., h, j, s  
 La Roe Instruments, Inc., h  
 Lavoie Laboratories Inc., h  
 Leach Corp., g  
 Lear, Inc., o, d, g, h, j  
 Lear, Inc., Grand Rapids Div., d, h  
 Leeds & Northrup Co., r  
 Lelectronics, Inc., h  
 Leland Airborne Products, Div.-American Machine & Foundry Co., g, h  
 \*WALLACE O. LEONARD, INC., i  
 Levinthal Electronic Products, Inc., h, o  
 \*LEWIS ENGRG. CO., THE, r  
 Lisco, Inc., o  
 Ling Electronics, Inc., i, s  
 Liquidimeter Corp., The, h  
 Lumatron Electronics, Inc., h

MB Mfg. Co., s  
 Magee-Bralla & Associates., i  
 Mogosync Mfg. Co., Ltd., h  
 Manson Labs., Inc., h, o  
 Marconi Instruments, g, h  
 Marotta Valve Corp., q  
 Marquardt Aircraft Co., g, h, q  
 Messco Div.-Coburn Electronics, Inc., h  
 Most Development Co., Inc., i  
 W. L. Maxson Corp., The, d  
 Measurements Div., McGraw Edison Co., h  
 Melectron Corp., q  
 Mergenthaler Linotype Co., h  
 Merz Engrg., Inc.  
 Metal Fabricators Corp.  
 Metronix, Inc., Sub.-Assembly Products, Inc., h  
 Micrometrical Mfg. Co., h, s  
 Milliest Corp., h  
 Mine Safety Appliances Co., k  
 Minneapolis-Honeywell Regulator Co.-Aeronautical Div., d, g, h, i, q  
 Minneapolis-Honeywell Regulator Co., Boston Div., g, h  
 Minneapolis-Honeywell Regulator Co.-Davies Labs. Div., i, s  
 Minneapolis-Honeywell Regulator Co., Industrial Product Group, b, g, h, i, q, r  
 Minneapolis-Honeywell Regulator Co., Ordnance Div., h, j, k  
 Miratel, Inc., h  
 Missimers Inc., b, f, i, k, r  
 Monogram Precision Industries, h, o  
 Moran Instrument Corp., j  
 Motorola Inc., Military Electronics Div., g, h, o  
 Heinz Mueller Eng. Co., Inc., g  
 Multi-Amp Corp., g, h  
 Murphy & Miller Inc., b, i, k, r  
 NRC Equipment Corp., b, i  
 George L. Nonkervis Co., d, g, h, m, p thru s  
 Nordo Microwave Corp., The, o  
 National Electronics, g, r  
 National Instrument Laboratories, Inc., g, h, p  
 National Spectrographic Labs., Inc., g, h  
 National Welding Equipment Co., p  
 Networks Electronic Corp., b, g, h, i, k, r, s  
 New England Scientific Instruments Co., g, k  
 Non-Linear Systems, Inc., h  
 North Atlantic Industries, Inc., h  
 North Electric Co., g, h  
 North Hills Electric Co., Inc., g, h  
 Nuclear Products-Erco Div.-ACF Industries, h  
 Omega Labs., Inc., o  
 Orbitran Co., Inc., h  
 Otis Elevator Co., Electronic Div., g  
 Oxygen Equipment & Service Co., p  
 PCA Electronics Inc., o, g, h  
 Pacific Scientific Co., r, s  
 Pacc Electronics Co., Inc., h  
 Perkin-Elmer Corp., r  
 Meschel Electrics, Inc., g, h  
 Philco Corp., Government & Industrial Div., g, h, o  
 Photon Instrument Co., h  
 Physics Research Laboratories, Inc., g  
 Polarad Electronics Corp., g, h, o  
 Polytechnic Research & Development Co., Inc., o  
 Power-Tronic Systems Inc., g, h, j  
 Precise Development Corp., g, h, m  
 Precision Apparatus Co., Inc., h  
 Precision Thermometer & Instrument Co., k, r  
 Pre-Flite Industries Corp.-Sub.-Avco Corp., q  
 Projects Unlimited Inc., g, h, r  
 Puritan Compressed Gas Corp., Aviation Div., p  
 Pyrometer Instrument Co., Inc., r  
 Radar Design Corp., o  
 Redex Corp., h  
 Radiophone Co., Inc., h  
 Radiation, Inc.  
 Romo-Wooldridge Div., Thompson Romo Wooldridge of Calif.  
 Raymond Engrg. Lab., Inc., e  
 Reflectone Corp., The, g, h  
 Republic Aviation Corp., d, g, h, j  
 Resdel Engrg. Corp., h, o  
 Reser Engrg., Inc., h  
 Research Appliance Co., f, l, m  
 Rototest Labs., Inc., s  
 Rayco Instruments, Inc., r  
 Rucker Co., The, o, e, i, q  
 Arthur C. Ruge Associates, Inc., r  
 Rutherford Electronics Co., h  
 Sage Labs., Inc., o  
 Sandberg-Serrell Corp., d, r  
 Sanders Associates, Inc., d  
 Schoevitz Engrg., o, e, s  
 Schaffer Air Industries, Inc., d, g, p, q  
 Scientific Engrg. Labs., Inc., b, h, i, k, r  
 Scientific Instrument Co., k, r  
 Scientific-Atlanta, Inc., o  
 H. H. Scott, Inc., s  
 Sequoia Wire & Cable Co.-Div.-Mandrel Industries, Inc., d, h  
 Shollcross Mfg. Co., g  
 Simpson Electric Co., g, h, r  
 Skyline Electric & Mfg. Co., g, h, i, k, r  
 Slaughter Co., Inc., g, h  
 Smith-Morris Corp.  
 Solatron Inc., g, h, j  
 Spoce Corp., h, i, j, s  
 Specialties, Inc., i, q  
 Sperry Microwave Electronics Co., Div.-Sperry Rand Corp., h, o  
 Stainless Inc., a  
 Standard Cabinet Co., b, l, k, r

Stanley Aviation Corp., j  
 State Testing Lab. Inc.  
 States Co., The, g  
 Stevid Engrg., Inc., o  
 Stearns-Roger Mfg. Co., i, k, p, q, r  
 F. J. Stokes Corp., b  
 Stromberg-Carlson Div.-General Dynamics Corp., d, g, h  
 Suffolk Products Corp., g, h  
 H. W. Sullivan Ltd., g, h  
 Sun Electric Corp., Aeronautical Div., d, f, g, h, m, p, q, s  
 Surface Combustion Corp., i  
 Systems Inc., h, o  
 Systron Corp., h  
 Tomar Electronics, Inc., h, o  
 Topco Group, Thompson-Romo-Wooldridge Inc., h, o  
 Technical Apparatus Builders, g, h  
 Technique Associates Div., Duncan Electric Co., Inc., g, r  
 Technitral Engrg. Co., h  
 Telechem Mfg. Corp., h, o  
 Telerad Mfg. Corp., h, o  
 Tel-Instrument Electronics Corp., h, s  
 Temperature Engrg. Corp., g thru k, r  
 Tenney Engrg., Inc., b, d, f, i, j, k, m, r  
 Thermo Electric Co., Inc., r  
 Theta Instrument Corp., d, g, h  
 Thiokol Chemical Corp., h  
 Thomas Electronics, Inc., g, h  
 Thompson-Romo-Wooldridge Products Co., The, h  
 Thwing-Albert Instrument Co., r  
 Tiplotron, Inc., s  
 Towaco Electronics Co., f, g  
 Traid Corp., j  
 Transco Products, Inc., h, o  
 Trasonic, Inc., h  
 Trans-Sonics, Inc., r  
 Triplet Electrical Instrument Co., g, h  
 Tucson Instrument Corp., g, h  
 Turbo Machine Co., o  
 Twenty-First Century Electronics, Inc., h  
 \*ULTRA-VIOLET PRODUCTS, INC., p  
 Unit Process Assemblies, Inc., h  
 United Aircraft Products, Inc., q, r  
 United Electric Controls Co., b, d, g, i, k, p, q, r  
 United Mfg. Co., Div., The W. L. Maxson Corp., d, g, q  
 U. S. Science Corp., Div.-Topp Industries, Inc., d, g, h, q  
 Universal Dynamics Corp., k  
 Vord Inc., g, h, q, s  
 Varian Associates, h, o  
 Vicon Corp., h  
 Victory Engrg. Corp., r  
 Virginia Electronics Co., Inc., h  
 Waldorf Electronics, Div.-F. C. Huyck & Sons, d, h  
 Wallace & Tiernan Inc., q  
 Walworth Electronics Corp., h  
 Walworth Engrg. Corp., o  
 Washington Technological Associates Inc., a, b, d, g, thru k, q, s  
 Waste King Corp., Technical Products Div., j  
 Waterman Products Co., Inc., g, h  
 Wough Engrg. Co., j  
 Waveline, Inc., o  
 Webber Engrg. Corp., b, i, k, r  
 Webcor, Inc., Government Div., h, q  
 Weinschel Engrg., h, o  
 Western Gear Corp., s  
 Westinghouse Electric Corp., g  
 Weston Instruments, Div.-Daystrom, Inc., g, h  
 Westronics Inc., h, i, r  
 Yellow Springs Instrument Co., The, r

**TEST LEADS**

Aerolite Electronics Corp.  
 Anelcom Electronic Hardware Co. Inc.  
 Anchor Specialty Mfg. Co. Inc.  
 Birmbach Radio Co., Inc.  
 Bud Radio Inc.  
 Devcon Corp.  
 Chicago Aerial Industries, Inc.  
 Eastern Specialty Co., The  
 Electro-Mechanical Products Co.  
 Electro-Tech Equipment Co.  
 First Electronics Corp., The  
 General Cement Mfg. Co., Div.-Trextron, Inc.  
 Hamilton Standard, Div.-United Aircraft Corp.  
 Industrial Transformer Corp.  
 Javex Electronics  
 Keystone Electronics Corp.  
 Nutron Corp.  
 National Electronics  
 Paul Nurches Co.  
 Poco Electronics Co., Inc.  
 Poroplegics Mfg. Co., Inc.  
 Pomono Electronics Co., Inc.  
 Precise Development Corp.  
 Precision Apparatus Co., Inc.  
 Projects Unlimited Inc.  
 Sanacor Corp.  
 Simpson Electric Co.  
 Slaughter Co., Inc.  
 Specialty Engrg. H. Electronics Co.  
 Stanley-Judd Div., The Stanley Works  
 Technical Apparatus Builders  
 Triplet Electrical Instrument Co.  
 Western International Co.  
 Whitaker Cable Corp.

**EST SETS, RADAR**  
See **RADAR TEST SETS**

**EST STANDS**  
See **STANDS, TEST**

**EST STANDS, STATIC**

Acco Equipment Div., American Chain & Cable Co., Inc.  
Aerojet-General Corp.  
Allegory Instrument Co., Inc.  
Associated Engineers, Inc.  
Astronautics Engrg.-Co.  
Avtron Mfg., Inc.  
Borry Controls Inc.  
Basic Tool Industries, Inc.  
Bendix Ulico Div., Bendix Aviation Corp.  
Bobrick Mfg. Corp.  
Champion Co., The  
Chicago Aerial Industries, Inc.  
C. B. Christensen Co.  
Colonial Aircraft Corp.  
Continental Technical Service, Inc.  
Control Engrg. Co., Div. Jervis B. Webb Co.  
Devco Engrg. Inc.  
Diversey Engrg. Co.  
Dresser Industries, Inc.  
Dynametrics Corp.  
Electro-Mechanical Products Co.  
Federal Mfg. & Engrg. Corp.  
G. W. Galloway Co.  
Great Hydraulics, Inc.  
Paul Hardman, Inc.  
Hardman Tool & Engrg. Co.  
Hoover Electric Co.  
Huffard Corp., The  
Industrial Engrg. Corp.  
Kaiser Steel Corp., Fabricating Div.  
Land-Air Inc.  
Leor, Inc.  
Leor, Inc., Grand Rapids Div.  
Leland Airborne Products, Div.-American Machine & Foundry Co.  
Machine Products Div., New Haven Trap Rock Co.  
Metal Fabricators Corp.  
**\*MIRAX CHEMICAL PRODUCTS CORP.,**  
**ELECTRO-MECHANICAL PRODUCTS DIV.**  
Multi-AMP Corp.  
Newbrook Machine Corp.  
Performance Measurements Co.  
Piosceki Aircraft Corp.  
Projects Unlimited Inc.  
Rucker Co., The  
Sequoia Wire & Cable Co.-Div.-Mandrel Industries, Inc.  
Smith-Morris Corp.  
Space Corp.  
Squiers Gage Co.  
Sun Electric Corp., Aeronautical Div.  
Thiokol Chemical Corp.  
Twin Coach Co., Aircraft-Missiles  
United Aircraft Products, Inc.  
Yard Inc.  
Washington Technological Associates Inc.  
Western Gear Corp.  
Westronics Inc.

**EST UNITS, ACCELERATION, MILITARY**

American Machine & Foundry Co., Government Products Group  
**\*ASSOCIATED TESTING LABS., INC.**  
Electronic Communications, Inc.  
Epic, Inc.  
Genisco, Inc.  
Hycan Mfg. Co.  
Metal Fabricators Corp.  
Rucker Co., The

**ESTERS**

a. Amplitude Linearity  
b. Automatic Tube  
c. Battery  
d. Cable  
e. Capacitor  
f. Cathode Ray Tube  
g. Circuit  
h. Coat Thickness  
i. Coil  
j. Color Infra-Red  
k. Continuity  
l. Crystal Testing  
m. Diode  
n. Distortion  
o. Induction  
p. Insulation  
q. Insulation Breakdown  
r. Meter  
s. Microwave  
t. Theodolites

Aero Electric Corp., q  
Airline Instruments Lab., Div.-Cutler-Hammer, Inc., l, m, s  
Aircam Inc., s  
Aircam Inc. of New Jersey, s  
Airtron Inc., Div.-Liton Industries, s  
Airtronics International Corp., d  
Allied International Co., s  
Amerac Inc., s  
American Instrument Co., Inc., h  
American Machine & Foundry Co., Government Products Group, d, g  
Anchor Specialty Mfg. Co. Inc., c, d, g, i, k, p, q

Associated Research, Inc., d, p, q  
Atlas Precision Products, Co., b, m  
Automation Dynamics Corp., d  
Avo Ltd., g  
Avtron Mfg., Inc.  
Bex Bassett, Inc., l  
Bendix Aviation Corp., Red Bank Div., s  
Bendix Aviation Corp., York Div., g  
Bevo Lab., Inc., a, q  
James G. Biddle Co., h, k, p  
Bliss Electronic Corp., d, e, g, k, q  
Bogue Electric Mfg., Co., c, g  
Brocke-Seib X-Roy Co., Inc., q  
Bronson Instruments, Inc., h  
Bristol Co., The, g  
Brush Instruments, Div.-Clevite Corp., a  
California Technical Industries, Div.-Trexon Inc., d, g, k, q, s  
Conogo Div., Underwood Corp., s  
Corol Electronics Corp., f  
Centronix Inc., g, k  
Chemalloy Electronics Corp., s  
Christie Electric Corp., c  
Consolidated Avionics Corp., a, n, p, q  
Consolidated Diesel Electric Corp., b, k, l, m  
Control Engrg. Co., Div. Jervis B. Webb Co., c  
Cornell-Dubilier Electric Corp., e  
Curtiss-Wright Corp., Electronics Div., p, q  
Daven Co., The, l, n  
Davenport Mfg. Co., p, q, r  
Dayton Aviation Radio & Equipment Corp., g, m  
Delsen Corp., p  
Demornay-Bonardi, s  
J. W. Dice Co., Electronics Div., d, g, k, p  
Douglas Microwave Co., Inc., s  
Eagle Electric Mfg. Co. Inc., g  
Eastern Specialty Co., The, p  
Eder Engrg. Co., Inc., e, g, k, m  
Edgerton, Germeshusen & Grier, Inc., f, m  
Electro Instruments, Inc., e, m  
Electronic Brazing Co., q  
Electronic Communications, Inc., g, s  
Electronic Control Corp., k  
Electronic Instrument Co., Inc. (EICO), b, c, e, f, i, k  
Electronic Research Associates, Inc., m  
Electro-Tech Equipment Co., c, g, h, k, p, q  
Engrg. Associates, s  
Epic, Inc., p  
Exide Industrial Div.-The Electric Storage Battery Co., c  
FXR, Inc., s  
Federal Mfg. & Engrg. Corp., e, m  
Foto-Video Labs., Inc., a  
Freed Transformer Co. Inc., p  
General Cement Mfg. Co., Div.-Trexon, Inc., g  
General Communication Co., s  
General Electric Co., Apparatus Sales Div., h, q  
General Scientific Equipment Co., b  
Good Electronic Corp., g  
Gordon Enterprises, k, t  
Green Rectifier Co., g, m  
Hi-Lo Manufacturing Corp., f  
Holtzer-Cabot Div., National Pneumatic Co., Inc., p  
Hunter Tool Co., g  
Walter J. Hyatt Co., The, s  
ITT-Kellogg, g  
Ideal Industries, Inc., g, k, q  
Indikon Co., Inc., The, e, m  
Industrial Control Co., c, e, g  
Industrial Engrg. Corp., k  
Industrial Instruments Inc., d, k, q  
Industrial Test Equipment Co., e, n thru q  
Industrial Transformer Corp., q  
Jan Hardware Mfg. Co., Inc., r  
Janco Corp., p  
Kohn & Co., Inc.  
Kaiser Aircraft & Electronics, Div.-Kaiser Industries Corp., d  
Koy Electric Co., o, s  
**\*KEARFOTT CO., INC.**, o thru e, g, i, k, l, m, o thru t  
Kordo Industries, k  
Land-Air Inc., f, g  
Lavoie Laboratories Inc., d, g, k  
Leeds & Northrup Co., p  
Licco, Inc., s  
Magnoflux Corp., h  
Manson Labs., Inc., q  
Marion Instrument Div., r  
McLean Development Labs., Inc., g  
Monogram Precision Industries, s  
Motorola Inc., Military Electronics Div., g, s  
Multi-AMP Corp., p, q, r  
Notional Electronics, k, m, q, r  
North Hills Electric Co., Inc., r  
Northrop Corp., The, Nortronics Div.  
PCA Electronics Inc.  
Paco Electronics Co., Inc., e, f, g  
Penn Keystone Corp., t  
Perkin-Elmer Corp., t  
Peschel Electronics, Inc., d, g, k, p, q  
Philco Corp., Government & Industrial Div., f, g, m, s  
Pioneer Industries Div., Almar-York Co. Inc., f, j  
Polarad Electronics Corp., s  
Precise Development Corp., b, c, e, f, n  
Precision Apparatus Co., Inc., e, f, g  
Projects Unlimited Inc., d, k  
Radar Design Corp., s  
Republic Aviation Corp., c

Ryan Aeronautical Co., g  
Schoffer Air Industries, Inc., g  
Seco Mfg. Co., b, k  
Shollcross Mfg. Co., c, q  
Simpson Electric Co., c, e, g, r  
Sittler Corp., g  
Skyline Electric & Mfg. Co., g, k  
Slaughter Co., Inc., a, k, p, q  
Saltaron Inc., a, n  
Sorensen & Co., Inc., d, q  
Spectral Electronics Corp., a  
Sperry Microwave Electronics Co., Div.-Sperry Rand Corp., s  
States Co., The, q, r  
Steel City Testing Machines, Inc., d  
Stromberg-Carlson Div.-General Dynamics Corp., e, l, k, m  
H. W. Sullivan Ltd., i  
Sun Electric Corp., Aeronautical Div., c, p, q, r  
B. K. Sweeney Mfg., Co., d  
Systron Corp.  
Technical Apparatus Builders, c, l, m, p, q  
Technitrol Engrg. Co., m  
Teletrome Mfg. Corp., s  
Telrad Mfg. Corp., s  
Teletronics Lab. Inc., m  
Theta Instrument Corp., t  
Thomson Electronics, Inc., b, f, h  
Towaco Electronics Co., n  
Trons Electronics, Inc., m  
Transformer Design, Inc. of Milwaukee, q  
Transtor Electronics Corp., l, m  
Trans-Western Electronics, m, s  
Tricraft Products Corp., f  
Unit Process Assemblies, Inc., h  
Varian Associates, s  
Vitro Labs., c  
Waveline, Inc., s  
Weinschel Engrg., s  
Westinghouse Electric Corp., p, q  
Weston Instruments, Div.-Daystrom, Inc., b, g, h, k, p, q, r

**THERMAL CONDITIONING EQUIPMENT**

Aerojet-General Corp.  
**\*AIRESEARCH MFG. CO., DIV.-THE GARRETT CORP.**  
American Air Filter Co., Defense Products Div.  
**\*ASSOCIATED TESTING LABS., INC.**  
Blue M Electric Co.  
Ellis & Watts Products, Inc.  
Hallcrafters  
International Radiant Corp.  
Marlo Coil Co.  
Missimers Inc.  
Pacific Scientific Co.  
Stratos, Div.-Fairchild Engine & Airplane Corp.  
Trane Co., The  
United Aircraft Products, Inc.  
U. S. Industries, Inc.  
Wenzlau Engrg. Co.  
York Corp.

**THERMAL CONDUCTIVITY CELLS**

Davis Instruments  
Greenbrier Instruments Inc.  
Industrial Instruments Inc.  
Leeds & Northrup Co.  
Mine Safety Appliances Co.  
National Beryllia Corp.  
Thermal Refractories Corp.  
Victory Engrg. Corp.

**THERMISTOR MOUNTS**  
See **MOUNTS, THERMISTOR**

**THERMOCOUPLES**

Advanced Electronics, Inc.  
Aero Research Instrument Co. Inc.  
Aerojet-General Corp.  
American Aeroparts  
American Instrument Co., Inc.  
B G Corp., The  
Barker Sales Co.  
J. Bishop & Co., Platinum Works  
Bristol Co., The  
Conax Corp.  
Consolidated Controls Corp.  
Consolidated Diesel Electric Corp.  
Electro-Tech Equipment Co.  
Engelhard Industries, Inc.  
Epic, Inc.  
Fenwal Inc.  
Fisher Scientific Co.  
General Electric Co., Apparatus Sales Div.  
Good Electronic Corp.  
Claud S. Gordon Co.  
Harco Labs., Inc.  
High Vacuum Equipment Corp.  
A. F. Holden Co., The  
Illinois Testing Laboratories, Inc.  
Kanthal Corp., The  
Leeds & Northrup Co.  
**\*LEWIS ENGRG. CO., THE**  
Meters Inc.  
Minneapolis-Honeywell Regulator Co., Industrial Div.  
Minneapolis-Honeywell Regulator Co., Industrial Product Group  
New England Scientific Instruments Co.  
Norton Co., New Products Dept.  
Pacific Scientific Co.  
Papesch & Kolstod, Inc.

Philo Corp., Government & Industrial Div.  
Pyrometer Instrument Co., Inc.  
Revere Corp. of America  
Arthur C. Ruge Associates, Inc.  
Servomechanisms, Inc.  
Simpson Electric Co.  
E. C. Smith Mfg. Co.  
Smith-Morris Corp.  
T-C Div., Dyna-Empire, Inc.  
Thermo Electric Co., Inc.  
Thwing-Albert Instrument Co.  
Vacuum Tube Products, Div.-Hughes Aircraft Co.  
West Instrument Corp.  
Weston Instruments, Div.-Daystrom, Inc.  
Wilks Precision Instrument Co., Inc.

#### THERMOCOUPLES, CABLE ASSEMBLIES See CABLE ASSEMBLIES, THERMOCOUPLES

#### THERMOMETERS, RESISTANCE

Aero Research Instrument Co. Inc.  
American Aeroports  
\*ARNOUX CORP.  
Avien, Inc.  
Bristol Co., The  
Consolidated Diesel Electric Corp.  
Electro-Tech Equipment Co.  
Epic, Inc.  
Fisher Scientific Co.  
Flow Corp.  
General Electric Co., Apparatus Sales Div.  
Hallikainen Instruments  
Illinois Testing Laboratories, Inc.  
Leeds & Northrup Co.  
\*LEWIS ENGRG. CO., THE  
Meters Inc.  
Minco Products, Inc.  
Minneapolis-Honeywell Regulator Co., Industrial Div.  
Minneapolis-Honeywell Regulator Co., Industrial  
Product Group  
National Beryllia Corp.  
New England Scientific Instruments Co.  
Pacific Scientific Co.  
Rosemont Engrg. Co.  
Arthur C. Ruge Associates, Inc.  
Servomechanisms, Inc.  
Simpson Electric Co.  
T-C Div., Dyna-Empire, Inc.  
Thermo Electric Co., Inc.  
Trans-Sonics, Inc.  
West Instrument Corp.  
Weston Instruments, Div.-Daystrom, Inc.

#### THERMOPILES

Aero Research Instrument Co. Inc.  
Aerojet-General Corp.  
James G. Biddle Co.  
Bristol Co., The  
Curtiss-Wright Corp., Research Div.  
Eppley Laboratory, Inc., The  
Illinois Testing Laboratories, Inc.  
Minneapolis-Honeywell Regulator Co., Industrial  
Product Group  
Minnesota Mining & Mfg. Co.  
Thermo Electric Co., Inc.

#### THERMOSTATIC BIMETAL See BIMETAL, THERMOSTATIC

#### THERMOSTATS

\*AIRESEARCH MFG. CO., DIV.-THE GARRETT  
CORP.  
Alloy Bellows Inc.  
Bristol Co., The  
Components Corp.  
Consolidated Diesel Electric Corp.  
Crown Controls Co., Inc.  
Electro-Tech Equipment Co.  
Fenwal Inc.  
G-V Controls Inc.  
General Electric Co., Apparatus Sales Div.  
Hagan Chemicals & Controls, Inc.  
Hart Mfg. Co., The  
Metals & Controls Corp., Spencer Div.  
Precision Thermometer & Instrument Co.  
Spencer Div., Metals & Controls Corp.  
Standard-Thomson Corp., Clifford Mfg. Co. Div.  
Stevens Mfg. Co., Inc.  
George Ulanet Co.  
United Aircraft Products, Inc.  
United Control Corp.  
United Electric Controls Co.  
Vap-Air Aeronautical Products Div., Vapor Heating  
Corp.  
Wilcolator Co., The

#### THICKNESS EQUIPMENT

American Instrument Co., Inc.  
B. C. Ames Co.  
\*BAUSCH & LOMB OPTICAL CO.  
Branson Instruments, Inc.  
Curtiss-Wright Corp., Research Div.  
J. W. Dice Co.  
Electronic Control Corp.  
Electro-Tech Equipment Co.  
Era Engrg. Inc.  
Fleetwood Labs., Inc.  
Gardner Laboratory, Inc.  
General Electric Co., Apparatus Sales Div.  
Magnaflex Corp.  
Piasecki Aircraft Corp.  
Tate-Peirce Mfg. Co., The

Weston Instruments, Div.-Daystrom, Inc.  
Westronics Inc.

#### THERMOT CHAMBERS

Aerojet-General Corp.  
Aerolab Development Co.  
Aerona Mfg. Corp.  
Alca Products, Inc.  
Astradyne, Inc.  
CDC Central Services, Inc.  
Diversey Engrg. Co.  
Dynamic Devices, Inc.  
Havag Industries, Inc.  
C. B. Kaupp & Sons, Inc.  
M. W. Kellagay Co., The  
Newbraak Machine Corp.  
Narris-Thermador Corp.  
Parland Copper & Tank Works Inc.  
Reaction Motors Div., Thiokol Chem. Corp.  
Reinhold Engrg. & Plastics Co.  
\*RHEEM MFG. CO., DEFENSE & TECHNICAL  
PRODUCTS DIV.  
Rohr Aircraft Corp.  
Ryan Aeronautical Co.  
Smith-Morris Corp.  
Space Corp.  
Special Projects Lab., Food Machinery &  
Chemical Corp.  
Stainless Steel Products, Inc.  
Standard-Thomson Corp., Clifford Mfg. Co. Div.  
C. W. Tomgren Co., Inc.  
Western Gear Corp.

#### THRUST MEASURING INSTRUMENTS

Aero Research Instrument Co. Inc.  
Aerojet-General Corp.  
Aeroscience, Inc.  
\*AIRESEARCH MFG. CO., DIV.-THE GARRETT  
CORP.  
American Machine & Foundry Co., Government  
Products Group  
Consolidated Controls Corp.  
Consolidated Diesel Electric Corp.  
W. C. Dillon & Co., Inc.  
Dynametrics Corp.  
G. M. Giannini & Co., Inc.  
Hagan Chemicals & Controls, Inc.  
Minneapolis-Honeywell Regulator Co.-Aeronautical  
Div.  
Revere Corp. of America  
Schoevitz Engrg.  
Space Corp.  
Thiokol Chemical Corp., Hunter-Bristol Div.  
Westronics Inc.

#### TIMERS

a. Automatic Cycle  
b. Automatic Reset  
c. Automatic Sequence  
d. Clock Radio  
e. Counting  
f. Cycle  
g. Electronic  
h. Hour Counting  
i. Impulse  
j. Inertia  
k. Interval  
l. Motor Operated  
m. Multicontact  
n. Percentage  
o. Sequence  
p. Special  
q. Thermal  
r. Welding, Electronic  
Advanced Products Co., The, a, b, c, f, h, k, l, m, a,  
p.  
Aero Instrument Co., h, k.  
Aerolab Development Co., f, g, i, k, a, p.  
Air Logistics Corp., g, p.  
Aiprax Electronics Inc.-Seminole Div., g, i.  
Allegany Instrument Co., Inc., g, k, p.  
Alto Scientific Co., Inc., a, b, c, g, o.  
Amelco, Inc., g.  
American Missile Products Co., Inc., p.  
Atlas Precision Products, Co., l, p.  
Baird-Atomic, Inc., g.  
Beckman Instruments, Inc., Berkeley Div., o, f, g, k.  
Beckman-Systems Div., b, e, g, k.  
Belock Instrument Corp., a, b, c, g, j, k, l, a, p.  
Bendix Aviation Corp., Friez Instrument Div., l.  
Bendix-Pacific Div., Bendix Aviation Corp., a, b, c, l,  
m, a, p.  
Bendix Utica Div., Bendix Aviation Corp., a, b, g, a.  
Berno Engrg. Corp., a, b, c, f, k, l, m, a, p.  
Branson Corp., a, b, c, e, f, k, m, a, p, q.  
Briggs Associates, Inc., g, p.  
Bristol Co., The, a, b, c, f, i, k thru p.  
Bulow Electric Co., o, b, c, l, p.  
Centronix Inc., g.  
Chicago Aerial Industries, Inc., a, b, c, f, g, i, k, l,  
a, p.  
Cleveland Metal Specialties Co., Electronics Div.,  
o, g.  
Cole Electric Co., a, p.  
Consolidated Avionics Corp., e.  
Control Engrg. Co., Div.-Jervis B. Webb Co., g.  
Controls Co. of America, a, c, f, i, k, l, a.  
Cooper Development Corp., Sub-Marquardt Aircraft  
Co., g, k, p.  
Cramer Controls Corp., o thru d, f, h, i, k thru p.  
Curler-Hammer Inc., a, g, l.  
DBM Research Corp., g.

Daystrom Pacific Div.-Daystrom, Inc., a, p.  
Destrin Co., a, b, c, g, k, m, a, p.  
Detranic Industries, e, g, a, r.  
Di-An Controls, Inc., a, b, c, e, f, g, k, a, p.  
Henry G. Dietz Co., Inc., a, c, g, k, m, a, p.  
Dimco-Gray Co., k, l.  
Divca-Wayne Electronics, Div.-Divca-Wayne Corp.,  
g, p.  
M. Ducommun Co., h, p.  
Dynamic Controls Corp., g.  
Dynamic Devices, Inc., c, o, p.  
Edgerton, Gernshausen & Grier, Inc., c.  
Eisler Engrg. Co., Inc., r.  
Elctro Electronics, g, p.  
Electro Instruments, Inc., e, g, o.  
Electro Precision Corp., g.  
Electronic Control Corp., a, g.  
Electronic Engrg. Co. of California, a, b, c, e, g, h,  
k, a, p.  
Electronic Specialty Co., g, p.  
Electro-Tech Equipment Co., a, b, c, e thru i, k, l, r,  
o, p, r.  
Elgin Micronics Div.-Elgin National Watch Co., a, f,  
h thru l, p.  
Elgin Micronics, West Coast Div.-Elgin National  
Watch Co., o thru p.  
Emerson Radio & Phonograph Corp., g.  
Erie Instrumentation, Div. Erie Resistor Corp., e, g, k.  
Erie Resistor Corp., b, e, g, k.  
Ewald Instruments, r.  
FXR, Inc., c, g, o.  
Farmer Electric Products Co., Inc., a, b, c, g, r.  
Federal Tool Engrg. Co., r.  
Fidelity Amplifier Co., f, a.  
First Electronics Corp., The, g, h, r.  
Flit Research, Inc., c, g, p.  
G-V Controls Inc., b, g, q.  
General Devices, Inc., g, l, m, a.  
General Electric Co., Apparatus Sales Div., a, f, h,  
k, l.  
Globe Industries, Inc., a, b, c, l.  
Gordon Enterprises, a, b, c, e, f, g, i, k, l, a, p.  
Grimes Mfg. Co., l.  
Guardian Electric Mfg. Co., k, a.  
Haller, Raymond & Brown Inc. Div., Singer Mfg. Co.,  
g, p.  
Hamilton Watch Co., d, i.  
Hamilton Watch Co.-Industrial Div., d, e, f, h, p.  
\*A. W. HAYDON CO., THE, a, b, c, e thru i, k, l, r,  
o, p.  
Haydon Div.-General Time Corp., a, b, c, e, f, h, k,  
a, p.  
C. I. Hayes, Inc., p.  
Holtzer-Cabot Div.-National Pneumatic Co., Inc., l,  
l-L-S Instrument Div., The Meriam Instrument Co., a,  
b, c, f, g, i, p.  
ITT Labs., g.  
Industrial Timer Corp., a, b, c, f, h, k thru q.  
Ingraham Co., The, p.  
Intercontinental Dynamics Corp., i.  
International Register Co., a, b, d, l.  
Janco Corp., i.  
Jordan Electronics, Div.-Victoreen Instrument Co.,  
c, g.  
H. Koch & Sons, a, b, c, f, j, k, m, o, p.  
Land-Air Inc., c, e, g, i, k, l, o, p.  
La Roe Instruments, Inc., e, g.  
Leach Corp., g, k, a, p.  
Lear, Inc., Grand Rapids Div., l, m, a, p.  
Librascope Inc., g.  
Litton Engrg. Labs., r.  
Livingston Electronic Corp., r.  
Lux Clock Mfg. Co., Inc., k, l, a.  
P. R. Mallory & Co. Inc., a, b, c, f, g, k, l, m, a, p.  
Marion Instrument Div., h.  
Jas. P. Marsh Corp., f.  
Mast Development Co., Inc., p.  
Minneapolis-Honeywell Regulator Co., Ordnance Div.,  
g, k, p.  
Morse Instrument Co., The, g.  
National Pneumatic Co., Inc., Holtzer-Cabot Div.,  
a.  
Navigation Computer Corp., c, e, k.  
Ernest Norman Laboratories, l.  
Paul Nurches Co., l, m, a.  
Orbitron Co., Inc., g.  
Pacific Scientific Co., a, b, c.  
Paragon Electric Co., a, b, c, f, k, l, o, p.  
Ralph M. Parsons Co., The, Electronics Div., g, k.  
Patterson, Moos Div.-Universal Winding Co., Inc.,  
a, b, l, i, k, o.  
Philo Corp., Government & Industrial Div., g, p.  
Photobell Co., Inc., e, g.  
Pomona Electronics Co., Inc., a.  
Radiation Instrument Development Lab., Inc., g.  
Raymond Engrg. Lab., Inc., a, b, c, e thru p.  
Raytheon Mfg. Co., r.  
Resdel Engrg. Corp., g.  
M. H. Rhodes, Inc., p.  
Royal Industries, Inc., a, b, c, e, f, g, i, j, k, m, o.  
Rutherford Electronics Co., g.  
Sangamo Electric Co., k, l.  
Sequoia Wire & Cable Co.-Div.-Mandrel Industries,  
Inc., g, k, a.  
Servomechanisms, Inc., g, j.  
Sheffield Corp., The, Sub-Bendix Aviation Corp., c.  
Singer Mfg. Co., The, Military Products Div., a, b, i,  
f, h thru l, a, p.  
Spectral Electronics Corp., a, c, k, l, m, a, p.  
Standard Electric Time Co., The, f thru i.  
Syston Corp., a, b, c, e, g, h, i, k, n.  
Taylor Winfield Corp., a, c, g, k, a, p, r.  
Telechrome Mfg. Corp., a, b, c, e thru l, n, o, p.



Telectro Industries Corp., g, l.  
Teletronics Lab. Inc., g.  
Tempo Instrument Inc., a, b, c, f, g, k, m, a, p.  
Textron Corp., g.  
George Ulanet Co., a.  
Unit Process Assemblies, Inc., a.  
J. S. Science Corp.-Div. Topp Industries, Inc., g, k, l,  
a.  
Vacuum Tube Products, Div.-Hughes Aircraft Co., r.  
Vemaline Products Co., a, b, c, g, k.  
Virginia Electronics Co., Inc., g.  
Vibro Labs., g.  
Viacline, Inc., h.  
Vakmann Watch Co. Inc.  
Valkirt Co., a, b, c, e, f, g, i, a, p.  
Valtham Engr. Corp., a thru r.  
Valtham Precision Instrument Co., h.  
Yong Labs., Inc., g.  
Vaugh Engr. Co., g, o.  
Webcor, Inc., Government Div., a, b, c, e, g, k, l, a, q.  
Western Design, Div.-U.S. Industries, Inc.; Santa  
Barbara Div., a, b, c, i, k, a.  
Western Gear Corp., a, b, c, l, a.  
Yeston Instruments, Div.-Daystrom, Inc., h.  
Ylkes Precision Instrument Co., Inc., l, m, a.  
G. C. Wilson & Co., a, b, f, g, k, a, r.

## ZINC PLATING See PLATING, TIN ZINC

## ANNING, HOT DIPPED

Anatom Electronic Hardware Co. Inc.  
Celsey-Hoyes Co.  
Ann-Michigan Mfg. Corp.  
Omers Brass Co. Inc.  
Feiner Engr. Corp.

## PS, SOLDERING IRON See SOLDERING IRON TIPS

## GGLE OR EXPANSION BOLTS See BOLTS, TOGGLE OR EXPANSION

## OLS, ALIGNMENT

Aerolite Electronics Corp.  
Anatom Electronic Hardware Co. Inc.  
Ball Machine Products Co., The  
Basic Tool Industries, Inc.  
Capital City Mfg. Co.  
Continental Technical Service, Inc.  
Dockendorff & Co. Inc.  
ENGIS EQUIPMENT CO.  
General Cement Mfg. Co., Div.-Textron, Inc.  
Hunter Tool Co.  
Industrial Technics, Inc.  
Kent-Moore Organization Inc.  
Leystone Electronics Corp.  
Leinn Fibre & Specialty Co., Inc.  
Map-On-Tools Corp.  
Quiers Gage Co.  
Washington Technological Associates Inc.

## OLS, HAND OR MECHANICAL

Aircraft Tools, Inc.  
Allen Tool Corp.  
Ampex Machine & Tool Co., The  
Arrow Tool Co. Inc.  
Basic Tool Industries, Inc.  
Bendix Aviation Corp., Eclipse-Pioneer Div.  
Billings & Spencer Co., The  
Brewer Mfg. Co.  
Continental Technical Service, Inc.  
Dockendorff & Co. Inc.  
Duro Specialty Co., Inc.  
Eylet Tool Co. Inc.  
Forberg Mfg. Co., The  
General Cement Mfg. Co., Div.-Textron, Inc.  
Hartman Tool & Engr., Co.  
Hunter Tool Co.  
ITT-Kellogg  
Industrial Tools Mfg. Corp., Sub.-Pendleton Tool  
Industries, Inc.  
In-Line Tools, Inc.  
Celsey-Hoyes Co.  
Kent-Moore Organization Inc.  
L. Konigslow Stamping & Tool Co.  
Lemert Engr. Co., Inc.  
Lico Instrument Co.  
Paul Nurches Co.  
Veruland Control Co.  
Watson Tool Co.  
IC Design Corp., Sub.-Benrus Watch Co., Inc.  
Leinn Fibre & Specialty Co., Inc.  
L. K. Porter Co., Inc.  
Joseph T. Ryerson & Son, Inc.  
Map-On-Tools Corp.  
McC Tool Co.  
Quiers Gage Co.  
Stanley-Judd Div.-The Stanley Works  
A. Sturtevant Co.  
Superior Pneumatic & Mfg., Inc.  
K. Sweeney Mfg. Co.  
Waff-Peirce Mfg. Co., The  
Orque Controls Inc.  
TOWNSEND CO., CHERRY RIVET DIV.  
Hman Devices Corp.  
S. Industries, Inc.  
Roscoloy-Romet Corp.  
Ickeh Tool Co., The  
Aldeas Kohinor, Inc.  
Washington Technological Associates Inc.

Wetzler Clamp Co. Inc.  
J. H. Williams & Co.

## TOOLS

- Pneumatic Assembly
- Resistance Soldering
- Thermal Soldering
- Ultrasonic Soldering
- Wire Tapping

Block & Decker Mfg. Co., The  
Buckeye Tools Corp., a.  
Chicago Pneumatic Tool Co., a.  
Continental Technical Service, Inc., a.  
Curtiss-Wright Corp., Princeton Div., c.  
Federal Machine Co. Inc.  
Forsberg Mfg. Co., The  
Gardner-DeVeer Corp., a.  
Gulton Industries, Inc., d.  
High Speed Hammer Co., Inc., The, a.  
Ideal Industries, Inc., b.  
Metal Carbides Corp.  
M. M. Newman Corp., c.  
PIC Design Corp., Sub.-Benrus Watch Co., Inc.  
Pioneer Tool & Engr. Co.  
Printronics Corp., a.  
Smith-Morris Corp.  
Superior Pneumatic & Mfg., Inc., a.  
United Supply Co.  
Virginia Electronics Co., Inc., b.  
Wosco Electric Products Corp., b.  
Winkler Labs., e.  
Wye Industries, d.  
Zephyr Mfg. Co. Inc., b.

## TOROIDAL COIL WINDING MACHINES See COIL WINDING MACHINES, TOROIDAL

## TOROIDS

Airpax Electronics Inc. Seminale Div.  
Aladdin Electronics, Div.-Aladdin Industries Inc.  
Alden Products Co.  
American Research & Mfg. Corp.  
Arnold Engr. Co., The  
Audio Development Co.  
Bendix Aviation Corp., York Div.  
Coilcraft Inc.  
Collins Radio Co.  
Control Circuits Inc.  
Double E Products Co.  
Dresser Industries, Inc.  
ESC Corp.  
Ferracube Corp. of America  
Forbes & Wogner, Inc.  
Geotronic Labs. Inc.  
Goslin Electric & Mfg. Co.  
Gulton Industries, Inc.  
Hammarlund Mfg., Co., Inc.  
Industrial Technics, Inc.  
Industrial Winding Machinery Corp.  
Jack & Heintz, Inc.  
Littion Industries, Inc.  
Magnetic Core Corp.  
Mico Instrument Co.  
Motorola Inc., Military Electronics Div.  
NYT Electronics, Inc.  
National Pneumatic Co., Inc., Holtzer-Cabot Div.  
Newbrook Machine Corp.  
North Hills Electric Co., Inc.  
Ortho Filter Corp.  
PCA Electronics Inc.  
Pacific Magnetic Corp.  
Palo Alto Engr. Co.  
Portland Copper & Tank Works Inc.  
Precision, Inc.  
Quitronic Transformer Corp.  
Railway Communications Inc.  
Reidman Electronic Corp.  
Reflectone Corp., The  
Rixon Electronics Inc.  
Rahr Aircraft Corp.  
Milton Ross Metals Co., The  
Rytron Co., Inc.  
Sangamo Electric Co.  
Technical Apparatus Builders  
Topper Mfg. Co., Inc.  
Transonic, Inc.  
Triad Transformer Corp.  
Universal Toroid Coil Winding, Inc.  
Vero Mfg. Co., Inc.  
Westbury Electronics Inc.  
Westinghouse Electric Corp.  
Zallea Brothers

## TOWER LIGHTING EQUIPMENT, TOWER See LIGHTING EQUIPMENT, TOWER

## TRACERS, SIGNAL

Philco Corp., Government & Industrial Div.

## TRAILERS, VANS, SHELTERS See SHELTERS, TRAILERS, VANS

## TRANSCEIVERS, PORTABLE

Allied International Co.  
Amelco, Inc.  
American Missile Products Co., Inc.  
Rex Bassett, Inc.  
Bendix Aviation Corp., York Div.  
Bendix Radio Div., Bendix Aviation Corp.  
Centronix Inc.  
Collins Radio Co.

Doven Co., The  
Electronic Communications, Inc.  
Hoffman Labs. Div., Hoffman Electronics Corp.  
ITT Labs.  
Leor, Inc.  
L E L, Inc.  
Litron Industries, Maryland Div.  
Motorola Inc., Military Electronics Div.  
National Pneumatic Co., Inc., Holtzer-Cabot Div.  
Philco Corp., Government & Industrial Div.  
Projects Unlimited Inc.  
Telectro Industries Corp.

## TRANSCEIVERS, UHF

Allied International Co.  
Amelco, Inc.  
American Electronics, Incorporated  
American Electronics, Inc.-Instrument Div.  
American Missile Products Co., Inc.  
Bendix Aviation Corp., York Div.  
Bendix Radio Div., Bendix Aviation Corp.  
Centronix Inc.  
Chrysler Corp., Defense Operations Div.  
Collins Radio Co.  
Dalmator Div., Yuba Consolidated Industries, Inc.  
Daven Co., The  
Divco-Wayne Electronics, Div.-Divco-Wayne Corp.  
Electronic Communications, Inc.  
Giffillan Bros. Inc.  
Hoffman Labs. Div., Hoffman Electronics Corp.  
ITT Federal Div., International Telephone &  
Telegraph Corp.  
ITT Labs.  
Instruments For Industry, Inc.  
Leor, Inc.  
L E L, Inc.  
Litron Industries, Maryland Div.  
Magnovox Co., The  
Motorola Inc., Military Electronics Div.  
Munston Mfg. & Service, Inc.  
Philco Corp., Government & Industrial Div.  
Stavid Engr., Inc.  
Stromberg-Carlson Div.-General Dynamics Corp.  
Telectro Industries Corp.  
Webcor, Inc., Government Div.

## TRANSCEIVERS, VHF

Allied International Co.  
Amelco, Inc.  
American Electronics, Inc.  
American Electronics, Incorporated  
Bendix Aviation Corp., York Div.  
Bendix Radio Div., Bendix Aviation Corp.  
Centronix Inc.  
Collins Radio Co.  
Dalmator Div., Yuba Consolidated Industries, Inc.  
Daven Co., The  
Divco-Wayne Electronics, Div.-Divco-Wayne Corp.  
Electronic Communications, Inc.  
Hoffman Labs. Div., Hoffman Electronics Corp.  
ITT Federal Div., International Telephone & Tele-  
graph Corp.  
ITT Labs.  
Instruments For Industry, Inc.  
Land-Air Inc.  
Leor, Inc.  
Leor, Inc., Grand Rapids Div.  
L E L, Inc.  
Litron Industries, Maryland Div.  
Livingston Electronic Corp.  
Motorola Inc., Military Electronics Div.  
Philco Corp., Government & Industrial Div.  
Stavid Engr., Inc.  
Stromberg-Carlson Div.-General Dynamics Corp.  
Telectro Industries Corp.  
U. S. Science Corp., Div.-Topp Industries, Inc.  
Webcor, Inc., Government Div.

## TRANSUCERS

- Accelerometer
- Flow
- Industrial
- Measurement
- Pressure
- Sonar
- Strain
- Temperature
- Vibration

Aero Research Instrument Co. Inc., b, e, h.  
Aeroscience, Inc.  
\*AIRESEARCH MFG. CO. OF ARIZ., e.  
\*AIRESEARCH MFG. CO., DIV.-THE GARRETT  
CORP., a, e, h.  
Airpax Electronics Inc. Seminale Div.  
Allegany Instrument Co., Inc., e, g, h.  
Allied Research & Engr., Div.-Allied Record Mfg.  
Co.  
American Machine & Foundry Co., Government  
Products Group, a, f, i.  
American Measurement & Controls, Inc., b.  
\*ARNOUX CORP., h.  
Atlantic Instrument Corp., Sub.-American Electronics,  
Inc., h.  
Atlantic Research Corp., d, e, f.  
B & F Instruments, Inc., e.  
BJ Electronics, Borg-Warner Corp., a thru e, g, h, i.  
B & K Instruments, Inc., a.  
Beaver Precision Products Inc., b, e.  
Beckman & Whitley, Inc., Missile Products Div., h.  
Bell Aircraft Corp., Niagara Frontier Div., a.  
Belock Instrument Corp., a, e, g.  
Bendix Aviation Corp., Friez Instrument Div., e.  
Bendix Aviation Corp., Montrose Div., e.

A. Biederman, Inc., d, e, h.  
Blackstone Corp., c.  
Bogue Electric Mfg. Co., d.  
Bairns Labs., Inc., a, e.  
Branson Instruments, Inc., d.  
Bristol Co., The, b thru e, g, h.  
Brush Instruments, Div.-Cleveland Corp., a thru i.  
Cadillac Gauge Co., a.  
Cardinal Instrumentation Corp., c, d, h.  
Cedar Engrg. Div.-Control Data Corp., a.  
Chesapeake Instrument Corp., a, f, i.  
Chrysler Corp., Defense Operations Div.  
Clark Electronic Labs., a, e, g.  
G. L. Callins Corp., d, e, i.  
Colorado Research Corp.  
Colvin Labs., Inc., c, e.  
Computer Instruments Corp., e.  
Consolidated Diesel Electric Corp., d, e, h.  
Consolidated Electrodynamics Corp., a, d, e, g, i.  
Control Circuits Inc., h.  
Control Data Corp., a.  
Crescent Engrg. & Research Co., b thru e, g, h, i.  
Curtiss-Wright Corp., Electronics Div., e, g.  
Curtiss-Wright Electronics Div., IMI Branch, e.  
Dalmator Div., Yuba Consolidated Industries, Inc., e.  
Datran Electronics, Div.-Mid-Continent Mfg., Inc., e.  
Daystrom Pacific Div.-Daystrom, Inc., a, d, e.  
Daytron Corp., c, d, e, g.  
Decker Corp., The, d.  
Delco-Remy Div., General Motors Corp., a, e.  
W. C. Dillon & Co., Inc., g.  
Donner Scientific Co., a, e.  
Dresser Industries, Inc., b, d, e, h.  
Dynamic Instrument Co., Inc., b, e.  
Edcliff Instruments, a, d, e.  
Edgerton, Gersmehausen & Grier, Inc., d.  
Electro Products Laboratories, Inc., c, d, i.  
Elgin Micronics, West Coast Div.-Elgin National Watch Co., a, d, f, g, h.  
Endevco Corp., a, e, i.  
Era Engrg. Inc., a.  
Erie Resistor Corp.  
Fairchild Controls Corp., Components Div., a, e.  
Fenwal Inc., h.  
Fischer & Porter Co., b, c, e, h.  
Fisher Governor Co., c, e.  
General Crystal Co., Inc., c, d.  
General Electric Co., Apparatus Sales Div., b, h.  
Genisco, Inc., a.  
Genisco, Inc., Instrument Div., a.  
Geotronic Labs. Inc.  
G. M. Giannini & Co., Inc., a, e, h.  
Good Electronic Corp., g, h.  
Gulton Industries, Inc., a, d, f, h, i.  
Hagan Chemicals & Controls, Inc.  
Hesco Engrg., h.  
Hewlett-Packard Co., c.  
I.L.S. Instrument Div., The Meriam Instrument Co., a.  
International Research & Development Corp., i.  
International Resistance Co., c, d, e.  
\*KEARFOTT CO., INC., a, h.  
Kin Tel Div.-Cohu Electronics, Inc., a, e, f, i.  
Kollman Instrument Corp., Sub-Standard Coil Products Co., Inc., a, e.  
Land-Air Inc., b, i.  
Lear, Inc., a.  
Lear, Inc., Grand Rapids Div., a, e.  
Leeds & Northrup Co., h.  
\*WALLACE O. LEONARD, INC., a, b, d, e.  
\*LEWIS ENGRG. CO., THE, h.  
Librascope Inc., b.  
Ling Electronics, Inc., i.  
Litton Industries, Maryland Div., a thru i.  
MB Mfg. Co., i.  
Malco Electronics, Inc., f.  
Massa Div.-Cohu Electronics, Inc., a, d, f.  
Metrometric Mfg. Co., i.  
Minitran Corp., d.  
Minco Products, Inc., h.  
Minneapolis-Honeywell Regulator Co.-Aeronautical Div., a, e.  
Minneapolis-Honeywell Regulator Co., Boston Div., a, i.  
Minneapolis-Honeywell Regulator Co., Industrial Div., b, c, e, h.  
Minneapolis-Honeywell Regulator Co., Industrial Product Group, b thru e, g, h.  
Minneapolis-Honeywell Regulator Co., Ordnance Div., a, f.  
Motorola Inc., Military Electronics Div., f.  
NRC Equipment Corp., e.  
Narda Ultrasonics Corp., The, f, i.  
National Beryllia Corp., h.  
National Pneumatic Co., Inc., Holtzer-Cabot Divs., f.  
Newwood Controls Unit, Detroit Controls Div., b, e, g.  
Pace Engrg. Co., a, b, e.  
Pacific Radionics, b, c, d, f, i.  
Pacific Scientific Co., a, c, h, i.  
Photocon Research Products, e.  
Pickering & Co., Inc., d.  
Pitter Aeronautical Corp., b.  
Power-Tronic Systems Inc., a thru e.  
Projects Unlimited Inc., e.  
Radiation, Inc.  
Rahm Instruments, Div.-American Machine & Metals, Inc., a, b, c, e.  
Revere Corp. of America, b, e, g, h.  
Rosemount Engrg. Co., e, h.  
Arthur C. Ruge Associates, Inc., h.  
Sanborn Co., e.  
Sangamo Electric Co., f.  
Schaevitz Engrg., a, d, e.  
Servomechanisms, Inc., a, e, h.

Singer Mfg. Co., The, Military Products Div., e, f.  
Space Corp., i.  
Specialties, Inc., e.  
Standard Controls, Inc., b, e.  
Statham Instruments, Inc., a thru e, g.  
Stromberg-Carlson Div.-General Dynamics Corp., f.  
Technology Instrument Corp., a, d, e, i.  
Therma Electric Co., Inc., h.  
Thiokol Chemical Corp., e, f, g.  
Trans-Sanics, Inc., b, d, e, g, h.  
Trionics Corp., a, h.  
Ultradyn, Inc., a, e.  
United Control Corp., e, h.  
U. S. Science Corp., Div.-Topp Industries, Inc., a, e, h.  
Valpey Crystal Corp.  
Victor R. F. & Microwave Co., d.  
Vinson Mfg. Co., Inc., b thru e.  
Wallace & Tiernan Inc., e.  
Waugh Engrg. Co., b.

## TRANSFORMER EQUIPMENT

American Machine & Foundry Co., Government Products Group  
Bowler, Inc., Defense Dept.  
Cambridge Co., Div.-Carrier Corp.  
Continental Technical Service, Inc.  
\*JANITROL AIRCRAFT DIV., SURFACE COMBUSTION CORP.  
Kenhos Corp., Div.  
Linde Co., Div.-Union Carbide Corp.  
Merz Engrg., Inc.  
Project Fabrication Corp.  
Edw. Renneburg & Sons Co.  
Resistoflex Corp.  
Special Project Lab., Food Machinery & Chemical Corp.  
Stearns-Roger Mfg. Co.  
Washington Technological Associates Inc.

## TRANSFORMER LAMINATIONS

See LAMINATIONS, TRANSFORMER

## TRANSFORMER WINDING BOBBINS

See BOBBINS, TRANSFORMER WINDING

## TRANSFORMER WINDINGS

Advanced Electronics, Inc.  
Atlas Coil Inc.  
Central Transformer Co.  
Dietz Design & Mfg. Co.  
Dinion Coil Co., Inc.  
Dresser Industries, Inc.  
Eisler Engrg. Co., Inc.  
Feratron Electronics Co., Inc.  
Forest Electric Co., The  
Fugle-Miller Labs. Inc.  
Good-All Electric Mfg. Co.  
Goslin Electric & Mfg. Co.  
Green Rectifier Co.  
Industrial Transformer Corp.  
Integrated Mica Corp.  
Langevin Div., The W. L. Maxxon Corp.  
Microtran Co. Inc.  
Minitran Corp.  
NYT Electronics, Inc.  
National Coil Co.  
Networks Electronic Corp.  
New York Coil Co.  
Palo Alto Engrg. Co.  
Perry Plastics, Inc.  
Quotronic Transformer Corp.  
Rollan Electric Co.  
Rytron Co., Inc.  
Signal Transformer Co.  
Topper Mfg. Co., Inc.  
Transformer Design, Inc. of Milwaukee  
Transonic, Inc.  
Universal Toroid Coil Winding, Inc.  
Westbury Electronics Inc.  
Westinghouse Electric Corp.

## TRANSFORMERS

a. Audia  
b. Fly Back  
c. Full Wound  
d. General  
e. High Voltage Power Supply  
f. Instrument  
g. Intermediate Frequency  
h. Miniature  
i. Output  
j. Power  
k. Precision Voltage Dividing  
m. RF & IF  
n. Ultrasonic

ACF Industries Inc., a, h, i.  
AMP Inc., i.  
A.P.W. Co., h.  
Ace Coil & Electronics Co., l, m.  
Acme Electric Corp., d, h, i, j, l.  
Acromag Inc., f, k.  
Aerolab Development Co., h, j.  
Airpax Electronics Inc., Seminole Div., a, e, i, j, l.  
Aladdin Electronics, Div.-Aladdin Industries Inc., a, d, g, h, l, m.  
All-Tronics, Inc., m.  
Amelco, Inc., a, d, g thru j, m, n.  
American Machine & Foundry Co., Greenwich, c.  
Amplifier Corp. of America, a, h, i, j.

R. B. Annis Co., f.  
Associated Research, Inc., f.  
Atlas Coil Inc., c thru n.  
Atlas Engrg. Co. Inc., a thru x, m.  
Audio Development Co., a, c thru f, h thru l, n.  
Ballastran Corp., a, d, g thru l, n.  
Barker & Williams Inc., g, m.  
Barwood Electronics Inc., a, d, h, i, j.  
Bell Aircraft Corp., Niagara Frontier Div., h, l.  
Bendix Aviation Corp., York Div., e, h, j, l.  
Bogue Electric Mfg. Co., e, j.  
Brown Engrg. Co., Inc., f, h, i, j, m.  
Cable Electric Products Inc., d, i.  
Carol Electronics Corp., a, j, m.  
Carruthers & Fernandez, Inc., d, h, i, j.  
Celco, (Constantine Engrg. Labs. Co.), a thru n.  
Central Transformer Co., a, c thru f, h, i, j, n.  
Chicago Electronic Engrg. Co., Inc., a, d, i, j, k.  
Chicago Standard Transformer Corp., a, b, d, e, h, i, j, l.  
Clippard Instrument Lab., Inc., b, m.  
Coil Co. of America, a, c, d, e, i thru l, n.  
Coilcraft Inc., g, h, m.  
G. L. Callins Corp., k.  
Control Circuits Inc., e, n.  
Cycle Transformer Corp., a, d, e, f, h thru l, n.  
Davenport Mfg. Co., e, k.  
Dayton Aviation Radio & Equipment Corp., g, m.  
Del Electronics Corp., e, h, i, j.  
Dietz Design & Mfg. Co., a, d, e, f thru n.  
Dinion Coil Co., Inc., a, e, f, h, i, j, l.  
Double E Products Co., m.  
Dresser Industries, Inc., a, b, d, e, h thru l, n.  
ESC Corp., h, l.  
Eagle Electric Mfg. Co. Inc., d.  
Eisler Engrg. Co., Inc., e, i, j.  
Elcor, Inc., f, h, j.  
Electrical Windings, Inc., a, d, f, g, i, j.  
Electro Development Corp.  
Electro Engrg. Works, a, d, e, f, i, j, k.  
Electronic Coils, Inc., k.  
Electronic Research Associates, Inc., a, e, h, i, j.  
Electronic Transformer Co., Inc., a, h, i, j, l, n.  
Electro-Tech Equipment Co., j.  
Electro-Winders Co. Inc., g, h, l, m.  
Era Electric Corp., a, e, d, e, h thru l.  
Erie Resistor Co., h, l.  
Ferranti Electric Inc., a, d, e, h thru k, n.  
Feratron Electronics Co., Inc., a, g thru j.  
Ferroxcube Corp. of America, b, h, l, m.  
Filtron Co., Inc., l.  
Forbes & Wagner, Inc., b, g, l, m.  
Forest Electric Co., The, a, d, e, i, j.  
Foster Transformer Co., a, d, e, h, i, j, l.  
Freder Transformer Co., Inc., a, c thru f, h thru l, n.  
Fugle-Miller Labs. Inc., e, g, m.  
General Coil Products Corp., a, d, g, h, i, m.  
General Electric Co., Apparatus Sales Div., d, e, f, i, l.  
Geotronic Labs. Inc., a, c, d, f thru j.  
Good-All Electric Mfg. Co., e, e, i, j.  
Goslin Electric & Mfg. Co., a, c thru n.  
Green Rectifier Co., c, d, j.  
Gudeman Co. of California, Inc., The, Monrovia Div., h, l.  
Hevi-Duty Electric Co., d, e, f, i, j, l.  
Hindle Transformer Co. Inc., c thru f, i, j.  
A. F. Holden Co., The, d.  
Industrial Transformer Corp., a, c thru l.  
Jensen Mfg. Co., a.  
Johnson Electronics Inc., h, m.  
Keystone Products Co., a, d, e, f, h thru l, n.  
Knopp Inc., d, e, f, i.  
Land-Air Inc., d, e, j.  
Landis & Gyr Inc., f.  
Langevin Div., The W. L. Maxxon Corp., a, c thru f, h thru l, n.  
Levinthal Electronic Products, Inc., l.  
Litton Industries, Inc., b, d, h, j.  
Magnetic, Inc., h, k.  
Merit Coil & Transformer Corp., a, b, d, f thru j, m.  
Microtran Co. Inc., a, d, e, f, h thru l, n.  
J. W. Miller Co., e, g, h, l.  
Sanford Miller Co., i, j.  
Minitran Corp., a, d, f, h thru l.  
Minneapolis-Honeywell Regulator Co., Boston Div., f.  
Mucon Corp., e, j.  
NYT Electronics, Inc., d thru m.  
National Coil Co., a, d, f thru i, k, m, n.  
National Pneumatic Co., Inc., Holtzer-Cabot Div., a, b, e, j, m.  
Networks Electronic Corp.  
New England Scientific Instruments Co., i, j.  
New England Transformer Co., Inc., a, c, d, e, h, i, j, l.  
New York Coil Co., a, c thru f, h thru n.  
New York Transformer Co., Inc., a, c thru f, h thru l, n.  
North Hills Electric Co., Inc., g, l, m, n.  
Ortho Filter Corp., a, f, i thru l.  
Osborne Electronic Sales Corp., a thru n.  
Oxford Components, Inc., a, d, e, f, h thru k.  
PCA Electronics Inc., l.  
Pacific Magnetic Corp., a, d, e, f, h thru l.  
\*PACKARD-BELL ELECTRONICS CORP., l.  
Palo Alto Engrg. Co., a, d, f, h thru l.  
Pearson Electronics, Inc., l.  
pen-Tran Corp., b, m.  
Perkin Engrg. Corp., e, d, e, j.  
Perry Plastics, Inc., a, h, i.  
Peschel Electronics, Inc., e.  
Portchester Instrument Corp.  
Quotronic Transformer Corp., a, c, d, f thru l.  
RS Electronics Corp., g, l, m.  
Radio Industries, Inc., g, h, m.

Douglas Rondall Inc., d, h, i, j.  
 Dytheon Mfg. Co., a, e, l.  
 Edman Electronics Corp., g, l, m, n.  
 Elton Electronics Inc., l.  
 Elton Electric Co., a, i, m.  
 Elton Ross Metals Co., The, h, l.  
 Eltron Co., Inc., g thru m.  
 Engstrom Electric Co., a, e, f, h, j, k, l, n.  
 Enron Industrial Electronics, Div.-Engr. Design  
 Inc., e.  
 General Transformer Co., a, c, d, e, h thru l, n.  
 Gensco & Co., Inc., e.  
 General Electronics, Inc., f thru i, k, l, m.  
 General Winding Co., Inc., g, m.  
 General Engrg., Inc., a, e, j, j.  
 General Transformer Corp., a, d, e, h, i, j, n.  
 General-Carlson Div.-General Dynamics Corp.,  
 a, h, l.  
 General Electronics Corp., g, h, m.  
 General Apparatus Builders, c, d, e, j.  
 General Engr. Co., l.  
 General Industries Corp., a, e.  
 General Mfg. Co., Inc., n.  
 General Electronics, Inc., a, d, f, h, j, k.  
 General Design, Inc. of Milwaukee, a thru l.  
 General Specialty Co., a, e thru f, i, j.  
 Generalson, Inc., a, d, e, f, h thru l.  
 General, Inc., a thru e, g, h, i, k.  
 General, Inc., a, b, d thru l, n.  
 General Toroid Coil Winding, Inc., f, l.  
 General Loudspeakers, Inc., a.  
 General Electronics Co., g, m.  
 General Mfg. Co., Inc., a, d, e, g thru l.  
 General Electronics Co., Inc., a, d thru g, m.  
 General Transformer Co., Inc., a, c thru n.  
 General Electronics Inc., a, c, d, e, l, i, l.  
 General Electric Corp.  
 General Instruments, Div.-Daystrom, Inc., f, k.  
 General Electronic Corp., Sub-Sperry Rand Corp.,  
 a, d thru m.  
 General Industries, n.  
 General Radio Corp., a, g, i, m.

**TRANSISTORS**

a. Germanium  
 b. Germanium, Power  
 c. Junction  
 d. Photo  
 e. Point-Contact  
 f. Power  
 g. Selenium  
 h. Silicon  
 i. Silicon, Power  
 j. Surface Barrier  
 k. Switching  
 l. Tetrode

**TRANSISTOR SUPPLY CO., a thru l.**  
 Bendix Aviation Corp., Red Bank Div., a, b, c, e, g,  
 h, i, k.  
 Bendix Aviation Corp.-Semiconductor Products, Red  
 Bank Div., a, b, k.  
 Bendix Electric Mfg. Co., h, i.  
 Bendix-Hytron, Div. Columbia Broadcasting System,  
 Inc., a, b, c, f, k.  
 Bendix Electronics Inc., a thru l.  
 Bendix Transistor Products, Div.-Clevite Corp.,  
 a, b, c, f, k.  
 Bendix Radio Div.-General Motors Corp., b.  
 Bendix Div.-British Industries Corp., a, b, e, f, h,  
 i, k.  
 Bendix General Transistor Corp., a, c, d, h, k.  
 Bendix General Electronics Corp., Semiconductor Div., f, h.  
 Bendix Power Electric Co.  
 Bendix Aircraft Co., a, h.  
 Bendix Transistor Corp., a, c, k.  
 Bendix Minneapolis-Honeywell Regulator Co., Ordnance Div.,  
 a, b, f, l.  
 Bendix Motorola Inc., Military Electronics Div., a, b, c, e, f,  
 h, i, k, l.  
 Bendix Semiconductor, Inc., h, i, k.  
 Bendix Philco Corp., Government & Industrial Div., a, b, c,  
 e thru l.  
 Bendix Philco Corp., Lansdale Tube Co. Div., a, b, c, h,  
 i, k.  
 Bendix Archer Instrument Corp.  
 Bendix Dytheon Mfg. Co., a, c, h, i.  
 Bendix Silicon Transistor Corp., h, i.  
 Bendix Berry Semiconductor Div., Sperry Rand Corp., h, k.  
 Bendix Avionics Electric Products Inc., Semiconductor  
 Div., a, b, e, f, h.  
 Bendix Technical Apparatus Builders, b, c, f, g, h, k.  
 Bendix Transistor Electronic Corp., a, h, i, k.  
 Bendix Ans-Sil Corp., i.  
 Bendix United States Dynamics Corp., h, i.  
 Bendix General Components, Div.-El-Tronics, Inc., b.  
 Bendix Generalhouse Electric Corp., a, b.  
 Bendix Zenith Radio Corp., k.

**TRANSMISSION LINE, WIRE & CABLE**

Aluminum Co. of America  
 American Super-Temperature Wires, Inc.  
 Barker Sales Co.  
 Barnbach Radio Co., Inc.  
 Billiam Brand & Co., Inc.  
 Bosh Brass & Copper Co., Inc.  
 Bostoplast, Inc.  
 Bostweld Steel Co., Wire & Cable Div.  
 British Wire Co. Inc.  
 Btron, Inc.  
 Buxess Wire Corp.  
 B-T-Kellogg  
 Brecision Tube Co., Inc.

Sequoia Wire & Cable Co., Div.-Mandrel Industries,  
 Inc.  
 Western International Co.  
 Westwood Cable Corp.  
 Wind Turbine Co.

**TRANSMISSION LINES, MICROWAVE**

Aircom Inc. of New Jersey  
 Airtron Inc., Div.-Litton Industries  
 American Super-Temperature Wires, Inc.  
 Barker Sales Co.  
 Bendix Aviation Corp., York Div.  
 Bogart Mfg. Corp.  
 Budd Stanley Co. Inc.  
 Diamond Antenna & Microwave Corp.  
 Douglas Microwave Co., Inc.  
 FXR, Inc.  
 ITT Federal Div., International Telephone & Tele-  
 graph Corp.  
 ITT Labs.  
 J-V-M Microwave Co.  
 Lieco, Inc.  
 Litton Industries, Inc.  
 Meridian Metalcraft, Inc.  
 Monogram Precision Industries  
 N.R.K. Mfg. & Engrg. Co.  
 Philco Corp., Government & Industrial Div.  
 Precision Tube Co., Inc.  
 Tamor Electronics, Inc.  
 Technical Appliance Corp.  
 Telerad Mfg. Corp.  
 Victor R. F. & Microwave Co.  
 Western International Co.

**TRANSMISSION MONITORING EQUIPMENT**

See **MONITORING EQUIPMENT, TRANSMISSION**

**TRANSMITTER BLOWERS**

See **BLOWERS, TRANSMITTER**

**TRANSMITTER TUNING DEVICES, MECHANICAL**

See **TUNING DEVICES, TRANSMITTER MECHANICAL**

**TRANSMITTERS**

Aerojet-General Corp.  
 Amelco, Inc.  
 Applied Science Corp. of Princeton  
 Babcock Radio Engrg., Inc.  
 Rex Bassett, Inc.  
 Bendix Radio Div., Bendix Aviation Corp.  
 Bristol Co., The  
 Budelman Electronics Corp.  
 Centronix Inc.  
 Collins Radio Co.  
 Communications Co.  
 Communications Research Co.  
 Continental Electronics Mfg. Co.  
 Cooper Development Corp., Sub-Marquardt Aircraft  
 Co.  
 Crosby Laboratories, Inc.  
 Daven Co., The  
 Dorsett Labs., Inc.  
 DuKane Corp.  
 Electro-Mechanical Research, Inc.  
 Electronic Communications, Inc.  
 Emerson Electric Mfg. Co., The, Electronics &  
 Avionics Div.  
 Emerson Radio & Phonograph Corp.  
 General Devices, Inc.  
 Gillfillan Bros. Inc.  
 Gaslin Electric & Mfg. Co.  
 Hammarlund Mfg. Co. Inc.  
 Hazeltine Electronics Div.-Hazeltine Corp.  
 Hoffman Labs. Div., Hoffman Electronics Corp.  
 ITI Federal Div., International Telephone &  
 Telegraph Corp.  
 ITT Labs.  
 E. F. Johnson Co.  
 Koor Engrg. Corp.  
 Kaiser Aircraft & Electronics, Div.-Kaiser Industries  
 Corp.  
 Land-Air Inc.  
 Leasing Engrg., Inc.  
 Lear, Inc.  
 Levinthal Electronic Products, Inc.  
 Ling Electronics, Inc.  
 Litton Industries, Maryland Div.  
 W. L. Moxson Corp., The  
 Motorola Inc., Military Electronics Div.  
 Ralph M. Parsons Co., The, Electronics Div.  
 Philco Corp., Government & Industrial Div.  
 Radiophone Co. Inc.  
 Raytheon Mfg. Co., Government Equipment Div.  
 Seeburg Corp., The  
 Stromberg-Carlson Div.-General Dynamics Corp.  
 Telerad Mfg. Corp.  
 Television Utilities Corp.  
 Thiokol Chemical Corp., Inc.  
 Virginia Electronics Co., Inc.  
 Zenith Radio Corp.

**TRANSMITTERS, PORTABLE & MOBILE RADIOTELEPHONE**

Automatic Electric Sales Corp.  
 Barker Sales Co.  
 Rex Bassett, Inc.  
 Bendix Radio Div., Bendix Aviation Corp.  
 Centronix Inc.  
 Collins Radio Co.  
 Communications Co.  
 Communications Research Co.

Daven Co., The  
 Emerson Radio & Phonograph Corp.  
 Goslin Electric & Mfg. Co.  
 Hammarlund Mfg. Co. Inc.  
 Hoffman Labs. Div., Hoffman Electronics Corp.  
 ITT Labs.  
 E. F. Johnson Co.  
 Koor Engrg. Corp.  
 Lear, Inc.  
 L. E. L., Inc.  
 Litton Industries, Maryland Div.  
 Livingston Electronic Corp.  
 Motorola Inc., Military Electronics Div.  
 Munston Mfg. & Service, Inc.  
 National Pneumatic Co., Inc., Holtzer-Cabot Div.  
 Philco Corp., Government & Industrial Div.  
 Radio Specialty Mfg., Co.  
 Rowe Industries  
 Stromberg-Carlson Div.-General Dynamics Corp.  
 Telectro Industries Corp.  
 Thiokol Chemical Corp.  
 Virginia Electronics Co., Inc.

**TRANSPONDERS**

American Missile Products Co., Inc.  
 Bristol Co., The  
 Centronix Inc.  
 Collins Radio Co.  
 Communications Research Co.  
 Cooper Development Corp., Sub-Marquardt Aircraft  
 Co.  
 Cubic Corp.  
 Curtiss-Wright Corp., Santa Barbara Div.  
 Daven Co., The  
 Dorsett Labs., Inc.  
 Electronic Communications, Inc.  
 Emerson Radio & Phonograph Corp.  
 Gillfillan Bros. Inc.  
 Hollomere Electronics Co.  
 Hazeltine Electronics Div.-Hazeltine Corp.  
 ITI Federal Div., International Telephone &  
 Telegraph Corp.  
 ITT Labs.  
 Land-Air Inc.  
 Lear, Inc.  
 Litton Industries, Maryland Div.  
 W. L. Moxson Corp., The  
 Minneapolis-Honeywell Regulator Co., Ordnance Div.  
 Motorola Inc., Military Electronics Div.  
 Ralph M. Parsons Co., The, Electronics Div.  
 Space Corp.  
 Telectro Industries Corp.  
 Telerad Mfg. Corp.  
 U. S. Science Corp., Div.-Topp Industries, Inc.  
 Varian Associates

**TRANSPORT UNITS**

Aerodex, Inc.  
 Aerolab Development Co.  
 Alwac Corp.  
 Cambridge Co., Div.-Carrier Corp.  
 Consolidated Diesel Electric Corp.  
 Crane Carrier Corp.  
 Danmer Scientific Co.  
 Dresser Industries, Inc.  
 Eidel Mfg. Co., Inc.  
 FWD Corp.  
 Lynchco & Truck Co. Inc.  
**\*MIRACHEMICAL PRODUCTS CORP., METAL CONTAINER DIV.**  
 Ordnance Div.-Food Machinery & Chemical Corp.  
 Shepard Laboratories, Inc.  
 Trailmobile Inc.  
 United Mfg. Co., The  
 U.S.A.C. Transport, Inc.

**TRAPS, WAVE**

See **WAVE TRAPS**

**TRIM TABS**

Adept Industries Inc.  
 Intercontinental Mfg. Co., Inc.  
 Kaiser Aircraft & Electronics, Div.-Kaiser Industries  
 Corp.  
 Longren Aircraft Co., Inc.  
 Monrovia Aviation Corp.  
 Santa Anita Engrg. Co.  
 Talley Corp., The

**TRIPODS**

Acca Equipment Div., American Chain & Cable Co.,  
 Inc.  
 Burke & James Inc.  
 Colson Corp., The  
 Davidson Mfg. Co., Inc.  
 Gordon Enterprises  
 Houston Fearless Corp.  
 Mitchell Camera Corp.  
 Peerless Products Industries  
**\*RHEEM MFG. CO., DEFENSE & TECHNICAL PRODUCTS DIV.**  
 Traid Corp.  
 Wind Turbine Co.

**TUBE**

a. Cooling Units  
 b. Pin Straighteners  
 c. Pullers  
 d. Seal Leads  
 e. Shields  
 f. Sockets

Aerovox Corp., f.  
 \*AIRESEARCH MFG. CO., DIV.-THE GARRETT CORP., a.  
 Alden Products Co., f.  
 Aluminum Co. of America, a.  
 Amphenol Connector Div., Amphenol-Borg Electronics Corp., f.  
 Art Wire & Stamping Co., d, e.  
 Associated Engrg. & Mfg. Corp., d.  
 Atlas E-E Corp., e.  
 Augat Brothers, Inc., a, e.  
 W. A. Beauchaine & Sons Inc., b, c.  
 Birtcher Corp., The, e.  
 Continental Electronics Mfg. Co., a.  
 Dean Products, Inc., a, e.  
 Doyle & Rath Mfg. Co., Inc., a.  
 Eastern Industries Inc., a.  
 Eitel-McCullough, Inc., f.  
 Elco Corp., f.  
 Electronic Parts Mfg. Co., Inc., d.  
 General Electric Co., Lamp Metals & Components Dept., d.  
 Grisco-Russell Co., The, a.  
 International Electronic Research Corp., a, e.  
 Jettron Products, Inc., f.  
 C. B. Kaupp & Sons, Inc., e.  
 Kling Metal Spinning & Stamping Co., e.  
 Livingston Electronic Corp., e, f.  
 Metal Textile Corp., Electronics Div., a, d, e, f.  
 Methode Mfg. Corp., e, f.  
 Monogram Precision Industries, a.  
 Mueller Brass Co., a.  
 Northrop Corp., The, Nortronics Div., a.  
 Paul Nurches Co., f.  
 Omega Electronic Corp., e, f.  
 Parts Engrg. Co., Inc., a.  
 C. F. Raark Welding & Engrg. Co., Inc., a.  
 Milton Ross Metals Co., The, b, f.  
 Slip Ring Co. of America, f.  
 Specialty Engrg. & Electronics Co.  
 Star Expansion, b.  
 Staver Co., Inc., The, e.  
 Sylvania Electronic Products Inc., Parts Div., f.  
 United Aircraft Products, Inc., a.  
 Vilter Mfg. Co., The, a.  
 Waldom Electronics Inc., e, f.  
 Westinghouse Electric Corp., Lamp Div., d.  
 Westline Products Div.-Western Lithograph Co., e.  
 Winchester Electronics, Inc., f.  
 Zipertubing Co., The, e.

**TRIMMERS, POTENTIOMETER**  
 See POTENTIOMETER TRIMMERS

**TUBE ASSEMBLIES, IGNITION**  
 See IGNITION TUBE ASSEMBLIES

**TUBE CAPS, TUBE**  
 See CAPS, TUBE

**TUBE CHEMICALS**  
 See CHEMICALS, TUBE

**TUBE PARTS**

Art Wire & Stamping Co.  
 Associated Engrg. & Mfg. Corp.  
 Astronautics Engrg. Co.  
 B. H. Aircraft Co., Inc.  
 Ball Machine Products Co., The  
 \*BEATON & CORBIN MFG. CO., THE  
 Carning Glass Works  
 Diamante Products Mfg. Co.  
 Electronic Parts Mfg. Co., Inc.  
 GAR Mfg. Corp.  
 Lancaster Glass Corp.  
 Mercury Tool & Mfg. Corp.  
 Metal Textile Corp., Electronics Div.  
 Mueller Brass Co.  
 National Beryllia Corp.  
 New Process Metals, Inc.  
 Paris Engrg. Co., Inc.  
 Precision Sheet Metal, Inc.  
 Milton Ross Metals Co., The  
 Shaw Metal Products Corp.  
 Smith-Morris Corp.  
 Staver Co., Inc., The  
 Superior Electronics Corp.  
 Sylvania Electronic Products Inc., Parts Div.  
 Thomas Electronics, Inc.  
 Universal Unlimited, Inc.  
 Veet Industries  
 Westinghouse Electric Corp., Lamp Div.  
 Woolf Aircraft Products, Inc.

**TUBE SLEEVES**  
 See SLEEVES, TUBE

**TUBE STAMPED PARTS**  
 See STAMPED PARTS, TUBE

**TUBE SUPPORTS**  
 See SUPPORTS, TUBE

**TUBES**

a. ATR  
 b. Backward Wave  
 c. Ballast  
 d. Battery Charger  
 e. Balometer  
 f. Cathode, Multiple Gun  
 g. Cathode Ray  
 h. Cathode Ray, Instrument Use  
 i. Ceramic

j. Computer, Storage  
 k. Counter Beam  
 l. Electrometer  
 m. Electron Multiplier  
 n. Gamma Ray, Nuclear  
 o. Geiger Counter, Nuclear  
 p. Geiger Mueller  
 q. Glow or Discharge  
 r. Ignitron  
 s. Infra-Red  
 t. Ionization  
 u. Klystron  
 v. Magnetron  
 w. Miniature  
 x. Noise Source  
 y. Phototubes  
 z. Phototubes, Multiplier  
 a1. Pirani  
 b1. Power Amplifier  
 c1. Projection  
 d1. Receiving  
 e1. Rectifying  
 f1. Rectifying, Gas-Filled Type  
 g1. Rectifying, Transmitting  
 h1. Rectifying, Vacuum Type  
 i1. Scintillation  
 j1. Scintillation, Nuclear  
 k1. Sparkgap  
 l1. Strabe  
 m1. Subminiature  
 n1. Switching  
 o1. Thyatron  
 p1. TR  
 q1. Transducer  
 r1. Transmitting  
 s1. Transmitting-Receiving  
 t1. Traveling Wave  
 u1. Ultra-Violet  
 v1. Vacuum  
 w1. Voltage Reference or Regulating  
 x1. X-Ray

American Brass Co., The, x-1.  
 American Elite, Inc., g, u, v, w, b-1, d-1 thru h-1, m-1, o-1, r-1, s-1, t-1, v-1, w-1.  
 Amlo Corp., g, l-1, u-1.  
 Anton Electronic Labs., Inc., n thru q, t, w-1.  
 Applied Radiatlon Corp., u.  
 Barker Sales Co., h, l, w.  
 Barry Electronics Corp., a thru y, a-1 thru w-1.  
 \*BEATON & CORBIN MFG. CO., THE, r.  
 Bendix Aviation Corp., Red Bank Div., a, b, c, i, j, k, n thru r, t thru x, b-1, d-1 thru k-1, m-1 thru w-1.  
 Bendix Aviation Corp., York Div.  
 Bomac Laboratories, Inc., a, b, u, v, x, k-1, p-1, s-1.  
 Brush Beryllium Co., The, l.  
 Burroughs Corp., Electronic Tube Div., a, v, x, n-1.  
 CBS-Hytran, Div.-Columbia Broadcasting System, Inc., g, h, q, w, b-1, d-1, e-1, h-1, n-1, o-1, r-1, s-1, v-1, w-1.  
 Calvert Electronics Inc., a thru z, a-1 thru x-1.  
 Carborundum Co., Refractories Div., i.  
 Central Electronic Mfrs., Div.-Nuclear Corp. of America, a, l, t, x, b-1, e-1, g-1, h-1, i-1, k-1, n-1, p-1, r-1, s-1, u-1, v-1.  
 DBM Research Corp., k, q, l-1.  
 Diamante Products Mfg. Co., i.  
 R. C. Dudek & Co., w-1.  
 Edgerton, Germeshausen & Grier, Inc., g, h, i, y, e-1, k-1, l-1, o-1, x-1.  
 Eitel-McCullough, Inc., i, u, v, w, b-1, e-1 thru h-1, n-1, r-1, t-1, v-1.  
 Electronic Refractories Co., The, i.  
 Electronic Tube Corp., f, g, h.  
 Electrons, Inc., f-1, o-1.  
 Engelhard Industries, Inc., s, u-1.  
 Ferranti Electric Inc., g, h, l, u, v, x, l-1, p-1, x-1.  
 Herzog Miniature Lamp Works, Inc., e, w-1.  
 High Vacuum Equipment Corp., t.  
 Huggins Labs., Inc., b, t-1.  
 Hughes Aircraft Co., b, g, t-1, v-1.  
 ITT Labs., a, j, s, u, v, w, a-1, p-1, t-1.  
 ITT Labs.-Ft. Wayne, a, l, m, r, y, z.  
 Instruments Div.-Philips Electronics, Inc., a, p, x-1.  
 Isolantite Mfg. Corp., i.  
 Kaiser Aircraft & Electronics, Div.-Kaiser Industries Corp., g, v, y.  
 Kemlite Laboratories, Inc., q, s, l-1, u-1, x-1.  
 Kip Electronics Corp., c, q, w, m-1, n-1, o-1, v-1, w-1.  
 Landsverk Electrometer Co., The, n, a, p.  
 Ling Electronics, Inc., b-1, e-1 thru h-1, o-1, r-1, v-1.  
 Lintin Industries, Inc., b, g, i, u thru x, p-1, t-1.  
 Mackay Research Labs., g, m, q, s, t, v, y, z, a-1, r-1, v-1.  
 Menlo Research Lab., u-1.  
 Mico Fabricating Co., a, p.  
 Microwave Associates, Inc., a, e, v, p-1, s-1.  
 Monogram Precision Industries, a, b.  
 National Beryllia Corp., i.

National Ceramic Co., l.  
 National Union Electric Corp., h, k, q, w, r-1.  
 Networks Electronic Corp., l-1.  
 Norton Co., New Products Dept., l.  
 Nuclear-Chicago Corp., n, o, p, l-1.  
 Penta Labs., Inc., b-1, e-1, o-1, r-1, v-1.  
 Philco Corp., Government & Industrial Div., f, s, t, w, d-1, m-1, n-1.  
 Philco Corp., Lansdale Tube Co. Div., g, h, w, b-1, d-1, e-1, h-1, m-1, v-1.  
 Photo-Crystals, Inc., y.  
 Polarad Electronics Corp., u.  
 Radiation Research Corp., k-1, w-1.  
 Radiation Instrument Development Lab., Inc., n, o, p, j-1.  
 Roulard Corp., The, g, h.  
 Raytheon Mfg. Co., b, d, f thru i, l, o, p, q, u, v, w, b-1, d-1 thru h-1, m-1, o-1, r-1, t-1, v-1, w-1.  
 Signalite Inc., w-1.  
 Sanatone Corp., w, d-1, m-1.  
 Sperry Electronic Tube Div., Sperry Rand Corp., u, t-1.  
 Strand Engrg. Co., o.  
 Stramberg-Carlson Div.-General Dynamics Corp., g.  
 Sylvania Electronic Products Inc., Special Tube Operations, a, b, u, v, a-1, p-1, t-1.  
 Sylvania Electronic Products Inc., Sylvicon Electronic Tubes Div., f, g, h.  
 Sylvania Electronic Products Inc., Electronic Tubes-Rec. Tubes Div., a, b, i, u, v, w, d-1, f-1, h-1, m-1, o-1, p-1, v-1.  
 Technical Apparatus Builders, c, d, l, s, e-1 thru h-1, l-1, w-1.  
 Thermosen Inc., w, x, d-1, w-1.  
 Thomas Electronics, Inc., g, h, o-1, v-1.  
 Triplett & Barton, Inc., x-1.  
 \*ULTRA-VIOLET PRODUCTS, INC., u-1.  
 Universal Unlimited, Inc., g.  
 Vacuum Tube Products, Div.-Hughes Aircraft Co., f, g, h, j, q, t, o-1, b-1, e-1 thru h-1, o-1, r-1, v-1.  
 Varian Associates, b, u, b-1, r-1, t-1.  
 Veeco Vacuum Corp., t, a-1.  
 Veet Industries  
 Waterman Products Co., Inc., h.  
 Westinghouse Electric Corp., c, d, g, h, m, n, s, u, v, y, z, b-1, d-1 thru h-1, m-1, o-1 thru v-1.  
 Zenith Radio Corp., g, t-1, x-1.

**TUBES, SHOCK**  
 See SHOCK TUBES

**TUBING**

a. Aluminum  
 b. Asbestos  
 c. Brass or Copper  
 d. Capillary  
 e. Ceramic  
 f. Fibre  
 g. Finned  
 h. Flexible Metal  
 i. Fused Quartz  
 j. Glass Fibre Insulation  
 k. Glass, Precision  
 l. Metal & Alloy  
 m. Metal Hose, Flexible  
 n. Mica  
 o. Molybdenum  
 p. Nickel  
 q. Paper  
 r. Phenolic  
 s. Plastic  
 t. Plastic  
 u. Precious Metal  
 v. Seamless  
 w. Silver  
 x. Steel  
 y. Steel, Stainless  
 z. Tantalum  
 a1. Titanium  
 b1. Tungsten  
 c1. Varnished or Lacquered  
 d1. Varnished Cambric Insulation  
 e1. Waveguide  
 f1. Woven or Knitted Wire

Adam Metal Supply Inc., a.  
 Aera Leather Products Co., j.  
 Aircam Inc. of New Jersey, e-1.  
 Airtron Inc., Div.-Littion Industries, h, o-1.  
 All Boro Metal Products Co., Inc., a, p, y.  
 Allheights Ludlum Steel Corp., l, v, y.  
 Allied Plastics Supply Corp., b, f, j, m, n, r, s, t, e-1, d-1.  
 Alloys Unlimited Inc., w.  
 Almac Plastics Inc., s, t.  
 Alpha Metals, Inc., l.  
 Aluminum Co. of America, a.  
 American Aeroplasts, a, c, i, x, y.  
 American Agile Corp., t.  
 American Brass Co., The, h, m, e-1.  
 American Instrument Co., Inc., y.  
 American Optical Co., Instrument Div., k.  
 American Rocket Co., b, j, s, t.  
 American Silver Co., c, d, u, v, w.  
 American Super-Temperature Wires, Inc., j, t.  
 Ampco Metal, Inc., l, v.  
 Anacodo Metal Hose Div., The American Brass Co., h, m, t, e-1, f-1.  
 Anchor Plastics Co., Inc., t.  
 Aristocrat Plastics, Inc., t.  
 Armo Steel Corp., x.  
 Associated Engrg. & Mfg. Corp., o, z, b-1.  
 Auburn Mfg. Co., The, b, f, t.

& C. Insulation Products, Inc., j, e-1, d-1.  
 mon Sales & Co., k.  
 riker Radio Co., e.  
 smont Smelting & Refining Works, Inc., l.  
 ndix Aviation Corp., Red Bank Div.  
 rgen Carbide Co., d.  
 mbach Radio Co., Inc., j, e-1, d-1.  
 Bishop & Co., Platinum Works, d, l, p, q, u, v, x, y.  
 onny Mfg. Corp., t.  
 rden Chemical Co., t.  
 rden Chemical Co., The, Div.-The Borden Co.,  
 Resinite Dept., t.  
 am Metallurgical & Chemical Co., a, c, l, n thru  
 q, u, v, w, y, e-1, b-1.  
 llium Brand & Co., Inc., j, t, e-1, d-1.  
 eze Corporations, Inc., h.  
 ridgeport Brass Co., a, c, f, g, l, m, o, p, q, u, v, w,  
 z, e-1.  
 ush Beryllium Co., The, e.  
 alifornia Aircraft Products, a, l, x, y.  
 rbarandum Co., Refractories Div., e, f.  
 rprenter Steel Co., The, l, q, y.  
 rprenter Steel Co., The, Alloy Tube Div., l, y, a-1.  
 nrolab, Div.-Globe-Union, e.  
 ase Brass & Copper Co., Inc., a, c, g, l, v, y, e-1.  
 emold Co., t.  
 emplasty, Inc., t.  
 eicago Gasket Co., t.  
 eveland Container Co., The, b, f, r, s.  
 emponents Corp., h, m, f-1.  
 entinental Diamond Fibre Corp., f, s, t.  
 eper Industries, Inc., a, c.  
 ebring Glass Works, d, e, l, k.  
 ucible Steel Co. of America, l, p, q, x, y, a-1.  
 ystal-X Corp., s, t.  
 urtiss-Wright Corp., Research Div., e.  
 K Mfg. Co., h, m.  
 amascus Tube Co., a, c, g, l, a, p, q, u thru z, e-1,  
 b-1.  
 all Optics Co., Ltd., l, k.  
 alla Chemical Works, Inc., l.  
 eta Products Div.-Air Accessories, Inc., t.  
 emarnay-Bonardi, e-1.  
 amonite Products Mfg. Co., e.  
 electric Materials Co., j, t, e-1, d-1, f-1.  
 ivision Lead Co., l.  
 ixon Corp., t.  
 ouglas Microwave Co., Inc., e-1.  
 ow Chemical Co., The, l.  
 unbar-Kapelle Inc.-Aircraft Components Div., h, l, m,  
 v, y.  
 lectric Steel Foundry Co., l, y.  
 lectric Insulation Co., Inc., b, f, j, r, s.  
 lectric Refractories Co., The, e.  
 loy Corp., s, t.  
 mpire State Aluminum Corp., a.  
 ngelhard Industries, Inc., l, l, u, v, w, e-1.  
 ngelhard Industries Inc., D. E. Makepeace Div., l, u,  
 w, e-1, e-1.  
 ngeered Plastics, Inc., f, s, t.  
 ischer & Porter Co., k.  
 isher Scientific Co., k, t.  
 leaxaco Co., The, h, m.  
 lexible Metal Hose Mfg. Co., h, m.  
 lexible Tubing Corp., f, j.  
**FLEXONICS CORP., AERONAUTICAL DIV., d, h,**  
**l, m, x, y, e-1.**  
 lexack Co., t.  
 luralon Labs., Inc., t.  
 armica Corp., t.  
 orm-It Products, Inc., f, r, s.  
 ranklin Fibre-Lamitex Corp., f, j, s, t.  
 eneral American Transportation Corp., t.  
 eneral Plastics Corp. of New Jersey, b.  
 ering Products, Inc., t.  
 lloading, McBeon & Co., e.  
 loss Engrg. Div. Brown-Knecht-Heimann-Co., k.  
 .F. Goodrich Industrial Products Co., t.  
 allett Mfg., Co., h, m.  
 alogen Insulator & Seal Corp., s.  
 arvey Aluminum, a, l, e-1.  
 oveg Industries, Inc., b, e, f, l, j, s, t.  
 aynes Stellite Co., Div.-Union Carbide Corp., l, z.  
 ayward Scientific Glass Corp., k.  
 itemp Wires Inc., j, t.  
 lomolite Corp., The, s, t.  
 lumitronic Engrg. Co., s, t.  
 mperial Brass Mfg. Co., The, t.  
 ntegrated Mico Corp., n.  
 nternational Nickel Co., The, l, p, q, v.  
 olanite Mfg. Corp., e.  
 olonial Plastics, t.  
 oms-Manville, b, f, j, t.  
 onesville Paper Tube Co., r.  
 oiser Aluminum & Chemical Sales, Inc., a.  
 ennamel Inc., z, e-1.  
 ensico Tube Co., Inc., e, d, v.  
 ip Electronics Corp., e.  
 lcolcast Industries-Div. Thompson Romo Wooldridge  
 Inc., p, q, x, y.  
 ramer Fabricating Co., The, t.  
 lamtex Industries, Inc., f, j, t, e-1.  
 o Pointe Industries Inc., a.  
 ewis & Saunders, g.  
 homas J. Long, Inc., f, r, s, t, e-1, d-1.  
 outhan Mfg. Co., The, Div.-Ferro Corp., e.  
 t & Q Plastic Products, t.  
 . R. Malloy & Co., Inc., a-1.  
 etal Textile Corp., Electronics Div., h, f-1.  
 etals & Controls Corp., General Plate Div., l, u, w,  
 z, e-1, e-1.  
 mica Fabricating Co., e, f, l, n, s, t, d-1.

Mica Insulator Div.-Minnesota Mining & Mfg., Co., n,  
 s, t.  
 Microwave Associates, Inc., e-1.  
 Minnesota Mining & Mfg. Co., e, h, j, n, r, s, t, e-1,  
 d-1.  
 Mitronics Inc., e.  
 Monogram Precision Industries, a, g, l, p, q, r, t, u, x,  
 z, a-1, e-1.  
 Mueller Brass Co., c, t.  
 National Beryllia Corp., d, e.  
 National Ceramic Co., e.  
 National Lead Co., a-1.  
 National Tube Div.,-United States Steel Corp., g, l, t,  
 v, x, y.  
 National Vulcanized Fibre Co., f, s, t.  
 Navar Corp., t, e-1, d-1.  
 New England Electrical Works, Inc., d, f-1.  
 New England Tape Co., Div.-United-Carr Fastener  
 Corp., t.  
 Narton Co., e.  
 Narton Co., New Products Dept., e.  
 Ohio Seamless Tube Div.-Copperweld Steel Co., v, x.  
 Omega Labs., Inc., e-1.  
 Orchard Industries, Inc., Actionflex Div., f, j, t.  
 Pacific Scientific Co., u.  
 Pacific Tube Co., x, y.  
 Parts Engrg. Co., Inc., h, l, m, y.  
 Penn Fibre & Specialty Co., Inc., f, s, t.  
 Permacel, t.  
 Phelps Dodge Copper Products Corp., c, l, v.  
 Pilgrim Products Inc., f, s, t.  
 Plastic Age Sales, Inc., j, t.  
 Polymer Corp., The, s.  
 Precision Sheet Metal, Inc., j.  
 Precision Tube Co., Inc., a, c, d, l, p, q, v, x, y.  
 Raybestos-Manhattan, Inc., b, t.  
 Raybestos-Manhattan, Inc., Pa., b, j, s, t.  
 Reinhold Engrg. & Plastics Co., s, t.  
 Edw. Renneburg & Sons Co., v, x, y.  
 Resistoflex Corp., a, e, l, t.  
 Reynolds Metals Co., a.  
**\*RHEEM MFG. CO., DEFENSE & TECHNICAL  
 PRODUCTS DIV., f-1.**  
 Roll Formed Products Co., a, x, y.  
 Rome-Turney Radiator Co., The, g.  
 Rubbercraft Corp. of California, u.  
 Joseph T. Ryerson & Son, Inc., a, l, t, v, x, y.  
 St. Regis Paper Co., Panelyte Div., s, t.  
 Sanford Plastics Corp., t.  
 Saylor Electric Products Corp., j, t, e-1.  
 Schlegel Mfg. Co., f-1.  
 W. S. Shamban & Co., t.  
 Sparta Mfg. Co., Div.-U.S. Ceramic Tile Co., t.  
 Spaulding Fibre Co., Inc., f, j, s, t.  
 Spectra-Strip Wire & Cable Corp., t.  
 Stainless Steel Products, Inc., y.  
 Standard Metals Corp., e, l, u, v, w, e-1.  
 Standard-Thomson Corp., Clifford Mfg. Co. Div., g, h,  
 m.  
 Sterling Glass Corp., k.  
 Stevens Products, Inc., j, r, s.  
 Superior Steatite & Ceramic Corp., e.  
 Swan Rubber Co., t.  
 Telerad Mfg. Corp., e-1, f-1.  
 Thermal Refractories Corp., e.  
 Thermal Wire of America, t.  
 H. L. Thompson Fibre Glass Co., l.  
 Timken Roller Bearing Co., The, l, v, x, y.  
 Titanium Metals Corp. of America, a-1.  
 Titeflex, Inc., h, m.  
 Tube Distributors Co., Inc., l, o, p, q, v, x, y, a-1.  
 Tube Methods Inc., l, p, q, v, y.  
 Tube Reducing Corp., p, v, x, y, a-1.  
 Turba Products, Inc., t.  
 Uniform Tubes, Inc., a, c, g, q, u thru y.  
 Union Asbestos & Rubber Co., b, j.  
 United Mineral & Chemical Corp., q.  
 U. S. Flexible Metallic Tubing Co., h.  
 U. S. Industries, Inc.  
 U. S. Steel Supply Div., United States Steel Corp., a,  
 v, x, y.  
 United Wire & Supply Corp., a, c, d, g, l, v.  
 Universal Moulded Products Corp., b, j.  
 Volpey Crystal Corp., l, k.  
 Vanadium-Alloys Steel Co., l, p, v, x, y.  
 Vorflex Corp., j, t, e-1, d-1.  
 Veet Industries, y.  
 Wolf Tube & Metal Products Co., v, y.  
 Wollingford Steel Co., y.  
 Waveline, Inc., e-1.  
 Western International Co., e-1.  
 Western International Tube Co., l, a, p, q, y, z, a-1.  
 Westminster Electric Corp., Lomp Div., l, a.  
 Wilmington Fibre Specialty Co., f, s.  
 Yordley Plastics Co., t.  
 Zoller Brothers, h, m.  
 Zippertubing Co., The, a, b, c, e, h, l, j, m, t, f-1.

Basic Tool Industries, Inc.  
**\*BEATON & CORBIN MFG. CO., THE**  
**Bil-Jax Inc.**  
 J. Bishop & Co., Platinum Works  
 Bridgeport Brass Co.  
 Brighton Corp.  
 California Aircraft Products  
 Cormac Aviation  
 C. B. Christiansen Co.  
 Crystal-X Corp.  
 Damascus Tube Co.  
 Diversey Engrg. Co.  
 Dockendorf & Co., Inc.  
 Doyle & Roth Mfg. Co., Inc.  
 Double E Products Co.  
 Dresser Mfg. Div., Dresser Industries, Inc.  
 Dresser-Ideco Co., Div.-Dresser Industries, Inc.  
 Dunbar-Kapelle Inc.-Aircraft Components Div.  
 Electrical Insulation Co., Inc.  
 Electrical & Mechanical Design Co.  
 Electronic Parts Mfg. Co., Inc.  
 Farwell Metal Fabricating  
 Firestone Tire & Rubber Co., The, Guided Missile  
 Div.  
 Flexible Metal Hose Mfg. Co.  
**\*FLEXONICS CORP., AERONAUTICAL DIV.**  
 Flori Pipe Co., The  
 Hallitt Mfg. Co.  
 Hardman Tool & Engrg. Co.  
 Harvey Aluminum  
 Houston Fearless Corp.  
 Huffard Corp., The  
 Intercontinental Mfg. Co., Inc.  
 Kaiser Aircraft & Electronics, Div.-Kaiser Industries  
 Corp.  
 Kanarr Corp.  
 Keystone Electronics Corp.  
 Kling Metal Spinning & Stamping Co.  
 Lomex Industries, Inc.  
 Lewis & Saunders  
 Thomas J. Long, Inc.  
 Longen Aircraft Co., Inc.  
 M & Q Plastic Products  
 Marman Div., Aeroquip Corp.  
 Mercury Tool & Mfg. Corp.  
**\*MIRAX CHEMICAL PRODUCTS CORP., ELECTRO-  
 MECHANICAL PRODUCTS DIV.**  
 Monogram Precision Industries  
 Mueller Brass Co.  
 New England Tape Co., Div.-United-Carr Fastener  
 Corp.  
 Newbrook Machine Corp.  
 Orchard Industries, Inc., Actionflex Div.  
 Parts Engrg. Co., Inc.  
 Peerless Products Industries  
 Penn-Michigan Mfg. Corp.  
 Piasecki Aircraft Corp.  
 Pilgrim Products Inc.  
 Portland Copper & Tank Works Inc.  
 Precision Sheet Metal, Inc.  
 Precision Tube Co., Inc.  
 Pressed Steel Tank Co.  
 R & R Engrg. Co.  
 Radiatronics, Inc.  
 Ravenna Metal Products, Div.-Standard Screw Co.  
 Red Lion Cabinet Co., Redco Tool Div.  
 Edw. Renneburg & Sons Co.  
 Resistoflex Corp.  
 Rimak, Inc.  
 Sanford Plastics Corp.  
 Skinner Precision Products  
 Skyline Products, Inc.  
 Stainless Steel Products, Inc.  
 Standard Metals Corp.  
 Standard-Thomson Corp., Clifford Mfg. Co. Div.  
 Topco Group, Thompson-Romo-Wooldridge Inc.  
 Teiner Engrg. Corp.  
 Turbo Products, Inc.  
 Twigg Industries  
 Uniform Tubes, Inc.  
 United Aircraft Products, Inc.  
 United Mfg. Co., The  
 Universal Metal Products Inc.  
 Variety Aircraft Corp.  
 Veet Industries  
 Woolf Aircraft Products, Inc.  
 Zippertubing Co., The

**TUBULAR PINS**  
 See PINS, TUBULAR

**TUNERS**  
 a. AM  
 b. Automatic  
 c. FM  
 d. FM & AM  
 e. Klystron  
 f. Microwave  
 g. Permeability  
 h. Tuning Units, Antenna

Aircorn Inc., e, f.  
 Aircorn Inc. of New Jersey, f.  
 Airtiron Inc., Div.-Littion Industries, f.  
 Airtiron Inc., Div.-Littion Industries, f.  
 Allied International Co., a thru d.  
 Amelco, Inc., b, c, d, f, g, h.  
 Atlas Precision Products, Co., h.  
 Barker & Williamson Inc., h.  
 Bendix Aviation Corp., York Div., e, f.  
 Blonder-Tongue Labs., Inc., e, d.  
 Bogen-Presto Co., Div.-Siegler Corp., The, a, c, d.  
 Budd Stanley Co. Inc., f.

**TUBULAR FABRICATIONS & ASSEMBLIES**

Advanced Electronics, Inc.  
 Aerolite Electronics Corp.  
 Aeroquip Corp., Jackson Div.  
 Alpitec, Inc.  
 Amelco, Inc.  
 American Aeroports  
 American Tube Bending Co., Inc.  
 Anchor Metal Spinning Co., The  
 Arnold Corp.  
 Atlantic Instrument Corp., Sub.-American Electronics,  
 Inc.  
 B. H. Aircraft Co., Inc.  
 Basco Metal Products, Inc.

Centronix Inc., b.  
Christie Machine Works, e.  
Continental Mfg., Inc., a, c, d.  
Daven Co., The, a, c, d.  
Demorney-Bonardi, f.  
Diamond Antenna & Microwave Corp., e, f, h.  
Douglas Microwave Co., Inc., f.  
Eastern Industries Inc., e.  
Electronic Applications, Inc., c.  
Electronic Communications, Inc., a thru d, f, h.  
Electronic Instrument Co., Inc. (EICD), a, c, d.  
Empire Products Sales Corp., e, f.  
Engrg. Associates, e, f.  
Erie Resistor Corp., d.  
FXR, Inc., f.  
Ferrotron Electronics Co., Inc., g.  
Forbes & Wagner, Inc., g.  
General Communication Co., f.  
John Gombos Co., Inc., f.  
Hallcrafters, h.  
Walter J. Hyatt Co., The, f, h.  
ITT Labs., a thru h.  
J.V.-M Microwave Co., f.  
\*KEARFOTT CO., INC., f, h.  
\*KEARFOTT CO., INC., MICROWAVE DIV., f.  
La Pointe Industries Inc., f.  
Lear, Inc., a, b, c, h.  
Lear, Inc., Grand Rapids Div., h.  
L. E. L., Inc., f.  
Liton Industries, Maryland Div., e.  
W. L. Maxson Corp., The, e, f.  
Meridian Metalcraft, Inc., f.  
Microlab, f.  
Microwave Associates, Inc., f.  
J. W. Miller Co., a, c, d.  
Miratal, Inc., c, d, e.  
Motorola Inc., Military Electronics Div., a thru e.  
N.R.K. Mfg. & Engrg. Co., f.  
Narda Microwave Corp., The, f.  
National Pneumatic Co., Inc., Holtzer-Cabot Divs., a, c, d.  
Philo Corp., Government & Industrial Div., a thru h.  
Polarad Electronics Corp., e, f.  
Polytechnic Research & Development Co., Inc., f.  
Porchester Instrument Corp., f.  
Precise Development Corp., a, c, d.  
Radar Design Corp., f.  
Radiatronics, Inc., f, h.  
Sperry Electronic Tube Div., Sperry Rand Corp., e.  
Sperry Microwave Electronics Co., Div.-Sperry Rand Corp., f.  
Stromberg-Carlson Div.-General Dynamics Corp., a, c, d.  
Superelex Electronics Corp., a.  
Telera Industries Corp., a, b, c, h.  
Telrad Mfg. Corp., e, f.  
Victor R. F. & Microwave Co., f.  
Waveline, Inc., f.  
Webcor, Inc., Government Div., e, f, h.  
Weinschel Engrg., f.

#### TUNING DEVICES

Atlas Precision Products, Co.  
Barker & Williamson Inc.  
Blonder-Tongue Labs., Inc.  
CGS Labs., Inc.  
Centronix Inc.  
Christie Machine Works  
Collins Radio Co.  
Data-Control Systems, Inc.  
Eastern Industries Inc.  
Electronic Communications, Inc.  
Empire Products Sales Corp.  
Federal Mfg. & Engrg. Corp.  
Instruments For Industry, Inc.  
JFD Electronics Corp.  
Lear, Inc.  
Livingston Electronic Corp.  
P. R. Mallory & Co. Inc.  
Motorola Inc., Military Electronics Div.  
Philo Corp., Government & Industrial Div.  
Precise Development Corp.  
Radiatronics, Inc.  
Slip Ring Co. of America  
Specialty Engrg. & Electronics Co.  
Telera Industries Corp.  
Telrad Mfg. Corp.  
Webcor, Inc., Government Div.

#### TUNING DEVICES, RECEIVER MECHANICAL

Atlantic Instrument Corp., Sub-American Electronics, Inc.  
Atlas Precision Products, Co.  
Centronix Inc.  
Collins Radio Co.  
Data-Control Systems, Inc.  
Erie Resistor Corp.  
ITT Labs.  
Instruments for Industry, Inc.  
Lear, Inc.  
Lear, Inc., Grand Rapids Div.  
P. R. Mallory & Co. Inc.  
W. L. Maxson Corp., The  
National Pneumatic Co., Inc., Holtzer-Cabot Divs.  
Philo Corp., Government & Industrial Div.  
Radiatronics, Inc.  
Telera Industries Corp.  
Western Gear Corp.

#### TUNING DEVICES, TRANSMITTER MECHANICAL

Atlas Precision Products, Co.  
Centronix Inc.

Christie Machine Works  
Collins Radio Co.  
Data-Control Systems, Inc.  
ITT Labs.  
Instruments For Industry, Inc.  
Lear, Inc.  
P. R. Mallory & Co. Inc.  
W. L. Maxson Corp., The  
National Pneumatic Co., Inc., Holtzer-Cabot Divs.  
Philo Corp., Government & Industrial Div.  
Radiatronics, Inc.  
Stainless Steel Products, Inc.  
Telera Industries Corp.  
Telrad Mfg. Corp.  
Western Gear Corp.

#### TUNING UNITS, ANTENNA

See ANTENNA TUNING UNITS

#### TUNNELS, SHOCK

See SHOCK TUNNELS

#### TUNNELS, WIND

See WIND TUNNELS

#### TURBINE ASSEMBLIES

Aerojet-General Corp.  
Centrax Ltd., American Sales Office  
Christie Machine Works  
Curtiss-Wright Corp., Research Div.  
Curtiss-Wright Corp., Santa Barbara Div.  
Curtiss-Wright Corp., Wright Aeronautical Div.  
Dresser Industries, Inc.  
Hamilton Standard, Div.-United Aircraft Corp.  
Houston Fearless Corp.  
\*LYCOMING DIV., AVCO MFG. CORP.  
Mercury Tool & Mfg. Corp.  
Merz Engrg., Inc.  
Monogram Precision Industries  
Newbrook Machine Corp.  
\*RHEEM MFG. CO., DEFENSE & TECHNICAL PRODUCTS DIV.  
Ryan Aeronautical Co.  
Smith-Morris Corp.  
Stalker Corp., The  
Stratos, Div.-Fairchild Engine & Airplane Corp.  
Tapco Group, Thompson-Ramo-Wooldrige Inc.  
Therm, Inc.  
Turbo Products, Inc.

#### TURBINE SHAFTS

Aerojet-General Corp.  
\*CAMERON IRON WORKS, INC.  
Capital City Mfg. Co.  
Christie Machine Works  
Curtiss-Wright Corp.-Research Div.  
Curtiss-Wright Corp.-South Bend Div.  
Curtiss-Wright Corp.-Wright Aeronautical Div.  
Diversey Engrg. Co.  
Dresser Industries, Inc.  
Federal Machine Co. Inc.  
Houston Fearless Corp.  
Merz Engrg., Inc.  
Newbrook Machine Corp.  
Stratos Div.-Fairchild Engine & Airplane Corp.  
Tapco Group, Thompson-Ramo-Wooldrige Inc.  
Talley Corp., The  
Tube-Turns Div., Chemetron Corp.  
Turbo Products, Inc.  
Walbar Machine Products Inc.  
Western Gear Corp.

#### TURBINE WHEELS

Aerojet-General Corp.  
\*AIRESEARCH MFG. CO., DIV.-THE GARRETT CORP.  
Bendix Utica Div., Bendix Aviation Corp.  
\*CAMERON IRON WORKS, INC.  
Capital City MFG. Co.  
Centrax Ltd., American Sales Office  
Christie Machine Works  
Curtiss-Wright Corp.-Research Div.  
Curtiss-Wright Corp.-South Bend Div.  
Curtiss-Wright Corp.-Wright Aeronautical Div.  
Diversey Engrg. Co.  
Dresser Industries, Inc.  
Federal Machine Co. Inc.  
Hamilton Standard, Div.-United Aircraft Corp.  
Haynes Stellite Co., Div.-Union Carbide Corp.  
Houston Fearless Corp.  
Jarvis Corp.  
Kelsey-Hayes Co.  
Merz Engrg., Inc.  
Newbrook Machine Corp.  
Parker-Hartford Corp., The  
Singer Mfg. Co., The, Military Products Div.  
Stalker Corp., The  
Steel Improvement & Forge., The  
Stratos, Div.-Fairchild Engine & Airplane Corp.  
Tapco Group, Thompson-Ramo-Wooldrige Inc.  
Talley Corp., The  
Therm, Inc.  
Turbo Products, Inc.  
Walbar Machine Products Inc.  
Western Gear Corp.  
Westinghouse Electric Corp.

#### TURBINES, AIR

Aerojet-General Corp.  
\*AIRESEARCH MFG. CO. OF ARIZ.  
\*AIRESEARCH MFG. CO., DIV.-THE GARRETT CORP.

Bendix Utica Div., Bendix Aviation Corp.  
Christie Machine Works  
Coppus Engrg. Corp.  
Curtiss-Wright Corp., Research Div.  
Curtiss-Wright Corp., Wright Aeronautical Div.  
General Electric Co., Apparatus Sales Div.  
Hamilton Standard, Div.-United Aircraft Corp.  
Houston Fearless Corp.  
Lear Inc., Lear-Romec Div.  
Stainless Steel Products, Inc.  
Stratos, Div.-Fairchild Engine & Airplane Corp.  
Tapco Group, Thompson-Ramo-Wooldrige Inc.  
Therm, Inc.  
Turbo Products, Inc.

#### TURBO FANS

\*AIRESEARCH MFG. CO., DIV.-THE GARRETT CORP.

Bendix Utica Div., Bendix Aviation Corp.  
Blowers Inc.  
Curtiss-Wright Corp.-Wright Aeronautical Div.  
Dresser Industries, Inc.  
General Electric Co., Apparatus Sales Div.  
Houston Fearless Corp.  
Jarvis Corp.  
Monogram Precision Industries  
Newbrook Machine Corp.  
Smith-Morris Corp.  
Stalker Corp., The  
Tapco Group, Thompson-Ramo-Wooldrige Inc.  
Talley Corp., The  
Therm, Inc.

#### TURBO JET ENGINES

\*AIRESEARCH MFG. CO. OF ARIZ.  
\*AIRESEARCH MFG. CO., DIV.-THE GARRETT CORP.

Curtiss-Wright Corp., Research Div.  
Curtiss-Wright Corp., Santa Barbara Div.  
Curtiss-Wright Corp., Wright Aeronautical Div.  
General Electric Co., Apparatus Sales Div.  
\*LYCOMING DIV., AVCO MFG. CORP.  
Smith-Morris Corp.  
Westinghouse Electric Corp.

#### TURBO PUMPS

Aerojet-General Corp.  
\*AIRESEARCH MFG. CO., DIV.-THE GARRETT CORP.

Bendix Utica Div., Bendix Aviation Corp.  
J. C. Carter Co., The  
Chandler Evans Corp.  
Christie Machine Works  
Curtiss-Wright Corp., Santa Barbara Div.  
Curtiss-Wright Corp., Utica Div.  
Curtiss-Wright Corp., Wright Aeronautical Div.  
Dresser Industries, Inc.  
Eastern Industries Inc.  
General Electric Co., Apparatus Sales Div.  
Hamilton Standard, Div.-United Aircraft Corp.  
Hydradyne Corp., Skinner Seal Div.  
Lear Inc., Lear-Romec Div.  
Reaction Motors Div., Thiokol Chem. Corp.  
Rocketdyne Div.-North American Aviation, Inc.  
Stalker Corp., The  
Stratos, Div.-Fairchild Engine & Airplane Corp.  
Tapco Group, Thompson-Ramo-Wooldrige Inc.  
Therm, Inc.

#### TURNTABLES, SOUND EQUIPMENT

Du Kane Corp.  
Electronic Applications, Inc.  
Kaiser Aircraft & Electronics, Div.-Kaiser Industries Corp.  
Robot Industries Inc.  
Wakefield Engrg. Co.

#### TURRETS, CAMERA

Gordon Enterprises  
Houston Fearless Corp.  
Luther Mfg. Co.  
Kelsey-Hayes Co.  
Monogram Precision Industries  
Wollensak Optical Corp.

#### TWIST DRILLS

See DRILLS, TWIST

#### UHF TRANSCIEVERS

See TRANSCIEVERS, UHF

#### ULTRASONIC CLEANERS

See CLEANERS, ULTRASONIC

#### ULTRASONIC EQUIPMENT

Andersen Labs.  
Arenberg Ultrasonic Lab., Inc.  
Associated Engineers, Inc.  
Atlantic Research Corp.  
Bearing Inspection, Inc.  
Bendix Aviation Corp., Pioneer-Central Div.  
Bendix Radio Div., Bendix Aviation Corp.  
Bircher Corp., The  
Blackstone Corp.  
Branson Instruments, Inc.  
Branson Ultrasonic Corp.  
Chesapeake Instrument Corp.  
Corning Glass Works  
Curtiss-Wright Corp., Princeton Div.  
Curtiss-Wright Corp., Research Div.

etrex Chemical Industries, Inc.  
u Kane Corp.  
ng. Associates  
eneral Electric Co., Apparatus Sales Div.  
eneral Kinetics, Inc.  
ultran Industries, Inc.  
in Tel Div.-Cohu Electronics, Inc.  
ing Electronics, Inc.  
agnaflex Corp.  
aico Electronics, Inc.  
arquardt Aircraft Co.  
assa Div.-Cohu Electronics, Inc.  
ckenna Labs.  
arda Ultrasonics Corp., The  
ational Ultrasonic Corp.  
acific Radionics  
ioner Industries Div., Almar-York Co. Inc.  
ower Supplies Inc.  
aytheon Mfg. Co.  
ingamo Electric Co.  
bragant & Wilbur Heat Treating Corp.  
nfield Corp., The, Sub.-Bendix Aviation Corp.  
erry Products, Inc.  
ransdyne Corp.  
venty-First Century Electronics, Inc.  
estinghouse Electric Corp.  
ye Industries  
acharias Electronics Corp.

**ULTRASONIC SOLDERING EQUIPMENT**  
See SOLDERING EQUIPMENT, ULTRASONIC

**ULTRASONIC VIBRATORS**  
See VIBRATORS, ULTRASONIC

**UNITS, PLUG-IN-CIRCUIT**  
See PLUG-IN-CIRCUIT UNITS

**UNITS, PRESSURIZATION**  
See PRESSURIZATION UNITS

**UNITS, REVERBERATION**  
See REVERBERATION UNITS

**UPSET FORGINGS**  
See FORGINGS, UPSET

**UPSET FORMS**  
See FORMS, UPSET

**VACUUM ALUMINIZERS**

onsolidated Electrodynamics Corp., Rochester Div.  
sler Engrg. Co., Inc.  
eneral Vacuum Corp.  
een Rectifier Co.  
gh Vacuum Equipment Corp.  
ill Corp.  
nney Mfg. Div., The New York Air Brake Co.  
stoplast Corp.  
RC Equipment Corp.  
ational Research Corp.  
ientific Engrg. Labs., Inc.  
J. J. Stokes Corp.  
vedlaw Inc.  
emperature Engrg. Corp.  
rian Associates  
veco Vacuum Corp.

**VACUUM SYSTEMS & CONTROLS**

fred Electronics  
merican Machine & Foundry Co., Greenwich  
plied Radiation Corp.  
Equipment Corp.  
**ASSOCIATED TESTING LABS., INC.**  
trovac Corp.  
och-Russ Co.  
stet Co., The  
ntrol Electronic Mfrs., Div.-Nuclear Corp. of  
America  
nflow Corp.  
nsolidated Controls Corp.  
nsolidated Diesel Electric Corp.  
nsolidated Electrodynamics Corp., Rochester Div.  
nelis Co., The, Aero Div.  
ill-Reynolds Co. Inc.  
neral Vacuum Corp.  
nnini Plasmadyne Corp.  
een Rectifier Co.  
ardite Co., Div. of American Marietta Co.  
ul Hardeman, Inc.  
gh Vacuum Equipment Corp.  
ill Corp.  
dramatics, Inc.  
ernational Pump & Machine Works  
**ANTROL AIRCRAFT DIV., SURFACE COMBUSTION CORP.**  
nney Mfg. Div., The New York Air Brake Co.  
ar, Inc.  
tton Engrg. Labs.  
toplast Corp.  
nneapolis-Honeywell Regulator Co., Industrial Div.  
nneapolis-Honeywell Regulator Co., Industrial  
Product Group  
hn Mehr & Sons  
RC Equipment Corp.  
ational Research Corp.  
ygen Equipment & Service Co.  
ue-Hydro Valve Corp.  
ccess & Instruments  
ed Point Corp.  
earch Appliance Co.  
ientific Engrg. Labs., Inc.

Skyline Electric & Mfg. Co.  
Space Corp.  
F. J. Stokes Corp.  
Temperature Engrg. Corp.  
United Electric Controls Co.  
Vacuum Tube Products, Div.-Hughes Aircraft Co.  
Varion Associates  
Veeco Vacuum Corp.

**VACUUM TUBE MEGOHMMETERS**  
See MEGOHMMETERS, VACUUM TUBE

**VACUUM UNITS**

Applied Radiation Corp.  
Beach-Russ Co.  
Central Electronic Mfrs., Div.-Nuclear Corp. of  
America  
Consolidated Electrodynamics Corp., Rochester Div.  
Cornelius Co., The, Aero Div.  
Finnell System, Inc.  
General Vacuum Corp.  
Giannini Plasmadyne Corp.  
Green Rectifier Co.  
Guardite Co., Div. of American Marietta Co.  
High Vacuum Equipment Corp.  
Hull Corp.  
International Radiant Corp.  
Kinney Mfg. Div., The New York Air Brake Co.  
Lear, Inc.  
Lear Inc., Lear-Romec Div.  
Leiman Brothers, Inc.  
NRC Equipment Corp.  
National Research Corp.  
Red Point Corp.  
Research Appliance Co.  
Scientific Engrg. Labs., Inc.  
F. J. Stokes Corp.  
Temperature Engrg. Corp.  
Veeco Vacuum Corp.

**VALVE GUIDES**

\*ANNIN CO., THE  
Capital City Mfg. Co.  
Huppert, K. H., Co.

**VALVE OPERATOR**

\*ANNIN CO., THE  
Bristol Co., The  
Conalflow Corp.  
Fisher Governor Co.  
Holax, Inc.  
Hoover Electric Co.  
Hydra-Power Corp.  
Hydromatics, Inc.  
Leslie Co.  
Mason-Neilan  
Minneapolis-Honeywell Regulator Co., Industrial  
Product Group  
Morse Instrument Co., The  
Research Controls  
Ranson Hydraulic Units Corp.  
Sargent Engrg. Corp.  
Skinner Electric Valve Div.  
Talley Corp., The  
Vacuum Research Co.

**VALVE OPERATOR, ELECTRIC**

\*ANNIN CO., THE  
Bart Mfg. Corp.  
Bendix-Pacific Div., Bendix Aviation Corp.  
Bristol Co., The  
Conalflow Corp.  
Hammel-Dahl Div.-General Controls Co.  
Hoover Electric Co.  
Hydra-Power Corp.  
Mason-Neilan  
Minneapolis-Honeywell Regulator Co., Industrial  
Product Group  
Skinner Electric Valve Div.  
Talley Corp., The  
Valcar Engrg. Corp.  
Walworth Co.

**VALVE OPERATOR, HYDRAULIC**

Adel Precision Products of California, Div.-General  
Metals Corp.  
American Machine & Foundry Co., Government  
Products Group  
American Measurement & Control, Inc.  
\*ANNIN CO., THE  
Astronautics Engrg. Co.  
Bendix-Pacific Div., Bendix Aviation Corp.  
Bristol Co., The  
Capital City Mfg. Co.  
Fisher Governor Co.  
Hammel-Dahl Div.-General Controls Co.  
Hydra-Power Corp.  
Hydromatics, Inc.  
Kemp Aero Products  
Ledeon Inc.  
Leslie Co.  
Mason-Neilan  
Ozone Metal Products Corp.  
Research Controls  
Ranson Hydraulic Units Corp.  
Sargent Engrg. Corp.  
Sirvalco Systems Corp.  
Walworth Co.  
Weston Hydraulics Ltd.-Sub., Borg-Warner Corp.

**VALVES**

a. Accumulator Charging  
b. Acid  
c. Acid Resistant  
d. Air  
e. Anti-Groovy  
f. Automatic Shutoff  
g. Automatic Shutoff, Hydraulic  
h. Bleeder  
i. By-Pass  
j. Check & Check Relief  
k. Check-Hydraulic, Gas  
l. Control  
m. Diaphragm  
n. Dump  
o. Electronic Solenoid  
p. Engine Inlet  
q. Exhaust  
r. Float  
s. Globe  
t. Helium  
u. High Pressure Gas  
v. Hydraulic System  
w. Hydrogen  
x. Motor Operated  
y. Needle  
z. Plug  
o1. Pneumatic  
b1. Power Control  
c1. Pressure Regulating  
d1. Relief & By-Pass  
e1. Restrictor  
f1. Rocket Fuel  
g1. Rotary  
h1. Sequence  
i1. Servo  
j1. Shuttle  
k1. Shuttle Solenoid  
l1. Solenoid  
m1. Strainer  
n1. Suction Regulating  
o1. Surge  
p1. Thermostatic  
q1. Throttling  
r1. Transfer  
s1. Vacuum Selector & Check  
t1. Vapor Tight  
u1. Venturi Opening  
ACF Industries Inc., b, c, i, k, m, o, u, v, y, a-1,  
c-1, d-1, k-1, l-1, p-1.  
Accessory Products Co., Div.-Textron Inc., a, d, e,  
f, j thru o, s thru x, a-1, b-1, c-1, f-1 thru n-1,  
p-1, r-1, s-1, t-1.  
Actuation Research Corp., d, t thru x, a-1, c-1.  
Adel Precision Products of California, Div.-General  
Metals Corp., d, f, g, i thru l, n, o, u, v, a-1, b-1,  
d-1, g-1, h-1, i-1, l-1.  
Aero Gasket Corp., m.  
Aero Supply Mfg. Inc., b thru o, r, t thru x, b-1 thru  
r-1.  
Aerojet-General Corp., b, d, f, g, n, u, v, w, z, a-1,  
c-1, f-1, i-1, q-1.  
Aeronautical & Instrument Div., Robertshaw-Fulton  
Controls Co., t.  
Aerotec Corp., The, d, f, g, j, l, r, t thru x, a-1, c-1,  
d-1, j-1, k-1, l-1, m-1, t-1, u-1.  
Aeroterro, g, w, f, l.  
Airborne Research & Development Corp., i, j, l, o, u,  
c-1, d-1, h-1, s-1.  
\*AIRESEARCH MFG. CO. OF ARIZ., c, d, f, h thru  
g, t, u, w, z, a-1 thru e-1, h-1, k-1, p-1, q-1, s-1,  
t-1, u-1.  
\*AIRESEARCH MFG. CO., DIV.-THE GARRETT  
CORP., c, d, f thru o, u thru x, a-1, c-1, d-1, f-1,  
i-1, j-1, n-1 thru r-1.  
Alico Valve Co., e, o, r, v, b-1, l-1.  
All Specs Corp., h, i, j, s, y, z, a-1, j-1.  
Allen Aircraft Products, Inc., d, i, k, n, r, v, a-1,  
d-1, f-1, a-1, s-1.  
Allensair Corp., d, h, i, a-1, j-1, l-1.  
Allied Control Co., Inc., l-1.  
Allmetal Screw Products Co., Inc., s.  
Alloy Steel Products Co., b, c, j, s, u, w thru z, f-1,  
g-1.  
Altair, Inc. d, f, g, i, k, o, u, v, a-1, c-1, j-1, l-1,  
p-1 thru s-1, u-1.  
American Aeroparts, o, f thru l, n, r, s, x, y, z, g-1  
thru p-1, s-1.  
American Brake Shoe Co., a-1.  
American Brake Shoe Co., Kellogg Div., a-1.  
American Felt Co., k, u, y.  
American Instrument Co., Inc., h, j, o, s, u, y, a-1,  
d-1.  
American Measurement & Control, Inc., l, o, v, x,  
b-1, i-1, r-1.  
American Standard Products, Inc., a thru z, a-1 thru  
u-1.  
Ampco Metal, Inc., c.  
\*ANDERSON, GREENWOOD & CO., c, d, j, l, n, s  
thru z, a-1, d-1, q-1.  
\*ANNIN CO., THE, g, j, l, m, s thru y, a-1, b-1, c-1,  
f-1, h-1, i-1, n-1, q-1, t-1.  
Applied Dynamics Corp., i, m, c-1.  
Arnay Aircraft Associates, Inc., h.  
ARO Equipment Corp., d, e, f, j, u, a-1, c-1, d-1, e-1.  
Astronautics Engrg. Co., o, e, f, g, i, n, v, c-1, d-1,  
i-1, j-1.  
Automatic Switch Co., b, c, d, i, j, l, t thru q, s, t, u,  
w, x, y, a-1, b-1, d-1, f-1, l-1.  
Auto-Valve Inc., h, j, n, e-1, l-1, m-1.  
Barber-Colman Co., d, f, i, l, x, a-1.  
Barksdale Valves, d, o, u, a-1, l-1.

Bart Mfg. Corp., o thru d, f, h, i, o, q, s thru w, a-1, d-1, f-1, l-1, o-1, s-1.  
Bell Aircraft Corp., Niagara Frontier Div., i-1.  
Bentbow Mfg. Corp., d, h thru m, u, v, x, a-1, c-1, d-1, e-1, h-1, l-1.  
**\*BENDIX AVIATION CORP., HAMLTON DIV., v.**  
Bendix Aviation Corp., Pioneer-Central Div., i, j, o-1, d-1.  
**\*BENDIX PRODUCTS DIV., BENDIX AVIATION CORP., o, l-1.**  
Bendix-Pacific Div., Bendix Aviation Corp., o, d, f, g, i, l thru o, v, x, y, z, a-1 thru d-1, g-1 thru l-1, r-1.  
Bendix Utica Div., Bendix Aviation Corp., d, f thru o, u, a-1 thru d-1, h-1, i-1, l-1, n-1, q-1.  
Bibrick Mfg. Corp., c, d, g, i thru o, u, v, x, a-1, b-1, d-1, e-1, f-1, l-1, l-1, n-1, s-1.  
Bridgeport Thermostat Div., Robertshaw-Fulton Controls Co., f, g, j, k, o, v, a-1, l-1.  
Bristol Co., The, f, g, j, k, o, v, a-1 thru d-1, p-1.  
Burklyn Co., j, k, v, a-1.  
CDC Control Services, Inc., v, i-1.  
Cadillac Gage Co., o, a-1, b-1, l-1.  
Caltron Products Co., q, k-1, l-1.  
**\*CAMERON IRON WORKS, INC.**  
Capitol City Mfg. Co., d, j, y.  
Captivo Seal Corp., b, d, f thru l, n, o, t thru x, a-1, c-1 thru f-1, h-1, l-1, q-1, t-1.  
Carleton Aviation Co., d, l, t, u, v, a-1, c-1, e-1, f-1, h-1.  
Carnac Aviation  
Carruthers & Fernandez, Inc., d, i, j, k, o, v, a-1, c-1, d-1, e-1, k-1, l-1.  
J. C. Carter Co., The, f, i, l, n, r, x, c-1, d-1, f-1, n-1, r-1.  
Carter Controls, Inc., a-1, l-1.  
A. W. Cash Valve Mfg. Corp., l, m, o, a-1, c-1, d-1.  
Chandler Evans Corp., d, f, i thru m, t, u, v, a-1 thru f-1, i-1, p-1, q-1, t-1.  
Chase Brass & Copper Co., Inc., j, l, s, y.  
Chrysler Corp., Defense Operations Div., f-1.  
Clark Equipment Co., v.  
Clary Dynamics, o thru l, n, o, q, t thru x, a-1 thru t-1.  
Cleveland Pneumatic Industries, Inc., a, f thru l, n, q, z, h-1 thru l-1.  
Clippard Instrument Lab., Inc., d, h, i, j, l, o, y, a-1, e-1, l-1.  
Collins Engng. Corp., e, h, j.  
Com-Air Products, Div.-A S R Products Corp., d, f thru l, n, o, q, s thru y, a-1, c-1, d-1, i-1, l-1.  
Commercial Shearing & Stamping Co., v.  
Components Corp., f thru n, o, t thru x, z, a-1 thru g-1, i-1, l-1, n-1, q-1, r-1, t-1.  
Conoflow Corp., b, c, d, l, m, s, x, a-1, c-1, q-1.  
Consolidated Controls Corp., b, d, f, g, i thru l, o, p, r, v, x, a-1 thru d-1, f-1 thru i-1, m-1 thru q-1, s-1, t-1.  
Consolidated Diesel Electric Corp., d, h thru m, s thru z, a-1, c-1, d-1, f-1, i-1, l-1, p-1.  
Consolidated Diesel Electric Corp., Test Equip. Div., i, k, v.  
Controls Co. of America, l, c-1, l-1, p-1.  
Coppus Engng. Corp., f, m, n, l-1.  
Cornelius Co., The, Aero Div., d, e, f, h thru o, u, a-1, c-1, d-1, e-1, f-1, n-1.  
Crane Co., b, c, i, m, s, u, x, y, z, f-1, q-1.  
Crystal-X Corp., j.  
Curtis Automotive Devices, Inc., d, h, n.  
Curtiss-Wright Corp., Marquette Div., y.  
Darling Valve & Mfg. Co., b, c, d, i, j, x.  
Denison Engng. Div., American Brake Shoe Co., g thru j, l, o, v, b-1, c-1, d-1, h-1, i-1, k-1, l-1, a-1, q-1.  
Dukes Co., Inc., l, v.  
Dumont Aircraft Fitting Co., b, f, g, j, k, m, o, q, s thru x, a-1, c-1, d-1, f-1 thru i-1, l-1, m-1, p-1, u-1.  
Dynamic Controls Corp., c, d, l, n, o, r, u, v, a-1, c-1, f-1, i-1, l-1, p-1.  
Dynamic Devices, Inc., f-1.  
Eastern Industries Inc., v, i-1.  
Eckel Valve Co., o thru d, f thru i, l, n, o, t thru w, a-1, f-1, l-1, r-1, t-1.  
Electric Auto-Lite Co., The, a, i-1, l-1.  
Electrol Inc., i, j, n, v, y, z, b-1, c-1, d-1, g-1, h-1, j-1, l, q-1.  
Electro-Tech Equipment Corp., l-1.  
Emerson Electric Mfg. Co., The, Electronics & Avionics Div., v, f-1.  
Engineered Products Co., The, j, y.  
Essex Mfg. Co., Inc., d, g, i, j, o-1.  
Fairbanks Co., The, d, j, s, y, q-1.  
Firestone Tire & Rubber Co., The, Guided Missile Div., d.  
Firewel Co., Inc., The, l, q, c-1.  
Fischer & Porter Co., l, c-1.  
Fisher Governor Co., f, l, m, r, u, x, a-1, c-1, d-1.  
Flight Refueling, Inc., b, c, d, l, r, o-1, f-1.  
Fluid Regulators Corp., h, i, k, v, y, c-1 thru f-1, l-1, l-1.  
Frebank Co., a, d, i thru l, n, t thru w, a-1, c-1, d-1, h-1, l-1.  
Fulton-Irgon Corp., The  
Futurcraft Corp., c, d, f, g, i thru m, p, t, u, x, a-1, c-1 thru f-1, j-1, k-1, l-1, q-1, s-1.  
GAR Precision Parts, Inc., k, v, a-1, c-1, e-1.  
Galland-Henning Nopak Div., d, l, v, a-1, l-1.

General Electric Co., Apparatus Sales Div., l-1.  
Greer Hydraulics, Inc., o, c, g, h, j, k, l, v, y, z, a-1, q-1.  
Grinnell Co., b, c, d, f, g, i, l, m, n, t, v, w, x, a-1, b-1, c-1, f-1, q-1, t-1.  
Grove Valve & Regulator Co., d, f, g, h, i, l, m, s thru y, a-1, c-1, d-1, f-1, l-1, q-1, u-1.  
Guided Missile Div.-De Havilland Aircraft of Canada, Ltd., g, a-1, d-1, q-1.  
B. H. Hadley, Inc., b thru p, r, t thru z, a-1 thru l-1, m-1, o-1, q-1 thru u-1.  
Hagon Chemicals & Controls, Inc., l.  
Hamer Valves, Inc., c, u, w, x, z, f-1, t-1, u-1.  
Hamilton Standard, Div.-United Aircraft Corp., d, i, m, n, p, u, o-1, c-1, d-1, l-1.  
Hammel-Dahl Div.-General Controls Co., b, c, d, f, g, i, l, m, s thru y, a-1, c-1, d-1, f-1, l-1, q-1, u-1.  
Hannifin Co., Div.-Parker-Hannifin Corp., j, k, o, a-1, c-1, e-1, l-1.  
Haskel Engng. & Supply Co., a thru d, f thru o, s thru w, y, z, a-1 thru e-1, g-1, h-1, l-1, i-1, l-1.  
Haveg Industries, Inc., b, c.  
High Vacuum Equipment Corp., s-1.  
Highland Rim Machine Works Inc., f, l.  
Hills-De Canna Co., b, c, n.  
Hoefner Corp., o thru d, f thru m, t thru w, a-1 thru f-1, i-1, p-1, q-1.  
Hoke Inc., c, d, i, k, l, m, s, t, u, y, c-1, l-1, q-1.  
Holox, Inc.  
Hoof Products Co., g, j, k, n, v, x, c-1, j-1.  
Hoover Electric Co., b, d, l, o, v, x, g-1, h-1, l-1, q-1, r-1.  
Hughes Tool Co., Aircraft Div.  
Walter J. Hyatt Co., The, b, d, g thru m, o, u, v, w, y, z, a-1, c-1 thru l-1, l-1, a-1, s-1, t-1.  
Hydra-Power Corp., d, f thru l, n, o, u, v, x, a-1, b-1, d-1, g-1 thru l-1, r-1.  
Hydraulic Press Mfg. Co., The, Div.-Koehring Co., v, d-1, l-1.  
**\*HYDRO-AIRE CO., DIV.-CRANE CO., c, d, f thru o, r thru l-1.**  
Hydrosyne Corp., Skinner Seal Div., b, c, d, i, j, k, m thru q, t, u, v, x, a-1 thru d-1, f-1, j-1 thru m-1, t-1.  
Hydromatics, Inc., b, c, d, f thru l, i, n, p, q, t thru x, z, a-1 thru d-1, f-1, g-1, h-1, n-1, o-1, q-1 thru u-1.  
Imperial Brass Mfg. Co., The, l, m, v, y, z.  
Integral Engng. Corp., v, c-1.  
Integral Corp., o thru d, f thru o, u, v, y, a-1, c-1, d-1, e-1, i-1 thru m-1, s-1.  
Interstate Engng. Corp., d thru l, i, n, r, t, u, v, x, a-1, c-1, d-1, g-1 thru l-1, q-1, r-1.  
James, Pond & Clark, Inc., b, c, d, h, j, i thru w, x, a-1, d-1, e-1, f-1, l-1, t-1.  
Jamesbury Corp., b, d, x, a-1, f-1, t-1.  
**\*JANITROL AIRCRAFT DIV., SURFACE COMBUSTION CORP., d, f, h, i, j, l, m, n, a-1, c-1, d-1, h-1.**  
Jerguson Gage & Valve Co., s.  
Kaiser Aircraft & Electronics, Div.-Kaiser Industries Corp., n.  
**\*KEARFOTT CO., INC., i-1.**  
Kemp Aero Products, o thru o, s thru z, a-1 thru l, p-1, q-1, r-1.  
Walker Kilde & Co., Inc., Aviation Div., j, u, a-1, c-1, d-1, h-1, i-1, l-1.  
Kieley & Mueller, Inc., c, l, m, s, t, u, w, z, c-1, q-1.  
Kinney Mfg. Div., The New York Air Brake Co., s-1.  
Koehler Aircraft Products Co., d, f, i thru r, u, w thru z, a-1, b-1, d-1, f-1, h-1, i-1, l-1, m-1, o-1, q-1, r-1.  
Kohler Co., d, f thru l, n, r, v, y, z, a-1, c-1, d-1, e-1.  
**\*KOONTZ-WAGNER ELECTRIC CO., INC., o thru d, f, h, i, l, o, u, v, b-1, f-1, j-1, k-1, l-1.**  
Ladish Co., c, j, l, s, y, z, m-1.  
Lear, Inc., l, u, w, x, a-1, i-1.  
Lear, Inc., Grand Rapids Div., l-1.  
Lear, Inc., Lear-Romec Div., v, a-1, c-1, i-1.  
Lbdeen Inc., l, a-1.  
**\*WALLACE O. LEONARD, INC., d, f, g, i, k, l, n thru q, t thru w, a-1, c-1 thru f-1, h-1, l-1, l-1, o-1, h, j, s-1.**  
Leslie Co., c, d, f, g, l, m, o, u, v, x, a-1, c-1, d-1, f-1, i-1, l-1, n-1, p-1, q-1, r-1, t-1, u-1.  
Linde Co., Div.-Union Carbide Corp., t, u, w.  
G. W. Lisk Co., Inc., k-1, l-1.  
Lundy Mfg. Corp., d, f, l, x.  
Luzerne Rubber Co., c.  
M. C. Mfg. Co., i, j, l, o, t thru w, a-1 thru e-1, g-1, h-1, l-1, r-1.  
Marotta Valve Corp., b, c, d, f thru l, o, t thru w, a-1, c-1, d-1, f-1, h-1, i-1, k-1, l-1.  
Jas. P. Marsh Corp., d, l, s, t, u, y, c-1, l-1, p-1.  
Mason-Neilan, f, i, l, m, r, x, a-1, c-1, n-1.  
Matheson Co., Inc., The, j, t, u, w, c-1.  
Mechanical Air Controls, l, o, a-1, h-1, l-1, r-1, s-1.  
Minneapolis-Honeywell Regulator Co., Industrial Product Group, b, c, d, f, i, l, m, n, u, x, a-1, c-1, f-1, q-1.  
Minneapolis-Honeywell Regulator Co., Ordnance Div., v, a-1.  
J. J. Monaghan Co., Inc., d.  
Monogram Precision Industries  
Moog Valve Co., Inc., g, v, i-1.  
Mueller Brass Co., i, j, m, s, d-1, l-1, q-1.

NRC Equipment Corp., s, q-1, s-1.  
National Airoil Burner Co., d, s, y, z.  
Notional Pneumatic Co., Inc., Holtzer-Cobor Div., a-1, l-1.  
National Research Corp., s-1.  
Natl. Water Lift Co., Div.-Cleveland Pneumatic Industries, Inc., l, i-1.  
National Welding Equipment Corp., d, h, j, t, u, w, y, OPW-Jordan, c, d, f, i, j, l, m, c-1, d-1, p-1.  
Diver Corp., The, v.  
Dwyer-Dyne, Inc., i, j, k, m, l-1.  
Owatonna Tool Co., w.  
Ozone Metal Products Corp., o, g, h, j, k, l, v, y, a-1, d-1, e-1, i-1 thru l-1.  
Pacific Scientific Co., l-1.  
Pacific Valves, Inc., c, g, i, s, x, y.  
Parker Aircraft Corp., o thru p, r, t thru z, a-1 thru r-1.  
Parker Hydraulics Div., Parker-Hannifin Corp., a, i, k, l, v.  
Peerless Machine Co., c, d, h, j, k, t, u, v, g-1, t-1.  
Pennsylvania Pump & Compressor Co., d.  
Pescor Products Div.-Borg-Warner Corp., i-1.  
Pneu-Hydro Valve Corp., o thru z, a-1 thru t-1.  
Power-Tronic Systems, Inc., i-1.  
Precision Equipment Co., b, c, d, f, i, j, i, o, t thru w, y, a-1, d-1, e-1, f-1, l-1, m-1, q-1, t-1, u-1.  
Puritan Compressed Gas Corp., Aviation Div., u.  
Racine Hydraulics & Machinery Inc., m, v.  
Randall Engng. Corp., o thru d, f, g, j, k, m, n, t, u, v, z, a-1, c-1, d-1, l-1.  
Reaction Motors Div., Thiokol Chem., Corp., f, i thru l, n, t, u, c-1, d-1, f-1, i-1, r-1.  
Reinhold Engng. & Plastics Co., a-1.  
Republic Mfg. Co., o, c, d, f thru o, s thru z, a-1, c-1 thru h-1, j-1, l-1, m-1, q-1, s-1.  
Research Controls, Inc., c, d, l, m, t, u, w, x, y, a-1, c-1, f-1, q-1, r-1, t-1.  
Rivett Lath & Grinder Inc., d, j, k, l, o, v, a-1, c-1, d-1, h-1, l-1.  
Robbins Aviation, Inc., c, d, s thru y, a-1, q-1.  
Rocketdyne Div.-North American Aviation, Inc.  
Ronson Hydraulic Units Corp., o, d, f thru l, n, o, t thru w, a-1 thru e-1, g-1, h-1, i-1, k-1, l-1, a-1, r-1.  
Rotex Punch Co., Inc., d, h, v, a-1, k-1, l-1.  
Milton Roy Co., d-1.  
Royleyn Inc., g, w, f, l.  
Ryan Aeronautical Corp., q.  
S-P Mfg. Corp., The, a-1.  
Sargent Engng. Corp., d, f thru m, o, t thru z, a-1, thru e-1, g-1 thru l-1, o-1, q-1, r-1.  
Schutte & Koehring Co., h, i, q, s.  
Scientific Engng. Labs., Inc., s-1.  
Seal Corp., l, k, n, w, d-1, f-1.  
Servomechanisms, Inc., l-1.  
Simmonds Aerossories, Inc., b, c, d, f, g, l, m, s thru y, a-1, e-1, f-1.  
Shinra-Collins Valve Co., Div.-IBEC, Inc., d, k, l, m, o, q, s thru v, a-1, c-1, e-1, h-1, i-1, q-1, r-1, t-1.  
Sirvalco Systems Corp., b, c, d, f, g, k thru q, t thru x, a-1, c-1, e-1 thru i-1, l-1, q-1, t-1.  
Skinner Electric Valve Div., c, d, f, g, l, o, t, u, w, a-1, f-1, l-1.  
Skyvalve Inc., b, c, d, h, l thru o, s thru v, z, a-1, c-1, j-1, k-1, l-1, q-1, r-1.  
Smith-Morris Corp., z.  
Smith Aircraft Co., o, l, o-1, d-1.  
Standard Control, Inc., i-1.  
Standard-Thomson Corp., Clifford Mfg. Co. Div., h, i, n, o-1, c-1, d-1, p-1, s-1.  
F. J. Stokes Corp., s-1.  
A. A. Stone & Co., Inc., b, c, d, f, g, h, i, k, l, u, v, w, a-1, c-1 thru f-1.  
Stratos, Div.-Fairchild Engine & Airplane Corp., u thru e, h thru p, t thru x, a-1 thru l-1.  
Surface Combustion Corp., d, l, o, u.  
Tactair Valve Div.-Aircraft Products Co., d, i thru l, u, v, a-1, b-1, c-1, e-1, h-1, j-1, l-1, k-1, l-1.  
Talley Corp., The, b, c, d, f, h, i, l, m, o, q, t, w, x, a-1, b-1, d-1, l-1.  
Tapco Group, Thompson-Ramo-Woodbridge Inc., d, f, g, l, o, v, x, a-1, c-1, d-1, l-1.  
Taylor Winfield Corp., d, o, a-1, l-1.  
Technical Apparatus Builders, a.  
Thermec Engng. Corp., l, m, v.  
Thiokol Chemical Corp., g, v, f-1, r-1.  
Tranco Products, Inc., d, h, i, j, n, p, x, c-1, d-1, l-1.  
Turbo Products, Inc., d, f, g, i, l thru r, v, x, a-1, b-1, f-1, g-1, h-1, l-1, r-1.  
Uniflow Valve Corp., c, d, k, l, m, s, u, v, w, y, z, a-1, k-1, p-1, s-1.  
United Aircraft Products, Inc., b thru u-1.  
United Control Corp., i, o-1, d-1, u-1.  
United Electric Controls Co., l, c-1, p-1.  
United States Rubber Co., m.  
United Supply Co.  
Vacuum Research Co.  
Valcor Engng. Corp., b, c, d, f, g, i, l thru o, q, t thru w, a-1, f-1, j-1, k-1, l-1, r-1, t-1.  
Vap-Air Aeronautical Products Div., Vapor Heating Corp., a-1, c-1.  
Veeco Vacuum Corp., s-1.  
Vickers Inc., Div.-Sperry Rand, o, i, j, l, n, o, v, y, b-1, c-1, d-1, h-1, i-1, l-1.  
Vickers Inc., Marine & Drdonce Dept., Machinery Hydraulics Div., j, l, o, d-1.  
Vither Mfg. Co., The, r, s, d-1.  
Vinson Mfg. Co., Inc., o thru t, t thru z, a-1 thru h-1, j-1, k-1, l-1, n-1, o-1, r-1, s-1, t-1.



aldorf Fluid Systems, Div.-F. C. Huyck & Sons, c, d, f thru r, t thru d-1, f-1, g-1, h-1, j-1, k-1, l-1, m-1, o-1, q thru u-1.  
allace & Tiernan Inc., u, o-1, m-1.  
alworth Co., c, d, h thru l, s thru v, x, y, z, d-1, f-1.  
atertown Div., The New York Air Brake Co., v.  
WEATHERHEAD CO., THE, a, d, h, j, k, n.  
estinghouse Air Brake Co., Industrial Products Div., j, u, o-1, c-1, j-1.  
estinghouse Electric Corp., a, v, b-1, f-1.  
eston Hydraulics Ltd.-Sub., Borg-Warner Corp., c, l, a, t thru w, y, o-1 thru f-1, h-1 thru l-1, q-1, r-1, t-1.  
hitaker Controls, Div.-Telecomputing Corp., b thru r, t thru x, z, o-1 thru h-1, j-1, k-1, l-1, n-1 thru u-1.

#### FOR PHASE CHROMATOGRAPHS SEE CHROMATOGRAPHS, VAPOR PHASE

#### PORIZERS, LIQUID OXYGEN

#### AIRESEARCH MFG. CO., DIV.-THE GARRETT CORP.

Cambridge Co.-Div.-Carrier Corp.  
lary Dynamics  
umont Aircraft Fitting Co.  
Paul Hardeman, Inc.  
loefner Corp.  
lofman Labs., Inc.  
ydraulics, Inc.  
nde Co., Div.-Union Carbide Corp.  
aris Engrg. Co., Inc.  
onan & Kunz, Inc.  
earn-Roger Mfg. Co.  
uperior Air Products Co.

#### VARIABLE INDUCTANCES SEE INDUCTANCES, VARIABLE

#### VARNISH

ame Wire Co.  
arco Co., The  
aries Laboratories, Inc.  
arl H. Biggs Co.  
orden Chemical Co.  
OOV CORNING CORP.  
rylan, Inc.  
ildand Industrial Finishes Co.  
enstone Co., The  
nited States Varnish Co.  
estinghouse Electric Corp.

#### VASELS

merican Machine & Foundry Co., Government Products Group  
nchor Metal Spinning Co., The  
asco Metal Products, Inc.  
rooks & Perkins, Inc.  
ambridge Co.-Div.-Carrier Corp.  
icago Bridge & Iron Co.  
yle & Roth Mfg. Co., Inc.  
resser Mfg. Div., Dresser Industries, Inc.  
eneral American Transportation Corp.  
aul Hardeman, Inc.  
hilip A. Hunt Co.  
ustrial Engrg. Corp.  
ntercontinental Mfg. Co., Inc.  
ahn & Co., Inc.  
aiser Aircraft & Electronics, Div.-Kaiser Industries Corp.  
aiser Metal Products, Inc.-Fleetwings Div.  
W. Kellogg Co., The  
alter Kidde & Co., Inc., Aviation Div.  
ercury Tool & Mfg. Corp.  
\*MIRAX CHEMICAL PRODUCTS CORP., METAL CONTAINER DIV.  
nogram Precision Industries  
ational Tube Div.-United States Steel Corp.  
nbrook Machine Corp.  
ater Corp.  
orris-Thermador Corp.  
ittsburgh-Des Moines Steel Co.  
recision Sheet Metal, Inc.  
ressed Steel Tank Co.  
einhold Engrg. & Plastics Co.  
dw. Renneburg & Sons Co.  
hr Aircraft Corp.  
allmobile, Inc.  
lter Mfg. Co., The

#### V OMNIRANGE RECEIVING EQUIPMENT SEE RECEIVING EQUIPMENT, VHF OMNIRANGE

#### V TRANSCIEVERS SEE TRANSCIEVERS, VHF

#### VIBRATION ABSORBERS

merican Felt Co.  
merican Latex Products Corp.  
naconda Metal Hose Div., The American Brass Co.  
plied Design Co.  
arco Mfg. Co.  
arry Controls, Inc.  
ushings, Inc.  
leveland Pneumatic Industries, Inc.  
ontinental Rubber Works  
OOV CORNING CORP.  
ow-Elco, Inc.  
ederal Shock Mount Corp.-Div. The Korfund Co., Inc.  
inal Aeronautical Corp., T. R. Finn & Co., Inc.

#### \*HOUOAILLE INDUSTRIES, INC., BUFFALO HYDRAULICS DIV.

Johns-Manville  
J. W. Johnson & Co., Inc.  
Walter Kidde & Co., Inc., Aviation Div.  
Lord Mfg. Co.  
M B Mfg. Co.  
Mc Dowell-Wellman Companies, The  
\*MIRAX CHEMICAL PRODUCTS CORP., METAL CONTAINER DIV.  
Pacific Scientific Co.  
Robinson Technical Products, Inc.  
Rubbercraft Corp. of California  
A. T. Stevens Co.  
Taylor Devices, Inc.  
Ucinite Co., The, Div.-United-Carr Fastener Corp.  
United States Rubber Co.  
Western Flat Works & Acadia Synthetic Products Div.

#### VIBRATION CONTROLS

American Machine & Foundry Co., Greenwich Bushings, Inc.  
Cleveland Pneumatic Industries, Inc.  
Epic, Inc.  
Genisco, Inc.  
B. F. Goodrich Industrial Products Co.  
Gulton Industries, Inc.  
\*HOUOAILLE INDUSTRIES, INC., BUFFALO HYDRAULICS DIV.  
J. W. Johnson & Co., Inc.  
Kohn & Co., Inc.  
Ling Electronics, Inc.  
Lord Mfg. Co.  
M B Mfg. Co.  
\*MIRAX CHEMICAL PRODUCTS CORP., METAL CONTAINER DIV.  
Pacific Scientific Co.  
Robinson Technical Products, Inc.  
Solartron Inc.

#### VIBRATION MEASURING EQUIPMENT SEE MEASURING EQUIPMENT, VIBRATION

#### VIBRATION & SHIMMY OAMPERS SEE OAMPERS, VIBRATION & SHIMMY

#### VIBRATION & SHOCK MOUNTINGS SEE MOUNTINGS, VIBRATION & SHOCK

#### VIBRATORS, INSTRUMENT PANEL

Cornell-Dubilier Electric Corp.  
Globe Industries, Inc.  
J. W. Johnson & Co., Inc.  
Kahn & Co., Inc.  
Solartron Inc.  
Talley Corp., The

#### VIBRATORS, MULTIVIBRATORS

Aerolab Development Co.  
Bendix Aviation Corp., York Div.  
J. W. Johnson & Co., Inc.  
Solartron Inc.  
Talley Corp., The

#### VIBRATORS, ULTRASONIC

J. W. Johnson & Co., Inc.  
Kin Tel Div.-Cohu Electronics, Inc.  
Massa Div.-Cohu Electronics, Inc.

#### VICES

Aerotec Corp., The  
Aircraft Tools, Inc.  
Burklyn Co.  
Covel Mfg. Co.  
A. L. Dery & Sons Tool & Die Co.  
Desmond-Stephan Mfg. Co., The  
Emmett Mfg. Co.  
Kenco Mfg. Co.  
Richards-Wilcox Mfg. Co.  
Snap-On-Tools Corp.  
Swayne, Robinson & Co.

#### VIEW FINOERS

SEE FINOERS, VIEW

#### VISCOMETERS

Automation Products, Inc.  
Bristol Co., The  
Ferranti Electric Inc.  
Fisher Scientific Co.  
Fish-Schuman Corp.  
Gardner Laboratory, Inc.  
General Electric Co., Apparatus Sales Div.  
Hagan Chemicals & Controls, Inc.  
Hallikainen Instruments  
Scientific Instrument Co.

#### VOLTAGE SUPPLIES, OECADE

American Aeroparts  
Bendix Aviation Corp., York Div.  
Beva Lab., Inc.  
G. L. Collins Corp.  
Davenport Mfg. Co.  
John Fluke Mfg. Co., Inc.  
Heavy-Duty Electric Co.  
Julie Research Labs., Inc.  
North Hills Electric Co., Inc.  
Technical Apparatus Builders  
Telco Industries Corp.  
Tel-Instrument Electronics Corp.

#### VOLTMETERS

American Aeroparts  
American Machine & Foundry Co., Government Products Group  
Assembly Products, Inc.  
Avo Ltd.  
Ballantine Labs., Inc.  
Beckman Instruments, Inc., Berkeley Div.  
Bristol Co., The  
Burr-Brown Research Corp.  
Burton-Rogers Co., Sales Div.-Hoyt Electrical Instruments.  
Columbia Electric Mfg. Co.  
Consolidated Electrodynamics Corp.  
Cubic Corp.  
Curtiss-Wright Corp., Electronics Div.  
Daven Co., The  
Daystrom Pacific Div.-Daystrom, Inc.  
Dejur-Amsco Corp., Electronic Sales Div.  
Donner Scientific Co.  
Dresser Industries, Inc.  
Electric Design & Mfg. Co.  
Electro Instruments, Inc.  
Electro-Tech Equipment Co.  
Elsin Electronics Corp.  
Epic, Inc.  
Flow Corp.  
John Fluke Mfg. Co., Inc.  
General Electric Co., Apparatus Sales Div.  
Greibach Instruments Corp.  
Helipot Div.-Beckman Instruments, Inc.  
Hewlett-Packard Co.  
Hoyt Electrical Instrument Works, Burton Rogers Co.  
Kay Electric Co.  
Keithley Instruments, Inc.  
Kin Tel Div.-Cohu Electronics, Inc.  
Marconi Instruments  
Marion Instrument Div.  
Meters Inc.  
Metronix, Inc., Sub.-Assembly Products, Inc.  
Minneapolis-Honeywell Regulator Co., Industrial Product Group  
F. L. Moseley Co.  
National Electronics  
New England Scientific Instruments Co.  
Non-Linear Systems, Inc.  
North Atlantic Industries, Inc.  
Paul Nurches Co.  
Pace Electrical Instruments Co., Inc.  
Physics Research Laboratories, Inc.  
Q. V. S. Inc.  
Rawson Electrical Instrument Co.  
Republic Aviation Corp.  
Simpson Electric Co.  
Sun Electric Corp., Aeronautical Div.  
Syston Corp.  
Technical Apparatus Builders  
Technique Associates Div., Duncan Electric Co., Inc.  
Technology Instrument Corp.  
Wacline, Inc.  
Waldom Electronics Inc.  
Westinghouse Electric Corp.  
Weston Instruments, Div.-Daystrom, Inc.

#### VOLUMETRIC FLOWMETERS SEE FLOWMETERS, VOLUMETRIC

#### VSWR MEASURING EQUIPMENT SEE MEASURING EQUIPMENT, VSWR

#### WALKING BEAM SYSTEMS

\*NEWAY EQUIPMENT CO.

#### WARNING UNITS, FUEL PRESSURE

ACF Industries Inc.  
Aircraft Controls Co., Div., Gorn Electric Co., Inc.  
Bendix Aviation Corp.-Montrose Div.  
A. Biederman, Inc.  
Cole-Herse Co.  
Consolidated Controls Corp.  
Consolidated Diesel Electric Corp.  
Frebark Co.  
Simmonds Aeroceramics, Inc.  
United Aircraft Products, Inc.  
United Electric Controls Co.

#### WARNING UNITS, TEMPERATURE

#### \*ARNOUX CORP.

Avien, Inc.  
Consolidated Controls Corp.  
Consolidated Diesel Electric Corp.  
Fenwal Inc.  
C. G. Hokanson Co., Inc.  
Thermo Electric Co., Inc.  
United Aircraft Products, Inc.  
United Control Corp.  
United Electric Controls Co.  
West Instrument Corp.

#### WASHERS

a. Brass  
b. Ceramic  
c. Felt  
d. Fibre  
e. Insulating  
f. Lack  
g. Metal  
h. Mico  
i. Plastic  
j. Rubber

Abbott Screw & Mfg. Co., a, c, d, f, g  
 Accurate Electronics Corp., Dept. D, a, d, e, g, i.  
 Acme Mfg. & Gasket Co., a, c thru g, i, j.  
 Aero Bolt & Screw Co., Inc., g, i.  
 Aero Gasket Corp., a, f, g, j.  
 All Specs Corp., a, d, f, g.  
 Allied Plastics Supply Corp., d, e, h, i, j.  
 Allmetal Screw Products Co., Inc., f.  
 Alloys Unlimited Inc., g, i.  
 Alpha Metals, Inc., g, i.  
 Alptec, Inc., a, e, f, g.  
 Aluminum Co. of America, g.  
 Amatong Electronic Hardware Co. Inc., a, d, e.  
 American Aeroparts, a, c, d, g thru j.  
 American Agile Corp., i.  
 American Brass Co., The, a.  
 American Lava Corp., b.  
 American Standard Products, Inc., a thru g, i, j.  
 Amplex Div.-Chrysler Corp., g.  
 Anchor Packing Co., The, c, d, i, j.  
 Anti-Corrosive Metal Products Co., Inc., e, f, g, i.  
 Aristocrat Plastics, Inc., i.  
 Armstrong Cork Co., j.  
 Atlas Screw & Specialty Co., a, f, g.  
 Auburn Mfg. Co., The, a thru, e, g thru j.  
 W. L. Barrett Co., The, e, f, g.  
 W. A. Beauchaine & Sons Inc., i.  
 Belmont Smelting & Refining Works, Inc., g.  
 Bergen Carbide Co., b, g.  
 Best Aircraft Corp., a, f, g.  
 Birnbach Radio Co., Inc., a, e, f.  
 Bland Burner Co., The, a, g.  
 Bonny Mfg. Corp., e, i.  
 Booth Felt Co., Inc., c.  
 Boston Felt Co., c.  
 Calinoy Div.-Illinois Tool Works, a, d thru g, i.  
 Capital City Mfg. Co., a, g.  
 Centralab, Div.-Globe-Union, b, e.  
 Century Fasteners Corp., a, d thru g, i, j.  
 Chase Brass & Copper Co., Inc., a, g.  
 Chemplast, Inc., e, i.  
 Chicago Gasket Co., i.  
 Cleveland Graphite Bronze, Div.-Clevite Corp., a, g.  
 Colonial Rubber Co., j.  
 Connecticut Hard Rubber Co., The, j.  
 Continental Diamond Fibre Corp., d, e, h, i.  
 Continental Rubber Works, j.  
 Cooper Industries, Inc., f, g, i, j.  
 Corbin Products Div., a, f, g.  
 Crystal-X Corp., i.  
 Diamonite Products Mfg. Co., b.  
 Division Lead Co., g.  
 Dixon Corp., i.  
 Dresser Mfg. Div., Dresser Industries, Inc., g.  
 DuCo Ceramics Co., b, e.  
 R. C. Dudek & Co., f.  
 Eaton Mfg. Co., f.  
 Eaton Mfg. Co., Reliance Div., a, f, g.  
 Electrical Insulation Co., Inc., d, e, i.  
 Electrical Refractories Co., The, b.  
 Eljay Corp., i.  
 Emeloid Co., Inc., The, i.  
 Emerson Plastics Corp., d, e, h, j.  
 Enrica Plastic Fabricators Div.-E. M. McCarthy Machine Co., d, e, i.  
 Excelsior Leather Washer Mfg. Co., Inc., c, d, i, j.  
 Federal Screw Products Inc., a, d, f, g, i.  
 Felters Co., The, c.  
 Flexrock Co., i.  
 Fluorocarbon Co., The, i.  
 Fluorulon Labs., Inc., i.  
 Ford Radio & Mica Corp., h.  
 Franklin Fibre-Lamitex Corp., d, e, i.  
 Frenchtown Porcelain Co., b.  
 George K. Garrett Co., Inc., a, e, f.  
 Gasket Mfg. Co. Inc., a, c, d, e, g thru j.  
 General Cement Mfg. Co., Div.-Textron, Inc., d, f, g.  
 General Gasket Inc., a, c, d, e, g, i, j.  
 Gladding, McBean & Co., b.  
 Goshen Rubber Co., Inc., j.  
 Greene, Tweed & Co., d, j.  
 Hampden Mfg. Co., Inc., d, i.  
 H. M. Harper Co., a.  
 Heys Mfg. Co., e, i.  
 Hobbs Mfg. Co., f.  
 Huntington Rubber Mills, j.  
 Integrated Mica Corp., e, h.  
 Joelin Mfg. Co., e, i.  
 Jodee Plastics Co., d, i.  
 Johns-Manville, d, e, i, j.  
 Kip Electronics Corp., b, e.  
 Kling Metal Spinning & Stamping Co., a, g.  
 Lamtex Industries, Inc., i.  
 Thomas J. Long, Inc., d, e, i.  
 Lourhan Mfg. Co., The, Div.-Ferro Corp., b.  
 Lucas Aircraft Supply Co., a thru j.  
 M & Q Plastic Products, i.  
 Magnetic Shield Div. Perfection Mica Co., c, d, h, i.  
 Mercury Tool & Mfg. Corp., a, d, g.  
 Mica Fabricating Co., b, e, h, i.  
 Mica Insulator Div.-Minnesota Mining & Mfg., Co., e, h.  
 Minnesota Mining & Mfg. Co., b, h.  
 \*MIRAX CHEMICAL PRODUCTS CORP., METAL CONTAINER DIV., i, j.  
 Mitronics Inc., b.  
 Monogram Precision Industries  
 J. I. Marris Co., a, f, g.  
 National Beryllia Corp., b.  
 National Ceramic Co., b.  
 National Tel-Tronics Corp., d, i.  
 National Vulcanized Fibre Co., d, e, i.

New England Tape Co., Div.-United-Carr Fastener Corp., i.  
 Darchard Industries, Inc., Actionflex Div., e, i, j.  
 PIC Design Corp., Sub.-Benrus Watch Co., Inc., f, g.  
 Pacific Cut Washer Co., a, d thru i.  
 Peerless Products Industries, a, c, d, e, g thru j.  
 Penn Fibre & Specialty Co., Inc., a, c, d, e, g thru j.  
 Piogram Products Inc., e, i.  
 Plastic Age Sales, Inc., i.  
 Polymer Corp., The, e, i.  
 Positive Lock Washer Co., The, f.  
 R & R Engrg. Co., a, c, d, g, i, j.  
 Raybestos-Manhattan, Inc., j.  
 Raybestos-Manhattan, Inc., Pa., i, j.  
 Republic Steel Corp., f, g.  
 Rogers Corp., d, e, i, j.  
 Milton Ross Metals Co., The, e, i.  
 Rubber Teck Inc., j.  
 Rubbercraft Corp. of California, j.  
 Saginaw Bearing Co., a.  
 St. Regis Paper Co., Panelyte Div., e, i.  
 Sanford Plastics Corp., i.  
 Sealectric Switch & Relay Corp., d, e, j.  
 W. S. Shamban & Co., i.  
 Silicone Insulation, Inc., e, h, i.  
 Sinclair Mfg. Co., a, d, e, g, i.  
 Skinner Precision Products, d.  
 Slip Ring Co. of America, i.  
 Sparta Mfg. Co., Div.-U. S. Ceramic Tile Co., e, i.  
 Spruce Pine Mica Co., Inc., e, h.  
 Standard Locknut & Lockwasher Inc., f.  
 Stanley-Judd Div.-The Stanley Works, a, e, g.  
 Star Stainless Screw Co., a, f.  
 Staver Co., Inc., The, a, c, d, e, g, i, j.  
 A. T. Stevens Co., j.  
 Stevens Products, Inc., e.  
 Superior Steatite & Ceramic Corp., b, e.  
 Teiner Engrg. Corp., a, g.  
 Thermal Refractories Corp., b.  
 Thompson-Bremer & Co., f.  
 Turbo Products, Inc., i.  
 United Mineral & Chemical Corp., h.  
 U. S. Fiber & Plastics Corp., i.  
 United States Rubber Co., j.  
 Variety Aircraft Corp., a, g.  
 Waterbury Components, Inc., i.  
 Western Felt Works & Acadia Synthetic Products Div., c, i.  
 Westlake Plastics Co., i.  
 Wilmington Fibre Specialty Co., d, e, i.  
 Wrought Washer Mfg., Co., a, c thru i.

#### WATER INJECTION EQUIPMENT

Accessory Products Co., Div.-Textron Inc.  
 \*AIRESEARCH MFG. CO., DIV.-THE GARRETT CORP.  
 Bendix Utica Div., Bendix Aviation Corp.  
 Chandler Evans Corp.  
 Components Corp.  
 Curtiss-Wright Corp., Santa Barbara Div.  
 Eastern Industries Inc.  
 Hydro-Power Corp.  
 Lear, Inc.  
 Marquardt Aircraft Co.  
 Talley Corp., The  
 Tapco Group, Thompson-Ramo-Wooldrige Inc.  
 Turbo Products, Inc.  
 Washington Technological Associates Inc.  
 Western Gear Corp.

#### WATER INJECTION SYSTEMS See INJECTION SYSTEMS, WATER

#### WAVE TRAPS

Dietz Design & Mfg. Co.  
 Meridian Metalcraft, Inc.  
 Radar Design Corp.

#### WAVEGUIDE STANDS See STANDS, WAVEGUIDE

#### WAVEGUIDE WINDOWS See WINDOWS, WAVEGUIDE

#### WAVEGUIDES

Ainslie Corp.  
 Aircorn Inc.  
 Aircorn Inc. of New Jersey  
 Airtron Inc., Div.-Litton Industries  
 American Machine & Foundry Co., Government Products Group  
 American Machine & Foundry Co., Greenwich  
 \*AVCO MFG. CORP., CROSLLEY DIV.  
 Bart Mfg. Corp.  
 Budd Stanley Co. Inc.  
 Carmac Aviation  
 Central Electronic Mfrs., Div.-Nuclear Corp. of America  
 Chemalloy Electronics Corp.  
 Demoray-Bonardi  
 Diamond Antenna & Microwave Corp.  
 Douglas Microwave Co., Inc.  
 Engelhard Industries Inc., D. E. Makepeace Div.  
 FXR, Inc.  
 Gabriel Co., The, Gabriel Electronics Div.  
 Gilfillan Bros. Inc.  
 John Gombos Co., Inc.  
 Highland Rim Machine Works Inc.  
 Hughes Tool Co., Aircraft Div.  
 Walter J. Hyatt Co., The  
 I-T-E Circuit Breaker Co.

#### ITT Labs.

Indusl. Prod.-Danbury Knudsen Div. Amphenol-Barg Electronics Corp.  
 J-V-M Microwave Co.  
 \*KEARFOTT CO., INC.  
 \*KEARFOTT CO., INC., MICROWAVE DIV.  
 Lieco, Inc.  
 Litton Industries, Inc.  
 Mercast Mfg. Corp.  
 Mercury Tool & Mfg. Corp.  
 Meridian Metalcraft, Inc.  
 Metal Fabricators Corp.  
 Microwave Associates, Inc.  
 Monogram Precision Industries  
 N. R. K. Mfg. & Engrg. Co.  
 Narda Microwave Corp., The  
 National Beryllia Corp.  
 National Pneumatic Co., Inc., Holtzer-Cabot Divs.  
 Omega Labs., Inc.  
 Portchester Instrument Corp.  
 Radiotronics, Inc.  
 Ryan Aeronautical Co.  
 Savage-Rowe Plating Co., Inc.  
 Scientific-Atlanta, Inc.  
 Special Instruments Div., British Industries Corp.  
 Standard Metals Corp.  
 Telerad Mfg. Corp.  
 Thermal Refractories Corp.  
 Turbo Machine Co.  
 United Aircraft Products, Inc.  
 United Shoe Machinery Corp., Ordnance Dept.  
 Waltham Horological Corp.  
 Walworth Co. Electronics Div.  
 Washington Aluminum Co., Inc.  
 Waveline, Inc.  
 Western International Co.  
 Wilks Precision Instrument Co., Inc.

#### WAVEGUIDES, FLEXIBLE

Aircorn Inc. of New Jersey  
 Airtron Inc., Div.-Litton Industries  
 American Machine & Foundry Co., Government Products Group  
 American Machine & Foundry Co., Greenwich  
 Borker Sales Co.  
 Bendix Aviation Corp., York Div.  
 Budd Stanley Co. Inc.  
 Co-Operative Industries, Inc.  
 Gilfillan Bros. Inc.  
 Walter J. Hyatt Co., The  
 ITT Labs.  
 \*KEARFOTT CO., INC.  
 Lieco, Inc.  
 Litton Industries, Inc.  
 Narda Microwave Corp., The  
 Portchester Instrument Corp.  
 Savage-Rowe Plating Co., Inc.  
 Telerad Mfg. Corp.

#### WAVEGUIDES, RIGID

Ainslie Corp.  
 Aircorn Inc.  
 Aircorn Inc. of New Jersey  
 Airtron Inc., Div.-Litton Industries  
 American Machine & Foundry Co., Government Products Group  
 American Machine & Foundry Co., Greenwich  
 Bart Mfg. Corp.  
 Bendix Aviation Corp., York Div.  
 Budd Stanley Co. Inc.  
 Central Electronics Mfrs., Div.-Nuclear Corp. of America  
 Coaxial Connector Co. Inc.  
 Demoray-Bonardi  
 Diamond Antenna & Microwave Corp.  
 Douglas Microwave Co., Inc.  
 FXR, Inc.  
 Federal Mfg. & Engrg. Corp.  
 Gilfillan Bros. Inc.  
 Walter J. Hyatt Co., The  
 I-T-E Circuit Breaker Co.  
 ITT Labs.  
 Indusl. Prod.-Danbury Knudsen Div. Amphenol-Barg Electronics Corp.  
 J-V-M Microwave Co.  
 \*KEARFOTT CO., INC.  
 D. S. Kennedy & Co.  
 Lieco, Inc.  
 Litton Industries, Inc.  
 Mercast Mfg. Corp.  
 Meridian Metalcraft, Inc.  
 Metal Fabricators Corp.  
 Metals & Controls Corp., General Plate Div.  
 Microwave Associates, Inc.  
 N. R. K. Mfg. & Engrg. Co.  
 Narda Microwave Corp., The  
 National Beryllia Corp.  
 National Pneumatic Co., Inc., Holtzer-Cabot Divs.  
 Omega Labs., Inc.  
 Portchester Instrument Corp.  
 Radiotronics, Inc.  
 Ryan Aeronautical Co.  
 Savage-Rowe Plating Co., Inc.  
 Scientific-Atlanta, Inc.  
 Special Instruments Div., British Industries Corp.  
 Standard Metals Corp.  
 Telerad Mfg. Corp.  
 Thermal Refractories Corp.  
 Turbo Machine Co.

Victor R. F. & Microwave Co.  
Waltham Horological Corp.  
Walworth Co. Electronics Div.  
Washington Technological Associates Inc.  
WaveLine, Inc.  
Western International Co.  
Wilks Precision Instrument Co., Inc.

#### ELDERS

- a. Automatic
- b. Electric Arc
- c. Inert Gas
- d. Manual

#### MOTOR GENERATOR CORP.

#### ELDERS, SPOT

Commercial Shearing & Stamping Co.  
Eisler Engrg. Co., Inc.  
Erdica Engrg. Corp.  
Ewald Instruments  
Federal Tool Engrg. Co.  
Fardman Tool & Engrg. Co.  
High Vacuum Equipment Corp.  
Linde Co., Div.-Union Carbide Corp.  
Litton Engrg. Labs.  
Peer, Inc.  
Pioneer Industries Div., Almar-York Co. Inc.  
Raytheon Mfg. Co.  
Republic Aviation Corp.  
Rocky Brothers, Inc.  
Royal Winfield Corp.  
Vacuum Tube Products, Div.-Hughes Aircraft Co.  
Vedmatic Div., Unittek Corp.  
Westinghouse Electric Corp.

#### HEELS

#### BALCRANK INC, MACHINE TOOL DIV.

#### HEELS TURBINE

#### HEELS TURBINE WHEELS

#### HD TUNNELS

Boro Research Instrument Co. Inc.  
Coralab Development Co.  
Cord-Partland, Inc.  
Crovac Corp.  
Cruver Precision Products Inc.  
Chicago Bridge & Iron Co.  
Clymatic Corp.  
Columbia Plasmadyne Corp.  
Ciscam-Russell Co., The  
Coul Hardeman, Inc.  
Cortland Radiant Corp.  
C-Dowell-Wellman Companies, The  
Cragram Precision Industries  
C-RC Equipment Corp.  
Crdberg Mfg. Co.  
Cacific Coast Engrg. Co.  
Cillips & Davies Inc.  
Cittsburgh-Des Moines Steel Co.  
Cortland Copper & Tank Works Inc.  
C.W. Remberg & Sons Co.  
Cuthbert Calif. Cooperative Wind Tunnel-Colif.  
Cust. Inst. of Technology  
Cusk Corp.  
Cusley Labs., Inc.  
C-S Science Corp., Div.-Tapp Industries, Inc.  
C-Washington Technological Associates Inc.  
C-Westinghouse Electric Corp.

#### WINDINGS, TRANSFORMER

Avanced Electronics, Inc.  
Besser Industries, Inc.  
Bisler Engrg. Co., Inc.  
Biotronic Labs. Inc.  
Boen Rectifier Co.  
Bornternational Wire & Cable Co.  
Bornd-Air Inc.  
Borntiran Corp.  
Borntitanol Coil Co.  
Borntw York Coil Co.  
Borntugles Randall Inc.  
Borntversal Toroid Coil Winding, Inc.  
Borntisbury Electronics Inc.  
Borntestinghouse Electric Corp.

#### WINDOWS, WAVEGUIDE

Bron Inc., Div.-Litton Industries  
A. Beouchaine & Sons Inc.  
Broc Laboratories, Inc.  
Brom Electronic Mfgs., Div.-Nuclear Corp. of America  
Bromassael, Inc.  
Bromonay-Bonardi  
Brogugles Microwave Co., Inc.  
Broctro-Mechanical Products Co.  
Brohm Corp.  
Bro-E Circuit Breaker Co.  
Bro-M Microwave Co.  
Broco, Inc.  
Brocroe Associates, Inc.  
Bro R. K. Mfg. & Engrg. Co.  
Brontional Beryllium Corp.  
Broge Labs., Inc.  
Brovania Electric Products Inc., Special Tube Operations  
Brolerad Mfg. Corp.  
Broermal Refractories Corp.

#### WIRE

- a. Aluminum
- b. Annunciator
- c. Antenna
- d. Asbestos Insulated
- e. Beryllium Copper
- f. Ceramic Insulated
- g. Cut & Stripped
- h. Enameled
- i. Filament
- j. Fine Wire Specialties
- k. Forms
- l. Glass Insulated
- m. Gold Plated
- n. Guy
- o. Harnesses
- p. High Voltage
- q. Hook-Up
- r. Litz
- s. Magnet
- t. Marking Service
- u. Mesh
- v. Metal Plated
- w. Metal Shielded
- x. Monel
- y. Nickel Clad Copper
- z. Phosphor Bronze
- ol. Plastic Insulated
- bl. Platinum
- cl. Recording
- d1. Reels
- e1. Resistance & Filament
- f1. Shielded
- g1. Silicon Bronze
- h1. Silver Plated
- il. Stainless Steel
- kl. Strippers, Mechanical
- ll. Tantulum
- ml. Teflon Insulated
- nl. Thermocouple
- ol. Zirconium

Acme Wire Co., h, l, s.  
Acramark Co., The, t.  
Adam Metal Supply Inc., o.  
Advanced Electronics, Inc., o.  
Aera Research Instrument Co. Inc., f, m-1.  
Alden Products Co., g, o.  
All Boro Metal Products Co., Inc., i-1.  
All Specs Corp., k.  
Allegheny Ludlum Steel Corp., i-1.  
Alloys Unlimited Inc., a, e, i, j, k, m, s, u, x, z, b-1, h-1, i-1, k-1.  
All-State Welding Alloys Co., Inc., a.  
Alpitect, Inc., k.  
Aluminum Co. of America, o.  
American Aereparts, c.  
American Brass Co., The, j, z, g-1.  
American Brazing Alloys Co., z, g-1.  
American Electric Cable Co., b, c, g, j, l, o, p, q, w, z, a-1, f-1.  
American Insulated Wire Corp., d, p, q, a-1, f-1.  
American Silver Co., m, b-1, h-1, k-1, n-1.  
American Super-Temperature Wires, Inc., g, h, j, l, p, q, s, w, a-1, f-1, i-1.  
Amphenol Cable & Wire Div., Amphenol-Borg Electronics Corp., c, q, a-1, f-1.  
Amphenol Connector Div., Amphenol-Borg Electronics Corp., o.  
Anaconda Wire & Cable Co., o, b, c, d, h, l, p, q, s, w, z, a-1, f-1, i-1.  
Anchor Metal Co. Inc., a, k.  
Armo Steel Corp., i-1.  
Art Wire & Stamping Co., j, k.  
Associated American Winding Co., Inc., j.  
Associated Engrg. & Mfg. Corp., i, j, y.  
Semon Boche & Co., l.  
Barker Sales Co., o thru e, h, j, l, m, n, p thru s, u, w, a-1, c-1, f-1.  
W. L. Barrett Co., The, j, k.  
Bart Mfg. Corp., m, u, y.  
W. A. Beauchaine & Sons Inc., o.  
Belden Mfg. Co., b, c, d, g, h, j, l, o thru s, a-1, f-1, i-1.  
Bendix Aviation Corp., Scintilla Div., a.  
Birmbach Radio Co., Inc., c, d, g, h, j, l, n thru q, s, t, z, a-1, f-1, g-1, h-1, l-1.  
J. Bishop & Co., Planting Works, m, u, v, x, y, b-1.  
Whitney Blake Co., q, a-1, f-1.  
Bliss Electronic Corp., o.  
Blowers Inc., j, k.  
Boston Insulated Wire & Cable Co., l, p, q, a-1, f-1, i-1, m-1.  
Brom Metallurgical & Chemical Co., e, h, j, m, r, v thru z, b-1, g-1, h-1, k-1, n-1.  
William Brand & Co., Inc., g, l, o, p, q, t, w, a-1, f-1.  
Bridgeport Brass Co., o, e, u, v, y, z, g-1, i-1, k-1, n-1.  
Bristol Co., The, m-1.  
Brush Beryllium Co., The, e.  
Cable Electric Products Inc., b, l, o, q, a-1.  
Connon-Muskegon Corp., j.  
Carpenter Steel Co., The, j, i-1.  
Chose Brass & Copper Co., Inc., a, h, l, s, u, z, g-1, i-1.  
Chemplast, Inc., p, a-1, i-1.  
Chester Cable Corp., l, p, q, w, a-1, f-1.  
Clippord Instrument Lab., Inc., o.  
Conox Corp., m-1.  
Consolidated Wire & Associated Companies, a thru e, h, l, p thru s, z, a-1, f-1 thru i-1, l-1, m-1.  
Continental Wire Soles Corp., d, g, l, p, q, w, a-1, f-1.

Copperweld Steel Co., Wire & Cable Div., o, c, e, j, m, n, p, q, u thru z, f-1, h-1, i-1.  
Cornish Wire Co., Inc., b, g, l, o, q, a-1, f-1.  
Crucible Steel Co. of America, s, x.  
Crystal-X Corp., a-1, l-1.  
Dalweld Co. Inc., a, z, g-1.  
Dell Optics Co., Ltd., l.  
Delta Chemical Works, Inc., e, f, j, l, m, v, w, y, z, b-1, g-1, h-1, i-1, k-1 thru n-1.  
Deringer Metallurgical Corp., b-1.  
Dielectric Materials Co., l, p, q, f-1.  
Wilbur B. Driver Co., e, h, f, j, l, x, z, c-1, h-1, i-1, k-1, l-1, m-1.  
Duralith Corp., t.  
Eagle Electric Mfg. Co. Inc., b, q, a-1, d-1.  
Eastern Smelting & Refining Corp., m, b-1, h-1.  
Eaton Mfg. Co., Reliance Div., a, j, x, z, d-1, g-1, i-1.  
Electric Auto-Lite Co., The, h, l, p, s, a-1, h-1, l-1.  
Electric Cords & Supply Corp., g, o, t.  
Electronic Applications, Inc., f-1.  
Electronic Parts Mfg. Co., Inc., i, j, k, y, c-1.  
Electro-Tech Equipment Co., m-1.  
Elmet Div.-North American Phillips Co., Inc., o, h, j, m, s, h-1.  
Empire Electronics Co., Inc., a.  
Empire State Aluminum Corp., o.  
Engelhard Industries Inc., D. E. Makepeace Div., m, b-1, h-1.  
Essex Mfg. Co., Inc., k.  
Essex Wire Corp., o, b, d, e, h, l, o, p, q, s, f-1.  
First Electronics Corp., The, o.  
Fluoracarbon Co., The, l-1.  
Fort Wayne Metals, Inc., i, u, x, c-1.  
General Cable Corp., o thru d, f, g, h, j, l, o thru s, u, w, z, f-1.  
General Cement Mfg. Co., Div.-Textran, Inc., j-1, l-1.  
General Electric Co., Apparatus Sales Div., m-1.  
General Electric Co., Lamp Metals & Components Dept., f, i.  
General Insulated Wire Works, q, a, w, a-1, f-1.  
Claud S. Gardon Co., f, l, o, w, a-1, m-1.  
Gunnar Laboratories, k, o.  
Hallett Mfg. Co., g, o, w, f-1.  
Hamilton Watch Co.-Industrial Div., e, j.  
Harco Labs., Inc., m-1.  
Haveg Industries, Inc., f, q, s, a-1, l-1.  
Haynes Stellite Co., Div.-Union Carbide Corp., k-1.  
HFL Manufacturing Corp., g, o.  
Hitemp Wires Inc., f, j, l, q, a-1, f-1.  
Holyoke Wire & Cable Corp., c, j, l, o, p, q, w, a-1, f-1, l-1.  
Haskins Mfg. Co., h, j, e-1, m-1.  
T. J. Houlihan Co., o.  
International Nickel Co., The, x, y, b-1, e-1.  
International Wire & Cable Co., o thru d, g, k.  
Jan Hardware Mfg. Co., Inc., w.  
Jefferson Electronic Products Corp., a.  
Jefferson Wire & Cable Corp., l, p, q, a-1, f-1.  
Jennings Machine Corp., l-1.  
Kaiser Aluminum & Chemical Sales, Inc., a.  
Kanthal Corp., The, d, h, j, e-1.  
Leeds & Northrup Co., m-1.  
Lenz Electric Mfg. Co., l, p, q, a-1, f-1, h-1, m-1.  
\*LEWIS ENGRG. CO., THE, d, g, h, l, o, p, q, w, y, a-1, f-1, l-1, m-1.  
Magnetic Shield Div., Perfection Mico Co., f-1.  
P. R. Mallory & Co. Inc., e.  
\*MALLORY-SHARON METALS CORP., k-1, n-1.  
Manger Electric Co., g, k, t.  
J. E. Menough Co., o, f-1.  
Metals & Controls Corp., General Plate Div., e, j, m, v, y, h-1, k-1, m-1, n-1.  
Michigan Wire Cloth Co., u.  
Minicord Corp. of America, c-1.  
Minnesota Mining & Mfg. Co., k.  
Mohawk Wire & Cable Corp., g, p, q, w, a-1, f-1.  
Heinz Mueller Eng. Co. Inc., o.  
Mutton Corp., o.  
National Pneumatic Co., Inc., Haltzer-Cobat Divs., o.  
National-Standard Co., c, e, i, j, n, u, v, x, i-1.  
Nesor Alloy Products Co., o, c, e, i, j, k, m, o, v thru z, b-1, e-1 thru i-1.  
New England Electrical Works, Inc., b, c, h, j, l, q, r, s, w.  
M. M. Newman Corp., o.  
Okonite Co., The, Subsidiary of Kennecott Copper Corp., a, c, d, p, q, a-1, f-1, l-1, m-1.  
Pacific Scientific Co., a, m-1.  
Packard Electric Div.-General Motors Corp., o, p, q, w, a-1, h-1, l-1.  
Paraplegics Mfg. Co., Inc., o.  
Pholo Plastics Corp., g, o, p, q, a-1.  
Phelps Dodge Copper Products Corp., c, h, j, l, p, s, v, w, y, a-1, f-1, h-1, l-1.  
Philadelphia Insulated Wire Co., b, d, g, h, j, l, q, a, r, s, w, a-1, f-1, l-1, m-1.  
Plastoid Corp., o thru d, p, q, a-1, f-1.  
Joseph E. Podgor Co., Inc., u, z, i-1.  
Precision Resistor Co. Inc., e-1.  
Precision Tube Co., Inc., w, f-1.  
Pyrometer Instrument Co., Inc., m-1.  
Radiophone Co. Inc., o.  
Reinhold Engrg. & Plastics Co., f, s, a-1.  
Reliable Spring & Wire Forms Co., k.  
Republic Steel Corp., i-1.  
Reverse Corp. of America, d, g, l, a, q, a-1, f-1, l-1, m-1.  
Reynolds Metals Co., a

Rex Corp., The, Sub-American-Enko, o, b, c, q, w, f-1.  
 Rockbestos Products Corp., d, l, q, s, a-1, l-1.  
 John A. Roebblings Sons Corp., o, d, h, j, k, l, n, p, s, u, v, w, z, a-1, f-1.  
 Rolock Inc., u.  
 Rome Cable Corp., Sub.-Aluminum Co. of America, a, h, p, q, s, w, a-1, f-1.  
 Royal Electric Corp., b, d, g, o, p, w, a-1, f-1.  
 Joseph T. Ryerson & Son, Inc., a, i-1.  
 Sanders Associates, Inc., j, o, q, a-1.  
 Sequoia Wire & Cable Co.-Div.-Mondrel Industries, Inc., f, g, i, o, p, q, w, a-1, f-1, l-1, m-1.  
 Simplex Wire & Cable Co., p, q, w, a-1, f-1, l-1.  
 Southwire Co., o, g, n, q.  
 Spectra-Strip Wire & Cable Corp., b, g, l, o, p, q, s, t, w, a-1, f-1, l-1, m-1.  
 Standard Metals Corp., m, v.  
 Stanley-Judd Div.-The Stanley Works, k.  
 Superior Cable Corp., c, q, w, a-1, f-1.  
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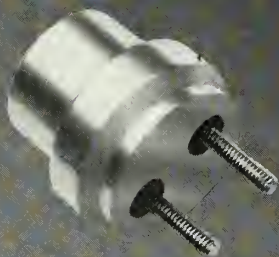
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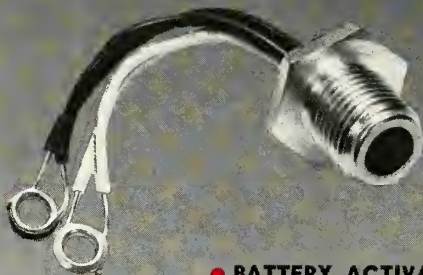
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