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*the technical journal
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STUDIO B

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Special 1968

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See page 67.

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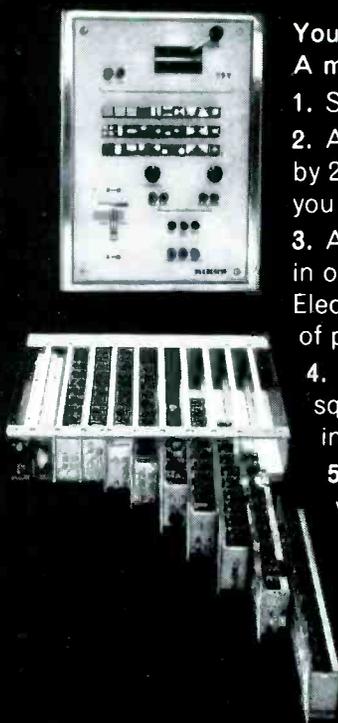
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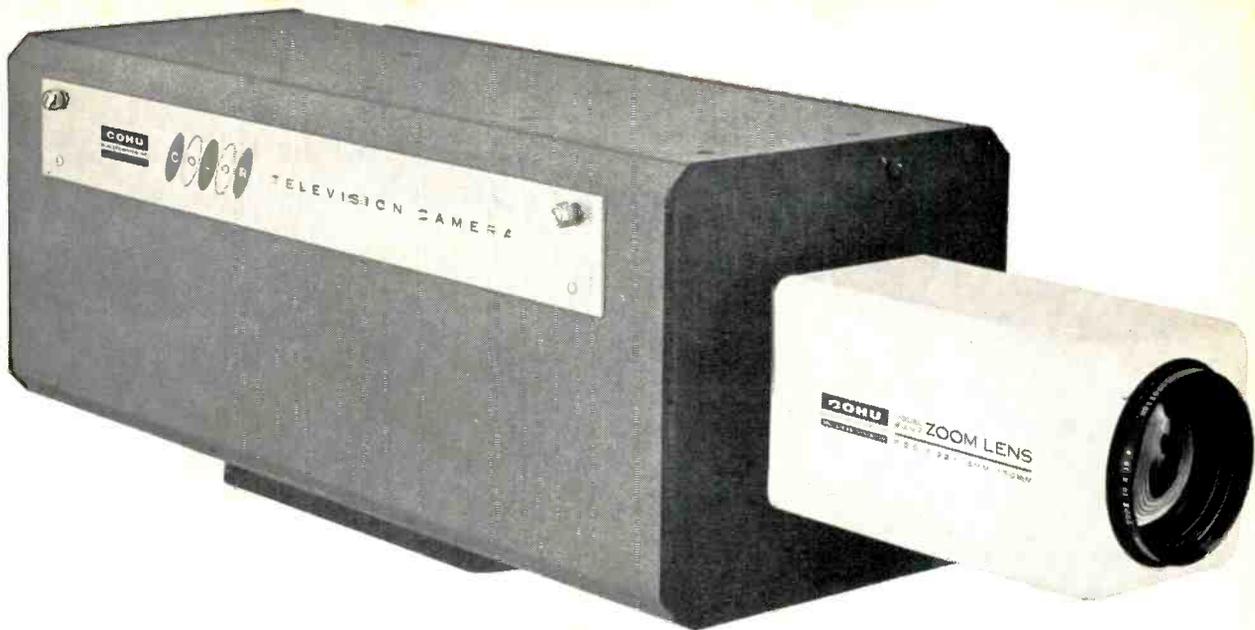
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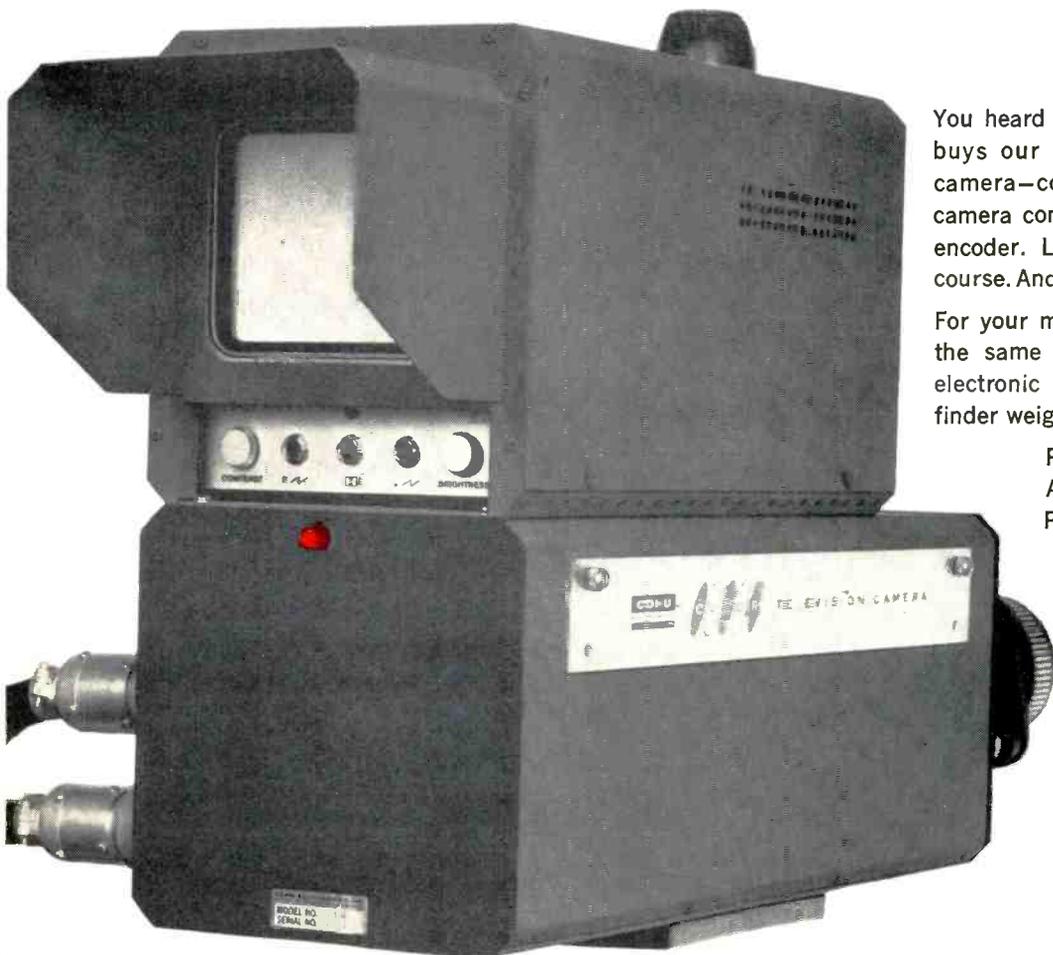
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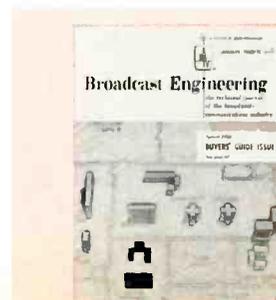
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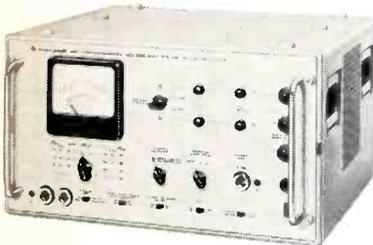
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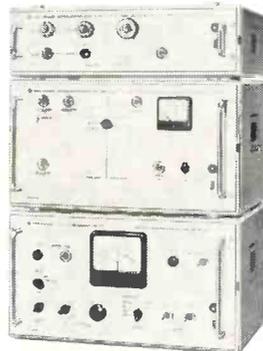


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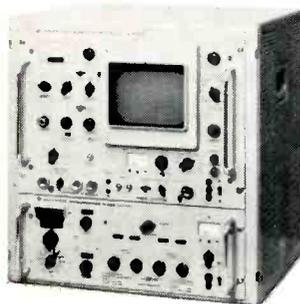


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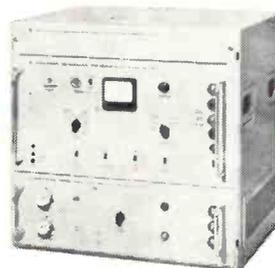
VESTIGIAL SIDEBAND ANALYSIS In the presence of synch. signals

SWEEP GENERATOR/RECEIVER



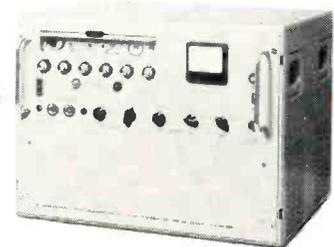
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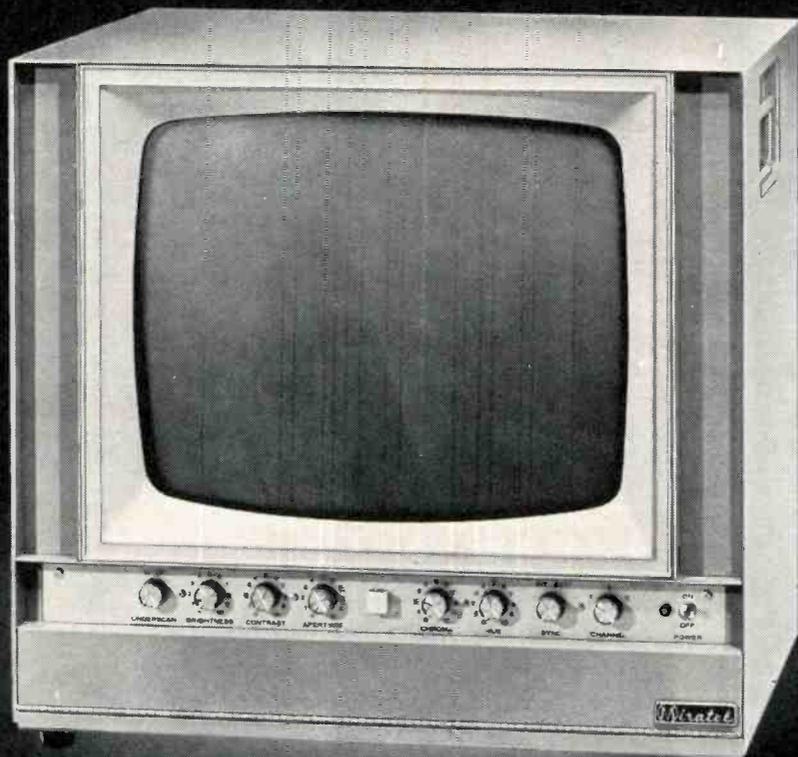


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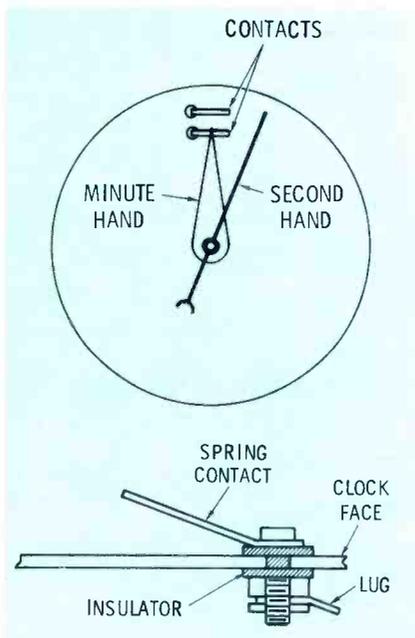
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ENGINEERS' EXCHANGE

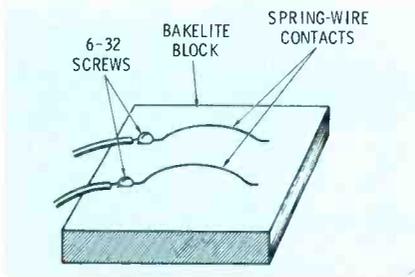
Hourly Time Signals

Following are three methods of controlling an hourly time-tone signal. The first two are based on placing contacts for the minute hand and second hand at the 12-o'clock position on a clock. The method of making the contacts differs slightly.



Two insulated contacts are mounted on the clock face and wired in series so that the minute hand and second hand must close the circuits simultaneously. We used a DC relay and supply with a large capacitor across the relay to prevent skipping or intermittent tone operation. A little adjustment of the contacts and hands was required, but once the system was set up, it worked fine.

—Melvon G. Hart



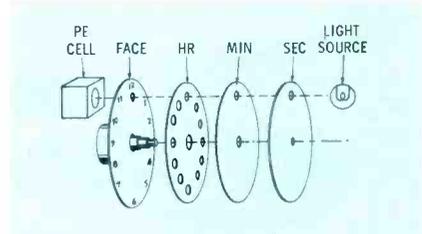
The minute and second hands of any good 10- or 12-inch electric clock may be used. The contacts are made of spring wire (unwind a few inches of any small spring) and are

mounted on a small block of bakelite. Shape the springs and the clock hands so that contact is made only on the 59th second of the 59th minute of each hour and for as long as is desired. One-half second usually is plenty long. Paint should be removed from the back of the two hands for good contact with the spring wires. Discard the hour hand.

A small relay is used to apply the tone to some high-level part of the circuit. There will be less trouble with contact noise if the tone is switched at high level (plus 8 dBm) and if the clock hands switch low voltage instead of signal.

The entire clock is insulated by mounting it on a varnished 12" × 12" board. Be sure to install a 1/2-ampere fuse in the clock AC line.

—Luther Crumbaugh



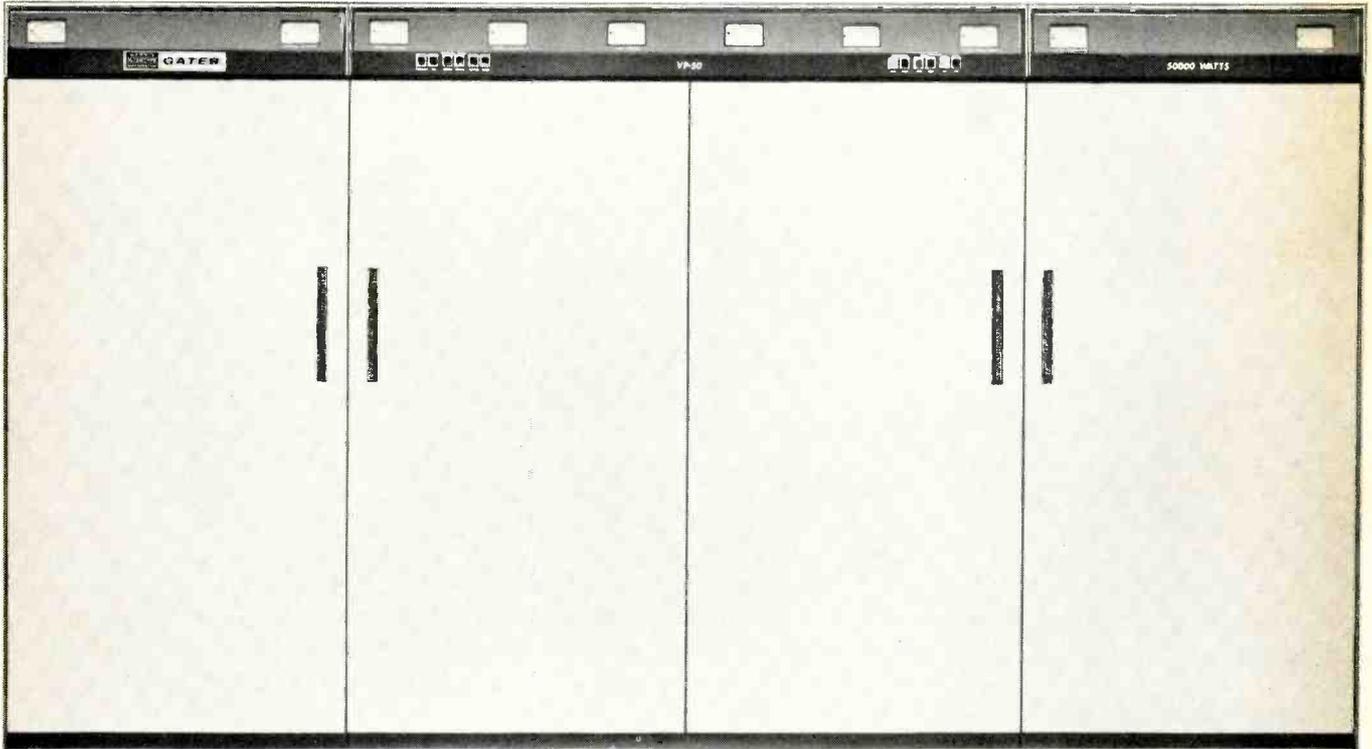
The hands of a conventional electric clock are replaced with thin aluminum discs. The hour disc has 12 small holes; the clock face, minute disc, and second disc have 1 hole each. A photocell behind the dial "sees" the light source for a brief time each hour. Widening the hole in the second disc to a slot makes the "beep" longer. If the three discs are made of different diameters, numbers to indicate the time may be painted on their rims.

—Basil Barbee

Erratum

In the Supplement to the Review of Professional Microphones (September 1967 BROADCAST ENGINEERING), there are errors in the listings of two PML microphones. On the polar graph for the Model EK-71 (page 33), the scale should read from 0 to 20 dB instead of from 0 to 40 dB. Also, the scales for the cardioid and bidirectional polar graphs for the Model TC-4V (page 34) should read from 0 to 20 dB instead of from 0 to 40 dB.

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A DOUBLY RELIABLE CONSOLE

by Len Spencer*—Solid-state reliability plus redundancy add up to a minimum of off-the-air time.

Trouble-free operation of a radio or TV station is a primary goal of all project and design engineers in the broadcast field. The control desk to be described is an attempt toward realizing this ideal situation. The basic idea is not new; it consists of having two of everything immediately available. The application of this once very expensive method has been made economically feasible by the development of solid-state printed-card amplifiers. And, solid-state circuits have the added advantage of long life, which has been estimated to be from 20 to 40 years if operation is under optimum conditions.

The Console

The new approach in this console is the ability to switch all amplifiers and power supplies by a "key bar." This is simply an aluminum bar that fits over 13 telephone-type keys so that they may be operated simultaneously (Fig. 1). By removing the bar, it is possible to switch each individual module from NORMAL to SPARE operation. This feature permits quick location of a fault and replacement of a card amplifier without interrupting the program. In-

*BE Consulting Author, Montreal, Quebec.



Fig. 1. Thirteen telephone-type keys are switched by an aluminum key bar.

dicator lights show which component, normal or spare, is in use for each function.

The console circuitry includes preamplifiers; intermediate, line, monitor, and cue amplifiers; and power supplies. All these components are mounted in two pull-out chassis located at the ends of the control desk (Fig. 2). This arrangement, in conjunction with the selector keys, allows a quick change of any of the plug-in cards without disturbing the announcer.

Fig. 3 shows an overall view of the studio equipment. Power ON-OFF and transmitter change are controlled from a panel at the extreme right of the desk; an indicating light on this panel is connected to the remote-control system of the two transmitters. Provision is made to switch from 50 kw to 10 kw if required. The mixing panel, which contains nine illuminated in-line at-



Fig. 2. Pull-out chassis at desk ends contain the solid-state circuit modules.

tenuators, is placed so that the announcer has a clear space in front of him for papers. An overhanging microphone keeps this space clear. The mixing panel controls the following sources: three turntables, two at the left of the announcer and one at his right; three tape-cartridge playblack units, two at the announcer's left and one at his right; one reel-to-reel tape machine on the right-hand side (not shown in photo); four remote program lines, controlled by push buttons which can be paralleled; three microphone inputs; and five spare line inputs.

Tally lights on the control panel indicate the status of all these functions, and the turntables and cartridge machines are started and stopped by their corresponding illuminated push buttons. Other features are: The volume indicator can be switched on or off by its own control switch. There is a monitor control switch to permit listening from the air or from the control-desk output. There are cue positions on the slide attenuators for the turntables, lines, and reel-to-reel tape machine.

An automatic switcher for the tape-cartridge machines selects the



Fig. 3. Reproduction equipment, remote-control unit surround operator.

proper tape and locks out unused cartridge units from the audio feed. The switcher is controlled by the push buttons on the mixer panel.

In normal operation, the output from the control desk is fed to the master control room, but should an emergency arise so that the master control is inoperative, there is a "panic" button that transfers the desk output to a phone line directly to the transmitter. Also, by pre-patching at the master control, four remote programs can be scheduled in advance, and through the use of the spare microphone inputs, the news room and other program sources can be controlled easily from this console.

In Fig. 4, the monitor and talk-back volume control is at the left, and the status lights show that the microphone and No. 3 cartridge machine are in operation. At the right of the attenuators are the four push buttons that are prepatched in the control room to remote points or other feeds, and above them is the transfer switch to send the output directly to the transmitter.

Use of Switches

The 24-volt indicator lights placed above and below their respective keys are energized through dropping resistors from a 36-volt supply. The lamps are wired through the amplifier cards so that, if a unit is removed from the circuit, the corresponding light will be extinguished to indicate the amplifier has been removed.

If, for example, the key bar is in the down, or NORMAL, position, all green lights are on, and all amplifiers and the power supply normally used are operative. Should an amplifier fail, moving its key to the up position extinguishes the green light, the red, or spare-position, light goes on, and the circuit is completed through the spare module. This not only reduces the outage time but also makes it very simple to locate the defective card so that it can be replaced by a spare and removed for repairs.

In normal operation, all the amplifiers and power supplies are changed simultaneously, and when the technician arrives, he removes the key bar and returns the keys,



Fig. 4. View of console with bar removed, some switches in "spare" position.

one by one, to the normal position until the faulty card is located; the switch for this card is returned quickly to the spare position. All the control lights then show green except one, which continues to show red until the defective card is replaced and the key is returned to the normal position.

In Fig. 4, the key bar has been removed, and three red lights (top row) show that spare circuit cards are being used.

Automatic Gain Control

For efficient operation of the entire system, a solid-state automatic limiter and gain control is used. This equipment operates as a limiter, a gated automatic gain control, and a voice-controlled automatic fade of program. An attack time of less than 20 microseconds for a 40-dB gain change and a recovery time of .5 to 8 seconds, depending on average program level, are available. When the equipment is set up for an average program level, a ± 20 -dB deviation from average can be corrected automatically. Also, the unit gates out the noise present during lapses in the program, so the need for manual control is eliminated.

The voice-controlled automatic fade is used across either the turntables or cartridge machines (Fig. 5). Using this "automatic fader"

feature, it is also possible for the announcer's microphone to voice fade a panel program using up to five microphones, in a variable range from -45 dBm to -5 dBm (Fig. 6).

Conclusion

The overall concept of the system described in this article was conceived by the author. Construction and assembly of the solid-state amplifiers and the control desk were in the hands of McCurdy Radio Industries, whose assistance and skill is gratefully acknowledged. ▲

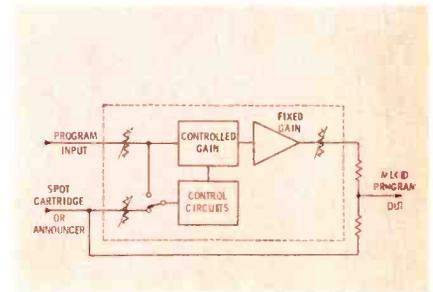


Fig. 5. Use of voice-controlled fader with recorded sources is illustrated.

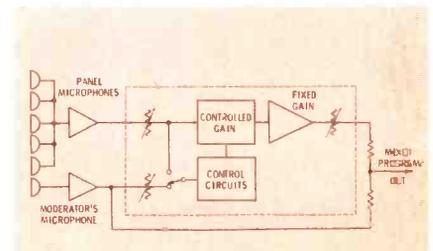


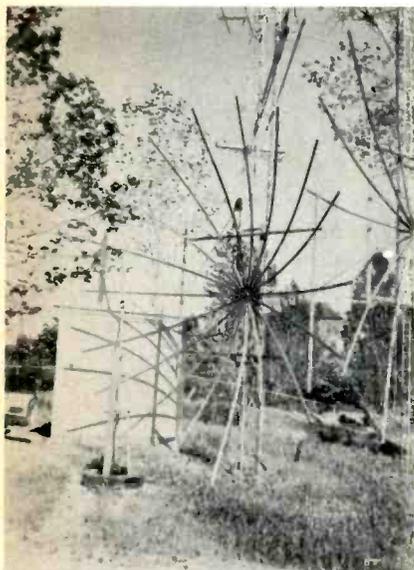
Fig. 6. The voice-controlled fader also may be used in panel-type programs.

A LIMITED-APERTURE CATV ANTENNA

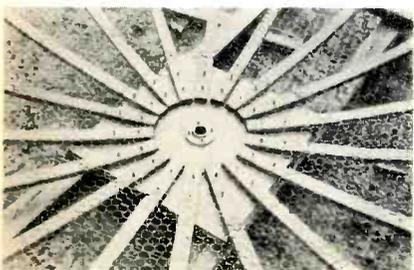
by Robert B. Cooper, Jr.*

Experimental procedures led to the construction of a high-gain antenna of moderate size.

Sophistication of CATV plant and system design has accelerated rapidly during the past few years. In the area of antennas, the evolution of quad-stacked log periodics and the so-called "modified Dew Line" parabolic has been noteworthy.



(A) Overall view



(B) Closeup of center

Fig. 1. Experimental wooden structure allowed field adjustments to be made.

The use of parabolic antennas is not new to broadcasting interests, since most point-to-point communications above 1 GHz employ dish antennas. A common rule of thumb applied to these antennas is to consider that "True parabolic antennas are not effective, and do not exhibit parabolic focal points, unless the antenna has an aperture of at least 10 wavelengths at the operating frequency." Parabolic antennas with a ten-wavelength aperture for various channels in the VHF and UHF television bands would have the following approximate dimensions (based on free-space wavelength and the center frequency of the channel).

Channel 2	— 172 feet
Channel 13	— 46 feet
Channel 14	— 21 feet
Channel 83	— 11 feet

If a ten-wavelength aperture is required for true parabolic perfor-

mance, use of this type of antenna for all but the highest channels (14-83) is impractical for any but the larger CATV systems. However, the experimental results to be described indicate that parabolic reflectors of significantly smaller dimensions can provide useful performance.

The Experimental Designs

The design of a parabolic antenna for reception of a channel-19 transmitter some 97 miles distant was undertaken. The first experimental antenna, shown in Fig. 1, was crude by professional standards, but proved to be flexible enough in construction to allow a large number of field variations and adjustments. This antenna was built with redwood struts and other locally available materials (Table 1) so that techni-

*Senior Engineer, Community Antenna Development Co.

Table 1. Antenna Details

	20' aperture	36' aperture
Focal Length	10'	18'
Struts	18 @ 20°	20 @ 18°
Number & Spacing	12' (unbowed)	20' (unbowed)
Length	1 1/4" sq redwood	2" sq redwood
Material	Three levels —	Four levels —
Eyes	4', 8', 11 1/2'	5', 10', 15', 19 1/2'
Back Plate	2' sq x 1" plywood	2 layers, 4' sq x 1" plywood
Back Frame	2 x 4's, 12' long	2 x 4's, 4 x 4's 12' long
Tower Mount	At three points using 1 1/2" U-bolts thru 1/4" thick, 2" high flat steel strips 2' 6"	At four points, using offset metal mounts to two legs of tower at each of the four mounting points. 4' 0"

Distance "A" (Fig. 2)

cians could easily "take it apart" and "put it back together again" after making design changes on the spot. With this approach, long delays caused by dragging the array back to the lab, retooling, and rebuilding were eliminated. Fig. 2 is a diagram of this 20-foot antenna. Building it required about \$60 in supplies and about twelve man hours.

In the course of development of the 20-foot dish, it was positioned so that it could be rotated manually by nearly 40 degrees. The reflector was mounted on a CATV tower support leg, and a feed-point (focal) antenna mount was developed so that any antenna installed on the mount could be moved forward and backward, and from side to side. In this way, the exact distance from the center of the dish, the precise side-to-side location relative to the center line of the dish, and the exact height above ground of the feed-point antenna could be located for maximum gain. Fig 3 illustrates the simple but effective movable feed-point antenna mount. Our experience with channel 19 indicated the optimum feed antenna for this dish, with a focal length of one-half the aperture, was a four-element, cut-to-channel Yagi (driven element, reflector, and two directors).

With channels 13, 10, 9, 8, and 7 also available at the head end, a four-element Yagi antenna was constructed for channel 13, for which the 20-foot dish was just over 4.33 wavelengths at the aperture. According to the previously mentioned rule of thumb, the antenna shouldn't work, but it did. In fact, the antenna exhibited parabolic tendencies down to and including channel 7, where the aperture was just over 3.6 wavelengths. (Tests were run at low

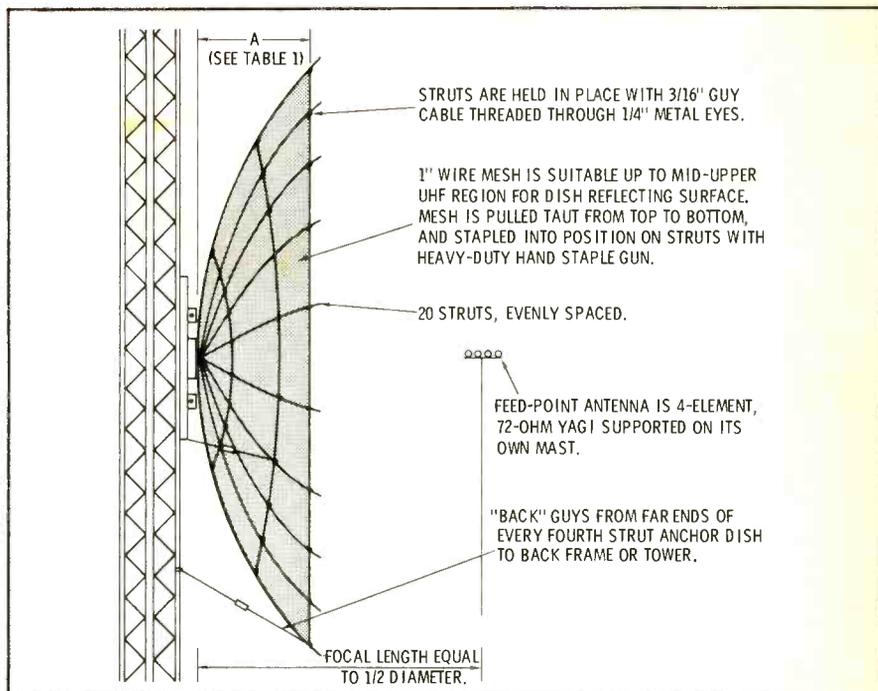


Fig. 2. Physical construction of the experimental limited-aperture parabolic.

band also, but channel 5 showed no focusing effect; channel 6 was not available). Table 2 indicates the performance of the 20-foot dish at channels 7 and 19.

Enthusied by the results with a 20-foot dish, we set out to determine just how large a dish could be built using the same construction techniques shown in Figs. 1 and 2. Again, the primary concern was antenna flexibility in the field. Changes had to be made with the antenna in position, mounted on the support tower.

A 36-foot dish was designed and constructed (Fig. 4). This antenna has an aperture at channel 7 of just less than 6.5 wavelengths, and an aperture at channel 5 of about 2.9 wavelengths.

It should be noted that the 20-foot dish, while exhibiting good focusing at channel 7 (where the aperture was 3.6 wavelengths), could

not be focused at channel 5, apparently because the aperture was only 1.6 wavelengths at that frequency. From this we concluded the fall-off point (where the dish would not exhibit focusing effects) was between the 1.6-wavelength aperture width on channel 5, where the 20-foot parabolic did not perform, and the 3.6-wavelength aperture at channel 7 where it did work.

The 36-foot dish afforded us an opportunity to measure focusing effect down to its cutoff point, and to determine the gain ratio between the 20-foot model and the larger 36-foot model.

The focal point for this antenna was 18 feet in front of the dish cen-

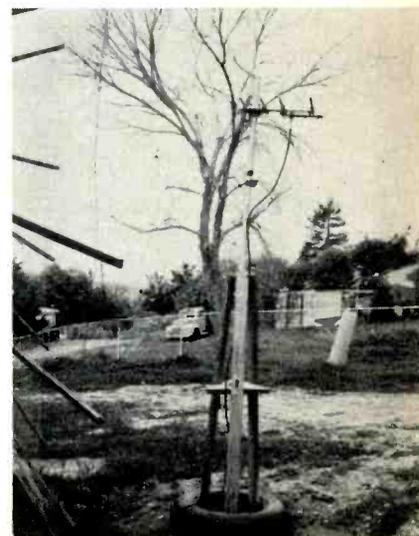


Fig. 3. During development, a movable mount for the antenna is necessary.

Table 2. Antenna Performance

20' Aperture

Channel 7—Signals 3 dB stronger than from four ten-element channel-7 Yagis horizontally stacked, 60 feet above ground. Cochannel interference reduced 90%.

Channel 19—Signals 6-8 dB stronger than from 6-ft dish. Selective tropospheric fading reduced 90%.

36' Aperture

Channel 5—Signals 3 dB stronger than stacked five-element Yagis at 60 feet; power line noise virtually eliminated.

FM—Signals 8-10 dB stronger than low-cost broadband ten-element Yagi, tropospheric fading virtually eliminated.

Channel 7—Gain averages 6 dB higher than for 20-ft parabolic. Cochannel interference further improved over 20-ft parabolic by 5%.

Channel 9—Gain 9 dB higher than four ten-element Yagis, 60 feet above ground.

Channel 19—Signals average 4. db higher from 20-ft dish. Tropospheric fading further reduced to near elimination.

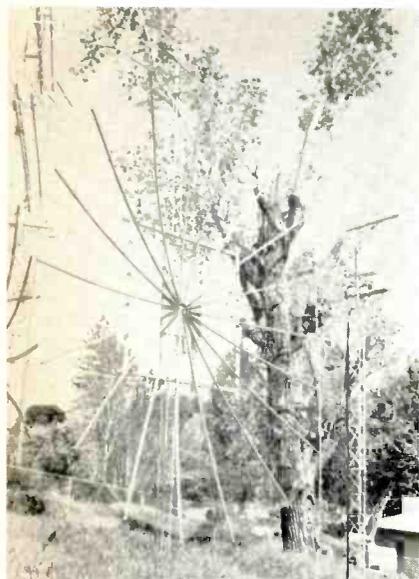


Fig. 4. Thirty-six-foot version was built after smaller design showed promise.

ter, or the equivalent of one-half the diameter. Table 2 also illustrates performance observed with the 36-foot dish.

By trying feed-point antennas for lower frequencies, we observed that down to and including channel 5 (2.9-wavelength aperture) there were definite focusing effects. In fact, at one time three feed antennas were mounted at the focal point; these were a channel 5 array, a combination feed antenna for channels 7 and 9, and an FM Yagi. Tests run at channel 4 (2.5-wavelength aperture) were inconclusive. The antenna showed measurable focusing effect, but not as clearly defined as that at channel 5. The gain was down 5 dB from the channel-5 performance, indicating a relationship (as would be expected) between focusing and signal voltages developed.

Our field tests indicate, then, that (under the particular conditions of the tests) parabolic reflectors with apertures smaller than ten wavelengths at the lowest operating frequency do exhibit focusing effects down to an aperture width of approximately 2.9 wavelengths, and they exhibit gain of a useful nature at those frequencies where there is proper focusing effect.

Antennas in Service

The original objective, reception on channel 19 over a 97-mile path with a ten-wavelength aperture on the design channel, has led to use

Construction Notes

1. Prepare back plate, back frame, and struts. (See Table 1.) All mounting holes in back plate and struts must be drilled. Using a jig for the struts will insure uniformity.
2. Assemble back frame and bolt back plate to frame.
3. With a 20-foot dish, the struts can be mounted at ground level with the frame and plate lying on level ground. (The completed 20-foot dish can be lifted by four men to a vertical position and tower mounted.) The 30-foot or larger dishes should have the back frame and plate hoisted into position and secured on the tower before the struts are placed on the back plate.
4. Mount struts in position. For the 20-foot model, this can be done on the ground. The 30-foot or larger models must have the struts mounted with the back frame and plate in position on the tower. A boom-chair construction truck can be used for this purpose.
5. Staple wire mesh into place. The mesh is run in a single piece (3, 4, or 5 feet wide) from top to bottom in the center of the dish, over the back plate first. At least two men are required, one to staple and the second to hold the netting taut for the stapler as he works from top down.
6. Draw struts taut to the desired curvature. Thread the 3/16-inch guy cable (stranded) through the eye hooks at each of the pulling levels on the struts. Apply pressure to the two ends in each circle with a come-along device, working the two outer circles first. As each inch or so of cable is pulled up, the struts should be checked to insure they are not slipping with the cable. When the struts have the desired curvature for the dish, they should be secured with turnbuckles. The

same process is repeated with the inner circles of 3/16-inch cable. Then check the curvature again, and adjust as necessary. Each strut is checked for accuracy of bow, and those that will not take a parabolic form are removed and replaced with new struts. (Note: Sprinkle the struts for four hours with a light-duty sprinkler [water] just before the bowing process. The struts should then bend without snapping off, and they should set to their new shape as they dry.)

7. Weave lashing wire (.045 inch) around each strut, eye, and circular cable as it passes through the eye, to insure that the struts do not slide on the cable during high winds.
8. Confirm the location of the focal point by moving the feed antenna around in the general area of the predicted point, up and down, forward and back, and side to side. View the results on a field-strength meter. When the point of maximum signal is verified, the feed-point antenna should be connected to a portable test receiver and the signal checked for cochannel interference. In the 36-foot dish discussed, the focal point for channel 7 was at a very precise distance out from the dish and laterally from the axis, but the vertical adjustment was 18 inches wide with very little apparent change in signal voltage developed. Cochannel interference from a second station, however, was twice as severe at one point as it was just six inches above that point; yet, the desired signal was only a fraction of a dB lower at the high position.
9. Make the feed-point antenna permanent. Install a separate tower or support mast rather than attempting to support the feed antenna from the dish itself.

of the parabolic principle for several additional channels. For this purpose, three 20-foot dishes and a 36-foot dish have been constructed. They are being utilized in the following situations:

Placerville — 20-Foot Antenna: Mounted at ground level, this antenna receives channel 12 over a 100-mile-plus mountainous path. The signal level is 3 to 5 dB higher than from a box array of four ten-element Yagis, 70 feet above ground.

36-Foot Antenna: This unit is mounted at ground level and re-

ceives channels 5, 7, 9, and FM over a 109-mile path. **CHANNEL 5**—The gain is 3-dB higher than from stacked (twin) five-element Yagis, 60 feet above ground. Troublesome power-line noise, previously disruptive of signal quality during bad weather conditions, has been greatly reduced. Color is much better. **CHANNEL 7**—The gain is 9-dB higher than from four ten-element Yagis stacked horizontally. Very disruptive cochannel interference from a second channel-7 station has been reduced considerably. **CHANNEL 9**—

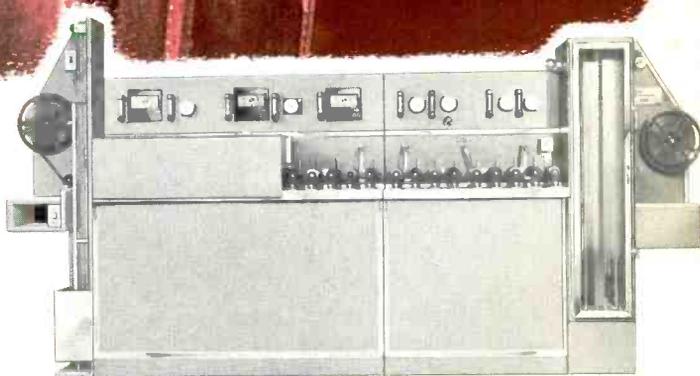
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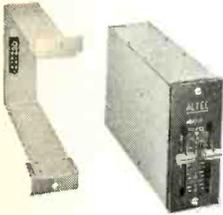
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AUDIO CONTROLS, AMPLIFIERS, MICROPHONES, SPEAKERS FOR BROADCAST AND RECORDING STUDIOS

AUDIO CONTROLS



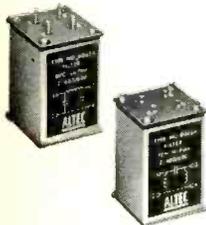
ALTEC 9060A MICROPHONE EQUALIZER provides up to 12-db equalization and 16-db attenuation at 100 Hz and 10 kHz. The controls are precisely calibrated in 2-db steps. Passive L/C/R bridged "T" network circuit. Compact plug-in design. $3\frac{1}{2}$ "H x $1\frac{1}{2}$ "W x $5\frac{1}{2}$ "D.

ALTEC 9061A & 9063A PROGRAM EQUALIZERS provide continuously variable equalization at selectable frequencies: up to 12-db boost at 40 or 100 Hz, and 3, 5, 10 or 15 kHz; 16-db attenuation at 100 Hz and 10 kHz. Passive circuitry. 9061A, for plug-in mounting, features straight-line controls.



ALTEC 9062A & 9073A GRAPHIC EQUALIZERS have completely passive circuitry which induces no hum or distortion at levels from -70 to +24 dbm. The 9062A provides quiet, positive variable boost or attenuation in 1 db steps at seven critical frequencies. The 9073A boosts or attenuates six different frequencies of +8 or -8 db in 1 db steps. Precise slider controls have an accuracy of ± 0.5 db per step, enabling a frequency overlap for an essentially flat response. Escutcheon plates available for rack mounting. 9062A, $3\frac{1}{2}$ "H x 10"W x $5\frac{1}{4}$ "D. 9073A, $3\frac{1}{2}$ "H x $8\frac{3}{4}$ "W x $5\frac{1}{4}$ "D.

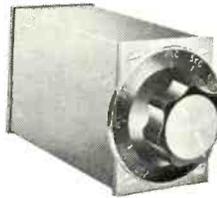
ALTEC 9064A NOTCH FILTER eliminates unwanted narrow-band frequencies with negligible effect on program material. The 9064A is made to your specification with notch frequencies from 50 to 20,000 Hz. Available as single or dual notch filter. 2"H x 3"W x $2\frac{1}{8}$ "D.



9065A FIXED LOW-PASS and 9066A FIXED HIGH-PASS FILTERS provide 18 db per octave attenuation from selected cutoff point. (30-db per octave units also available.) No insertion loss. The 9065A may be ordered to any cutoff point from 50 to 20,000 Hz; the 9066A from 40 to 20,000 Hz. $1\frac{1}{8}$ "H x $1\frac{1}{8}$ "W x $2\frac{1}{8}$ "D.

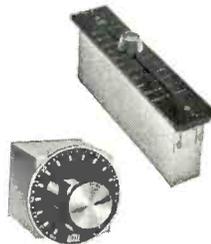


ALTEC 9067A VARIABLE LOW- AND HIGH-PASS COMBINATION FILTER combines the 9068A and 9069A for rack mounting. Rear-mounting input and output terminals normaled thru front panel jacks. $3\frac{1}{2}$ "H x 19"W x $5\frac{1}{4}$ "D.



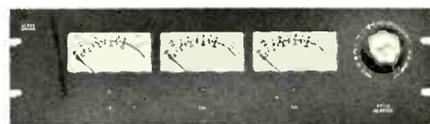
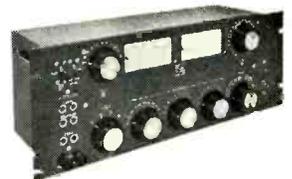
ALTEC 9068A VARIABLE LOW-PASS FILTER AND 9069A VARIABLE HIGH-PASS FILTER provide 18 db per octave attenuation with 10 positions of LF and HF cutoff. With toroidally wound inductances, units may be used in extremely low-level circuitry without noise or hum pick-up. Zero insertion loss. **9068A LOW-PASS FILTER** is 3 "H x $2\frac{1}{4}$ "W x $5\frac{1}{2}$ "D. **9069A HIGH-PASS FILTER** is same size.

ALTEC PRECISION NETWORKS introduce no frequency discrimination or distortion from 0 to 150 kHz. Units include mixers, matching pads, fixed-loss pads, bridging pads, and VU meter extenders in unbalanced "T" and balanced "H" configurations. Networks come in four sizes, are enclosed against dust and dirt, and are available in a wide range of impedances.



ALTEC ATTENUATORS MIXERS, VU EXTENDERS AND STEREO PAN POTENTIOMETERS provide less than 1-milli-ohm contact resistance, lower noise, easier upkeep, and longer life. Choose from more than 300 types, either rotary or straight-line. New rotaries use pure silver dual brushes, independently sprung to eliminate "stumble."

ALTEC 9704A GAIN SET is a precise test instrument for measuring gain, loss, frequency response, and signal level of audio devices. Individual components or entire systems may be measured. Input (send) and output (receive) measurements may be made simultaneously; two VU meters permit simultaneous readings. Impedances are selectable and the set may be used for balanced or unbalanced circuitry. This highly accurate instrument provides a frequency response of ± 0.1 db, 10-50,000 Hz. Distortion is less than 0.2%. All attenuators and meter readings are accurate to ± 0.2 db at any setting. Designed for rack mounting, the set is 7"H, 19"W, $6\frac{1}{4}$ "D.



ALTEC VU INDICATORS provide precise measurement of output levels. 4" meters are designed to meet Bell Telephone Laboratory standards for construction and calibration. Each VU meter is connected to one gang of a calibrated VU extender control which is a bridge-T type attenuator with positions to 1 MW, +4 to 40 VU in 2-db steps, plus OFF. A calibration control is on the front panel. The units are $5\frac{1}{4}$ "H, 19"W for rack mounting. Model 9708A has one meter; Model 9709A has two; Model 9710A has three.

AMPLIFIERS



ALTEC 9470A AMPLIFIER can serve as preamp, line, booster, or program amplifier with no internal changes. All-silicon transistor circuitry delivers 0.5 watt and may operate continuously at 85°C without derating. **Frequency Response:** ± 0.5 dB, 20-20,000 Hz. Less than 1% THD, 20-20,000 Hz, with +27 dBm output. **Noise Level** (unweighted, 10-25,000 cycle band-pass):

equivalent input noise, -127 dBm (input unterminated). **Overload Recovery Time:** 5 microseconds for 100% overload. 3"H x 1 3/4"W x 11"D. Eight fit single 19" rack and feature large plug-in connectors.

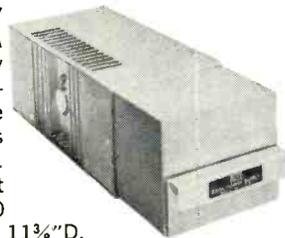
ALTEC 9471A MONITOR AMPLIFIER provides 20 watts of power at less than 0.5% THD, 20-20,000 Hz. Featuring all-silicon transistor circuitry, the 9471A has self-contained power plus additional outputs to supply two Altec 9470A preamps. **Gain:** 75 dB from 10,000 ohm source; 61 dB bridging 600 ohm line. **Frequency Response:** ± 0.5 dB, 20-20,000 Hz. **Load Impedance:** 4, 8 or 16 ohms. Uses magnetically ground transformers to virtually eliminate pickup of external magnetic and electrostatic fields. Convenient plug-in design. 3"H, 7 1/2"W, 12 1/4"D.



ALTEC 9476A MONITOR / CUEING AMPLIFIER is a fixed-gain plug-in unit with 8-watt output (+39 dBm) at less than 0.5% THD, 25-15,000 Hz. The all-silicon transistor amplifier features high gain, low noise and frequency response of ± 0.5 dB, 20-20,000 Hz. **Input Impedance:** 10,000 ohms (balanced). **Source Impedance:** 300 to 10,000 ohms. 3"H, 3 1/8"W, 10 3/4"D.



ALTEC 9550A POWER SUPPLY can power up to fifteen 9470A Amplifiers at full output. Entirely solid-state. External sensing circuit insures that output voltage will remain constant regardless of line voltage fluctuations. Under full 2 amp load, output ripple and noise is only 200 microvolts rms. 3"H x 3 3/8"W x 11 3/8"D.



MOUNTING TRAYS & ASSEMBLIES are available for rack, console, or bench mounting of 9470A and 9550A units.



CONTROL CONSOLE

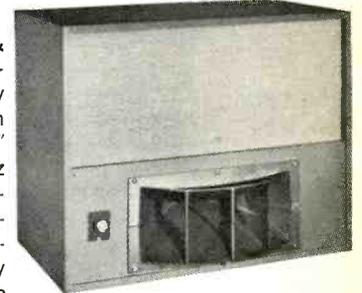
ALTEC 9200A CONTROL CONSOLE is made up of modules you can assemble to your specific requirements. Everything furnished: basic cabinet and hardware (pre-drilled, punched, finished), and Altec amplifiers, controls, accessories as you need them. You end up with a custom console at a fraction of usual costs, both in time and money. Cabinet accommodates up to 27 swing-out strip modules of 1 3/4" and 3 1/2" widths. Each module accepts a variety of pots, equalizers, keys, mixers. Up to 23 Altec plug-in amplifiers fit inside cabinet.

MONITOR & PLAYBACK SPEAKER SYSTEMS



ALTEC A7 & A7-500 "VOICE OF THE THEATRE"® SPEAKER SYSTEMS are recommended for playback in large studios where exceptional projection capability is required. These famous systems provide excellent smoothness from 35-22,000 Hz and are well suited for the most demanding applications. The A7 crosses over at 800 Hz; the A7-500 at 500 Hz.

ALTEC 844A MONITOR & PLAYBACK SPEAKER SYSTEM was designed especially for convenient use in studios. Contains two 12" LF speakers and 800-Hz horn with driver and dividing network. Horn is positioned below the LF speakers so that entire unit may be mounted above the observation window. Provides exceptionally smooth frequency response from 30 to 22,000 Hz. Only 24"H x 31"W x 16"D.



ALTEC 604E SUPER DUPLEX® LOUDSPEAKER is a 15" coaxial of highest efficiency and a superb 20-22,000 Hz frequency range. Offers exceptional smoothness in the all-important mid-range, as well as at the extremes of the audible spectrum. Comes complete with dividing network and may be mounted in Altec utility or furniture-finish cabinets.

MICROPHONES & ACCESSORIES



ALTEC MICROPHONES are available in a variety of types, sizes, and prices. Miniature condenser microphone systems

are available with omnidirectional or cardioid pick-up patterns. Studio dynamics include omnidirectional, cardioid, and selectable-pattern models. Close-talking and several miniature lavalier types are also available. Complete line of mounts, wind screens, and other accessories.



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BUILDING EBS RECEIVERS

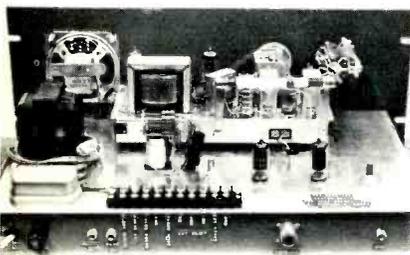
by Charles D. Sears*—Several station-built alarms for EBS application are described.

A problem common to all broadcast stations is providing means for the reception of Emergency Action Notifications and Terminations as part of the station's responsibility under Subpart G of the FCC Rules. Basically, as far as equipment is concerned, the problem reduces to providing a means for monitoring a key station, and alerting the operator when that station's carrier is interrupted. This article presents some practical solutions to the problem.

Vacuum-Tube Alarm With Kit Receiver

This alarm was built for use with an available AM table radio built from a kit (in this case, a Heathkit Model GR-10). This receiver has a circuit with the standard AC-DC five-tube line-up, but it is transformer operated (desirable for reasons of safety) and has provision for an external antenna.

The receiver chassis was removed from the cabinet and mounted on a larger chassis behind a rack panel (Fig. 1). A hole was cut in the large chassis to provide access



(A) Rear view



(B) Front panel

Fig. 1. EBS alarm is designed for use with receiver assembled from a kit.

to the receiver circuitry. (Another approach would be to cut a hole the size of the receiver and mount the receiver flush with the chassis.) The pilot lamp was removed, the speaker was mounted on the rack panel, and the loop antenna was moved to the rear of the radio chassis, where it would not interfere with the variable capacitor. The variable capacitor was disconnected, and a selector switch was installed so that fixed-frequency operation could be obtained. The variable capacitor was connected to the switch so that tunable operation was available if needed. A resistor was added at the ground end of the volume control so that the volume could not be reduced to an inaudible level. A phone jack was installed next to the operator at the console to make it possible to monitor the receiver whenever necessary. A jumper was placed across the receiver power switch, since power is controlled by the alarm. The .05-mfd, 12-volt capacitor originally in the AVC circuit (C1 in Fig. 2) was replaced with a unit of larger voltage rating, because the alarm circuit can place a greater voltage on this capacitor than the original rating.

A coaxial connector was wired to the external-antenna terminals of the receiver so that a long-wire antenna could be used. This type of antenna was necessary because the receiver-alarm was to be mounted in a metal rack, and the rack shields the loop antenna. The long-wire antenna is mounted on the building roof, is untuned, and is fed through the center conductor of the coaxial cable. Sufficient signal was obtained by this means in the subject installation; a tuned antenna can be used if the noise level is high, or if the signal level from the desired station is low.

A separate power supply was chosen for the alarm because the receiver transformer could not sup-

ply the extra current without running too close to its ratings. Also, a 6.3-volt supply was required for filament voltage and for the alarm.

A resistor sensitive to current was installed in the main power line to both units. As a result, they operate below the normal line voltage, and longer tube and parts life is anticipated. A 10-ohm, 2-watt resistor is installed in series with each pilot lamp for the same reason. The alarm power supply uses silicon rectifiers rated at 1 ampere and 800 volts PIV; the low voltage and current demands on the supply, together with the high rating of the rectifiers, should provide long life.

Circuit Operation

A negative voltage from the AVC bus is applied to the control grid of the first 6AU6 in Fig. 2; this tube is cut off when a signal is present. The AVC voltage that causes cutoff is determined by the sensitivity control, which provides an adjustable, positive voltage to set the operating point by counteracting the negative voltage from the bus. This effectively reduces the sensitivity of the receiver so that only strong signals will keep the alarm relay actuated. The sensitivity control must be set after the antenna is installed.

When the first 6AU6 is cut off, its plate current is low, and therefore its plate voltage is high. Because the two 6AU6 stages are direct-coupled, the second tube conducts, and the relay is actuated. When the monitored signal is removed, the negative voltage is removed from the first 6AU6, this tube conducts, its plate voltage is lowered, and the voltage on the grid of the second 6AU6 drops. This lowers the plate current through the second tube and the relay coil; the relay is released, and the alarm sounds.

The dropout of the relay is delayed by the capacitor-resistor com-

bination across the relay coil. This provides a delay of approximately 2 seconds to prevent alarm operation when there is momentary loss of the monitored signal.

A holding contact on the relay causes the alarm to continue to sound after the monitored station has returned to the air. This contact grounds the grid of the second 6AU6, keeping it at a potential below that of the cathode and preventing the tube from conducting. The relay can be reset, when a signal is present, by opening this ground through the internal monitor switch or through an external switch.

The audio output of the receiver goes through the alarm relay to the speaker. When a signal is being monitored, the receiver is silent. When an alarm is received, the speaker is activated. It is possible to listen to the receiver without tripping the alarm by operating the monitor switch.

The audio output on the barrier strip permits external monitoring. Two outputs are provided. The RECEIVER AUDIO is connected directly to the output transformer and pro-

vides audio at all times that the receiver is on. The ALARM AUDIO is connected in parallel with the receiver speaker and provides audio only when the alarm relay is tripped (or the monitor switch is in the "speaker on" position). This arrangement is to provide alarm audio to another room if needed.

Construction Notes

The amount of resistance added at the ground end of the volume control depends on the antenna used and the signal available. In the unit described, a variable resistor was installed behind the panel so that this value could be adjusted for the desired minimum level (Fig. 3).

The variable tuning capacitor was disconnected from the rest of the circuit, and a 2-pole, 6-position rotary switch with 60° indexing was installed on the front panel as close to the variable capacitor as physically possible. Four trimmer-type capacitors were mounted directly on the switch to provide oscillator and RF tuning for the two fixed frequencies. The variable ca-

pacitor was connected to the third position of the switch, so that if both selected stations were off the air, another station could be monitored. Only three positions of this switch are used on this unit, although more could have been used. Fixed tuning of this type reduces the danger of mistuning by the operator.

In the original unit, 50-380 pf capacitors were used for all trimmers, although units in the 10-180 pf range probably would be a better choice for the oscillator section. The large capacitors may be set to the desired station by this procedure: Run the screw all the way out; this will place the oscillator in the high portion of the band. Slowly turn the screw inward and listen to the stations until the desired station is found. If trouble is experienced in identifying the stations at the high end of the band, the setting of the trimmer also can be determined by tuning a signal generator slowly across these frequencies.

A tip jack was placed in the AVC circuit to facilitate receiver tuning adjustment. The B+ of both the

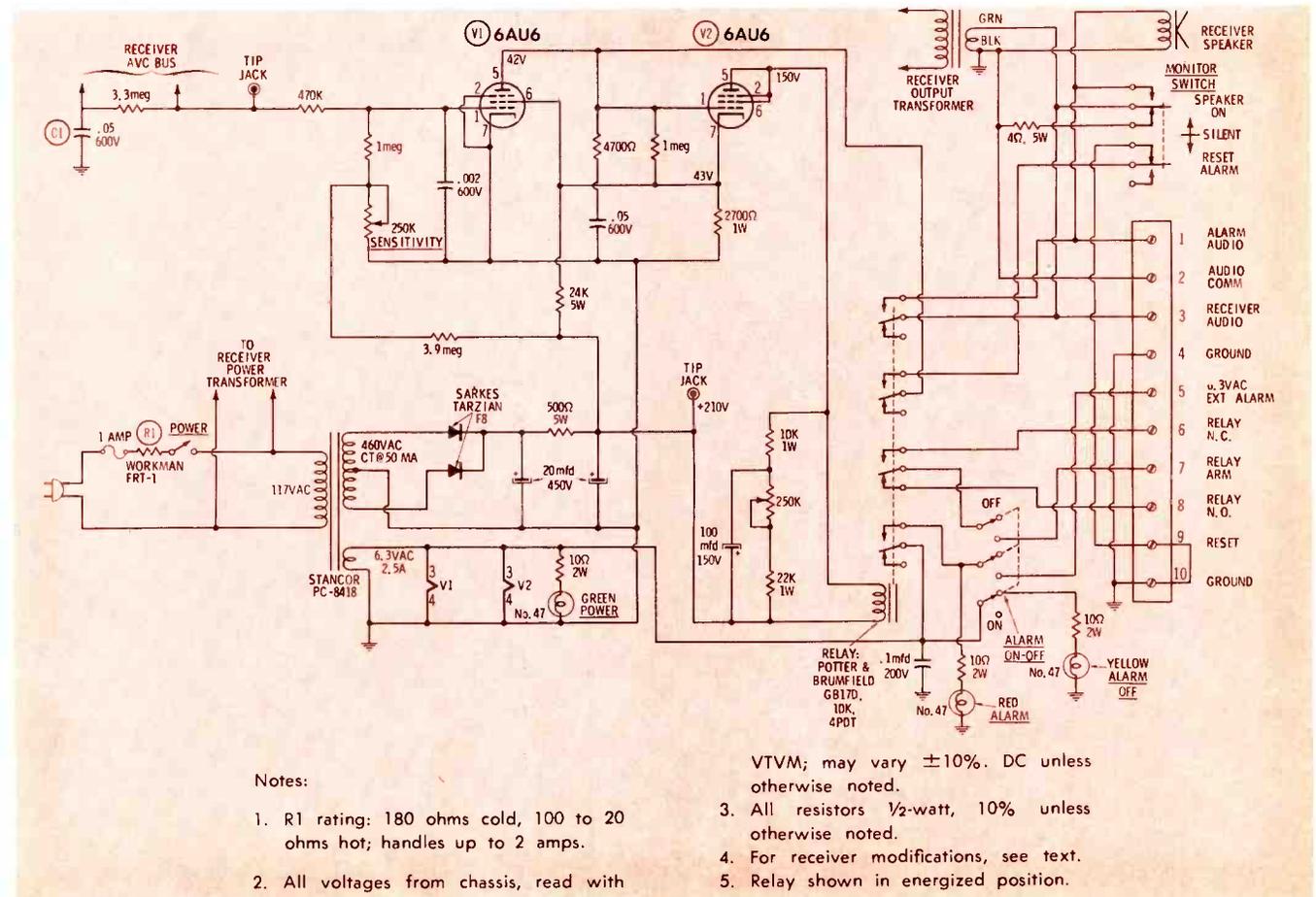


Fig. 2. Schematic of alarm circuit and its connection to receiver. A modification to tuning is described in text.

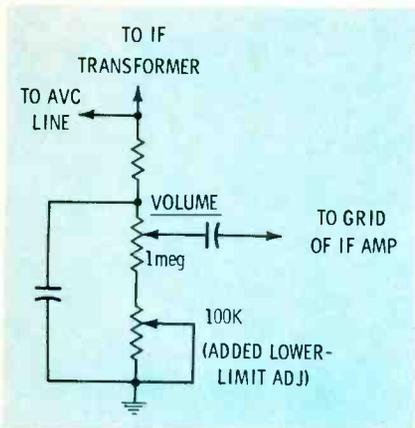


Fig. 3. Variable resistor is added to control to insure volume is audible.

receiver and the alarm also was brought out to tip jacks for easy maintenance.

If a kit receiver is used, the kit should first be completely assembled according to the instruction book. It should be operating properly before any modifications are made. Also, inexpensive multiband receivers are available and could be used for this purpose. The added feature of these units is that the receiver may be used for WWV time checks when an EBS station is not being monitored.

Operating the EBS Receiver

If power for the equipment rack containing the EBS unit is controlled by one switch, leave the EBS receiver power switch in the "On" position at all times. In this way, the receiver goes on when the rest of the equipment does and is not forgotten. An alternative is to connect the unit to the filament circuit of the transmitter.

As the receiver warms up, the monitored station will be heard. The volume control should be set for a comfortable listening level. (The control will not turn the audio all the way down, since it has been



Fig. 4. Alarm uses thyatron, clock.

modified to provide some audio at all times.) After about 10 to 15 seconds of listening, to make sure that the desired station is in normal operation, push the MONITOR switch down to "Reset Alarm." The red light (EBS ALARM) should go out and the speaker should go off. At this time, place the ALARM ON-OFF switch in the "On" position; the yellow light (ALARM OFF) should go out. (The yellow light serves to remind the operator to turn the alarm on.)

To listen to the monitored station without tripping the alarm, place the MONITOR switch in the "Speaker On" position. When finished listening, place the MONITOR switch in the "Silent" position.

The proper station should be monitored at all times, with the selector switch set on this station. The alternate station should be placed on the other fixed position, and the variable tuning should be used only in an emergency.

Thyatron Alarm With Clock

This circuit uses a thyatron tube, a clock timer, and a communications receiver. Fig. 4 shows that the receiver has been modified for rack mounting, and the alarm is mounted directed below the receiver on a 3½-inch bathtub chassis provided with a front panel to support the clock and indicating devices. Fig. 5 shows how the alarm circuit and receiver are integrated into the system. All audio going through the alarm is at a level of about -40

dBm; an impedance of 500 ohms, balanced, is maintained throughout.

The Circuit

Fig. 6 shows the modifications to the receiver (a Hammarlund HQ-140-X). A pickup point was added to provide AVC voltage for the alarm circuit. The pickup point is after the MAN-AVC-BFO switch; this arrangement makes it possible to trip the alarm for testing when desired. The receiver output stage was deleted, and the original output transformer connected to the first audio stage, because the audio goes to the monitor amplifier, which has a low-level input. The phone jack and associated wiring in the receiver were eliminated; the secondary of the transformer was made into a balanced configuration; and a new balanced line was run to the terminal strip. Thus a 6-ohm balanced output is fed to the alarm relay.

The receiver antenna input circuit was modified by adding a coaxial connector. In the original installation, it was necessary to use a coaxial line to reduce the noise pickup from the fluorescent lights in the building, and to reduce pickup from the transmitter.

Fig. 7 shows the alarm circuit, which differs in several respects from the design described previously. This circuit uses 115 volts AC on the control tube; the only DC present is that used to operate K2 for switching the audio. The AVC voltage from the receiver holds the 2050 tube (a thyatron) cut off. When

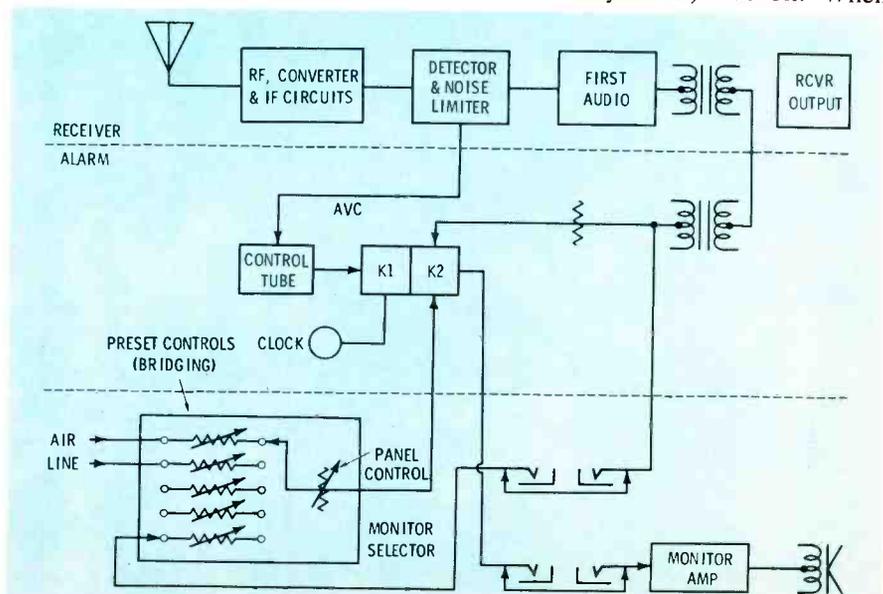
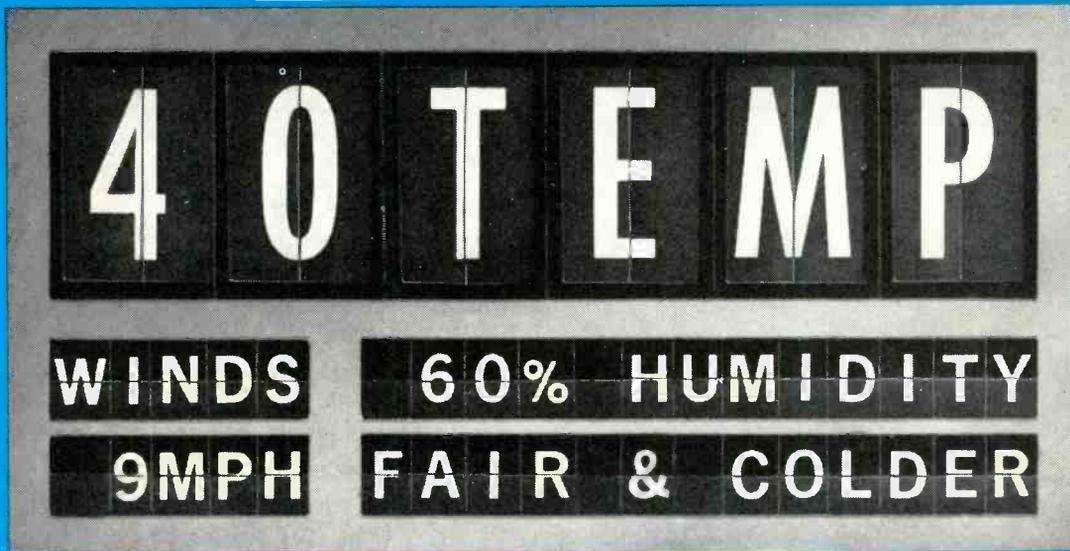


Fig. 5. Diagram shows use of alarm receiver with monitor system in station.

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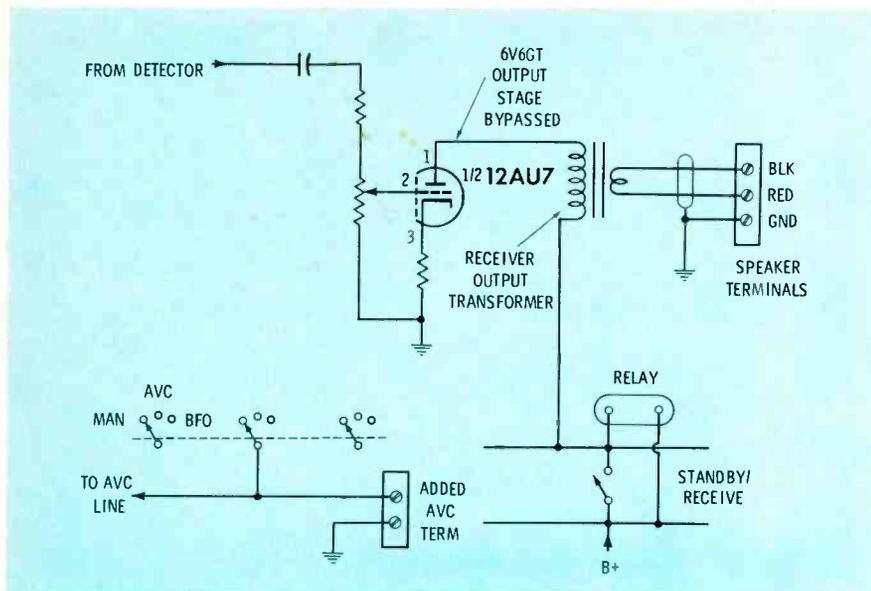


Fig. 6. Modifications to communications receiver used with system of Fig. 5.

this voltage becomes less negative than -4 volts, the 2050 conducts, the relays operate, the clock stops, the neon lamp lights, and the monitor-amplifier input is switched to the output of the EBS receiver. The upper contacts of K1 hold the relay energized until the reset button is pushed; thus the alarm is held on even though the monitored station has returned to the air. A resistor-rectifier-capacitor combination provides a delay for relay K2.

The power transformer has a primary winding with two separate halves. One half of this winding is used for the primary, and the other half is used for the high-voltage sec-

ondary. In this circuit, the transformer runs well within its ratings.

The 2.2-meg resistor in the grid circuit of the 2050 is used for isolation, to keep the tube from loading the AVC circuit. The transformer in the line from the EBS-receiver output is to match the 6-ohm output to the 500 ohms used throughout the rest of the station system. The transformer is a standard line-to-voice-coil transformer; a quality transformer is not needed because the signal is not to be rebroadcast. The 500-ohm side of the transformer has a parallel connection to the patch panel so that the audio can be used where needed; also, the receiver can

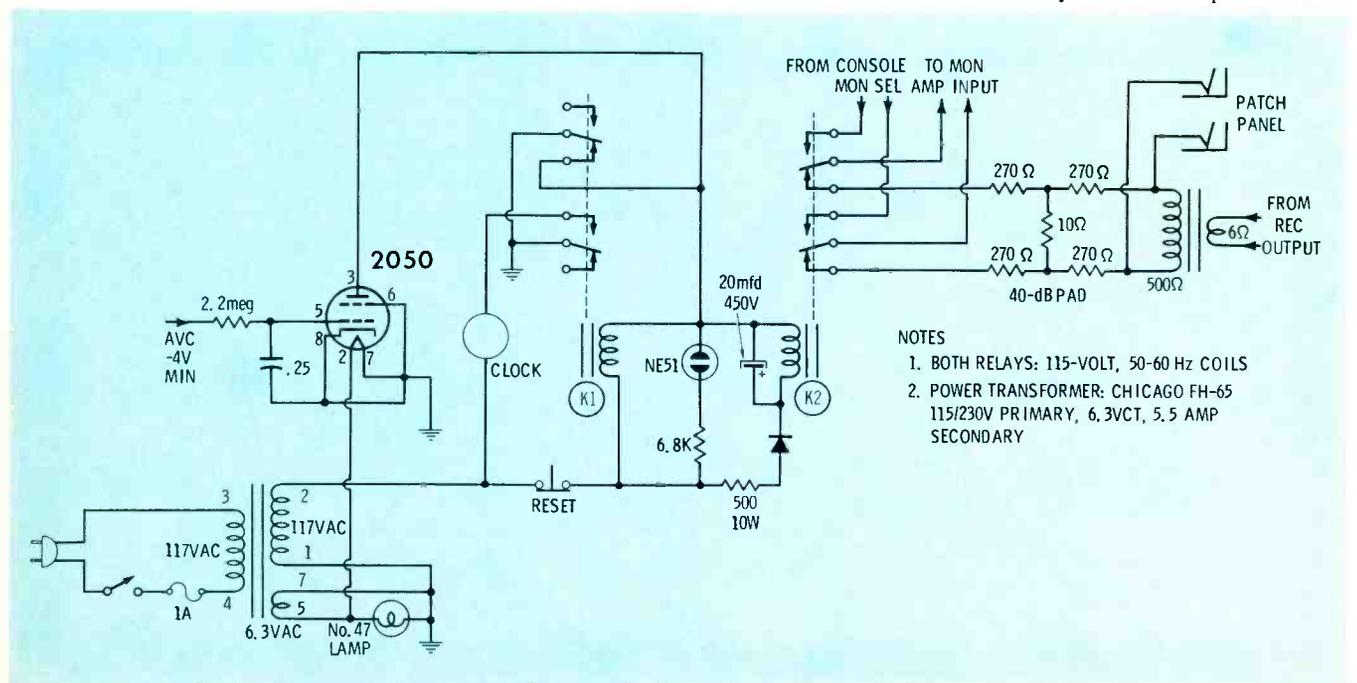
be listened to without tripping the alarm. The pad further reduces the audio to the level necessary to feed directly into the low-level input of the monitor amplifier.

The clock on the panel is a small timer such as is used in clock radios. It normally runs, and is set to correspond with the station clock. When an alert is received, this clock stops until the relays are reset, thus indicating the time of the alert.

Operating Notes

Some hum pickup is noticed when an alarm is being received, but this makes the alarm audio readily distinguishable from the program audio. At the station using the original unit, the receiver audio is normally kept louder than the program audio. The monitor amplifier is rack mounted beneath the receiver, and has its own level control that is normally left in one position. The normal monitoring level is set by a control at the operating position. In this way, no matter how the monitor selector and level controls are set, the alarm audio is received at a constant level.

It is important to note that this circuit is not failsafe; that is, if the control tube or the relays fail, the alarm will not sound. The circuit does not depend on the receiver for power, however, so any failure of the receiver will sound the alarm. Also, the system interrupts the nor-



NOTES

1. BOTH RELAYS: 115-VOLT, 50-60 Hz COILS
2. POWER TRANSFORMER: CHICAGO FH-65 115/230V PRIMARY, 6.3VCT, 5.5 AMP SECONDARY

Fig. 7. Schematic diagram of the thyatron EBS alarm unit. No DC power supply is required for this alarm circuit.

mal monitoring as long as the alarm is being received. At the original installation, at a TV transmitter, program switching is not a normal function of the operator, so the interruption does not cause the problems it would in a studio control room.

This particular alarm circuit does not have a sensitivity control; the sensitivity is set with the RF gain control of the communications receiver. If it is desired to use the alarm with a regular AM broadcast receiver, a potentiometer may be placed in the AVC-pickup line (Fig. 8) to reduce the voltage applied to the thyatron. The pickup point for the AVC voltage in most receivers is across the volume control, and the impedance of the circuit at this point is normally a maximum of 1 megohm. Placing a 5 megohm (minimum) potentiometer across this control does not adversely affect the value of AVC voltage that can be

set for optimum negative voltage on the 2050 tube.

Alarm Using Triodes

The circuit in Fig. 9 is a modification of one given in an FCC information sheet titled "Conelrad Alarm" and dated June 23, 1958.

The Circuit

The negative voltage from the receiver AVC bus controls the first section of the 12AT7; conduction of the second section energizes the relay when a sufficiently strong signal is present. This provides fail-safe operation, in that if the 12AT7 or the relay coil fails, the alarm will sound. A time delay is fixed by the capacitor across the relay coil; this should be about 3 seconds to allow the alarm to remain in its normal position during short carrier breaks, yet respond to complete failures and to the desired tests and alerts.

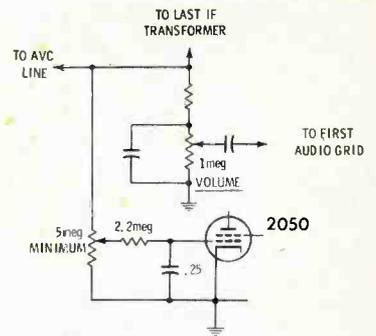


Fig. 8. Potentiometer reduces voltage; amount of AVC loading is tolerable.

When an alert is received, the alarm lamp on the panel lights, and the speaker circuit is completed. In the original unit, a door bell was connected to the external-alarm terminals. The arm of the relay contacts for the external circuit is connected through a switch which cuts off the bell when needed. A panel light comes on when this switch is in the off position, to remind the operator that the bell is

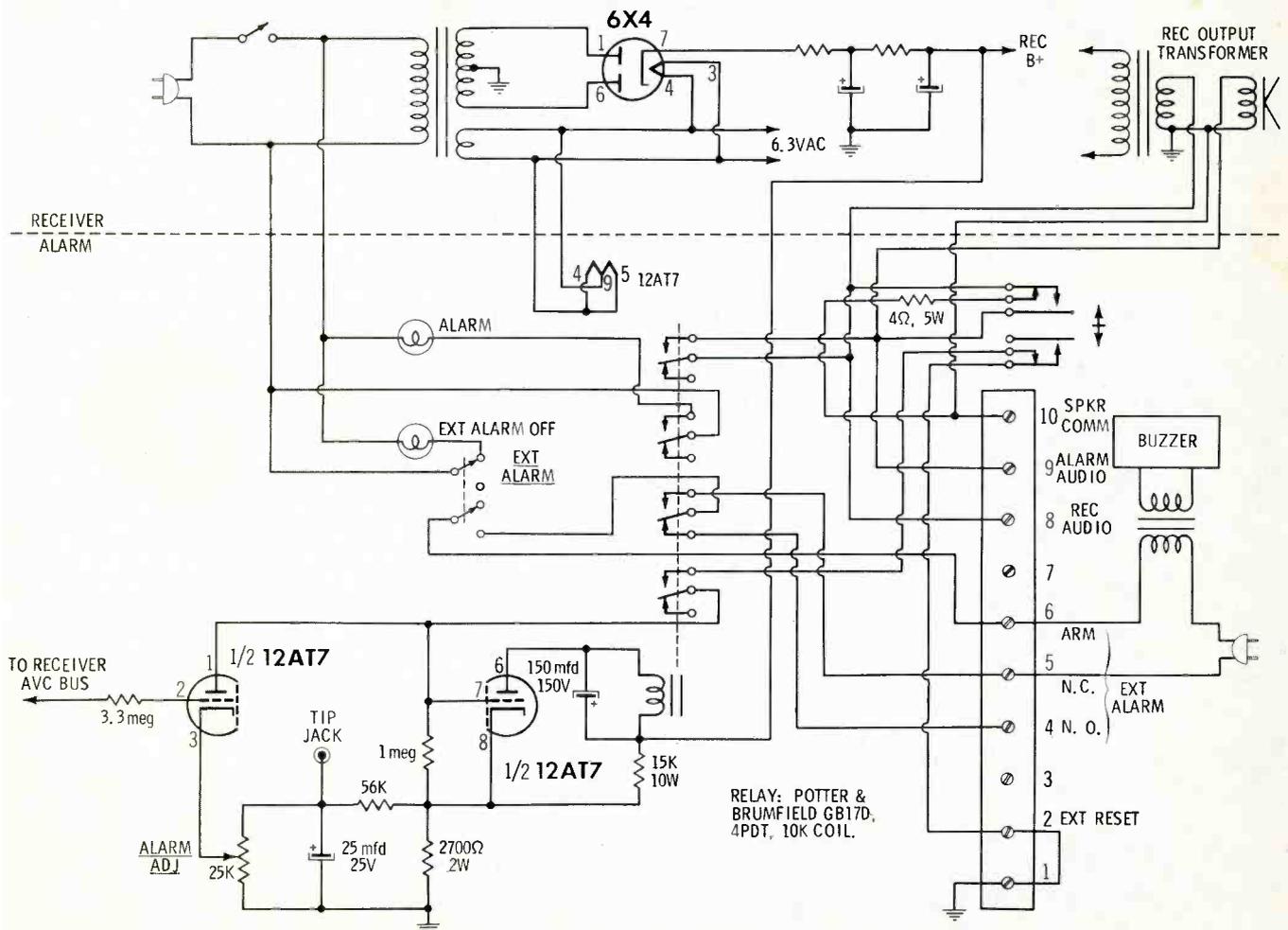


Fig. 9. Alarm circuit using twin triode derives its power from the companion receiver; failsafe feature is included.

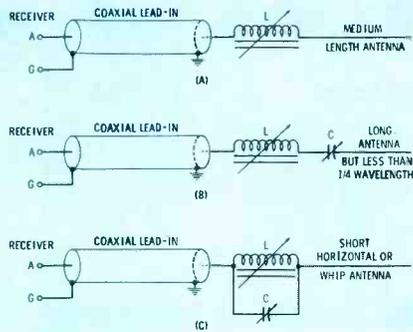


Fig. 10. Methods of connecting antennas through a coaxial transmission line.

disabled. If the alarm, receiver—or almost anything in the receiver—fails, the bell will ring, because it receives power from a separate outlet. Any type of external alarm may be used as long as the ratings of the relay are not exceeded.

The audio output of the receiver goes through the relay and a switch that provides either silent or aural monitoring. The other half of the switch is used to reset the relay when the station has returned to the air.

The audio output is available on the terminal strip either directly from the receiver or controlled through the relay and switch. Power for the alarm is obtained from the receiver. The B+ obtained in the original installation was about 290 volts; the voltage should be in this range, but does not seem to be critical.

An external reset switch can be connected between terminals 1 and 2; a jumper is required if an external switch is not used. Holding either the panel or external reset switch (if used) open for 1 to 2 seconds resets the alarm.

Set-Up Procedure

Using a VTVM, tune the receiver to the desired station. Connect the VTVM to the ALARM TEST tip jack (about 15 volts positive). Turn the ALARM ADJ control fully clockwise. Reset the alarm (with the panel control), and short out the antenna. The voltage should drop to about 10 volts. Adjust the ALARM ADJ control to a point just before the voltage rises. This adjustment must be made before the relay releases; the alarm relay may have to be reset several times before correct adjustment is achieved. The relay

will release in 2 to 3 seconds. If the ALARM ADJ control is increased too far, the relay will not release. About 1 volt positive on pin 3 (cathode) of the 12AT7 is the usual reading and seems to be the best operating point.

The adjustment of the sensitivity control is somewhat critical. The relay must hold when the receiver is not tuned to a signal. Adjustment too far in one direction will cause false alarms when the signal fades, and adjustment too far in the other direction will prevent the alarm from operating upon the receipt of a real alert, especially if there is considerable background noise.

Antenna Coupling

Most receivers in broadcast stations are located in racks, and therefore are shielded. For this reason, an external antenna is a must for most locations. The following notes on coupling the antenna to the receiver are from an FCC information sheet dated April 26, 1957.

The signal-to-noise ratio is a major factor in determining the reliability of an alarm receiver which is designed to operate when the carrier of the key station is interrupted. If the background noise is too high, the AVC voltage may not drop low enough to operate the alarm when the key station goes off the air. Local noise may be reduced by connecting a coaxial-cable lead-in between the antenna terminals of the receiver and an antenna erected in a quiet location away from the source of interference. However, the coaxial cable may reduce the desired signal as well as the noise to the extent that there will be little net gain.

The loss of signal through the coaxial cable will be minimum when the impedance of the open-wire antenna is the same as that of the coaxial cable, which is between 50 and 75 ohms. The impedance of an open-wire antenna is minimum when its length is equal to a quarter wavelength of the received signal. In the broadcast band, this varies from 456 feet at 540 kHz to 154 feet at 1600 kHz. Since it is often inconvenient or impossible to erect antennas of this length in the space available, shorter ones may be used if the electrical length is made equal to a quarter wavelength of the received signal by inserting an inductive reactance between the open wire and the coaxial lead-in.

Experiments were conducted using a receiver tuned to a distant station on 1260 kHz; a coaxial-cable lead-in consisting of 53 feet of RG 29/U cable connected the receiver and an open-wire horizontal antenna. A standard ferrite antenna coil with an adjustable iron core

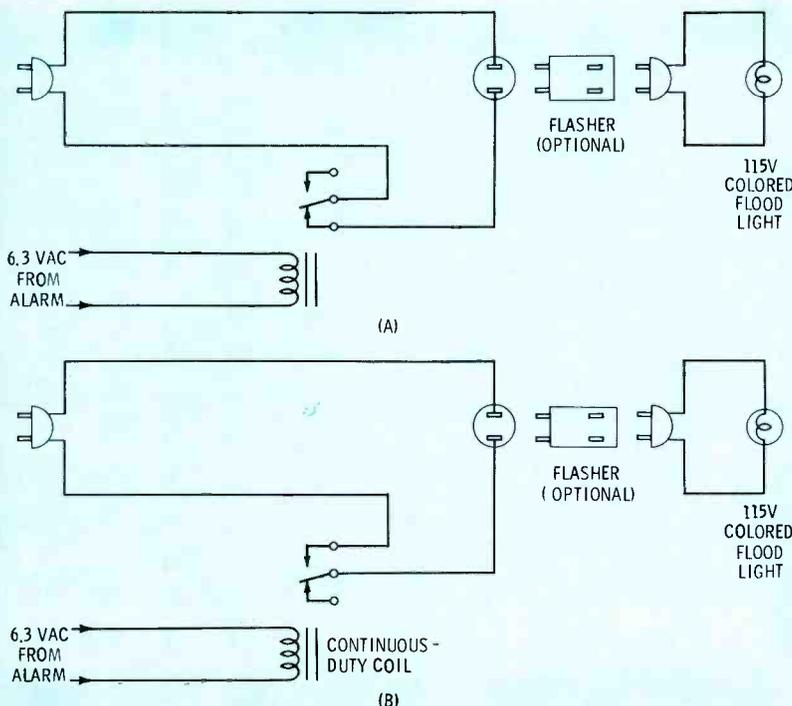


Fig. 11. Floodlight, with flasher if desired, serves as inaudible indicator.

was inserted between the coaxial cable and the antenna (Fig. 10A). The AVC of the receiver was measured with a vacuum-tube voltmeter.

With a 30-foot antenna, maximum AVC was obtained by adjusting the inductance of the ferrite coil near its maximum value. With a 90-foot antenna, maximum AVC was obtained with the inductance of the coil reduced to near its minimum value. With the antenna length increased to 160 feet, the minimum inductance was not low enough, but the inductive reactance was decreased and a peak AVC voltage obtained by adding a 410-pf capacitor in series with the minimum inductance of the coil (Fig. 10B). A peak AVC, at a slightly lower value, also was obtained with the 160-foot antenna by increasing the inductance of the coil to its maximum value and reducing the capacitor to 63 pf.

With the antenna reduced to 16 feet, the maximum inductance of the coil was not large enough, but the inductive reactance was increased and a peak AVC voltage obtained by adding a 19-pf capacitor in parallel with the maximum inductance of the coil (Fig. 10C). Peak AVC, at a lower value, was obtained by reducing the inductance of the coil and increasing the capacitance to 180 pf. With the antenna reduced to 8 feet, using the maximum inductance of the coil, the parallel capacitance was increased to 31 pf. A mica trimmer capacitor, shunted by a small fixed mica capacitor when necessary, was used either in parallel or in series with the ferrite antenna coil.

Increasing the length of the antenna increased the AVC voltage in all cases. The shorter the antenna, the more effective was the coupling circuit. If a series circuit is used, the inductance should be minimum and the capacitance should be maximum, consistent with the values of the components available. If a parallel circuit is used, the inductance should be maximum and the capacitance should be minimum.

Grounding the shield of the coaxial cable at the antenna end increased the AVC voltage when the line was properly coupled to the antenna, but decreased the AVC voltage when the line was connected directly to the antenna. When the shield was grounded, the tuning adjustment was very critical, but when the shield was open, the tuning adjustment was rather broad. It would appear that grounding the shield of the coaxial cable at the antenna end would reduce the amount of signal picked up by the lead-in.

Indicator Devices

An indicator device is needed to attract the attention of the operator on duty. When the indicator is located in the same room with a microphone, an audible alarm could go over the air. Since this is not desirable, a large light is the most logical device to use.

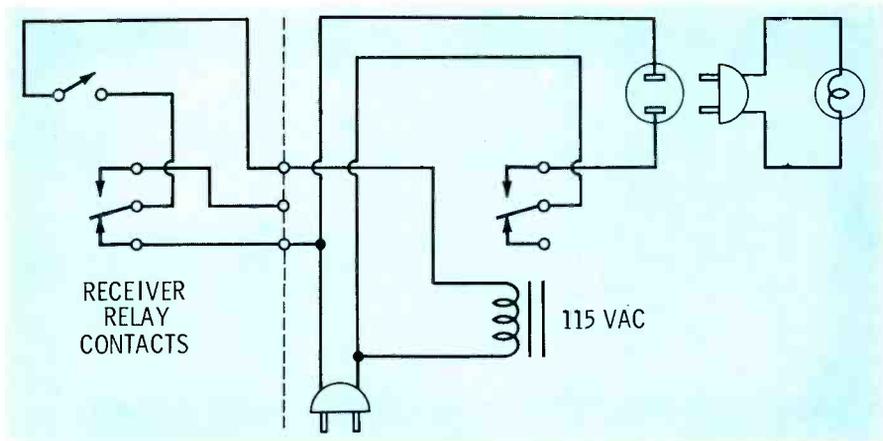


Fig. 12. Arrangement for use with alarm having external-indicator contacts.

Fig. 11A shows the connection of a flood light to an EBS receiver alarm circuit. When the alarm operates, its relay makes 6.3 volts AC available on the terminal strip; this controls a relay which completes the circuit to the light. A flasher may be used if desired. The flood light may be mounted, for example, on a rack, shining toward the control console. A colored lamp is desirable for contrast with the room lighting.

In Fig. 11B, the alarm relay has been modified to provide 6.3 volts AC when *not* receiving an alarm, and the lamp relay is a continuous-duty type which holds the light off until an alarm is received. This is a failsafe circuit; if the receiver fails, the relay fails, or the receiver is turned off, the lamp will be lighted.

If the EBS receiver has contacts for an external alarm indicator, the circuit in Fig. 12 may be used. This circuit may also be used to apply voltage to the relay coil only during an alarm condition by an arrangement similar to that shown in Fig. 11A. The relay that operates the lamp may have any desired coil voltage, if a transformer is used to supply it.

For the circuits in Figs. 11 and 12, the 115-volt AC should be obtained directly from the controlled circuit in the rack, and not through the receiver; then turning off the receiver does not turn off the alarm. Both the receiver and the alarm can be disabled for the normal off-air times by means of the rack master power switch.

Final Comments

Almost any AM broadcast receiver will function as an EBS receiver with the proper alarm circuit added. If an AC-DC receiver is chosen, use an isolation transformer if the alarm circuit has a separate power transformer. As an alternative, select a transformer that has 115-volt and 6.3-volt secondaries for use as shown in Fig. 13.

The alarm circuits described need not be used with the receivers with which they are shown; they can be used with almost any receiver.

These alarm circuits can be used with both AM and FM receivers to indicate loss of the station carrier. This is particularly useful when the transmitter is located at a site separate from the studios. ▲

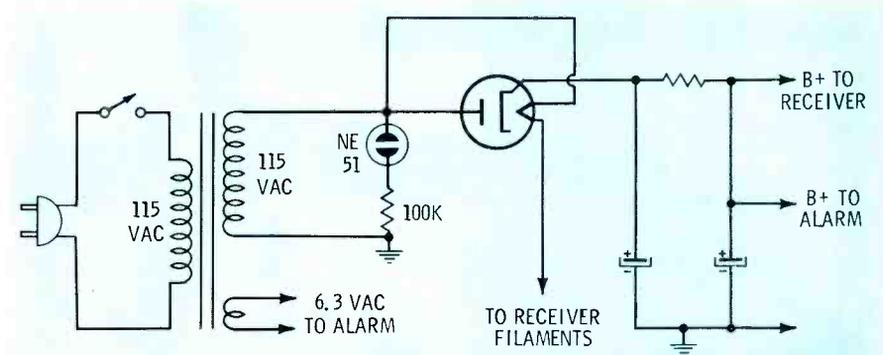


Fig. 13. Power-supply modification for safe use of AC-DC radio with alarm.



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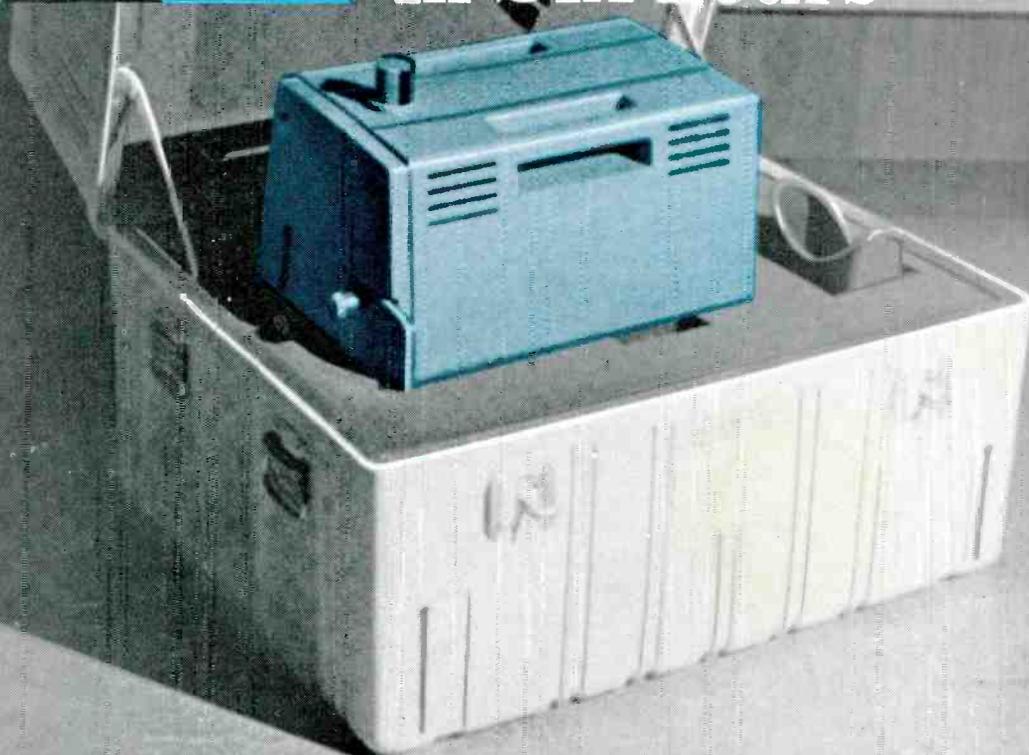
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Circle Item 17 on Tech Data Card

January 1968

We interrupt this magazine to bring you...

Late Bulletin from Washington

by Howard T. Head

Commission Studies Land-Mobile Reports

A joint Industry-Government Advisory Committee has filed with the Commission an 800-page report, culminating a three-year study of technical measures to improve the efficiency of operation of the land mobile radio services. These services, including fire, police, and a host of other business and industrial users, occupy various frequency bands between 25 and 890 MHz.

The Land Mobile Advisory Committee was set up to study present conditions on the existing channels and to recommend measures which might be undertaken to provide some relief from existing congestion. The report submitted to the Commission deals with such matters as channel splitting, interservice sharing, and modes of operation such as multiple-channel random-access techniques. The report concludes, however, that improvements available through these means are limited, and that in the long run additional frequencies must be reallocated from other services. 512 MHz of the band between 25 and 890 MHz is currently allocated to FM and television broadcasting.

In the meantime, tests to determine the feasibility of sharing the VHF television broadcast channels with base stations in the land mobile service have been concluded (May 1967 Bulletin). Reports covering the findings of the tests are now in preparation. Preliminary data indicate that these final reports will conclude that sharing of television broadcast channels is technically feasible, if appropriate limitations on operation of land mobile base stations are established.

New Ground Rules for Presunrise Service Authorities

As expected, the Commission's action in providing for Presunrise Service Authority (PSA) for standard broadcast stations has brought about a rash of complaints (see October 1967 Bulletin), including a number of lawsuits against the Commission by unhappy licensees. One of these suits has led a U.S. District Court to order the Commission to re-examine the criteria for PSA operation by fulltime stations.

Under the original Presunrise Service Authority Rules, both daytime-only and full-time stations could request PSA operation, if required protection to foreign stations would be provided. The new Rules, however, limit both categories of stations to a presunrise power not to exceed 500 watts employing daytime facilities, even where higher power might have been permitted without interfering with foreign stations.

Under the Court order, the Commission is now required to determine whether higher powers might be employed prior to sunrise by full-time stations. If foreign interference criteria are met, full-time stations may employ their daytime facilities with power up to the licensed power. Presunrise operation cannot begin earlier than 6:00 A.M. Reduced power is permitted where required to meet interference considerations.

Daytime-only stations are not affected by the new ruling.

Field-Strength Measurements Rejected in CATV Case

In a case involving required carriage of a Bristol, Va. television broadcast station by a CATV system in Bluefield, W. Va., the Commission has rejected a showing based on field-strength measurements on the television broadcast signal. Bluefield is within the predicted Grade B coverage contour of the station, and in the absence of any showing to the contrary, the CATV system would be required to carry the station.

Field-strength measurements showing a signal below Grade B level in Bluefield were submitted by the system. These measurements, however, were rejected by the Commission on the ground that they were insufficient to establish the location of the Grade B contour of the television station. The Commission stated that the contour location, rather than local measurements in individual cities, would determine the applicability of the station-carriage Rule.

Although the ruling leaves the door open to the submission of field-strength measurements in future cases, it provides no guide lines as to the type of measurements which the Commission will consider acceptable for CATV or other purposes. Proposals urging the Commission to establish such procedures have been pending for some time (see June 1967 Bulletin).

Does Television Interfere with Computers?

A Washington, D.C. consulting engineering firm has asked the Commission for authority to conduct tests in the Minneapolis-St. Paul area to determine whether strong RF fields in the television broadcast bands may have any deleterious effect on the operation of high-speed digital computers. A Commission examiner recently recommended the establishment of an antenna farm area in the Twin Cities at a location immediately adjoining the plant of a large computer center.

Little, if any, information is generally available about the effects of high-intensity RF fields on digital computers, although some work along this line has been done by the Department of Defense. These reports, however, are classified and not available to the general public.

Short Circuits

The House of Representatives has passed a resolution asking the Commission to delay for at least a year any further consideration of the introduction of Pay-TV. . . A 24-channel CATV system, believed to be the nation's first, is under construction at Levittown, Pennsylvania. . . Progress continues to be slow in negotiating a new AM treaty with Mexico; the present protocol expires on December 31, 1967, leaving the two countries without a standard-broadcast treaty. . . The Commission has proposed to permit subaudible telemetering (November 1967 Bulletin). . . FCC Commissioner Robert Bartley has proposed that the Commission's CATV Task Force be given authority to grant distant-carriage waivers to CATV systems in the smaller communities; a full hearing is now required for all such requests.

Howard T. Head. . . in Washington



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Circle Item 18 on Tech Data Card

CHECKING BASE-AND SAMPLING-CURRENT RATIOS

by Melvon G. Hart*

A method is suggested for keeping track of these vital parameters.

The following is a method that may be used to assure that base-current and sampling-current ratios of a directional antenna are maintained within the FCC limits of $\pm 5\%$.

A chart showing the permissible base-current limits is posted next to the base-current meter in each tuning house except the one at the reference tower. The current of the reference tower is read first and noted in the daily maintenance log. The charts at the other towers then

show the operator at a glance whether the currents are correct.

To illustrate the preparation of the charts, a four-tower array will be used as an example. The base-current ratios are: No. 1, .357; No. 2 (reference), 1.000; No. 3, 1.060; and No. 4, .446. Using a calculator, charts were made showing the upper and lower limits for each tower for each 0.1-ampere change in the reference tower. For example:

$$\begin{aligned} \text{Tower 3 ratio} &= 1.060 \\ -5\% &= 1.007 \\ +5\% &= 1.113 \end{aligned}$$

If the current for tower 2 is 8.6 amperes, then the tower-3 ammeter must read between 8.66 and 9.57 amperes.

$$(8.6 \times 1.007 = 8.66)$$

$$(8.6 \times 1.113 = 9.57)$$

The accuracy of the charts is well within the accuracy limits of the indicating instruments (2% on a 0 - 12 ampere instrument is 0.24 ampere).

A separate chart is used at each tuning unit (Fig.1). A chart prepared in the same manner, but using the sampling-current ratios, is posted at the phase monitor. ▲

*Melvon G. Hart and Associates, St. Louis, Missouri.

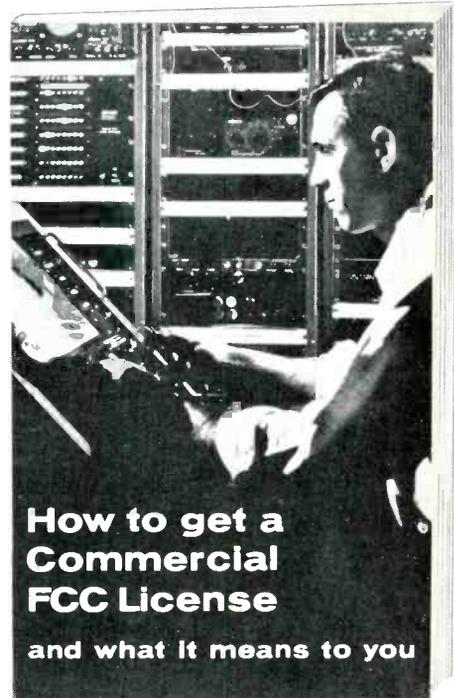
Tower 1			Tower 3			Tower 4		
I_2	-5%	+5%	I_2	-5%	+5%	I_2	-5%	+5%
8.0	2.71	3.00	8.0	8.06	8.90	8.0	3.39	3.74
8.1	2.75	3.04	8.1	8.16	9.02	8.1	3.43	3.79
8.2	2.78	3.07	8.2	8.26	9.13	8.2	3.48	3.84
8.3	2.81	3.11	8.3	8.36	9.24	8.3	3.52	3.88
8.4	2.85	3.15	8.4	8.46	9.35	8.4	3.56	3.93
8.5	2.88	3.19	8.5	8.56	9.46	8.5	3.60	3.98
8.6	2.92	3.22	8.6	8.66	9.57	8.6	3.65	4.02
8.7	2.95	3.26	8.7	8.76	9.68	8.7	3.69	4.07
8.8	2.98	3.30	8.8	8.86	9.79	8.8	3.73	4.12
8.9	3.02	3.34	8.9	8.96	9.91	8.9	3.77	4.17
9.0	3.05	3.37	9.0	9.02	10.02	9.0	3.82	4.21

Fig. 1. One of the above charts would be posted in each tower house, except reference, at the station in the example.

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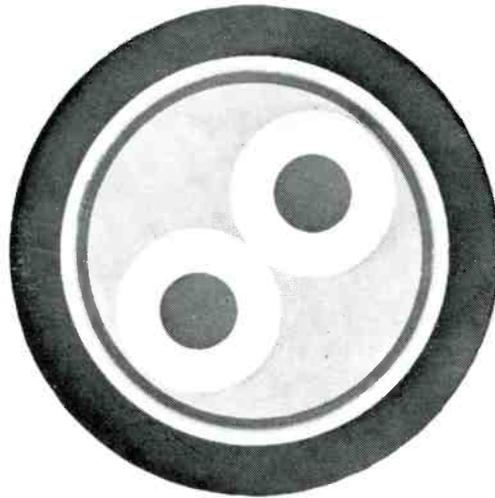
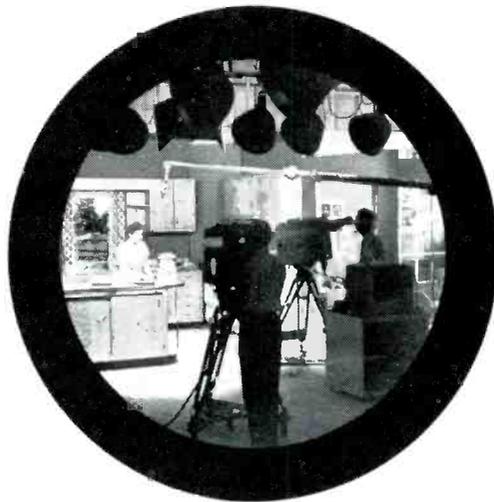
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10 MHz	5.2
15 MHz	6.4



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(Continued from page 16)
gain on this channel is 9-dB higher than from four ten-element Yagis in a box array. Very strong adjacent channel-10 signal is attenuated 5 dB (channel 10 is 5 degrees off the channel-9 antenna heading).

Angels Camp—20-Foot No. 1: Mounted at ground level, where the head-end site is 1600 feet below a mountainous ridge 3.8 miles west, this antenna receives channel 7 over the ridge on a 119-mile path. The previous antenna (four ten-element Yagis horizontally stacked) produced a 50-microvolt signal which was not useable much of the time because of severe cochannel interference. The dish antenna virtually eliminated all the cochannel interference (just a slight trace is seen on occasion), and raised the signal level to 100 microvolts, which, with a good low-noise preamplifier, provides useful color signals most of the time.

20-Foot No. 2—Mounted at ground level, this antenna replaced a 6-foot, commercially-available antenna for channel 24, received over a 105-mile knife-edge diffraction path. The 6-foot dish produced a 200-microvolt signal; the 20-foot dish gives a 400-microvolt signal.

Conclusion

These experiments indicate that, under the conditions of the tests, useful results can be obtained in CATV from parabolic antennas smaller than those currently being used. The lightweight construction used in these developmental antennas is not, however, recommended. Although both the 20- and 36-foot models have been subjected to six inches of wet-snow loading and 70-mile-per-hour winds, a much better design is possible utilizing aluminum channel for the struts and welded aluminum for the backframing.

It is our experience that the antennas will withstand a construction tolerance up to an equivalent of 0.05 wavelength on the operating frequency. This is not to suggest that errors in construction can or should be permitted. However, a strut slightly out of position by up to 0.05 wavelength can be tolerated without noticeable performance degradation. ▲

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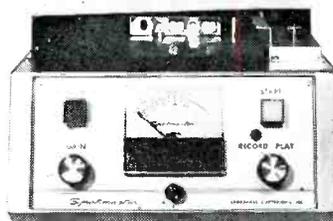
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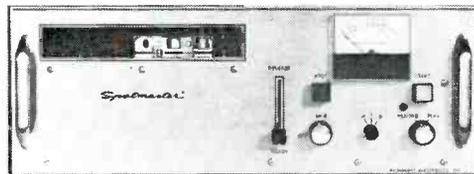
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NEWS OF THE INDUSTRY

INTERNATIONAL

Color TV in Europe

In a luncheon talk during the **IEEE** Broadcast Symposium in Washington, Sir Francis McLean, director of engineering, **BBC**, discussed the status of color television in Europe. He reported that services already have started in the United Kingdom and Germany, services in France and the

USSR were due to start on October 1, and a large number of other countries will start within the next two years. In the United Kingdom, he said, the demand for color receivers exceeds the supply, although it will be a year or so before color receiver sales, in any country, reach as much as 10 per cent of total sales.

The speaker mentioned that, in addition to the basic difference between the field repetition rates in American and European television, there will be

at least two, perhaps three, color systems used in Europe. In a large number of countries in Western Europe, the PAL system will be used, but in France and the Eastern Bloc some form of SECAM will be used. The PAL system is now very well defined and the implications of its introduction are pretty well understood, he said, but the exact form of the SECAM system to be used still does not seem to be entirely clear, nor is it certain whether the same form will be used in the USSR as in France.

Because 405-line transmissions fully occupy the VHF bands, British color transmissions are restricted to UHF, although in other countries in Europe color will be on UHF and VHF. Tests of UHF were described, and the speaker reported, "As a result of this we really feel very optimistic about giving an even wider service on UHF." He said a plan has been formulated to eliminate the 405-line service over a period of years by duplicating the service on 625 lines in the UHF band, after which the VHF 405-line system will go out of service, and the VHF facilities will then be re-engineered for additional 625-line services. Color is planned for the other two programs (BBC and ITA) at the end of 1969 and early 1970; from that date, three networks will be giving about 150 hours of color per week.

The speaker described briefly the BBC all-electronic field-store converter, which converts the field frequency either way between 50 and 60 Hz, the lines per frame either way between 625 and 525, and the system between NTSC and PAL. The device can also be made to operate on the SECAM system.

European Tape Plant

A plant in Europe for the manufacture of computer and other magnetic recording tapes has been purchased by **Audev S.A.R.L.**, a newly formed, wholly owned subsidiary of **Audio Devices Inc.** Located in Annemasse, France, situated on the outskirts of Geneva, the new plant will be temperature and humidity controlled and will include clean rooms and specially designed production equipment. It is to be in operation early in 1968.

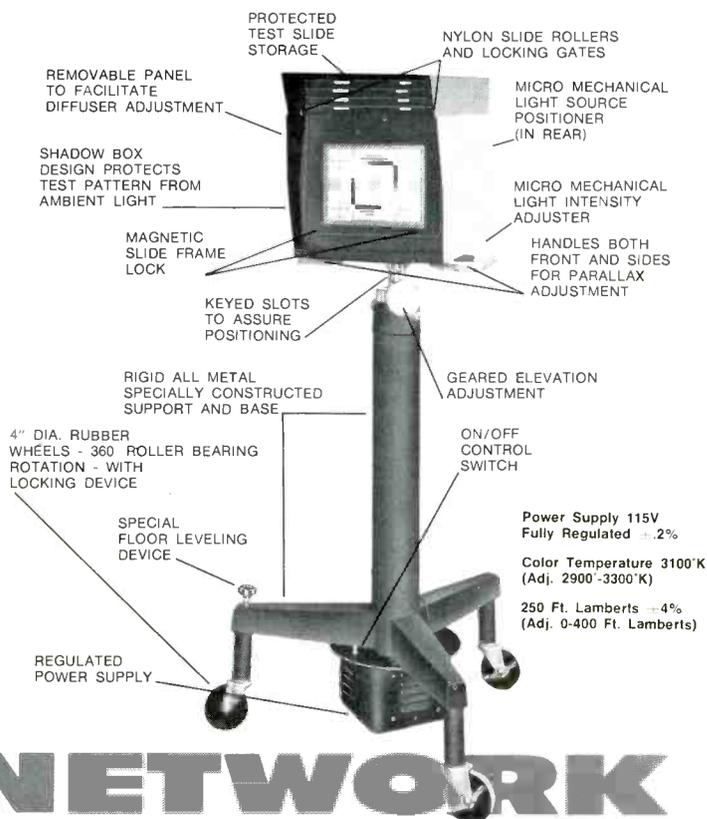
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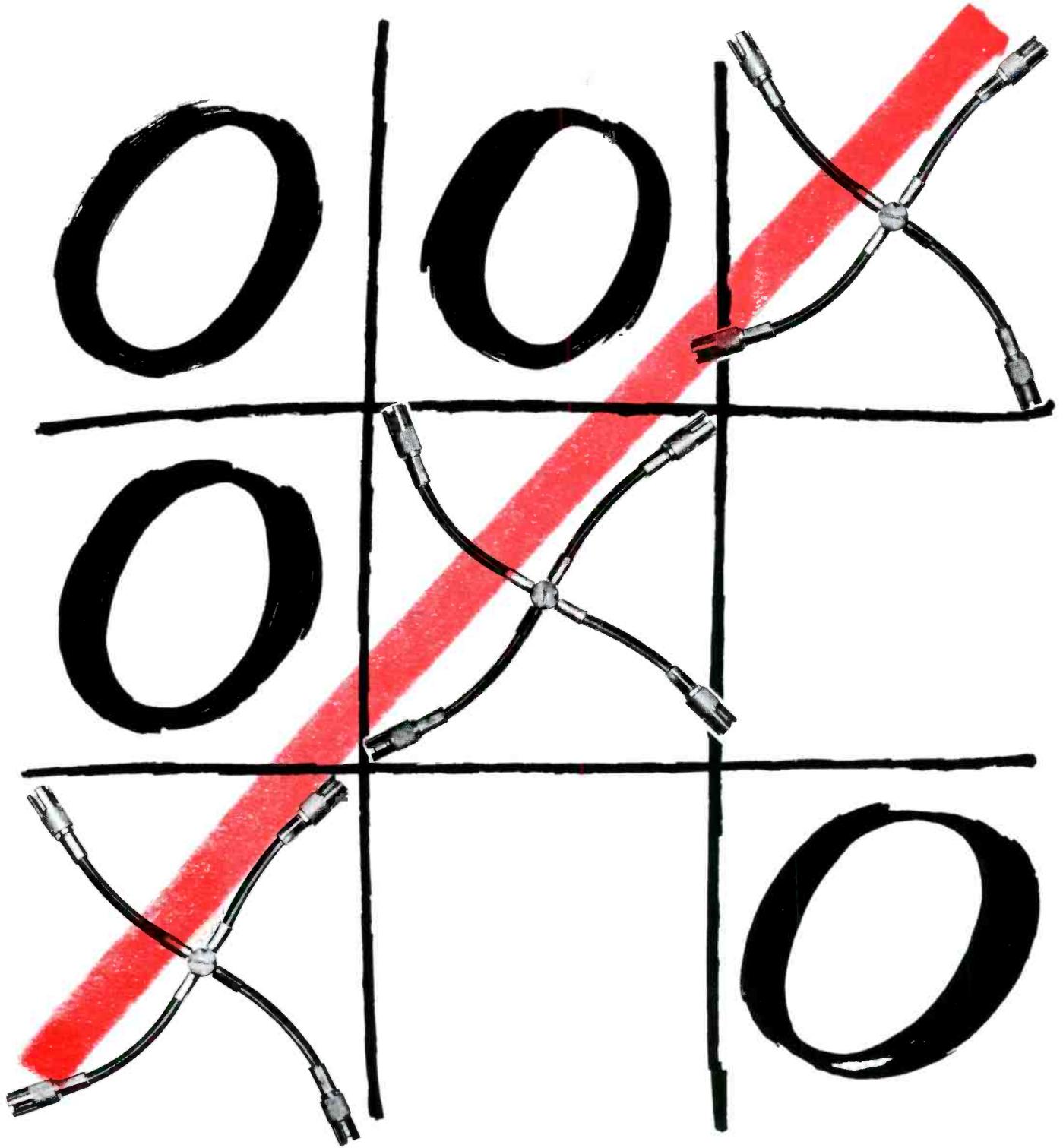


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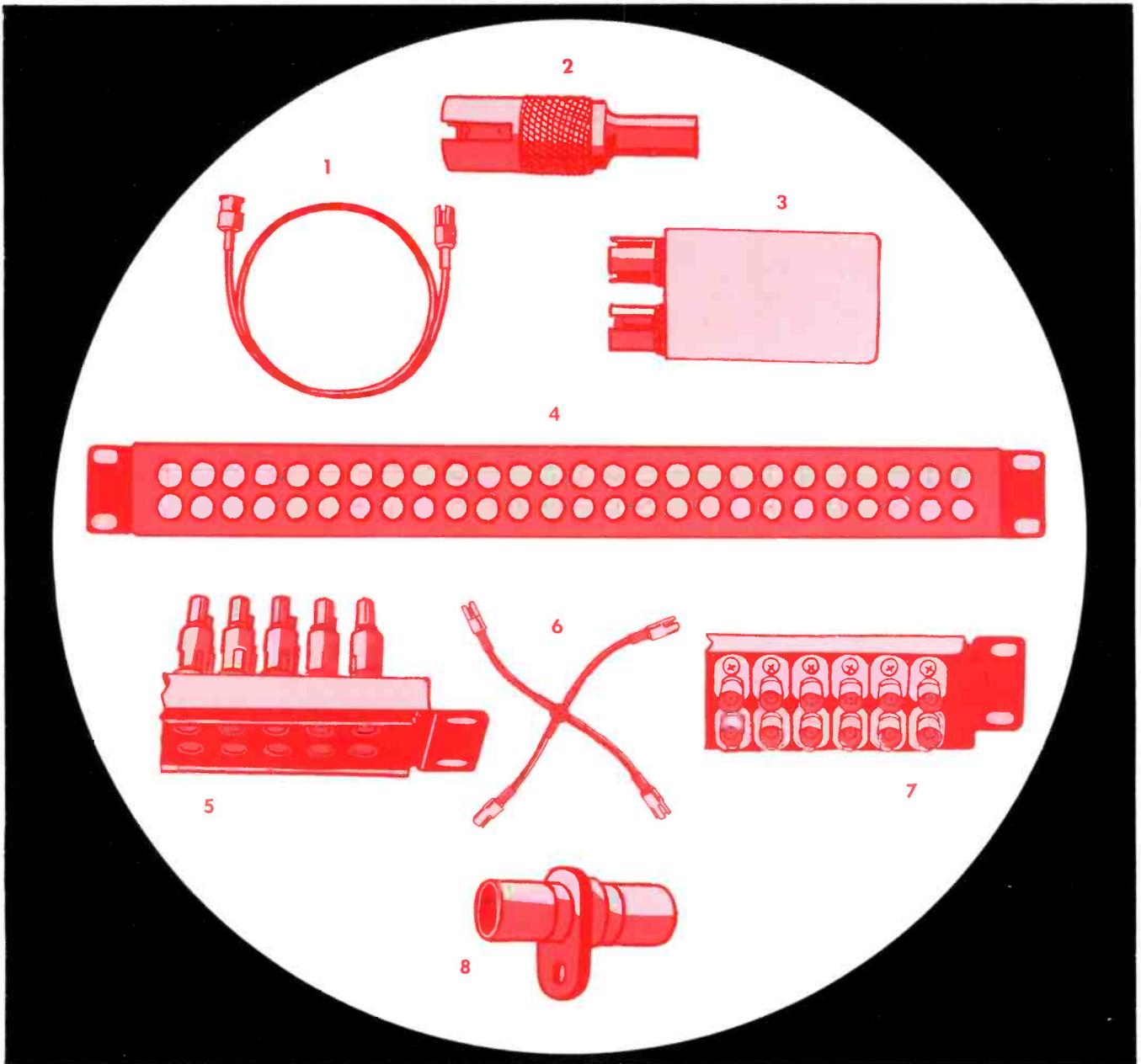


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Student Wins Scholarship

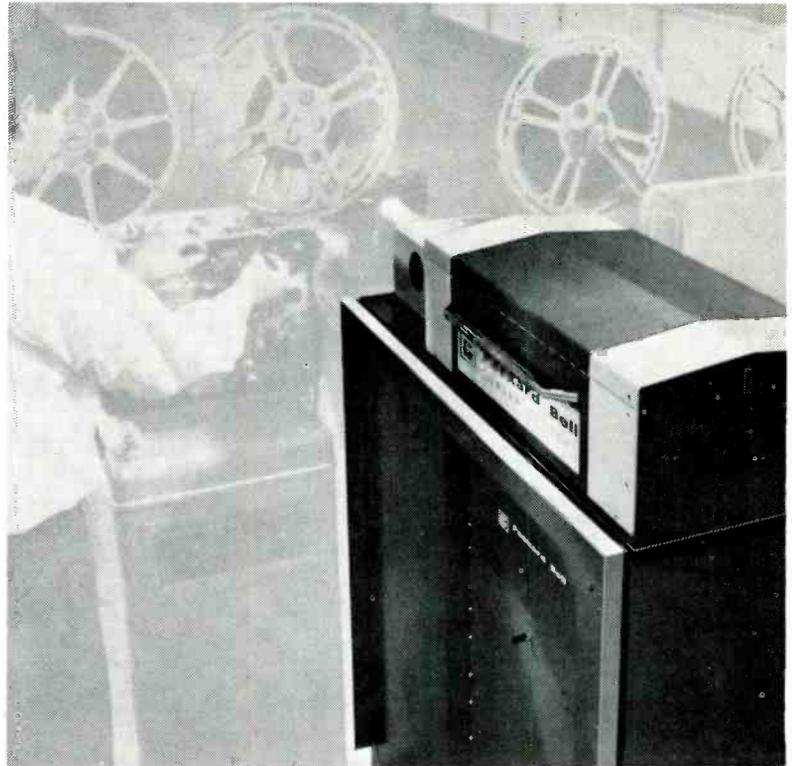
The first recipient of the **Visual Electronics Corp.** \$1000 annual EDUCOM Scholarship award is John D. Hutchinson, Jr., a sophomore at the University of North Carolina. The presentation of the scholarship grant and plaque was made by James B. Tharpe, president of Visual, at a banquet following the 1967 National Association of Educational Broadcasters Convention in Denver November 8th. Mr. Hutchinson, whose home is in Charlotte, N.C., won the award on the basis of his scholastic achievement in his current communications courses, augmented by an essay explaining why he desires a career in the field of radio and television.

Visual originated the ten-year, ten-thousand-dollar EDUCOM (Education for the Advancement of Communications) Scholarship Fund for the purpose of advancing the development of leaders in the broadcast industry.

New CATV System

The new **Valley Video Cable Co.** CATV system for Hershey, Pennsylvania will provide nine TV channels, FM, and a local weather channel to an estimated 2000 potential subscribers. **Anaconda Astrodata Co.** has

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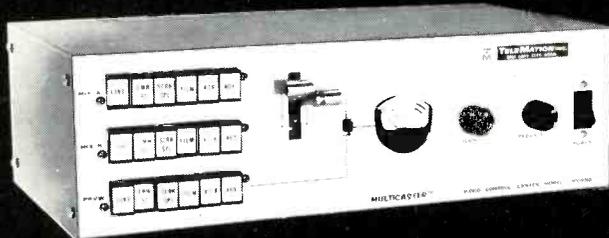
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Addition Completed

A new 20,000-square-foot research and development addition to the Raytheon Co. Special Microwave Devices Operation, Waltham, Mass., has been completed. The new facility houses engineering and management personnel of the operation. The one-story brick building is attached to the existing structure, is air-conditioned and fully tiled, and has tinted glass windows. A 70-foot-long "dark tunnel" for light propagation experiments runs the length of the building.

Plant Expanded

Construction has begun on the initial phase of major expansion at the Ameco Cable, Inc. plant in Phoenix. A 6000-square-foot addition at the rear of the 16-acre property will be connected to the main building by an 1880-foot draw bench. Total expansion plans call for an addition on the east side of the main building before the end of the year.

Broadcast Reps Appointed

Two sales representatives have been appointed to handle the broadcast equipment line of American Electronic Laboratories, Inc. Technical Instruments, Inc., Wilmington, Mass., will provide representation in the New England area, and Hugh Marsland Associates, Chicago, will be the Midwest representative.

ORGANIZATIONS

AES

A highlight of the 33rd Audio Engineering Society Convention in New York was the annual Awards Banquet. The John H. Potts Memorial Award was presented to William B. Snow, head, Electro-Acoustic Laboratory, Bissett-Berman Co., ". . . in recognition of his pioneering work particularly in the field of stereophonic sound transmission and recording." The Emile Berliner Award went to Robert Morris, retired staff engineer, American Broadcasting Co., ". . . In recognition of his pioneering work in the field of disc recording, particularly in 'orthacoustic' pre-emphasis volume indicators." Recipient of the Audio Engineering Society Award was Floyd Harvey for ". . . contributions beyond the call of duty during and after his official terms of office."

AES fellowships were awarded to: John S. Boyers, director of engineering, Professional Products Division, Telex Corp., "... in recognition of his pioneer work on tape recorders for professional and home use"; A. Pierce Evans, director, plant systems engineering, CBS Television Engineering Department, "... in recognition of his outstanding work in the field of audio facility design"; and Adolph R. Morgan, research engineer, RCA Laboratories, "... in recognition of his achievement in sound recording and electro-acoustic research."

Abstracts of proposed papers for the 34th National Convention have been requested. Submitted papers should be limited to the following technical areas: Transducers, Amplifiers—General, Amplifiers—FET, Instrumentation, Recording, Automotive Tape Systems, Acoustics and Hearing, Music and Speech, Recording and Broadcasting Facilities, Sound Reinforcement, and Audio Applications.

The 34th Convention will be held April 29-May 2, 1968, at the Hollywood Roosevelt Hotel, Hollywood, California. Attendance is limited to those persons actively engaged in one or more of the major activities of audio engineering.

Abstracts of proposed papers will be received up to January 30, 1968. They should be submitted to:

Don Davis—Convention Chairman
34th National Convention
Audio Engineering Society
c/o Altec Lansing
1515 South Manchester
Anaheim, California 92803

NAB

Speaking before the Maine Association of Broadcasters, William Carlisle, NAB vice-president for television, said it is a matter that should give broadcasters "cause for grave concern" to realize that by the mid-to-late 1970's satellite-to-home broadcasting could be operable throughout most of the United States. Outlining reasons why this scientific achievement, while possible, is not desirable, Mr. Carlisle stated that as the number of daily newspapers declines, local broadcast stations become more important. "... To transfer the control of the on-off switch from the hands of thousands of independent broadcasters ... to the person or persons who control the satellite would constitute a dire potential threat to our national independence," he said. He added, "It is easy to destroy a satellite—and easier still to jam one. If our nation's television communication depends upon so vulnerable a 'bird,' it would ap-



All Digital Color Sync Generator



Pat. Pending

Exclusive Features —

- All pulses and transitions clock derived
- No monostables — no delay lines
- Integrated circuit reliability
- Dual outputs — permit pulse assignment with full standby
- Subcarrier vs. horizontal jitter better than 0.25 nsec.
- Pulse jitter better than 4 nsec throughout frame
- 1 3/4" rack space — including all "Add-In" modules

Add-In Modules —

- Monochrome Genlock
- Bar Dot Generator
- Color Genlock
- Sync Changeover Switch

Monochrome

Model TSG-2000M
\$1,000

Color

Model TSG-2000C
\$1,500

Prices and specifications subject to change without notice.

NEW PORTA-SYNC™

Identical
Performance
at a Great
Savings!



Pat. Pending

Ideal for . . . REMOTE FIELD APPLICATIONS . . .
PORTABLE TEST GENERATOR . . . SYSTEM SPARE
. . . FULL TIME DUTY. Economical, yet absolutely
no sacrifice of waveform performance.
Specifications are the same as Models
TSG-2000M/C, but Add-In modules are not
available because of ultra-compact dimensions of
3 1/4" h x 5 1/4" w x 10" d.

Monochrome

Model TSG-1000M
\$695

Color

Model TSG-1000C
\$1000

For complete details, request Form TPB-30

Prices and specifications subject to change without notice.

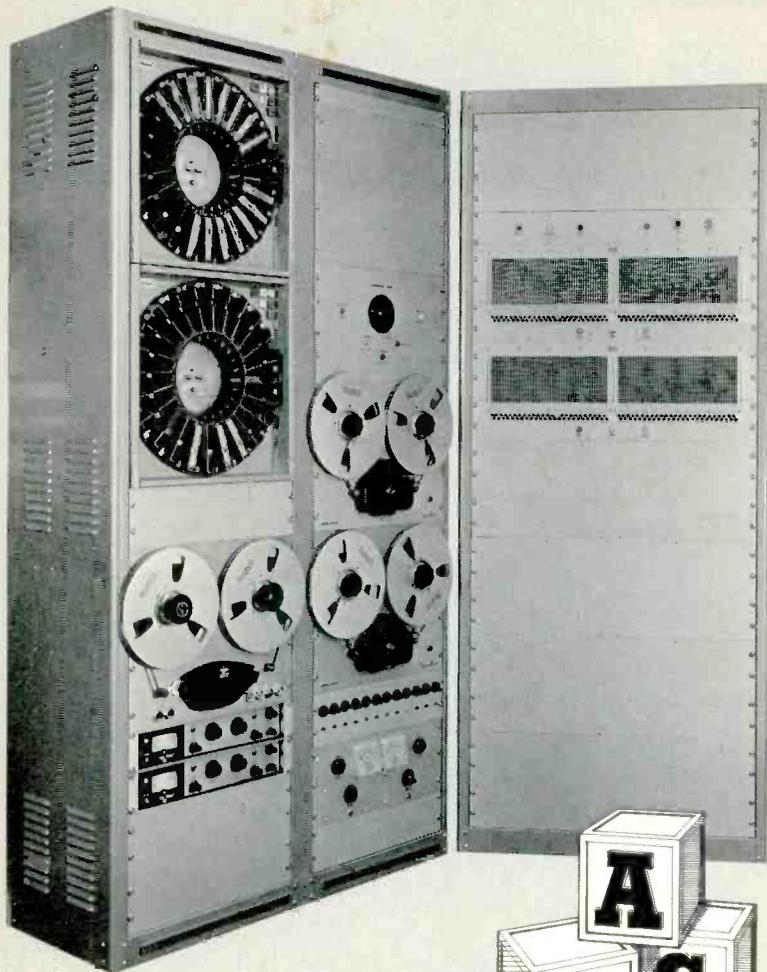
. . . from Telemation — where experience powers pacesetting products!



TELEMATION, INC.

2275 So. West Temple / Salt Lake City, Utah 84115
Telephone (801) 486-7564

Circle Item 24 on Tech Data Card



Tape-Athon reduces station automation to its simplest terms

A Simple to Adapt—“Building Block” construction of the Tape-Athon Model 5000 Automatic Broadcasting System permits initial installation of basic system to fit budget and/or station requirements. Then, system may be easily expanded to increase capacity as needs arise.

B Simple to Buy—The 5000 System is priced a comfortable margin lower than other systems, and may be purchased in “starter” and “add-on” modules to spread the investment. Prices start at \$5000.00. All specifications conform to NAB standards.

C Simple to Control—The Tape-Athon Model 5000 Automatic Broadcasting System incorporates a unique but easily operated system of switchboard and timers to pre-set programming of music, announcements, and commercials for the day, week, or even an entire month.

A NEW BROCHURE PROVIDING DETAILS AND SPECIFICATIONS ON THE 5000 IS AVAILABLE ON REQUEST.

Tape-Athon 523 S. Hindry, Inglewood, Calif. 90307 • 213-678-5445

Circle Item 25 on Tech Data Card

pear mandatory to have a terrestrial ‘back-up’ system.” He concluded that if the ground facilities must be maintained for operation in any eventuality, why not save the billions of research, development, launching, and operational dollars for other purposes?

SMPTE

Alan M. Gundelfinger, Technicolor, Inc., has been named program Chairman for the SMPTE 103rd Technical Conference, set for the Century Plaza Hotel in Los Angeles, May 5-10, 1968.

Shortly after his appointment, Mr. Gundelfinger issued the Conference’s Call for Papers. He urged all engineers, scientists, and technicians in motion pictures, television, and related fields to participate in the Conference by submitting papers for presentation at the technical sessions. Prospective authors should write to SMPTE Headquarters, Att: 103rd Conference, 9 East 41st Street, N.Y., N.Y. 10017, for information and forms.

Session topics will include Instrumentation and High-Speed Photography; Laboratory Practices and Color Quality Control; Television; Systems Approach to Color Quality Control; Photographic and Allied Sciences; Photosensitive Materials for Motion Pictures and Television; Theater Presentation and Projection; Small Format Films; Studio Practices; and Sound.

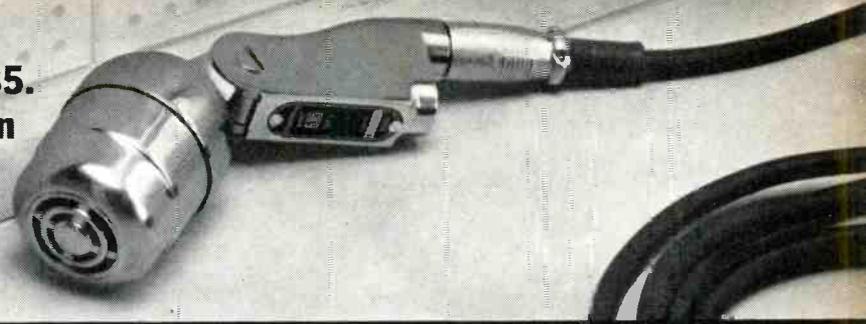
TRANSACTIONS

United Recording Corp. has acquired Waveforms, Inc. Under the merger, URC has acquired the Waveforms name and all assets, including product line, designs, and engineering. Mr. A. E. Byers, former Waveforms president, has been appointed to the newly created position of product manager. Mr. Hugh McDonald continues as the new manufacturing engineer.

Subject to the approval of the FCC, the assets of Radio Stations WEIC and WEIC-FM, Charleston, Illinois, have been sold to Community Communications, Inc. of Mt. Carmel, Illinois, John Hurlbut, president. William Kepper is the seller. Mr. Hurlbut also owns radio stations in Mt. Carmel and Mendota, Illinois and a daily newspaper and two weeklies in Illinois. The selling price was \$180,000.

Radio Station WFOX, Milwaukee, owned by the Fox Broadcasting Corp. has been sold, subject to FCC approval, to the L & P Broadcasting

**This was the E-V Model 635.
It started a tradition
of excellence in
dynamic microphones.**



**This is the new
E-V Model 635A.
It's better
in every way!**



Model 635A Dynamic Microphone \$82.00 List. (Normal trade discounts apply.)

E-V How can a microphone as good as the E-V Model 635 be made obsolete? By making it better! It wasn't easy. After all, professional sound engineers have depended on the 635 since 1947.

During this time, the 635 earned a reputation for toughness and dependability that was unrivalled by other omnidirectional dynamics. And internal changes through the years have kept the 635 well in the forefront of microphone design.

But now the time has come for an all new 635: the Electro-Voice Model 635A. It's slimmer, for easier hand-held use. Lighter, too. With a slip-in mount (or accessory snap-on Model 311 mount) for maximum versatility on desk or floor stands. The new, stronger steel case re-

duces hum pickup, and offers a matte, satin chromium finish perfect for films or TV.

The new 635A is totally new inside, too—and all for the best. A new four-stage filter keeps "pops" and wind noise out of the sound track, while guarding against dirt and moisture in the microphone, completely eliminating any need for external wind protection. Of course you still get high output (—55db) and smooth, crisp response. And you can still depend on the exclusive E-V Acoustalloy® diaphragm that is guaranteed against failure for life* (it's that tough!)

We expect to see plenty of the "old" 635's in daily use for years. But more and more, the new 635A will take over as the new standard. It's easy to find out

why: just ask your E-V Professional Microphone distributor for a free demonstration in your studio. Or write us today for complete data. We'll be proud to tell you how much better the new Model 635A really is!

*The E-V Professional Microphone Guarantee: All E-V professional microphones are guaranteed UNCONDITIONALLY against malfunction for two years from date of purchase. Within this period, Electro-Voice will repair or replace, at no charge, any microphone exhibiting any malfunction, regardless of cause, including accidental abuse. In addition, all E-V microphones are GUARANTEED FOR LIFE against defects in the original workmanship and materials.

ELECTRO-VOICE, INC., Dept. 181V
638 Cecil Street, Buchanan, Michigan 49107

Electro-Voice®
SETTING NEW STANDARDS IN SOUND

Circle Item 26 on Tech Data Card

Multiple choice— every one a right answer!

Bauer's line of audio consoles

There's a compact Bauer console that's right for any audio operation, simple or complex. Each console is self-contained and highly versatile, for speed and accuracy in cueing, monitoring, mixing and programming. Each is of typical Bauer high quality and reasonably priced.

Model 915—for the remote TV truck; 8-microphone versatility with multiple inputs for turntables, tape units, projectors.

Model 912S—for 5-channel stereo in studio production and control rooms. Handles tape prerecording, remote interviews, panel shows, commercial ETs, ID spots, etc. As on-the-air console, gives fast, precise control over 13 inputs.

Model 912—a 5-mixer model for production preprogramming in studio or on remote location; excellent primary, on-the-air unit for smaller stations.

Model 910S—8-mixer stereo console with all the inputs and controls needed by any station, AM or FM, large or small.

Model 910D—dual unit, easily handles two programs simultaneously; 8 mixing channels and more useful features than most consoles twice its size.



Let a Bauer add new dimensions to your audio capabilities: modern, high-speed control, versatility, simplicity, and convenience. Write to us for full technical information.

Bauer

ELECTRONICS CORPORATION

1601 California Ave.
Palo Alto, California 94304

A **Granger Associates** COMPANY

Corp. of Chicago for \$260,000. Leonard Chess is president of L & P, which operates WVON, Cicero, Ill. and WSDM(FM), Chicago. Herb Lee is president of Fox Broadcasting and also owns WKTY, LaCrosse, Wis.

The acquisition of **Programming Methods, Inc.**, by **Riker Video Industries** has been announced. The current management of Programming Methods will be retained, and Mr. George Langnas will continue to serve as president and chief executive officer.

Earlier, it was revealed that Riker and an investors group have acquired 108,784 shares of **Ward Leonard**. Bernard Gilligan will continue as president and chief executive officer of Ward Leonard, and the present management under Mr. Gilligan's direction will remain.

North American Communications Corp., Minneapolis, has purchased **Fergus Cablevision, Inc.**, the CATV system at Fergus Falls, Minn. The purchase was for an undisclosed amount of cash from **Gross-Leighton, Inc.** Fergus Cablevision supplies off-the-air pickup to 1200 subscribers in the town of 13,000 persons.

PERSONALITIES

Two key position appointments have been made at **Round Hill Associates, Inc.** **Alvin J. Schwartz** has been named sales manager. Before his present appointment, Mr. Schwartz was vice-president of the Broadcast and Communication Division of Singer Products, Inc. **Raymond E. Morris**, formerly Round Hill sales manager, has been promoted to the position of manager of industrial products. Before he joined Round Hill in 1964, Mr. Morris was president of Ametronics, Inc.

Richard L. Paullus has been made vice-president, marketing, of **Dynair Electronics, Inc.**; he replaces **Robert N. Vendeland**. Mr. Paullus previously was president and treasurer of Logic Systems, Inc.

Richard R. Peterson has been made national sales manager, educational/industrial products, for the **Ampex Corp.** consumer and educational products division. Mr. Peterson was formerly national merchandising manager, and prior to joining Ampex in 1966, he was vice-president of Universal Distributors, Inc., Honolulu. ▲

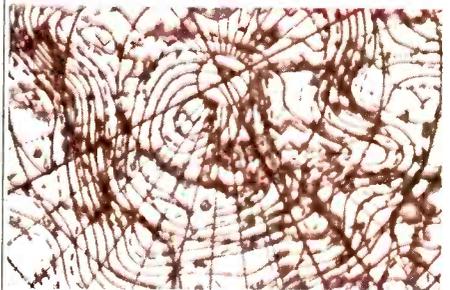
Dramatize TV weather

Alden facsimile weather data recorders reproduce pictures direct from satellites . . . all broadcast weather charts and data . . . vividly — permanently — economically.



Global Weather Picture from Synchronous ATS Satellite

APT—Satellite cloud pictures from ESSA, NIMBUS, ATS enlarged to 10" x 10" for easier interpretation . . . using one of Alden's complete tracking/receiving systems or via land line from another system.



Weather Charts via radio from United States and international broadcasts.

Weather Charts via land line from U.S. Weather Copy Bureau in handy filing size (8½" x 11").

PLUS . . . remote hard copy reproduction of any weather radar scope presentation via slow scan TV over ordinary telephone lines.

Alden facsimile recorders are rugged and reliable — excellent for land or marine environment. Several models are available to suit space, application, and radio environment including Weather Bureau/Navy/Air Force standard units. If you already have an Alden 18 Weather Chart recorder, consider the Alden 11 Tactical Recorder for back-up . . . adding a second network . . . getting APT pictures. Several operating modes, all using Aifax paper for unlimited storage, tone shade response, permanent printing — and the color gives outstanding results on Television!

Purchase a recorder and build your own system or purchase a complete system from

ALDEN ELECTRONIC AND IMPULSE RECORDING EQUIPMENT CO., INC.
Washington Street, Westboro, Massachusetts

Tel. (617) 366-4467

JJ-1

Send information on the Alden 11 Tactical Recorder and complete Satellite Picture Receiving Systems.

Call me at once. My telephone number _____

NAME _____

COMPANY _____

ADDRESS _____

Circle Item 27 on Tech Data Card

Circle Item 48 on Tech Data Card

NEW PRODUCTS

For further information about any item, circle the associated number on the Tech Data Card.



Cables and Connectors

(78)

Twinax or Triax cables of 1/4-inch O.D. are available, with connecting hardware for patching systems, from **Trompeter Electronics, Inc.** Pictured are the patch plug, panel jack (center), and back-mating cable connector designed for use with either Twinax or Triax.

The purpose of these cables is to provide reduced noise pick-up and improved signal-to-noise ratio; Triax cable is made primarily for RF and driven-shield applications, while Twinax cable is made primarily for DC through video frequencies, and for balanced-line and low-level analog and digital applications.

Triax cable and mating connectors are available in both 50- and 75-ohm impedance, while Twinax cable and mating connectors are available in both 78- and 124-ohm impedance.



F/5.6, 500-mm Lens

(79)

A new version of the 20-inch Zoomar Reflector lens, now called the Sport Zoomar Reflector "500," has been made available by **Zoomar, Inc.** Using the Zoomar-Kilar adapter system, the new lens may be adapted to a variety of cameras, including 35-mm

get the turntable a studio needs ...and rek-o-kut durability, too!



There's hardly an engineer in the broadcast field that hasn't used a Rek-O-Kut turntable in his career. Rek-O-Kut has been building studio turntables for over a quarter century. So you are assured of buying top quality sound reproduction along with the ruggedness and durability that broadcast and commercial installations demand. The rim drive Rek-O-Kut B-12H by Koss Electronics permits slip cueing without sacrificing fidelity. And your Koss/Rek-O-Kut will last and last with a minimum of maintenance and repair. Write for complete details on the popular Model B-12H or the 16" studio B-16H today.

specifications:

SPEEDS: 33 1/3, 45, 78 rpm. NOISE LEVEL: — 59db below 5 cm/sec average recorded level. MOTOR: custom-built computer type heavy-duty hysteresis synchronous motor. 45 RPM HUB: instantaneously removable by hand. PILOT LIGHT: neon light acts as an "on/off" indicator. FINISH: grey and aluminum. DECK DIMENSIONS: 14 x 15 1/8". Minimum Dimensions: (for cabinet installation) 17 3/4" w. x 16" d. x 3" above deck x 6 1/4" below. PRICE: B-12H Turntable \$165. S-320 Tonearm \$34.95. Optional BH Base for audition room \$18.95.



Rek-O-Kut Turntables by

KOSS

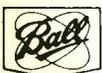
Koss Electronics Inc., 2227 N. 31st St., Milwaukee, Wis 53208
Export Cable: STEREOFONE • Koss-Impetus/2 Via Berna/Lugano, Switzerland

Circle Item 28 on Tech Data Card

BBRC's Mark 21...*The Wave Maker*



This is the Mark 21-RM, full-rack version of Ball Brothers Research Corporation's Mark 21 Waveform Monitor. It provides the video signal information you most often need to keep your video systems performing perfectly. It works with the precision and reliability born of good design and solid-state construction. You'll find more sophisticated waveform monitors on the market, selling at considerably more sophisticated prices. But for making general waves, ours is the one. Data sheets, and an evaluation of the Mark 21 in your operation, are available on request.



BBRC BROADCAST TELEVISION EQUIPMENT · BALL BROTHERS RESEARCH CORPORATION · BOULDER, COLORADO 80302 · TELEPHONE: 303/444-5300

Circle Item 29 on Tech Data Card

Mounting and positioning equipment for cameras and space-age instruments



GENERAL PRECISION LABS Closed Circuit TV Camera on PS-34 Pedestal Stand with Model HD head. Model HD head features internal torsion spring to prevent camera dumping during extreme forward and backward tilts.

The PS-34 makes possible an infinite number of applications for mounting and positioning. It has "floating action," which means the actual weight of the camera is perfectly counterbalanced by a sturdy spring—just a touch and the camera automatically "floats" to the level you desire—stays there.

D & S offers the most complete line of stands and tripods. When standard models will not meet the requirement, we design and manufacture special tripods to order. TV monitor mounts also available.

For more information write: Dept. BEJ-68

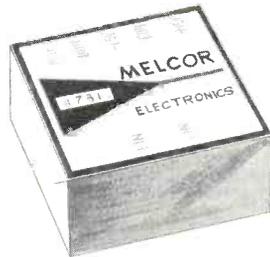
DAVIS & SANFORD

24 Pleasant St., New Rochelle, N. Y.

Circle Item 30 on Tech Data Card

range-finder cameras with reflex housings, 35-mm SLR, motion-picture, and television cameras.

A new feature of this lens is a quick-focus lever, which can be attached to either the right or left side of the lens, according to the needs of the photographer. The lens also features a built-in disc with equivalent F/stop markings for F/5.6, F/8, F/11, and F/16. The built-in tripod mount has both 1/4-inch and 3/8-inch sockets.



Audio Operational Amplifier

(80)

A new audio operational amplifier is available from **Melcor Electronics Corp.** Known as the Melcor Model 1731, the modular unit occupies less than one cubic inch. It is designed to serve as a basic building block from which a number of circuit functions such as microphone preamplifier, mixer preamplifier, line amplifier, tape preamplifier, and phono preamplifier can be performed by the addition of external networks.

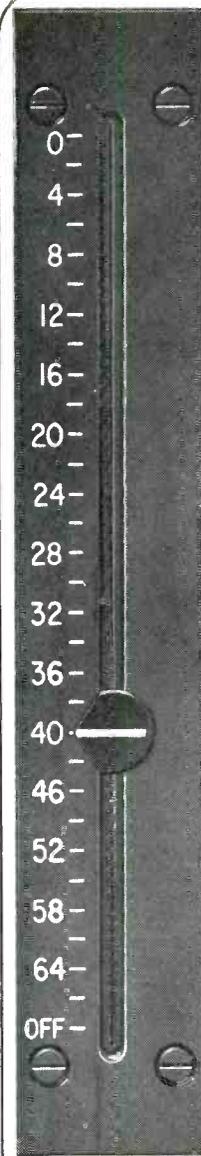


IO Viewfinder Camera System

(81)

The Model Orth IX image-orthicon viewfinder camera from **Maryland Telecommunications, Inc.** features portability and solid-state regulated circuitry. The camera head weighs approximately 40 pounds and is adaptable to accept any 3-inch image-orthicon tube and a variety of fixed and zoom lenses.

Two basic versions of the camera are offered. The Model Orth IXA is designed to accept full EIA external synchronization and is priced at \$12,725. The Model Orth IXB is complete with self-contained fully interlaced industrial synchronization and is priced at \$13,075. Both versions are priced less image-orthicon tube and lens, which are selected by the user.



YOU ONLY NEED THIS MUCH PANEL SPACE FOR TECH LAB'S NEW 1" VERTICAL ATTENUATOR

(actual size)

Here's the smallest vertical attenuator made in the U.S.A. . . . another first from Tech Labs, pioneers in vertical attenuators since 1937.

It uses little panel space . . . only 1" wide x 6" long. It provides quick change of levels on multiple mixers and assures long, noise-free life. Units are available in 20 or 30 steps with balanced or unbalanced ladder or "T", or potentiometer circuits. Standard Db per step is 1.5, others on order. Impedance ranges are 30 to 500 ohms on ladders or "T's" and up to 1 megohm on pots.

Don't wait, send for complete data today!
Need Video or Audio Rotary Attenuators?

All Tech rotary attenuators are precision made for extended noise-free service. Many standard designs available and specials made to your specs. Send for literature today.



TECH LABORATORIES, INC.

Bergen & Edsall Bldvs., Palisades Park, N.J. 07650
Tel: 201-944-2221 • TWX: 510-230-9780

Circle Item 31 on Tech Data Card

SPOTMASTER



PortaPak I Cartridge Playback Unit

Your time salesmen will wonder how they ever got along without it! Completely self-contained and self-powered, PortaPak I offers wide-range response, low distortion, plays all sized cartridges anywhere and anytime. It's solid state for rugged dependability and low battery drain, and recharges overnight from standard 115v ac line. Packaged in handsome stainless steel with a hinged lid for easy maintenance, PortaPak I weighs just 11 1/2 lbs. Vinyl carrying case optional.

Write or wire for full information.

Spotmaster
BROADCAST ELECTRONICS, INC.

8800 Brookville Road
Silver Spring, Maryland

all
solid
state



AM MODULATION MONITOR

The Metron Model 506B-1 Amplitude Modulation Monitor is a high quality instrument, field-proven for several years.

- FCC Type Approval 3-127
- Compact—Only 5 1/4" high on a standard 19" rack
- All solid state circuits—silicon transistors for greater reliability.
- Low Cost—only \$550.00.

When you replace your present AM Monitor, buy the Metron 506B-1, your best value.



METRON INSTRUMENTS, INC.

1051 South Platte River Drive Denver, Colo. 80223

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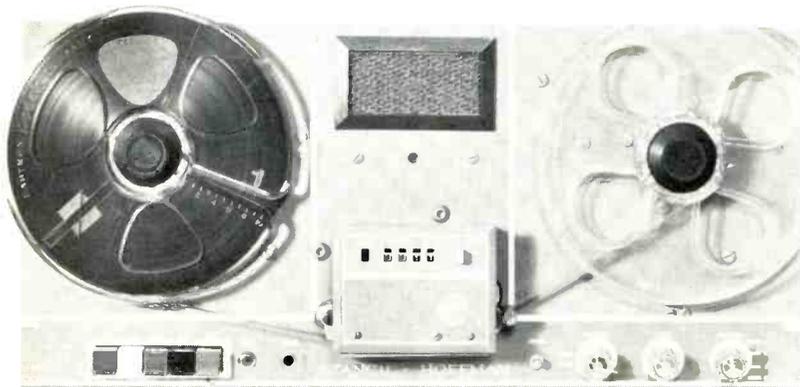
R-75 BROADCAST RECORDER / REPRODUCER

Proven best in use by numerous network radio, TV and FM stations!

UNDER *
\$1,000

Brilliant broadcast quality, most compact, most dependable, most easily serviced tape recorder/reproducer in the industry—the new R-75 is uniquely superior! Takes only 8 3/4" x 19" x 11 1/2" rack space. New advanced solid state lifetime electronics with silicon transistor plug-in amplifiers; cool-running heavy-duty lifetime motors; handles thinnest triple play 1/4" tape without breaking or stretching—3600 feet on a 7" reel gives 1 1/2 hrs at 7 1/2 ips (3 hrs @ 3 3/4 ips) mono or 2 & 3 track stereo! One R-75 and a 7" reel takes the place of two ordinary units!

High level output up to +25 dbm at 600/150 ohms, input transformer bridging 10,000 ohms, single or two speed, remote and automatic operation, slide-out rack mount, motion memory sensor, film sync, many more performance features and full line of accessories.



*prices from \$990.00

WRITE FOR SPECIFICATIONS AND PRICE LIST

STANCIL-HOFFMAN CORP.

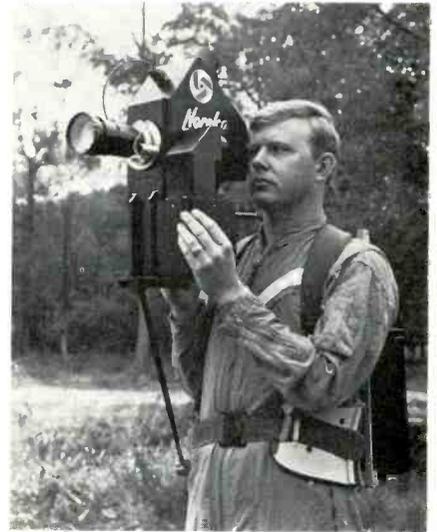
921 NORTH HIGHLAND, HOLLYWOOD, CALIFORNIA 90038

Circle Item 33 on Tech Data Card

Distribution Amplifier

(82)

A new Grass Valley Group distribution amplifier for TV studio distribution of 3.58-MHz subcarrier signals has been announced by **Gravco Sales, Inc.** The GVG Model 907 incorporates a 360° phase shifter to establish proper phase reference after distribution in the studio. Four individual outputs are available.



Portable Color TV Camera

(83)

A portable *Plumbicon* color TV camera, Model PCP-70, has been introduced by **Philips Broadcast Equipment Corp.** The price of the PCP-70, which Philips has dubbed the "Little Shaver," is \$41,450, including camera head and electronic viewfinder, lens, electronic backpack, harness, and interconnecting cable. This 44-pound package has been designed to be fully compatible with the camera control unit used with the Norelco PC-70 studio color camera, and to provide high-quality pictures. Up to 3000 feet of cable may be used between the backpack and camera control gear.

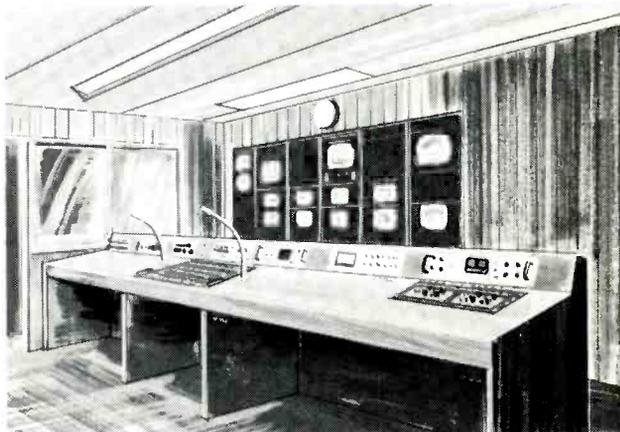
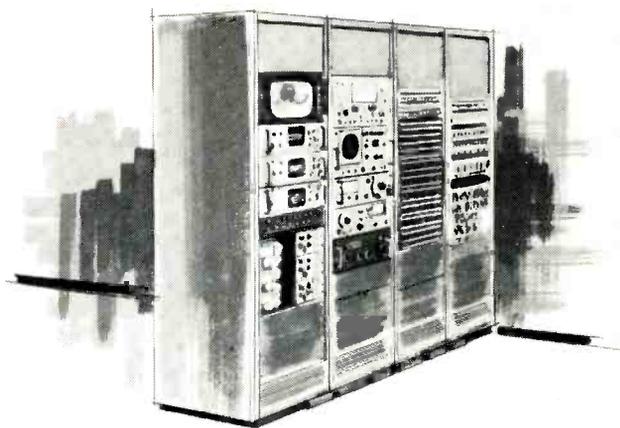
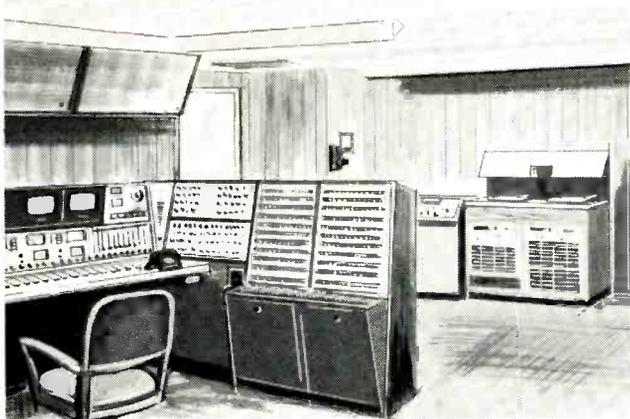


Solid-State Inverters

(84)

The 400 Series of solid-state inverters is designed by the **Trepac Corp.**

BROADCAST ENGINEERING



Now, from a single source, a full range of TV studio engineering services.

Studio engineers seeking the best in TV broadcasting technology rely on Federal Electric Corporation's full range of studio services, backed by the experience, skill and resources of ITT, world leader in communications research and engineering.

Federal Electric offers studio design, installation, and backup maintenance, custom-tailored to improve your studio's effi-

ciency and flexibility. Result: your station equipment is current, competitive and profit-making.

We design systems, select, install, tuneup and checkout equipment, and deliver as-installed records and technical manuals. Whether you are building a station from the ground up ... adding remote pickup ... converting from monochrome to color ... or

merely adding updated or expanded recording facilities, you'll find that service from Federal Electric brings you top professional people, fully matured in TV studio engineering.

ITT's Service Associate,
Federal Electric Corporation,
621 Industrial Avenue,
Paramus, N. J. 07652.
(201) 967-2554

ITT

of America to convert DC voltage from a battery or other source to frequency-stabilized 115 volts AC. The units are for use with timing mechanisms or to operate synchronous motors in mobile or remote locations where AC line power with a fixed frequency is not readily available.

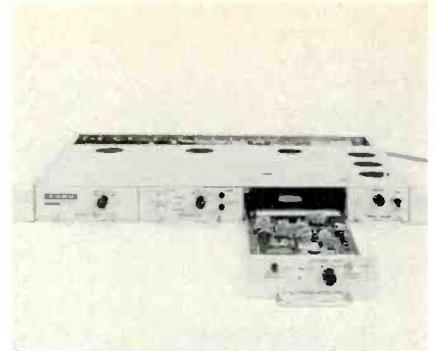
The 400 Series inverters feature all solid-state components, overload protection, and sealed construction to protect against adverse environmental conditions. Two different series are available. These are the 403 Series for 3-watt synchronous-motor application, and the 406 Series for 6-watt applications. Frequency stability for all 400 Series units is specified as $\pm 0.5\%$ over input voltage and tem-

perature range; operating temperature is from -20°C to $+71^{\circ}\text{C}$. There are six models available in each series to provide 60- or 400-Hz AC output over the DC input range of 6 to 24 volts.

Single unit price is \$75.

Color-Sync System (85)

The Model 2472-523 color-sync system, a genlocking system plus a plug-in color standard with color lock, is manufactured by **Cohu Electronics, Inc.** The new system is intended for use with color television in both broadcast and closed-circuit units. Capabilities include provision of all required signals for a color-camera chain (including dual subcarrier out-



puts and burst flag) and phase locking to a remotely generated NTSC signal (a front-panel lamp indicates presence of color burst on the incoming composite signal).

A front-panel control provides 360°

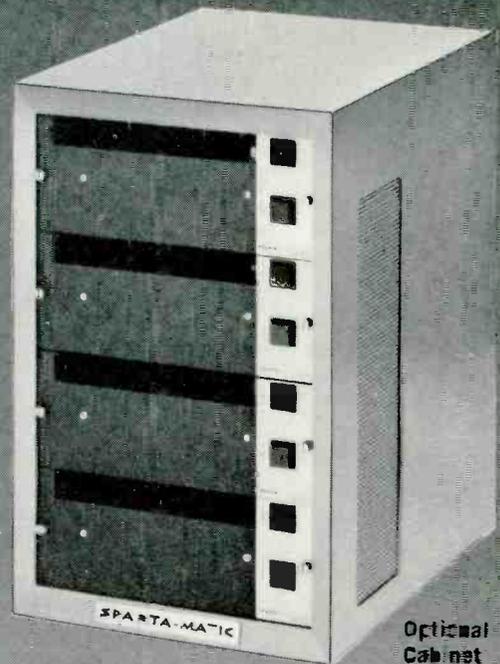
Here's A Better Idea!

A NEW CONCEPT IN CARTRIDGE HANDLING!

The SPARTA-MATIC Multi-Cartridge Systems



Rack Mounting



Optional Cabinet

The SPARTA-MATIC MC Series is bound to change your idea of dependable cartridge playback operation. The possibility of total system failure has been eliminated. Each of the four playback modules contains a separate direct drive motor/capstar tape transport system, and separate transistorized electronics. Not one, but two DC power supplies are provided.

INCREASED FLEXIBILITY, TOO! The MC Series operates smoothly and quietly in either of the configurations shown above. Both monoaural and stereo models are available. Add optional conveniences like remote control and automatic sequencer, second and third NAB auxiliary tone cues, and four channel audio switcher. These are ideas you can profit by! Call or write Sparta for complete information now!

SPARTA ELECTRONIC CORPORATION

5851 FLORIN-PERKINS ROAD • SACRAMENTO, CALIFORNIA • 383-5353

Our VA 2034 video distribution amplifier



**holds better than 1% gain stability
within operating temperature range**

In other words, "Set it! Forget it!"—it's that reliable. And you'll notice other features that maintain signal quality. For example, better than 40 db ground loop hum rejection; the modular arrangement that permits plugging or unplugging one amplifier in a rack without disturbing the others; four identical outputs per amplifier; optional sync and/or blanking adding. Complete technical literature is yours by return mail.

The VA 2034 is crafted by Central Dynamics — international leader in terminal equipment designed for maximum operating efficiency and operator convenience.



CENTRAL DYNAMICS CORPORATION

HEAD OFFICE: 903 Main St., Cambridge, Mass. 02139



1 Delta Model OIB-1 Operating Impedance Bridge measures "in circuit" impedance of networks, transmission lines and antennas while operating at full or reduced power. Accuracy: $\pm 5\% \pm 1$ Ohm. Power Rating: 5kw with VSWR of 3:1.



2 Delta Model CPB-1 Common Point Bridge measures common point resistance to $\pm 2\% \pm 1$ Ohm, and reactance to $\pm 5\% \pm 1$ Ohm operating at full power.



3 Delta Model RG-1 Receiver/Generator, a combination signal generator with high output power, and receiver with excellent shielding and metering for use with Model OIB-1 or any other impedance bridge.

THE DELTA TRIO

for optimum monitoring of your antenna system

△ With this "Delta Trio", you can either "spot check", or continuously monitor actual "on-the-air" operating impedance of transmission lines, networks and antenna systems accurately to maintain a "clean signal" at peak operating efficiency.

△ If you're operating with a directional antenna, there's real value in being able to keep the radiating system in close adjustment at all times . . . continuously verify common point impedance to insure full power output . . . plus locating and correcting any antenna problems—fast!

△ Complete details and application data are available without obligation—just write or call Robert Foley—(703) 751-3133.

DELTA ELECTRONICS

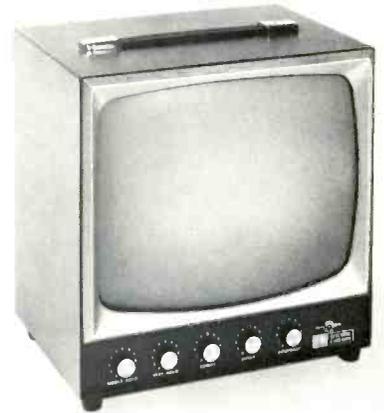


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Exclusive Export Distributor
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13 East 40th St., New York, N.Y. 10016 U.S.A.
Cable: "ARLAB"

Circle Item 37 on Tech Data Card

phase adjustment to obtain the desired remote-to-local phase relationship. Specifications include a color-subcarrier frequency of $3.579545 \text{ MHz} \pm 10 \text{ Hz}$; a temperature range of 0°C to $+45^\circ\text{C}$ ($+32^\circ\text{F}$ to $+113^\circ\text{F}$); two sub-carrier outputs, each 2 volts P-P into 75 ohms, source terminated; and burst-flag outputs of 4 volts P-P negative into 75 ohms. The price is \$2240.



TV Monitor
(86)

A new monochrome TV monitor for broadcast-station, industrial, educational, and other applications is sold by **Setchell Carlson**. The monitor has a viewable picture area of 125 square inches and includes such features as a plug-in high-voltage transformer. It is priced at approximately \$200 in quantities.



Tape Degausser
(87)

The **Hewlett-Packard Model 3603A** tape degausser has been designed to erase magnetic tapes automatically in 32 seconds, with no requirement for cooling off between degaussing cycles. In operation, the reel is placed on the hub, the drawer is closed, and the DEGAUSS button is pressed. This action turns on the magnetic field. The drawer then opens automatically, slowly withdrawing the tape from the field while rotating the reel to insure uniform demagnetization. When the drawer is fully extended, which removes the tape completely from the field, the machine shuts itself off.

Specifications include erasure to at least 90 dB below the recorded level; reel-size capacity from 3 to 15 inches in diameter with 1/4- to 1-inch wide



INSTANT REPLAY

Ideal instant playbacks at low cost with the cae Model 221 Mechanical Instant Playback Adapter

SATISFIES THE MOST DEMANDING VIDEO ENGINEER

Easily installed

Integrates with normal VTR operation. Levelling feet for precise tracking.

Fast, simple loading

Takes only 5 minutes, including splicing.

Efficient tape storage

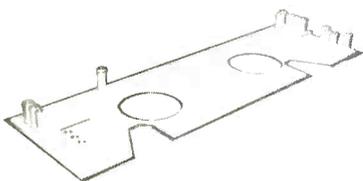
Accommodates 18 to 39-second playbacks.

Adjustable

Sliding pulley adjusts tension for odd lengths of tape.

Strong and lightweight

Heavy gauge aluminum construction for easy portability.



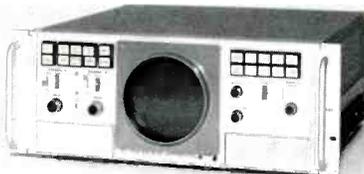
Let us solve your instant playback problems. Contact **ONEIDA ELECTRONICS INC.** 805 Court Street, UTICA, New York.

cae INDUSTRIES LTD. Electronics Division (Western), 387 Sutherland Avenue, WINNIPEG 4, Manitoba.



Circle Item 38 on Tech Data Card

tapes; accommodation of EIA- or NAB-type reels with 5/16- or 3-inch diameter hubs (an accessory hub adapter fits digital-computer-type reels); and size, 16 $\frac{3}{4}$ " x 8 $\frac{3}{4}$ " x 16 $\frac{3}{8}$ ". The unit may be used on the bench or installed in a standard-width rack with the hardware provided. Its price is \$900.



NTSC Vectorscope (88)

The Type 520 NTSC vectorscope, designed to measure luminance, hue, and saturation of the NTSC color television signal, has been introduced by **Tektronix, Inc.** Push-button controls provide selection of displays for analysis of television color signal characteristics. Amplitude calibrated displays of chroma and luminance are provided with internal calibration test signals. The luminance component of the composite color signal is derived for displaying separately or in combination with the red, green, or blue components.

Two 0° to 360° phase-shifters provide independent phase control of channels A and B to compensate for unequal signal paths. A calibrated phase shifter with a range of 30°, spread over 30 inches of dial length, is intended to provide adequate resolution for making small phase measurements. The equipment is designed to permit video cable lengths to be matched for time delay at the color subcarrier frequency to less than 0.5° phase difference. Differential gain and differential phase measurement capabilities are provided with specified accuracies within 1% for gain and 0.2° for phase. A digital line selector permits the display of a single-line vertical-interval test signal from a selected line of either field 1 or field 2. A vector graticule, or IEEE graticule, is automatically selected and edge-lighted concurrent with operating-mode selection. All silicon solid-state design is used.

The Type 520 NTSC vectorscope is available in electrically identical cabinet or rack-mount models. Price of either model is \$1850.

Cleaning Kit (89)

A kit designed to clean completely the critical areas of magnetic tape equipment and other electronic components is being marketed by the **Texwipe Co.** The kit contains 600 4" x 4" disposable cloths. These cloths are 100% cellulose, and are manu-

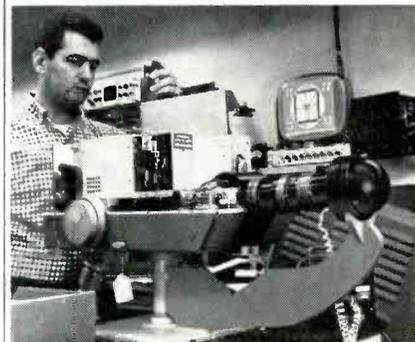


Photo Research introduces an easier, faster, more accurate way to test TV cameras . . .



The SPECTRA TV OPTOLINER*

is a high resolution, precision TV camera tester that saves space by eliminating the elaborate test equipment formerly used for this operation. Now being used by RCA in their Burbank production facilities, the Optoliner attaches directly into the camera lens mount and provides microscopic alignment (within 0.002") of the slide mounted test patterns to the center of the camera lens. Ideal for use in production facilities, quality control operations or in standards labs, the Optoliner contains a constant, adjustable light source, and a special meter to indicate the exact illuminance and color temperature falling on the face of the camera tube. For more information on this simplified approach to TV camera testing, write, wire or phone today!

*Trademark of Photo Research Corp.



Karl Freund, President

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Circle Item 39 on Tech Data Card



**NEW
HOLLOW
SHAFT**

nutdriver set

with Locknut/Screw
adjusting feature

Speeds, simplifies setting of combination locknut/slotted screw adjustments on rheostats and similar controls used in a wide variety of electrical and electronic equipment.

Handle is drilled so you can run an 8" screwdriver blade right through its center and down through the hollow nutdriver shaft.



Ideal for all-around production, maintenance, and service work, this new HSC-1 Set contains eight interchangeable hollow nutdriver shafts in the most popular hex opening sizes from 3/16" thru 9/16"



Really compact! Set is small enough, light enough to carry in your hip pocket.

Sturdy, see-thru, plastic carrying case doubles as a bench stand.

WRITE FOR BULLETIN N867

XCELITE

XCELITE, INC., 118 Bank St., Orchard Park, N.Y. 14127
In Canada contact Charles W. Pointon, Ltd.

Circle Item 40 on Tech Data Card

60



factured to be lint-free, highly absorbent, nonabrasive, and useable either dry or with solvent cleaners. Fifty foam-ended swabs and one 16-ounce aerosol can of *Freon TF* solvent are included. The can has a removable extension nozzle to pinpoint the spray.

The kit lists for \$23, and refills of any of the cleaning components can be ordered individually.

Miniature Sync Generator (90)

A miniature monochrome or color EIA sync generator, the *Porta-sync*, featuring all-digital circuitry is now available from **TeleMation, Inc.** The *Porta-sync*, Model TSG-1000M/C, is a broadcast synchronizing generator electrically identical to TeleMation's TSG-2000 series, but about half the



size, for use in remote field applications or as a system spare. It meets the same specifications as the TSG-2000, with the exception that it cannot be fitted with bar/dot, genlock, or sync-changeover accessories.

Timing of all waveform transitions is derived from clock pulses in the logic circuitry. Integrated circuits are used for all counting and logic functions. Because of this design, subcarrier phase jitter in the TSG-1000C (color) sync generator is specified as less than 0.5 nsec.

The generator measures 10 inches long and 5½ inches wide. Rack panels are available in single, dual, or dual with changeover versions to adapt the TSG-1000M/C to 19-inch rack mounting. ▲

Operating remote control? Be safe and sure with the



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Features of the Model TRF 1A:

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- EXTREME STABILITY • EXCELLENT SELECTIVITY
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Circle Item 41 on Tech Data Card

BROADCAST ENGINEERING

Engineers' TECH DATA

AUDIO EQUIPMENT

95. ATLAS SOUND—Studio booms, microphone stands, and accessories are shown in two-page Form PP 1840.
96. BELL PA PRODUCTS—Specifications, operating instructions, and schematics of Carillon series of sound-system amplifiers are offered.
97. QUAM-NICHOLS—Housings for 8-inch PA and background-music speakers are listed on information sheet.
98. STANFORD INT'L—New 1968 catalog of MB (West German) microphones and headsets is available.
99. SUPERSCOPE—31-page catalog "All the Best From Sony" features Sony/Superscope tape recorders, magnetic tape, microphones, and accessories. Additional catalog has technical specifications of consumer and professional microphones.
100. UNIVERSITY SOUND—28-page 1968 Commercial Sound Product Catalog lists speakers, microphones, and sound columns together with sound-system design chart, formulas, and technical data.

CATV

101. AMECO—"Tech Topics" is a regular feature of monthly "Profit Package" mailing.

COMPONENTS & MATERIALS

102. DIALIGHT—Catalog L-208 provides data, drawings, and ordering information for 513 Series momentary-action switches with terminals for direct connection to printed circuit boards.
103. MOTOROLA SEMICONDUCTOR—Reference folder covers over 100 silicon power transistor types.
104. TROMPETER—Catalogs M-4 and T-6, listing coax, twinax, and triax patching and switching products, are offered.
105. UNITRODE—16-page application note has as its subject direct replacement of high-voltage, high-current rectifier tubes with stackable "door-bell" rectifier modules.
106. WESTINGHOUSE—Line of high-vacuum amplifiers, pulse tubes, and diodes is described in 20-page quick-reference guide.

LIGHTING EQUIPMENT

107. BERKEY-COLORTRAN—"Super-Beam 1000" 1k lensless quartz light is subject of Catalog Sheet No. Q1-1022.

MISCELLANEOUS

108. DENSON—Catalog No. 967 A-1 and supplemental pages contain listings of new, used, and surplus electronic equipment.

POWER DEVICES

109. PROSSER IND.—Model 2511A 2500-watt alternator is presented in data sheet.

RECORDING & PLAYBACK EQUIPMENT

110. ELECTRONIC ENG'G—Eight-page booklet contains information about **On Time** editing and control equipment for TV tape recorders.
111. FAIRCHILD RECORDING EQUIP'T—FICM integrated input module is explained by one-page Technical Bulletin.



CUSTOM 12"
also available in
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Who put the "able" in turntable

If you're one of the multitude of QRK users in the U.S. or elsewhere in the world, you own the answer.

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NEW—USED—TRADE

Circle Item 43 on Tech Data Card

- 112. JOA—Prices and data are given for new tape cartridges and for cartridge-reconditioning service.
- 113. MEMOREX—Brochure is about new nationwide customer service network of distributors for firm's closed-circuit television tape.
- 114. METROTECH—Six-page brochure describes 500 Series recorders, reproducers, and slow-speed loggers.
- 115. RAYCO SOUND IND.—BASF magnetic tape and Fidelipac tape cartridges are subjects of literature offered.
- 116. SCULLY—Information folder describes new styling of 280 Series tape recorders.
- 117. TELEX—Descriptions of Viking Studio 96 and Magnecord Models 1021 and 1022 tape recording and reproducing equipment are given in literature.
- 118. TEXWIPE—Folder gives information on the Texwipe Precision Cleaning Kit for magnetic-tape equipment.

REFERENCE MATERIALS & SCHOOLS

- 119. CLEVELAND INSTITUTE OF ELECTRONICS—Pocket-size plastic "Electronics Data Guide" includes formulas and tables for: frequency vs wavelength, dB, length of antennas, and color code.

TELEVISION EQUIPMENT

- 120. CLEVELAND ELECTRONICS—A 52-page quick-reference stepdown die-cut catalog gives information on vidicon, Plumbicon, and image-orthicon deflection components.
- 121. COHU—Booklet 6-493 presents basics of television switching.
- 122. KALART—Literature is offered for Model STV-TB 16-mm TV projector, "Moviematic" and "Duolite" 16-mm sound projectors, and projection TV in schools.
- 123. TV ZOOMAR—Literature covers H.T.S. studio equipment, Newsbreaker 400 color film processor, and TV Colorgard meter to balance color TV monitors.

- 124. VITAL—VI-500 color video stabilizing amplifier with AGC, video and pulse distribution amplifiers VI-10A and VI-20A, and VIX-60 solid-state switching systems are subjects of literature offer.

TEST & MEASURING EQUIPMENT

- 125. ALFORD—112-page Catalog O lists RF instruments and components.
- 126. BARKER & WILLIAMSON—Sales Bulletin No. 111 illustrates and gives descriptions of Model 210 audio oscillator and Model 410 distortion meter.
- 127. BENRUS TECH. PRODS.—Catalog No. 704, "Benrus Electronic Instruments," features CRT display devices and other instruments.
- 128. BIRD—VSWR nomograph and other data are included in 60 page Catalog GC-68 of RF-measurement instrumentation.
- 129. DELTA—Information sheet has as its subject the Model RG-1 receiver/generator for use with impedance bridges in antenna-system measurements.
- 130. MARCONI INSTRUMENTS—Information concerning the TF 2904 color gain and delay test set is given.
- 131. SECO—Operating manual for Model 107C tube tester is offered along with new line folder.
- 132. SENCORE—Eight-page catalog and a four-page supplement catalog are available.
- 133. TELONIC ENG'G—Eight-page booklet is titled "TVS-1 Precision VSWR Measurement System."
- 134. TRIPLETT—Catalog D-68 is about panel meters; Catalog 49-T shows line of VOM's and other test equipment.

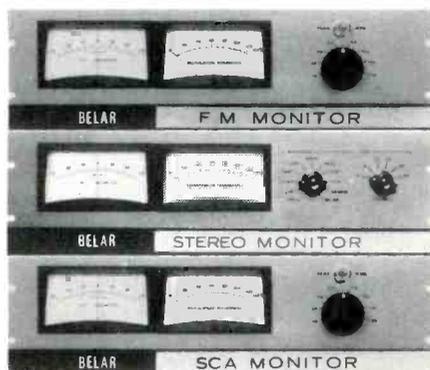
TRANSMITTERS & ASSOCIATED EQUIPMENT

- 135. BARNSTEAD—Six-page Bulletin No. 201 describes recirculating repurification loops for cooling water for UHF transmitting tubes.
- 136. GATES—Brochure contains specifications and illustrations of GTM-88S stereo modulation monitor, GTM-88M monaural modulation monitor, and GTM-88F FM frequency monitor.

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- Totally integrated, solid state design **BELAR HAS IT**
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January, 1968

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YOU NEED
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MICROPHONES, WIRELESS
POWER SUPPLIES, AC
RECORDERS, MAGNETIC TAPE,
AUDIO
RECORDERS, MAGNETIC TAPE,
AUDIO, CARTRIDGE

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SOUND SYSTEMS, PORTABLE
SOUND SYSTEMS, THEATER
SPEAKER COMPONENTS
SPEAKERS
TAPE, MAGNETIC RECORDING,
AUDIO
TAPE, MAGNETIC RECORDING,
AUDIO, CARTRIDGE

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TERMI-BLOK
SOLISTRAND
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215 647-1000
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CONNECTORS, COAXIAL CABLE
CONNECTORS, POWER
CONNECTORS, RF
PLUGS, COAXIAL
SWITCHES
SWITCHING MATRIXES
SWITCHING SYSTEMS
TERMINAL BLOCKS
TERMINALS, HIGH VOLTAGE
TERMINALS, LUG
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TOOLS, CRIMPERS

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TWX 516-433-9045
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SEMICONDUCTOR DIVISION
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COMPONENTS DIV.
HICKSVILLE, N. Y. 11802
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ELECTROLYTIC
CAPACITORS, FIXED, FILM
CAPACITORS, FIXED, GENERAL
CAPACITORS, FIXED, METALLIZED
CAPACITORS, FIXED, MICA
MICROWAVE COMPONENTS
RESISTORS, FIXED, CARBON
RESISTORS, FIXED, OTHER
SEMICONDUCTOR DIODES
SEMICONDUCTOR RECTIFIERS,
GENERAL
SEMICONDUCTOR RECTIFIERS,
HIGH VOLTAGE
SEMICONDUCTOR RECTIFIERS,
POWER
SEMICONDUCTOR RECTIFIERS,
SILICON CONTROLLED - SCR
SEMICONDUCTORS, THYRISTORS
SEMICONDUCTORS,
TRANSISTORS, AF
SEMICONDUCTORS,
TRANSISTORS, FE
SEMICONDUCTORS, TRANSISTORS,
GENERAL
SEMICONDUCTORS,
TRANSISTORS, RF
VACUUM TUBES, CAMERA,
IMAGE-ORTHICON
VACUUM TUBES, CAMERA,
PLUMBICON
VACUUM TUBES, CAMERA, VIDICON
VACUUM TUBES, CATHODE RAY,
OSCILLOSCOPE
VACUUM TUBES, CATHODE RAY,
TV, COLOR
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415 367-2011
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AMPLIFIER, TV, VIDEO
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AUTOMATION EQUIPMENT, VIDEO
CABLE, CAMERA
CAMERAS, TV, COLOR
CAMERAS, TV, MONOCHROME
CATV. HEAD-END EQUIPMENT
CATV. ORIGINATION EQUIPMENT
COMPUTER EQUIPMENT
CONSOLE, AUDIO, PORTABLE
CONSOLE, AUDIO, RECORDING
CONSOLE, VIDEO, PORTABLE
CONSOLE, VIDEO, STUDIO
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DEMAGNETIZERS, HEAD
DISPLAY EQUIPMENT, TV
DOLLIES, CAMERA
DROPOUT COMPENSATOR,
VIDEO TAPE
EARPHONES, HEADPHONES
EDITORS, AUDIO TAPE
EDITORS, VIDEO TAPE
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EQUIPMENT
EDUCATION FACILITIES, SCHOOLS
ENCLOSURES, SPEAKER
GENERATORS, SIGNAL, COLOR BAR
GENERATORS, SIGNAL,
SPECIAL EFFECT
GENERATORS, SIGNAL,
SQUARE WAVE
GENERATORS, SIGNAL
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HEADS, ERASE, MAGNETIC
HEADS, RECORDING, MAGNETIC
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LENSES, OPTICAL, FIXED
LENSES, OPTICAL, ZOOM
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MICROPHONES, DYNAMIC
MIXERS - SEE CONSOLES
MOBILE EQUIPMENT, TV
MODULATORS, TV
MONITORS, VIDEO
MONITORS, WAVEFORM
PREAMPLIFIERS, AUDIO
RECORDERS, DISC, MAGNETIC
RECORDERS, FILM, MAGNETIC
RECORDERS, LOGGING, MAGNETIC
RECORDERS, MAGNETIC TAPE,
AUDIO
RECORDERS, MAGNETIC TAPE,
AUDIO, CARTRIDGE
RECORDERS, MAGNETIC TAPE,
LOGGING
RECORDERS, MAGNETIC TAPE,
VIDEO
REELS, TAPE
REMOTE CONTROL SYSTEMS, TV
REWINDERS, TAPE
SOUND SYSTEMS, OUTDOOR
SOUND SYSTEMS, PORTABLE
SOUND SYSTEMS, THEATER
SPEAKERS
SPLICERS, MAGNETIC TAPE
AND FILM
STANDS, TELEVISION MONITOR
TAPE ACCESSORIES
TAPE DECKS, MAGNETIC
TAPE DUPLICATORS
TAPE, MAGNETIC RECORDING,
AUDIO
TAPE, MAGNETIC RECORDING,
AUDIO, CARTRIDGE
TAPE, MAGNETIC RECORDING,
COMPUTER
TAPE, MAGNETIC RECORDING,
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TAPE, MAGNETIC RECORDING,
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REMOTE CONTROL SYSTEMS, TV
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TRANSMITTERS, FM, 250 WATTS
TRANSMITTERS, FM, 1 KW
TRANSMITTERS, FM, 5 KW
TRANSMITTERS, FM, 10 KW
TRANSMITTERS, FM, 15 KW
TRANSMITTERS, TV, 1 WATT
TRANSMITTERS, TV, 10 WATTS
TRANSMITTERS, TV, 100 WATTS
TRANSMITTERS, TV, 1 KW
TRANSMITTERS, TV, 10 KW
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TRANSMITTERS, TV, 30 KW
TRANSMITTERS, TV, 55 KW
TRANSMITTERS, TV, 70 KW
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CABLE, SHIELDED, AUDIO
CLOCKS & CHRONOGRAPHS
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POTENTIOMETERS, WIREWOUND
RELAYS, COAXIAL
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WIREWOUND
SOCKETS, RELAY
SOCKETS, TUBE
SWITCHES, COAXIAL
SWITCHES, WAVEGUIDE
TERMINAL BLOCKS
TERMINAL BOARDS
TERMINAL STRIPS
TOOLS, CRIMPERS
WAVEGUIDE AND
ASSOCIATED COMPONENTS
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WIRE, BARE, COPPER STRAP
WIRE, INSULATED, HOOKUP
WIRE & CABLING SERVICES

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MAGNERASER JR
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AMPLIFIER, AF, REVERBERATION
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METERS, FLUTTER & WOW
PROJECTORS, SLIDE
RECORDERS, MAGNETIC TAPE,
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AMPLIFIER, VIDEO, SWEEP
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MASTER-COMMUNITY
CABLE, CATV, HARDWARE
CAMERA, REMOTE
CONTROL EQUIPMENT
CAMERAS, TV, COLOR
CAMERAS, TV, MONOCHROME
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CATV, HEAD-END EQUIPMENT
CATV, ORIGINATION EQUIPMENT
COMMUNICATIONS SYSTEMS,
MICROWAVE
CONNECTORS, ANTENNA
CONNECTORS, COAXIAL CABLE
CONNECTORS, RF
CONSOLE, VIDEO, PORTABLE
CONSOLE, VIDEO, STUDIO
CONVERTERS
GENERATORS, FM, SUBCARRIER
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MONITORS, VIDEO
NARROW-BAND FM EQUIPMENT
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NETWORKS, PHASING
RECORDERS, MAGNETIC TAPE,
VIDEO
RODS, GROUND
TAPE DECKS, MAGNETIC
TAPE, MAGNETIC RECORDING,
VIDEO
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CATV, HEAD-END
TRANSLATOR SYSTEMS
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MKTG MGR, CATV
R.A. BROOKS
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CABLE, CATV, HARDWARE
CABLE, COAXIAL, FLEXIBLE
CABLE, DIRECT-BURIAL
CATV EQUIPMENT - ALSO SEE
OTHER CATEGORIES
CATV, CABLE TERMINALS
CATV, CHANNEL AMPLIFIERS
CATV, HEAD-END EQUIPMENT
CONNECTORS, COAXIAL CABLE
HEAD-END EQUIPMENT,
SEE CATV HEAD-END EQUIPMENT
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METERS, FIELD STRENGTH
POWER SUPPLIES, AC
TRANSFORMERS, GENERAL
TV SYSTEMS, CLOSED CIRCUIT

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CHICAGO, ILL. 60656
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CONSOLE, AUDIO, FM
CONSOLE, AUDIO, RECORDING
CONSOLE, AUDIO, TV

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BLACK HAWK, S. DAKOTA 57718
787-4224
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AMPLIFIER, TV, BOOSTER
ANTENNAS, FM
ANTENNAS, TV

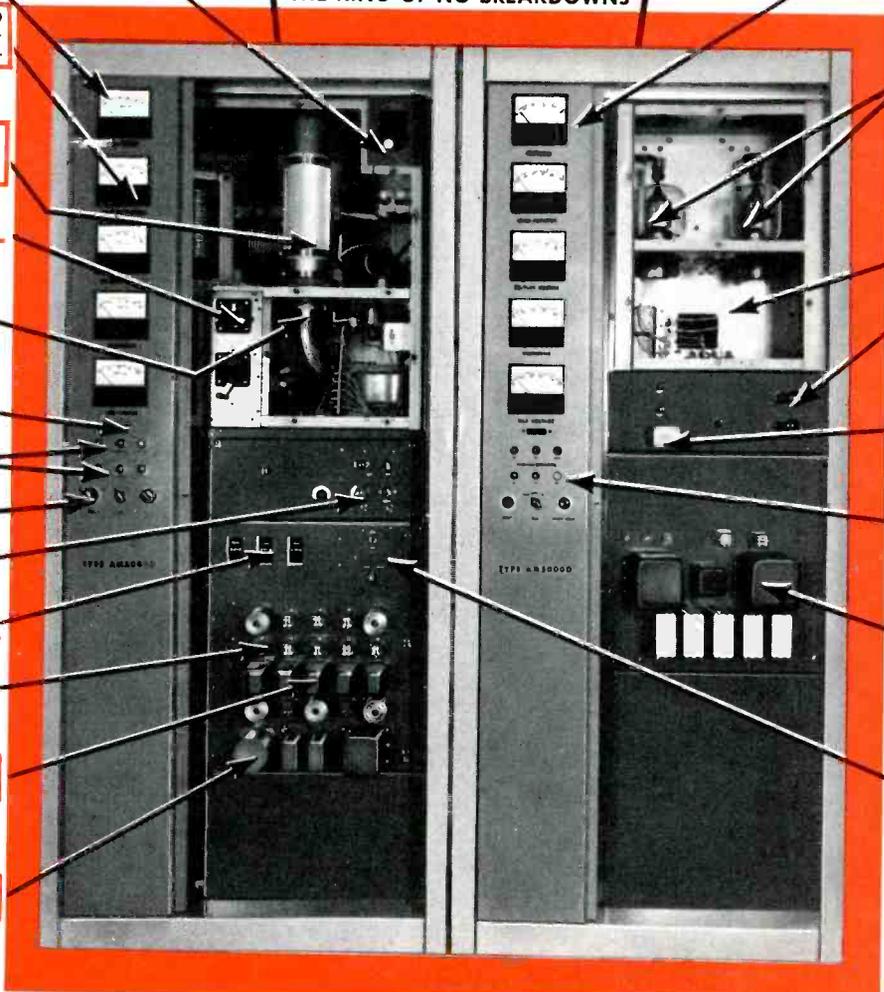
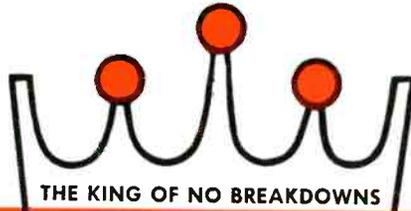
ATTENUATORS, RF
BALUNS
CATV, CHANNEL AMPLIFIERS
CATV, HEAD-END EQUIPMENT
CATV, ORIGINATION EQUIPMENT
FILTERS, RF
GENERATORS, POWER,
WIND AND THERMOELECTRIC
METERS, FIELD STRENGTH, FM
METERS, FIELD STRENGTH,
TV, UHF
METERS, FIELD STRENGTH,
TV, VHF
MODULATORS, TV
STL EQUIPMENT
TRANSLATOR SYSTEMS
TRANSMITTERS, FM
TRANSMITTERS, TV, 1 WATT
TRANSMITTERS, TV, 10 WATTS
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ANTENNAS, REMOTE PICKUP
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CONNECTORS, RF
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FILTERS, OTHER
GENERATORS, SIGNAL, PULSE
GENERATORS, SIGNAL, RF
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METERS, FIELD STRENGTH, FM
METERS, FIELD STRENGTH,
TV, UHF
METERS, FIELD STRENGTH,
TV, VHF
METERS, FREQUENCY
METERS, POWER
METERS, STANDING WAVE
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RELAYS, TELEPHONE
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TRANSMITTERS, AM, 250 WATT
TRANSMITTERS, AM, 500 WATT
TRANSMITTERS, AM, 1 KW
TRANSMITTERS, AM, TO ORDER
TRANSMITTERS, FM, 10 WATTS
TRANSMITTERS, FM, 50 WATTS
TRANSMITTERS, FM, TO ORDER
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FROM ANY VIEW...THE CCA



FRONT VIEW LESS DOORS AND COVERS

PA TUNING—VARIABLE VACUUM CAPACITOR.

HINGED METER PANELS.

TOTAL METERING—METERS AND MULTIMETER SWITCHES, PROVIDE 34 METERING FUNCTIONS.

3CX2500F3PA—LONG LIFE—(8—10,000 HOURS). INEXPENSIVE—(\$205.00).

CALIBRATED TUNING CONTROLS.

CCA WAS FIRST MANUFACTURER TO PROPERLY POSITION 3CX2500F3 (ANODE ON TOP).

TIME ELAPSED METER.

CONTROL STATUS LIGHTS.

OPERATING SWITCHES.

VACUUM CRYSTAL.

"BACK UP" CIRCUIT BREAKERS.

CONVENTIONAL PARTS.

OVERLOAD RELAYS—FRONT PANEL ADJUSTABLE.

THREE CYCLE AUTOMATIC RECYCLING SYSTEM.

HINGED METER PANEL

LOW COST, RELIABLE—4-1000A MODULATORS. THESE TUBES OPERATING IN CLASS AB2 ARE PROVIDING CCA OWNERS WITH 8—10,000 HOURS LIFE. THIS REPRESENTS TOTAL MODULATOR COST OF APPROXIMATELY 2 CENTS PER HOUR.

TOTAL ACCESS.

EL-34 CATHODE FOLLOWERS.

STANDARD PARTS.

OVERLOAD INDICATOR LIGHTS FOR INDEPENDENT CIRCUITS.

STANDARD PARTS.

TRUE-POWER CUTBACK—ACHIEVED WITH CONTACTORS AND NOT HIGH POWER DROPPING RESISTORS.

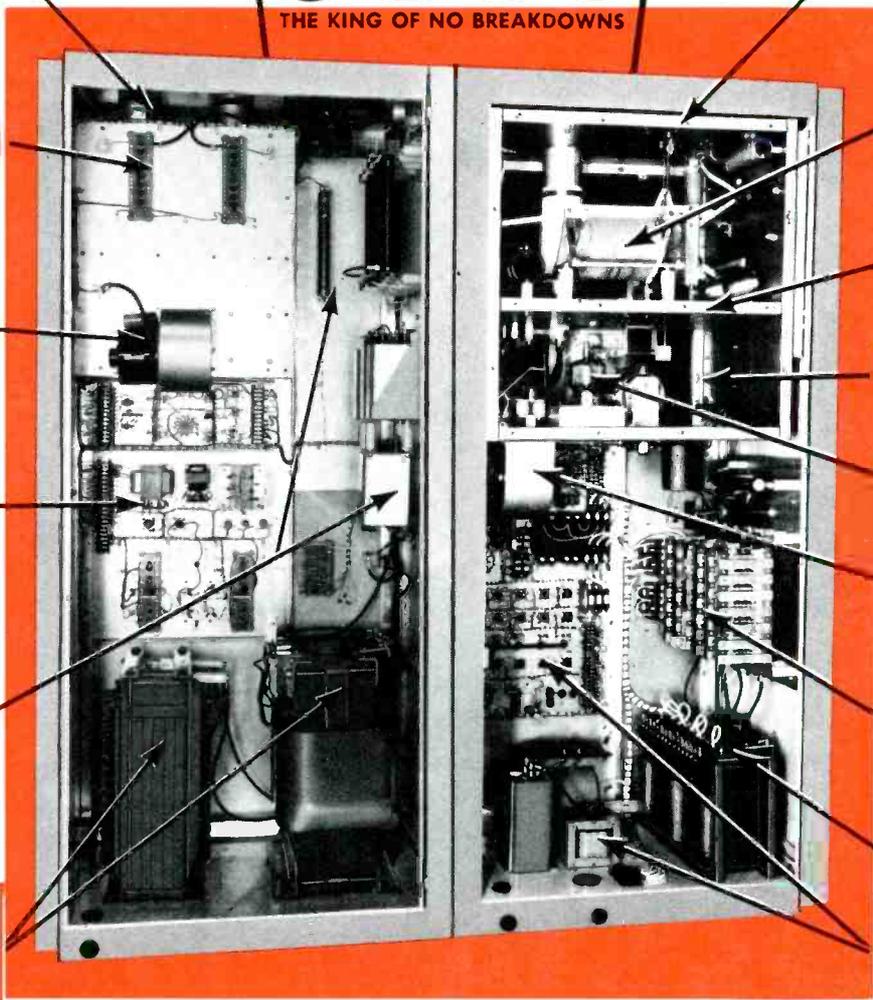
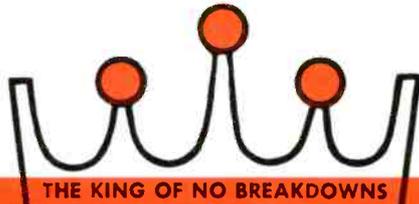
AUTOMATIC STEP-START SEQUENCE—TRANSMITTER NEVER STARTS DIRECTLY AT HIGH POWER.

THESE BROADCASTERS PRESENTLY USE THE **CCA** AM-5000D

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 WFIF MILFORD, CONNECTICUT
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 KDOT SCOTTSDALE, ARIZONA
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 WVAM ALTOONA, PENNSYLVANIA

5KW AM IS OUTSTANDING!



100% RF SHIELDING: — ALL RF COMPONENTS OF THE AM-5000D ARE MOUNTED WITHIN A SUBSTANTIAL ALUMINUM ENCLOSURE WITHIN THE RF CABINET. THIS ELIMINATES TROUBLESOE CABINET RADIATION PROBLEMS PRESENT IN OLDER DESIGNS WHERE RF COMPONENTS WERE SIMPLY SUPPORTED ON THE SIDE OF UNSHIELDED CABINETS.

OUTPUT CIRCUIT CONTAINS DOUBLE PI AND 2ND HARMONIC TRAP. CIRCUITS OPERATE WITH LOADED "Q'S" OF ONLY 5 AND 2. HARMONIC SUPPRESSION 90 DB.

ALL RF COMPONENTS SHIELDED.

FULL ACCESS TO RF COMPONENTS FROM FRONT OR REAR OF CABINET.

CONSERVATIVE 4-400A IPA.

300% RESERVE IN COOLING.

HI CURRENT SILICON RECTIFIER WITH 200+% RESERVE IN VOLTAGE AND 3000% RESERVE IN CURRENT. WE HAVE NEVER LOST A HIGH CURRENT SILICON!!

TRANSFORMERS DESIGNED FOR 15,000' ELEVATION.

STANDARD PARTS USED—AVAIL-ABLE FROM LOCAL SOURCES.

AIR INTERLOCK IN OUTLET DUCT.

ONLY 13 DB DEGENERATIVE FEED-BACK.

SELF LUBRICATED—300% COOLING.

FULL ACCESS TO ALL PARTS.

STANDARD PARTS USED—AVAIL-ABLE FROM LOCAL SOURCES.

INDUSTRY'S LARGEST 5 KW MOD-ULATION COMPONENTS ASSURE 30 TO 12,000 CYCLE PERFORMANCE WITH A MID BAND DISTORTION OF LESS THAN 1%. (WE HAVE NEVER LOST A MODULATION COMPONENT.)

REAR VIEW LESS DOORS AND COVERS



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716 Jersey Ave., Gloucester City, N. J. 08030 • 609-456-1716
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WE'RE ONLY #3

WE'RE NOT PARTICULARLY PROUD THAT WE'RE ONLY #3, BUT CONSIDERING THAT #4 HAS BEEN IN BUSINESS FOR 30 YEARS, WE FEEL IT'S QUITE AN ACCOMPLISHMENT!! BROADCASTERS UNDERSTAND THAT CCA PROVIDES MORE THAN JUST A RELIABLE, ECONOMICAL TRANSMITTER — WE PROVIDE PERSONALIZED SERVICE — WE HAVE TO — WE'RE ONLY #3!

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 INSULATORS, STAND-OFF
 TOWERS, ANTENNA,
 CATV HEAD-END
 TOWERS, ANTENNA, RECEIVING
 TOWERS, ANTENNA,
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 AMPLIFIER, SENSING
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 MAINTENANCE SERVICES, AM
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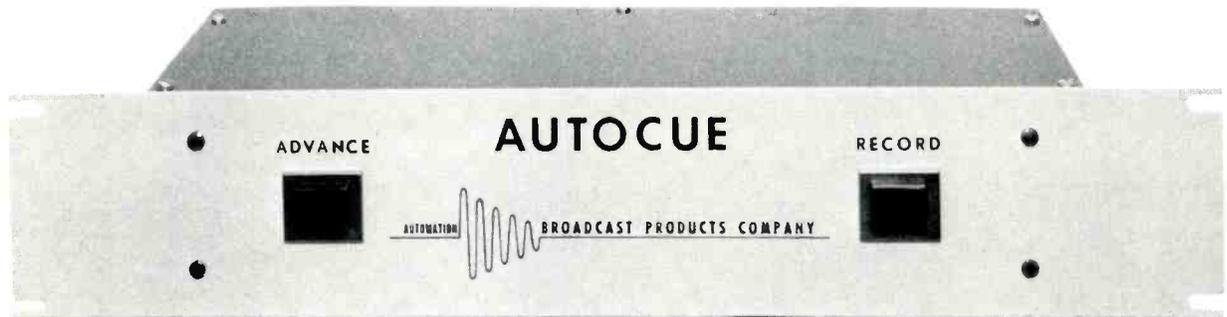
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NETWORKS, MATCHING, RF
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REGULATORS, FREQUENCY
REGULATORS, VOLTAGE
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RELAYS, COAXIAL
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REMOTE CONTROL SYSTEMS, FM
SCRAMBLERS, SPEECH
SEMICONDUCTOR RECTIFIERS,
GENERAL
SEMICONDUCTOR RECTIFIERS,
HIGH VOLTAGE
SEMICONDUCTOR RECTIFIERS,
POWER
SEMICONDUCTOR RECTIFIERS,
SILICON CONTROLLED - SCR
SERVICES, INSTALLATION
SHIFTERS, PHASE, MICROWAVE
STL EQUIPMENT
SWITCHES, COAXIAL
SWITCHES, CROSSBAR
SWITCHES, ILLUMINATED
SWITCHES, INTERLOCK
SWITCHES, KNIFE
SWITCHES, LEVER
SWITCHES, MECHANICALLY
ACTUATED
SWITCHES, MULTICONTACT
SWITCHES, PUSHBUTTON
SWITCHES, ROTARY
SWITCHES, SLIDE
SWITCHES, SNAP
SWITCHES, TELEPHONE TYPE
SWITCHES, THERMAL
SWITCHES, TOGGLE
SWITCHES, WAVEGUIDE
SWITCHING MATRIXES
SWITCHING SYSTEMS
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TELEPHONE EQUIPMENT
TERMINAL BLOCKS
TERMINAL BOARDS
TERMINAL CARDS
TERMINAL STRIPS
TESTERS, SEMICONDUCTOR
TOWERS, ANTENNA,
TRANSMITTING, AM
TOWERS, ANTENNA,
TRANSMITTING, FM
TRANSFORMERS, RF
TRANSLATOR SYSTEMS
TRANSMITTERS, AM, CARRIER
TRANSMITTERS, AM, LOW POWER
TRANSMITTERS, AM, 250 WATT
TRANSMITTERS, AM, 500 WATT
TRANSMITTERS, AM, 1 KW
TRANSMITTERS, AM, 5 KW
TRANSMITTERS, AM, 10 KW
TRANSMITTERS, AM, OVER 50 KW
TRANSMITTERS, AM, TO ORDER
TRANSMITTERS, FM, 10 WATTS
TRANSMITTERS, FM, 50 WATTS
TRANSMITTERS, FM, 100 WATTS
TRANSMITTERS, FM, 250 WATTS
TRANSMITTERS, FM, 1 KW
TRANSMITTERS, FM, 3 KW
TRANSMITTERS, FM, 5 KW
TRANSMITTERS, FM, 7.5 KW
TRANSMITTERS, FM, 10 KW
TRANSMITTERS, FM, 15 KW
TRANSMITTERS, FM, 20 KW
TRANSMITTERS, FM, 40 KW
TRANSMITTERS, FM,
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FILTERS, RF
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TRANSMITTERS, AM, 10 KW
TRANSMITTERS, AM, 25 KW
TRANSMITTERS, AM, 50 KW
TRANSMITTERS, AM, OVER 50 KW
TRANSMITTERS, AM, TO ORDER

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RELAYS, PLUG IN
RELAYS, POWER
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CAPACITORS, FIXED, PAPER
CAPACITORS, FIXED, OTHER
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FILTERS, OTHER
INVERTERS, DC TO AC,
VIBRATORS
POWER SUPPLIES, AC
POWER SUPPLIES, DC
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RELAYS, LATCHING
RELAYS, OVERLOAD
RELAYS, PHOTOELECTRIC
RELAYS, PLUG-IN
RELAYS, POWER
RELAYS, SEQUENCING
RELAYS, STEPPING
RELAYS, TELEPHONE
RELAYS, TIME DELAY
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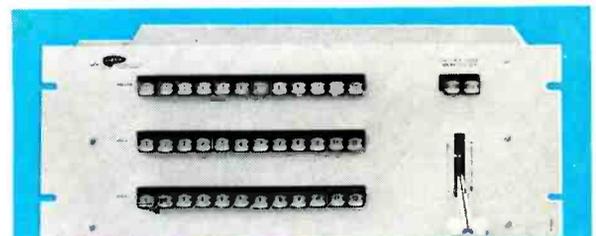
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FREQUENCY
COMMUNICATIONS SYSTEMS, CB
COMMUNICATIONS SYSTEMS,
INTERCOM, WIRED
COMMUNICATIONS SYSTEMS,
INTERCOM, WIRELESS
COMMUNICATIONS SYSTEMS,
LAND MOBILE
COMMUNICATIONS SYSTEMS,
MICROWAVE
COMMUNICATIONS SYSTEMS,
MULTIPLY
COMMUNICATIONS SYSTEMS,
TELEPRINTER
MICROWAVE SYSTEMS, STL
MICROWAVE SYSTEMS, 2500 MHZ
MICROWAVE SYSTEMS, OTHER
MOBILE EQUIPMENT
REMOTE CONTROL SYSTEMS
SWITCHING SYSTEMS
TRANSLATOR SYSTEMS
TV SYSTEMS, CLOSED CIRCUIT

THE JAMES FLOYD FORD CO. DIV. OF THE ZIOLACK CORP.

SALES MANAGER
LARRY STEVEN KILBREATH
BRAND NAMES
JFFCO
JFFCOM
JFFCOMPT
COMPANY ADDRESS
JFFCO BUILDING P.O. DRWR 839
CAPE GIRARDEAU, MO. 63701
314-334-6308
TWX 314-334-7027
ALARM, INTRUDER
CABLE, TELEPHONE
COILS, TELEPHONE
COMMUNICATIONS SYSTEMS,
INTERCOM, WIRED
COMPUTER SERVICES
DESIGNATION CARDS & STRIPS

DIALS, TELEPHONE
FILM, PROCESSING SERVICE
INVERTERS, DC TO AC,
SOLID STATE
LETTERS AND NUMBERS,
PRESSURE SENSITIVE
MICROPHONES, WIRELESS
NAMEPLATES
PLUGS, PHONE
RECORDING SERVICE, AUDIO,
RELAYS, TELEPHONE
SCRAMBLERS, SPEECH
SWITCHES, TELEPHONE TYPE
SWITCHING SYSTEMS
TELEPHONE EQUIPMENT

FORT WORTH TOWER CO, INC

PRESIDENT
T. W. MOORE
COMPANY ADDRESS
5201 BRIDGE ST P.O. BOX 8597
FORT WORTH, TEXAS 76112
817 536 5676
ANTENNAS, MICROWAVE
PREFABRICATED BUILDINGS
RADOMES
REFLECTORS, PASSIVE
TOWERS, ANTENNA,
CATV, HEAD-END
TOWERS, ANTENNA, RECEIVING
TOWERS, ANTENNA,
TRANSMITTING, AM
TOWERS, ANTENNA,
TRANSMITTING, FM
TOWERS, ANTENNA,
TRANSMITTING, TV

FOURJAY INDUSTRIES

SALES MANAGER
W. A. SCHONEBERGER
COMPANY ADDRESS
2801 ONTARIO AVE.
DAYTON, OHIO 45414
513 278-2924
ENCLOSURES, SPEAKER
SOUND SYSTEMS, OUTDOOR
SPEAKERS

GABRIEL ELECTRONICS DIV. MAREMONT CORP.

SALES MANAGER
LOUIS LAMPERTI
BRAND NAMES
HOPSTRETCHER
COMPANY ADDRESS
NORTH ST. P. O. BOX 471
SACO, MAINE 04072
207 282-1526
TWX 207-284-5761
ANTENNAS, MICROWAVE
ANTENNAS, REMOTE PICKUP
ANTENNAS, 2500 MHZ
JOINTS, ROTARY, COAXIAL
JOINTS, ROTARY, WAVEGUIDE
MOUNTS, ANTENNA, FIXED
PRESSURIZATION EQUIPMENT,
TRANSMISSION LINE
RADOMES
REFLECTORS, PASSIVE
WAVEGUIDE AND
ASSOCIATED COMPONENTS

GAMMA SCIENTIFIC, INCORPORATED

SALES MANAGER
HAROLD P. FIELD
COMPANY ADDRESS
5841 MISSION GORGE RD.
SAN DIEGO, CALIF. 92120
METERS, LIGHT

GATES RADIO COMPANY

SALES MANAGER
EUGENE O. EDWARDS
BRAND NAMES
CYCLOID
COMPANY ADDRESS
123 HAMPSHIRE STREET
QUINCY, ILLINOIS 62301
217-222-8202
AMPLIFIER, AF, AGC
AMPLIFIER, AF, COMPRESSING
AMPLIFIER, AF,
GENERAL PURPOSE
AMPLIFIER, AF, MONAURAL
AMPLIFIER, AF,
PEAK LIMITING, AM
AMPLIFIER, AF,
PEAK LIMITING, FM
AMPLIFIER, AF, REMOTE
AMPLIFIER, BRIDGING
AMPLIFIER, RF, POWER
ANTENNAS, AM
ANTENNAS, FM
ANTENNAS, HF
ANTENNAS, TV
ARMS, TONE
AUTOMATION EQUIPMENT, AUDIO
BROADCAST PROGRAMMING
SERVICE, RADIO
CABINETS, METAL
CABINETS, STORAGE, DISC
CABINET, STORAGE,
MAGNETIC TAPE
CABINETS, STORAGE,
MAGNETIC TAPE, CARTRIDGE
CABINETS, WOOD

CARTRIDGES, MAGNETIC TAPE
COILS, ANTENNA LOADING
COILS, CHOKE, RF
COMMUNICATIONS SYSTEMS,
INTERCOM WIRELESS
COMMUNICATIONS SYSTEMS,
MULTIPLY
COMMUNICATIONS SYSTEMS,
TELEPRINTER
CONSOLE, AUDIO, AM
CONSOLE, AUDIO, FM
CONSOLE, AUDIO, PORTABLE
CONSOLE, AUDIO, RECORDING
CONSOLE, AUDIO, TV
COUPLERS
DUMMY LOAD
EDUCATION FACILITIES,
EQUIPMENT
ENCLOSURES, SPEAKER
EXCITERS, FM
FILTERS, ANTENNA
GENERATORS, FM, STEREO
GENERATORS, FM, SUBCARRIER
HARDWARE, PANEL
HARDWARE, RACK
JACK PANEL ASSEMBLIES
MAINTENANCE SERVICES,
CARTRIDGE TAPE
MONITORS, AM SYSTEMS
MONITORS, FM SYSTEMS, MONO
MONITORS, FM SYSTEMS, SCA
MONITORS, FM SYSTEMS, STEREO
MONITORS, FREQUENCY
MONITORS, MODULATION
NETWORKS, MATCHING, RF
NETWORKS, ANTENNA,
OSCILLATORS, AM
OSCILLATORS, FM
OSCILLATORS, TV
PREAMPLIFIERS, AUDIO
RECORDERS, MAGNETIC TAPE,
AUDIO, CARTRIDGE
REMOTE CONTROL SYSTEMS, AM
REMOTE CONTROL SYSTEMS, FM
REMOTE CONTROL SYSTEMS, TV
SWITCHING SYSTEMS
TAPE ACCESSORIES
TAPE DECKS, MAGNETIC
TERMINAL BLOCKS
TOWERS, ANTENNA,
TRANSMITTING, AM
TOWERS, ANTENNA,
TRANSMITTING, FM
TRANSMISSION LINES
TRANSMITTER KITS
TRANSMITTERS, AM, LOW POWER
TRANSMITTERS, AM, 250 WATT
TRANSMITTERS, AM, 500 WATT
TRANSMITTERS, AM, 1 KW
TRANSMITTERS, AM, 5 KW
TRANSMITTERS, AM, 10 KW
TRANSMITTERS, AM, 25 KW
TRANSMITTERS, AM, 50 KW
TRANSMITTERS, AM, OVER 50 KW
TO ORDER
TRANSMITTERS, FM
TRANSMITTERS, FM, 10 WATTS
TRANSMITTERS, FM, 50 WATTS
TRANSMITTERS, FM, 100 WATTS
TRANSMITTERS, FM, 250 WATTS
TRANSMITTERS, FM, 1 KW
TRANSMITTERS, FM, 5 KW
TRANSMITTERS, FM, 7.5 KW
TRANSMITTERS, FM, 10 KW
TRANSMITTERS, FM, 15 KW
TRANSMITTERS, FM, 20 KW
TRANSMITTERS, FM, 40 KW
TRANSMITTERS, FM, 50 KW
TRANSMITTERS, FM, 100 KW
TRANSMITTERS, FM,
SPECIFY POWER
TRANSMITTERS, FM, TO ORDER
TRANSMITTERS, TV
TRANSMITTERS, TV, 1 WATT
TRANSMITTERS, TV, 10 WATTS
TRANSMITTERS, TV, 20 WATTS
TRANSMITTERS, TV, 60 WATTS
TRANSMITTERS, TV, 100 WATTS
TRANSMITTERS, TV, 5 KW
TRANSMITTERS, TV,
SPECIFY POWER
TURNTABLES, PHONOGRAPH

GBC AMERICA CORPDRATIDN

SALES MANAGER
HARRY LEFKOWITZ
COMPANY ADDRESS
89 FRANKLIN STREET
NEW YORK, NEW YORK 10013
AMPLIFIER, CATV
AMPLIFIER, TV, VIDEO
INDUSTRIAL TV
MONITORS, VIDEO
TV SYSTEMS, CLOSED CIRCUIT
VACUUM TUBES, CAMERA, VIDICON

G C ELECTRONICS COMPANY

SALES MANAGER
ED GALLAGHER
BRAND NAMES
AUDIOTEX
ELECTROCRRAFT
G C ELECTRONICS
G. C. TELCO
WALSCO

COMPANY ADDRESS
400 S. WYMAN STREET
ROCKFORD, ILLINOIS 61101
968-9661

ANTENNAS, FM
ANTENNAS, TV
CLAMPS, CABLE
CLAMPS, GROUND
CLEANERS, CHEMICAL-
ALSO SEE SOLVENTS
CLEANERS, LENS
CLEANERS, OTHER-
ALSO SEE SOLVENTS
COMPUTER SERVICES
CONNECTORS, AF & MICROPHONE
CORDS, DIAL
CORDS, LACING
DEMAGNETIZERS, BULK TAPE
DEMAGNETIZERS, HEAD
HARDWARE, GROMMETS
INSULATORS, STAND-OFF
INVERTERS, DC TO AC,
SOLID STATE
JACK PANEL ASSEMBLIES
JACKS
KNOBS
LEADS, TEST
LIGHTNING ARRESTERS
LUBRICANTS
PROBES, TEST LEAD
RESISTORS, FIXED, CARBON
RODS, GROUND
SOCKETS, SEMICONDUCTOR
SOCKETS, TUBE
SOLVENTS AND CLEANERS
SPLICERS, MAGNETIC TAPE
SWITCHES, MULTICONTACT
SWITCHES, PUSHBUTTON,
SWITCHES, SLIDE
SWITCHES, SNAP
SWITCHES, TOGGLE
TAPE ACCESSORIES
TERMINALS, SOLDER
TERMINALS, SOLDERLESS
TOOLS, ALIGNMENT
TOOLS, SOLDERING AIDS

GENARCO, INC.

PRESIDENT
JEAN P. LATIL
COMPANY ADDRESS
15-58 127TH ST.
FLUSHING, N. Y. 11356
212 445-7200

LIGHTING, TV, SYSTEMS
PROJECTORS, SLIDE

GENERAL ANILINE & FILM CORP.

SALES MANAGER
F. W. RAEDER
BRAND NAMES
ANSCOVISION
ANSCOMATIC
VERSAPAN
SUPER HYPAN
ANSCOCROME
COMPANY ADDRESS
140 WEST 51 ST.
NEW YORK, N. Y. 10020
212 582-7600

CAMERAS, FILM, CINE
CAMERAS, FILM STILL
CLEANERS, CHEMICAL -
ALSO SEE SOLVENTS
COPYING EQUIPMENT
DRAFTING EQUIPMENT
FILM, PHOTOGRAPHIC
PROJECTORS, FILM
PROJECTORS, SLIDE

G E VISUAL COMMUNICATIONS PROD

SALES MANAGER
R. E. LAUTERBACH
COMPANY ADDRESS
ELECTRONICS PARK
SYRACUSE, NEW YORK 13201
456-2230

AMPLIFIER, AF, AGC
AMPLIFIER, AF,
GENERAL PURPOSE
AMPLIFIER, RF, POWER
AMPLIFIER, TV, VIDEO
ANTENNAS, TV
CABLE, CAMERA
CAMERAS, TV, COLOR
CAMERAS, TV, MONOCHROME
CONSOLE, AUDIO, AM
CONSOLE, AUDIO, FM
CONSOLE, AUDIO, TV
CONSOLE, VIDEO, STUDIO
FILTERS, RF
GENERATORS, SIGNAL,
TV SYNCHRONIZING
HARDWARE, RACK
INDUSTRIAL TV-ALSO SEE
TV, CLOSED CIRCUIT
MAINTENANCE SERVICES, TV
MICROWAVE SYSTEMS, STL
MONITORS, VIDEO
MULTIPLEXERS
PREAMPLIFIERS, AUDIO
RACKS, MOUNTING-
ALSO SEE HARDWARE
STL EQUIPMENT
TRANSMITTERS, AM, 50 KW
TRANSMITTERS, TV, 100 WATTS

TRANSMITTERS, TV, 1 KW
TRANSMITTERS, TV, 5 KW
TRANSMITTERS, TV, 10 KW
TRANSMITTERS, TV, 11 KW
TRANSMITTERS, TV, 15 KW
TRANSMITTERS, TV, 30 KW
TRANSMITTERS, TV, 35 KW
TRANSMITTERS, TV, 50 KW
TRANSMITTERS, TV, 100 KW
TRANSMITTERS, TV,
SPECIFY POWER
TV SYSTEMS, CLOSED CIRCUIT
VESTIGIAL SIDEBAND FILTERS

G E DISTRIBUTOR SALES FORCE

COMPANY ADDRESS
GENERAL ELECTRIC COMPANY
OWENSBORO, KENTUCKY

CARTRIDGES, PHONO
CRYSTALS, PIEZOELECTRIC
LAMPS, GLOW
LAMPS, EXCITER
LAMPS, PANEL
LAMPS, PROJECTION
SEMICONDUCTOR DIODES
SEMICONDUCTOR RECTIFIERS,
GENERAL
SEMICONDUCTOR RECTIFIERS,
HIGH VOLTAGE
SEMICONDUCTOR RECTIFIERS,
POWER
SEMICONDUCTOR RECTIFIERS,
SILICON CONTROLLED - SCR
SEMICONDUCTORS, THYRISTORS
SEMICONDUCTORS,
TRANSISTORS, AF
SEMICONDUCTORS,
TRANSISTORS, FE
SEMICONDUCTORS, TRANSISTORS,
GENERAL
SEMICONDUCTORS,
TRANSISTORS, RF
VACUUM TUBES, CATHODE RAY,
TV, COLOR
VACUUM TUBES, CATHODE RAY,
TV, MONOCHROME
VACUUM TUBES, RECEIVING
VACUUM TUBES, TRANSMITTING

G E INDUSTRIAL SALES OPERATION

COMPANY ADDRESS
GENERAL ELECTRIC COMPANY
SCHENECTADY, N. Y.

AMMETERS, AC
AMMETERS, AC, THERMOCOUPLE
AMMETERS, DC
AMMETERS, RF
CIRCUIT BREAKERS
METERS, DB AND VU
METERS, DB AND VU, WIDE RANGE
SHUNTS, METER
TRANSFORMERS, GENERAL
VOLTMETERS, AC
VOLTMETERS, DC
WATTMETERS

G E CAPACITOR DEPARTMENT

COMPANY ADDRESS
GENERAL ELECTRIC COMPANY
HUDSON FALLS, N. Y.

BATTERIES, NICKEL CADMIUM
CAPACITORS, FIXED, AIR
CAPACITORS, FIXED, CERAMIC
CAPACITORS, FIXED, MICA
CAPACITORS, FIXED, OIL-FILLED
CAPACITORS, FIXED, OTHER

G E SUPPLY COMPANY

COMPANY ADDRESS
GENERAL ELECTRIC SUPPLY CO
BOSTON, MASS

CLOCKS
METERS, LIGHT
RECEIVERS, AM
REGULATORS, CURRENT
REGULATORS, VOLTAGE

G E SALES AND DISTRIBUTION

COMPANY ADDRESS
GENERAL ELECTRIC COMPANY
LOUISVILLE, KENTUCKY

RECEIVERS, TV, COLOR
RECEIVERS, TV, MONOCHROME

GENERAL ELECTRIC COMPANY

COMMUNICATION PRODUCTS DEPT.
MANAGER MARKET DEVELOPMENT
J. A. LIGHTNER
COMPANY ADDRESS
GENERAL ELECTRIC COMPANY
P O BOX 4197
LYNCHBURG, VA 24502
MOBILE EQUIPMENT

G E PICKUP TUBE OPERATION

MANAGER BROADCAST SALES
E T CHACE
COMPANY ADDRESS
ELECTRONICS PARK
BLDG 6, ROOM 128
SYRACUSE, NEW YORK 13201
VACUUM TUBES, CAMERA,
IMAGE-ORTHICON

VACUUM TUBES, CAMERA, VIDICON

**GENERAL ELECTRIC COMPANY
ELECTRONIC COMPONENTS SLS OPR**

BRAND NAMES
ALUGARD
ALUMALYTIC
BONUS LINE
HI-BREAK
INDUCTROL
PYRANOL
TANTALYTIC
THE BIG LOOK
TRI-CLAD
VOLT-PAC

COMPANY ADDRESS
1301 W. 2ND STREET
OAK BROOK, ILL. 60521
312 654-2030

AMMETERS, AC
AMMETERS, DC
AMPLIFIER, AF,
GENERAL PURPOSE
AMPLIFIER, DC
AMPLIFIER, PULSE
AMPLIFIER, RF,
GENERAL PURPOSE
BALLASTS, LAMP
BATTERIES, NICKEL CADMIUM
BATTERIES, OTHER
BLOWERS AND FANS
BRIDGES
CAPACITORS, FIXED,
ELECTROLYTIC
CAPACITORS, FIXED, FILM
CAPACITORS, FIXED, GENERAL
CAPACITORS, FIXED, METALLIZED
CAPACITORS, FIXED, OIL-FILLED
CAPACITORS, FIXED, PAPER
CAPACITORS, FIXED, OTHER
CARRIER CURRENT EQUIPMENT
CARTRIDGES, PHONO
CHARGERS, BATTERY
CHOPPERS
CIRCUIT BREAKERS
COMPUTER EQUIPMENT
CONVERTERS
CORES, TRANSFORMER AND COIL
COUNTER, FREQUENCY
DETECTORS, MICROWAVE
DIVIDERS, FREQUENCY
DIVIDERS, VOLTAGE
FUSES
GAUSSMETER
GENERATORS, POWER,
ELECTRIC MOTOR
HARDWARE, ELECTRIC MOTORS,
GENERAL
HEATING ELEMENTS
INDUSTRIAL TV-ALSO SEE
TV, CLOSED CIRCUIT
INTEGRATED CIRCUITS
INVERTERS, DC TO AC,
SOLID STATE
LIGHTNING ARRESTERS
METERS, FREQUENCY
METERS, PHASE ANGLE
MICROWAVE COMPONENTS
MOTORS, ELECTRIC-SEE HARDWARE
PANELS, INSTRUMENT,
FOR RACK MOUNTING
PAPER, CHART AND GRAPH
POWER SUPPLIES, AC
POWER SUPPLIES, DC
RELOGGING AND GRAPHIC
ORDERS, PAPER,
RECTIFIERS - ALSO SEE SEMI-
CONDUCTORS & VACUUM TUBES
RECTIFIERS, SELENIUM
REGULATORS, CURRENT
REGULATORS, FREQUENCY
REGULATORS, VOLTAGE
RELAYS, GENERAL PURPOSE
RELAYS, LATCHING
RELAYS, OVERLOAD
RELAYS, PHOTOELECTRIC
RELAYS, POWER
RELAYS, THERMAL
RELAYS, TIME DELAY
REMOTE CONTROL SYSTEMS, TV
RESISTORS, FIXED, WIREWOUND
RHEOSTATS
SEMICONDUCTOR DIODES
SEMICONDUCTOR RECTIFIERS,
GENERAL
SEMICONDUCTOR RECTIFIERS,
POWER
SEMICONDUCTOR RECTIFIERS,
SILICON CONTROLLED - SCR
SEMICONDUCTORS, TRANSISTORS,
GENERAL
SHUNTS, METER
SWITCHES, FOOT
SWITCHES, ILLUMINATED
SWITCHES, INTERLOCK
SWITCHES, KNIFE
SWITCHES, LEVER
SWITCHES, MECHANICALLY
ACTUATED
SWITCHES, MULTICONTACT
SWITCHES, PUSHBUTTON,
SWITCHES, ROTARY
SWITCHES, SLIDE
SWITCHES, THERMAL
SWITCHES, TOGGLE
SWITCHES, THERMAL
SWITCHES, THERMAL
TERMINAL BLOCKS
TERMINAL BOARDS
TERMINAL STRIPS
TERMINALS, LUG

TESTERS, BATTERY
TESTERS, INSULATION
TIMERS, ELECTRIC
TIMERS, MANUAL
TOOLS, SOLDERING IRONS,
INDUSTRIAL
TRANSFORMERS, AUTO
TRANSFORMERS, FILAMENT
TRANSFORMERS, GENERAL
TRANSFORMERS, POWER
TRANSFORMERS, VARIABLE
TV SYSTEMS, CLOSED CIRCUIT
VACUUM TUBES, CAMERA,
IMAGE-ORTHICON
VACUUM TUBES, CAMERA, VIDICON
VACUUM TUBES, CATHODE RAY,
TV, COLOR
VACUUM TUBES, RECEIVING
VACUUM TUBES, RECTIFIERS
VACUUM TUBES, TRANSMITTING
VOLTMETERS, AC
VOLTMETERS, DC
WATTMETERS

**GENERAL ELECTRIC CO.
CCTV BUSINESS**

SALES MANAGER
H. A. RIEGELMAN
COMPANY ADDRESS
600 OLD LIVERPOOL ROAD
LIVERPOOL, N. Y. 13088
315 456-3277

CAMERAS, TV, MONOCHROME
DISPLAY EQUIPMENT, TV
INDUSTRIAL TV - ALSO SEE
TV, CLOSED CIRCUIT
MONITORS, VIDEO
RECORDERS, MAGNETIC TAPE,
VIDEO
TAPE, MAGNETIC RECORDING,
VIDEO
TV SYSTEMS, CLOSED CIRCUIT
VACUUM TUBES, CAMERA, VIDICON

GENERAL INSTRUMENT CORP.

SALES MANAGER
ARTHUR ZUCKER
BRAND NAMES
MTOS
GLASS-AMP
CAPSIL
HERCULEADS
TRI-AMP
THERMAL-PAIRING

COMPANY ADDRESS
P. O. BOX 600
HICKSVILLE, N. Y. 11802
516 538-8520
TWX 510-222-2388

CAPACITORS, FIXED,
ELECTROLYTIC
CAPACITORS, FIXED, MICA
CAPACITORS, FIXED, PAPER
CAPACITORS, FIXED, OTHER
CAPACITORS, VARIABLE
CONVERTERS
RECTIFIERS - ALSO SEE SEMI-
CONDUCTORS AND VACUUM TUBES
REGULATORS, VOLTAGE
SEMICONDUCTOR DIODES
SEMICONDUCTOR RECTIFIERS,
GENERAL
SEMICONDUCTOR RECTIFIERS,
HIGH VOLTAGE
SEMICONDUCTOR RECTIFIERS,
POWER
SEMICONDUCTORS,
TRANSISTORS, AF
SEMICONDUCTORS,
TRANSISTORS, FE
SEMICONDUCTORS, TRANSISTORS,
GENERAL
SEMICONDUCTORS, RF
TRANSISTORS, RF

**GENERAL MACHINE PRODUCTS
CO., INC.**

V. P. SALES
DAVID P. MERTZ
COMPANY ADDRESS
OLD LINCOLN HGY
TREVOSTE, PA. 19047
215 357-5500

CABLE, CATV, HARDWARE
CLIPS, TEST
GENERATORS, POWER,
GASOLINE ENGINE
PRESSURIZATION EQUIPMENT,
TRANSMISSION LINE
REELS, CABLE, AUTOMATIC
SAFETY DEVICES, CLIMBING
SOLDER
SOLVENT AND CLEANERS
TESTERS, INSULATION
TOOLS, CLAMPS
TOOLS, CRIMPERS
TOOLS, HAND
TOOLS, SOLDERING IRONS,
INDUSTRIAL
TOOLS, WRENCHES
WIRE, BARE, STEEL

GENERAL MICROWAVE CORPORATION

SALES MANAGER
MOE WIND

COMPANY ADDRESS
155 MARINE STREET
FARMINGDALE, NEW YORK 11735
516-694-3600

AMPLIFIER, BRIDGING
AMPLIFIER, RF
GENERAL PURPOSE
ANTENNAS, HF
ANTENNAS, MICROWAVE
ATTENUATORS, AUDIO
ATTENUATORS, FIXED
ATTENUATORS, MICROWAVE
ATTENUATORS, RF
BRIDGES
CALORIMETERS
CAVITIES, MICROWAVE
COMMUNICATIONS SYSTEMS,
MICROWAVE
COUNTERS, FREQUENCY
DETECTORS, MICROWAVE
DETECTORS, STANDING WAVE
FILTERS, RF
FILTERS, OTHER
GENERATORS, SIGNAL, RF
METERS, FREQUENCY
METERS, POWER
METERS, STANDING WAVE
MICROWAVE COMPONENTS
MICROWAVE SYSTEMS, STL
MICROWAVE SYSTEMS, 2500 MHZ
MICROWAVE SYSTEMS, OTHER
MONITORS, FREQUENCY
MONITORS, POWER
SLOTTED SECTIONS
SWITCHES, ROTARY
SWITCHES, WAVEGUIDE
WATTMETERS
WAVEGUIDE AND
ASSOCIATED COMPONENTS

GENERAL RADIO COMPANY
SALES MANAGER
L. J. CHAMBERLAIN,
BRAND NAMES
DURATRAK-R
ORTHONULL-R
STROBOTAC-R
GR
VARIAC-R
COMPANY ADDRESS
22 BAKER AVENUE
W. CONCORD, MASS. 01781
617 369-4400
TWX 710-347-1051

ADAPTERS, CONNECTOR
AMPLIFIER, DC
AMPLIFIER, PULSE
ANALYZERS, DISTORTION
ANALYZERS, HARMONIC

ANALYZERS, NOISE
BOXES, DECADE, CAPACITOR
BOXES, DECADE, INDUCTOR
BOXES, DECADE, RESISTOR
BRIDGES
CAPACITORS, FIXED, AIR
CAPACITORS, FIXED, MICA
CAPACITORS, VARIABLE
CONNECTORS, RF
COUNTERS, FREQUENCY
DELAY LINES
DIVIDERS, VOLTAGE
FILTERS, AUDIO
GENERATORS, SIGNAL, AF
GENERATORS, SIGNAL, PULSE
GENERATORS, SIGNAL, RF
GENERATORS, SIGNAL,
SQUARE WAVE
INDUCTANCES, FIXED
INDUCTANCES, VARIABLE
METERS, FREQUENCY
METERS, FREQUENCY CALIBRATING
METERS, POWER
METERS, STANDING WAVE
MICROWAVE COMPONENTS
OSCILLATORS, AF AND RF,
SEE GENERATORS
OSCILLATORS, AM
OSCILLATORS, OTHER
PLUGS, COAXIAL
POTENTIOMETERS, WIREWOUND
POWER SUPPLIES, AC
POWER SUPPLIES, DC
POWER SUPPLIES, PRECISION
PREAMPLIFIERS, AUDIO
RECORDERS, MAGNETIC TAPE,
AUDIO
REGULATORS, VOLTAGE
RESISTORS, FIXED,
NONINDUCTIVE
RESISTORS, FIXED, PRECISION
RHEOSTATS
STROBE, DISCS
STROBE, LIGHTS
TESTERS, CAPACITOR
TESTERS, INSULATION
TRANSFORMERS, VARIABLE
VOLTMETERS, AC
VOLTMETERS, DC
VOLTMETERS, VACUUM TUBE

GENERAL TELEVISION NETWORK
SALES MANAGER
R. RANDOLPH HIPPLER
BRAND NAMES
GIANTVIEW
COMPANY ADDRESS
901 LIVERNOS

FERNDALE, MICHIGAN 48220
PROJECTORS, TV, LARGE SCREEN
STANDS, TELEVISION MONITOR

**GIBBS MANUFACTURING AND
RESEARCH CORPORATION**
VP SALES ENG
R. E. MOWRIS
PRODUCT SALES MANAGER
KENNETH D. SCOTT
COMPANY ADDRESS
450 NORTH MAIN STREET
JANESVILLE, WISCONSIN 53545

CABLE, ASSEMBLIES
CLOCKS
CONVERTERS
GENERATORS, FM, SUBCARRIER
GENERATORS, SIGNAL, AF
GENERATORS, SIGNAL, MARKER
GENERATORS, SIGNAL, PULSE
GENERATORS, SIGNAL, RF
GENERATORS, SIGNAL,
SQUARE WAVE
INVERTERS, DC TO AC, CHOPPER
OSCILLATORS, AF AND RF,
SEE GENERATORS
OSCILLATORS, AM
OSCILLATORS, OTHER
OSCILLATORS, TV
OSCILLATORS, OTHER
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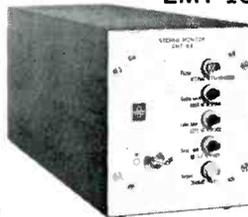
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ADAPTERS, FM STEREO
BATTERIES, LEAD ACID
BATTERIES, NICKEL CADMIUM
CHARGERS, BATTERY
CONSOLE, AUDIO, AM
CONSOLE, AUDIO, FM
CONSOLE, AUDIO, PORTABLE
CONSOLE, AUDIO, RECORDING
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AUDIO
TAPE DECKS, MAGNETIC
TAPE, MAGNETIC RECORDING,
AUDIO

INDUSTRIAL DEVICES, INC.

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OMNI-GLOW
GLO-DOT
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COMPANY ADDRESS
EDGEWATER, N.J. 07020
CLIPS, TEST
LAMP ASSEMBLIES
LAMPS, GLOW
LAMPS, PANEL
REELS, CABLE, AUTOMATIC
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COLLECTRIC
PORT-O-REELS
SPRING-D-MATIC
COMPANY ADDRESS
1509 CHICAGO ST
OMAHA, NEBRASKA 68102
402 341 4600
REELS, CABLE, AUTOMATIC

INDUSTRIAL ELECTRONIC HARDWARE CORP.

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JOEL JACOBS
COMPANY ADDRESS
109 PRINCE ST.
NEW YORK, N. Y. 10012
212 677-1881
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HOLDERS, FUSE
SOCKETS, CRYSTAL
SOCKETS, LAMP
SOCKETS, RELAY
SOCKETS, TUBE
SPEAKER COMPONENTS
SWITCHES, SLIDE
TERMINAL BOARDS
TERMINAL STRIPS
TERMINALS, LUG

INSTRUMENT LABORATORIES CORP.

COMPANY ADDRESS
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CHICAGO, ILLINOIS 60610
642-0123
AMMETERS, AC
AMMETERS, DC
GENERATORS, SIGNAL, AF
METERS, DB AND VU
OHMMETERS
OSCILLATORS, OTHER
VOLTMETERS, AC
VOLTMETERS, DC
VOLTMETERS, VACUUM TUBE

INTERNATIONAL ELECTRONICS CORP.

SALES MANAGER
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COMPANY ADDRESS
316 S. SERVICE ROAD
MELVILLE, N. Y. 11749
516 694-7700
TWX 212-479-9410
AMMETERS, RF
CAPACITORS, FIXED,
ELECTROLYTIC
CAPACITORS, FIXED, FILM
CAPACITORS, FIXED, GENERAL
CAPACITORS, FIXED, METALLIZED
COILS, ANTENNA LOADING
METERS, DB AND VU
METERS, DV AND VU, WIDE RANGE
SEMICONDUCTOR DIODES
SEMICONDUCTOR RECTIFIERS,
GENERAL
SEMICONDUCTORS,
TRANSISTORS, AF
SEMICONDUCTORS, TRANSISTORS,
GENERAL
SPEAKER COMPONENTS
SPEAKERS
TRANSFORMERS, TRANSISTOR
VACUUM TUBES, BALLAST
VACUUM TUBES, CATHODE RAY,
OSCILLOSCOPE
VACUUM TUBES, RECEIVING
VACUUM TUBES, RECTIFIERS

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IGM
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BOX 943,
BELLINGHAM, WASHINGTON 98225
206-733-4567
AMPLIFIER, AF
GENERAL PURPOSE
AMPLIFIER, SENSING
AUTOMATION EQUIPMENT
BACKGROUND MUSIC SERVICE
BROADCAST PROGRAMMING SERVICE
CARTRIDGES, MAGNETIC TAPE
CATV, HEAD-END EQUIPMENT
GENERATORS, SIGNAL, AF
RECORDERS, MAGNETIC TAPE,
AUDIO
SWITCHERS
SWITCHING SYSTEMS
TAPE DECKS, MAGNETIC

INTERNATIONAL NUCLEAR CORP

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COMPANY ADDRESS
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NASHVILLE, TENN 37204
254-3365
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GENERAL PURPOSE
AMPLIFIER, AF, MONAURAL

AMPLIFIER, BRIDGING
AMPLIFIER, CLAMPING
AMPLIFIER, DC
AMPLIFIER, DISTRIBUTION
AMPLIFIER, PULSE
AMPLIFIER, STABILIZING
AMPLIFIER, TV, VIDEO
BROADCAST PROGRAMMING
SERVICE, CATV
BROADCAST PROGRAMMING
SERVICE, RADIO
BROADCAST PROGRAMMING
SERVICE, VIDEO
CABLE, ASSEMBLIES
CASES, PORTABLE
ELECTRONIC EQUIPMENT
CATV, HEAD-END EQUIPMENT
CONSOLE, AUDIO, AM
CONSOLE, AUDIO, TV
CONSOLE, VIDEO, PORTABLE
CONSOLE, VIDEO, STUDIO
INDUSTRIAL TV - ALSO SEE
TV, CLOSED CIRCUIT
MOBILE EQUIPMENT
MOBILE EQUIPMENT, TV
MODULATORS, TV
POWER SUPPLIES, DC
PREAMPLIFIERS, AUDIO
PREAMPLIFIERS, VIDEO
SWITCHING MATRIXES
SWITCHING SYSTEMS

INTERNATIONAL RECTIFIER

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WALTER GORRELL
BRAND NAMES
KLIP-SEL
COMPANY ADDRESS
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EL SEGUNDO, CALIF. 90245
213 088-6281
TWX 910-348-6291
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HEAT SINKS
RECTIFIERS - ALSO SEE SEMI-
CONDUCTORS AND VACUUM TUBES
RECTIFIERS, SELENIUM
SEMICONDUCTOR DIODES
SEMICONDUCTOR RECTIFIERS,
GENERAL
SEMICONDUCTOR RECTIFIERS,
HIGH VOLTAGE
SEMICONDUCTOR RECTIFIERS,
POWER
SEMICONDUCTOR RECTIFIERS,
SILICON CONTROLLED - SCR
SEMICONDUCTORS, THYRISTORS

IRC, INC.

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AMMO-PAK
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EPIC
GBT
GRIP STRIP
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NINEL-R
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PRECISTOR
REVISTEG
REVODIX
COMPANY ADDRESS
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PHILADELPHIA, PA. 19108
215 WA 2-8900
TWX 710-670-5949
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CABLE, CATV, HARDWARE
CABLE, COAXIAL, FLEXIBLE
CABLE, COAXIAL, RIGID
CABLE, SHIELDED, AUDIO
CABLE, TELEPHONE
POTENTIOMETERS, WIREWOUND
RECTIFIERS - ALSO SEE SEMI-
CONDUCTORS AND VACUUM TUBES
RECTIFIERS, SELENIUM
RESISTORS, FIXED, CARBON
RESISTORS, FIXED,
NONINDUCTIVE
RESISTORS, FIXED, PRECISION
RESISTORS, FIXED, WIREWOUND
RESISTORS, FIXED, OTHER
RESISTORS, VARIABLE,
WIREWOUND
SEMICONDUCTOR DIODES
SEMICONDUCTOR RECTIFIERS,
GENERAL
SEMICONDUCTOR RECTIFIERS,
POWER
SEMICONDUCTOR RECTIFIERS,
SILICON CONTROLLED - SCR
SEMICONDUCTORS, THYRISTORS
WIRE, BARE, COPPER
WIRE, INSULATED, HIGH VOLTAGE
WIRE, INSULATED, HOOKUP
WIRE, SHIELDED
WIRE & CABLING SERVICES

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DENNIS BAKER

COMPANY ADDRESS
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CLIFTON, NEW JERSEY 07015
201 473-0900
AMPLIFIER, TV, VIDEO
DISPLAY EQUIPMENT, TV
MONITORS, VIDEO
OSCILLOSCOPES

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MICROSOCKET
MORPHO
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LOS ANGELES, CALIF 90031
213 225-1251
TWX 910-321-4267
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CONNECTORS, AF & MICROPHONE
CONNECTORS, ANTENNA
CONNECTORS, COAXIAL CABLE
CONNECTORS, POWER
CONNECTORS, RF
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SALES MANAGER
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COMPANY ADDRESS
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SAN JOSE, CALIF. 95108
408 292 4025
TWX 910-338-0159
CAPACITORS, FIXED, OTHER
CAPACITORS, VARIABLE
DIVIDERS, VOLTAGE
RELAYS, COAXIAL
RELAYS, LATCHING
RELAYS, OVERLOAD
RELAYS, POWER
RELAYS, STEPPING
SWITCHES, COAXIAL
SWITCHES, CROSSBAR
SWITCHES, MECHANICALLY
ACTUATED
SWITCHING MATRIXES
SWITCHING SYSTEMS
VOLTMETERS, VACUUM TUBE

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NEW YORK, NEW YORK 10022
COMMUNICATIONS SYSTEMS,
INTERCOM, WIRED
COMMUNICATIONS SYSTEMS,
MICROWAVE
COMMUNICATIONS SYSTEMS,
MULTIPLY
DIALS, TELEPHONE
MICROWAVE SYSTEMS, 2500 MHZ
RELAYS, TELEPHONE
SWITCHES, CROSSBAR
SWITCHES, TELEPHONE TYPE
SWITCHING SYSTEMS, TELEPHONE
TELEPHONE EQUIPMENT

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SURCODUR
COMPANY ADDRESS
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CABLE, COAXIAL, RIGID
CABLE, DIRECT BURIAL
CABLE, TELEPHONE
CORDS, SET
FUSES
WIRE, INSULATED, HIGH VOLTAGE
WIRE, INSULATED, HOOKUP
WIRE, SHIELDED

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SACRAMENTO, CALIF. 95828
916-383-1177

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ANTENNAS, FM
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MOUNTS, ANTENNA, FIXED
TOWERS, ANTENNA,
CATV, HEAD-END
TOWERS, ANTENNA, RECEIVING
TOWERS, ANTENNA,
TRANSMITTING, AM
TOWERS, ANTENNA,
TRANSMITTING, FM
TOWERS, ANTENNA,
TRANSMITTING, TV

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216 455-8152
DRAPERY, PERIMETER &
CYCLORAMA
TRACK, SCENERY PERIMETER

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TWX 910-224-4661
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CABINETS, WOOD
DIVIDERS, FREQUENCY
EARPHONES, HEADPHONES
EDUCATION FACILITIES,
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KITS
NETWORKS, MATCHING, AUDIO
SOUND SYSTEMS, OUTDOOR
SOUND SYSTEMS, PORTABLE
SOUND SYSTEMS, THEATER
SPEAKER COMPONENTS
SPEAKERS
TRANSFORMERS, AUDIO,
ISOLATION
TRANSFORMERS, AUDIO, MATCHING
TRANSFORMERS, AUTO
TRANSFORMERS, COUPLING
TRANSFORMERS, VARIABLE

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SYOSSET, N. Y. 11791
516 938-1150
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FREQUENCY
CALIBRATION SERVICE,
INSTRUMENT
CALORIMETERS
CAVITIES, MICROWAVE
COMMUNICATIONS SYSTEMS,
MICROWAVE
MICROWAVE SYSTEMS, OTHER
PRINTERS, LOGGING
RECORDERS, MAGNETIC TAPE,
LOGGING
WAVEGUIDE AND
ASSOCIATED COMPONENTS

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SALES MANAGER GOV. & IND.
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SALES MANAGER CATV
BOB TONER
SALES MANAGER EDUC. & COMM.
WALTER ULLRICH
BRAND NAMES
STARLINE
MODLINE
PARALOG
CHANNEL COMMANDER
COLOR-CAPTAIN
COMPANY ADDRESS
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PHILADELPHIA, PA. 19105
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AMPLIFIER, CATV
AMPLIFIER, DISTRIBUTION
AMPLIFIER, RF
GENERAL PURPOSE
ANTENNAS, CATV
ANTENNAS, FM
ANTENNAS, MICROWAVE
ANTENNAS, TV
ANTENNAS, TV,
MASTER-COMMUNITY

ANTENNAS, 2500 MHZ
ATTENUATORS, FIXED
ATTENUATORS,
IMPEDANCE MATCHING
ATTENUATORS, RF
ATTENUATORS, VIDEO
BRIDGES
CABLE, ASSEMBLIES
CABLE, CATV, HARDWARE
CATV, CABLE TERMINALS
CATV, CHANNEL AMPLIFIERS
CATV, HEAD-END EQUIPMENT
COMMUNICATIONS SYSTEMS,
MICROWAVE
CONNECTORS, COAXIAL CABLE
CONVERTERS
CONVERTERS, CATV, 20-CHANNEL
COUPLERS
DEMODULATORS
FILTERS, ANTENNA
FILTERS, RF
GENERATORS, SIGNAL, MARKER
GENERATORS, SIGNAL, RF
HOUSINGS, ANTENNA
METERS, FIELD STRENGTH,
TV, UHF
METERS, FIELD STRENGTH,
TV, VHF
METERS, STANDING WAVE
MICROWAVE SYSTEMS, STL
MICROWAVE SYSTEMS, 2500 MHZ
MICROWAVE SYSTEMS, OTHER
MODULATORS, TV
MOUNTS, ANTENNA, FIXED
NETWORKS, MATCHING, RF
PREAMPLIFIERS, VIDEO
STL EQUIPMENT
SWITCHES, COAXIAL
TRANSMITTERS, FM
TRANSMITTERS, TV, 1 WATT
TV SYSTEMS, CLOSED CIRCUIT

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AMPLIFIER, AF, STEREO
RECORDERS, MAGNETIC TAPE,
AUDIO
TAPE DECKS, MAGNETIC

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COMPANY ADDRESS
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HAMPTON, N.H. 03842
COMMUNICATIONS SYSTEMS,
LAND MOBILE
MOBILE EQUIPMENT
TV SYSTEMS, CLOSED CIRCUIT

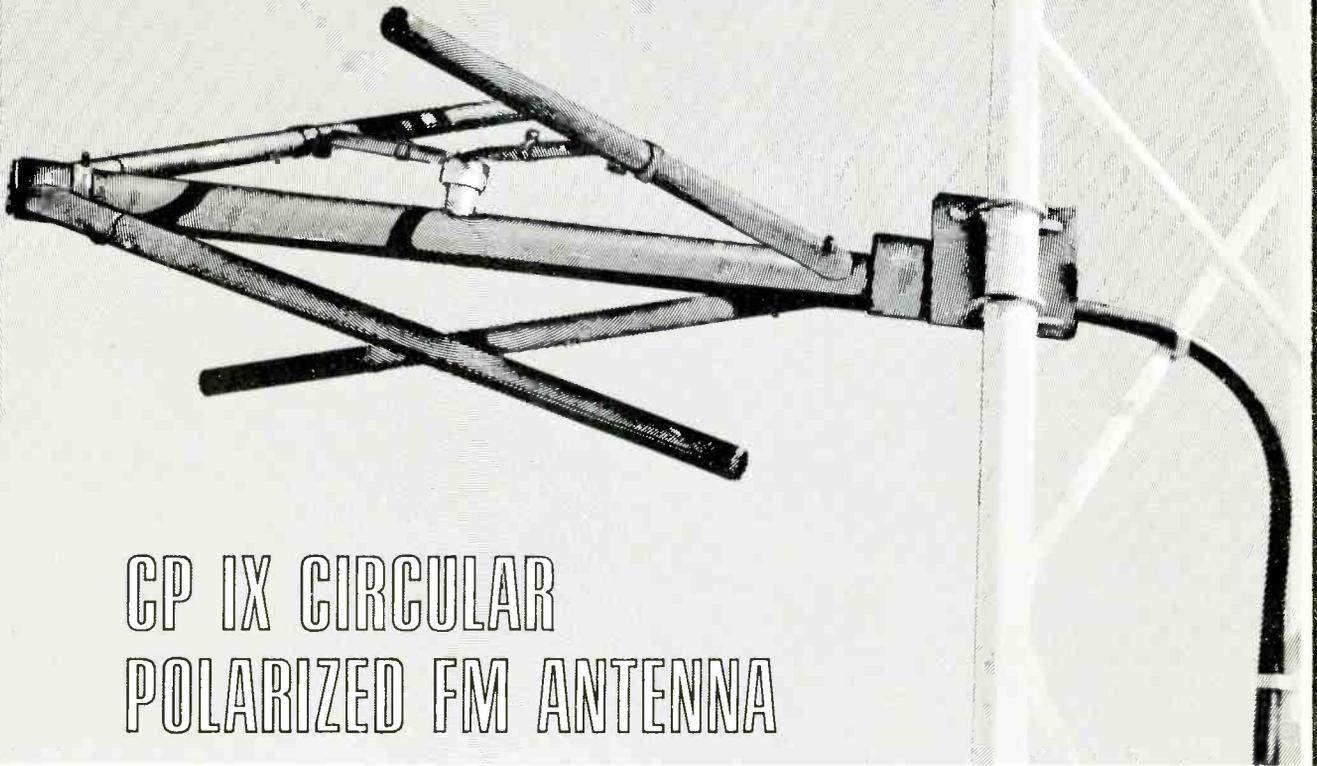
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PHILADELPHIA PA. 19150
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TAPE, MAGNETIC RECORDING,
AUDIO, CARTRIDGE

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WASECA, MINNESOTA 56093
507-835-2050
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CAPACITORS, VARIABLE
COILS, CHOKER, RF
COMMUNICATIONS SYSTEMS, CB
COMMUNICATIONS SYSTEMS,
INTERCOM, WIRELESS
COMMUNICATIONS SYSTEMS,
LAND MOBILE
COUPLERS
HARDWARE, PANEL
HOLDERS, CRYSTAL
INDUCTANCES, FIXED
INDUCTANCES, VARIABLE
INSULATORS, ANTENNA
INSULATORS, FEED THROUGH
INSULATORS, STAND-OFF
INSULATORS, OTHER
JACKS
MOBILE EQUIPMENT
PROBES, TEST LEAD

JAMPRO presents the



CP IX CIRCULAR POLARIZED FM ANTENNA

The only true Circularly Polarized FM Antenna available with variable horizontal/vertical power gain ratios.

Only Jampro can offer horizontal/vertical gain ratios to meet your exact requirements, from 50/50 to 75/25. Jampro CP IX antennas are also available in two different configurations:

- 1) Parallel feed system with individual feed cables for zero phase change during FM.
- 2) Shunt feed system, using common $3\frac{1}{8}$ " co-ax to all radiating elements.

Jampro CP IX antennas are designed with many new features including: LOW WIND RESISTANCE • LIGHT WEIGHT • HIGH POWER CAPABILITIES • WIDE VSWR BAND WIDTHS OF 1.08 TO 1 FOR ± 200 KC • HORIZONTAL TOWER MOUNTED CIRCULARITY, BETTER THAN ± 2 DB.

JAMPRO

ANTENNA COMPANY

6939 POWER INN ROAD

SACRAMENTO, CALIFORNIA

A DIVISION OF COMPUTER EQUIPMENT CORPORATION

Circle Item 56 on Tech Data Card

Easy to get your fingers around the vinyl lift-strap. Easy to lift, easy to carry.

Plenty of room to write important data. Easy to put on a new program label.

Fits your existing shelf space. Pulls off shelves easily with this pull-strap.

Open, lock, ship: three fool-proof positions. Just a twist of the dial and it's ready to mail anywhere in the world. No wrapping needed. Can't jam, can't fall open.

There's another pull-strap on the back, and another lift-strap on the bottom.

Toughest case in the business. Handy and lightweight. Won't crack, scratch, or break. (For more data, write us at 810 Memorex Park, Santa Clara, California 95050.)

The case for a better tape.

(A new, tough, shippable case containing our new high-chroma video tape, 78V. Have you tried it yet?)

MEMOREX

Circle Item 49 on Tech Data Card

RELAYS, ANTENNA
SOCKETS, CRYSTAL
SOCKETS, LAMP
SOCKETS, TUBE
SWITCHES, KNIFE
SWITCHES, SNAP
TRANSMITTER KITS
TRANSMITTERS, AM, 250 WATT
TRANSMITTERS, AM, 1 KW

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COMPANY ADDRESS
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CASSELBERRY, FLORIDA 32707
305 838-2111
AMPLIFIER, AF, MONAURAL
RECEIVERS, FM
RECEIVERS, HF
RECEIVERS, MULTIPLEX

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SALES MANAGER
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14707 KESWICK STREET
VAN NUYS, CALIF. 91405
213 781-3849
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BOXES, DECADE, RESISTOR
RESISTORS, FIXED,
NONINDUCTIVE
RESISTORS, FIXED, PRECISION
RESISTORS, FIXED, WIREWOUND

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805 968-3551
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SYMMETRA-PEAK
ECHOPEX
VOICEPEX
COMPANY ADDRESS
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FREEPORT, NEW YORK 11520
AMPLIFIER, AF,
PEAK LIMITING, AM
CONVERTERS
EXCITERS, FM
RECEIVERS, AM
RECEIVERS, HF

KAISER-COX CORPORATION

SALES MANAGER
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PITMAN, N. J. 08071
609 589 0330
BRAND NAMES
PHONECIAN
KASIER-COX
THUNDERBIRD
COMPANY ADDRESS
2216 W. PEORIA AVE. BOX 9728
PHOENIX, ARIZONA 85020
ANTENNAS, CATV
ANTENNAS, CATV
CABLE, CATV, HARDWARE
CATV EQUIPMENT - ALSO SEE
OTHER CATEGORIES
CATV, CABLE TERMINALS
CATV, CHANNEL AMPLIFIERS
CATV, HEAD-END EQUIPMENT
CATV, ORIGINATION EQUIPMENT
CONNECTORS, COAXIAL CABLE
HEAD-END EQUIPMENT,
SEE CATV HEAD-END EQUIPMENT
TV SYSTEMS, CLOSED CIRCUIT

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SOUNDVIEW
KALART
KALART VICTOR
MAGNESOUND
TELE-BEAM
COMPANY ADDRESS
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747-1663
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PROJECTORS, FILM, REAR
PROJECTORS, SLIDE
PROJECTORS, TV, LARGE SCREEN

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COMPANY ADDRESS
165 ROOSEVELT AVENUE
CARTERET, N. J. 07008
201 541-4226
BALUNS

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FILTERS, OTHER
INDUCTANCES, FIXED
INDUCTANCES, VARIABLE
NETWORKS, MATCHING, AUDIO
NETWORKS, MATCHING, RF
NETWORKS PHASING
TRANSFORMERS, RF

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SOUTH NORWALK, CONN. 06856
ADAPTERS, FM STEREO
AMPLIFIER, AF, STEREO
GENERATORS, FM, STEREO
MONITORS, FM SYSTEMS, MONO
MONITORS, FM SYSTEMS, STEREO
RECEIVERS, FM
RECEIVERS, MULTIPLEX
RECEIVERS, SCA

KATONA ELECTRONICS CO.

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SPECTRUM MATCHED
COMPANY ADDRESS
140 FORSYTHIA DR NORTH
LEVITTOWN, PA 19056
215 945-4575
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AMPLIFIER, CATV
AMPLIFIER, DISTRIBUTION
ANTENNAS, CATV
ANTENNAS, TV,
MASTER-COMMUNITY
ATTENUATORS, RF
BROADCAST PROGRAMMING
SERVICE, CATV
CABLE, CATV, HARDWARE
CABLE, COAXIAL, FLEXIBLE
CABLE, DIRECT-BURIAL
CATV, CABLE TERMINALS
CATV, CHANNEL AMPLIFIERS
CATV, HEAD-END EQUIPMENT
CATV, ORIGINATION EQUIPMENT
CONNECTORS, COAXIAL CABLE
CONVERTERS, CATV, 20-CHANNEL
TOWERS, ANTENNA,
CATV, HEAD-END
TRANSFORMERS, RF
TV SYSTEMS, CLOSED CIRCUIT

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CHICAGO, ILLINOIS 60645
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TOOLS, CUTTERS
TOOLS, HAND
TOOLS, PLIERS
TOOLS, SCREWDRIVERS
TOOLS, WRENCHES

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V.P. TV DIV.
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BRAND NAMES
KLIEGL-LIGHT
SAF-PATCH
ROTO-LECTOR
COMPANY ADDRESS
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LONG ISLAND CITY, N. Y. 11101
212 786-7474
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LIGHTING, TV, CONTROLS
LIGHTING, TV, SYSTEMS

KLINE IRON & STEEL COMPANY

SALES MANAGER
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COLUMBIA, S. C. 29202
AL 4-0301
BRAND NAMES
KIMCO
COMPANY ADDRESS
P O BOX 1013
COLUMBIA, S. C. 29202
TOWERS, ANTENNA,
CATV, HEAD-END
TOWERS, ANTENNA, RECEIVING
TOWERS, ANTENNA,
TRANSMITTING, AM
TOWERS, ANTENNA,
TRANSMITTING, FM
TOWERS, ANTENNA,
TRANSMITTING, TV

KORFUND DYNAMICS CORP.

SALES MANAGER
JOHN FASANO
COMPANY ADDRESS
CANTIAQUE ROAD
WESTBURY, N. Y. 11590
516 333-7580
ACOUSTIC MATERIALS
HARDWARE, MOUNTS
MOUNTS, VIBRATION AND SHOCK

KOSS ELECTRONICS INC

SALES MANAGER
GREG CORNEHLS
BRAND NAMES
ACOUSTECH
REK-O-KUT
KOSS
COMPANY ADDRESS
2227 NORTH 31 STREET
MILWAUKEE, WISCONSIN 53208
AMPLIFIER, AF, STEREO
ARMS, TONE
EARPHONES, HEADPHONES
HEADS, DISC RECORDING
LATHE, DISC RECORDING
PREAMPLIFIERS, AUDIO
SPEAKERS
TURNTABLES, PHONOGRAPH

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SALES MANAGER
HERB KRECKMAN
BRAND NAMES
KRECO ANTENNAS
COMPANY ADDRESS
CRESCO, PA. 18326
ANTENNAS, MOBILE
ANTENNAS, REMOTE PICKUP

KRS INSTRUMENTS

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BRAND NAMES
STACT
STACTAPE
COMPANY ADDRESS
1313 N. LINCOLN AVE.
PASADENA, CALIF. 91103
213 601 7416
TWX 910 588 3282
ANALYZERS, VIDEO
AUTOMATION EQUIPMENT
CARTRIDGES, MAGNETIC TAPE
EDUCATION FACILITIES,
EQUIPMENT
RECORDERS, MAGNETIC TAPE,
AUDIO
RECORDERS, MAGNETIC TAPE,
AUDIO, CARTRIDGE
RECORDERS, MAGNETIC TAPE,
LOGGING
TAPE DECKS, MAGNETIC
TAPE, RECORDING, GRAPHIC

LACROSSE ELECTRONICS INC

SALES MANAGER
KIT VAIL
COMPANY ADDRESS
P.O. BOX 102
LACROSSE, WISCONSIN 54601
782-6042
RECORDERS, MAGNETIC TAPE,
AUDIO, CARTRIDGE

LAFAYETTE RADIO ELECTRONICS

SALES MANAGER
J. RUSSELL
BRAND NAMES
ARGONNE-R
COMPANY ADDRESS
111 JERICHO TURNPIKE
SYOSSET, L.I., N. Y. 11791
TRANSFORMERS, AUDIO,
ISOLATION
TRANSFORMERS, AUDIO, MATCHING
TRANSFORMERS, AUDIO,
POWER OUTPUT
TRANSFORMERS, AUTO
TRANSFORMERS, FILAMENT
TRANSFORMERS, GENERAL
TRANSFORMERS, POWER
TRANSFORMERS, TRANSISTOR

LAKE ELECTRONICS, INC

VICE PRESIDENT-MARKETING
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BRAND NAMES
LAKE-GERHARD
COMPANY ADDRESS
3311 PERKINS AVENUE
CLEVELAND, OHIO 44114
216 431 6212
COILS, DEFLECTION
AND FOCUSING
CONSOLE, AUDIO, TV
GENERATORS, SIGNAL, DOT BAR
GENERATORS, SIGNAL, MARKER
GENERATORS, SIGNAL, PULSE
GENERATORS, SIGNAL,
SQUARE WAVE
GENERATORS, SIGNAL,
TV, SYNCHRONIZING
INDUCTANCES, FIXED
INDUSTRIAL TV
LENSES, OPTICAL, ZOOM
MONITORS, VIDEO
SEMICONDUCTORS,
TRANSISTORS, AF
SEMICONDUCTORS, TRANSISTERS,
GENERAL
SPEAKERS
TRANSFORMERS, AUDIO, MATCHING
TRANSFORMERS, AUDIO,
POWER OUTPUT

TRANSFORMERS, FILAMENT
TRANSFORMERS, GENERAL
TRANSFORMERS, PLATE
TRANSFORMERS, POWER
TRANSFORMERS, RF
TRANSFORMERS, TRANSISTOR
TRANSFORMERS, VARIABLE
YOKES, DEFLECTION

LAMPKIN LABORATORIES INC

SALES MANAGER
DAVID A. BOYERS
COMPANY ADDRESS
8400 9TH AVENUE N. W.
BRADENTON, FLA. 33508
746-4175
METERS, FREQUENCY
MONITORS, FREQUENCY
MONITORS, MODULATION

LANG ELECTRONICS, INC

COMPANY ADDRESS
507 FIFTH AVE
NEW YORK, NEW YORK 10017
AMPLIFIER, AF,
GENERAL PURPOSE
CABINETS, METAL
CABINETS, WOOD
CONSOLE, AUDIO, PORTABLE
CONSOLE, AUDIO, RECORDING
CONSOLE, CABINETS
AND HARDWARE
MIXERS - ALSO SEE CONSOLES
STROBE, DISCS
TAPE DUPLICATORS

LANGEVIN, DIVISION SCIENTIFIC

INDUSTRIES, INC

SALES MANAGER
JOHN SWANSON
COMPANY ADDRESS
1801 E. CARNEGIE AVE.
SANTA ANA, CALIF. 92705
546-8830
AMPLIFIER, AF,
GENERAL PURPOSE
AMPLIFIER, AF, MONAURAL
AMPLIFIER, AF, REMOTE
AMPLIFIER, BRIDGING
ATTENUATORS, AUDIO
ATTENUATORS, FIXED
EQUALIZERS, AUDIO EMPHASIS
FILTERS, AUDIO
NETWORKS, MATCHING, AUDIO
POWER SUPPLIES, DC
PREAMPLIFIERS, AUDIO
SWITCHES, MULTICONTACT
SWITCHES, ROTARY

JAMES B. LANSING SOUND, INC.

SALES MANAGER
T. E. FERRY
COMPANY ADDRESS
3249 CASITAS AVE.
LOS ANGELES, CALIF. 90039
213 665-4101
AMPLIFIER, AF, STEREO
ENCLOSURES, SPEAKER
SPEAKERS

LAVIOLETTE ELECTRONICS

SALES MANAGER
DORIS A. LAVIOLETTE
COMPANY ADDRESS
26077 FARMFIELD ROAD
CALABASAS, CALIF. 91302
MONITORS, VIDEO

LENKURT ELECTRIC CO INC

SALES MANAGER
WAYNE LEONARD
BRAND NAMES
AGAMP
DATATEL
LENKURT
MOBILTEL
MICROTEL
COMPANY ADDRESS
1105 COUNTY ROAD
SAN CARLOS, CALIF. 94070
415 591-8461
TWX 910-376-4396
COMMUNICATIONS SYSTEMS,
MICROWAVE
COMMUNICATIONS SYSTEMS,
MULTIPLEX
MICROWAVE SYSTEMS, STL
MICROWAVE SYSTEMS, 2500 MHZ
MICROWAVE SYSTEMS, OTHER
MULTIPLEXERS

LENZ ELECTRIC MANUFACTURING

COMPANY
SALES MANAGER
R. G. ZENDER
COMPANY ADDRESS
1751 NORTH WESTERN AVE.
CHICAGO, ILLINOIS 60647
CABLE, SHIELDED, AUDIO
CABLE, TELEPHONE
WIRE, INSULATED, HIGH VOLTAGE

WIRE, INSULATED, HOOKUP
WIRE, SHIELDED

LEWIS AND KAUFMAN LTD.

DIRECTOR OF MARKETING
CHARLES A. TEPPER
BRAND NAMES
LEWIS & KAUFMAN
L & K
COMPANY ADDRESS
107 TRUMBULL STREET
ELIZABETH, NEW JERSEY 07206
VACUUM TUBES, BALLAST
VACUUM TUBES, CAMERA, VIDICON
VACUUM TUBES, CATHODE RAY,
TV, MONOCHROME
VACUUM TUBES, RECEIVING
VACUUM TUBES, TRANSMITTING

LIBERTY TOWER MFG CO

SALES MANAGER
B. J. GRIFFITH
COMPANY ADDRESS
RT 45 NORTH, BOX 161
EFFINGHAM, ILLINOIS
ANCHORS, GUY
MAINTENANCE SERVICES, AM
MAINTENANCE SERVICES, FM
MAINTENANCE SERVICES,
MICROWAVE
MAINTENANCE SERVICES,
STEEPLEJACK
MOUNTS, ANTENNA, FIXED
TOWERS, ANTENNA,
CATV, HEAD-END
TOWERS, ANTENNA, RECEIVING
TOWERS, ANTENNA,
TRANSMITTING, AM
TOWERS, ANTENNA,
TRANSMITTING, FM
TOWERS, ANTENNA,
TRANSMITTING, TV

LIGHTING & ELECTRONICS INC

SALES MANAGER
N. J. SONNENFELD
COMPANY ADDRESS
423 SOUTH BROADWAY
YONKERS, NEW YORK 10705
LIGHTING, TV, COMPONENTS
LIGHTING, TV, CONTROLS
LIGHTING, TV, SYSTEMS

LIGHTING UNLIMITED

COMPANY ADDRESS
560 W. BEECH ST.
LONG BEACH, N. Y. 11561
516 431-0182
LIGHTING, TV, COMPONENTS
LIGHTING, TV, CONTROLS
LIGHTING, TV, SYSTEMS

LINDSAY SYECIALTY PRODUCTS LTD

COMPANY ADDRESS
50 MARY ST. W
LINDSAY, ONTARIO
AMPLIFIER, BRIDGING
AMPLIFIER, CATV
AMPLIFIER, DISTRIBUTION
AMPLIFIER, TV, BOOSTER
ANTENNAS, CATV
ANTENNAS, FM
ANTENNAS, MOBILE
ANTENNAS, TV
ANTENNAS, TV,
MASTER-COMMUNITY

LIPPS INC

VICE PRESIDENT - SALES
BERNARD D. LIPPS
COMPANY ADDRESS
1630 EUCLID STREET
SANTA MONICA, CALIF. 90404
393-0449
HEADS, DISC RECORDING
HEADS, ERASE, MAGNETIC
HEADS, RECORDING, MAGNETIC

LISTEC TELEVISION EQUIPMENT CORP.

SALES MANAGER
JACK LITTLER
BRAND NAMES
VINTEN
VARLEY
HOKUSHIN
AUTOCUE
BICC
COMPANY ADDRESS
35 CAIN DR
PLAINVIEW, N. Y. 11803
516 694-8963
BATTERIES, LEAD ACID
BATTERIES, NICKEL CADMIUM
CABLE, ARMORED
CABLE, CAMERA
CAMERA, MOUNTING EQUIPMENT
DOLLIES, CAMERA
PROJECTORS, FILM

LITTELFUSE INC

VICE PRES & SALES MANAGER

WALTER A. CLEMENTS
BRAND NAMES
MICROFUSE
PICOFUSE
SLO-BLO
COMPANY ADDRESS
800 E. NORTHWEST HWY
DESPAINES, ILL 60016
312 824-1188
CIRCUIT BREAKERS
FUSES
HOLDERS, FUSE

LITTLE JOE ENTERPRISES

SALES MANAGER
ROBERT D. SIDWELL
COMPANY ADDRESS
400 3RD STREET
PORT ST. JOE, FLORIDA
ANCHORS, GUY
CABINETS, WOOD
CONSOLE, AUDIO, AM
CONSOLE, AUDIO, FM
CONSOLE, AUDIO, PORTABLE
CONSOLE, AUDIO, RECORDING
CONSOLE, AUDIO, TV
CONSOLE, CABINETS
AND HARDWARE
DUMMY LOAD
MAINTENANCE SERVICES, AM
MAINTENANCE SERVICES, FM
MAINTENANCE SERVICES,
STEEPLEJACK
REVERBERATION DEVICES
TOWERS, ANTENNA,
CATV, HEAD-END
TOWERS, ANTENNA, RECEIVING
TOWERS, ANTENNA,
TRANSMITTING, AM
TOWERS, ANTENNA,
TRANSMITTING, FM

LITTON EDUCATIONAL TELEVISION DIVISION

VICE
HENRY SHAPIRO
COMPANY ADDRESS
210 WESTCHESTER AVENUE
WHITE PLAINS, NEW YORK 10604
ANTENNAS, MICROWAVE
ANTENNAS, 2500 MHZ
MICROWAVE COMPONENTS
MICROWAVE SYSTEMS, STL
MICROWAVE SYSTEMS, 2500 MHZ
TRANSLATOR SYSTEMS
TV SYSTEMS, CLOSED CIRCUIT

LOW POWER BROADCAST EQUIPMENT COMPANY

SALES MANAGER
RICHARD H. CROMPTON
COMPANY ADDRESS
248 SWEDSFORD ROAD
MALVERN, PA 19355
215 NI 4-4096
TRANSMITTERS, AM, CARRIER
TRANSMITTERS, AM, LOW POWER

LTV LING ALTEC, INC.

V.P. MKTG.
H. S. MORRIS
BRAND NAMES
PEERLESS
ALTEC
DUMONT
VOICE OF THE THEATER
DUPLEX
NOALA
VANGUARD
SAFGUARD
GIANT VOICE
SEQR
COMPANY ADDRESS
1515 S. MANCHESTER AVE.
ANAHEIM, CALIF. 92803
714 774-2900
AMPLIFIER, AF, AGC
AMPLIFIER, AF, COMPRESSING
AMPLIFIER, AF,
GENERAL PURPOSE
AMPLIFIER, AF, MONAURAL
AMPLIFIER, AF,
PEAK LIMITING, AM
AMPLIFIER, AF,
PEAK LIMITING, FM
AMPLIFIER, AF, REMOTE
AMPLIFIER, AF, REVERBERATION
AMPLIFIER, AF, STEREO
AMPLIFIER, BRIDGING
AMPLIFIER, CLAMPING
AMPLIFIER, DISTRIBUTION
AMPLIFIER, RF,
GENERAL PURPOSE
AMPLIFIER, RF, PEAK LIMITING
AMPLIFIER, RF, POWER
AMPLIFIER, SENSING
AMPLIFIER, STABILIZING
ATTENUATORS, AUDIO
ATTENUATORS, FIXED
ATTENUATORS,
IMPEDANCE MATCHING
AUTOMATION EQUIPMENT, AUDIO
BRIDGES
COMMUNICATIONS SYSTEMS,

INTERCOM, WIRED
COMMUNICATIONS SYSTEMS,
LAND MOBILE
CONSOLE, AUDIO, AM
CONSOLE, AUDIO, FM
CONSOLE, AUDIO, PORTABLE
CONSOLE, AUDIO, RECORDING
CONSOLE, AUDIO, TV
CONSOLE, CABINETS
AND HARDWARE
CONSOLE, KITS
EQUALIZERS, AUDIO EMPHASIS
EXCITERS, FM
FILTERS, AUDIO
JACK PANEL ASSEMBLIES
METERS, DB AND VU
METERS, DB AND VU, WIDE RANGE
MICROPHONE HARDWARE
MICROPHONE STANDS & BOOMS
MICROPHONES, CONDENSER
MICROPHONES, DYNAMIC
MICROPHONES, VELOCITY
MIXERS - SEE CONSOLES
MOBILE EQUIPMENT
MONITORS, AM SYSTEMS
MONITORS, FM SYSTEMS, MONO
MONITORS, FM SYSTEMS, STEREO
NARROW BAND FM EQUIPMENT
NETWORKS, MATCHING, AUDIO
NETWORKS, PHASING
POWER SUPPLIES, AC
POWER SUPPLIES, DC
POWER SUPPLIES, PRECISION
PREAMPLIFIERS, AUDIO
RECEIVERS, AM
RECEIVERS, FM
RECEIVERS, HF
REMOTE CONTROL SYSTEMS, AM
REMOTE CONTROL SYSTEMS, FM
REVERBERATION DEVICES -
ALSO SEE AMPLIFIERS
SOUND SYSTEMS, OUTDOOR
SOUND SYSTEMS, PORTABLE
SOUND SYSTEMS, THEATER
SPEAKER COMPONENTS
SPEAKERS
SWITCHES, MULTICONTACT
SWITCHES, ROTARY
SWITCHES, SLIDE
TELEPHONE EQUIPMENT
TRANSFORMERS, AUDIO,
ISOLATION
TRANSFORMERS, AUDIO, MATCHING
TRANSFORMERS, AUDIO,
POWER OUTPUT
TRANSFORMERS, AUTO
TRANSFORMERS, COUPLING
TRANSFORMERS, FILAMENT
TRANSFORMERS, GENERAL
TRANSFORMERS, PLATE
TRANSFORMERS, POWER
TRANSFORMERS, TRANSISTOR
TRANSFORMERS, VARIABLE
TRANSFORMERS, CARRIER
TRANSMITTERS, AM, LOW POWER
TRANSMITTERS, AM, 250 WATT
TRANSMITTERS, AM, 500 WATT
TRANSMITTERS, FM,
TRANSMITTERS, FM, 10 WATTS
TRANSMITTERS, FM, 50 WATTS
TRANSMITTERS, FM, 100 WATTS

MACARTA INC.

SALES MANAGER
G. D. ANDREWS
BRAND NAMES
CAROUSEL
ROTA RAK
MACARTA
COMPANY ADDRESS
709 RAILROAD AVE.
WEST DES MOINES, IOWA 50265
274-3869
AUTOMATION EQUIPMENT, AUDIO
CARTRIDGES, MAGNETIC TAPE
RECORDERS, MAGNETIC TAPE,
AUDIO, CARTRIDGE

THE MACHLETT LABORATORIES, INC. A SUBSIDIARY OF RAYTHEON CO.

SALES MANAGER
DAVID S. FRANKEL
COMPANY ADDRESS
1063 HOPE STREET
STAMFORD, CONN. 06907
203 348-7511
TWX 203-327-2496
CAPACITORS, VARIABLE
VACUUM TUBES, TRANSMITTING

MACKENZIE LABORATORIES

SALES MANAGER
A. R. TAYLOR
COMPANY ADDRESS
1357 N FAIR OAKS AVE
PASADENA, CALIF 91103
213 SY 8 6220
AUTOMATION EQUIPMENT
RECORDERS, MAGNETIC TAPE,
AUDIO
TAPE DECKS, MAGNETIC

MAGNASYNC-MOVIOLA CORP.

SALES MANAGER
WALTER H. MILLS
COMPANY ADDRESS
5539 RIVERTON AVE.
NORTH HOLLYWOOD, CALIF. 91601
213 877-2791

CONSOLE, AUDIO, PORTABLE
DEMAGNETIZERS, BULK TAPE
DOLLIES, CAMERA
EDITORS, FILM
MIXERS - SEE CONSOLES
RECORDERS, FILM, MAGNETIC
RECORDERS, MAGNETIC TAPE,
AUDIO
REWINDERS, FILM
TAPE DECKS, MAGNETIC

MAGNA-TECH CORPORATION

SALES MANAGER
RON MATTHEWS
COMPANY ADDRESS
2300 AMPEX AVENUE
OPELIKA, ALABAMA 36801
205 745-6515
CARTRIDGES, MAGNETIC TAPE
CARTRIDGES, TAPE,
RECORDING SERVICE
HEADS, ERASE, MAGNETIC
HEADS, RECORDING, MAGNETIC
RECORDERS, MAGNETIC TAPE,
AUDIO
RECORDERS, MAGNETIC TAPE,
AUDIO, CARTRIDGE
TAPE DECKS, MAGNETIC
TAPE DUPLICATORS
AUDIO, CARTRIDGE
RECORDING SERVICE

MAGNECORD, DIVISION OF THE TELEX CORP.

SALES MANAGER
PAUL BUNKER
COMPANY ADDRESS
9600 ALDRICH AVE. SOUTH
MINNEAPOLIS, MINN. 55420
612 881-2636
AMPLIFIER, AF, MONAURAL
AMPLIFIER, AF, STEREO
EARPHONES, HEADPHONES
EDUCATION FACILITIES,
EQUIPMENT
RECORDERS, MAGNETIC TAPE,
AUDIO
REELS, TAPE
TAPE DECKS, MAGNETIC
TAPE DUPLICATORS

MAGNETIC MEDIA CORPORATION

SALES MANAGER
RICHARD K. PEDERSEN
BRAND NAMES
MICRO MEDIA
COMPANY ADDRESS
616 FAYETTE AVE.
MAMARONECK, NEW YORK 10543
CARTRIDGES, MAGNETIC TAPE
TAPE, MAGNETIC RECORDING,
AUDIO
TAPE, MAGNETIC RECORDING,
COMPUTER
TAPE, MAGNETIC RECORDING,
VIDEO

MAGNETIC STUDIOS CORP.

SALES MANAGER
DONALD P. WHITTICAR
COMPANY ADDRESS
1670 WEST FIRST AVE.
COLUMBUS, OHIO 43212
614 486-2469
EDITORS, AUDIO TAPE
RECORDING SERVICE, AUDIO
RECORDS, BLANK, ACETATE,
FOR RECORDING
SOUND SYSTEMS, OUTDOOR
SOUND SYSTEMS, PORTABLE
SOUND SYSTEMS, THEATER
STYLI, CUTTING
TAPE ACCESSORIES
TAPE DUPLICATORS
TAPE, MAGNETIC RECORDING,
AUDIO

MAGNE-TRONICS INC.

SALES MANAGER
A. J. KENDRICK
COMPANY ADDRESS
21 EAST 40TH ST.
NEW YORK, N. Y. 10016
LE2-3832
BACKGROUND MUSIC SERVICE

MAGNUSONIC DEVICES, INC.

SALES MANAGER
MIKE LEVITT
COMPANY ADDRESS
68 TOLEDO ST.
FARMINGDALE, N. Y. 11735
516 249-2888
DEMAGNETIZERS, BULK TAPE
HEADS, ERASE, MAGNETIC
HEADS, RECORDING MAGNETIC

MALLORY DISTRIBUTOR PRODUCTS CO.

SALES MANAGER
FRANK P. VENDELY
BRAND NAMES
DURACELL
DISCAP

STA-LOC
COMPANY ADDRESS
101 S. PARKER AVE
INDIANAPOLIS, IND. 46206
317 636-5353
BATTERIES, DRY CELL
BATTERIES, OTHER
CAPACITORS, FIXED, CERAMIC
CAPACITORS, FIXED,
ELECTROLYTIC
CAPACITORS, FIXED, FILM
CAPACITORS, FIXED, GENERAL
CAPACITORS, FIXED, OIL-FILLED
CIRCUIT BREAKERS
JACKS
PLUGS, PHONE
POTENTIOMETERS, CARBON
POTENTIOMETERS, WIREWOUND
RECTIFIERS-ALSO SEE
SEMICONDUCTORS
RESISTORS, FIXED, PRECISION
RESISTORS, FIXED, WIREWOUND
RESISTORS, FIXED, OTHER
RESISTORS, VARIABLE,
WIREWOUND
RHEOSTATS
SEMICONDUCTOR DIODES
SEMICONDUCTOR RECTIFIERS,
GENERAL
SEMICONDUCTOR RECTIFIERS,
HIGH VOLTAGE
SEMICONDUCTOR RECTIFIERS,
POWER
TIMERS, ELECTRIC

MARANTZ COMPANY, INC.

SALES MANAGER
RICHARD BRUNELLE
C-O SUPERSCOPE, INC.
8150 VINELAND AVE
SUN VALLEY, CALIF
COMPANY ADDRESS
37-04 57TH STREET
WOODSIDE, NEW YORK 11377
AMPLIFIER, AF,
GENERAL PURPOSE
AMPLIFIER, AF, MONAURAL
AMPLIFIER, AF, STEREO
CABINETS, WOOD
PREAMPLIFIERS, AUDIO
RECEIVERS, FM
RECEIVERS, MULTIPLEX
TURNTABLES, PHONOGRAPH

MARATHON BROADCAST EQUIPMENT SALES CORP.

SALES MANAGER
CHARLES RICH
COMPANY ADDRESS
57 NORTH PUTNAM ST.
DANVERS, MASS. 01923
617 774-6066
TAPE, MAGNETIC RECORDING,
AUDIO, CARTRIDGE

MARATHON PRODUCTS CORP.

SALES MANAGER
B. D. BAGDASARIAN
COMPANY ADDRESS
370 SO MAIN STREET
HOLDEN, MASS 01520
CARTRIDGES, MAGNETIC TAPE
CARTRIDGES, TAPE
RECORDING SERVICE

MARCONI DIVISION THE ENGLISH ELECTRIC CORP

COMPANY ADDRESS
ONE PARK AVE
NEW YORK, N Y 10016
212 679-9313
ANTENNAS, AM
ANTENNAS, FM
ANTENNAS, HF
ANTENNAS, MF
ANTENNAS, TV
AUTOMATION EQUIPMENT, AUDIO
AUTOMATION EQUIPMENT, VIDEO
CAMERAS, TV, COLOR
CAMERAS, TV, MONOCHROME
CONSOLE, AUDIO, AM
CONSOLE, AUDIO, PORTABLE
CONSOLE, AUDIO, TV
DETECTORS, STANDING WAVE
DUMMY LOAD
EXCITERS, FM
GENERATORS, SIGNAL, COLOR BAR
GENERATORS, SIGNAL,
SPECIAL EFFECT
GENERATORS, SIGNAL,
TV SYNCHRONIZING
INDUSTRIAL TV
METERS, STANDING WAVE
MOBILE EQUIPMENT, TV
MONITORS, VIDEO
RECORDERS, VIDEO, KINESCOPE
SWITCHES, COAXIAL
SWITCHING SYSTEMS
TRANSMITTERS, AM, 1 KW
TRANSMITTERS, AM, 10 KW
TRANSMITTERS, AM, 50 KW
TRANSMITTERS, AM, OVER 50 KW
TRANSMITTERS, FM, 5 KW
TRANSMITTERS, TV, 5 KW
TRANSMITTERS, TV, 10 KW

TRANSMITTERS, TV, 25 KW
TRANSMITTERS, TV, 50 KW
TV SYSTEMS, CLOSED CIRCUIT

MARCONI INSTRUMENTS, DIV ENGLISH ELECTRIC CORP

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KEITH ELKINS
COMPANY ADDRESS
111 CEDAR LANE
ENGLEWOOD, N J 07631
201 567 0607
ANALYZERS, DISTORTION
ANALYZERS, HARMONIC
ANALYZERS, NOISE
ANALYZERS, SIDEBAND
ANALYZERS, SPECTRUM
ATTENUATORS, RF
ATTENUATORS, VIDEO
BRIDGES
GENERATORS, FM, STEREO
GENERATORS, FM, SUBCARRIER
GENERATORS, SIGNAL, AF
GENERATORS, SIGNAL, RF
OSCILLATORS, AF AND RF,
SEE GENERATORS
OSCILLOSCOPES
RECEIVERS, AM
RECEIVERS, FM
RECEIVERS, HF
SWITCHES, COAXIAL
VOLTMETERS, AC
VOLTMETERS, DC
VOLTMETERS, VACUUM TUBE
WATTMETERS

MARTI ELECTRONICS

SALES AND MARKETING MANAGER
ROBERT E. RICHARDS
COMPANY ADDRESS
105 POINDEXTER, PO BOX 661
CLEBURNE, TEXAS 76031
AMPLIFIER, AF, AGC
AMPLIFIER, AF, COMPRESSING
AMPLIFIER, AF,
GENERAL PURPOSE
ANTENNAS, FM
ANTENNAS, MOBILE
BASE STATIONS
COMMUNICATIONS SYSTEMS,
LAND MOBILE
COMMUNICATIONS SYSTEMS,
MICROWAVE
EXCITERS, FM
GENERATORS, FM, SUBCARRIER
MICROWAVE SYSTEMS, STL
MOBILE EQUIPMENT
NARROW-BAND FM EQUIPMENT
PREAMPLIFIERS, AUDIO
RECEIVERS, FM
RECEIVERS, SCA
REMOTE CONTROL SYSTEMS
RTL EQUIPMENT
TRANSMITTERS, FM, 10 WATTS
TRANSMITTERS, FM, 100 WATTS

MARYLAND TELECOMMUNICATIONS, INCORPORATED

SALES MANAGER
JOHN D. ROCKWELL
COMPANY ADDRESS
10534 YORK ROAD
COCKEYSVILLE, MARYLAND 21030
666-2777
CONSOLE, AUDIO, TV
CONSOLE, VIDEO, STUDIO
DISPLAY EQUIPMENT, TV
GENERATORS, SIGNAL,
TV SYNCHRONIZING
MONITORS, VIDEO
TV SYSTEMS, CLOSED CIRCUIT
TRANSFORMERS, FILAMENT
TRANSFORMERS, GENERAL
TRANSFORMERS, POWER
TRANSFORMERS, RF
TRANSFORMERS, TRANSISTOR

MASTER TOWER COMPANY

SALES MANAGER
RICHARD KRONE
COMPANY ADDRESS
BOX 694
SIOUX CITY, IOWA 51102
258-0108
ANCHORS, GUY
PREFABRICATED BUILDINGS
REFLECTORS, PASSIVE
TOWERS, ANTENNA,
CATV, HEAD-END
TOWERS, ANTENNA, RECEIVING
TOWERS, ANTENNA,
TRANSMITTING, AM
TOWERS, ANTENNA,
TRANSMITTING, FM
TOWERS, ANTENNA,
TRANSMITTING, TV

J. G. MCALISTER, INC.

BRAND NAMES
BARDWELL
MCALISTER

COMPANY ADDRESS
1117 N MCCADDEN PL BOX 38368
HOLLYWOOD, CALIF. 90038
LAMPS, PANEL
LIGHTING, TV, COMPONENTS
LIGHTING, TV, SYSTEMS

THE MCINTIRE COMPANY

SALES MANAGER
E. S. CHATLOS
COMPANY ADDRESS
OKNER PARKWAY
LIVINGSTON, NEW JERSEY 07039
201 992-1634
TWX 201-992-7358
DESICCANTS
PRESSURIZATION EQUIPMENT,
TRANSMISSION LINE

MCMARTIN INDUSTRIES, INC.

MARKETING DIRECTOR, BROADCAST
DUANE HAVERTY
MARKETING MGR, AUDIO
GARY SMITH
COMPANY ADDRESS
605 NORTH 13TH STREET
OMAHA, NEBRASKA 68102
ADAPTERS, FM STEREO
AMPLIFIER, AF,
GENERAL PURPOSE
AMPLIFIER, AF, MONAURAL
AMPLIFIER, DISTRIBUTION
AMPLIFIER, RF,
GENERAL PURPOSE
AMPLIFIER, RF, PEAK LIMITING
AMPLIFIER, RF, POWER
ANTENNAS, FM
BACKGROUND MUSIC SERVICE
CABINETS, METAL
COMMUNICATIONS SYSTEMS,
INTERCOM, WIRED
COMMUNICATIONS SYSTEMS,
MULTIPLEX
HARDWARE, RACK
METERS, DB AND VU
METERS, FIELD STRENGTH
METERS, FREQUENCY
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MONITORS, FM SYSTEMS, SCA
MONITORS, FM SYSTEMS, STEREO
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RECEIVERS, FM
RECEIVERS, MULTIPLEX
RECEIVERS, SCA
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CHOKES, WAVEGUIDE
COUPLERS
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INDUCTANCES, VARIABLE
MONITORS, PHASE
NETWORKS, PHASING
SWITCHING MATRIES

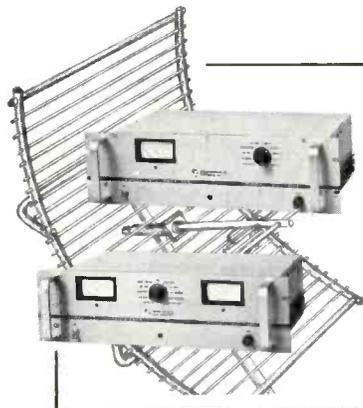
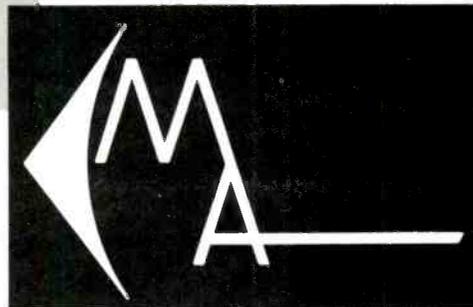
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AURAL STUDIO-TRANSMITTER LINKS

FOR FM - AM - TV - INTERCITY RELAY

Fully silicon solid-state and utilizing true direct FM, this powerful STL offers uncompromised, dependable performance in the Moseley tradition . . .

Model PCL-303 890 - 960 MHz 8 Watts

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Model PCL-303 COMPOSITE — for FM stereo. Another Moseley first! This single STL transmits a composite stereo waveform.

SOLID-STATE REMOTE CONTROL SYSTEMS

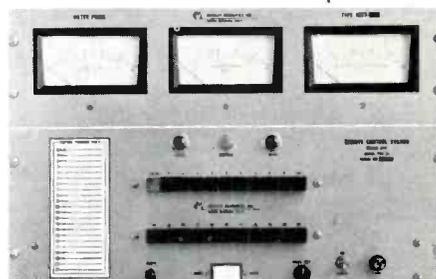
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Model PBR-21A This 21 channel deluxe control system can be operated over a single wire line or STL. DC line continuity not required. A complete line of control subcarrier generators and detectors is available to adapt the PBR-21A to Dual or Composite STL systems for all-wireless control. All FM radio remote control systems compatible with stereophonic and SCA program operation.

Model WRC-10T Designed to operate over a single DC wire pair, this 10 channel all solid-state control system is dependable, accurate, and economical. 4" rectangular meter provided for easy readout.

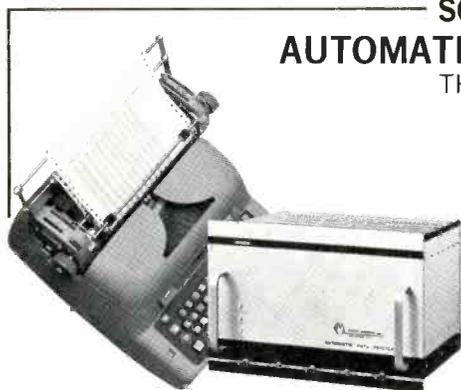
Model SCS-1 Status/Control System This modular 8 channel system can be used as a status indicator, fault reporting or one-way control system. Uses single telco line.

*Patented



SOLID-STATE DIGITAL AUTOMATIC TRANSMITTER LOGGER

THE EASIEST WAY TO LOG



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Model SCG-3T Stereo Generator is all silicon solid-state using integrated circuits. Attention to design details has produced minimal quadrature error and phase difference between channels. Excellent channel separation (>40 db). Designed to operate with the PCL-303 Composite STL.

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Model RPL-1 has low distortion, wide frequency response, and is an excellent choice for FM stations. Operates in the 148-174 MHz band. The transmitter, rated at 30 watts output, is designed for continuous duty.

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SOUND SYSTEMS, PORTABLE
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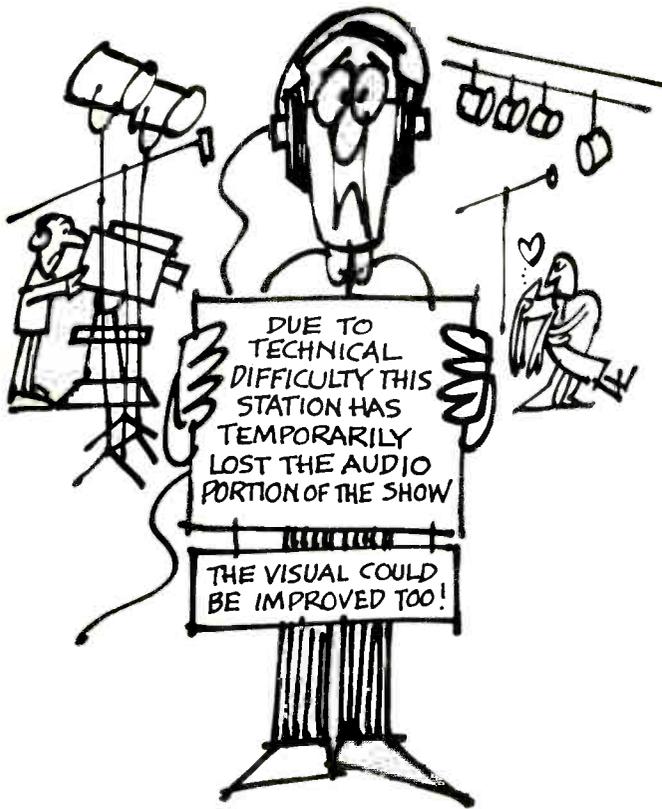
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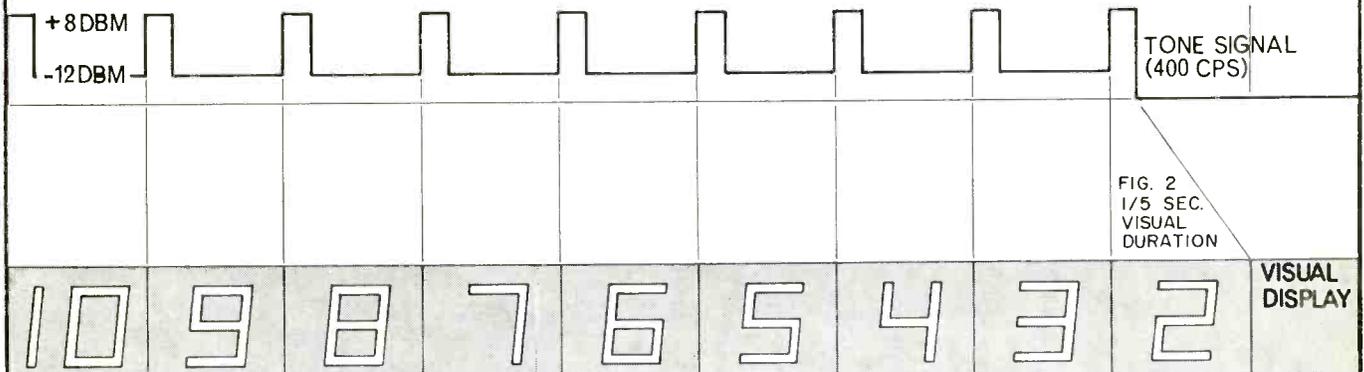


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AUDIO
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SEMICONDUCTOR RECTIFIERS,
POWER
SEMICONDUCTORS, AF
SEMICONDUCTORS, TRANSISTORS,
GENERAL
SEMICONDUCTORS,
TRANSISTORS
TRANSFORMERS, AUDIO,
ISOLATION

TRANSFORMERS, AUDIO, MATCHING
TRANSFORMERS, AUDIO,
POWER OUTPUT
TRANSFORMERS, AUTO
TRANSFORMERS, COUPLING
TRANSFORMERS, FILAMENT
TRANSFORMERS, GENERAL
TRANSFORMERS, PLATE
TRANSFORMERS, POWER
TRANSFORMERS, RF
TRANSFORMERS, TRANSISTOR
TRANSFORMERS, VARIABLE
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TRANSMITTERS, AM, 5 KW
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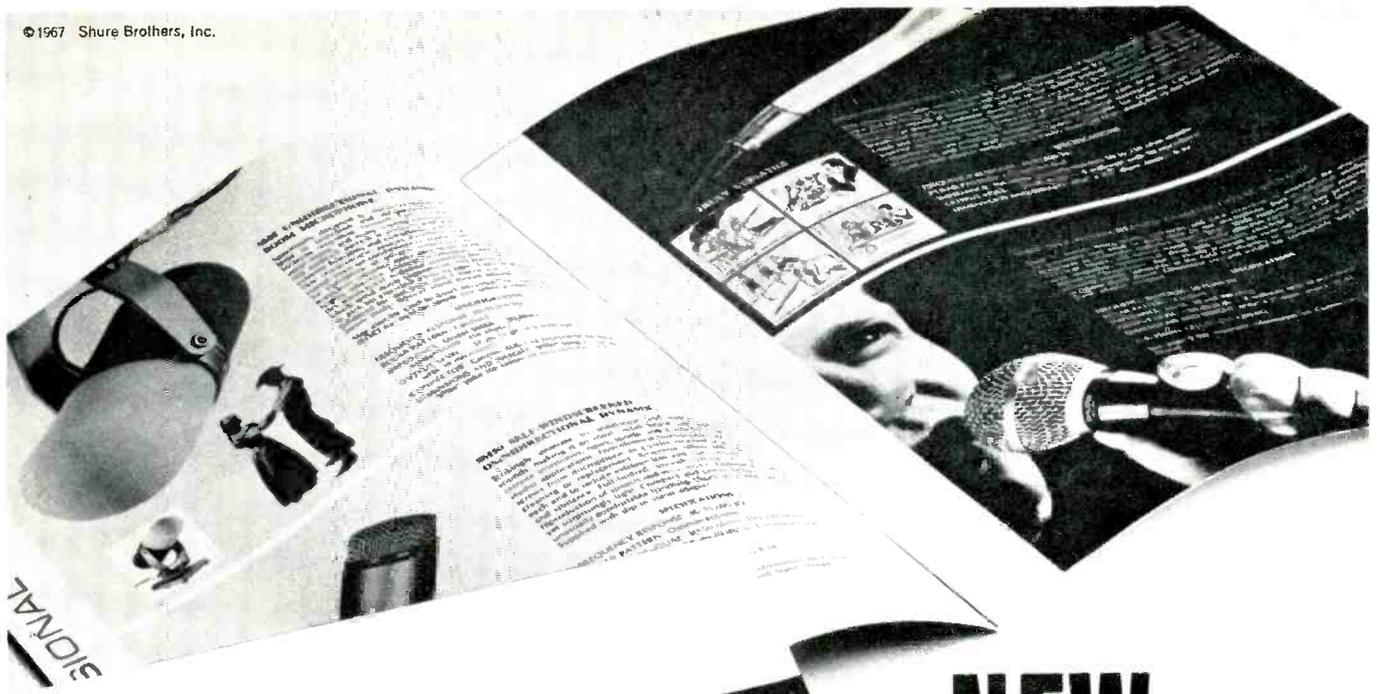
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AMMETERS, RF
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AMPLIFIER, AF,
PEAK LIMITING, FM
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AMPLIFIER, AF, REVERBERATION
AMPLIFIER, AF, STEREO
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CABLE, CAMERA
CABLE, CATV, HARDWARE
CABLE, COAXIAL, FLEXIBLE
CABLE, COAXIAL, RIGID
CABLE, DIRECT-BURIAL
CABLE, SHIELDED, AUDIO
CABLE, TELEPHONE
CALORIMETERS
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CAPACITORS, FIXED,
ELECTROLYTIC
CAPACITORS, FIXED, FILM
CAPACITORS, FIXED, GENERAL
CAPACITORS, FIXED, METALLIZED
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CAPACITORS, FIXED, OIL-FILLED
CAPACITORS, FIXED, PAPER
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COMMUNICATIONS SYSTEMS,
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COMMUNICATIONS SYSTEMS,
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COMMUNICATIONS SYSTEMS,
MICROWAVE
COMMUNICATIONS SYSTEMS,
MULTIPLY
COMMUNICATIONS SYSTEMS,
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CONNECTORS, ANTENNA
CONNECTORS, COAXIAL CABLE
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CONSOLE, AUDIO, TV
CONSOLE, KITS
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CORDS, LACING
CORDS, PATCH
CORDS, SET
COUPLERS
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DEMAGNETIZERS, BULK TAPE
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FILTERS, AUDIO
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GENERATORS, FM, SUBCARRIER
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HEADS, ERASE, MAGNETIC
HEADS, RECORDING, MAGNETIC
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HOLDERS, CRYSTAL
HOLDERS, FUSE
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INDUCTANCES, VARIABLE
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INSULATORS, FEED THROUGH
INSULATORS, STAND OFF
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INVERTERS, DC TO AC,
SOLID STATE
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JACKS
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JOINTS, ROTARY, WAVEGUIDE
KITS
KNOBS
LAMP ASSEMBLIES
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LAMPS, PROJECTION
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LIGHTING, TV, CONTROLS
LIGHTING, TV, SYSTEMS
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LIGHTS, TOWER, OBSTRUCTION

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METERS, DB AND VU, WIDE RANGE
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METERS, FREQUENCY CALIBRATING
METERS, LIGHT
METERS, STANDING WAVE
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MICROPHONE STANDS & BOOMS
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MICROPHONES, DYNAMIC
MICROPHONES, WIRELESS
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MICROWAVE SYSTEMS, STL
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MONITORS, FM SYSTEMS, MONO
MONITORS, FM SYSTEMS, SCA
MONITORS, FM SYSTEMS, STEREO
MONITORS, FREQUENCY
MONITORS, MODULATION
MONITORS, PHASE
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MOUNTS, ANTENNA, MOBILE
MOUNTS, INSTRUMENT
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NARROW-BAND FM EQUIPMENT
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NETWORKS, MATCHING, RF
OHMMETERS
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FOR RACK MOUNTING
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PLUGS, PHONE
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POTENTIOMETERS, WIREWOUND
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POWER SUPPLIES, DC
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PRINTERS, TELEPRINTER
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RECEIVERS, HF
RECEIVERS, MULTIPLEX
RECEIVERS, SCA
RECEIVERS, TV, COLOR
RECEIVERS, TV, MONOCHROME
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AUDIO
RECORDER, MAGNETIC TAPE,
AUDIO, CARTRIDGE
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FOR RECORDING
RECORDS, BLANK, LACQUER,
FOR RECORDING
RECORDS, SOUND EFFECT
RECORDS, TEST
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REELS, CABLE, AUTOMATIC
REELS, TAPE
REFLECTORS, PASSIVE
RELAYS, ANTENNA
RELAYS, COAXIAL
RELAYS, PLUG IN
RELAYS, POWER
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REMOTE CONTROL SYSTEMS, FM
REMOTE CONTROL SYSTEMS, TV
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RESISTORS, FIXED,
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RESISTORS, FIXED, PRECISION
RESISTORS, FIXED, WIREWOUND
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 TRANSMITTERS, AM, 5 KW
 TRANSMITTERS, AM, 10 KW
 TRANSMITTERS, AM, 25 KW
 TRANSMITTERS, AM, 50 KW
 TRANSMITTERS, AM, OVER 50 KW
 TRANSMITTERS, AM, TO ORDER
 TRANSMITTERS, FM
 TRANSMITTERS, FM, 10 WATTS
 TRANSMITTERS, FM, 50 WATTS
 TRANSMITTERS, FM, 100 WATTS
 TRANSMITTERS, FM, 250 WATTS
 TRANSMITTERS, FM, 1 KW
 TRANSMITTERS, FM, 3 KW
 TRANSMITTERS, FM, 5 KW
 TRANSMITTERS, FM, 7.5 KW
 TRANSMITTERS, FM, 10 KW
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 TRANSMITTERS, FM, 20 KW
 TRANSMITTERS, FM, 40 KW
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 TRANSMITTERS, FM, 100 KW
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 VACUUM TUBES, CATHODE RAY,
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SOLID-STATE C37-FET CONDENSER MICROPHONE



the World's Finest
Professional Microphone
**NOW PACKS ITS
OWN POWER**

The new Sony Solid-State C37-FET Condenser Microphone is designed to give you the ultimate in professional capabilities wherever you may need them. A revolutionary Field Effect Transistor (FET) replaces the conventional vacuum tube, eliminating the external power supply and bulky connecting cables. Power is now supplied by a built-in replaceable 9-volt battery, delivering 300 hours of continuous power.

The C37-FET retains all the warm, natural quality, the unbelievable flat frequency response free of resonant peaks and dips—so characteristic of its illustrious predecessor the world-famous C-37. Musicians, conductors, soloists and sound engineers prefer the C37-FET for its wide dynamic range which captures the splendor of choral groups...for its faithful flat reproduction of high, middle and low registers to capture the magnificence and true timbre of strings, woodwinds and piano.

Add to this the outstanding signal-to-noise ratio specifications, unusually high front to back rejection of cardioid pattern, a built-in battery that delivers up to 300 hours of continuous power, and you have a microphone whose performance is unparalleled whether in the studio or on location.

\$ 325.00



Color It Warm and Natural

SONY F-121 CAROID DYNAMIC MICROPHONE

... the instrument Sony engineered to provide the ultimate in performance under difficult conditions. Whether you wish to reproduce the rich warmth of strings and woodwinds or the fine upper registers of a soprano, this superb Sony instrument will fulfill your most discriminating expectations. Designed to meet the exacting requirements of professional use, the Sony F-121 offers a cardioid pattern with exceptional front-to-back rejection ratio without compromising the normal frequency response. An integrated wind screen assures immunity against any wind-produced noise or blast effect, while the convenient on-off switch permits immediate operation. The Sony F-121 is the ideal selection for the recording enthusiast

who wants professional characteristics in a microphone whose operation is foolproof. Complete with 20-foot microphone cable, desk stand, clip-on holder, and deluxe carrying case, just \$59.50.



F-121 Features and Specifications: Select from three impedances (50, 150 and 10,000 ohms). On-off switch has electrical safety interlock to prevent accidental cut-off. Change single wire to switch impedances. Unidirectional characteristic. Frequency response, 30 - 18,000 Hz. Hum induction level, below 6 db/mgauss. Wind noise, less than 50 db in all directions. Dimensions: 7" x 1 1/4" max. dia., 1" min.

SONY SUPERSCOPE

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No Strings!

...With the
SONY
Solid - State CR-6
F.M. Wireless Microphone



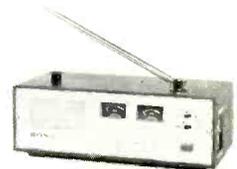
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Sony brings new freedom to the profession — a totally cordless communication system that meets the most critical industry standards!

Take a compact, lightweight, solid-state FM transmitter and professional-caliber condenser microphone. House them in a tiny capsule less than three inches long. Attach a small battery pack and you'll move freely through crowds for on-the-spot interviews with a hand-held probe. Or, pocket the cigarette-size extra power pack, wear the capsule as a lavalier.

Anywhere indoors or outdoors, the Sony solid state AC/DC receiver is ready to capture every sound — flawlessly. Distortion and interference usually found in conventionally designed wireless microphones is completely eliminated by the CR-6's Sony-special frequency modulation system. And you'll never worry about a power source — the Sony CR-6 F.M. Battery operated receiver packs its own power.

Available in three frequencies — 42.98 MCS, 35.02 MCS or 33.14 MCS (must be specified at time of order).
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Sony offers you professional performance

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CONSOLE, AUDIO, PORTABLE
CONSOLE, AUDIO, RECORDING
CONSOLE, AUDIO, TV
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CONSOLE, VIDEO, STUDIO
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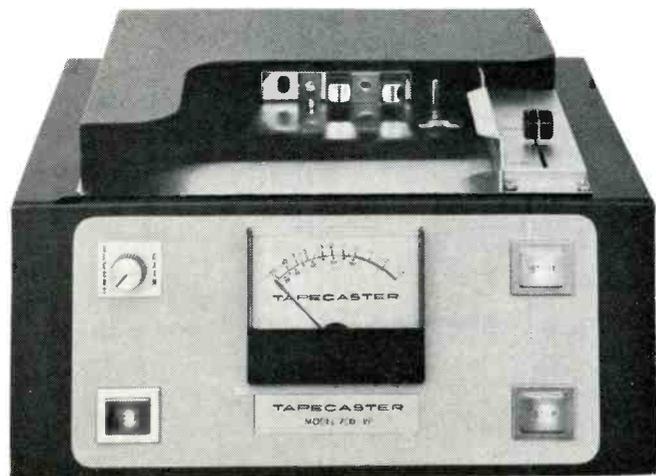
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 TOWERS, ANTENNA,
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 TRANSMITTERS, AM, 10 KW
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STEPHENS
STEPHENS TRU-SONIC
FREE CONE
STEREODOT
COMPANY ADDRESS
389 N. FAIR OAKS AVE.
PASADENA, CALIF. 91103
ENCLOSURES, SPEAKER
MICROPHONE HARDWARE
MICROPHONES, CONDENSER
MICROPHONES, WIRELESS
SOUND SYSTEMS, OUTDOOR
SOUND SYSTEMS, PORTABLE
SOUND SYSTEMS, THEATER
SPEAKER COMPONENTS
SPEAKERS

TRW ELECTRONICS
MARKETING MANAGER
R. L. ASHLEY
COMPANY ADDRESS
1100 GLENDON AVENUE
LOS ANGELES, CALIF. 90024
CAPACITORS, FIXED, AIR
CAPACITORS, FIXED, CERAMIC
CAPACITORS, FIXED, FILM
CAPACITORS, FIXED, METALLIZED
CAPACITORS, VARIABLE
CATV EQUIPMENT - ALSO SEE
OTHER CATEGORIES
COILS, ANTENNA LOADING
COILS, CHOKE, AF
COILS, CHOKE, RF
COILS, DEFLECTION
AND FOCUSING
CRYSTALS, PIEZOELECTRIC
FILTERS, AUDIO
FILTERS, OTHER
OVENS, CRYSTAL
POWER SUPPLIES, PRECISION
SEMICONDUCTOR DIODES
SEMICONDUCTOR RECTIFIERS,
GENERAL
SEMICONDUCTOR RECTIFIERS,
HIGH VOLTAGE
SEMICONDUCTORS, TRANSISTORS,
GENERAL
SEMICONDUCTORS,
TRANSISTORS, RF
SPEAKERS
TRANSFORMERS, AUDIO,
ISOLATION
TRANSFORMERS, AUDIO, MATCHING
TRANSFORMERS, AUDIO,
POWER OUTPUT
TRANSFORMERS, AUTO
TRANSFORMERS, COUPLING
TRANSFORMERS, FILAMENT
TRANSFORMERS, GENERAL
TRANSFORMERS, PLATE
TRANSFORMERS, POWER
TRANSFORMERS, TRANSISTOR
TRANSFORMERS, VARIABLE

TRYLON, INCORPORATED
MARKETING MANAGER
W. S. ROSCOE
BRAND NAMES
TRYLON
PRESTITE
COMPANY ADDRESS
ELVERSON, PA. 19520
215 942-2981
ANCHORS, GUY
ANTENNAS, AM
ANTENNAS, HF
ANTENNAS, LF
ANTENNAS, MF
BALUNS
DUMMY LOAD
INSULATORS, ANTENNA
INSULATORS, FEED THROUGH
INSULATORS, STAND OFF
INSULATORS, OTHER
LIGHTS, TOWER, OBSTRUCTION
MAINTENANCE SERVICES, AM
MAINTENANCE SERVICES, FM
MAINTENANCE SERVICES,
MICROWAVE
MAINTENANCE SERVICES,
SLEEPEJACK
MAINTENANCE SERVICES, TV
MOUNTS, ANTENNA, FIXED
SERVICES, INSTALLATION

TOWERS, ANTENNA,
CATV, HEAD-END
TOWERS, ANTENNA, RECEIVING
TOWERS, ANTENNA,
TRANSMITTING, AM
TOWERS, ANTENNA,
TRANSMITTING, FM
TOWERS, ANTENNA,
TRANSMITTING, TV

T T ELECTRONICS, INC.
SALES MANAGER
J. F. SODARO
COMPANY ADDRESS
3753 ROBERTSON BL.
CULVER CITY, CALIF. 90230
213 870-6001
FILTERS, ANTENNA
FILTERS, AUDIO
FILTERS, RF
FILTERS, OTHER
NETWORKS, MATCHING, AUDIO
NETWORKS, MATCHING, RF
NETWORKS PHASING

TURNER MICROPHONE COMPANY
SALES MANAGER
DOUG BATTIN
COMPANY ADDRESS
909 17TH STREET
CEDAR RAPIDS, IOWA 52402
319 365-0421
AMPLIFIER, AF
GENERAL PURPOSE
AMPLIFIER, AF, MONAURAL
MICROPHONE STANDS & BOOMS
MICROPHONES, DYNAMIC

TV CABLE SUPPLY COMPANY
SALES MANAGER
JAMES E. MORTON
BRAND NAMES
TVC
VIDEO INSTRUMENT
COMPANY ADDRESS
BOX 38
CARLISLE, PA. 17013
DIVIDERS, FREQUENCY
METERS, FIELD STRENGTH
METERS, FREQUENCY CALIBRATING
TRANSFORMERS, AUDIO, MATCHING
TRANSFORMERS, GENERAL

ULTRA AUDIO PRODUCTS
SALES MANAGER
W. H. CARR
BRAND NAMES
SOUNDESIGN
CUSTOMIZER
CIRCUITESTER
PHANTOM POSITIONER
COMPANY ADDRESS
BOX 921
BEVERLY HILLS, CALIF. 90213
274-3129
AMPLIFIER, AF, COMPRESSING
AMPLIFIER, AF
GENERAL PURPOSE
AMPLIFIER, AF, MONAURAL
AMPLIFIER, AF, REMOTE
AMPLIFIER, AF, REVERBERATION
AMPLIFIER, AF, STEREO
AMPLIFIER, BRIDGING
CONSOLE, AUDIO, AM
CONSOLE, AUDIO, FM
CONSOLE, AUDIO, PORTABLE
CONSOLE, AUDIO, RECORDING
CONSOLE, AUDIO, TV
CONSOLE, KITS
EQUALIZERS, AUDIO EMPHASIS
LIGHTING, TV, CONTROLS
NETWORKS, MATCHING, AUDIO
REVERBERATION DEVICES -
ALSO SEE AMPLIFIERS

**UNGAR ELECTRIC TOOLS
ELECTRONIC DIVISION OF
ELDON INDUSTRIES, INC**
BRAND NAMES
IMPERIAL
PRINCESS
UNGAR
COMPANY ADDRESS
2701 W. EL SEGUNDO BLVD.
LOS ANGELES, CALIF.
757-2151
TOOLS, SOLDERING IRONS,
INDUSTRIAL

UNITED RADIO SUPPLY INC.
SALES MANAGER
JOHN RIES
BRAND NAMES
KUSTOM BROADCAST CONSOLE
COMPANY ADDRESS
829 W. BURNSIDE
PORTLAND, OREGON 97209
503-226-6334
CONSOLE, AUDIO, AM
CONSOLE, AUDIO, FM
CONSOLE, AUDIO, PORTABLE
CONSOLE, AUDIO, RECORDING

UNITED STATES PLASTIC ROPE INC
VICE PRESIDENT - SALES
PETER M. LIND
BRAND NAMES
GLASTRAN
COMPANY ADDRESS
711 HAMILTON AVE.
MENLO PARK, CALIF. 94025
415-322-1881
CORDS, DIAL
INSULATORS, ANTENNA

UNITED STATES TOWERS
OWNER
JOHN J. HOKE
COMPANY ADDRESS
249 BARTOW LANE
PETERSBURG, VA.
732-9350
TOWERS, ANTENNA,
CATV, HEAD-END
TOWERS, ANTENNA, RECEIVING
TOWERS, ANTENNA,
TRANSMITTING, AM
TOWERS, ANTENNA,
TRANSMITTING, FM
TOWERS, ANTENNA,
TRANSMITTING, TV

UNITED TRANSFORMER CO.
DIV. OF TRW INC.
SALES MANAGER
J. R. BARRECA
COMPANY ADDRESS
150 VARICK STREET
NEW YORK, NEW YORK 10013
212-AL5-3500
TWX 710-581-2722
BOXES, DECADE, INDUCTOR
COILS, CHOKE, AF
COILS, TELEPHONE
DELAY DEVICES, AF
DELAY LINES
FILTERS, AUDIO
FILTERS, OTHER
INDUCTANCES, FIXED
INDUCTANCES, VARIABLE
TRANSFORMERS, AUDIO,
ISOLATION
TRANSFORMERS, AUDIO, MATCHING
TRANSFORMERS, AUDIO,
POWER OUTPUT
TRANSFORMERS, AUTO
TRANSFORMERS, COUPLING
TRANSFORMERS, FILAMENT
TRANSFORMERS, GENERAL
TRANSFORMERS, PLATE
TRANSFORMERS, POWER
TRANSFORMERS, RF
TRANSFORMERS, TRANSISTOR
TRANSFORMERS, VARIABLE

UP-RIGHT SCAFFOLDS
SALES MANAGER
R. L. ESKEN
COMPANY ADDRESS
1013 PARDEE STREET
BERKELEY, CALIF. 94710
CAMERA, MOUNTING EQUIPMENT
LIGHTNING ARRESTERS
TOWERS, ANTENNA,
CATV, HEAD-END
TOWERS, ANTENNA, RECEIVING
TOWERS, ANTENNA,
TRANSMITTING, AM
TOWERS, ANTENNA,
TRANSMITTING, FM
TOWERS, ANTENNA,
TRANSMITTING, TV

UPSON TOOLS, INC.
SALES MANAGER
H. H. VELEPEC
BRAND NAMES
HOLD-E-ZEE
UPSON
ROLTITE
COMPANY ADDRESS
55 CENTRE PARK
ROCHESTER, N. Y. 14608
716 232-6876
HARDWARE, FIXTURES, HOLDING
HARDWARE, GENERAL
KITS
TOOLS, HAND
TOOLS, PUNCH, CHASSIS
TOOLS, SCREWDRIVERS
TOOLS, WRENCHES

UTICA ELECTRONICS
SALES MANAGER
ARTHUR EHRLICH
BRAND NAMES
UTICA
TOWN & COUNTRY
T & C
UTI-COM
COMPANY ADDRESS
2917 W. IRVING PARK RD.
CHICAGO, ILL. 60618
312 588-8227
ANTENNAS, MOBILE
BASE STATIONS
COMMUNICATIONS SYSTEMS, CB
MOBILE EQUIPMENT

MONITORS, FM SYSTEMS, MONO
MOUNTS, ANTENNA, MOBILE
RECEIVERS, AM
RECEIVERS, FM
TRANSMITTERS, FM
TRANSMITTERS, FM, 50 WATTS

UTILITY PRODUCTS COMPANY
VICE PRESIDENT, SALES
LOREN H. PEASE
COMPANY ADDRESS
3111 W. MILL ROAD
MILWAUKEE, WISCONSIN 53209
CATV, CABLE TERMINALS
TERMINAL BOARDS

UTILITY TOWER COMPANY
ALES MANAGER
V. G. DUVALL
COMPANY ADDRESS
BOX 12027
3200 N W 38TH STREET
OKLAHOMA CITY, OKLA. 73112
W1 6-5551

ANCHORS, GUY
ANTENNAS, AM
ANTENNAS, CATV
ANTENNAS, FM
ANTENNAS, MICROWAVE
CABLE, COAXIAL, FLEXIBLE
CABLE, COAXIAL, RIGID
CLAMPS, CABLE
CLAMPS, GROUND
FLASHERS, TOWER
INSULATORS, ANTENNA
INSULATORS, OTHER
LIGHTNING ARRESTERS
LIGHTS, TOWER, OBSTRUCTION
MAINTENANCE SERVICES, AM
MAINTENANCE SERVICES, FM
MAINTENANCE SERVICES,
MICROWAVE
MAINTENANCE SERVICES,
STEEPLEJACK
MAINTENANCE SERVICES, TV
MICROWAVE SYSTEMS, OTHER
MOUNTS, ANTENNA, FIXED
PREFABRICATED BUILDINGS
REFLECTORS, PASSIVE
SAFETY DEVICES, CLIMBING
SERVICES, INSTALLATION
TOWERS, ANTENNA,
CATV, HEAD-END
TOWERS, ANTENNA, RECEIVING
TOWERS, ANTENNA,
TRANSMITTING, AM
TOWERS, ANTENNA,
TRANSMITTING, FM
TOWERS, ANTENNA,
TRANSMITTING, TV
TRANSMISSION LINES
WIRE, BARE, COPPER
WIRE, BARE, COPPER STRAP

VACO PRODUCTS CO.
SALES MANAGER
ROY VETZNER
BRAND NAMES
VACO
VACOMBO
AMBERYL
COMFORDOME
GUILD-MARK
COMPANY ADDRESS
510 N. DEARBORN ST.
CHICAGO, ILL. 60610
312 467-0123
HARDWARE, RETAINING RINGS
TERMINALS, SOLDERLESS
TOOLS, CRIMPERS
TOOLS, CUTTERS
TOOLS, HAND
TOOLS, PLIERS
TOOLS, SCREWDRIVERS
TOOLS, WRENCHES

VALUE INCORPORATED
SALES MANAGER
CLIFFORD K. FEARN
BRAND NAMES
POLYANGLE
COMPANY ADDRESS
206 NORTH BROADWAY
PENNSVILLE, N. J. 08070
DRAFTING EQUIPMENT

VEGA ELECTRONICS CORPORATION
VICE PRESIDENT - MARKETING
CHARLES F. SWISHER
BRAND NAMES
SOUNDSERVO
VEGA-MIKE
VEGATROL
COMPANY ADDRESS
2115 DE LA CRUZ BLVD.
SANTA CLARA, CALIF. 95050
408 243-9777
AMPLIFIER, AF, AGC
AMPLIFIER, AF, COMPRESSING
AMPLIFIER, AF
PEAK LIMITING, AM
AMPLIFIER, AF,
PEAK LIMITING, FM

COMMUNICATIONS SYSTEMS,
INTERCOM, WIRELESS
MICROPHONES, CONDENSER
MICROPHONES, WIRELESS
RECEIVERS, FM
TRANSMITTERS, FM

VENT-RAK INCORPORATED
SALES MANAGER
JAMES L. WRIGHT, JR.
BRAND NAMES
CHASSIS-TRAK INC
VENT-RAK INC
COMPANY ADDRESS
525 S. WEBSTER AVE.
INDIANAPOLIS, INDIANA 46219
CABINETS, METAL
CONSOLE, CABINETS
AND HARDWARE
HARDWARE, CHASSIS
LAMP ASSEMBLIES
PANELS, INSTRUMENT,
FOR RACK MOUNTING
REELS, CABLE, AUTOMATIC
SLIDES, CHASSIS

VIDEO COMPONENTS, INC.
SALES MANAGER
DICK TURCHEN
COMPANY ADDRESS
200 WEST 57TH ST.
NEW YORK, N. Y. 10019
212 JU2-4540
AMPLIFIER, TV, VIDEO
CAMERA, REMOTE
CONTROL EQUIPMENT
DOLLIES, CAMERA
INDUSTRIAL TV - ALSO SEE
TV, CLOSED CIRCUIT
LENSES, OPTICAL, FIXED
LENSES, OPTICAL ZOOM
LIGHTING, TV, COMPONENTS
MODULATORS, TV
MONITORS, VIDEO
MULTIPLXERS
PROJECTORS, FILM
PROJECTORS, FILM REAR
STANDS, TELEVISION MONITOR

VIDEOMETRICS, INC.
COMPANY ADDRESS
33 CAIN DRIVE
PLAINVIEW, N. Y. 11803
516 249-5662
AMPLIFIER, CLAMPING
AMPLIFIER, DISTRIBUTION
AMPLIFIER, PULSE
AMPLIFIER, TV, VIDEO
GENERATORS, SIGNAL, COLOR BAR
GENERATORS, SIGNAL, DOT BAR
GENERATORS, SIGNAL
SQUARE WAVE
GENERATORS, SIGNAL
TV SYNCHRONIZING
GENERATORS, SIGNAL, VITS
TRANSMISSION TEST SETS

VIDEON CORPORATION
SALES MANAGER
J. J. WILENTCHIK
COMPANY ADDRESS
140 E. MAIN ST.
HUNTINGTON, NEW YORK 11743
516-427-6285
AMPLIFIER, CLAMPING
AMPLIFIER, DC
AMPLIFIER, DISTRIBUTION
AMPLIFIER, KEYING
AMPLIFIER, MASKING
AMPLIFIER, PULSE
AMPLIFIER, SENSING
AMPLIFIER, STABILIZING
AMPLIFIER, TV, VIDEO
AUTOMATION EQUIPMENT, VIDEO
CONSOLE, VIDEO, PORTABLE
CONSOLE, VIDEO, STUDIO
DELAY LINES
FILTERS, OTHER
GENERATORS, SIGNAL, COLOR BAR
GENERATORS, SIGNAL, DOT BAR
GENERATORS, SIGNAL,
SPECIAL EFFECT
GENERATORS, SIGNAL,
TV SYNCHRONIZING
GENERATORS, SIGNAL, VITS
MOBILE EQUIPMENT, TV
MULTIPLXERS
OSCILLATORS, TV
POWER SUPPLIES, DC
PREAMPLIFIERS, VIDEO
SWITCHERS
SWITCHING MATRIXES
SWITCHING SYSTEMS
TRANSMISSION TEST SETS

VIDEO SYSTEMS
SALES MANAGER
VERNON A. BERTRAND
COMPANY ADDRESS
6444 N RIDGEWAY
CHICAGO, ILL. 60645
312 677-9000
CAMERA, MOUNTING EQUIPMENT
CAMERA, REMOTE
CONTROL EQUIPMENT
CAMERAS, TV, MONOCHROME
COMMUNICATIONS SYSTEMS,

MICROWAVE
CONSOLE, AUDIO, TV
CONSOLE, VIDEO, PORTABLE
DISPLAY EQUIPMENT, TV
MOBILE EQUIPMENT, TV
MULTIPLXERS
SWITCHING SYSTEMS
TV SYSTEMS, CLOSED CIRCUIT

VIKING TAPE RECORDERS, DIV.
TELEX CORP.
SALES MANAGER
GORDON THORBURN
COMPANY ADDRESS
9600 ALDRICH AVE S.
MINNEAPOLIS, MINN. 55420
612 881-2636
AMPLIFIER, AF, MONAURAL
AMPLIFIER, AF, STEREO
CARTRIDGES, MAGNETIC TAPE
EDUCATION FACILITIES,
EQUIPMENT
RECORDERS, MAGNETIC TAPE,
AUDIO
RECORDERS, MAGNETIC TAPE,
AUDIO CARTRIDGE
TAPE DECKS, MAGNETIC
TAPE DUPLICATORS

VIKOA, INC.
SALES MANAGER
ALLEN LIPP
COMPANY ADDRESS
400 NINTH ST.
HOBOKEN, N. J. 07030
201 656-2020
AMPLIFIER, BRIGING
AMPLIFIER, CATV
AMPLIFIER, RF
GENERAL PURPOSE
AMPLIFIER, TV, BOOSTER
ANTENNAS, TV
ATTENUATORS, RF
BALUNS
BROADCAST PROGRAMMING
SERVICE, CATV
CABLE, ASSEMBLIES
CABLE, CAMERA
CABLE, CATV, HARDWARE
CABLE, COAXIAL, FLEXIBLE
CABLE, DIRECT-BURIAL
CABLE, SHIELDED, AUDIO
CABLE, TELEPHONE
CAMERA, MOUNTING EQUIPMENT
CAMERAS, TV, MONOCHROME
CATV, CABLE, TERMINALS
CATV, CHANNEL AMPLIFIERS
CATV, HEAD-END EQUIPMENT
CATV, ORIGINATION EQUIPMENT
CONNECTORS, COAXIAL CABLE
CONNECTORS, RF
FILTERS, ANTENNA
FILTERS, RF
INDUSTRIAL TV
LIGHTNING ARRESTERS
METERS, FIELD STRENGTH,
TV, VHF
MONITORS, VIDEO
SWITCHING SYSTEMS
TOOLS, CRIMPERS
TOOLS, CUTTERS
TRANSFORMERS, RF
WIRE, INSULATED, HOOKUP
WIRE, SHIELDED
WIRE & CABLING SERVICES

VIRGINIA ELECTRONICS CO., INC.
SALES MANAGER
JOSEPH S. DAWSON
COMPANY ADDRESS
5204 RIVER ROAD
WASHINGTON, D. C. 20016
301 654-6680
AMPLIFIER, AF, COMPRESSING
AMPLIFIER, AF,
GENERAL PURPOSE
AMPLIFIER, DISTRIBUTION
AMPLIFIER, PULSE
AMPLIFIER, RF,
GENERAL PURPOSE
COMMUNICATIONS SYSTEMS,
INTERCOM, WIRED
COMMUNICATIONS SYSTEMS,
LAND MOBILE
CORES, TRANSFORMER AND COIL
JACK PANEL ASSEMBLIES
NETWORKS, MATCHING, AUDIO
OSCILLATORS, AF AND RF
POWER SUPPLIES, DC
POWER SUPPLIES, PRECISION
SWITCHING MATRIXES
TRANSFORMERS, AUDIO,
ISOLATION
TRANSFORMERS, AUDIO, MATCHING
TRANSFORMERS, AUDIO,
POWER OUTPUT
TRANSFORMERS, AUTO
TRANSFORMERS, COUPLING
TRANSFORMERS, FILAMENT
TRANSFORMERS, GENERAL
TRANSFORMERS, PLATE
TRANSFORMERS, RF
TRANSFORMERS, TRANSISTOR

VISHAY RESISTOR PRODUCTS DIV
SALES MANAGER
J. R. CURLEY

COMPANY ADDRESS
63 LINCOLN HIGHWAY
MALVERN, PA. 19355
RESISTORS, FIXED,
NONINDUCTIVE
RESISTORS, FIXED, PRECISION

VISUAL ELECTRONICS CORPORATION

VICE PRESIDENT - SALES
GEORGE H WAGNER
BRAND NAMES
ALLENIZED
EDUCOM
COMPANY ADDRESS
356 WEST 40TH STREET
NEW YORK, NEW YORK 10018
736-5840
TWX 710-581-2810
AMPLIFIER, AF, AGC
AMPLIFIER, AF,
GENERAL PURPOSE
AMPLIFIER, AF, MONAURAL
AMPLIFIER, AF,
PEAK LIMITING, AM
AMPLIFIER, AF
AMPLIFIER, FM
AMPLIFIER, AF, REMOTE
AMPLIFIER, AF, REVERBERATION
AMPLIFIER, AF, STEREO
AMPLIFIER, BRIDGING
AMPLIFIER, CLAMPING
AMPLIFIER, DISTRIBUTION
AMPLIFIER, PULSE
AMPLIFIER, RF,
GENERAL PURPOSE
AMPLIFIER, RF, POWER
ANTENNAS, AM
ANTENNAS, FM
AUTOMATION EQUIPMENT, AUDIO
AUTOMATION EQUIPMENT, VIDEO
CAMERA, MOUNTING EQUIPMENT
CAMERAS, TV, COLOR
CAMERAS, TV, MONOCHROME
CLOCKS & CHRONOGRAPHS
COMMUNICATIONS SYSTEMS,
INTERCOM, WIRED
COMMUNICATIONS SYSTEMS,
INTERCOM, WIRELESS
CONSOLE, AUDIO, AM
CONSOLE, AUDIO, FM
CONSOLE, AUDIO, PORTABLE
CONSOLE, AUDIO, RECORDING
CONSOLE, AUDIO, TV
DISPLAY EQUIPMENT, TV
DOLLIES, CAMERA
DROPOUT COMPENSATOR,
VIDEO TAPE
EDITORS, VIDEO TAPE
ENHANCERS, TV IMAGE
EXCITERS FM
GENERATORS, SIGNAL, COLOR BAR
GENERATORS, SIGNAL, DOT BAR
GENERATORS, SIGNAL, PULSE
HEADS, RECORDING MAGNETIC
IMAGE MOTION
STABILIZING EQUIPMENT
INDUSTRIAL TV - ALSO SEE
TV, CLOSED CIRCUIT
LENSES, OPTICAL, FIXED
LENSES, OPTICAL, ZOOM
LIGHTING, TV, COMPONENTS
LIGHTING, TV, CONTROLS
LIGHTING, TV, SYSTEMS
MIXERS - SEE CONSOLES
MOBILE EQUIPMENT
MOBILE EQUIPMENT, TV
MONITORS, VIDEO
PREAMPLIFIERS, AUDIO
PREAMPLIFIERS, VIDEO
PROJECTORS, FILM
PROJECTORS, SLIDE
RECORDERS, DISC, MAGNETIC
RECORDERS, MAGNETIC TAPE,
AUDIO
RECORDERS, MAGNETIC TAPE,
AUDIO, CARTRIDGE
RECORDERS, MAGNETIC TAPE,
VIDEO
REMOTE CONTROL SYSTEMS, AM
REMOTE CONTROL SYSTEMS, FM
REMOTE CONTROL SYSTEMS, TV
SWITCHES
SWITCHING MATRIXES
TAPE DECKS, MAGNETIC
TOWERS, ANTENNA,
TRANSMITTING, AM
TOWERS, ANTENNA,
TRANSMITTING, FM
TOWERS, ANTENNA,
TRANSMITTING, TV
TRANSMITTERS, AM, LOW POWER
TRANSMITTERS, AM, 250 WATT
TRANSMITTERS, AM, 500 WATT
TRANSMITTERS, AM, 1 KW
TRANSMITTERS, AM, 5 KW
TRANSMITTERS, AM, 10 KW
TRANSMITTERS, AM, 25 KW
TRANSMITTERS, AM, 50 KW
TRANSMITTERS, FM
TRANSMITTERS, FM, 10 WATTS
TRANSMITTERS, FM, 50 WATTS
TRANSMITTERS, FM, 100 WATTS
TRANSMITTERS, FM, 250 WATTS
TRANSMITTERS, FM, 1 KW
TRANSMITTERS, FM, 3 KW
TRANSMITTERS, FM, 5 KW
TRANSMITTERS, FM, 7.5 KW

TRANSMITTERS, FM, 10 KW
TRANSMITTERS, FM, 15 KW
TRANSMITTERS, FM, 40 KW
TV SYSTEMS, CLOSED CIRCUIT
VACUUM TUBES, CAMERA,
IMAGE-ORTHICON
VACUUM TUBES, CAMERA,
PLUMBICON R
VACUUM TUBES, CAMERA, VIDICON

VISUAL ELECTRONIC LABS, ALLEN DIV.

SALES MANAGER
GEORGE WAGNER
BRAND NAMES
VISUAL-ALLEN
ALLEN
COMPANY ADDRESS
725 SAN ALESO AVE.
SUNNYVALE, CALIF. 94086
245-8696
TWX 910-373-1761
GENERATORS, SIGNAL, RF
HEADS, RECORDING MAGNETIC
RECORDERS, DISC, MAGNETIC
RECORDERS, MAGNETIC TAPE,
VIDEO

VITAL INDUSTRIES

SALES MANAGER
NUBAR DONOYAN
COMPANY ADDRESS
3614 S. W. ARCHER ROAD
GAINESVILLE, FLORIDA 32601
904-378-1581
AMPLIFIER, CLAMPING
AMPLIFIER, DISTRIBUTION
AMPLIFIER, STABILIZING
AMPLIFIER, TV, VIDEO
SWITCHES, CROSSBAR
SWITCHING SYSTEMS

VITRO ELECTRONICS

SALES MANAGER
JOHN BIRCH
BRAND NAMES
NEMS-CLARKE
VITRO
COMPANY ADDRESS
919 JESUP-BLAIR DRIVE
SILVER SPRING, MD. 20910
CIRCUITS, PRINTED
CONNECTORS, COAXIAL CABLE
CONNECTORS, RF
CORDS, PATCH
HARDWARE, PANEL
HARDWARE, RACK
INTEGRATED CIRCUITS
JACK PANEL ASSEMBLIES
JACKS
METERS, FIELD STRENGTH
MONITORS, AM SYSTEMS
MONITORS, FM SYSTEMS, MONO
MONITORS, PHASE
RECEIVERS, AM
RECEIVERS, FM
RECEIVERS, HF
RECEIVERS, MULTIPLEX
TERMINAL STRIPS
WIRE AND CABLING SERVICES

VUE-TRONICS INC.

SALES MANAGER
W. PRESCOTT
COMPANY ADDRESS
15844 STRATHERN ST
VAN NUYS, CALIF 91406
213-989-3020
RECORDERS, VIDEO, KINESCOPE

WABER ELECTRONICS INC

SALES MANAGER
ARNOLD GOLDMAN
BRAND NAMES
SKINSULATED CIRCUITRY
LAB-ON-WHEELS
POWERLINE
SKINNY MILTON
SKINNY MARIE
FAT PHOEBE
LONG JOHN
STRING BEAN
VARI-FINE
STEREO MAGIC
COMPANY ADDRESS
2000 N 2ND STREET
PHILADELPHIA, PA 19122
215 NE 4-3200
CABINETS, METAL
CONNECTORS, POWER
CORDS, SET
COUPLERS
DOLLIES, CAMERA
DOLLIES, TEST EQUIPMENT
DUCTS, WIRING
KITS
RACKS, MOUNTING
SWITCHES, MECHANICALLY
ACTUATED
VOLTMETERS, AC

WALLACH & ASSOCIATES, INC.

SALES MANAGER
CHARLES D. WALLACH
BRAND NAMES

DISCABINETS
DISCMOBILE
MOBILE A-V CENTER
REELMOBILE
COMPANY ADDRESS
P. O. BOX 18167
CLEVELAND, OHIO 44118
361-7616
CABINETS, STORAGE, DISC
CABINETS, STORAGE, FILM
CABINETS, STORAGE,
MAGNETIC TAPE
CABINETS, STORAGE,
MAGNETIC TAPE, CARTRIDGE
CABINETS, STORAGE, SLIDE

WARO ELECTRONIC INDUSTRIES

SALES MANAGER
J. PAUL AUDET
COMPANY ADDRESS
142 CENTRAL AVENUE
CLARK, N. J. 07066
201-382-3700
AMPLIFIER, AF, AGC
AMPLIFIER, AF,
GENERAL PURPOSE
AMPLIFIER, AF, MONAURAL
AMPLIFIER, BRIDGING
AMPLIFIER, CLAMPING
AMPLIFIER, DISTRIBUTION
AMPLIFIER, KEYING
AMPLIFIER, STABILIZING
AMPLIFIER, TV, VIDEO
AUTOMATION EQUIPMENT, VIDEO
COMMUNICATIONS SYSTEMS,
INTERCOM, WIRED
CONSOLE, AUDIO, AM
CONSOLE, AUDIO, FM
CONSOLE, AUDIO, TV
DEMODULATORS
MIXERS - SEE CONSOLES
PREAMPLIFIERS, AUDIO
SWITCHES
SWITCHING MATRIXES
SWITCHING SYSTEMS

WATERS MANUFACTURING, INC.

SALES MANAGER
ROBERT A. WATERS
COMPANY ADDRESS
533 BOSTON POST ROAD
WAYLAND, MASS. 01778
ANTENNAS, MOBILE
ATTENUATORS, RF
DUMMY LOAD
FILTERS, OTHER
METERS, FREQUENCY
MOUNTS, ANTENNA, MOBILE
POTENTIOMETERS, WIREWOUND
RESISTORS, VARIABLE,
WIREWOUND
SWITCHES, COAXIAL
WATTMETERS

WAVEFORMS, INCORPORATED

SALES MANAGER
A. E. BYERS
COMPANY ADDRESS
333 6TH AVENUE
NEW YORK, NEW YORK 10014
212-929-2795
ANALYZERS, DISTORTION
GENERATORS, SIGNAL, AF
GENERATORS, SIGNAL,
SQUARE WAVE
METERS, FREQUENCY
OSCILLATORS, AF AND RF
OSCILLATORS, OTHER
TRANSMISSION TEST SETS
VOLTMETERS, AC
VOLTMETERS, VACUUM TUBE

WECKESSER COMPANY, INC

SALES MANAGER
C. J. CZAPINSKI, JR.
BRAND NAMES
NY-GRIP
STRAP-TITE
TAB-LOC
ETHO-LOC
WEDGE LOCK
STRAINCHEK
COMPANY ADDRESS
4444 WEST IRVING PARK ROAD
CHICAGO, ILLINOIS 60641
312-282-8626
CABLE, ASSEMBLIES
CLAMPS, CABLE

WESTINGHOUSE ELECTRIC CORP. ELECTRONIC TUBE DIVISION

MARKET MANAGER
L. L. GRANT
COMPANY ADDRESS
BOX 284
ELMIRA, N Y 49502
RE 9 3611
VACUUM TUBES, CAMERA,
IMAGE-ORTHICON
VACUUM TUBES, CAMERA, VIDICON
VACUUM TUBES, CATHODE RAY,
TV, COLOR
VACUUM TUBES, CATHODE RAY,
TV, MONOCHROME
VACUUM TUBES, RECEIVING
VACUUM TUBES, TRANSMITTING

WESTREX

SALES MANAGER
FRANK E. PONTIUS
COMPANY ADDRESS
1136 N. LAS PALMAS
HOLLYWOOD, CALIF. 90038
213-466-7795
AMPLIFIER, AF, COMPRESSING
AMPLIFIER, AF,
GENERAL PURPOSE
AMPLIFIER, AF, MONAURAL
CONSOLE, AUDIO, AM
CONSOLE, AUDIO, PORTABLE
CONSOLE, AUDIO, RECORDING
EQUALIZERS, AUDIO EMPHASIS
FILTERS, AUDIO
HEADS, DISC RECORDING
HEADS, ERASE, MAGNETIC
HEADS, RECORDING MAGNETIC
LATHE, DISC RECORDING
METERS, DB AND VU
MIXERS - SEE CONSOLES
MOTORS, ELECTRIC
PREAMPLIFIERS, AUDIO
RECORDERS, DISC, MAGNETIC
RECORDERS, FILM LIGHT
RECORDERS, FILM MAGNETIC
STYLI, CUTTING

WIDE RESPONSE

SALES MANAGER
J. C. CUBBAGE
COMPANY ADDRESS
2926 BENTLEY AVE.
LOS ANGELES, CALIF. 90064
213-477-5840
REELS, TAPE
TAPE, MAGNETIC RECORDING,
AUDIO

WILKINSON ELECTRONICS, INC

COMPANY ADDRESS
1937 W MACDOADE BOULEVARD
WOOLLYN, PA. 19094
AMPLIFIER, AF, AGC
AMPLIFIER, AF, MONAURAL
AMPLIFIER, AF,
PEAK LIMITING, AM
AMPLIFIER, AF,
PEAK LIMITING, FM
CONSOLE, AUDIO, AM
CONSOLE, AUDIO, FM
CONSOLE, AUDIO, RECORDING
CONSOLE, AUDIO, TV
EXCITERS, FM
GENERATORS, FM, STEREO
GENERATORS, FM, SUBCARRIER
GENERATORS, SIGNAL, RF
METERS, FIELD STRENGTH
MONITORS, AM SYSTEMS
MONITORS, FREQUENCY
RECTIFIERS - ALSO SEE
SEMICONDUCTORS
SEMICONDUCTOR RECTIFIERS,
GENERAL
SEMICONDUCTOR RECTIFIERS,
HIGH VOLTAGE
SEMICONDUCTOR RECTIFIERS,
POWER
TRANSMITTERS, AM, 1 KW
TRANSMITTERS, AM, 5 KW
TRANSMITTERS, AM, 10 KW
TRANSMITTERS, FM, 1 KW
TRANSMITTERS, FM, 5 KW
TRANSMITTERS, FM, 7.5 KW
TRANSMITTERS, FM, 10 KW
TRANSMITTERS, FM, 20 KW

H. WILSON CORPORATION

SALES MANAGER
DAVID D. SCHWARTZ
BRAND NAMES
MOVIE-MOVER
WILSON
COMPANY ADDRESS
546 W. 119TH STREET
CHICAGO, ILL. 60628
HARDWARE, MOUNTS
LAMPS, PROJECTION
MOBILE EQUIPMENT
SCREENS, PROJECTION, REAR

WINSTON RESEARCH CORP.

SALES MANAGER
GEORGE HOWARDELL
COMPANY ADDRESS
6711 S. SEPULVEDA BLVD.
LOS ANGELES, CALIF 90045
670-3305
TWX 910-328-6128
HEADS, ERASE, MAGNETIC
HEADS, RECORDING MAGNETIC
RECORDERS, MAGNETIC TAPE,
AUDIO
RECORDERS, MAGNETIC TAPE,
VIDEO
RECORDERS, VIDEO, KINESCOPE

WLAK ELECTRONICS SERVICE, INC.

COMPANY ADDRESS
P. O. BOX 487
LAKELAND, FLA. 33802
682-3145
CALIBRATION SERVICE,
FREQUENCY

W.R.S. ELECTRONICS, LTD

SALES MANAGER
 WERNER R. SCHULZ
 COMPANY ADDRESS
 14 WILLOW PARK CENTER
 E. FARMINGDALE N. Y. 11735
 516 249-1884
 ALARM, FAULT
 ALARM, INTRUDER
 ALARM SIGNAL
 AMPLIFIER, AF, AGC
 AMPLIFIER, AF, COMPRESSING
 AMPLIFIER, AF
 GENERAL PURPOSE
 AMPLIFIER, AF, MONAURAL
 AMPLIFIER, AF
 PEAK LIMITING, AM
 AMPLIFIER, AF
 PEAK LIMITING, FM
 AMPLIFIER, AF, REMOTE
 AMPLIFIER, AF, REVERBERATION
 AMPLIFIER, AF, STEREO
 AMPLIFIER, BRIDGING
 AMPLIFIER, DC
 AMPLIFIER, RF
 GENERAL PURPOSE
 AMPLIFIER, SENSING
 ATTENUATORS, AUDIO
 ATTENUATORS, FIXED

ATTENUATORS,
 IMPEDANCE MATCHING
 CABLE, ASSEMBLIES
 CONSOLE, AUDIO, AM
 CONSOLE, AUDIO, FM
 CONSOLE, AUDIO, PORTABLE
 CONSOLE, AUDIO, RECORDING
 CONSOLE, AUDIO, TV
 CONSOLE, CABINETS
 AND HARDWARE
 CONSOLE, KITS
 CONSOLE, VIDEO, PORTABLE
 CONSOLE, VIDEO, STUDIO
 CORDS, PATCH
 EQUALIZERS, AUDIO EMPHASIS
 HARDWARE, CHASSIS
 MIXERS - SEE CONSOLES
 MONITORS, POWER
 POWER SUPPLIES, DC
 SOUND SYSTEMS, THEATER

XCELITE INCORPORATED

SALES MANAGER
 ARLIE J. HOLMES
 COMPANY ADDRESS
 THORNE AND BANK STREETS
 ORCHARD PARK, NEW YORK 14127
 716 662-4461
 TOOLS, PLIERS

TOOLS, SCREWDRIVERS
 TOOLS, WRENCHES

YOKOGAWA ELECTRIC WORKS, INC.

SALES MANAGER
 RIO IMAMURA
 BRAND NAMES
 HANDI-CRANK
 HANDI-MITE
 YEW
 COMPANY ADDRESS
 1995 PALMER AVE.
 LARCHMONT, NEW YORK 10538
 AMMETERS, AC
 AMMETERS, AC, THERMOCOUPLE
 AMMETERS, DC
 AMMETERS, RF
 BRIDGES
 METERS, DB AND VU
 METERS, DB AND VU, WIDE RANGE
 METERS, FIELD STRENGTH
 METERS, FREQUENCY
 METERS, LIGHT
 METERS, PHASE ANGLE
 METERS, POWER
 OHMMETERS
 PANELS, INSTRUMENT,
 FOR RACK MOUNTING
 RECORDERS, PAPER,

LOGGING AND GRAPHIC
 TESTERS, INSULATION
 VOLTMETERS, AC
 VOLTMETERS, DC
 WATTMETERS

ZOLOMATICS CORPORATION

SALES MANAGER
 CHARLES STENNING
 COMPANY ADDRESS
 5875 MELROSE AVE.
 HOLLYWOOD, CALIF. 90038
 LENSES, OPTICAL, FIXED
 LENSES, OPTICAL, ZOOM
 PROJECTORS, SLIDE

ZOOMAR, INC

V.P. SALES
 WALTER P. STEVER
 BRAND NAMES
 ZOOMAR
 OPTICOMETER
 COMPANY ADDRESS
 55 SEA CLIFF AVE.
 GLEN COVE, N. Y. 11542
 LENSES, OPTICAL, FIXED
 LENSES, OPTICAL, ZOOM
 METERS, LIGHT

PRODUCT DIRECTORY

A listing of over 600 products and services compiled from questionnaires completed by the manufacturers.

ADAPTERS, CONNECTOR

AMECO, INC.
AMERICAN CABLE ELECTRONICS
AMPHENOL CORP.
APPLIED ELECTRO-MECHANICS
AVA ELECTRONICS & MACHINE CORP
BIRD ELECTRONIC CORPORATION
BLONDER-TONGUE LABORATORIES
GENERAL RADIO CO
IMPEX ELECTRONICS CORP
MICROLAB - FXR
PRODELIN, INCORPORATED
ROBINS INDUSTRIES CORP.
SINGER PRODUCTS CO.
SWITCHCRAFT, INC.
TROMPETER ELECTRONICS

ACOUSTIC MATERIALS

AUDIO INSTRUMENT CO
HARTLEY PRODUCTS

ADAPTERS, FM STEREO

IMPEX ELECTRONICS CORP.
KARG LABORATORIES
McMARTIN INDUSTRIES
HEATH CO
SINGER PRODUCTS CO.

ADAPTERS, TEST

ALFORD MANUFACTURING COMPANY
AMECO, INC.
SINGER PRODUCTS CO.

ADAPTERS, TUBE

EIMAC DIVISION OF VARIAN

ALARM, FAULT

BIRD ELECTRONIC CORPORATION
DIVERSIFIED CONSULTANTS
HOUSTON ELECTRONICS CO.
MOSELEY ASSOCIATES INC.
RUST CORP
SINGER PRODUCTS CO.
SPENCER-KENNEDY LABORATORIES
TREPAC CORPORATION OF AMERICA
W.R.S. ELECTRONICS, LTD.

ALARM, INTRUDER

DIVERSIFIED CONSULTANTS
ELECTRONIC DESIGNERS INC.
ELECTRONICS ESSENTIALS OF CCC
ENGINEERING ASSOCIATES
THE JAMES FLOYD FORD CO
HOUSTON ELECTRONICS CO.
MILES REPRODUCER CO
RFE LABS
W.R.S. ELECTRONICS, LTD.

ALARM, SIGNAL

DIVERSIFIED CONSULTANTS
ENGINEERING ASSOCIATES
MILES REPRODUCER CO
TREPAC CORPORATION OF AMERICA
W.R.S. ELECTRONICS, LTD.

AMMETERS, AC

API INSTRUMENTS CO.
COLUMBIA ELECTRIC MFG CO
G E INDUSTRIAL SALES OPERATION
GENERAL ELECTRIC CO
HICKOK ELECTRICAL INSTRUMENT
INSTRUMENT LABORATORIES CORP
THE SINGER CO - METRICS DIV
TRIPLETT ELECTRICAL INSTRUMENT
YOKOGAWA ELECTRIC WORKS

AMMETERS, AC, THERMOCOUPLE

API INSTRUMENTS CO.
G E INDUSTRIAL SALES OPERATION
THE SINGER CO - METRICS DIV
TRIPLETT ELECTRICAL INSTRUMENT
YOKOGAWA ELECTRIC WORKS

AMMETERS, DC

API INSTRUMENTS CO.

COHU ELECTRONICS

COLUMBIA ELECTRIC MFG CO
G E INDUSTRIAL SALES OPERATION
GENERAL ELECTRIC CO
HICKOK ELECTRICAL INSTRUMENT
INSTRUMENT LABORATORIES CORP
THE SINGER CO - METRICS DIV
SINGER PRODUCTS CO.
TRIPLETT ELECTRICAL INSTRUMENT
YOKOGAWA ELECTRIC WORKS

AMMETERS, RF

G E INDUSTRIAL SALES OPERATION
INTERNATIONAL ELECTRONICS CORP
THE SINGER CO - METRICS DIV
SINGER PRODUCTS CO.
TELETRONIX
TRIPLETT ELECTRICAL INSTRUMENT
VISUAL ELECTRONICS CORP
YOKOGAWA ELECTRIC WORKS

AMPLIFIER, AF, AGC

AMECO, INC.
AMPEX CORPORATION
AMPLIFIER CORP OF AMERICA
CCA ELECTRONICS CORPORATION
CENTRAL DYNAMICS CORPORATION
COLLINS RADIO COMPANY
DIVERSIFIED ELECTRONIC CORP
ELECTRONIC SYSTEM ENGINEERING

AMPLIFIER, AF, AGC

GATES RADIO COMPANY
G E VISUAL COMMUNICATIONS PROD
LTV LING ALTEC, INC.
MARTI ELECTRONICS
MELCOR ELECTRONICS
ROCKE INTERNATIONAL CORP.
ROUND HILL ASSOCIATES
STEPHENS ELECTRONICS
TAPE-ATHON CORPORATION
TELE-MEASUREMENTS INC.
TELETRONIX
TREPAC CORPORATION OF AMERICA
VEGA ELECTRONICS CORP
VISUAL ELECTRONICS CORP
WARD ELECTRONICS, INC.
WILKINSON ELECTRONICS, INC
W.R.S. ELECTRONICS, LTD.

AMPLIFIER, AF, COMPRESSING

AMPLIFIER CORP OF AMERICA
BOGEN COMMUNICATIONS DIV.
C B S LABORATORIES
CCA ELECTRONICS CORPORATION
CENTRAL DYNAMICS CORPORATION
COLLINS RADIO COMPANY
ELECTRONIC SYSTEM ENGINEERING
FAIRCHILD RECORDING EQUIPMENT
GATES RADIO COMPANY
LTV LING ALTEC, INC.
MARTI ELECTRONICS
MELCOR ELECTRONICS
ORBIT RADIO
ROCKE INTERNATIONAL CORP.
ROUND HILL ASSOCIATES
SOUTHWESTERN COMMUNICATIONS
STANCIL-HOFFMAN CORPORATION
STEPHENS ELECTRONICS
TELETRONIX
TREPAC CORPORATION OF AMERICA
ULTRA AUDIO PRODUCTS
VEGA ELECTRONICS CORPORATION
VIRGINIA ELECTRONICS CO., INC.
WESTREX
W.R.S. ELECTRONICS, LTD.

AMPLIFIER, AF, GENERAL PURPOSE

ALCOR, INC.
ALLIED ELECTRONICS CORP
ALMA ENGINEERING INC
AMERICAN ELECTRONIC LABS
AMERICAN GELOSO ELECTRONICS
AMPEX CORPORATION
AMPLIFIER CORP OF AMERICA

ARBOR SYSTEMS, INC.

AUDIO INSTRUMENT CO
BAUER BROADCAST PRODUCTS DIV.
BELL P-A PRODUCTS CORP.
B & K INSTRUMENTS, INC.
BOGEN COMMUNICATIONS DIV.
BRADFORD INFORMATION SYSTEMS
BROWNING LABORATORIES, INC.
C-COR ELECTRONICS
CENTRAL DYNAMICS CORPORATION
COLLINS RADIO COMPANY
CROWN INTERNATIONAL
DAYTON ELECTRONIC PRODUCTS CO
DENRAD MFG. CO. INC.
DIVERSIFIED ELECTRONIC CORP
ELECTRONIC DESIGNERS INC.
ELECTRONICS ESSENTIALS OF CCC
ELECTRO-SOUND ACOUSTICS
FISHER BERKELEY CORPORATION
GATES RADIO COMPANY
G E VISUAL COMMUNICATIONS PROD
GENERAL ELECTRIC CO
HEWLETT-PACKARD CO.
INTERNATIONAL GOOD MUSIC
INTERNATIONAL NUCLEAR CORP.
LANG ELECTRONICS, INC
LANGEVIN
LTV LING ALTEC, INC.
MARANTZ COMPANY
MARTI ELECTRONICS
MCMARTIN INDUSTRIES
MELCOR ELECTRONICS
MID AMERICA ELECTRONICS CORP
MULTRONICS
NORTH AMERICAN PHILIPS CO
ORBIT RADIO
PERMOFLUX CORPORATION
RCA ELECTRONIC COMPONENTS
ROCKE INTERNATIONAL CORP.
ROUND HILL ASSOCIATES
H. H. SCOTT, INCORPORATED
SHINTRON CO. INC.
SINGER PRODUCTS CO.
SOUTHWESTERN COMMUNICATIONS
STANCIL-HOFFMAN CORPORATION
STEPHENS ELECTRONICS
TAPE-ATHON CORPORATION
TELETRONIX
TURNER MICROPHONE CO
ULTRA AUDIO PRODUCTS
VIRGINIA ELECTRONICS CO., INC.
VISUAL ELECTRONICS CORP
WARD ELECTRONIC INDUSTRIES
WESTREX
W.R.S. ELECTRONICS, LTD.

AMPLIFIER, AF, MONAURAL

ALLIED ELECTRONICS CORP
ALMA ENGINEERING INC
BAUER BROADCAST PRODUCTS DIV.
BELL P-A PRODUCTS CORP.
B & K INSTRUMENTS, INC.
BOGEN COMMUNICATIONS DIV.
BRADFORD INFORMATION SYSTEMS
CALBEST ELECTRONICS
CENTRAL DYNAMICS CORPORATION
COLLINS RADIO COMPANY
CROWN INTERNATIONAL
DAYTON ELECTRONIC PRODUCTS CO
DENRAD MFG. CO. INC.
DIVERSIFIED ELECTRONIC CORP
ELECTRONICS ESSENTIALS OF CC
ELECTRO-SOUND ACOUSTICS
GATES RADIO COMPANY
GREGORY AMPLIFIER CORP
INTERNATIONAL NUCLEAR CORP.
JETRON INDUSTRIES, INC.
JOHNSON ELECTRONICS, INC.
LANGEVIN
LTV LING ALTEC, INC.
MAGNECORD
MARANTZ COMPANY
MCMARTIN INDUSTRIES
MELCOR ELECTRONICS
ORBIT RADIO
PERMOFLUX CORPORATION
RECORDING EQUIPMENT COMPANY
ROCKE INTERNATIONAL CORP.
ROUND HILL ASSOCIATES
H. H. SCOTT, INCORPORATED
SINGER PRODUCTS CO.
SOUTHWESTERN COMMUNICATIONS
STANCIL-HOFFMAN CORPORATION

STEPHENS ELECTRONICS
TAPE-ATHON CORPORATION
TELETRONIX
TURNER MICROPHONE CO
ULTRA AUDIO PRODUCTS
VIKING TAPE RECORDERS
VISUAL ELECTRONICS CORP
WARD ELECTRONIC INDUSTRIES
WESTREX
WILKINSON ELECTRONICS, INC
W.R.S. ELECTRONICS, LTD.

AMPLIFIER, AF, PEAK LIMITING, AM

BAUER BROADCAST PRODUCTS DIV.
BOGEN COMMUNICATIONS DIV.
C B S LABORATORIES
CCA ELECTRONICS CORPORATION
COLLINS RADIO COMPANY
FAIRCHILD RECORDING EQUIPMENT
GATES RADIO COMPANY
THE GRASS VALLEY GROUP, INC.
KAHN RESEARCH LABORATORIES
LTV LING ALTEC, INC.
ROCKE INTERNATIONAL CORP.
ROUND HILL ASSOCIATES
SINGER PRODUCTS CO.
SOUTHWESTERN COMMUNICATIONS
TELE-MEASUREMENTS INC.
TELETRONIX
VEGA ELECTRONICS CORP
VISUAL ELECTRONICS CORP
WILKINSON ELECTRONICS, INC
W.R.S. ELECTRONICS, LTD.

AMPLIFIER, AF, PEAK LIMITING, FM

BAUER BROADCAST PRODUCTS DIV.
BOGEN COMMUNICATIONS DIV.
C B S LABORATORIES
CCA ELECTRONICS CORPORATION
COLLINS RADIO COMPANY
FAIRCHILD RECORDING EQUIPMENT
GATES RADIO COMPANY
THE GRASS VALLEY GROUP, INC.
LTV LING ALTEC, INC.
ROCKE INTERNATIONAL CORP.
ROUND HILL ASSOCIATES
SINGER PRODUCTS CO.
SOUTHWESTERN COMMUNICATIONS
TELE-MEASUREMENTS INC.
TELETRONIX
VEGA ELECTRONICS CORP
VISUAL ELECTRONICS CORP
WILKINSON ELECTRONICS, INC
W.R.S. ELECTRONICS, LTD.

AMPLIFIER, AF, REMOTE

ALMA ENGINEERING INC
BOGEN COMMUNICATIONS DIV.
COLLINS RADIO COMPANY
DIVERSIFIED ELECTRONIC CORP
ELECTRONIC SYSTEM ENGINEERING
GATES RADIO COMPANY
LANGEVIN
LTV LING ALTEC, INC.
ORBIT RADIO
PERMOFLUX CORPORATION
ROCKE INTERNATIONAL CORP.
ROUND HILL ASSOCIATES
H. H. SCOTT, INCORPORATED
SINGER PRODUCTS CO.
SOUTHWESTERN COMMUNICATIONS
STANCIL-HOFFMAN CORPORATION
STEPHENS ELECTRONICS
TAPECASTER ELECTRONICS
TELETRONIX
ULTRA AUDIO PRODUCTS
VISUAL ELECTRONICS CORP
W.R.S. ELECTRONICS, LTD.

AMPLIFIER, AF, REVERBERATION

AMPLIFIER CORP OF AMERICA
AUDIO INSTRUMENT CO
BAUER BROADCAST PRODUCTS DIV.
CALIFONE-ROBERTS
FAIRCHILD RECORDING EQUIPMENT

GREGORY AMPLIFIER CORP
LTV LING ALTEC, INC.
NORTH AMERICAN PHILIPS CO
ORBIT RADIO
ROCKE INTERNATIONAL CORP.
ROUND HILL ASSOCIATES
SINGER PRODUCTS CO
SOUTHWESTERN COMMUNICATIONS
STEPHENS ELECTRONICS
ULTRA AUDIO PRODUCTS
VISUAL ELECTRONICS CORP
W.R.S. ELECTRONICS, LTD.

AMPLIFIER, AF, STEREO

ALLIED ELECTRONICS CORP
ALMA ENGINEERING INC
AMPEX CORPORATION
BAUER BROADCAST PRODUCTS DIV.
BOGEN COMMUNICATIONS DIV.
CALBEST ELECTRONICS
CENTRAL DYNAMICS CORPORATION
COLLINS RADIO COMPANY
CROWN INTERNATIONAL
ELECTRONICS ESSENTIALS OF CCC
ELECTRO-VOICE INC
HEATH CO
JETRONIC INDUSTRIES, INC.
KARG LABORATORIES
KOSS ELECTRONICS, INC.
JAMES B. LANSING SOUND, INC.
LTV LING ALTEC, INC.
MAGNECORD
MARANTZ COMPANY
MELCOR ELECTRONICS
ORBIT RADIO
PERMOFLUX CORPORATION
ROCKE INTERNATIONAL CORP.
ROUND HILL ASSOCIATES
H. H. SCOTT, INCORPORATED
SHURE BROTHERS, INC.
SINGER PRODUCTS CO.
SONY CORPORATION OF AMERICA
SOUTHWESTERN COMMUNICATIONS
STEPHENS ELECTRONICS
ULTRA AUDIO PRODUCTS
VIKING TAPE RECORDERS
VISUAL ELECTRONICS CORP
W.R.S. ELECTRONICS, LTD.

AMPLIFIER, BRIDGING

ALMA ENGINEERING INC
AMECO, INC.
AMPLIVISION CORPORATION
ANACONDA ASTRODATA CO
ARBOR SYSTEMS, INC.
AUDIO INSTRUMENT CO
BAUER BROADCAST PRODUCTS DIV.
BLONDER-TONGUE LABORATORIES
C-COR ELECTRONICS
COLLINS RADIO COMPANY
DELTA ELECTRONICS, INC.
DENRAD MFG. CO. INC.
GATES RADIO COMPANY
GENERAL MICROWAVE CORPORATION
THE GRASS VALLEY GROUP, INC.
INTERNATIONAL NUCLEAR CORP.
JERROLD ELECTRONICS CORP
KATONA ELECTRONICS CO.
LANGEVIN
LINDSAY SPECIALTY PRODUCTS
LTV LING ALTEC, INC.
ORBIT RADIO
RICHMOND HILL LABORATORIES
ROUND HILL ASSOCIATES
RUST CORP.
H. H. SCOTT, INCORPORATED
SINGER PRODUCTS CO.
SOUTHWESTERN COMMUNICATIONS
SPENCER-KENNEDY LABORATORIES
STANCIL-HOFFMAN CORPORATION
STEPHENS ELECTRONICS
TELETRONIX
ULTRA AUDIO PRODUCTS
VIKOA, INC.
VISUAL ELECTRONICS CORP
WARD ELECTRONIC INDUSTRIES
W.R.S. ELECTRONICS, LTD.

AMPLIFIER, CATV

AMECO, INC.
AMPLIVISION CORPORATION
ANACONDA ASTRODATA CO
KEITH ANDERSON CO
AVA ELECTRONICS & MACHINE CORP
BENCO TELEVISION ASSOCIATES
BLONDER-TONGUE LABORATORIES
CAS MANUFACTURING CO.
C-COR ELECTRONICS
COLLINS RADIO COMPANY
CRAFTSMAN ELECTRONICS PRODUCTS
DORATE INC.
ELECTRONICS DEVELOPMENT CORP.
ENTRON INC
GBC AMERICA CORPORATION
THE GRASS VALLEY GROUP, INC.
JERROLD ELECTRONICS CORP
KAISER-COX

KATONA ELECTRONICS CO.
LINDSAY SPECIALTY PRODUCTS
ROUND HILL ASSOCIATES
SPENCER-KENNEDY LABORATORIES
TELESIS CORPORATION
TELESYSTEM SERVICES CORP.
VIKOA, INC.

AMPLIFIER, CLAMPING

ELECTRONICS DEVELOPMENT CORP.
THE GRASS VALLEY GROUP, INC.
INTERNATIONAL NUCLEAR CORP.
LTV LING ALTEC, INC.
PRESEARCH INC.
RAYTHEON CO.
RICHMOND HILL LABORATORIES
RIKER VIDEO INDUSTRIES
TELEMET COMPANY
VIDEOMETRICS, INC.
VIDEON CORPORATION
VISUAL ELECTRONICS CORP
VITAL INDUSTRIES
WARD ELECTRONIC INDUSTRIES

AMPLIFIER, DC

COHU ELECTRONICS
CROWN INTERNATIONAL
DAVEN DIV. - EDISON INDUS.
DIVERSIFIED ELECTRONIC CORP
FAIRLANE ELECTRONICS
GENERAL ELECTRIC CO
GENERAL RADIO CO
THE GRASS VALLEY GROUP, INC.
HEWLETT-PACKARD CO.
TEST INSTR. DIV. HONEYWELL
INTERNATIONAL NUCLEAR CORP.
MELCOR ELECTRONICS
MOSELEY ASSOCIATES INC.
RCA ELECTRONIC COMPONENTS
RUST CORP.
SHINTRON CO. INC.
VIDEON CORPORATION
W.R.S. ELECTRONICS, LTD.

AMPLIFIER, DISTRIBUTION

ALMA ENGINEERING INC
AMECO, INC.
AMPEX CORPORATION
AMPLIVISION CORPORATION
ANACONDA ASTRODATA CO
APPLIED ELECTRO-MECHANICS
ASCO SONOCRAFT CORP
B & K INSTRUMENTS, INC.
BLONDER-TONGUE LABORATORIES
BOGEN COMMUNICATIONS DIV.
BROADCAST ELECTRONICS, INC.
CAS MANUFACTURING CO.
C-COR ELECTRONICS
CENTRAL DYNAMICS CORPORATION
COLLINS RADIO COMPANY
COOKE ENGINEERING COMPANY
CRAFTSMAN ELECTRONICS PRODUCTS
DELTA ELECTRONICS, INC.
DYNAIR ELECTRONICS, INC.
THE GRASS VALLEY GROUP, INC.
IKEGAMI TSUSHINKI CO., LTD.
INTERNATIONAL NUCLEAR CORP.
JERROLD ELECTRONICS CORP
KATONA ELECTRONICS CO.
LINDSAY SPECIALTY PRODUCTS
LTV LING ALTEC, INC.
MCMARTIN INDUSTRIES
MELCOR ELECTRONICS
NORTH AMERICAN PHILIPS CO
ORBIT RADIO
PRESEARCH INC.
RCA BROADCAST PRODS.
RICHMOND HILL LABORATORIES
RIKER VIDEO INDUSTRIES
ROUND HILL ASSOCIATES
RUST CORP.
SARKES-TARZIAN
SHINTRON CO. INC.
SPENCER-KENNEDY LABORATORIES
TELEQUIP CORPORATION
TELETRONIX
TEL-INSTRUMENT ELECTRONICS
VIDEOMETRICS, INC.
VIDEON CORPORATION
VIRGINIA ELECTRONICS CO., INC.
VISUAL ELECTRONICS CORP
VITAL INDUSTRIES
WARD ELECTRONIC INDUSTRIES

AMPLIFIER, KEYING

BALL BROTHERS RESEARCH
DIVERSIFIED ELECTRONIC CORP
THE GRASS VALLEY GROUP, INC.
RICHMOND HILL LABORATORIES
RIKER VIDEO INDUSTRIES
TELEMET COMPANY
VIDEON CORPORATION
WARD ELECTRONIC INDUSTRIES

AMPLIFIER, MASKING

C B S LABORATORIES
IKEGAMI TSUSHINKI CO., LTD.
RIKER VIDEO INDUSTRIES
VIDEON CORPORATION

AMPLIFIER, PULSE

ALMA ENGINEERING INC
AMPEX CORPORATION
APPLIED ELECTRO-MECHANICS
BALL BROTHERS RESEARCH
BOGEN COMMUNICATIONS DIV.
C-COR ELECTRONICS
CENTRAL DYNAMICS CORPORATION
COHU ELECTRONICS
DYNAIR ELECTRONICS, INC.
ELECTRONICS DEVELOPMENT CORP.
GENERAL ELECTRIC CO
GENERAL RADIO CO
THE GRASS VALLEY GROUP, INC.
HEWLETT-PACKARD CO.
INTERNATIONAL NUCLEAR CORP.
PRESEARCH INC.
RCA BROADCAST PRODS.
RHG ELECTRONICS LABORATORY
RICHMOND HILL LABORATORIES
RIKER VIDEO INDUSTRIES
SHINTRON CO. INC.
STEPHENS ELECTRONICS
TELE-MEASUREMENTS INC.
TELEMET COMPANY
TELEQUIP CORPORATION
VIDEOMETRICS, INC.
VIDEON CORPORATION
VIRGINIA ELECTRONICS CO., INC.
VISUAL ELECTRONICS CORP

AMPLIFIER, RF, GENERAL PURPOSE

AMECO, INC.
AMPLIVISION CORPORATION
BARKER & WILLIAMSON
BLONDER-TONGUE LABORATORIES
BOGEN COMMUNICATIONS DIV.
CCA ELECTRONICS CORPORATION
C-COR ELECTRONICS
COLLINS RADIO COMPANY
DIVERSIFIED ELECTRONIC CORP
GENERAL ELECTRIC CO
GENERAL MICROWAVE CORPORATION
HEWLETT-PACKARD CO.
JERROLD ELECTRONICS CORP
LTV LING ALTEC, INC.
MCMARTIN INDUSTRIES
MICROMEGA
MULTRONICS
RCA ELECTRONIC COMPONENTS
RHG ELECTRONICS LABORATORY
ROCKE INTERNATIONAL CORP.
ROHDE & SCHWARZ SALES CO.
RUST CORP.
STANDARD ELECTRONICS CORP.
VIKOA, INC.
VIRGINIA ELECTRONICS CO., INC.
VISUAL ELECTRONICS CORP
W.R.S. ELECTRONICS, LTD.

AMPLIFIER, RF, PEAK LIMITING

BELAR ELECTRONICS LABORATORY
LTV LING ALTEC, INC.
MCMARTIN INDUSTRIES

AMPLIFIER, RF, POWER

AMERICAN ELECTRONIC LABS
AVA ELECTRONICS & MACHINE CORP
BAUER BROADCAST PRODUCTS DIV.
BARKER & WILLIAMSON
CCA ELECTRONICS CORPORATION
C-COR ELECTRONICS
CLAASEN ELECTRONICS
COLLINS RADIO COMPANY
CONTINENTAL ELECTRONICS MFG
COURIER COMMUNICATIONS
EIMAC DIVISION OF VARIAN
GATES RADIO COMPANY
G E VISUAL COMMUNICATIONS PROD
HAMMARLUND MANUFACTURING CO.
HEWLETT-PACKARD CO.
E F JOHNSON COMPANY
LTV LING ALTEC, INC.
MCMARTIN INDUSTRIES
MICROWAVE ASSOCIATES, INC.
MULTRONICS
RHG ELECTRONICS LABORATORY
ROCKE INTERNATIONAL CORP.
TELETRONIX
VISUAL ELECTRONICS CORP

AMPLIFIER, SENSING

APPLIED ELECTRO-MECHANICS
BROADCAST PRODUCTS COMPANY
HOUSTON ELECTRONICS CO.
INTERNATIONAL GOOD MUSIC
LTV LING ALTEC, INC.
RIKER VIDEO INDUSTRIES
SCHAFFER ELECTRONICS
TELEMET COMPANY
VIDEON CORPORATION
W.R.S. ELECTRONICS, LTD.

AMPLIFIER, STABILIZING

AMPEX CORPORATION
BALL BROTHERS RESEARCH
CENTRAL DYNAMICS CORPORATION
THE GRASS VALLEY GROUP, INC.
IKEGAMI TSUSHINKI CO., LTD.
INTERNATIONAL NUCLEAR CORP.
LTV LING ALTEC, INC.
PRESEARCH INC.
RCA BROADCAST PRODS.
RIKER VIDEO INDUSTRIES
SARKES-TARZIAN
TELE-MEASUREMENTS INC.
TELEMET COMPANY
TELEQUIP CORPORATION
VIDEON CORPORATION
VITAL INDUSTRIES
WARD ELECTRONIC INDUSTRIES

AMPLIFIER, TV, BOOSTER

AMECO, INC.
AMPLIVISION CORPORATION
ANACONDA ASTRODATA CO
KEITH ANDERSON CO
AVA ELECTRONICS & MACHINE CORP
BENCO TELEVISION ASSOCIATES
BLONDER-TONGUE LABORATORIES
CRAFTSMAN ELECTRONICS PRODUCTS
THE FINNEY CO
THE GRASS VALLEY GROUP, INC.
IKEGAMI TSUSHINKI CO., LTD.
LINDSAY SPECIALTY PRODUCTS
SINGER PRODUCTS CO.
TELE-MEASUREMENTS INC.
VIKOA, INC.

AMPLIFIER, TV, VIDEO

ALMA ENGINEERING INC
AMPEX CORPORATION
AMPLIVISION CORPORATION
APPLIED ELECTRO-MECHANICS
AVA ELECTRONICS & MACHINE CORP
BALL BROTHERS RESEARCH
BLONDER-TONGUE LABORATORIES
BRADFORD INFORMATION SYSTEMS
CATEL COMPANY
C-COR ELECTRONICS
CENTRAL DYNAMICS CORPORATION
COHU ELECTRONICS
DYNAIR ELECTRONICS, INC.
ELECTRONIC DESIGNERS INC.
ELECTRONICS DEVELOPMENT CORP.
GBC AMERICA CORPORATION
G E VISUAL COMMUNICATIONS PROD
THE GRASS VALLEY GROUP, INC.
IKEGAMI TSUSHINKI CO., LTD.
INTERNATIONAL NUCLEAR CORP.
ITI ELECTRONICS, INC.
RCA BROADCAST PRODS.
RCA ELECTRONIC COMPONENTS
RIKER VIDEO INDUSTRIES
RUST CORP.
SARKES-TARZIAN
SETCHELL CARLSON, INC.
SHINTRON CO. INC.
SINGER PRODUCTS CO.
STANDARD ELECTRONICS CORP.
TELE-MEASUREMENTS INC.
TELEMET COMPANY
TEL-INSTRUMENT ELECTRONICS
VIDEO COMPONENTS, INC.
VIDEOMETRICS, INC.
VIDEON CORPORATION
VITAL INDUSTRIES
WARD ELECTRONIC INDUSTRIES

AMPLIFIER, VIDEO, SWEEP

ALMA ENGINEERING INC
AMPLIVISION CORPORATION
BALL BROTHERS RESEARCH
CATEL COMPANY
C-COR ELECTRONICS
TELE-MEASUREMENTS INC.

ANALYZERS, DISTORTION

AUDIO INSTRUMENT CO.
BARKER & WILLIAMSON

B & K INSTRUMENTS, INC.
COLLINS RADIO COMPANY
GENERAL RADIO CO.
HEWLETT-PACKARD CO.
MARCONI INSTRUMENTS
NORTHEAST ELECTRONICS CORP
THE SINGER CO - METRICS DIV
WAVEFORMS, INCORPORATED

ANALYZERS, HARMONIC

B & K INSTRUMENTS, INC.
GENERAL RADIO CO.
HEWLETT-PACKARD CO.
MARCONI INSTRUMENTS
ROHDE & SCHWARZ SALES CO.
THE SINGER CO - METRICS DIV

ANALYZERS, INTERMODULATION

AUDIO INSTRUMENT CO
THE SINGER CO - METRICS DIV

ANALYZERS, NOISE

B & K INSTRUMENTS, INC.
COLLINS RADIO COMPANY
GENERAL RADIO CO.
HEWLETT-PACKARD CO.
MARCONI INSTRUMENTS
NORTHEAST ELECTRONICS CORP
ROHDE & SCHWARZ SALES CO.
H. H. SCOTT, INCORPORATED
THE SINGER CO - METRICS DIV

ANALYZERS, SIDEBAND

ANRITSU ELECTRIC CO., LTD.
COLLINS RADIO COMPANY
DYNAIR ELECTRONICS, INC.
MARONI INSTRUMENTS
ROHDE & SCHWARZ SALES CO.
THE SINGER CO - METRICS DIV
SINGER PRODUCTS CO.

ANALYZERS, SPECTRUM

ANRITSU ELECTRIC CO., LTD.
B & K INSTRUMENTS, INC.
COLLINS RADIO COMPANY
HEWLETT-PACKARD CO.
MARCONI INSTRUMENTS
ROHDE & SCHWARZ SALES CO.
RYCOM, INC.
SINGER PRODUCTS CO.
TEKTRONIX INC.

ANALYZERS, VIBED

ANRITSU ELECTRIC CO., LTD.
B & K INSTRUMENTS, INC.
COLORADO VIDEO
IKEGAMI TSUSHINKI CO., LTD.
KRS INSTRUMENTS DIVISION
THE SINGER CO - METRICS DIV
TELE-MEASUREMENTS INC.

ANCHORS, GUY

AMECO, INC.
COPPERWELD STEEL COMPANY
EVERSTICK ANCHOR CO.
JAMPRO ANTENNA COMPANY
LIBERTY TOWER MFG. CO.
LITTLE JOE ENTERPRISES
MASTER TOWER CO.
RELIABLE ELECTRIC
SINGER PRODUCTS CO.
TRYLON INCORPORATED
UTILITY TOWER CO.

ANTENNAS, FM

ANTENNA PRODUCTS COMPANY
ADVANCE INDUSTRIES
COLLINS RADIO COMPANY
CONTINENTAL ELECTRONICS MFG
GATES RADIO COMPANY
JAMPRO ANTENNA COMPANY
MARCONI DIVISION
MASTER TOWER COMPANY
RCA BROADCAST PRODS.
ROCKE INTERNATIONAL CORP.
SINGER PRODUCTS CO.
STAINLESS, INC.
SWAGER TOWER CORPORATION
TELETRONIX
TRYLON INCORPORATED
UTILITY TOWER CO.
VISUAL ELECTRONICS CORP

ANTENNAS, CATV

ADVANCE INDUSTRIES
AMECO, INC.
ANTENNA PRODUCTS COMPANY
BLONDER-TONGUE LABORATORIES
CAS MANUFACTURING CO.
CUSH CRAFT
HY-GAIN ELECTRONICS
JAMPRO ANTENNA COMPANY
JERROLD ELECTRONICS CORP.
KAISER-COX

KATONA ELECTRONICS CO.
LINDSAY SPECIALTY PRODUCTIONS
SCALA RADIO CORPORATION
SCIENTIFIC-ATLANTA
SIGNAL ENGINEERING & SALES INC
SINGER PRODUCTS CO.
SITCO ANTENNA CO.
TECHNICAL APPLIANCE CORP
TELESYSTEM SERVICES CORP.
TELETRONIX
UTILITY TOWER CO.

ANTENNAS, FM

ALFORD MANUFACTURING COMPANY
AMECO, INC.
KEITH ANDERSON CO
ANTENNA PRODUCTS COMPANY
APPARATUS DEVELOPMENT CO
BROWNING LABORATORIES, INC.
CCA ELECTRONICS CORPORATION
COLLINS RADIO COMPANY
CUSH CRAFT
ELECTRONICS RESEARCH, INC.
THE FINNEY CO
GATES RADIO COMPANY
G C ELECTRONICS COMPANY
JAMPRO ANTENNA COMPANY
JERROLD ELECTRONICS CORP
LINDSAY SPECIALTY PRODUCTS
MARCONI DIVISION
MARTI ELECTRONICS
MCMARTIN INDUSTRIES
MOTOROLA COMMUNICATIONS
RCA BROADCAST PRODS.
ROCKE INTERNATIONAL CORP.
SCALA RADIO CORPORATION
SINGER PRODUCTS CO
SITCO ANTENNA CO.
TELETRONIX
THOMSON ELECTRIC CO
UTILITY TOWER CO.
VISUAL ELECTRONICS CORP

ANTENNAS, HF

COLLINS RADIO COMPANY
CONTINENTAL ELECTRONICS MFG
CUSH CRAFT
GATES RADIO COMPANY
GENERAL MICROWAVE CORPORATION
MARCONI DIVISION
RCA BROADCAST PRODS.
ROCKE INTERNATIONAL CORP.
SCALA RADIO CORPORATION
SINGER PRODUCTS CO.
TRYLON INCORPORATED

ANTENNAS, LF

COLLINS RADIO COMPANY
CONTINENTAL ELECTRONICS MFG
MULTRONICS
RCA BROADCAST PRODS.
ROCKE INTERNATIONAL CORP.
SINGER PRODUCTS CO.
TRYLON INCORPORATED

ANTENNAS, MF

COLLINS RADIO COMPANY
CONTINENTAL ELECTRONICS MFG
MARCONI DIVISION
MULTRONICS
ROCKE INTERNATIONAL CORP.
SINGER PRODUCTS CO.
TRYLON INCORPORATED

ANTENNAS, MICROWAVE

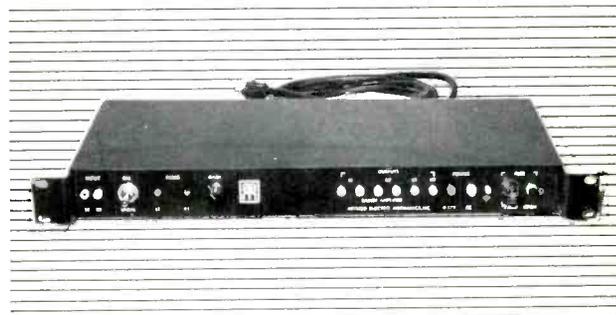
ADVANCE INDUSTRIES
AMECO, INC.
ANDREW CORPORATION
COLLINS RADIO COMPANY
DEMORNAY - BONARDI DIVISION
FORT WORTH TOWER CO., INC.
GABRIEL ELECTRONICS DIV.
GENERAL MICROWAVE CORPORATION
HOUSTON FEARLESS CORPORATION
JERROLD ELECTRONICS CORP
LITTON EDUCATIONAL TELE DIV
MICRO-LINK SYSTEMS-VARIAN
MICROWAVE ASSOCIATES, INC.
MOTOROLA COMMUNICATIONS
NARDA MICROWAVE CORPORATION
PRODELIN, INCORPORATED
RCA BROADCAST PRODS.
SCALA RADIO CORPORATION
SINGER PRODUCTS CO
STAINLESS, INC.
TECHNICAL APPLIANCE CORP
TELETRONIX
UTILITY TOWER CO.

ANTENNAS, MOBILE

ANDREW CORPORATION
COLLINS RADIO COMPANY
COMMUNICATIONS PRODUCTS CO
F & M SYSTEMS COMPANY
HY-GAIN ELECTRONICS
HERB KRECKMAN CO
LINDSAY SPECIALTY PRODUCTS
MARTI ELECTRONICS

New...

BUDR-1 BALUN AMPLIFIER



ACCEPTS BALANCED OR UNBALANCED INPUTS AND ELIMINATES FREQUENCY INTERFERENCE

The new Model BUDR-1 Balun Amplifier is ideally suited for distribution of video signals within the studio or from remote locations. The BUDR-1 automatically cancels out generated unbalanced voltages, and eliminates power hum or other spurious interference frequencies which could be induced into the cable. Completely transistorized, it accepts either balanced or unbalanced signal inputs while providing four outputs, two balanced at 124 ohms and two unbalanced at 75 ohms. Choice of inputs is selectable by a front panel switch.

Designed for operation on 105-120 volt, 60 Hz power, the BUDR-1 provides high common mode rejection of up to 50 db for power frequencies. Its signal handling capability is 2 volts p-p. Differential gain is typically less than 1% under normal use, and the gain is adjustable from -1.0 to +6.0 db. Frequency response is $\pm 1/2$ db from 10 Hz to 10 MHz. The amplifier exhibits very low noise, typically 70 db below 1 volt. Hum and noise together are less than 0.1 millivolt on any terminated output, and all output lines are connected to front panel test jacks for in-rack monitoring. Measuring 19" x 1 3/4" x 8", total weight is 5 pounds. Price: \$415.00. Please write for further information.

APPLIED ELECTRO MECHANICS, INC.

2350 Duke Street, Alexandria, Virginia 22314
PHONE: (703) 548-2166



Circle Item 62 on Tech Data Card

MICROWAVE ASSOCIATES, INC.
MOTOROLA COMMUNICATIONS
PRODELIN, INCORPORATED
RCA BROADCAST PRODS.
ROCKE INTERNATIONAL CORP.
SINGER PRODUCTS CO.
THE TECHNICAL MATERIEL CORP.
UTICA ELECTRONICS
WATERS MANUFACTURING

ANTENNAS, REMOTE PICKUP

ANDREW CORPORATION
CUSH CRAFT
GABRIEL ELECTRONICS DIV.
HOUSTON FEARLESS CORPORATION
HERB KRECKMAN CO
MICROWAVE ASSOCIATES, INC.
ROCKE INTERNATIONAL CORP.
SCALA RADIO CORPORATION
SINGER PRODUCTS CO.

ANTENNAS, TV

ALFORD MANUFACTURING COMPANY
ALLIED ELECTRONICS CORP
RF TRANSMISSION DEPT, AMPEX
KEITH ANDERSON CO
BLONDER-TONGUE LABORATORIES
THE FINNEY CO
GATES RADIO COMPANY
G C ELECTRONICS COMPANY
G E VISUAL COMMUNICATIONS PROD
JAMPRO ANTENNA COMPANY
JERROLD ELECTRONICS CORP
LINDSAY SPECIALTY PRODUCTS
MARCONI DIVISION
PACIFIC TOWER CO.
RCA BROADCAST PRODS.
ROCKE INTERNATIONAL CORP.
SCALA RADIO CORPORATION
SINGER PRODUCTS CO.
THOMSON ELECTRIC CO
VIKOA, INC.

ANTENNAS, TV, MASTER COMMUNITY

AMECO, INC.
AMPLIVISION CORPORATION
ANTENNA PRODUCTS COMPANY
BENCO TELEVISION ASSOCIATES
BLONDER-TONGUE LABORATORIES
CUSH CRAFT
THE FINNEY CO
JERROLD ELECTRONICS CORP
KATONA ELECTRONICS CO.
LINDSAY SPECIALTY PRODUCTS
SCALA RADIO CORPORATION
SCIENTIFIC-ATLANTA
SIGNAL ENGINEERING & SALES INC
SITCO ANTENNA CO.
STAINLESS, INC

ANTENNAS, 2500 MHZ

ALFORD MANUFACTURING COMPANY
ANDREW CORPORATION
GABRIEL ELECTRONICS DIV.
JERROLD ELECTRONICS CORP
LITTON EDUCATIONAL TELE DIV
MICRO-LINK SYSTEMS-VARIAN
NARDA MICROWAVE CORPORATION
PRODELIN, INCORPORATED
RCA BROADCAST PRODS.
SCALA RADIO CORPORATION
SIGNAL ENGINEERING & SALES INC
SINGER PRODUCTS CO.
TECHNICAL APPLIANCE CORP

ARMS, TONE

THE ASTATIC CORPORATION
COLLINS RADIO COMPANY
DIACOUSTIC LABORATORY
EUPHONICS MARKETING
GATES RADIO COMPANY
GOTHAM AUDIO CORPORATION
GRAY RESEARCH & DEVELOPMENT CO
KOSS ELECTRONICS, INC.
ROCKE INTERNATIONAL CORP.
SHURE BROTHERS, INC.
SINGER PRODUCTS CO
SONY CORPORATION OF AMERICA

ATTENUATORS, AUDIO

AMECO, INC.
ARBOK SYSTEMS, INC.
CENTRALAB
COLLINS RADIO COMPANY
DAVEN DIV. - EDISON INDUS.
DIVERSIFIED ELECTRONIC CORP
FAIRCHILD RECORDING EQUIPMENT
GENERAL MICROWAVE CORPORATION
GOTHAM AUDIO CORPORATION
JENSEN MANUFACTURING
LANGEVIN
LTV LING ALTEC, INC.
PAINTON INCORPORATED
ROCKE INTERNATIONAL CORP.
ROHDE & SCHWARZ SALES CO.
SOUTHWESTERN COMMUNICATIONS
STEPHENS ELECTRONICS
TELONIC INDUSTRIES
TROMPETER ELECTRONICS
W.R.S. ELECTRONICS, LTD.

ATTENUATORS, FIXED

BLONDER-TONGUE LABORATORIES
COLLINS RADIO COMPANY
DAVEN DIV. - EDISON INDUS.
DIVERSIFIED ELECTRONIC CORP

GENERAL MICROWAVE CORPORATION
HOLLAND ELECTRONICS INC
JERROLD ELECTRONICS CORP
JORDAN ELECTRIC COMPANY
LANGEVIN
LTV LING ALTEC, INC.
MICROLAB - FXR
NARDA MICROWAVE CORPORATION
ROCKE INTERNATIONAL CORP.
ROHDE & SCHWARZ SALES CO.
THE SINGER CO - METRICS DIV
SOUTHWESTERN COMMUNICATIONS
TROMPETER ELECTRONICS
W.R.S. ELECTRONICS, LTD.

ATTENUATORS, IMPEDANCE MATCHING

ALFORD MANUFACTURING COMPANY
AMECO, INC.
BLONDER-TONGUE LABORATORIES
COLLINS RADIO COMPANY
DAVEN DIV. - EDISON INDUS.
HOLLAND ELECTRONICS INC
JERROLD ELECTRONICS CORP
LTV LING ALTEC, INC.
MICROLAB - FXR
NARDA MICROWAVE CORPORATION
ROHDE & SCHWARZ SALES CO.
SOUTHWESTERN COMMUNICATIONS
TROMPETER ELECTRONICS
W.R.S. ELECTRONICS, LTD.

ATTENUATORS, MICROWAVE

AMECO, INC.
COLLINS RADIO COMPANY
DEMORNAY - BONARDI DIVISION
GENERAL MICROWAVE CORPORATION
HEWLETT-PACKARD CO.
MICROLAB - FXR
MICROWAVE ASSOCIATES, INC.
NARDA MICROWAVE CORPORATION
PRODELIN, INCORPORATED
ROHDE & SCHWARZ SALES CO.
THE SINGER CO - METRICS DIV
TELONIC INDUSTRIES

ATTENUATORS, RF

AMECO, INC.
RF TRANSMISSION DEPT, AMPEX
AMPHENOL CORP.
KEITH ANDERSON CO
ANRITSU ELECTRIC CO., LTD.
AVA ELECTRONICS & MACHINE CORP
BENCO TELEVISION ASSOCIATES
BIRD ELECTRONIC CORPORATION
BLONDER-TONGUE LABORATORIES
COLLINS RADIO COMPANY
DAVEN DIV. - EDISON INDUS.
GENERAL MICROWAVE CORPORATION
HEWLETT-PACKARD CO.
HOLLAND ELECTRONICS INC
JERROLD ELECTRONICS CORP
KATONA ELECTRONICS CO.
MARCONI INSTRUMENTS
NARDA MICROWAVE CORPORATION
PRODELIN, INCORPORATED
ROCKE INTERNATIONAL CORP.
ROHDE & SCHWARZ SALES CO.
THE SINGER CO - METRICS DIV
TELONIC INDUSTRIES
TROMPETER ELECTRONICS
VIKOA, INC.
WATERS MANUFACTURING

ATTENUATORS, VIDEO

AMECO, INC.
ANRITSU ELECTRIC CO., LTD.
AVA ELECTRONICS & MACHINE CORP
BLONDER-TONGUE LABORATORIES
CENTRAL DYNAMICS CORPORATION
DAVEN DIV. - EDISON INDUS.
FAIRLANE ELECTRONICS
HOLLAND ELECTRONICS INC
IKEGAMI TSUSHINKI CO., LTD.
JERROLD ELECTRONICS CORP
MARCONI INSTRUMENTS
MICROLAB - FXR
NARDA MICROWAVE CORPORATION
PAINTON INCORPORATED
ROHDE & SCHWARZ SALES CO.
TELONIC INDUSTRIES
TROMPETER ELECTRONICS

AUTOMATION EQUIPMENT

AITKEN COMMUNICATIONS
AMECO, INC.
AMPEX CORPORATION
ATC DIV. GATES RADIO
B & K INSTRUMENTS, INC.
BROADCAST PRODUCTS COMPANY
CENTRAL DYNAMICS CORPORATION
CHRONO-LOG CORPORATION
COLLINS RADIO COMPANY
CONTINENTAL ELECTRONICS MFG
DELTA ELECTRONICS, INC.
F & M SYSTEMS COMPANY
GATES RADIO COMPANY
HANCOCK TELECONTROL
INTERNATIONAL GOOD MUSIC
KRS INSTRUMENTS DIVISION
LTV LING ALTEC, INC.
MACARTA INC.
MACKENZIE LABORATORIES
MARCONI DIVISION
METROTECH INCORPORATED
MID AMERICA ELECTRONICS CORP
MILES REPRODUCER CO
ORBIT RADIO

RCA BROADCAST PRODS.
RFE LABS
RICHMOND HILL LABORATORIES
RIKER VIDEO INDUSTRIES
ROCKE INTERNATIONAL CORP.
RUST CORP.
SCHAFFER ELECTRONICS
SPARTA ELECTRONIC CORPORATION
S. STERLING COMPANY
TAPE-ATHON CORPORATION
TAPECASTER ELECTRONICS
TELECONTROL CORP.
TELEMATION, INC.
TELEVISION ZOOMAR
TROMPETER ELECTRONICS
VIDEON CORPORATION
VISUAL ELECTRONICS CORP
WARD ELECTRONIC INDUSTRIES

BACKGROUND MUSIC SERVICE

AMECO, INC.
ASCO SONOCRAFT CORP.
BELL P A PRODUCTS CORP.
CINE SONIC SOUND
INTERNATIONAL GOOD MUSIC
MAGNE-TRONICS, INC.
MCMARTIN INDUSTRIES
MINNESOTA MINING - 3 M
MOSELEY ASSOCIATES INC.
MOTOROLA COMMUNICATIONS
ORBIT RADIO
SCHAFFER ELECTRONICS
ALBERT SCHULTZ, INC
SINGER PRODUCTS CO
SOUTHWESTERN COMMUNICATIONS
TAPE-ATHON CORPORATION

BALLASTS, LAMP

GENERAL ELECTRIC CO
SOLA ELECTRIC
SYLVANIA LIGHTING PRODUCTS

BALUNS

AMECO, INC.
KEITH ANDERSON CO
ANTENNA PRODUCTS COMPANY
APPARATUS DEVELOPMENT CO.
BARKER & WILLIAMSON
BLONDER-TONGUE LABORATORIES
COLLINS RADIO COMPANY
COMMUNICATIONS PRODUCTS CO
CRAFTSMAN ELECTRONICS PRODUCTS
ELECTROMAGNETIC RADIATION LABS
THE FINNEY CO
KAPPA NETWORKS, INC
RICHMOND HILL LABORATORIES
ROCKE INTERNATIONAL CORP.
ROHDE & SCHWARZ SALES CO.
SCALA RADIO CORPORATION
SINGER PRODUCTS CO.
SITCO ANTENNA CO.
STANDARD ELECTRONICS CORP
THE TECHNICAL MATERIEL CORP
TELONIC INDUSTRIES
TRYLON INCORPORATED
VIKOA, INC.

BASE STATIONS

COLLINS RADIO COMPANY
MARTI ELECTRONICS
MOSELEY ASSOCIATES INC.
MOTOROLA COMMUNICATIONS
RCA BROADCAST PRODS.
ROCKE INTERNATIONAL CORP.
SINGER PRODUCTS CO

BATTERIES, DRY CELL

BURGESS BATTERY COMPANY
MALLORY DISTRIBUTOR PRODUCTS
RCA ELECTRONIC COMPONENTS

BATTERIES, LEAD ACID

IMPEX ELECTRONICS CORP
LISTEC TELEVISION EQUIPMENT

BATTERIES, NICKEL CADMIUM

BERKEY TECHNICAL CORP
COLORTRAN INDUSTRIES - BERKEY
G E CAPACITOR DEPARTMENT
GENERAL ELECTRIC CO
IMPEX ELECTRONICS CORP
LISTEC TELEVISION EQUIPMENT

BATTERIES, OTHER

GENERAL ELECTRIC CO
MALLORY DISTRIBUTOR PRODUCTS
RCA ELECTRONIC COMPONENTS

BLOWERS AND FANS

AMECO, INC.
BUD RADIO, INC
DYANCOOL MANUFACTURING CO
GENERAL ELECTRIC CO
ROTRON MANUFACTURING COMPANY
SIGMA INDUSTRIES

BOXES, DECADE, CAPACITOR

AEROVOX CORP.
GENERAL RADIO CO
HEATH CO
TEST INSTR. DIV. HONEYWELL
ROHDE & SCHWARZ SALES CO.

BOXES, DECADE, INDUCTOR

AEROVOX CORP.
GENERAL RADIO CO
TEST INSTR. DIV. HONEYWELL
UNITED TRANSFORMER COMPANY

BOXES, DECADE, RESISTOR

AEROVOX CORP.
GENERAL RADIO CO
HEATH CO
TEST INSTR. DIV. HONEYWELL
JORDAN ELECTRIC COMPANY
OHMITE MANUFACTURING COMPANY
ROHDE & SCHWARZ SALES CO.
SHALLCROSS MFG. CO.

BREADBOARDS

DIVERSIFIED ELECTRONIC CORP
RFE LABS

BRIDGES

ALFORD MANUFACTURING COMPANY
AMECO, INC.
BLONDER-TONGUE LABORATORIES
COLLINS RADIO COMPANY
DELTA ELECTRONICS, INC. - NC
DELTA ELECTRONICS, INC. - VA
DIVERSIFIED ELECTRONIC CORP
GENERAL ELECTRIC CO
GENERAL MICROWAVE CORPORATION
GENERAL RADIO CO
HEATH CO
HEWLETT-PACKARD CO.
TEST INSTR. DIV. HONEYWELL
JERROLD ELECTRONICS CORP
LTV LING ALTEC, INC.
MARCONI INSTRUMENTS
ROCKE INTERNATIONAL CORP.
ROHDE & SCHWARZ SALES CO.
SHALLCROSS MFG. CO.
YOKOGAWA ELECTRIC WORKS

BROADCAST PROGRAMMING SERVICE

ALTO FONIC PROGRAMMING INC.
AMECO, INC.
ASCO SONOCRAFT CORP
ATC DIV. GATES RADIO
BISCAYNE AUDIO COMPANY
COLLINS RADIO COMPANY
GATES RADIO COMPANY
HOUSTON ELECTRONICS CO.
INTERNATIONAL GOOD MUSIC
INTERNATIONAL NUCLEAR CORP.
KATONA ELECTRONICS CO.
NEMO RECORDING LABS
ORBIT RADIO
SCHAFFER ELECTRONICS
ALBERT SCHULTZ, INC
SOUND STUDIOS INC.
TAPE-ATHON CORPORATION
TELEMATION, INC.
VIKOA, INC.

CABINETS, METAL

ACME VISIBLE RECORDS
AMECO, INC.
BUD RADIO, INC
COLLINS RADIO COMPANY
COOK ELECTRIC, WIRECOG DIV.
DATA INSTRUMENT DIVISION
ENCLOSURE CORP
GATES RADIO COMPANY
HARWALD COMPANY
LANG ELECTRONICS, INC
MCMARTIN INDUSTRIES
METROPOLITAN ELECTRIC MFG CO
NEUMADE PRODUCTS CORPORATION
RCA BROADCAST PRODS.
SCHAFFER ELECTRONICS
SCIENTIFIC-ATLANTA
SINGER PRODUCTS CO.
SPENCER-KENNEDY LABORATORIES
VENT-RAK INCORPORATED
WABER ELECTRONICS, INC.

CABINETS, PLASTIC

CALBEST ELECTRONICS

CABINETS, STORAGE, DISC.

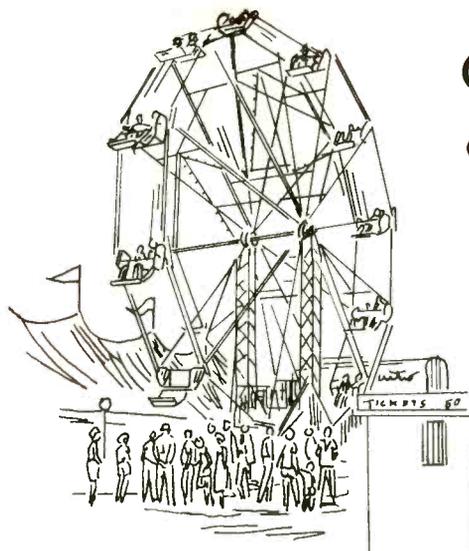
ACME VISIBLE RECORDS
GATES RADIO COMPANY
GRINNAN FIXTURE COMPANY
HARWALD COMPANY
NEUMADE PRODUCTS CORPORATION
WALLACH & ASSOCIATES

CABINETS, STORAGE, FILM

ACME VISIBLE RECORDS
GRINNAN FIXTURE COMPANY
HARWALD COMPANY
NEUMADE PRODUCTS CORPORATION
WALLACH & ASSOCIATES

CABINETS, STORAGE, MAGNETIC TAPE, CARTRIDGE

AMERICAN GELOSO ELECTRONICS
BROADCAST ELECTRONICS, INC
BROADCAST PRODUCTS COMPANY
COLLINS RADIO COMPANY
GATES RADIO COMPANY
HARWALD COMPANY
NEUMADE PRODUCTS CORPORATION
SPARTA ELECTRONIC CORPORATION
WALLACH & ASSOCIATES



Congratulations to the inventor
of the wheel...he just made...

**BROADCASTING
MORE PROFITABLE!**

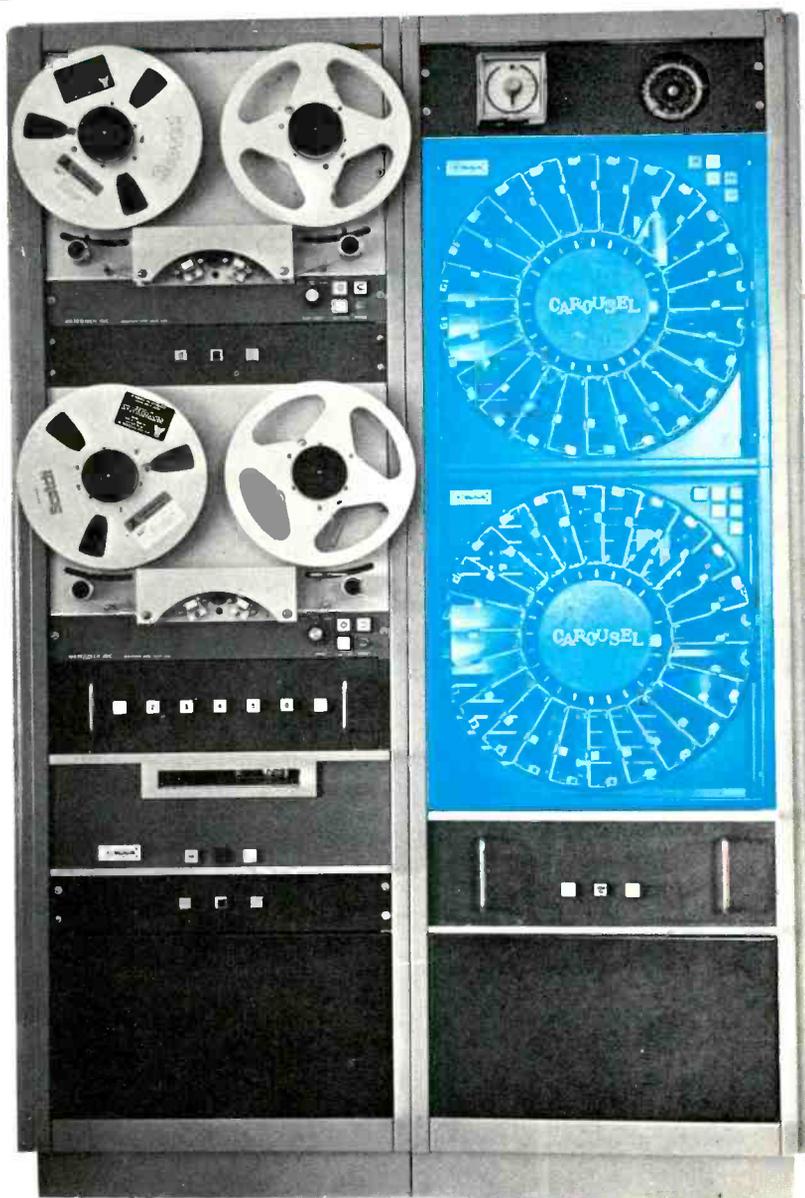
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COLLINS RADIO COMPANY
GATES RADIO COMPANY
GRINNAN FIXTURE COMPANY
JENSEN MANUFACTURING
LANG ELECTRONICS, INC.
LITTLE JOE ENTERPRISES
MARANTZ COMPANY

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AMPHENOL CORP.
ANSONIA WIRE AND CABLE CO
BIRNBACH CO
BOSTON INSULATED WIRE & CABLE
LISTEC TELEVISION EQUIPMENT
PHELPS DODGE
THE PLASTIC WIRE & CABLE CORP.
SINGER PRODUCTS CO.
SUPERIOR CONTINENTAL CORP.

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ALPHA WIRE
AMECO, INC.
AMPHENOL CORP.
BIRNBACH CO
BOSTON INSULATED WIRE & CABLE
D & B ELECTRONICS COMPANY
GIBBS MFG. AND RESEARCH CORP.
INTERNATIONAL NUCLEAR CORP.
IRC, INC.
ITT CANNON ELECTRIC
JERROLD ELECTRONICS CORP
PHELPS DODGE
THE PLASTIC WIRE & CABLE CORP.
ROME CABLE DIV OF ALCOA
SAXTON PRODUCTS
SINGER PRODUCTS CO.
SOUTHWESTERN COMMUNICATIONS
SWITCHCRAFT, INC.
TELEQUIP CORPORATION
TIMES WIRE AND CABLE
TROMPETER ELECTRONICS
VIKOA, INC.
WECKESSER COMPANY, INC.
W.R.S. ELECTRONICS, LTD.

CABLE, CAMERA

AMPEX CORPORATION
BELDEN MANUFACTURING CO.
BIRNBACH CO
BOSTON INSULATED WIRE & CABLE
COHU ELECTRONICS
G E VISUAL COMMUNICATIONS PROD
LISTEC TELEVISION EQUIPMENT
RCA BROADCAST PRDTS.
SINGER PRODUCTS CO.
TELEQUIP CORPORATION
TELEVISION UTILITIES CORP
VIKOA, INC.

CABLE, CATV, HARDWARE

AMECO, INC.
AMPHENOL CORP.
AMPLIVISION CORPORATION
ANACONDA ASTRODATA CO
ANDREW CORPORATION
AVA ELECTRONICS & MACHINE CORP
BIRNBACH CO
CAS MANUFACTURING CO.
DIAMOND EXPANSION BOLT CO INC
ENTRON INC
GENERAL MACHINE PRODUCTS CO.
IRC, INC.
JERROLD ELECTRONICS CORP
KAISER-COX
KATONA ELECTRONICS CO.
PHELPS DODGE
PRODELIN, INCORPORATED
RELIABLE ELECTRIC
SIGMA INDUSTRIES
SINGER PRODUCTS CO.
SPENCER-KENNEDY LABORATORIES
SUPERIOR CONTINENTAL CORP.
TELESYSTEM SERVICES CORP.
TELETRONIX
TIMES WIRE AND CABLE
VIKOA, INC.

CABLE, COAXIAL, FLEXIBLE

ALPHA WIRE
AMECO, INC.
AMPHENOL CORP.
ANACONDA ASTRODATA CO
ANDREW CORPORATION
BELDEN MANUFACTURING CO
BIRNBACH CO
BOSTON INSULATED WIRE & CABLE
GOTHAM AUDIO CORPORATION

IRC, INC.

ITT WIRE & CABLE DIVISION
KATONA ELECTRONICS CO.
PHELPS DODGE
PRODELIN, INCORPORATED
ROCKE INTERNATIONAL CORP.
ROME CABLE DIV OF ALCOA
SAXTON PRODUCTS
SINGER PRODUCTS CO.
SPENCER-KENNEDY LABORATORIES
SUPERIOR CONTINENTAL CORP.
TELEQUIP CORPORATION
TENSOLITE INSULATED WIRE CO.
TELETRONIX
TIMES WIRE AND CABLE
UTILITY TOWER CO.
VIKOA, INC.

CABLE, COAXIAL, RIGID

ALPHA WIRE
AMPHENOL CORP.
ANDREW CORPORATION
ANTENNA PRODUCTS COMPANY
COMMUNICATIONS PRODUCTS CO
ELECTROMAGNETIC RADIATION LABS
IRC, INC.
ITT WIRE & CABLE DIVISION
PHELPS DODGE
PRODELIN, INCORPORATED
SAXTON PRODUCTS
SINGER PRODUCTS CO.
TELEQUIP CORPORATION
TIMES WIRE AND CABLE
UTILITY TOWER CO.

CABLE, DIRECT-BURIAL

ALPHA WIRE
AMECO, INC.
AMPHENOL CORP.
ANSONIA WIRE AND CABLE CO
ANACONDA ASTRODATA CO
ANDREW CORPORATION
BELDEN MANUFACTURING CO
BIRNBACH CO
BOSTON INSULATED WIRE & CABLE
ITT WIRE & CABLE DIVISION
KATONA ELECTRONICS CO.
PHELPS DODGE
THE PLASTIC WIRE & CABLE CORP.
ROCKE INTERNATIONAL CORP.
ROME CABLE DIV OF ALCOA
SAXTON PRODUCTS
SINGER PRODUCTS CO.
SUPERIOR CONTINENTAL CORP.
TIMES WIRE AND CABLE
VIKOA, INC.

CABLE, SHIELDED, AUDIO

ALPHA WIRE
AMPHENOL CORP.
BELDEN MANUFACTURING CO
BIRNBACH CO
BOSTON INSULATED WIRE & CABLE
GOTHAM AUDIO CORPORATION
IRC, INC.
LENZ ELECTRIC MANUFACTURING CO
THE PLASTIC WIRE & CABLE CORP.
ROME CABLE DIV OF ALCOA
SAXTON PRODUCTS
SINGER PRODUCTS CO.
SUPERIOR CONTINENTAL CORP.
TELEQUIP CORPORATION
TENSOLITE INSULATED WIRE CO.
VIKOA, INC.

CABLE, TELEPHONE

ALPHA WIRE
AMECO, INC.
ANSONIA WIRE AND CABLE CO
BELDEN MANUFACTURING CO
BIRNBACH CO
THE JAMES FLOYD FORD CO
IRC, INC.
ITT WIRE & CABLE DIVISION
LENZ ELECTRIC MANUFACTURING CO
THE PLASTIC WIRE & CABLE CORP.
ROME CABLE DIV OF ALCOA
SAXTON PRODUCTS
SINGER PRODUCTS CO.
SUPERIOR CONTINENTAL CORP.
VIKOA, INC.

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ELECTRONICS ESSENTIALS OF CCC
HERB FITZGERALD COMMUNICATIONS
F & M SYSTEMS COMPANY
HEWLETT-PACKARD CO.
JERICHO ELECTRONICS SUPPLY
RAID ATDS
S. STERLING COMPANY
WLAK ELECTRONICS SERVICE INC.

CALIBRATION SERVICE, INSTRUMENT

BIRNS & SAWYER
B & K INSTRUMENTS, INC.
DATA INSTRUMENT DIVISION
EDISON ELECTRONIC COMPANY

ELECTRONICS ESSENTIALS OF CCC
HEWLETT-PACKARD CO.
TEST INSTR. DIV. HONEYWELL
JERICHO ELECTRONICS SUPPLY
S. STERLING COMPANY

CALORIMETERS

BIRD ELECTRONIC CORPORATION
THE ENGLISH ELECTRIC CORP.
GENERAL MICROWAVE CORPORATION
HEWLETT-PACKARD CO.
JERICHO ELECTRONICS SUPPLY
NARDA MICROWAVE CORPORATION
ROCKE INTERNATIONAL CORP.
SINGER PRODUCTS CO.

CAMERA, MOUNTING EQUIPMENT

AMECO, INC.
E J BAUGHMAN CO
BERKEY TECHNICAL CORP
BIRNS & SAWYER
BURKE & JAMES
COHU ELECTRONICS
COLORTRAN INDUSTRIES - BERKEY
DIAMOND POWER SPECIALTY CORP.
GORDON ENTERPRISES
HOUSTON FEARLESS CORPORATION
LISTEC TELEVISION EQUIPMENT
POWER-OPTICS INCORPORATED
RCA BROADCAST PRDTS.
SHINTRON CO, INC.
SINGER PRODUCTS CO.
TELE-MEASUREMENTS INC.
TELEQUIP CORPORATION
TELEVISION UTILITIES CORP
TELEVISION ZOOMAR
TRAID CORPORATION
UP-RIGHT SCAFFOLDS
VIKOA, INC.
VISUAL ELECTRONICS CORP
VIDEO SYSTEMS

CAMERA, REMOTE CONTROL EQUIPMENT

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COHU ELECTRONICS
DELTA ELECTRONICS, INC.
DIAMOND POWER SPECIALTY CORP.
GORDON ENTERPRISES
HOUSTON FEARLESS CORPORATION
IKEGAMI TSUSHINKI CO., LTD.
MOTOROLA COMMUNICATIONS
POWER-OPTICS INCORPORATED
RCA BROADCAST PRDTS.
SHINTRON CO, INC.
TELE-MEASUREMENTS INC.
TELEVISION UTILITIES CORP
TELEVISION ZOOMAR
VIDEO COMPONENTS, INC.
VIDEO SYSTEMS

CAMERAS, FILM, CINE

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ARRIFLEX CORP OF AMERICA
BECKMAN & WHITLEY
BIRNS & SAWYER
EASTMAN KODAK CO.
FAIRCHILD INDUSTRIAL PRODUCTS
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METROFILM CORP.
D. B. MILLIKEN COMPANY
NORTH AMERICAN PHILIPS CO
PRECISION LABORATORIES
TELE-MEASUREMENTS INC.
TRAID CORPORATION

CAMERAS, FILM STILL

CHARLES BESELER CO.
BURKE & JAMES
EASTMAN KODAK CO.
GENERAL ANILINE & FILM CORP.
METROFILM CORP.
NORTH AMERICAN PHILIPS CO
OMNIBUS RESEARCH LABORATORIES
PRECISION LABORATORIES

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GORDON ENTERPRISES
HEWLETT-PACKARD CO.
THE SINGER CO - METRICS DIV
TEKTRONIX INC
TELE-MEASUREMENTS INC.
TRAID CORPORATION

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AMPEX CORPORATION
AMPLIVISION CORPORATION
ASCO SONOCRAFT CORP
COHU ELECTRONICS
G E VISUAL COMMUNICATIONS PROD
IKEGAMI TSUSHINKI CO., LTD.
MARCONI DIVISION
NORTH AMERICAN PHILIPS CO
PACKARD BELL ELECTRONICS,
RCA BROADCAST PRDTS.
SARKES-TARZIAN
TELE-MEASUREMENTS INC.
VISUAL ELECTRONICS CORP

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AMPEX CORPORATION
AMPLIVISION CORPORATION
ATV RESEARCH
BAUER BROADCAST PRODUCTS DIV.
THE BENDIX CORP.
BLONDER-TONGUE LABORATORIES
COHU ELECTRONICS
COLORADO VIDEO
DAGE BELL CORPORATION
DIAMOND ELECTRONICS
DIAMOND POWER SPECIALTY CORP.
DIECRAFT, INC.
G E VISUAL COMMUNICATIONS PROD
GENERAL ELECTRIC CO.
GORDON ENTERPRISES
GPL DIV.
IKEGAMI TSUSHINKI CO., LTD.
MARCONI DIVISION
NORTH AMERICAN PHILIPS CO
PACKARD BELL ELECTRONICS,
RAYTHEON LEARNING SYSTEMS CO.
RCA BROADCAST PRDTS.
ROCKE INTERNATIONAL CORP.
SARKES-TARZIAN
SHINTRON CO, INC.
SONY CORPORATION OF AMERICA
SYLVANIA-COMM. ELECTRONICS DIV
TELEVISION, INC.
TELE-MEASUREMENTS INC.
TELEVISION UTILITIES CORP
THOMSON ELECTRIC CO
VIDEO SYSTEMS
VISUAL ELECTRONICS CORP
VIKOA, INC.

CAPACITORS, FIXED, AIR

G E CAPACITOR DEPARTMENT
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SINGER PRODUCTS CO.
TRW ELECTRONICS

CAPACITORS, FIXED, CERAMIC

AEROVOX CORP.
AMERICAN ELITE
CENTRALAB
CORNELL-DUBILIER ELECTRONICS
G E CAPACITOR DEPARTMENT
MALLORY DISTRIBUTOR PRODUCTS
SINGER PRODUCTS CO.
TRW ELECTRONICS

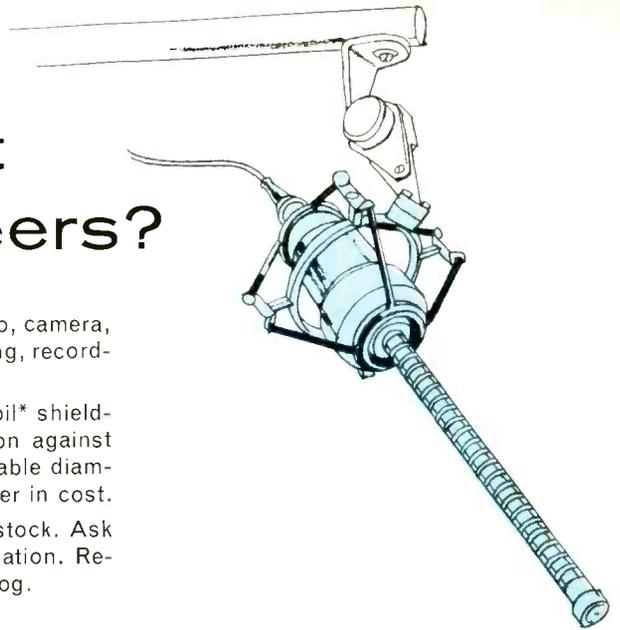
CAPACITORS, FIXED, ELECTROLYTIC

AEROVOX CORP.
AMERICAN ELITE
AMPEREX ELECTRONIC CORP
CORNELL-DUBILIER ELECTRONICS
GENERAL ELECTRIC CO
GENERAL INSTRUMENT CORP
INTERNATIONAL ELECTRONICS CORP
MALLORY DISTRIBUTOR PRODUCTS
OHMITE MANUFACTURING COMPANY
SINGER PRODUCTS CO.

CAPACITORS, FIXED, FILM

AEROVOX CORP.
AMERICAN ELITE
AMPEREX ELECTRONIC CORP
CORNELL-DUBILIER ELECTRONICS
DEARBORN ELECTRONICS INC
GENERAL ELECTRIC CO
INTERNATIONAL ELECTRONICS CORP
MALLORY DISTRIBUTOR PRODUCTS
THE NOVA COMPANY
SCIENTIFIC ELECTRONIC PRODUCTS
SINGER PRODUCTS CO.
TEXAS INSTRUMENTS
TRW ELECTRONICS

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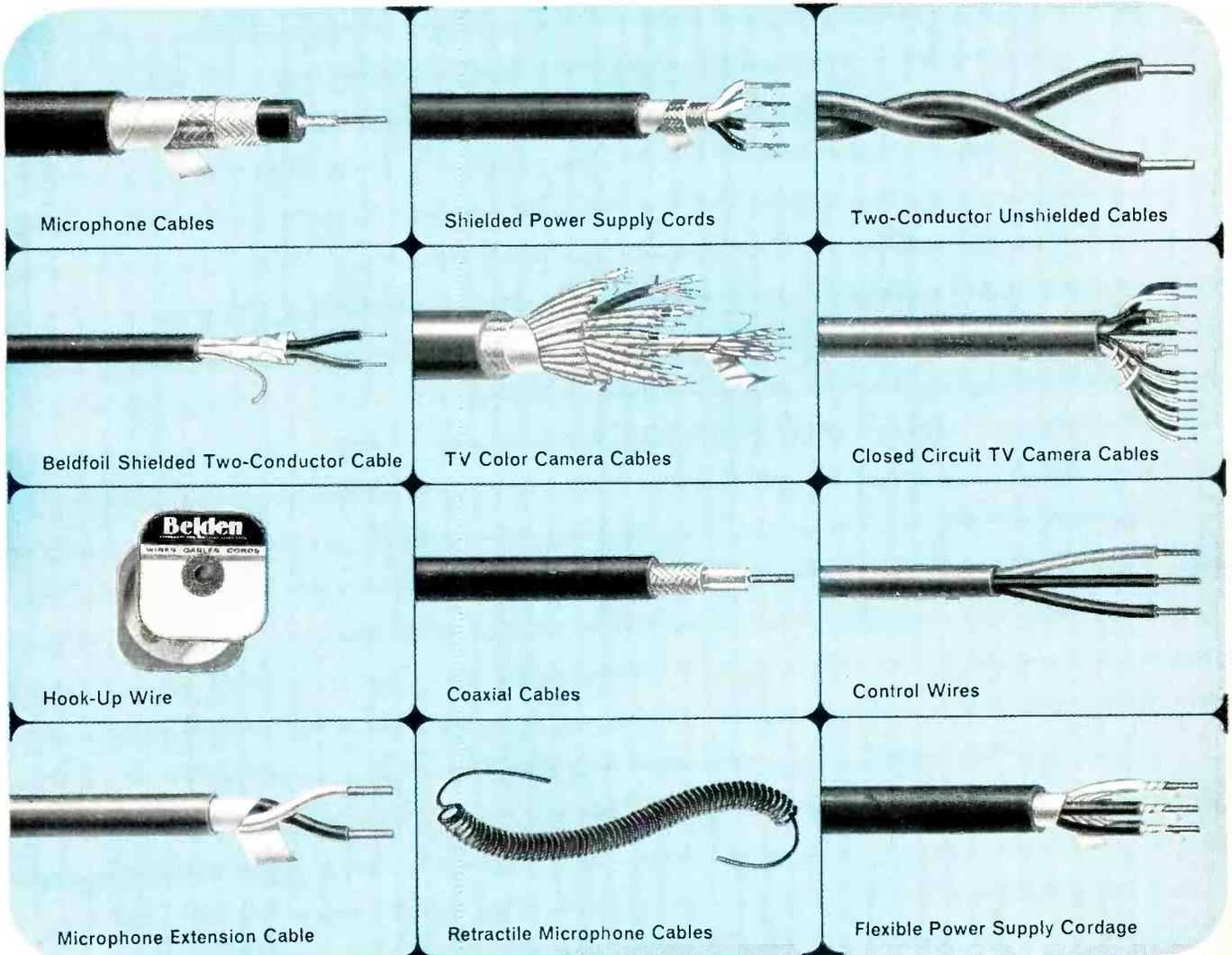


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INTERNATIONAL ELECTRONICS CORP
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SCIENTIFIC ELECTRONIC PRODUCTS
SINGER PRODUCTS CO.

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AMPEREX ELECTRONIC CORP
CENTRALAB
CORNELL DUBILIER ELECTRONICS
DEARBORN ELECTRONICS INC
GENERAL ELECTRIC CO
INTERNATIONAL ELECTRONICS CORP
THE NOVA COMPANY
SCIENTIFIC ELECTRONIC PRODUCTS
SINGER PRODUCTS CO.
TRW ELECTRONICS

CAPACITORS, FIXED, MICA

AEROVOX CORP.
AMPEREX ELECTRONIC CORP
CORNELL DUBILIER ELECTRONICS
G E CAPACITOR DEPARTMENT
GENERAL INSTRUMENT CORP.
GENERAL RADIO CO
SINGER PRODUCTS CO.

CAPACITORS, FIXED, OIL-FILLED

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DEARBORN ELECTRONICS INC
G E CAPACITOR DEPARTMENT
GENERAL ELECTRIC CO
MALLORY DISTRIBUTOR PRODUCTS
SINGER PRODUCTS CO.

CAPACITORS, FIXED, PAPER

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CORNELL DUBILIER ELECTRONICS
DEARBORN ELECTRONICS INC
GENERAL ELECTRIC CO
GENERAL INSTRUMENT CORP.
SINGER PRODUCTS CO.

CAPACITORS, FIXED, OTHER

AEROVOX CORP.
CALVERT ELECTRONICS
CORNELL DUBILIER ELECTRONICS
DEARBORN ELECTRONICS INC
G E CAPACITOR DEPARTMENT
GENERAL ELECTRIC CO
GENERAL INSTRUMENT CORP
ITT JENNINGS DIV.
SINGER PRODUCTS CO.

CAPACITORS, VARIABLE

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BUD RADIO, INC
CARDWELL CONDENSER CORP
CENTRALAB
GENERAL INSTRUMENT CORP.
GENERAL RADIO CO
HAMMARLUND MANUFACTURING CO.
ITT JENNINGS DIV.
E F JOHNSON COMPANY
THE MACLETT LABORATORIES
ROANWELL CORPORATION
SARKES-TARZIAN
SCIENTIFIC ELECTRONIC PRODUCTS
SINGER PRODUCTS CO.
SOLITRON DEVICES
TRW ELECTRONICS

CARRIER CURRENT EQUIPMENT

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CARDION COMMUNICATIONS
GENERAL ELECTRIC CO
ORBIT RADIO
RUST CORP.

CARTRIDGES, MAGNETIC TAPE

AMERLINE CORPORATION
ATC DIV. GATES RADIO
AUDIO DEVICES
AUDIO INSTRUMENT CO.
BROADCAST ELECTRONICS, INC.
CINE SONIC SOUND
DISPLAY TECHNOLOGIES INC
GATES RADIO COMPANY
INTERNATIONAL GOOD MUSIC
KRS INSTRUMENTS DIVISION
MACARTA INC.
MACKENZIE LABORATORIES
MAGNA-TECH CORPORATION
MAGNETIC MEDIA CORPORATION
MARATHON PRODUCTS CORP.
MINNESOTA MINING - 3 M
RCA BROADCAST PRODS.

ROBINS INDUSTRIES CORP.
ROCKE INTERNATIONAL CORP.
SINGER PRODUCTS CO.
SOUND STUDIOS INC.
SPARTA ELECTRONIC CORPORATION
TAPECASTER ELECTRONICS
TELE-MEASUREMENTS INC.
VIKING TAPE RECORDERS

CARTRIDGES, PHONO

THE ASTATIC CORPORATION
BENJAMIN ELECTRONIC SOUND CORP
DIACOUSTIC LABORATORY
ELECTRO-VOICE INC
EUPHONICS MARKETING
FAIRCHILD RECORDING EQUIPMENT
G E DISTRIBUTOR SALES FORCE
GENERAL ELECTRIC CO
GOTHAM AUDIO CORPORATION
GRADO LABORATORIES, INC
ROCKE INTERNATIONAL CORP.
SHURE BROTHERS, INC.
SINGER PRODUCTS CO
SONY CORPORATION OF AMERICA
SPARTA ELECTRONIC CORPORATION

CARTRIDGES, TAPE, RECORDING SERVICE

AUDIO INSTRUMENT CO
CINE SONIC SOUND
MAGNA-TECH CORPORATION
MARATHON PRODUCTS CORP.
ORBIT RADIO
SOUND STUDIOS INC.
SINGER PRODUCTS CO.

CASES, PORTABLE, ELECTRONIC EQUIPMENT

HEWLETT-PACKARD CO.
INTERNATIONAL NUCLEAR CORP.
TELEVISION UTILITIES CORP

CATV EQUIPMENT - ALSO SEE OTHER CATEGORIES

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AMERICAN CABLE ELECTRONICS
AMPLIVISION CORPORATION
ANACONDA ASTRODATA CO
BENCO TELEVISION ASSOCIATES
ELECTROLINE TV EQUIPMENT INC.
KAISER-COX
PRUZAN COMPANY
SIGMA INDUSTRIES
SPENCER-KENNEDY LABORATORIES
TRW ELECTRONICS

CATV, CABLE TERMINALS

AMECO, INC.
AMERICAN PAMCOR, INC
ANACONDA ASTRODATA CO
AVA ELECTRONICS & MACHINE CORP
BENCO TELEVISION ASSOCIATES
CAS MANUFACTURING CO.
CRAFTSMAN ELECTRONICS PRODUCTS
ENTRON INC
JERROLD ELECTRONICS CORP
KAISER-COX
KATONA ELECTRONICS CO.
RELIABLE ELECTRIC
SIGMA INDUSTRIES
SUPERIOR CONTINENTAL CORP.
TELEMET COMPANY
TELESYSTEM SERVICES CORP.
UTILITY PRODUCTS CO.
VIKOA, INC.

CATV, CHANNEL AMPLIFIERS

AMECO, INC.
AMPLIVISION CORPORATION
ANACONDA ASTRODATA CO
KEITH ANDERSON CO
AVA ELECTRONICS & MACHINE CORP
BENCO TELEVISION ASSOCIATES
BLONDER-TONGUE LABORATORIES
CAS MANUFACTURING CO.
C-COR ELECTRONICS
ELECTRONICS DEVELOPMENT CORP.
ENTRON INC
JERROLD ELECTRONICS CORP
KAISER-COX
KATONA ELECTRONICS CO.
SIGNAL ENGINEERING & SALES INC
SPENCER-KENNEDY LABORATORIES
TELESIS CORPORATION
TELESYSTEM SERVICES CORP.
VIKOA, INC.

CATV, HEAD-END EQUIPMENT

AMECO, INC.
AMPEX CORPORATION
AMPLIVISION CORPORATION
ANACONDA ASTRODATA CO
KEITH ANDERSON CO
AVA ELECTRONICS & MACHINE CORP
BENCO TELEVISION ASSOCIATES
BLONDER-TONGUE LABORATORIES

CAS MANUFACTURING CO.
C-COR ELECTRONICS
COHU ELECTRONICS
DYNAIR ELECTRONICS, INC.
ELECTRONICS DEVELOPMENT CORP.
ENTRON INC
INTERNATIONAL GOOD MUSIC
INTERNATIONAL NUCLEAR CORP.
JERROLD ELECTRONICS CORP
KAISER-COX
KATONA ELECTRONICS CO.
ROHN MANUFACTURING CO.
SCIENTIFIC-ATLANTA
SIGNAL ENGINEERING & SALES INC
SPENCER-KENNEDY LABORATORIES
TELEMATION, INC.
TELESYSTEM SERVICES CORP.
VIKOA, INC.

CATV, ORIENTATION EQUIPMENT

AMECO, INC.
AMERICAN CABLE ELECTRONICS
AMPEX CORPORATION
AMPLIVISION CORPORATION
KEITH ANDERSON CO
BLONDER TONGUE LABORATORIES
CAS MANUFACTURING CO.
CATEL COMPANY
CENTRAL DYNAMICS CORPORATION
COHU ELECTRONICS
COPPERWELD STEEL COMPANY
ELECTRONICS DEVELOPMENT CORP.
KAISER-COX
KATONA ELECTRONICS CO.
RAYTHEON LEARNING SYSTEMS CO.
RCA BROADCAST PRODS.
SIGNAL ENGINEERING & SALES INC
SYLVANIA-COMM. ELECTRONICS DIV
TAPE-ATHON CORPORATION
TELEMATION, INC.
TELESYSTEM SERVICES CORP.
TELEVISION UTILITIES CORP
TELEVISION ZOOMAR
VIKOA, INC.

CAVITIES, MICROWAVE

COMMUNICATIONS PRODUCTS CO
DEMORNAY - BONARDI DIVISION
ELECTROMAGNETIC RADIATION LABS
GENERAL MICROWAVE CORPORATION
JERICHO ELECTRONICS SUPPLY
MICROLAB - FXR
NARDA MICROWAVE CORPORATION
RCA ELECTRONIC COMPONENTS

CHARGERS, BATTERY

ALLIED ELECTRONICS CORP
COLORTRAN INDUSTRIES - BERKEY
ENGINEERING ASSOCIATES
GENERAL ELECTRIC CO
IMPEX ELECTRONICS CORP
ONAN DIVISION
POWER SOURCES
SINGER PRODUCTS CO

CHOKES, WAVEGUIDE

DEMORNAY - BONARDI DIVISION
MICROLAB - FXR
NARDA MICROWAVE CORPORATION

CHOPPERS

ANRITSU ELECTRIC CO., LTD.
GENERAL ELECTRIC CO
HEWLETT-PACKARD CO.
OAK MANUFACTURING CO
SINGER PRODUCTS CO.

CIRCUIT BREAKERS

G E INDUSTRIAL SALES OPERATION
GENERAL ELECTRIC CO
HOUSTON ELECTRONICS CO.
LITTLELUSE, INC.
MALLORY DISTRIBUTOR PRODUCTS

CIRCUITS, PRINTED

AMECO, INC.
ATV RESEARCH
COLLINS RADIO COMPANY
SOLITRON DEVICES
TREPAC CORPORATION OF AMERICA
VITRO ELECTRONICS

CLAMPS, CABLE

AMECO, INC.
BIRNBACH CO
DIAMOND EXPANSION BOLT CO INC
G C ELECTRONICS COMPANY
SINGER PRODUCTS CO
TELEQUIP CORPORATION
THE THOMAS & BETTS CO
UTILITY TOWER CO.
WECKESSER COMPANY, INC.

CLAMPS, COMPONENT

ELECTROVERT, INCORPORATED
SINGER PRODUCTS CO.
THE THOMAS & BETTS CO

CLAMPS, GROUND

AMECO, INC.
G C ELECTRONICS COMPANY
RELIABLE ELECTRIC
SINGER PRODUCTS CO.
THE THOMAS & BETTS CO
UTILITY TOWER CO.

CLAMPS, TUBE

BIRNBACH CO
SINGER PRODUCTS CO.
THE THOMAS & BETTS CO

CLEANERS, AIR

THE TEXWIPE COMPANY

CLEANERS, CHEMICAL ALSO SEE SOLVENTS

G C ELECTRONICS COMPANY
GENERAL ANILINE & FILM CORP.
J W GIBSON CO, INC
NEUMADE PRODUCTS CORPORATION
SINGER PRODUCTS CO.
THE TEXWIPE COMPANY

CLEANERS, LENS

BURKE & JAMES
DUOTONE COMPANY INC
G C ELECTRONICS COMPANY
THE TEXWIPE COMPANY

CLEANERS, OTHER ALSO SEE SOLVENTS

DUOTONE COMPANY INC.
G C ELECTRONICS COMPANY
ROBINS INDUSTRIES CORP.
THE TEXWIPE COMPANY

CLIPS, TEST

ELECTRONICS ESSENTIALS OF CCC
GENERAL MACHINE PRODUCTS CO.
INDUSTRIAL DEVICES, INC.

CLOCKS & CHRONOGRAPHS

AMPHENOL CORP.
CENTRAL DYNAMICS CORPORATION
CHRONO-LOG CORPORATION
G E SUPPLY COMPANY
GIBBS MFG. AND RESEARCH CORP.
PRESEARCH INC.
RIKER VIDEO INDUSTRIES
STANDARD ELECTRIC TIME CO.
TEXAS ELECTRONICS
VISUAL ELECTRONICS CORP

COILS, ANTENNA LOADING

BARKER & WILLIAMSON
COLLINS RADIO COMPANY
DELTA ELECTRONICS INC — VA
GATES RADIO COMPANY
INTERNATIONAL ELECTRONICS CORP
MULTNTRONICS
PRODELIN, INCORPORATED
ROCKE INTERNATIONAL CORP.
TRW ELECTRONICS

COILS, CHOKE, AF

ADC PRODUCTS
PERMOFLUX CORPORATION
ROCKE INTERNATIONAL CORP.
SCIENTIFIC ELECTRONIC PRODUCTS
TRW ELECTRONICS
UNITED TRANSFORMER COMPANY

COILS, CHOKE, RF

ADC PRODUCTS
BARKER & WILLIAMSON
CALBEST ELECTRONICS
D & B ELECTRONICS COMPANY
GATES RADIO COMPANY
E F JOHNSON COMPANY
OHMITE MANUFACTURING COMPANY
ROCKE INTERNATIONAL CORP.
SCIENTIFIC ELECTRONIC PRODUCTS
TRW ELECTRONICS

COILS, DEFLECTION AND FOCUSING

AMERICAN ELITE
ATV RESEARCH
CLEVELAND ELECTRONICS
DEFLECTION COMPONENTS DIV
LAKE ELECTRONICS, INC.
SCIENTIFIC ELECTRONIC PRODUCTS
TRW ELECTRONICS

COILS, HYBRID

ADC PRODUCTS

COILS, TELEPHONE

ADC PRODUCTS
THE JAMES FLOYD FORD CO
MILES REPRODUCER CO
UNITED TRANSFORMER COMPANY

COLORIMETERS

TEST INSTR. DIV. HONEYWELL
SINGER PRODUCTS CO.
TELEVISION ZOOMAR

COMMUNICATIONS SYSTEMS, CB

AMPHENOL CORP.
BROWNING LABORATORIES, INC.
COURIER COMMUNICATIONS
F & M SYSTEMS COMPANY
HEATH CO.
E F JOHNSON COMPANY
THE NOVA COMPANY
PRODELIN, INCORPORATED
SCIENTIFIC ELECTRONIC PRODUCTS
SINGER PRODUCTS CO.
UTICA ELECTRONICS

COMMUNICATIONS SYSTEMS, INTERCOM, WIRED

ALCOR, INC.
AMERICAN ELITE
AMERICAN GELOSO ELECTRONICS
ASCO SONOCRAFT CORP
AUDIO INSTRUMENT CO
BELL P-A PRODUCTS CORP.
BOGEN COMMUNICATIONS DIV.
CALBEST ELECTRONICS
CENTRAL DYNAMICS CORPORATION
COHU ELECTRONICS
DIVERSIFIED ELECTRONIC CORP
FISHER BERKELEY CORPORATION
F & M SYSTEMS COMPANY
THE JAMES FLOYD FORD CO
HEATH CO.
ITT TELECOMMUNICATIONS
LTV LING ALTEC, INC.
MCMARTIN INDUSTRIES
MOTOROLA COMMUNICATIONS
ROCKE INTERNATIONAL CORP.
SINGER PRODUCTS CO.
SOUTHWESTERN COMMUNICATIONS
TANDBERG OF AMERICA, INC.
THE TECHNICAL MATERIEL CORP
TELECONTROL CORP.
VIRGINIA ELECTRONICS CO., INC.
VISUAL ELECTRONICS CORP
WARD ELECTRONIC INDUSTRIES

COMMUNICATIONS SYSTEMS, INTERCOM, WIRELESS

ALLIED ELECTRONICS CORP
ASCO SONOCRAFT CORP
BOGEN COMMUNICATIONS DIV.
FISHER BERKELEY CORPORATION
F & M SYSTEMS COMPANY
GATES RADIO COMPANY
HEATH CO.
E F JOHNSON COMPANY
MILES REPRODUCER CO
ROUND HILL ASSOCIATES
SOUTHWESTERN COMMUNICATIONS
THE TECHNICAL MATERIEL CORP
VEGA ELECTRONICS CORP
VISUAL ELECTRONICS CORP

COMMUNICATIONS SYSTEMS, LAND MOBILE

AMERICAN ELITE
COLLINS RADIO COMPANY
F & M SYSTEMS COMPANY
HAMMARLUND MANUFACTURING CO.
IKEGAMI TSUSHINKI CO., LTD.
J M ELECTRONICS COMPANY
E F JOHNSON COMPANY
LTV LING ALTEC, INC.
MARTI ELECTRONICS
MOSELEY ASSOCIATES INC.
MOTOROLA COMMUNICATIONS
MULTRONICS
THE NOVA COMPANY
PRODELIN, INCORPORATED
RCA BROADCAST PRODS.
ROCKE INTERNATIONAL CORP.
SINGER PRODUCTS CO.
SOUTH SHORE RADIO TELEPHONE
THE TECHNICAL MATERIEL CORP
VIRGINIA ELECTRONICS CO., INC.

COMMUNICATIONS SYSTEMS, MICROWAVE

AMERICAN ELITE
AMPLIVISION CORPORATION
CARDION COMMUNICATIONS
COLLINS RADIO COMPANY
DRESSER CRANE HOIST & TOWER
ELECTRONICS DEVELOPMENT CORP.
F & M SYSTEMS COMPANY
GENERAL MICROWAVE CORPORATION
ITT TELECOMMUNICATIONS
JERICHO ELECTRONICS SUPPLY
JERROLD ELECTRONICS CORP
LENKURT ELECTRIC CO., INC.
MARTI ELECTRONICS
MICRO-LINK SYSTEMS-VARIAN
MOTOROLA COMMUNICATIONS
MOSELEY ASSOCIATES INC.
MOTOROLA COMMUNICATIONS
PRODELIN, INCORPORATED
RAYTHEON CO.
RCA BROADCAST PRODS.
RHC ELECTRONICS LABORATORY
SIGNAL ENGINEERING & SALES INC
SINGER PRODUCTS CO.
STAINLESS, INC.
THE TECHNICAL MATERIEL CORP
TELE-MEASUREMENTS INC.
VIDEO SYSTEMS

COMMUNICATIONS SYSTEMS, MULTIPLEX

AMERICAN ELECTRONIC LABS
AMERICAN ELITE
BELAR ELECTRONICS LABORATORY
CARDION COMMUNICATIONS
COLLINS RADIO COMPANY
ELECTRONICS DEVELOPMENT CORP.
F & M SYSTEMS COMPANY
GATES RADIO COMPANY
ITT TELECOMMUNICATIONS
LENKURT ELECTRIC CO., INC.
MCMARTIN INDUSTRIES
MICROWAVE ASSOCIATES, INC.
MOSELEY ASSOCIATES INC.
RCA BROADCAST PRODS.
RHC ELECTRONICS LABORATORY
SINGER PRODUCTS CO.
THE TECHNICAL MATERIEL CORP

COMMUNICATIONS SYSTEMS TELEPRINTER

COLLINS RADIO COMPANY
F & M SYSTEMS COMPANY
GATES RADIO COMPANY
SINGER PRODUCTS CO.
THE TECHNICAL MATERIEL CORP.
TREPAC CORPORATION OF AMERICA

COMPUTER EQUIPMENT

AMPEX CORPORATION
COLLINS RADIO COMPANY
DATEX DIV., CONRAC CORP.
DISPLAY TECHNOLOGIES INC
GENERAL ELECTRIC CO
HANCOCK TELECONTROL
HARVEY RADIO CO. INC.
HEATH CO.
HEWLETT-PACKARD CO.
SARKES-TARZIAN
S. STERLING COMPANY
TELECONTROL CORP.

COMPUTER SERVICES

ACME VISIBLE RECORDS
COLLINS RADIO COMPANY
THE JAMES FLOYD FORD CO
G C ELECTRONICS COMPANY
S. STERLING COMPANY

CONNECTORS, AF & MICROPHONE

AMPHENOL CORP.
AVA ELECTRONICS & MACHINE CORP
BELL P-A PRODUCTS CORP.
DIALIGHT CORPORATION
ELECTRONICS ESSENTIALS OF CCC
G C ELECTRONICS COMPANY
GOTHAM AUDIO CORPORATION
ITT CANNON ELECTRIC
ROBINS INDUSTRIES CORP.
SINGER PRODUCTS CO.
SWITCHCRAFT, INC.
TROMPETER ELECTRONICS

CONNECTORS, ANTENNA

AMECO, INC.
AMERICAN PAMCOR, INC
AMPHENOL CORP.
AMPLIVISION CORPORATION
AVA ELECTRONICS & MACHINE CORP
BARKER & WILLIAMSON
COMMUNICATIONS PRODUCTS CO
CRAFTSMAN ELECTRONICS PRODUCTS
ITT CANNON ELECTRIC
PHELPS DODGE
PRODELIN, INCORPORATED
SINGER PRODUCTS CO.
TROMPETER ELECTRONICS

CONNECTORS, COAXIAL CABLE

AMECO, INC.
AMERICAN CABLE ELECTRONICS
AMERICAN PAMCOR, INC
AMPHENOL CORP.
AMPLIVISION CORPORATION
ANACONDA ASTRODATA CO
ANDREW CORPORATION
AVA ELECTRONICS & MACHINE CORP
BENCO TELEVISION ASSOCIATES
BLONDER-TONGUE LABORATORIES
BOSTON INSULATED WIRE & CABLE
CAS MANUFACTURING CO.
CEI
CDOKE ENGINEERING COMPANY
CRAFTSMAN ELECTRONICS PRODUCTS
ELECTROMAGNETIC RADIATION LABS
GILBERT ENGINEERING CO., INC.
ITT CANNON ELECTRIC
JERROLD ELECTRONICS CORP
KAISER-COX
KATONA ELECTRONICS CO.
NARDA MICROWAVE CORPORATION
PHELPS DODGE
PRODELIN, INCORPORATED
SIGMA INDUSTRIES
SINGER PRODUCTS CO.
SPENCER-KENNEDY LABORATORIES
SUPERIOR CONTINENTAL CORP.

THE TECHNICAL MATERIEL CORP

TELETRONIX
THE THOMAS & BETTS CO
TIMES WIRE AND CABLE
TROMPETER ELECTRONICS
VIKOA, INC.
VITRO ELECTRONICS

CONNECTORS, POWER

AMECO, INC.
AMERICAN PAMCOR, INC
AMPHENOL CORP.
ITT CANNON ELECTRIC
SINGER PRODUCTS CO.
THE THOMAS & BETTS CO
WABER ELECTRONICS, INC.

CONNECTORS, RF

AMECO, INC.
AMERICAN PAMCOR, INC
AMPHENOL CORP.
AMPLIVISION CORPORATION
ANDREW CORPORATION
AVA ELECTRONICS & MACHINE CORP
BIRD ELECTRONIC CORPORATION
BLONDER-TONGUE LABORATORIES
COMMUNICATIONS PRODUCTS CO
CRAFTSMAN ELECTRONICS PRODUCTS
GENERAL RADIO CO
ITT CANNON ELECTRIC
NARDA MICROWAVE CORPORATION
PHELPS DODGE
PRODELIN, INCORPORATED
SINGER PRODUCTS CO.
SUPERIOR CONTINENTAL CORP.
THE TECHNICAL MATERIEL CORP
THE THOMAS & BETTS CO
TIMES WIRE AND CABLE
TROMPETER ELECTRONICS
VIKOA, INC.
VITRO ELECTRONICS

CONSOLE, AUDIO, AM

ALMA ENGINEERING INC
ANCHA ELECTRONICS
BAUER BROADCAST PRODUCTS DIV.
BRADFORD INFORMATION SYSTEMS
COLLINS RADIO COMPANY
DATA INSTRUMENT DIVISION
DIVERSIFIED ELECTRONIC CORP
FAIRCHILD RECORDING EQUIPMENT
GATES RADIO COMPANY
G E VISUAL COMMUNICATIONS PROD
GOTHAM AUDIO CORPORATION
HARVEY RADIO CO. INC.
HOUSTON ELECTRONICS CO.
IKEGAMI TSUSHINKI CO., LTD.
IMPEX ELECTRONICS CORP
INTERNATIONAL NUCLEAR CORP.
LITTLE JOE ENTERPRISES
LTV LING ALTEC, INC.
MARCONI DIVISION
MID AMERICA ELECTRONICS CORP
ORBIT RADIO
RAYTHEON LEARNING SYSTEMS CO.
ROCKE INTERNATIONAL CORP.
SINGER PRODUCTS CO
SOUTHWESTERN COMMUNICATIONS
SPARTA ELECTRONIC CORPORATION
STEPHENS ELECTRONICS
THE TECHNICAL MATERIEL CORP
TELETRONIX
ULTRA AUDIO PRODUCTS
UNITED RADIO SUPPLY, INC
VISUAL ELECTRONICS CORP
WARD ELECTRONIC INDUSTRIES
WESTREX
WILKINSON ELECTRONICS, INC
W.R.S. ELECTRONICS, LTD.

CONSOLE, AUDIO, FM

ALMA ENGINEERING INC
ANCHA ELECTRONICS
BAUER BROADCAST PRODUCTS DIV.
COLLINS RADIO COMPANY
DATA INSTRUMENT DIVISION
FAIRCHILD RECORDING EQUIPMENT
GATES RADIO COMPANY
G E VISUAL COMMUNICATIONS PROD
GOTHAM AUDIO CORPORATION
HARVEY RADIO CO. INC.
HOUSTON ELECTRONICS CO.
IKEGAMI TSUSHINKI CO., LTD.
IMPEX ELECTRONICS CORP
LITTLE JOE ENTERPRISES
LTV LING ALTEC, INC.
MID AMERICA ELECTRONICS CORP
ORBIT RADIO
RAYTHEON LEARNING SYSTEMS CO.
ROCKE INTERNATIONAL CORP.
SINGER PRODUCTS CO
SOUTHWESTERN COMMUNICATIONS
SPARTA ELECTRONIC CORPORATION
STANDARD ELECTRONICS CORP
STEPHENS ELECTRONICS
THE TECHNICAL MATERIEL CORP
TELETRONIX
ULTRA AUDIO PRODUCTS
UNITED RADIO SUPPLY, INC
VISUAL ELECTRONICS CORP

**WARD ELECTRONIC INDUSTRIES
WILKINSON ELECTRONICS, INC
W.R.S. ELECTRONICS, LTD.****CONSDLE, AUDIO, PORTABLE**

ALCOR, INC.
ALMA ENGINEERING INC
AMPEX CORPORATION
BAUER BROADCAST PRODUCTS DIV.
BROADCAST ELECTRONICS, INC
COLLINS RADIO COMPANY
DATA INSTRUMENT DIVISION
DELTA ELECTRONICS, INC — NC
DIVERSIFIED ELECTRONIC CORP
FAIRCHILD RECORDING EQUIPMENT
GATES RADIO COMPANY
GOTHAM AUDIO CORPORATION
HARVEY RADIO CO. INC.
HOUSTON ELECTRONICS CO.
IMPEX ELECTRONICS CORP
LANG ELECTRONICS, INC
LITTLE JOE ENTERPRISES
LTV LING ALTEC, INC.
MAGNASYN MOVIOLOA CORP.
MARCONI DIVISION
MID AMERICA ELECTRONICS CORP
NEMO RECORDING LAB'S
NORTH AMERICAN PHILIPS CO
ORBIT RADIO
ROCKE INTERNATIONAL CORP.
SINGER CO.
SOUTHWESTERN COMMUNICATIONS
SPARTA ELECTRONIC CORPORATION
STEPHENS ELECTRONICS
THE TECHNICAL MATERIEL CORP
TELETRONIX
ULTRA AUDIO PRODUCTS
VISUAL ELECTRONICS CORP
WESTREX
W.R.S. ELECTRONICS, LTD.

CONSOLE, AUDIO, RECORDING

ALCOR, INC.
ALMA ENGINEERING INC
AMERICAN ELITE
AMPEX CORPORATION
ANCHA ELECTRONICS
ASCO SONOCRAFT CORP
BAUER BROADCAST PRODUCTS DIV.
BRADFORD INFORMATION SYSTEMS
COLLINS RADIO COMPANY
DATA INSTRUMENT DIVISION
DELTA ELECTRONICS, INC. — NC
FAIRCHILD RECORDING EQUIPMENT
GATES RADIO COMPANY
GOTHAM AUDIO CORPORATION
HARVEY RADIO CO. INC.
HOUSTON ELECTRONICS CO.
IMPEX ELECTRONICS CORP
LANG ELECTRONICS, INC
LITTLE JOE ENTERPRISES
LTV LING ALTEC, INC.
MID AMERICA ELECTRONICS CORP
NEMO RECORDING LAB'S
NORTH AMERICAN PHILIPS CO
ORBIT RADIO
ROCKE INTERNATIONAL CORP.
SINGER PRODUCTS CO.
SOUTHWESTERN COMMUNICATIONS
SPARTA ELECTRONIC CORPORATION
STEPHENS ELECTRONICS
THE TECHNICAL MATERIEL CORP
TELE-MEASUREMENTS INC.
TELETRONIX
ULTRA AUDIO PRODUCTS
UNITED RADIO SUPPLY, INC
VISUAL ELECTRONICS CORP
WESTREX
WILKINSON ELECTRONICS, INC
W.R.S. ELECTRONICS, LTD.

CONSOLE, AUDIO, TV

ALCOR, INC.
ALMA ENGINEERING INC
ANCHA ELECTRONICS
BAUER BROADCAST PRODUCTS DIV.
BRADFORD INFORMATION SYSTEMS
CENTRAL DYNAMICS CORPORATION
COLLINS RADIO COMPANY
DATA INSTRUMENT DIVISION
FAIRCHILD RECORDING EQUIPMENT
GATES RADIO COMPANY
G E VISUAL COMMUNICATIONS PROD
GOTHAM AUDIO CORPORATION
HOUSTON ELECTRONICS CO.
INTERNATIONAL NUCLEAR CORP.
LAKE ELECTRONICS, INC.
LITTLE JOE ENTERPRISES
LTV LING ALTEC, INC.
MARCONI DIVISION
MARYLAND TELECOMMUNICATIONS
MID AMERICA ELECTRONICS CORP
ORBIT RADIO
RAYTHEON LEARNING SYSTEMS CO.
RCA BROADCAST PRODS.
ROCKE INTERNATIONAL CORP.
SARKES-TARZIAN
SIGNAL ENGINEERING & SALES INC
SINGER PRODUCTS CO.
SOUTHWESTERN COMMUNICATIONS
SPARTA ELECTRONIC CORPORATION
STANDARD ELECTRONICS CORP

STEPHENS ELECTRONICS
S. STERLING COMPANY
SYLVANIA-COMM. ELECTRONICS DIV
THE TECHNICAL MATERIEL CORP
TELE-MEASUREMENTS INC.
TELEMET COMPANY
TELETRONIX
TELEVISION UTILITIES CORP
ULTRA AUDIO PRODUCTS
VIDEO SYSTEMS
VISUAL ELECTRONICS CORP
WARD ELECTRONIC INDUSTRIES
WILKINSON ELECTRONICS, INC
W.R.S. ELECTRONICS, LTD.

CONSOLE CABINETS & HARDWARE

ASCO SONOCRAFT CORP
BUD RADIO, INC
COLLINS RADIO COMPANY
DATA INSTRUMENT DIVISION
ENCLOSURE CORP
GRINNAN FIXTURE COMPANY
LANG ELECTRONICS, INC
LITTLE JOE ENTERPRISES
LTV LING ALTEC, INC.
SPARTA ELECTRONIC CORPORATION
TELEVISION UTILITIES CORP
VENT-RAK INCORPORATED
W.R.S. ELECTRONICS, LTD.

CONSOLE, KITS

DATA INSTRUMENT DIVISION
DIVERSIFIED ELECTRONIC CORP
GOTHAM AUDIO CORPORATION
LTV LING ALTEC, INC.
SHINTRON CO., INC.
SINGER PRODUCTS CO.
ULTRA AUDIO PRODUCTS
W.R.S. ELECTRONICS, LTD.

CONSOLE, VIDEO, PORTABLE

ALCOR, INC.
ALMA ENGINEERING INC
AMPEX CORPORATION
AMPLIVISION CORPORATION
CENTRAL DYNAMICS CORPORATION
DATA INSTRUMENT DIVISION
GORDON ENTERPRISES
INTERNATIONAL NUCLEAR CORP.
MINNESOTA MINING - 3 M
PACKARD BELL ELECTRONICS
RICHMOND HILL LABORATORIES
RIKER VIDEO INDUSTRIES
ROCKE INTERNATIONAL CORP.
SHINTRON CO., INC.
SIGNAL ENGINEERING & SALES INC
SONY CORPORATION OF AMERICA
S. STERLING COMPANY
SYLVANIA-COMM. ELECTRONICS DIV
THE TECHNICAL MATERIEL CORP
TELE-MEASUREMENTS INC.
TELEVISION UTILITIES CORP
VIDEON CORPORATION
VIDEO SYSTEMS
W.R.S. ELECTRONICS, LTD.

CONSOLE, VIDEO, STUDIO

ALCOR, INC.
ALMA ENGINEERING INC
AMPEX CORPORATION
AMPLIVISION CORPORATION
BLONDER-TONGUE LABORATORIES
CENTRAL DYNAMICS CORPORATION
DATA INSTRUMENT DIVISION
G E VISUAL COMMUNICATIONS PROD
IKEGAMI TSUSHINKI CO., LTD.
INTERNATIONAL NUCLEAR CORP.
MARYLAND TELECOMMUNICATIONS
MID AMERICA ELECTRONICS CORP
PACKARD BELL ELECTRONICS
RAYTHEON LEARNING SYSTEMS CO.
RCA BROADCAST PRODS.
RICHMOND HILL LABORATORIES
RIKER VIDEO INDUSTRIES
ROCKE INTERNATIONAL CORP.
SIGNAL ENGINEERING & SALES INC
SONY CORPORATION OF AMERICA
STANDARD ELECTRONICS CORP.
S. STERLING COMPANY
SYLVANIA-COMM. ELECTRONICS DIV
THE TECHNICAL MATERIEL CORP
TELE-MEASUREMENTS INC.
TELEMET COMPANY
TELEVISION UTILITIES CORP
VIDEON CORPORATION
W.R.S. ELECTRONICS, LTD.

CONVERTERS

AMECO, INC.
AMPLIVISION CORPORATION
BARKER & WILLIAMSON

F W BELL, INC
BENCO TELEVISION ASSOCIATES
BLONDER-TONGUE LABORATORIES
C-COR ELECTRONICS
GENERAL ELECTRIC CO
GENERAL INSTRUMENT CORP.
GIBBS MFG. AND RESEARCH CORP.
TEST INSTR. DIV. HONEYWELL
JERROLD ELECTRONICS CORP
KAHN RESEARCH LABORATORIES
MICRO-LINK SYSTEMS-VARIAN
THE SINGER CO - METRICS DIV
SINGER PRODUCTS CO.
STANDARD KOLLSMAN INDUSTRIES
TREPAC CORPORATION OF AMERICA

CONVERTERS, CATV, 20-CHANNEL

CAS MANUFACTURING CO.
JERROLD ELECTRONICS CORP
KATONA ELECTRONICS CO.
SCIENTIFIC-ATLANTA

COOLING UNITS, TUBE

EIMA DIVISION OF VARIAN

COPYING EQUIPMENT

BURKE & JAMES
GENERAL ANILINE & FILM CORP.

CORDS, DIAL

BIRNBACH CO
G C ELECTRONICS COMPANY
SINGER PRODUCTS CO.
UNITED STATES PLASTIC ROPE

CORDS, LACING

BIRNBACH CO
BOSTON INSULATED WIRE & CABLE
G C ELECTRONICS COMPANY
SINGER PRODUCTS CO.

CORDS, PATCH

ADC PRODUCTS
APPLIED ELECTRO-MECHANICS
AUDIO ACCESSORIES
BIRNBACH CO
GEI
CENTRAL DYNAMICS CORPORATION
COLORTRAN INDUSTRIES - BERKEY
COOKE ENGINEERING COMPANY
D & B ELECTRONICS COMPANY
ELECTRONICS ESSENTIALS OF CCC
HOLLAND ELECTRONICS INC
SINGER PRODUCTS CO.
THE TECHNICAL MATERIEL CORP
TROMPETER ELECTRONICS
VITRO ELECTRONICS
W.R.S. ELECTRONICS, LTD.

CORDS, SET

BELDEN MANUFACTURING CO
BIRNBACH CO
D & B ELECTRONICS COMPANY
ITT WIRE & CABLE DIVISION
THE PLASTIC WIRE & CABLE CORP.
SINGER PRODUCTS CO.
WABER ELECTRONICS, INC.

CORES, TRANSFORMER AND COIL

GENERAL ELECTRIC CO
RCA ELECTRONIC COMPONENTS
VIRGINIA ELECTRONICS CO., INC.

COUNTERS, FREQUENCY

ANRITSU ELECTRIC CO., LTD.
COLLINS RADIO COMPANY
GENERAL ELECTRIC CO
GENERAL MICROWAVE CORPORATION
GENERAL RADIO CO
HEWLETT-PACKARD CO.
HICKOK ELECTRICAL INSTRUMENT
TEST INSTR. DIV. HONEYWELL
MOTOROLA COMMUNICATIONS

COUPLERS

AMECO, INC.
AMERICAN ELECTRONIC LABS
BARKER & WILLIAMSON
DEMORNAY - BONARDI DIVISION
ELECTROMAGNETIC RADIATION LABS
GATES RADIO COMPANY
HEWLETT-PACKARD CO.
JERROLD ELECTRONICS CORP
E F JOHNSON COMPANY
MICROLAB - FXR
MULTRONICS
NARDA MICROWAVE CORPORATION
SINGER PRODUCTS CO.
STANDARD ELECTRONICS CORP.

THE TECHNICAL MATERIEL CORP
WABER ELECTRONICS, INC.

CRYSTALS, PIEZOELECTRIC

EIDSON ELECTRONIC COMPANY
ELECTRONIC RESEARCH COMPANY
G E DISTRIBUTOR SALES FORCE
PIEZO CRYSTAL COMPANY
PRECISION PIEZO SERVICE
SCIENTIFIC ELECTRONIC PRODUCTS
SINGER PRODUCTS CO.
THE TECHNICAL MATERIEL CORP
TRW ELECTRONICS

DECALCOMANIAS

W H BRADY CO

DEHUMIDIFIERS

COMMUNICATIONS PRODUCTS CO
PALL TRINITY MICRO CORP

DELAY DEVICES, AF

AUDIO INSTRUMENT CO
S. HIMMELSTEIN AND CO.
SINGER PRODUCTS CO.
SPARTA ELECTRONIC CORPORATION
TAPECASTER ELECTRONICS
UNITED TRANSFORMER COMPANY

DELAY LINES

ANDREW CORPORATION
AUDIO INSTRUMENT CO
CENTRAL DYNAMICS CORPORATION
COOK ELECTRIC COMPANY
DAVEN DIV. - EDISON INDUS.
GENERAL RADIO CO
KAPPA NETWORKS, INC
PHELPS DODGE
RCA BROADCAST PRODS.
ROHDE & SCHWARZ SALES CO.
SINGER PRODUCTS CO.
TEKTRONIX INC
UNITED TRANSFORMER COMPANY
VIDEON CORPORATION

DEMAGNETIZERS, BULK TAPE

AEROVOX CORP.
AMPEX CORPORATION
AMPLIFIER CORP OF AMERICA
BIRNS & SAWYER
BROADCAST ELECTRONICS, INC
G C ELECTRONICS COMPANY
HEWLETT-PACKARD CO.
MAGNASYNC-MOVIOLA CORP.
MAGNUSON DEVICES, INC.
ROBINS INDUSTRIES CORP.
SINGER PRODUCTS CO.
SPARTA ELECTRONIC CORPORATION

DEMAGNETIZERS, HEAD

AMPEX CORPORATION
AMPLIFIER CORP OF AMERICA
BROADCAST ELECTRONICS, INC
G C ELECTRONICS COMPANY
ROBINS INDUSTRIES CORP.
SPARTA ELECTRONIC CORPORATION

DEMODULATORS

AMECO, INC.
BELAR ELECTRONICS LABORATORY
COLLINS RADIO COMPANY
DYNAIR ELECTRONICS, INC.
ELECTRONICS DEVELOPMENT CORP.
HEWLETT-PACKARD CO.
IKEGAMI TSUSHINKI CO., LTD.
JERROLD ELECTRONICS CORP
RCA ELECTRONIC COMPONENTS
RHG ELECTRONICS LABORATORY
ROHDE & SCHWARZ SALES CO.
SETCHELL CARLSON, INC.
STANDARD ELECTRONICS CORP.
THE TECHNICAL MATERIEL CORP
WARD ELECTRONIC INDUSTRIES

DESICCANTS

THE MCINTIRE COMPANY
PALL TRINITY MICRO CORP

DESIGNATION CARDS & STRIPS

ACME VISIBLE RECORDS
THE JAMES FLOYD FORD CO

DETECTORS, MICROWAVE

COLLINS RADIO COMPANY
DEMORNAY - BONARDI DIVISION
GENERAL ELECTRIC CO
GENERAL MICROWAVE CORPORATION
HEWLETT-PACKARD CO.
MICROLAB - FXR
MICROWAVE ASSOCIATES, INC.
NARDA MICROWAVE CORPORATION
SYLVANIA-SEMICONDUCTOR DIV.

DETECTORS, RF

BIRD ELECTRONIC CORPORATION

DETECTORS, STANDING WAVE

ALFORD MANUFACTURING COMPANY
BIRD ELECTRONIC CORPORATION
COLLINS RADIO COMPANY
DEMORNAY - BONARDI DIVISION
GENERAL MICROWAVE CORPORATION
HEWLETT-PACKARD CO.
MARCONI DIVISION
NARDA MICROWAVE CORPORATION
ROHDE & SCHWARZ SALES CO.
SINGER PRODUCTS CO.

DIALS, INSTRUMENT

AMPHENOL CORP.
SINGER PRODUCTS CO.
TELEQUIP CORPORATION
TEXAS ELECTRONICS

DIALS, TELEPHONE

THE JAMES FLOYD FORD CO
SINGER PRODUCTS CO.
ITT TELECOMMUNICATIONS

DIPLEXERS

RF TRANSMISSION DEPT, AMPEX
COLLINS RADIO COMPANY
ELECTROMAGNETIC RADIATION LABS
MICROLAB - FXR
MICROWAVE ASSOCIATES, INC.
PHELPS DODGE
PRODELIN, INCORPORATED
SINGER PRODUCTS CO.
STANDARD ELECTRONICS CORP.

DISPLAY EQUIPMENT, TV

AMPEX CORPORATION
BALL BROTHERS RESEARCH
C B S LABORATORIES
CENTRAL DYNAMICS CORPORATION
COLORADO VIDEO
DISPLAY TECHNOLOGIES INC
GENERAL ELECTRIC CO.
GORDON ENTERPRISES
GRINNAN FIXTURE COMPANY
HEWLETT-PACKARD CO.
ITI ELECTRONICS, INC.
MARYLAND TELECOMMUNICATIONS
MIRATEL ELECTRONICS, INC
MYR CORPORATION
PACKARD BELL ELECTRONICS
Q-TV SALES & DISTRIBUTING CORP
RAYTHEON LEARNING SYSTEMS CO.
RCA BROADCAST PRODS.
SCIENTIFIC SYSTEMS, INC.
SETCHELL CARLSON, INC.
SHINTRON CO, INC.
SIGNAL ENGINEERING & SALES INC
TELE-MEASUREMENTS INC.
TELEMET COMPANY
TELEVISION UTILITIES CORP
VIDEO SYSTEMS
VISUAL ELECTRONICS CORP

DIVIDERS, FREQUENCY

BLONDER-TONGUE LABORATORIES
COLLINS RADIO COMPANY
DEMORNAY - BONARDI DIVISION
GENERAL ELECTRIC CO
HEWLETT-PACKARD CO.
JENSEN MANUFACTURING
MICROLAB - FXR
PRESEARCH INC.
TV CABLE SUPPLY CO

DIVIDERS, POWER

COLLINS RADIO COMPANY
DEMORNAY - BONARDI DIVISION
ELECTROMAGNETIC RADIATION LABS
MICROLAB - FXR
NARDA MICROWAVE CORPORATION
OHMITE MANUFACTURING COMPANY
PRODELIN, INCORPORATED
STANDARD ELECTRONICS CORP

DIVIDERS, VOLTAGE

COLLINS RADIO COMPANY
DAVEN DIV. - EDISON INDUS.
GENERAL ELECTRIC CO
GENERAL RADIO CO
ITT JENNINGS DIV.
OHMITE MANUFACTURING COMPANY
THE SINGER CO - METRICS DIV

DOLLIES, CAMERA

AMPEX CORPORATION
COLORTRAN INDUSTRIES - BERKEY
GORDON ENTERPRISES
HOUSTON FEARLESS CORPORATION
LISTEC TELEVISION EQUIPMENT
MAGNASYNC-MOVIOLA CORP.
RCA BROADCAST PRODS.
TELEQUIP CORPORATION
TELEVISION UTILITIES CORP
TELEVISION ZOOMAR
THOMSON ELECTRIC CO
VIDEO COMPONENTS, INC.
VISUAL ELECTRONICS CORP
WABER ELECTRONICS, INC.

DOLLIES, TEST EQUIPMENT

THE SINGER CO - METRICS DIV
TEKTRONIX INC
WABER ELECTRONICS, INC.

DRAFTING EQUIPMENT

GENERAL ANILINE & FILM CORP.
VALUE INCORPORATED

DRAPERY, PERIMETER & CYCLORAMA

THE JANSON INDUSTRIES

DROPOUT COMPENSATOR, VIDEO TAPE

AMPEX CORPORATION
MINNESOTA MINING - 3 M
RICHMOND HILL LABORATORIES
RIKER VIDEO INDUSTRIES
VISUAL ELECTRONICS CORP

DUCTS, WIRING

WABER ELECTRONICS, INC.

DUMMY LOAD

BARKER & WILLIAMSON
BAUER BROADCAST PRODUCTS DIV.
BIRD ELECTRONIC CORPORATION
CCA ELECTRONICS CORPORATION
COLLINS RADIO COMPANY
CONTINENTAL ELECTRONICS MFG
D & B ELECTRONICS COMPANY
DEMORNAY - BONARDI DIVISION
ELECTROMAGNETIC RADIATION LABS
GATES RADIO COMPANY
IKEGAMI TSUSHINKI CO., LTD.
LITTLE JOE ENTERPRISES
MARCONI DIVISION
MICROLAB - FXR
OHMITE MANUFACTURING COMPANY
PRODELIN, INCORPORATED
ROCKE INTERNATIONAL CORP.
ROHOE & SCHWARZ SALES CO.
SINGER PRODUCTS CO.
STANDARD ELECTRONICS CORP.
THE TECHNICAL MATERIEL CORP
TRYLON INCORPORATED
WATERS MANUFACTURING

EARPHONES, HEADPHONES

AMERICAN GELOSO ELECTRONICS
AMPEX CORPORATION
ASCO SONOCRAFT CORP
THE ASTATIC CORPORATION
GOTHAM AUDIO CORPORATION
HEATH CO
JENSEN MANUFACTURING
KOSS ELECTRONICS, INC.
MAGCORD
NORTH AMERICAN PHILIPS CO
PERMOFLUX CORPORATION
ROANWELL CORPORATION
SINGER PRODUCTS CO
TANDBERG OF AMERICA, INC.

EDITORS, AUDIO TAPE

AMPEX CORPORATION
ASCO SONOCRAFT CORP
EMC CORP.
MAGNETIC STUDIOS CORP.
ORBIT RADIO
ROBINS INDUSTRIES CORP.
SOUND STUDIOS INC.

EDITORS, FILM

EMC CORP.
GORDON ENTERPRISES
HARWALD COMPANY
MAGNASYNC MOVIOLA CORP.
METROFILM CORP.
NEUMADE PRODUCTS CORPORATION
PRECISION LABORATORIES

EDITORS, VIDEO TAPE

AMPEX CORPORATION
GOTHAM AUDIO CORPORATION
PRECISION LABORATORIES
RCA BROADCAST PRODS.
ROBINS INDUSTRIES CORP.
TELE-MEASUREMENTS INC.
VISUAL ELECTRONICS CORP

EDUCATION FACILITIES, EQUIPMENT

ALCOR, INC.
AMPEX CORPORATION
ASCO SONOCRAFT CORP
AUDIO INSTRUMENT CO
CHARLES BESELER CO.
CENTRAL DYNAMICS CORPORATION
DELTA ELECTRONICS, INC. — NC

GATES RADIO COMPANY
HOLMES PROJECTOR CO., INC.
KRS INSTRUMENTS DIVISION
MAGNECORD
MICRO-LINK SYSTEMS-VARIAN
MILES REPRODUCER CO
NORTH AMERICAN PHILIPS CO
RAYTHEON LEARNING SYSTEMS CO.
RCA BROADCAST PRODS.
ROCKE INTERNATIONAL CORP.
SYLVANIA-COMM. ELECTRONICS DIV
TELEMATION, INC.
VIKING TAPE RECORDERS

EDUCATION FACILITIES, PUBLISHERS

EMC CORP.
GRANTHAM SCHOOLS, INC
HAYDEN BOOK COMPANY
JENSEN MANUFACTURING
NORTH AMERICAN PHILIPS CO
RAYTHEON LEARNING SYSTEMS CO.
HOWARD W SAMS & CO INC
SINGER PRODUCTS CO.

EDUCATION FACILITIES, SCHOOLS

ALCOR, INC.
AMPEX CORPORATION
AUDIO INSTRUMENT CO
GRANTHAM SCHOOLS, INC
HOLMES PROJECTOR CO., INC.
MICRO-LINK SYSTEMS-VARIAN
RAYTHEON LEARNING SYSTEMS CO.
HOWARD W SAMS & CO INC

ENCLOSURES, SPEAKER

AMPEX CORPORATION
ASCO SONOCRAFT CORP
ELECTRO-SOUND ACOUSTICS
FOURJAY INDUSTRIES
GATES RADIO COMPANY
HARTLEY PRODUCTS
JAMES B. LANSING SOUND, INC.
NORTH AMERICAN PHILIPS CO
SINGER PRODUCTS CO.
TRUSONIC

ENHANCERS, TV IMAGE

C B S LABORATORIES
COLORADO VIDEO
DYNASCIENTES CORPORATION
TELE-MEASUREMENTS INC.
VISUAL ELECTRONICS CORP

EQUALIZERS, AUDIO EMPHASIS

A & B DUPLICATORS DIV.
B & K INSTRUMENTS, INC.
COLLINS RADIO COMPANY
FAIRCHILD RECORDING EQUIPMENT
GOTHAM AUDIO CORPORATION
GRAY RESEARCH & DEVELOPMENT CO
LANGEVIN
LTV LING ALTEC, INC.
MELCOR ELECTRONICS
PULSE TECHNIQUES, INC.
SOUTHWESTERN COMMUNICATIONS
WESTREX
W. R. S. ELECTRONICS, LTD.

ESCUTCHEIONS

BELL P-A PRODUCTS CORP.

EXCITERS, FM

AMERICAN ELECTRONIC LABS
BAUER BROADCAST PRODUCTS DIV.
BELAR ELECTRONICS LABORATORY
CCA ELECTRONICS CORPORATION
COLLINS RADIO COMPANY
ELECTRONICS DEVELOPMENT CORP.
GATES RADIO COMPANY
KAHN RESEARCH LABORATORIES
LTV LING ALTEC, INC.
MARCONI DIVISION
MARTI ELECTRONICS
MOSELEY ASSOCIATES INC.
RHG ELECTRONICS LABORATORY
SINGER PRODUCTS CO
STANDARD ELECTRONICS CORP.
TELETRONIX
VISUAL ELECTRONICS CORP
WILKINSON ELECTRONICS, INC

FACSIMILE EQUIPMENT

METROFILM CORP.
SHINTRON CO, INC.
SINGER PRODUCTS CO

FILM, PHOTOGRAPHIC

EASTMAN KODAK CO.
GENERAL ANILINE & FILM CORP.
METROFILM CORP.
MINNESOTA MINING - 3 M

FILM, PROCESSING SERVICE

ACME FILM & VIDEOTAPE LABS
EASTMAN KODAK CO.
THE JAMES FLOYD FORD CO
METROFILM CORP.

FILTERS, ANTENNA

AMECO, INC.
BARKER & WILLIAMSON
BAUER BROADCAST PRODUCTS DIV.
BENCO TELEVISION ASSOCIATES
COLLINS RADIO COMPANY
CONTINENTAL ELECTRONICS MFG
GATES RADIO COMPANY
JERROLD ELECTRONICS CORP
MICROLAB - FXR
PRODELIN, INCORPORATED
ROCKE INTERNATIONAL CORP.
SINGER PRODUCTS CO.
THE TECHNICAL MATERIEL CORP
TELETRONIX
T T ELECTRONICS, INC.
VIKOA, INC.

FILTERS, AUDIO

ADC PRODUCTS
AEROVOX CORP.
B & K INSTRUMENTS, INC.
BRADFORD INFORMATION SYSTEMS
BROADCAST PRODUCTS COMPANY
COLLINS RADIO COMPANY
DIVERSIFIED ELECTRONIC CORP
FAIRCHILD RECORDING EQUIPMENT
GENERAL RADIO CO
KAPPA NETWORKS, INC
LANGEVIN
LTV LING ALTEC, INC.
MOSELEY ASSOCIATES INC.
ORBIT RADIO
PULSE TECHNIQUES, INC.
RECORDING EQUIPMENT COMPANY
ROCKE INTERNATIONAL CORP.
SINGER PRODUCTS CO.
STEPHENS ELECTRONICS
THE TECHNICAL MATERIEL CORP
TREPAC CORPORATION OF AMERICA
TRW ELECTRONICS
T T ELECTRONICS
UNITED TRANSFORMER COMPANY
WESTREX

FILTERS, RF

ADC PRODUCTS
AEROVOX CORP.
AMECO, INC.
KEITH ANDERSON CO
BARKER & WILLIAMSON
BAUER BROADCAST PRODUCTS DIV.
BIRD ELECTRONIC CORPORATION
BLONDER-TONGUE LABORATORIES
CCA ELECTRONICS CORPORATION
COLLINS RADIO COMPANY
COMMUNICATIONS PRODUCTS CO
CONTINENTAL ELECTRONICS MFG
CORNELL-DUBILIER ELECTRONICS
CRAFTSMAN ELECTRONICS PRODUCTS
DELTA ELECTRONICS INC
DIVERSIFIED ELECTRONIC CORP.
ELECTROMAGNETIC RADIATION LABS
ENTRON INC
G E VISUAL COMMUNICATIONS PROD
GENERAL MICROWAVE CORPORATION
HOLLAND ELECTRONICS INC
JERROLD ELECTRONICS INC
MICROWAVE ASSOCIATES, INC.
NARDA MICROWAVE CORPORATION
PRODELIN, INCORPORATED
RECORDING EQUIPMENT COMPANY
ROCKE INTERNATIONAL CORP.
SINGER PRODUCTS CO.
STANDARD ELECTRONICS CORP.
THE TECHNICAL MATERIEL CORP
TELETRONIX
T T ELECTRONICS
VIKOA, INC.

FILTERS, OTHER

ANRITSU ELECTRIC CO., LTD.
BARKER & WILLIAMSON
CLAASEN ELECTRONICS
COLLINS RADIO COMPANY
COLTRAN INDUSTRIES - BERKEY
CORNELL-DUBILIER ELECTRONICS
ELECTRONIC RESEARCH COMPANY
GENERAL MICROWAVE CORPORATION
HEWLETT-PACKARD CO.
KAPPA NETWORKS, INC
MICROLAB - FXR
PALL TRINITY MICRO CORP
PIEZO CRYSTAL COMPANY
STANDARD ELECTRONICS CORP.
THE TECHNICAL MATERIEL CORP
TRW ELECTRONICS
T T ELECTRONICS
UNITED TRANSFORMER COMPANY
VIDEON CORPORATION
WATERS MANUFACTURING

FLASHERS, TOWER

ELECTRONIC LIGHTS, INC.
HARWOOD MFG. CO.
HOUSTON ELECTRONICS CO.

HUGHEY & PHILLIPS
SINGER PRODUCTS CO.
SWAGER TOWER CORPORATION
UTILITY TOWER CO.

FRAMES, MOUNTING

BURKE & JAMES
COOK ELECTRIC, WIRECOM DIV.
RCA ELECTRONIC COMPONENTS

FUSES

GENERAL ELECTRIC CO
ITT WIRE & CABLE DIVISION
LITTLELUFUSE, INC.
SINGER PRODUCTS CO.

GAUSSMETER

F W BELL, INC
GENERAL ELECTRIC CO
HEWLETT-PACKARD CO.

GENERATORS, FM, STEREO

ALLIED ELECTRONICS CORP
AMERICAN ELECTRONIC LABS
BAUER BROADCAST PRODUCTS DIV.
BELAR ELECTRONICS LABORATORY
CATEL COMPANY
CCA ELECTRONICS CORPORATION
COLLINS RADIO COMPANY
GATES RADIO COMPANY
HEATH CO
HICKOK ELECTRICAL INSTRUMENT
KARG LABORATORIES
MARCONI INSTRUMENTS
MOSELEY ASSOCIATES INC.
RCA ELECTRONIC COMPONENTS
ROHDE & SCHWARZ SALES CO.
H. H. SCOTT INCORPORATED
SINGER PRODUCTS CO
STANDARD ELECTRONICS CORP
WILKINSON ELECTRONICS, INC

GENERATORS, FM, SUBARRIER

AMERICAN ELECTRONIC LABS
AMPLIVISION CORPORATION
BAUER BROADCAST PRODUCTS DIV.
CCA ELECTRONICS CORPORATION
COLLINS RADIO COMPANY
ELECTRONICS DEVELOPMENT CORP.
GATES RADIO COMPANY
GIBBS MFG. AND RESEARCH CORP.
MARCONI INSTRUMENTS
MARTI ELECTRONICS
MICROWAVE ASSOCIATES, INC.
MOSELEY ASSOCIATES INC.
H. H. SCOTT INCORPORATED
SINGER PRODUCTS CO
TELEMET COMPANY
TELETRONIX
WILKINSON ELECTRONICS, INC

GENERATORS, POWER, ELECTRIC MOTOR

COLUMBIA ELECTRIC MFG CO
GENERAL ELECTRIC CO
THE TECHNICAL MATERIEL CORP

GENERATORS, POWER, GASOLINE ENGINE

FAIRLANE ELECTRONICS
GENERAL MACHINE PRODUCTS CO.
ONAN DIVISION
SINGER PRODUCTS CO.
THE TECHNICAL MATERIEL CORP

GENERATORS, POWER, WIND & THERMOELECTRIC

KEITH ANDERSON CO
FAIRLANE ELECTRONICS
THE TECHNICAL MATERIEL CORP

GENERATORS, SIGNAL, AF

ARBOR SYSTEMS, INC.
B & K INSTRUMENTS, INC.
DELTA ELECTRONICS, INC. — NC
DIVERSIFIED ELECTRONIC CORP
ENGINEERING ASSOCIATES
GENERAL RADIO CO
GIBBS MFG. AND RESEARCH CORP.
HEATH CO
HEWLETT-PACKARD CO.
HICKOK ELECTRICAL INSTRUMENT
INSTRUMENT LABORATORIES CORP.
INTERNATIONAL GOOD MUSIC
MARCONI INSTRUMENTS
NORTHEAST ELECTRONICS CORP
RCA ELECTRONIC COMPONENTS
ROHDE & SCHWARZ SALES CO.
THE SINGER CO - METRICS DIV
STEPHENS ELECTRONICS
WAVEFORMS, INCORPORATED

GENERATORS, SIGNAL, COLOR BAR

ALLIED ELECTRONICS CORP
AMPEX CORPORATION
THE GRASS VALLEY GROUP, INC.
HEATH CO
HICKOK ELECTRICAL INSTRUMENT
IKEGAMI TSUSHINKI CO., LTD.
MARCONI DIVISION

RCA BROADCAST PRODS.
RCA ELECTRONIC COMPONENTS
RICHMOND HILL LABORATORIES
RIKER VIDEO INDUSTRIES
TELEMATION, INC.
TELE-MEASUREMENTS INC.
TELEMET COMPANY
TEL-INSTRUMENT ELECTRONICS
VIDEOMETRICS, INC.
VIDEON CORPORATION
VISUAL ELECTRONICS CORP

GENERATORS, SIGNAL, DOT BAR
THE GRASS VALLEY GROUP, INC.
HEATH CO
HICKOK ELECTRICAL INSTRUMENT
IKEGAMI TSUSHINKI CO., LTD.
LAKE ELECTRONICS, INC.
RCA ELECTRONIC COMPONENTS
RICHMOND HILL LABORATORIES
RIKER VIDEO INDUSTRIES
TELEMATION, INC.
TELE-MEASUREMENTS INC.
TELEMET COMPANY
TEL-INSTRUMENT ELECTRONICS
VIDEOMETRICS, INC.
VIDEON CORPORATION
VISUAL ELECTRONICS CORP

GENERATORS, SIGNAL, MARKER
BLONDER-TONGUE LABORATORIES
GIBBS MFG. AND RESEARCH CORP.
HEWLETT-PACKARD CO.
HICKOK ELECTRICAL INSTRUMENT
JERROLD ELECTRONICS CORP
LAKE ELECTRONICS, INC.
RCA ELECTRONIC COMPONENTS
TELE-MEASUREMENTS INC.
TEL-INSTRUMENT ELECTRONICS

GENERATORS, SIGNAL, PULSE
ANRITSU ELECTRIC CO., LTD.
DATAPULSE DIVISION
GENERAL RADIO CO
GIBBS MFG. AND RESEARCH CORP.
THE GRASS VALLEY GROUP, INC.
HEWLETT-PACKARD CO.
HICKOK ELECTRICAL INSTRUMENT
TEST INSTR. DIV. HONEYWELL
LAKE ELECTRONICS, INC.
NARDA MICROWAVE CORPORATION
PRESEARCH INC.
RICHMOND HILL LABORATORIES
SPENCER-KENNEDY LABORATORIES
TEKTRONIX INC.
TELE-MEASUREMENTS INC.
TELEVISION UTILITIES CORP
TRAID CORPORATION
VISUAL ELECTRONICS CORP

GENERATORS, SIGNAL, RF
ALLIED ELECTRONICS CORP.
AMECO, INC.
ANRITSU ELECTRIC CO., LTD.
BLONDER-TONGUE LABORATORIES
DIVERSIFIED ELECTRONIC CORP
ENGINEERING ASSOCIATES
GENERAL MICROWAVE CORPORATION
GENERAL RADIO CO
GIBBS MFG. AND RESEARCH CORP.
HEATH CO
HEWLETT-PACKARD CO.
HICKOK ELECTRICAL INSTRUMENT
IKEGAMI TSUSHINKI CO., LTD.
JERROLD ELECTRONICS CORP
MARCONI INSTRUMENTS
NARDA MICROWAVE CORPORATION
PRESEARCH INC.
RCA ELECTRONIC COMPONENTS
ROHDE & SCHWARZ SALES CO.
THE SINGER CO - METRICS DIV
THE TECHNICAL MATERIEL CORP
TEKTRONIX INC
TEL-INSTRUMENT ELECTRONICS
TELEVIC INDUSTRIES
TRIPLETT ELECTRICAL INSTRUMENT
VISUAL ELECTRONIC LABS
WILKINSON ELECTRONICS, INC

GENERATORS, SIGNAL, SPECIAL EFFECT
ALMA ENGINEERING INC
AMPEX CORPORATION
APPLIED ELECTRO-MECHANICS
BALL BROTHERS RESEARCH
B & K INSTRUMENTS, INC.
CENTRAL DYNAMICS CORPORATION
COLORADO VIDEO
IKEGAMI TSUSHINKI CO., LTD.
MARCONI DIVISION
RICHMOND HILL LABORATORIES
RIKER VIDEO INDUSTRIES
H. H. SCOTT, INCORPORATED
TELEMATION, INC.
TELE-MEASUREMENTS INC.
TELEMET COMPANY
TELEVISION UTILITIES CORP
VIDEON CORPORATION

GENERATORS, SIGNAL, SQUARE WAVE
AMPEX CORPORATION
DATAPULSE DIVISION
DIVERSIFIED ELECTRONIC CORP
GENERAL RADIO CO
GIBBS MFG. AND RESEARCH CORP.
HEATH CO
HEWLETT-PACKARD CO.
HICKOK ELECTRICAL INSTRUMENT
IKEGAMI TSUSHINKI CO., LTD.
LAKE ELECTRONICS, INC.
RCA ELECTRONIC COMPONENTS
RICHMOND HILL LABORATORIES
TEKTRONIX INC
TELE-MEASUREMENTS INC.
TELEMET COMPANY
VIDEOMETRICS, INC.
WAVEFORMS, INCORPORATED

GENERATORS, SIGNAL TV SYNCHRONIZING
AMPEX CORPORATION
BLONDER-TONGUE LABORATORIES
CENTRAL DYNAMICS CORPORATION
COLORADO VIDEO
DAGE BELL CORPORATION
G E VISUAL COMMUNICATIONS PROD
THE GRASS VALLEY GROUP, INC.
IKEGAMI TSUSHINKI CO., LTD.
LAKE ELECTRONICS, INC.
MARCONI DIVISION
MARYLAND TELECOMMUNICATIONS
RAYTHEON LEARNING SYSTEMS CO.
RCA BROADCAST PRODS.
RICHMOND HILL LABORATORIES
RIKER VIDEO INDUSTRIES
SCIENTIFIC SYSTEMS, INC.
SHINTRON CO. INC.
TELEMATION, INC.
TELE-MEASUREMENTS INC.
TELEMET COMPANY
TELEVISION UTILITIES CORP
TEL-INSTRUMENT ELECTRONICS
VIDEOMETRICS, INC.
VIDEON CORPORATION

GENERATORS, SIGNAL, VITS
CENTRAL DYNAMICS CORPORATION
RICHMOND HILL LABORATORIES
RIKER VIDEO INDUSTRIES
ROHDE & SCHWARZ SALES CO.
TELE-MEASUREMENTS INC.
TELEMET COMPANY
VIDEOMETRICS, INC.
VIDEON CORPORATION

HARDWARE, CHASSIS
BELL P-A PRODUCTS CORP.
BIRNBACH CO
BUD RADIO, INC
D & B ELECTRONICS COMPANY
ELECTRONICS ESSENTIALS OF CCC
HARWOOD MFG. CO.
SINGER PRODUCTS CO.
TELEQUIP CORPORATION
VENT-RAK INCORPORATED
W.R.S. ELECTRONICS, LTD.

HARDWARE, DIAL POINTERS
BARKER & WILLIAMSON
BIRNBACH CO
SINGER PRODUCTS CO.

HARDWARE, ELECTRIC MOTORS, FRACTIONAL HP
AMPHENOL CORP.

HARDWARE, ELECTRIC MOTORS, GENERAL
ALBION OPTICAL COMPANY
GENERAL ELECTRIC CO

HARDWARE, FIXTURES, HOLDING
BUD RADIO, INC
SINGER PRODUCTS CO.
UPSON TOOLS, INC.
HARDWARE, GENERAL
AMECO, INC.
ELECTRONICS ESSENTIALS OF CCC
ELECTROVERT, INCORPORATED
SINGER PRODUCTS CO.
UPSON TOOLS, INC.

HARDWARE, GROMMETS
BIRNBACH CO
ELECTRONICS ESSENTIALS OF CCC
ELECTROVERT, INCORPORATED
GC ELECTRONICS COMPANY
SINGER PRODUCTS CO.

HARDWARE, LOUVERS, VENTILATING
BUD RADIO, INC

HARDWARE, MOUNTS
BUD RADIO, INC
ELECTRONICS ESSENTIALS OF CCC
KORFUND DYNAMICS CORP.
SINGER PRODUCTS CO.
H. WILSON CORPORATION

HARDWARE, PANEL
BELL P-A PRODUCTS CORP.
BUD RADIO, INC
ENCLOSURE CORP
GATES RADIO COMPANY
E F JOHNSON COMPANY
RCA BROADCAST PRODS.
TELEQUIP CORPORATION
VITRO ELECTRONICS

HARDWARE, RACK
BUD RADIO, INC
COLLINS RADIO COMPANY
ELECTRONICS ESSENTIALS OF CCC
ENCLOSURE CORP
GATES RADIO COMPANY
G E VISUAL COMMUNICATIONS PROD
MCMARTIN INDUSTRIES
RCA BROADCAST PRODS.
SINGER PRODUCTS CO.
VITRO ELECTRONICS

HARDWARE, RETAINING RINGS
SINGER PRODUCTS CO.
VACO PRODUCTS CO.

HARDWARE, TOOLS
AMECO, INC.
ELECTRONICS ESSENTIALS OF CCC
H. K. PORTER INC.
THE THOMAS & BETTS CO

HARDWARE, TUBING, METAL
ELECTRONICS ESSENTIALS OF CCC
SINGER PRODUCTS CO.
TELEQUIP CORPORATION

HARDWARE, TUBING, PLASTIC
BIRNBACH CO
ELECTRONICS ESSENTIALS OF CCC
RAYTHEON LEARNING SYSTEMS CO.
SIGMA INDUSTRIES
SINGER PRODUCTS CO.

HEAD-END EQUIPMENT,
AMECO, INC.
AMPLIVISION CORPORATION
ANACONDA ASTRODATA CO
BENCO TELEVISION ASSOCIATES
DYNNAIR ELECTRONICS, INC.
KAISER-COX
SPENCER-KENNEDY LABORATORIES

HEADS, DISC RECORDING
DIACOUSTIC LABORATORY
FAIRCHILD RECORDING EQUIPMENT
GOTHAM AUDIO CORPORATION
KROSS ELECTRONICS, INC.
LIPPS, INC.
MILES REPRODUCER CO
SINGER PRODUCTS CO.
WESTREX

HEADS, ERASE, MAGNETIC
AMPEX CORPORATION
BROADCAST ELECTRONICS, INC
DIACOUSTIC LABORATORY
LIPPS, INC.
MAGNA-TECH CORPORATION
MAGNUSONIC DEVICES, INC.
MINNEAPOLIS MAGNETICS
NORTON ASSOCIATES, INC.
NORTRONICS COMPANY, INC
SINGER PRODUCTS CO.
SONY CORPORATION OF AMERICA
TANDBERG OF AMERICA, INC.
WESTREX
WINSTON RESEARCH CORP.

HEADS, RECORDING, MAGNETIC
AMPEX CORPORATION
BROADCAST ELECTRONICS, INC
DIACOUSTIC LABORATORY
LIPPS, INC.
MAGNA-TECH CORPORATION
MAGNUSONIC DEVICES, INC.
MINNEAPOLIS MAGNETICS
NORTON ASSOCIATES, INC.
NORTRONICS COMPANY, INC
PRECISION LABORATORIES
SINGER PRODUCTS CO
SONY CORPORATION OF AMERICA
TAPECASTER ELECTRONICS
VISUAL ELECTRONICS CORP
VISUAL ELECTRONIC LABS
WESTREX
WINSTON RESEARCH CORP.

HEAT EXCHANGERS
INTERNATIONAL RECTIFIER

RCA ELECTRONIC COMPONENTS
HEATING ELEMENTS
GENERAL ELECTRIC CO
SINGER PRODUCTS CO.

HEAT SINKS
BIRNBACH CO
CHANNELLOCK, INC.
COLLINS RADIO COMPANY
DELCO RADIO DIV
EIMAC DIVISION OF VARIAN
INTERNATIONAL RECTIFIER
SINGER PRODUCTS CO.
SOLITRON DEVICES
TELEQUIP CORPORATION

HOLDERS, CRYSTAL
INDUSTRIAL ELECTRONIC HARDWARE
E F JOHNSON COMPANY
SINGFR PRODUCTS CO.

HOLDERS, FUSE
INDUSTRIAL ELECTRONIC HARDWARE
LITTELFUSE, INC.
SINGER PRODUCTS CO.

HOUSINGS, ANTENNA
BENCO TELEVISION ASSOCIATES
COLLINS RADIO COMPANY
HOUSTON FEARLESS CORPORATION
JERROLD ELECTRONICS CORP

IMAGE MOTION STABILIZING EQUIPMENT
DYNASCIENCES CORPORATION
VISUAL ELECTRONICS CORP

INDUCTANCES, FIXED
ADC PRODUCTS
BARKER & WILLIAMSON
GENERAL RADIO CO
EF JOHNSON COMPANY
KAPPA NETWORKS, INC
LAKE ELECTRONICS, INC.
J. W. MILLER CO.
MULTRONICS
ROCKE INTERNATIONAL CORP.
SINGER PRODUCTS CO.
TREPAC CORPORATION OF AMERICA
UNITED TRANSFORMER COMPANY

INDUCTANCES, VARIABLE
BARKER & WILLIAMSON
DELTA ELECTRONICS INC — VA
GENERAL RADIO CO
E F JOHNSON COMPANY
KAPPA NETWORKS, INC
J. W. MILLER CO.
MULTRONICS
ROCKE INTERNATIONAL CORP.
SINGER PRODUCTS CO.
TREPAC CORPORATION OF AMERICA
UNITED TRANSFORMER COMPANY

INDUSTRIAL TV - ALSO SEE TV, CLOSED CIRCUIT
ALCOR, INC.
AMPEX CORPORATION
ANACONDA ASTRODATA CO
ATV RESEARCH
BAUER BROADCAST PRODUCTS DIV.
BLONDER-TONGUE LABORATORIES
CENTRAL DYNAMICS CORPORATION
COHU ELECTRONICS
COLORADO VIDEO
DAGE BELL CORPORATION
DYNNAIR ELECTRONICS, INC.
GBC AMERICA CORPORATION
G E VISUAL COMMUNICATIONS PROD
GENERAL ELECTRIC CO
GPL DIV.
IKEGAMI TSUSHINKI CO., LTD.
INTERNATIONAL NUCLEAR CORP.
LAKE ELECTRONICS, INC.
MARCONI DIVISION
MIRATEL ELECTRONICS, INC
MYR CORPORATION
PACKARD BELL ELECTRONICS
POWER OPTICS INCORPORATED
RAYTHEON LEARNING SYSTEMS CO.
RCA BROADCAST PRODS.
RIKER VIDEO INDUSTRIES
RUST CORP.
SINGER PRODUCTS CO.
SONY CORPORATION OF AMERICA
S. STERLING COMPANY
SYLVANIA-COMM. ELECTRONICS DIV
THE TECHNICAL MATERIEL CORP
TELEMATION, INC.
TELEMET COMPANY
TELEQUIP CORPORATION
TELEVISION UTILITIES CORP
VIDEO COMPONENTS, INC.
VIKOA, INC.
VISUAL ELECTRONICS CORP

INSULATORS, ANTENNA

ANTENNA PRODUCTS COMPANY
BIRNBACH CO
CENTRALAB
E F JOHNSON COMPANY
ROCKE INTERNATIONAL CORP.
SINGER PRODUCTS CO.
TRYLON INCORPORATED
UNITED STATES PLASTIC ROPE
UTILITY TOWER CO.

INSULATORS, FEED THROUGH

BIRNBACH CO
CENTRALAB
E F JOHNSON COMPANY
ROCKE INTERNATIONAL CORP.
SINGER PRODUCTS CO.
TRYLON INCORPORATED

INSULATORS, STAND-OFF

ANTENNA PRODUCTS COMPANY
BIRNBACH CO
CENTRALAB
G C ELECTRONICS COMPANY
E F JOHNSON COMPANY
ROCKE INTERNATIONAL CORP.
SINGER PRODUCTS CO.
TRYLON INCORPORATED

INSULATORS, OTHER

BIRNBACH CO
BUCHANAN ELECTRICAL CORP
CENTRALAB
E F JOHNSON COMPANY
TRYLON INCORPORATED
UTILITY TOWER CO.

**INTEGRATED CIRCUITS
ALSO SEE SEMICONDUCTORS**

AEROVOX CORP.
MERICAN ELITE
CENTRALAB
COLLINS RADIO COMPANY
FAIRCHILD RECORDING EQUIPMENT
FAIRLANE ELECTRONICS
GENERAL ELECTRIC CO
MICROLAB - FXR
MOTOROLA SEMICONDUCTOR
RCA ELECTRONIC COMPONENTS
TEXAS INSTRUMENTS
VITRO ELECTRONICS

INVERTERS, DC TO AC, CHOPPER

GIBBS MFG. AND RESEARCH CORP.
ROCKE INTERNATIONAL CORP.
SINGER PRODUCTS CO.
THE TECHNICAL MATERIEL CORP

**INVERTERS, DC TO AC,
SOLID STATE**

ALLIED ELECTRONICS CORP
ELECTRO PRODUCTS LABORATORIES
FAIRLANE ELECTRONICS
THE JAMES FLOYD FORD CO
G C ELECTRONICS COMPANY
GENERAL ELECTRIC CO
THE GRASS VALLEY GROUP, INC.
IKEGAMI TSUSHINKI CO., LTD.
POWER SOURCES
ROCKE INTERNATIONAL CORP.
SCIENTIFIC SYSTEMS, INC.
SINGER PRODUCTS CO
THE TECHNICAL MATERIEL CORP
TEXAS ELECTRONICS
TOPAZ INCORPORATED
TREPAC CORPORATION OF AMERICA

**INVERTERS, DC TO AC,
VIBRATORS**

CORNELL-DUBILIER ELECTRONICS
ROCKE INTERNATIONAL CORP.
SINGER PRODUCTS CO.
SONY CORPORATION OF AMERICA
THE TECHNICAL MATERIEL CORP

JACK PANEL ASSEMBLIES

ADC PRODUCTS
AUDIO ACCESSORIES
AVA ELECTRONICS & MACHINE CORP
CEI
CENTRAL DYNAMICS CORPORATION
COLLINS RADIO COMPANY
COOKE ENGINEERING COMPANY
D & B ELECTRONICS COMPANY
DIVERSIFIED ELECTRONIC CORP
ELECTRONICS ESSENTIALS OF CCC
GATES RADIO COMPANY
G C ELECTRONICS COMPANY
HOLLAND ELECTRONICS INC
LTV LING ALTEC, INC.
PHELPS DODGE
RCA BROADCAST PRODS.
SINGER PRODUCTS CO.
SOUTHWESTERN COMMUNICATIONS
S. STERLING COMPANY
SWITCHCRAFT, INC.
THE TECHNICAL MATERIEL CORP
TROMPETER ELECTRONICS

VIRGINIA ELECTRONICS CO., INC.
VITRO ELECTRONICS

JACKS

ADC PRODUCTS
AMPHENOL CORP.
AUDIO ACCESSORIES
CEI
CENTRAL DYNAMICS CORPORATION
COOKE ENGINEERING COMPANY
ELECTRONICS ESSENTIALS OF CCC
G C ELECTRONICS COMPANY
E F JOHNSON COMPANY
MALLORY DISTRIBUTOR PRODUCTS
PHELPS DODGE
ROBINS INDUSTRIES CORP.
SINGER PRODUCTS CO.
SWITCHCRAFT, INC.
THE TECHNICAL MATERIEL CORP
TROMPETER ELECTRONICS
VITRO ELECTRONICS

JOINTS, ROTARY, COAXIAL

COLLINS RADIO COMPANY
GABRIEL ELECTRONICS DIV.
SCIENTIFIC-ATLANTA
SINGER PRODUCTS CO.

JOINTS, ROTARY, WAVEGUIDE

COLLINS RADIO COMPANY
DEMORNAY - BONARDI DIVISION
GABRIEL ELECTRONICS DIV.
SINGER PRODUCTS CO.

KITS

AEROVOX CORP.
ALLIED ELECTRONICS CORP
ATV RESEARCH
BARKER & WILLIAMSON
DIVERSIFIED ELECTRONIC CORP
HEATH CO
JENSEN MANUFACTURING
RCA ELECTRONIC COMPONENTS
SINGER PRODUCTS CO.
TELEVISION UTILITIES CORP
UPSON TOOLS, INC.
WABER ELECTRONICS, INC.

KNOBBS

BARKER & WILLIAMSON
BIRNBACH CO

G C ELECTRONICS COMPANY
SINGER PRODUCTS CO.
TELETRONIX

LAMP ASSEMBLIES

D & B ELECTRONICS COMPANY
DIALIGHT CORPORATION
ELECTRONICS ESSENTIALS OF CCC
HARWOOD MFG. CO.
INDUSTRIAL DEVICES, INC.
SINGER PRODUCTS CO.
VENT-RAK INCORPORATED

LAMPS, ARC

MOLE-RICHARDSON CO.

LAMPS, EXCITER

G E DISTRIBUTOR SALES FORCE
SYLVANIA LIGHTING PRODUCTS

LAMPS, GLOW

DIALIGHT CORPORATION
G E DISTRIBUTOR SALES FORCE
INDUSTRIAL DEVICES, INC.
MOLE-RICHARDSON CO.

LAMPS, PANEL

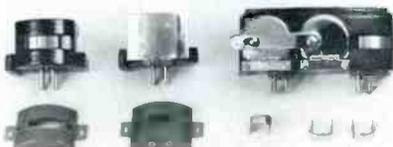
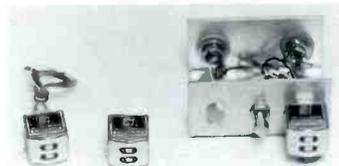
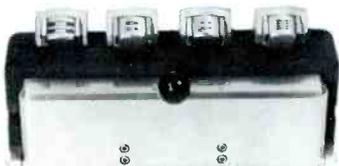
ADC PRODUCTS
DIALIGHT CORPORATION
ELECTRONICS ESSENTIALS OF CCC
G E DISTRIBUTOR SALES FORCE
INDUSTRIAL DEVICES, INC.
J. G. MCALISTER
MOLE-RICHARDSON CO.
SINGER PRODUCTS CO.

LAMPS, PROJECTION

BIRNS & SAWYER
G E DISTRIBUTOR SALES FORCE
MOLE-RICHARDSON CO.
SINGER PRODUCTS CO.
SYLVANIA LIGHTING PRODUCTS
H. WILSON CORPORATION

VALUE • Integrity • Performance

LET'S GET OUR HEADS TOGETHER . . .



Minneapolis Magnetics, Inc. produces heads, caps and pole pieces for replacement, updating and conversion of professional equipment using 1/4" tape. Full and Half track mono, 2-Track, 4-Track and 8-Track Stereo heads are available as well as multi-(4)-Channel heads in the 4-Track and 8-Track formats for duplicating and special applications. Descriptive literature available on request.

The following Regional Distributors carry the MMI line in stock for immediate shipment:

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NORTHWEST
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3131 Western Avenue
Seattle, Washington 98121

WEST
RUSSCO ELECTRONICS MFG. CO.
6879 North Sunnyside
Clovis, California 93612

MIDWEST
MAGNATECH COMPANY
3745 Monterey Drive
Minneapolis, Minnesota 55416

CENTRAL
RADIO DISTRIBUTING CO.
814 North Senate Avenue
Indianapolis, Indiana 46202

EAST & EXPORT
VICTOR INTERNATIONAL CORP.
13 West 46th Street
New York, N.Y. 10036

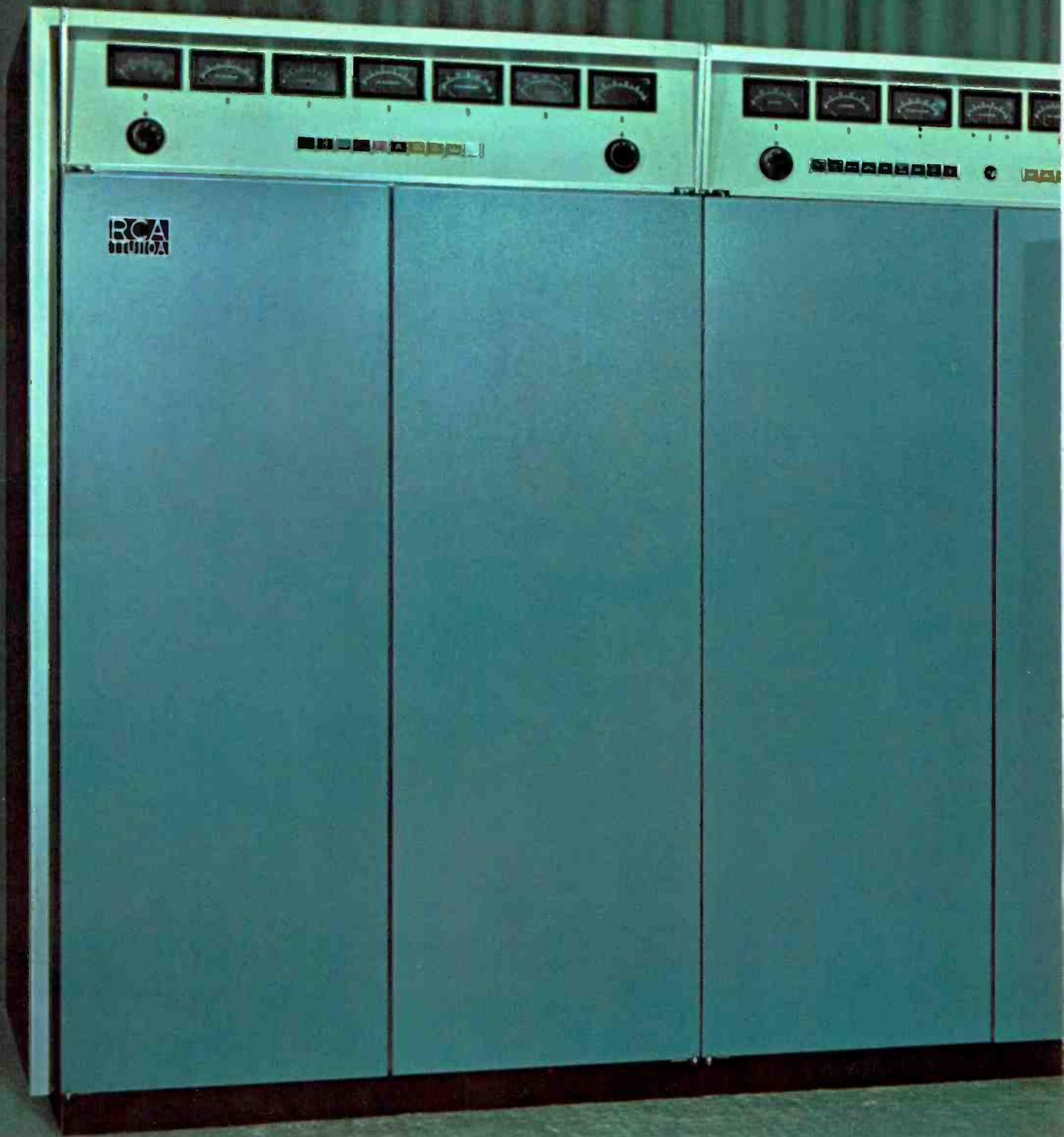
SOUTH
BROADCAST EQUIPMENT & SUPPLY CO.
P. O. Box 3141
Bristol, Tennessee 37620

SOUTHEAST & EXPORT
CONTINENTAL ELECTRONIC WHOLESALE CORP.
1620 West 32nd Place
Hialeah, Florida 33012



MINNEAPOLIS MAGNETICS, INC

2915 Huntington Avenue Minneapolis, Minnesota 55416



**diplexed power amplifiers . . . more
reliable operation . . . up to 5 mega-
watts ERP . . . with antenna to match**

This 110 KW UHF transmitter, combined with the right RCA antenna, provides RCA's most powerful transmitter-antenna package, affording up to 5 million watts ERP.

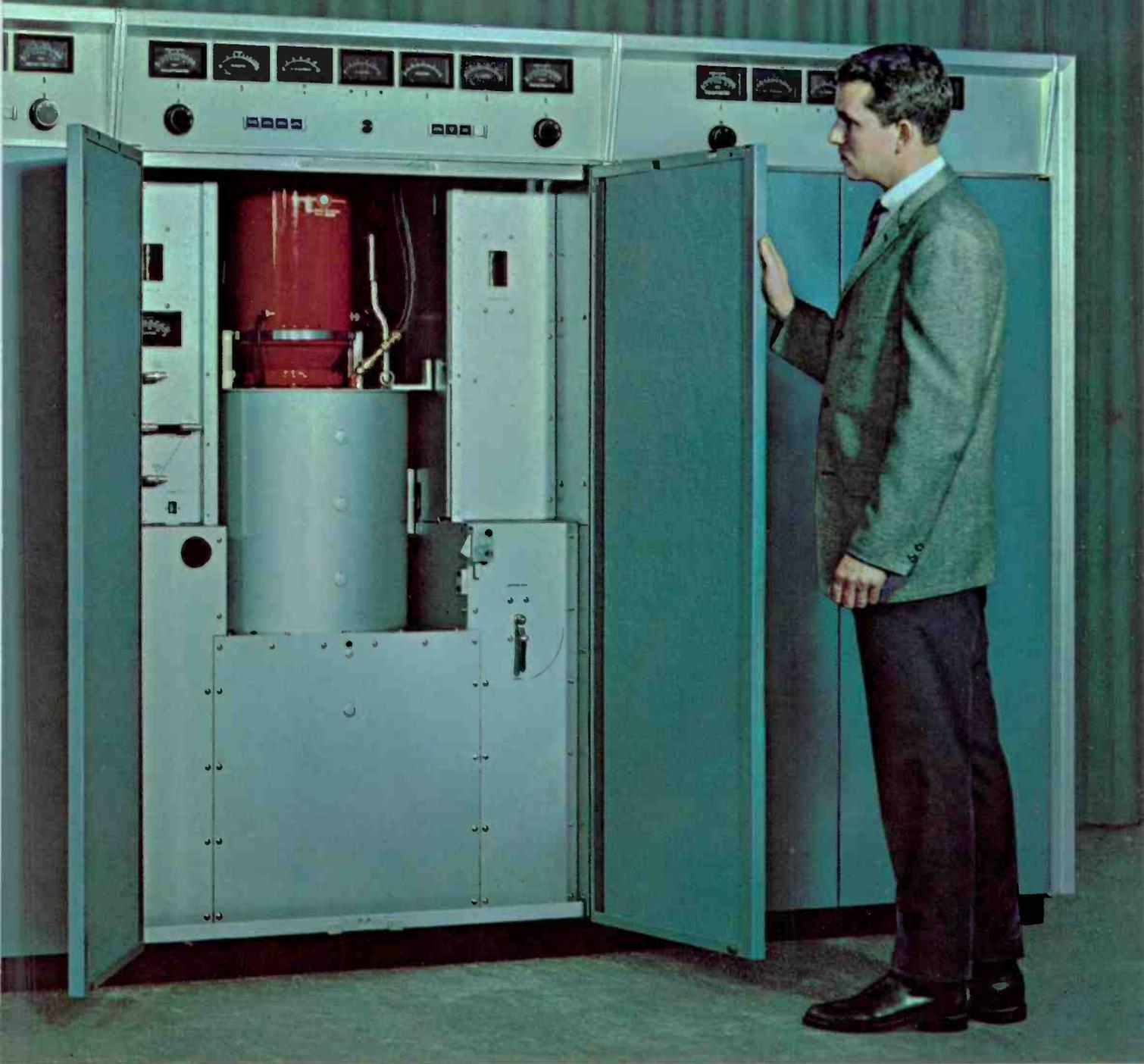
RELIABLE OPERATION. The diplexed visual power amplifiers assure the utmost in reliability. One amplifier is always ready to back up the other in case of emergency.

NEW TYPE KLYSTRONS. Unique, integral-cavity vapor-cooled klystrons are a high power development of those used in the proven RCA TTU-30A and TTU-50C Transmitters. Reliability and long life are major advantages, with faster warm-up time, less weight and retuning among other points of superiority.

VAPOR COOLING EFFICIENCY. Vapor cooling is much more efficient than water cooling. This results in reduced operating expense. Lower input power is required.

WALK-IN DESIGN. New design techniques and walk-in cabinetry result in smaller size and easy maintenance. This means direct savings in installation and operation and will minimize building construction costs.

110-KW TRANSMITTER ... for maximum power UHF



ANTENNA CHOICES. RCA offers you a choice of Pylon and Panel Antennas for use with this new Transmitter. You get the kind of Antenna that suits your needs—directional or non-directional—as well as your power requirements.

COMPLETE LINE OF UHF TRANSMITTERS. There are three high-power integral-cavity vapor-cooled klystron transmitters: 30KW, 55KW and 110KW. Also two lower-power air-cooled transmitters: 2KW and 10KW (the 2KW is easily expanded to a 10KW).

YOU GET SO MUCH MORE FROM RCA—RCA offers the only full-line of broadcast equipment. RCA's long experience, engineering skills and improved products mean better performance.

From RCA you get matched system design, overall warranty responsibility, single supplier coordination and complete service. It all adds up to greater value.

For more information, call your RCA Broadcast Representative. Or write RCA Broadcast and Television Equipment, Building 15-5, Camden, N.J. 08102.



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 DIACOUSTIC LABORATORY
 FAIRCHILD RECORDING EQUIPMENT
 GDTHAM AUDIO CORPORATION
 KOSS ELECTRONICS, INC.
 SCULLY RECORDING INSTRUMENTS
 SINGER PRODUCTS CO.
 SOUTHWESTERN COMMUNICATIONS
 WESTREX

LEADER, FILM

METROFILM CORP.
 NEUMAQUE PRODUCTS CORPORATION

LEADS, TEST

BIRNBACH CO
 ELECTRONICS ESSENTIALS OF CCC
 E-Z-HOOK TEST PRODUCTS
 G C ELECTRONICS COMPANY
 HEWLETT-PACKARD CO.

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ALBION OPTICAL COMPANY
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 AMPEX CORPORATION
 CHARLES BESELER CO.
 BIRNS & SAWYER
 BURKE & JAMES
 COHU ELECTRONICS
 DYNAMIC OPTICS INC.
 EASTMAN KODAK CO.
 GORDON ENTERPRISES
 MOTOROLA COMMUNICATIONS
 POWER-OPTICS INCORPORATED
 RCA BROADCAST PRODS.
 TELE-CINE INC.
 TELEMATON, INC.
 TELE-MEASUREMENTS INC.
 TELEVISION UTILITIES CORP
 TELEVISION ZOOMAR
 TRAUD CORPORATION
 VIDEO COMPONENTS, INC.
 VISUAL ELECTRONICS CORP
 ZOLOMATICS CORPORATION
 ZOOMAR, INC.

LENSES, OPTICAL, ZOOM

ALBION OPTICAL COMPANY
 AMECO, INC.
 AMPEX CORPORATION
 BIRNS & SAWYER
 COHU ELECTRONICS
 GORDON ENTERPRISES
 LAKE ELECTRONICS, INC.
 MOTOROLA COMMUNICATIONS
 POWER-OPTICS INCORPORATED
 RCA BROADCAST PRODS.
 TELE-CINE INC.
 TELE-MEASUREMENTS INC.
 TELEVISION UTILITIES CORP
 TELEVISION ZOOMAR
 TRAUD CORPORATION
 VIDEO COMPONENTS, INC.
 VISUAL ELECTRONICS CORP
 ZOLOMATICS CORPORATION
 ZOOMAR, INC.

**LETTERS AND NUMBERS,
PRESSURE SENSITIVE**

W H BRADY CO.
 THE JAMES FLOYD FORD CO

LIFTS, AERIAL, TRUCK-MOUNTED

HUNT-PIERCE CORP
 TELSTA CORPORATION

LIGHTING, TV, COMPONENTS

BERKEY-COLORTRAN, INC.
 BOSTON INSULATED WIRE & CABLE
 CENTURY LIGHTING, INC.
 COLORTRAN INDUSTRIES - BERKEY
 DRESSER CRANE HOIST & TOWER
 HARWOOD MFG. CO.
 KIEGL BROS. LIGHTING
 LIGHTING & ELECTRONICS, INC.
 LIGHTING UNLIMITED
 J. G. MCALISTER
 METROPOLITAN ELECTRIC MFG CO
 MOLE-RICHARDSON CO.
 PACIFIC TOWER CO
 RCA BROADCAST PRODS.
 SICODIM, INC.
 SINGER PRODUCTS CO.
 SYLVANIA LIGHTING PRODUCTS
 TELEQUIP CORPORATION
 TELEVISION UTILITIES CORP
 VIDEO COMPONENTS, INC.
 VISUAL ELECTRONICS CORP

LIGHTING, TV, CONTROLS

BERKEY-COLORTRAN, INC.
 CENTURY LIGHTING, INC.
 COLORTRAN INDUSTRIES - BERKEY
 DRESSER CRANE HOIST & TOWER

HOUSTON ELECTRONICS CO.
 KIEGL BROS. LIGHTING
 LIGHTING & ELECTRONICS, INC.
 LIGHTING UNLIMITED
 METROPOLITAN ELECTRIC MFG CO
 MOLE-RICHARDSON CO.
 RCA BROADCAST PRODS.
 SICODIM, INC.
 SINGER PRODUCTS CO.
 ULTRA AUDIO PRODUCTS
 VISUAL ELECTRONICS CORP

LIGHTING, TV, SYSTEMS

BIRNS & SAWYER
 CENTURY LIGHTING, INC.
 COLORTRAN INDUSTRIES - BERKEY
 DRESSER CRANE HOIST & TOWER
 ELECTRONIC LIGHTS, INC.
 GENARCO, INC.
 KIEGL BROS. LIGHTING
 LIGHTING & ELECTRONICS, INC.
 LIGHTING UNLIMITED
 J. G. MCALISTER
 METROPOLITAN ELECTRIC MFG CO
 MOLE-RICHARDSON CO.
 PACIFIC TOWER CO
 RCA BROADCAST PRODS.
 SICODIM, INC.
 SINGER PRODUCTS CO.
 SYLVANIA-COMM. ELECTRONICS DIV
 TELE-MEASUREMENTS INC.
 TELEQUIP CORPORATION
 TELEVISION UTILITIES CORP
 VISUAL ELECTRONICS CORP

LIGHTNING ARRESTERS

AMECO, INC.
 AVA ELECTRONICS & MACHINE CORP
 CARDION COMMUNICATIONS
 COLLINS RADIO COMPANY
 COOK ELECTRIC, WIRECOM DIV.
 G C ELECTRONICS COMPANY
 GENERAL ELECTRIC CO
 JOSLYN ELECTRONIC SYSTEMS
 MOLE-RICHARDSON CO.
 RCA ELECTRONIC COMPONENTS
 RELIABLE ELECTRIC
 SINGER PRODUCTS CO.
 UP-RIGHT SCAFFOLDS
 UTILITY TOWER CO.
 VIKOA, INC.

LIGHTS, TOWER, OBSTRUCTION

DRESSER CRANE HOIST & TOWER
 HARWOOD MFG. CO.
 HUGHES & PHILLIPS
 JAMPRO ANTENNA COMPANY
 RCA BROADCAST PRODS.
 ROHN MANUFACTURING CO.
 SINGER PRODUCTS CO.
 TRYLON INCORPORATED
 UTILITY TOWER CO.

LOG BOOKS OR SHEETS

ACME VISIBLE RECORDS

LUBRICANTS

G C ELECTRONICS COMPANY
 SINGER PRODUCTS CO.

MAINTENANCE SERVICES, AM

AMERICAN ELECTRONIC LABS
 ASCO SONOCRAFT CORP
 COLLINS RADIO COMPANY
 GATES RADIO COMPANY
 DRESSER CRANE HOIST & TOWER
 EITEL ELECTRONICS
 LIBERTY TOWER MFG. CO
 LITTLE JOE ENTERPRISES
 ORBIT RADIO
 RCA SERVICE COMPANY
 SOUTHWESTERN COMMUNICATIONS
 TRYLON INCORPORATED
 UTILITY TOWER CO.

**MAINTENANCE SERVICES,
CARTRIDGE TAPE**

ATC DIV. GATES RADIO
 BROADCAST PRODUCTS COMPANY
 COLLINS RADIO COMPANY
 GATES RADIO COMPANY
 JOA CARTRIDGE SERVICE
 SINGER PRODUCTS CO.

MAINTENANCE SERVICES, FM

AMERICAN ELECTRONIC LABS
 ASCO SONOCRAFT CORP
 COLLINS RADIO COMPANY
 DRESSER CRANE HOIST & TOWER
 EITEL ELECTRONICS
 LIBERTY TOWER MFG. CO
 LITTLE JOE ENTERPRISES
 MOTOROLA COMMUNICATIONS
 ORBIT RADIO
 RCA SERVICE COMPANY
 SOUTHWESTERN COMMUNICATIONS
 STANDARD ELECTRONICS CORP.
 TRYLON INCORPORATED
 UTILITY TOWER CO.

**MAINTENANCE SERVICES,
MICROWAVE**

AMECO, INC.
 COLLINS RADIO COMPANY
 EITEL ELECTRONICS

LIBERTY TOWER MFG. CO
 MICRO-LINK SYSTEMS-VARIAN
 RCA SERVICE COMPANY
 TRYLON INCORPORATED
 TRYLON INCORPORATED
 UTILITY TOWER CO.

**MAINTENANCE SERVICES,
STEEPLE JACK**

DRESSER CRANE HOIST & TOWER
 LIBERTY TOWER MFG. CO
 LITTLE JOE ENTERPRISES
 RCA SERVICE COMPANY
 SWAGER TOWER CORPORATION
 TRYLON INCORPORATED
 UTILITY TOWER CO.

MAINTENANCE SERVICES, TV

AMPEX CORPORATION
 RF TRANSMISSION DEPT, AMPEX
 BIRNS & SAWYER
 CENTRAL DYNAMICS CORPORATION
 DRESSER CRANE HOIST & TOWER
 EITEL ELECTRONICS
 G E VISUAL COMMUNICATIONS PROD
 RCA SERVICE COMPANY
 STANDARD ELECTRONICS CORP.
 TELE-MEASUREMENTS INC.
 TRYLON INCORPORATED
 UTILITY PRODUCTS CO.

METERS, DB AND VU

API INSTRUMENTS CO.
 BRADFORD INFORMATION SYSTEMS
 C B S LABORATORIES
 COLLINS RADIO COMPANY
 G E INDUSTRIAL SALES OPERATION
 GOTHAM AUDIO CORPORATION
 INSTRUMENT LABORATORIES CORP
 INTERNATIONAL ELECTRONICS CORP
 LTV LING ALTEC, INC.
 MCMARTIN INDUSTRIES
 NORTHEAST ELECTRONICS CORP
 SINGER PRODUCTS CO.
 TRIPLETT ELECTRICAL INSTRUMENT
 WESTREX
 YOKOGAWA ELECTRIC WORKS

METERS, DB AND VU, WIDE RANGE

B & K INSTRUMENTS, INC.
 C B S LABORATORIES
 COLLINS RADIO COMPANY
 DAVEN DIV. - EDISON INDUS.
 G E INDUSTRIAL SALES OPERATION
 INTERNATIONAL ELECTRONICS CORP
 LTV LING ALTEC, INC.
 H. H. SCOTT, INCORPORATED
 SINGER PRODUCTS CO.
 YOKOGAWA ELECTRIC WORKS

METERS, FIELD STRENGTH, AM & FM

ANACONDA ASTRODATA CO
 KEITH ANDERSON CO
 ANRITSU ELECTRIC CO., LTD.
 BENCO TELEVISION ASSOCIATES
 BLONDER-TONGUE LABORATORIES
 MCMARTIN INDUSTRIES
 ROCKE INTERNATIONAL CORP.
 ROHDE & SCHWARZ SALES CO.
 THE SINGER CO - METRICS DIV
 SINGER PRODUCTS CO.
 TV CABLE SUPPLY CO
 VITRO ELECTRONICS
 WILKINSON ELECTRONICS, INC
 YOKOGAWA ELECTRIC WORKS

**METERS, FIELD STRENGTH,
TV, UHF**

KEITH ANDERSON CO
 ANRITSU ELECTRIC CO., LTD.
 BLONDER-TONGUE LABORATORIES
 JERROLD ELECTRONICS CORP
 ROHDE & SCHWARZ SALES CO.

**METERS, FIELD STRENGTH,
TV, VHF**

KEITH ANDERSON CO
 ANRITSU ELECTRIC CO., LTD.
 BLONDER-TONGUE LABORATORIES
 HICKOK ELECTRICAL INSTRUMENT
 JERROLD ELECTRONICS CORP
 ROHDE & SCHWARZ SALES CO.
 VIKOA, INC.

METERS, FLUTTER & WOW

ALBION OPTICAL COMPANY
 AMPLIFIER CORP OF AMERICA
 GOTHAM AUDIO CORPORATION
 MICOM, INC

METERS, FREQUENCY

ANRITSU ELECTRIC CO., LTD.
 BELAR ELECTRONICS LABORATORY
 CLAASSEN ELECTRONICS
 COLLINS RADIO COMPANY
 ENGINEERING ASSOCIATES
 GENERAL ELECTRIC CO
 GENERAL MICROWAVE CORPORATION
 GENERAL RADIO CO
 HEWLETT-PACKARD CO.

HICKOK ELECTRICAL INSTRUMENT
 LAMPKIN LABORATORIES INC
 MCMARTIN INDUSTRIES
 MICROLAB - FXR
 MOTOROLA COMMUNICATIONS
 NARDA MICROWAVE CORPORATION
 ROHDE & SCHWARZ SALES CO.
 THE SINGER CO - METRICS DIV
 SINGER PRODUCTS CO.
 WATERS MANUFACTURING
 WAVEFORMS, INCORPORATED
 YOKOGAWA ELECTRIC WORKS

METERS, FREQUENCY CALIBRATING

GENERAL RADIO CO
 HEWLETT-PACKARD CO.
 HICKOK ELECTRICAL INSTRUMENT
 MICROLAB - FXR
 MICRO-LINK SYSTEMS-VARIAN
 NARDA MICROWAVE CORPORATION
 PRESEARCH INC.
 SINGER PRODUCTS CO.
 TV CABLE SUPPLY CO

METERS, LIGHT

ALLIED ELECTRONICS CORP
 BIRNS & SAWYER
 BURKE & JAMES
 ELECTRONIC SYSTEM ENGINEERING
 GAMMA SCIENTIFIC, INC.
 G E SUPPLY COMPANY
 SINGER PRODUCTS CO.
 YOKOGAWA ELECTRIC WORKS
 ZOOMAR, INC.

METERS, PHASE ANGLE

GENERAL ELECTRIC CO
 HEWLETT-PACKARD CO.
 ROHDE & SCHWARZ SALES CO.
 THE SINGER CO - METRICS DIV
 YOKOGAWA ELECTRIC WORKS

METERS, POWER

ANRITSU ELECTRIC CO., LTD.
 BIRD ELECTRONIC CORPORATION
 DAVEN DIV. - EDISON INDUS.
 GENERAL MICROWAVE CORPORATION
 GENERAL RADIO CO
 HEWLETT-PACKARD CO.
 MICRO-LINK SYSTEMS-VARIAN
 NARDA MICROWAVE CORPORATION
 ROCKE INTERNATIONAL CORP.
 ROHDE & SCHWARZ SALES CO.
 THE SINGER CO - METRICS DIV
 YOKOGAWA ELECTRIC WORKS

METERS, STANDING WAVE

ALFORD MANUFACTURING COMPANY
 ANRITSU ELECTRIC CO., LTD.
 BARKER & WILLIAMSON
 BIRD ELECTRONIC CORPORATION
 DELTA ELECTRONICS INC
 DEMORNY - BONARDI DIVISION
 GENERAL MICROWAVE CORPORATION
 GENERAL RADIO CO
 HEWLETT-PACKARD CO.
 JERROLD ELECTRONICS CORP
 MARCONI DIVISION
 NARDA MICROWAVE CORPORATION
 ROHDE & SCHWARZ SALES CO.
 SINGER PRODUCTS CO.
 STANDARD ELECTRONICS CORP.

MICROPHONE HARDWARE

AMECO, INC.
 AMERICAN GELOSO ELECTRONICS
 BIRNBACH CO
 B & K INSTRUMENTS, INC.
 COLLINS RADIO COMPANY
 ELECTRONICS ESSENTIALS OF CCC
 GOTHAM AUDIO CORPORATION
 LTV LING ALTEC, INC.
 NORTH AMERICAN PHILIPS CO
 PRIMO CO. LTD
 SINGER PRODUCTS CO.
 TELE-MEASUREMENTS INC.
 TRUSONIC

MICROPHONE STANDS & BOOMS

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 ATLAS SOUND
 E J BAUGHMAN CO
 BELL P-A PRODUCTS CORP.
 CENTURY LIGHTING, INC.
 ELECTRO-VOICE INC
 GOTHAM AUDIO CORPORATION
 LTV LING ALTEC, INC.
 MOLE-RICHARDSON CO.
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TELEQUIP CORPORATION
TELEVISION ZOOMAR
TURNER MICROPHONE CO

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GORDON ENTERPRISES
GOTHAM AUDIO CORPORATION
LTV LING ALTEC, INC.
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PRIMO CO. LTD.
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SINGER PRODUCTS CO.
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SYNCRON CORPORATION
TELE-MEASUREMENTS INC.
TRUSONIC
VEGA ELECTRONICS CORPORATION

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AMERICAN GELOSO ELECTRONICS
AMPEX CORPORATION
THE ASTATIC CORPORATION
BELL P-A PRODUCTS CORP.
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COLLINS RADIO COMPANY
ELECTRO-VOICE INC
GORDON ENTERPRISES
LTV LING ALTEC, INC.
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MILES REPRODUCER CO
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TELE-MEASUREMENTS INC.
TURNER MICROPHONE CO

MICROPHONES, VELOCITY

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TELE-MEASUREMENTS INC.

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GORDON ENTERPRISES
MILES REPRODUCER CO
OMNIBUS RESEARCH LABORATORIES
PRIMO CO. LTD.
SINGER PRODUCTS CO.
SONY CORPORATION OF AMERICA
SPARTA ELECTRONIC CORPORATION
TELE-MEASUREMENTS INC.
TRUSONIC
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AMPEREX ELECTRONIC CORP
AMPHENOL CORP.
ANDREW CORPORATION
BIRD ELECTRONIC CORPORATION
CARDWELL CONDENSER CORP
COLLINS RADIO COMPANY
COMMUNICATIONS PRODUCTS CO
DEMORNAY - BONARDI DIVISION
EIMAC DIVISION OF VARIAN
ELECTROMAGNETIC RADIATION LABS
GENERAL ELECTRIC CO
GENERAL MICROWAVE CORPORATION
GENERAL RADIO CO
LITTON EDUCATIONAL TELE DIV
MICROLAB - FXR
MICROWAVE ASSOCIATES, INC.
MOTOROLA SEMICONDUCTOR
NARDA MICROWAVE CORPORATION
PHELPS DODGE
PRODELIN, INCORPORATED
RHG ELECTRONICS LABORATORY
SOLITRON DEVICES
SYLVANIA-SEMICONDUCTOR DIV.
TELEQUIP CORPORATION
TEXAS INSTRUMENTS

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DEMORNAY - BONARDI DIVISION
ELECTRONICS DEVELOPMENT CORP.
F & M SYSTEMS COMPANY
G E VISUAL COMMUNICATIONS PROD
GENERAL MICROWAVE CORPORATION
JERROLD ELECTRONICS CORP
LENKURT ELECTRIC CO., INC.
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MICRO-LINK SYSTEMS-VARIAN
MICROWAVE ASSOCIATES, INC.
MOSELEY ASSOCIATES INC - NC.
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RCA BROADCAST PRODS.
RHG ELECTRONICS LABORATORY
SARKES-TARZIAN
SINGER PRODUCTS CO
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TELETRONIX

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COLLINS RADIO COMPANY
DEMORNAY - BONARDI DIVISION
F & M SYSTEMS COMPANY
GENERAL MICROWAVE CORPORATION
ITT TELECOMMUNICATIONS
JERROLD ELECTRONICS CORP
LENKURT ELECTRIC CO., INC.
LITTON EDUCATIONAL TELE DIV
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PRODELIN, INCORPORATED
RCA BROADCAST PRODS.
RHG ELECTRONICS LABORATORY
SIGNAL ENGINEERING & SALES INC
SINGER PRODUCTS CO.
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CARDWELL CONDENSER CORP
COLLINS RADIO COMPANY
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JERICO ELECTRONICS SUPPLY
JERROLD ELECTRONICS CORP
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MICROLAB - FXR
MICRO-LINK SYSTEMS VARIAN
MICROWAVE ASSOCIATES, INC.
NARDA MICROWAVE CORPORATION
RAYTHEON CO.
RCA BROADCAST PRODS.
RHG ELECTRONICS LABORATORY
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BELL P-A PRODUCTS CORP.
CENTRAL DYNAMICS CORPORATION
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DELTA ELECTRONICS, INC. - NC
GOTHAM AUDIO CORPORATION
THE GRASS VALLEY GROUP, INC.
HARVEY RADIO CO. INC.
HOUSTON ELECTRONICS CO.
LANG ELECTRONICS, INC
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SINGER PRODUCTS CO
SPARTA ELECTRONIC CORPORATION
SUPERIOR CONTINENTAL CORP.
THE TECHNICAL MATERIEL CORP
UTICA ELECTRONICS
VISUAL ELECTRONICS CORP
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MOBILE EQUIPMENT, TV

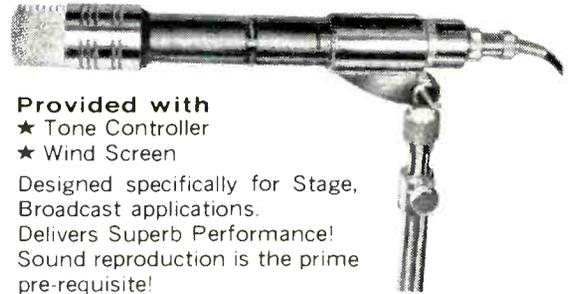
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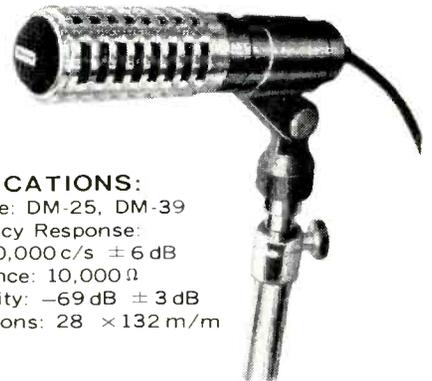
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SPECIFICATIONS:

- Cartridge: DM-47, DM-48
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- Sensitivity: -72 dB
- Dimensions: 31 x 230 m/m
- Net weight: 440 g

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SPECIFICATIONS:

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- Impedance: 10,000 Ω
- Sensitivity: -69 dB \pm 3 dB
- Dimensions: 28 x 132 m/m

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ROHDE & SCHWARZ SALES CO.
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STANDARD ELECTRONICS CORP .
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SINGER PRODUCTS CO
SOUTHWESTERN COMMUNICATIONS
VITRO ELECTRONICS
WILKINSON ELECTRONICS, INC

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KARG LABORATORIES
LTV LING ALTEC, INC.
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UTICA ELECTRONICS
VITRO ELECTRONICS

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CALBEST ELECTRONICS
COLLINS RADIO COMPANY
GATES RADIO COMPANY
HAMMARLUND MANUFACTURING CO.
MCMARTIN INDUSTRIES
ROCKE INTERNATIONAL CORP.
SINGER PRODUCTS CO

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GATES RADIO COMPANY
GOTHAM AUDIO CORPORATION
KARG LABORATORIES
LTV LING ALTEC, INC.
MCMARTIN INDUSTRIES
MELCOR ELECTRONICS
ROCKE INTERNATIONAL CORP.
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EIDSON ELECTRONIC COMPANY
GATES RADIO COMPANY
GENERAL MICROWAVE CORPORATION
HEWLETT-PACKARD CO.
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ROHDE & SCHWARZ SALES CO.
RUST CORP.
THE SINGER CO - METRICS DIV
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TELETRONIX
WILKINSON ELECTRONICS, INC

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LAMPKIN LABORATORIES INC
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ROCKE INTERNATIONAL CORP.
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AMPLIVISION CORPORATION
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BLONDER-TONGUE LABORATORIES
BRADFORD INFORMATION SYSTEMS
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CONRAC DIV., CONRAC CORP.
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DIAMOND POWER SPECIALTY CORP.
ELECTRONIC DESIGNERS INC.
GBC AMERICA CORPORATION
G E VISUAL COMMUNICATIONS PROD
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GPL DIV.
HEWLETT-PACKARD CO.
IKEGAMI TSUSHINKI CO., LTD.
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LAKE ELECTRONICS, INC.
LAVIOLETTE ELECTRONICS
MARCONI DIVISION
MARYLAND TELECOMMUNICATIONS
MIRATEL ELECTRONICS, INC
MOTOROLA COMMUNICATIONS
NORTH AMERICA ELECTRONICS
PACKARD BELL ELECTRONICS,
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SYLVANIA-COMM. ELECTRONICS DIV
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TELEMET COMPANY
TELEQUIP CORPORATION
TELEVISION UTILITIES CORP
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VIKOA, INC.
VISUAL ELECTRONICS CORP

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BALL BROTHERS RESEARCH
BENRUS
BRADFORD INFORMATION SYSTEMS
COLORADO VIDEO
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IKEGAMI TSUSHINKI CO., LTD.
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RCA BROADCAST PRODS.
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SONY CORPORATION OF AMERICA
TEKTRONIX INC
TELE-MEASUREMENTS INC.
TELEVISION UTILITIES CORP

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WESTREX

MOUNTS, ANTENNA, FIXED

ADVANCE INDUSTRIES
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ANDREW CORPORATION
COMMUNICATIONS PRODUCTS CO
DAVIS & SANFORD
GABRIEL ELECTRONICS DIV
HOUSTON FEARLESS CORPORATION
JAMPRO ANTENNA COMPANY
JERROLD ELECTRONICS CORP
LIBERTY TOWER MFG. CO

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ROHN MANUFACTURING CO.
SCIENTIFIC-ATLANTA
SINGER PRODUCTS CO.
TELEQUIP CORPORATION
TRYLON INCORPORATED
UTILITY PRODUCTS CO.

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DAVIS & SANFORD
HOUSTON FEARLESS CORPORATION
MICROWAVE ASSOCIATES, INC.
PRODELIN, INCORPORATED
SINGER PRODUCTS CO.
TELEQUIP CORPORATION
UTICA ELECTRONICS
WATERS MANUFACTURING

MOUNTS, INSTRUMENT

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SINGER PRODUCTS CO.
TELEQUIP CORPORATION

MOUNTS, VIBRATION AND SHOCK

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ELECTROVERT, INCORPORATED
KORFUND DYNAMICS CORP.

MULTIPLEXERS

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BALL BROTHERS RESEARCH
BLONDER-TONGUE LABORATORIES
COLLINS RADIO COMPANY
DAGE BELL CORPORATION
ELECTRONICS DEVELOPMENT CORP.
G E VISUAL COMMUNICATIONS PROD
GPL DIV.
LENKURT ELECTRIC CO., INC.
MICROWAVE ASSOCIATES, INC.
RICHMOND HILL LABORATORIES
SINGER PRODUCTS CO.
TELE-CINE INC.
TELEMAN, INC.
TELE-MEASUREMENTS INC.
TELEVISION UTILITIES CORP
VIDEO COMPONENTS, INC.
VIDEON CORPORATION
VIDEO SYSTEMS

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THE JAMES FLOYD FORD CO
NEMO RECORDING LAB'S

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COLLINS RADIO COMPANY
COURIER COMMUNICATIONS
HAMMARLUND MANUFACTURING CO.
LTV LING ALTEC, INC.
MARTI ELECTRONICS
ROCKE INTERNATIONAL CORP.
SINGER PRODUCTS CO
STANDARD ELECTRONICS CORP .

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COLLINS RADIO COMPANY
DAVEN DIV. - EDISON INDUS.
FAIRLANE ELECTRONICS
HARTLEY PRODUCTS
JENSEN MANUFACTURING
KAPPA NETWORKS, INC
LANGEVIN
LTV LING ALTEC, INC.
SINGER PRODUCTS CO.
SOUTHWESTERN COMMUNICATIONS
STEPHENS ELECTRONICS
T T ELECTRONICS
ULTRA AUDIO PRODUCTS
VIRGINIA ELECTRONICS CO., INC.

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BARKER & WILLIAMSON
BAUER BROADCAST PRODUCTS DIV.
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CONTINENTAL ELECTRONICS MFG
GATES RADIO COMPANY
JERROLD ELECTRONICS CORP
KAPPA NETWORKS, INC
NARDA MICROWAVE CORPORATION
SINGER PRODUCTS CO.
TELONIC INDUSTRIES
T T ELECTRONICS

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BAUER BROADCAST PRODUCTS DIV.
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CONTINENTAL ELECTRONICS MFG
GATES RADIO COMPANY
KAPPA NETWORKS, INC
LTV LING ALTEC, INC.
MULTRONICS
SOUTHWESTERN COMMUNICATIONS
T T ELECTRONICS

OHMMETERS

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HEATH CO
HEWLETT-PACKARD CO.
HICKOK ELECTRICAL INSTRUMENT
TEST INSTR. DIV. HONEYWELL
INSTRUMENT LABORATORIES CORP
RCA ELECTRONIC COMPONENTS
ROHDE & SCHWARZ SALES CO.
SINGER PRODUCTS CO.
TRIPLETT ELECTRICAL INSTRUMENT
YOKOGAWA ELECTRIC WORKS

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HEATH CO
HEWLETT-PACKARD CO.
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TREPAC CORPORATION OF AMERICA
VIRGINIA ELECTRONICS CO., INC.
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GATES RADIO COMPANY
GENERAL RADIO CO
GIBBS MFG. AND RESEARCH CORP.
HEATH CO
ROHDE & SCHWARZ SALES CO.
SINGER PRODUCTS CO.
SOUTHWESTERN COMMUNICATIONS

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ELECTRONICS DEVELOPMENT CORP.
GATES RADIO COMPANY
GIBBS MFG. AND RESEARCH CORP.
HEATH CO
MILES REPRODUCER CO
RHG ELECTRONICS LABORATORY
ROHDE & SCHWARZ SALES CO.
SOUTHWESTERN COMMUNICATIONS
STANDARD ELECTRONICS CORP .

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HEATH CO
RHG ELECTRONICS LABORATORY
RIKER VIDEO INDUSTRIES
ROHDE & SCHWARZ SALES CO.
STANDARD ELECTRONICS CORP .
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TELEMET COMPANY
VIDEON CORPORATION

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HEWLETT-PACKARD CO.
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NARDA MICROWAVE CORPORATION
RCA ELECTRONIC COMPONENTS
TELONIC INDUSTRIES
WAVEFORMS, INCORPORATED

OSCILLOSCOPES

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BENRUS
COLORADO VIDEO
DATA INSTRUMENT DIVISION
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HEATH CO
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TEST INSTR. DIV. HONEYWELL
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TEKTRONIX INC

OVENS, CRYSTAL

COLLINS RADIO COMPANY
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RCA BROADCAST PRODS.
SINGER PRODUCTS CO.
SWITCHCRAFT, INC.
THE TECHNICAL MATERIEL CORP
TROMPETER ELECTRONICS

PLUGS, PHONE

ADC PRODUCTS
AUDIO ACCESSORIES
AVA ELECTRONICS & MACHINE CORP
BIRNBACH CO
ELECTRONIC ESSENTIALS OF CCC
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ROBINS INDUSTRIES CORP.
SINGER PRODUCTS CO.
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POTENTIOMETERS, CARBON

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CENTRALAB
DAVEN DIV. - EDISON INDUS.
GOTHAM AUDIO CORPORATION
MALLORY DISTRIBUTOR PRODUCTS
OHMITE MANUFACTURING COMPANY
SINGER PRODUCTS CO.

POTENTIOMETERS, WIREWOUND

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CENTRALAB
DAVEN DIV. - EDISON INDUS.
GENERAL RADIO CO
IRC, INC.
MALLORY DISTRIBUTOR PRODUCTS
OHMITE MANUFACTURING COMPANY
SINGER PRODUCTS CO.
WATERS MANUFACTURING

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ANACONDA ASTRODATA CO.
BIRNS & SAWYER
COHU ELECTRONICS
COLLINS RADIO COMPANY
CORNELL-DUBILIER ELECTRONICS
D & B ELECTRONICS COMPANY
DIVERSIFIED ELECTRONIC CORP
FAIRCHILD RECORDING EQUIPMENT

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GIBBS MFG. AND RESEARCH CORP.
GREGORY AMPLIFIER CORP
HEATH CO
TEST INSTR. DIV. HONEYWELL
IKEGAMI TSUSHINKI CO., LTD.
LTV LING ALTEC, INC.
POWER SOURCES
ROCKE INTERNATIONAL CORP.
SCIENTIFIC SYSTEMS, INC.
THE SINGER CO. - METRICS DIV
SINGER PRODUCTS CO.
SOLA ELECTRIC
SORENSEN OPERATION-RAYTHEON CO
STACO, INC.
STANDARD ELECTRONICS CORP.

POWER SUPPLIES, DC

ADC PRODUCTS
ALLIED ELECTRONICS CORP
ALMA ENGINEERING INC
AMECO, INC.
RF TRANSMISSION DEPT, AMPLEX
ARBOR SYSTEMS, INC.
BENRUS
BIRNS & SAWYER
CLAASEN ELECTRONICS
COHU ELECTRONICS
COLLINS RADIO COMPANY
CORNELL-DUBILIER ELECTRONICS
DELTA ELECTRONICS, INC.
DIVERSIFIED ELECTRONIC CORP
ELECTRO PRODUCTS LABORATORIES
FAIRCHILD RECORDING EQUIPMENT
FAIRLANE ELECTRONICS
GENERAL ELECTRIC CO
GENERAL RADIO CO
HEATH CO
HEWLETT-PACKARD CO.
IKEGAMI TSUSHINKI CO., LTD.
INTERNATIONAL NUCLEAR CORP.
LANGEVIN
LTV LING ALTEC, INC.
MELCOR ELECTRONICS
MOTOROLA COMMUNICATIONS
POWER SOURCES
RFE LABS
ROCKE INTERNATIONAL CORP.
SCIENTIFIC SYSTEMS, INC.
SHINTRON CO. INC.
SINGER PRODUCTS CO.
SOLA ELECTRIC
SORENSEN OPERATION-RAYTHEON CO
SOUTHWESTERN COMMUNICATIONS
STACO, INC.
STANDARD ELECTRONICS CORP.
STEPHENS ELECTRONICS
TREPAC CORPORATION OF AMERICA
VIDEON CORPORATION
VIRGINIA ELECTRONICS CO., INC.
W.R.S. ELECTRONICS, LTD.

POWER SUPPLIES, PRECISION

BENRUS
COHU ELECTRONICS
COLLINS RADIO COMPANY
DIVERSIFIED ELECTRONIC CORP
FAIRLANE ELECTRONICS
GENERAL RADIO CO
GIBBS MFG. AND RESEARCH CORP.
THE GRASS VALLEY GROUP, INC.
HEATH CO
HEWLETT-PACKARD CO.
LTV LING ALTEC, INC.
ROCKE INTERNATIONAL CORP.
SOLA ELECTRIC
TRW ELECTRONICS
VIRGINIA ELECTRONICS CO., INC.

PREAMPLIFIERS, AUDIO

AITKEN COMMUNICATIONS
ALCOR, INC.
ALMA ENGINEERING INC
AMECO, INC.
AMPLEX CORPORATION
ARBOR SYSTEMS, INC.
AUDIO INSTRUMENT CO
BAUER BROADCAST PRODUCTS DIV.
BELL P-A PRODUCTS CORP.
B & K INSTRUMENTS, INC.
BOGEN COMMUNICATIONS DIV.
CENTRAL DYNAMICS CORPORATION
COHU ELECTRONICS
COLLINS RADIO COMPANY
CROWN INTERNATIONAL
DELTA ELECTRONICS, INC.
DIVERSIFIED ELECTRONIC CORP
FAIRCHILD RECORDING EQUIPMENT
GATES RADIO COMPANY
G E VISUAL COMMUNICATIONS PROD
GENERAL RADIO CO
THE GRASS VALLEY GROUP, INC.
GREGORY AMPLIFIER CORP
IKEGAMI TSUSHINKI CO., LTD.
INTERNATIONAL NUCLEAR CORP.
KOSS ELECTRONICS, INC.
LANGEVIN
LTV LING ALTEC, INC.
MARANTZ COMPANY
MARTI ELECTRONICS
MCMARTIN INDUSTRIES

MELCOR ELECTRONICS
NEMO RECORDING LAB'S
NORTH AMERICAN PHILIPS CO
ORBIT RADIO
PERMOFLUX CORPORATION
PULSE TECHNIQUES, INC.
Q R K ELECTRONIC PRODUCTS
RECORDING EQUIPMENT COMPANY
ROCKE INTERNATIONAL CORP.
RUSSCO ELECTRONICS MFG.
SCHAFFER ELECTRONICS
H. H. SOTT, INCORPORATED
SHURE BROTHERS, INC.
SINGER PRODUCTS CO.
SONY CORPORATION OF AMERICA
SOUTHWESTERN COMMUNICATIONS
STANCIL-HOFFMAN CORPORATION
STEPHENS ELECTRONICS
VISUAL ELECTRONICS CORP
WARD ELECTRONIC INDUSTRIES
WESTEX

PREAMPLIFIERS, VIDEO

ALCOR, INC.
AMECO, INC.
BLONDER-TONGUE LABORATORIES
CENTRAL DYNAMICS CORPORATION
COHU ELECTRONICS
DIVERSIFIED ELECTRONIC CORP
THE GRASS VALLEY GROUP, INC.
IKEGAMI TSUSHINKI CO., LTD.
INTERNATIONAL NUCLEAR CORP.
JERROLD ELECTRONICS CORP
RHG ELECTRONICS LABORATORY
TELE-MEASUREMENTS INC.
VIDEON CORPORATION
VISUAL ELECTRONICS CORP

PREFABRICATED BUILDINGS

ADVANCE INDUSTRIES
FORT WORTH TOWER CO., INC.
MASTER TOWER CO
UTILITY TOWER CO.

**PRESSURIZATION EQUIPMENT,
TRANSMISSION LINE**

ANDREW CORPORATION
COLLINS RADIO COMPANY
GABRIEL ELECTRONICS DIV.
GENERAL MACHINE PRODUCTS CO.
THE MCINTIRE COMPANY
SIGMA INDUSTRIES
SUPERIOR CONTINENTAL CORP.

PRINTERS, LOGGING

COLLINS RADIO COMPANY
HEWLETT-PACKARD CO.
HICKOK ELECTRICAL INSTRUMENT
JERICHO ELECTRONICS SUPPLY
MOSELEY ASSOCIATES INC.
RUST CORP.
SINGER PRODUCTS CO.

PRINTERS, TELEPRINTER

COLLINS RADIO COMPANY
SINGER PRODUCTS CO
TREPAC CORPORATION OF AMERICA

PROBES, OSCILLOSCOPE

DATA INSTRUMENT DIVISION
DIVERSIFIED ELECTRONIC CORP
ELECTRONICS ESSENTIALS OF CCC
ENGINEERING ASSOCIATES
FAIRLANE ELECTRONICS
HEWLETT-PACKARD CO.
HICKOK ELECTRICAL INSTRUMENT
RCA ELECTRONIC COMPONENTS
TEKTRONIX INC

PROBES, TEST LEAD

F W BELL, INC
DIVERSIFIED ELECTRONIC CORP
ELECTRONICS ESSENTIALS OF CCC
ENGINEERING ASSOCIATES
E-Z-HOOK TEST PRODUCTS
G C ELECTRONICS COMPANY
HEWLETT-PACKARD CO.
E F JOHNSON COMPANY
RCA ELECTRONIC COMPONENTS

PROCESSORS, FILM, B-W

BURKE & JAMES
FAIRCHILD INDUSTRIAL PRODUCTS
GORDON ENTERPRISES
HOUSTON FEARLESS CORPORATION
METROFILM CORP.
MICRO RECORD CORP.
OMNIBUS RESEARCH LABORATORIES

PROCESSORS, FILM, COLOR

GORDON ENTERPRISES
HOUSTON FEARLESS CORPORATION
METROFILM CORP.

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PROJECTORS, FILM

ARRIFLEX-SIEMENS
CENTURY PROJECTOR CORPORATION
EASTMAN KODAK CO.
GENERAL ANILINE & FILM CORP.
GORDON ENTERPRISES
HOLMES PROJECTOR CO., INC.
THE KALART CO. INC.
LISTEC TELEVISION EQUIPMENT
PRECISION LABORATORIES
RCA BROADCAST PRODS.
TELE-MEASUREMENTS INC.
TELEVISION UTILITIES CORP
TRAID CORPORATION
VIDEO COMPONENTS, INC.
VISUAL ELECTRONICS CORP

PROJECTORS, FILM, REAR

FAIRCHILD INDUSTRIAL PRODUCTS
GORDON ENTERPRISES
HARWALD COMPANY
HOLMES PROJECTOR CO., INC.
KALART CO., INC.
TELE-MEASUREMENTS INC.
TELEVISION UTILITIES CORP
VIDEO COMPONENTS, INC.

PROJECTORS, SLIDE

AMPLIFIER CORP OF AMERICA
CHARLES BESELER CO.
BIRNS & SAWYER
DISPLAY TECHNOLOGIES INC
EASTMAN KODAK CO.
GENARCO, INC.
GENERAL ANILINE & FILM CORP.
GRAY RESEARCH & DEVELOPMENT CO
HARWALD COMPANY
HOLMES PROJECTOR CO., INC.
THE KALART CO, INC
PRECISION LABORATORIES
RCA BROADCAST PRODS.
TELEVISION UTILITIES CORP
VISUAL ELECTRONICS CORP
ZOLOMATICS CORPORATION

PROJECTORS, TV, LARGE SCREEN

CHARLES BESELER CO.
GENERAL TELEVISION NETWORK
GORDON ENTERPRISES
GPL DIV.
HOLMES PROJECTOR CO., INC.
KALART CO., INC.
RCA BROADCAST PRODS.
TELE-MEASUREMENTS INC.

RACKS, MOUNTING ALSO SEE HARDWARE

AMECO, INC.
BUD RADIO, INC.
COLLINS RADIO COMPANY
DATA INSTRUMENT DIVISION
FAIRCHILD RECORDING EQUIPMENT
G E VISUAL COMMUNICATIONS PROD
RCA BROADCAST PRODS.
SCHAFFER ELECTRONICS
WABER ELECTRONICS, INC.

RADAR, WEATHER

COLLINS RADIO COMPANY

RADOMES

ANDREW CORPORATION
COLLINS RADIO COMPANY
FORT WORTH TOWER CO., INC.
GABRIEL ELECTRONICS DIV.
PRODELIN, INCORPORATED
TECHNICAL APPLIANCE CORP

RECEIVERS, AM

AMERICAN ELITE
BELL P-A PRODUCTS CORP.
BENJAMIN ELECTRONIC SOUND CORP
BOGEN COMMUNICATIONS DIV.
CALBEST ELECTRONICS
CONCERTONE, INC.
COLLINS RADIO COMPANY
CONCERTONE, INC.
DELCO RADIO DIV
G E SUPPLY COMPANY
HAMMARLUND MANUFACTURING CO.
HEATH CO.
KAHN RESEARCH LABORATORIES
LTV LING ALTEC, INC.
MARCONI INSTRUMENTS
NORTH AMERICAN PHILIPS CO
RHG ELECTRONICS LABORATORY
ROBERTS DIV. OF RHEEM MFG CO.
ROCKE INTERNATIONAL CORP.
ROHDE & SCHWARZ SALES CO.
SETCHELL CARLSON, INC.
SINGER PRODUCTS CO
TANDBERG OF AMERICA, INC.
THE TECHNICAL MATERIEL CORP
UTICA ELECTRONICS
VITRO ELECTRONICS

RECEIVERS, FM

AMECO, INC.
AMERICAN ELITE
BELAR ELECTRONICS LABORATORY
BELL P-A PRODUCTS CORP.
BENJAMIN ELECTRONIC SOUND CORP
BOGEN COMMUNICATIONS DIV.
CALBEST ELECTRONICS
CONCERTONE, INC.
DAYTON ELECTRONIC PRODUCTS CO
DELCO RADIO DIV
ELECTRO-VOICE INC
HAMMARLUND MANUFACTURING CO.
HEATH CO.
JOHNSON ELECTRONICS, INC.
KARG LABORATORIES
LTV LING ALTEC, INC.
MARANTZ COMPANY
MARCONI INSTRUMENTS
MARTI ELECTRONICS
MCMARTIN INDUSTRIES
MOTOROLA COMMUNICATIONS
NORTH AMERICAN PHILIPS CO
RHG ELECTRONICS LABORATORY
ROBERTS DIV. OF RHEEM MFG CO.
ROCKE INTERNATIONAL CORP.
ROHDE & SCHWARZ SALES CO.
H. H. SCOTT, INCORPORATED
SETCHELL CARLSON, INC.
SINGER PRODUCTS CO
SONY CORPORATION OF AMERICA
TANDBERG OF AMERICA, INC.
THE TECHNICAL MATERIEL CORP
UTICA ELECTRONICS
VEGA ELECTRONICS CORPORATION
VITRO ELECTRONICS

RECEIVERS, HF

AMERICAN ELITE
BENJAMIN ELECTRONIC SOUND CORP
CALBEST ELECTRONICS
COLLINS RADIO COMPANY
ENGINEERING ASSOCIATES
HAMMARLUND MANUFACTURING CO.
JOHNSON ELECTRONICS, INC.
KAHN RESEARCH LABORATORIES
LTV LING ALTEC, INC.
MARCONI INSTRUMENTS
NARDA MICROWAVE CORPORATION
RHG ELECTRONICS LABORATORY
ROCKE INTERNATIONAL CORP.
ROHDE & SCHWARZ SALES CO.
SINGER PRODUCTS CO
THE TECHNICAL MATERIEL CORP
VITRO ELECTRONICS

RECEIVERS, MULTIPLEX

BELAR ELECTRONICS LABORATORY
BOGEN COMMUNICATIONS DIV.
BROWNING LABORATORIES, INC.
CALBEST ELECTRONICS
CONCERTONE, INC.
ELECTRONICS DEVELOPMENT CORP.
ELECTRO-VOICE INC
HEATH CO
JOHNSON ELECTRONICS, INC.
KARG LABORATORIES
MARANTZ COMPANY
MCMARTIN INDUSTRIES
MICROWAVE ASSOCIATES, INC.
RHG ELECTRONICS LABORATORY
ROCKE INTERNATIONAL CORP.
H. H. SCOTT, INCORPORATED
SINGER PRODUCTS CO
TANDBERG OF AMERICA, INC.
THE TECHNICAL MATERIEL CORP
VITRO ELECTRONICS

RECEIVERS, SCA

BELAR ELECTRONICS LABORATORY
BROWNING LABORATORIES, INC.
CALBEST ELECTRONICS
DAYTON ELECTRONIC PRODUCTS CO
KARG LABORATORIES
MARTI ELECTRONICS
MCMARTIN INDUSTRIES
ROCKE INTERNATIONAL CORP.
SINGER PRODUCTS CO

RECEIVERS, TV, COLOR

AMECO, INC.
CONRAC DIV., CONRAC CORP.
G E SALES AND DISTRIBUTION
HEATH CO
PACKARD BELL ELECTRONICS,
RHG ELECTRONICS LABORATORY
SETCHELL CARLSON, INC.
SINGER PRODUCTS CO.
TELE-MEASUREMENTS INC.

RECEIVERS, TV, MONOCHROME

AMECO, INC.
CONRAC DIV., CONRAC CORP.
G E SALES AND DISTRIBUTION
HEATH CO
PACKARD BELL ELECTRONICS,
RHG ELECTRONICS LABORATORY
SETCHELL CARLSON, INC.
SINGER PRODUCTS CO.
SONY CORPORATION OF AMERICA
SYLVANIA-COMM. ELECTRONICS DIV
TELE-MEASUREMENTS INC.

RECORDERS, DISC, MAGNETIC

AMPEX CORPORATION
COLORADO VIDEO
MVR CORPORATION
VISUAL ELECTRONIC LABS
WESTREX

RECORDERS, FILM LIGHT WESTREX

RECORDERS, FILM, MAGNETIC

AMPEX CORPORATION
MAGNASYNC-MOVIOLA CORP.
STANCIL-HOFFMAN CORPORATION
WESTREX

RECORDERS, LOGGING, MAGNETIC

AMPEX CORPORATION
AUDIO INSTRUMENT CO
BIONIC INSTRUMENTS, INC.
ROCKE INTERNATIONAL CORP.
THE SOUND SCRIBER CORP.

RECORDERS, MAGNETIC TAPE, AUDIO

A & B DUPLICATORS DIV.
ALLIED ELECTRONICS CORP
AMERICAN ELITE
AMERICAN GELOSO ELECTRONICS
AMPEX CORPORATION
AMPLIFIER CORP OF AMERICA
AUDIO INSTRUMENT CO
AUDIO MAGNETICS CORP.
BIONIC INSTRUMENTS, INC.
B & K INSTRUMENTS, INC.
CALIFONE-ROBERTS
CONCERTONE, INC.
CROWN INTERNATIONAL
DIACOUSTIC LABORATORY
GENERAL RADIO CO
GOTHAM AUDIO CORPORATION
HEATH CO
IMPEX ELECTRONICS CORP
INTERNATIONAL GOOD MUSIC
JETRONIC INDUSTRIES, INC.
KRS INSTRUMENTS DIVISION
MACKENZIE LABORATORIES
MAGNASYNC-MOVIOLA CORP.
MAGNA-TECH CORPORATION
MAGNECORD
METROTECH INCORPORATED
MINNESOTA MINING - 3 M
NORTH AMERICAN PHILIPS CO
RAYTHEON LEARNING SYSTEMS CO.
RCA BROADCAST PRODS.
ROBERTS DIV. OF RHEEM MFG CO.
ROCKE INTERNATIONAL CORP.
SCHAFFER ELECTRONICS
SCULLY RECORDING INSTRUMENTS
SINGER PRODUCTS CO.
SONY CORPORATION OF AMERICA
THE SOUND SCRIBER CORP.
SPARTA ELECTRONIC CORPORATION
STANCIL-HOFFMAN CORPORATION
STEPHENS ELECTRONICS
MATTHEW STUART & CO, INC
SUPERSCOPE, INC.
TANDBERG OF AMERICA, INC.
TAPE-ATHON CORPORATION
TAPECASTER ELECTRONICS
TELECTRO INDUSTRIES CORP
VIKING TAPE RECORDERS
VISUAL ELECTRONICS CORP
WINSTON RESEARCH CORP.

RECORDERS, MAGNETIC TAPE, AUDIO, CARTRIDGE

AMERICAN GELOSO ELECTRONICS
AMPEX CORPORATION
ATC DIV. GATES RADIO
AUDIO INSTRUMENT CO
AUDIO MAGNETICS CORP.
BIONIC INSTRUMENTS, INC.
BROADCAST ELECTRONICS, INC
COLLINS RADIO COMPANY
CONCERTONE, INC.
GATES RADIO COMPANY
KRS INSTRUMENTS DIVISION
LACROSSE ELECTRONICS, INC.
MACARTA INC.
MAGNA-TECH CORPORATION
MINNESOTA MINING - 3 M
RAYTHEON LEARNING SYSTEMS CO.
RCA BROADCAST PRODS.
ROBERTS DIV. OF RHEEM MFG CO.
ROCKE INTERNATIONAL CORP.
SCIENTIFIC SYSTEMS, INC.
SINGER PRODUCTS CO.
SPARTA ELECTRONIC CORPORATION
SUPERSCOPE, INC.
TANDBERG OF AMERICA, INC.
TAPECASTER ELECTRONICS
TELECTRO INDUSTRIES CORP
VIKING TAPE RECORDERS
VISUAL ELECTRONICS CORP

RECORDERS, MAGNETIC TAPE, LOGGING

AMPEX CORPORATION
AUDIO INSTRUMENT CO

BIONIC INSTRUMENTS, INC.
CROWN INTERNATIONAL
TEST INSTR. DIV. HONEYWELL
JERICHO ELECTRONICS SUPPLY
KRS INSTRUMENTS DIVISION
METROTECH INCORPORATED
ROCKE INTERNATIONAL CORP.
SCHAFFER ELECTRONICS
STANCIL-HOFFMAN CORPORATION
TAPE-ATHON CORPORATION
TELECTRO INDUSTRIES CORP

RECORDERS, MAGNETIC TAPE, VIDEO

AMPEX CORPORATION
AMPLIVISION CORPORATION
DIAMOND POWER SPECIALTY CORP.
GENERAL ELECTRIC CO.
GORDON ENTERPRISES
GPL DIV.
IKEGAMI TSUSHINKI CO., LTD.
MINNESOTA MINING - 3 M
MVR CORPORATION
NORTH AMERICAN PHILIPS CO
RCA BROADCAST PRODS.
SONY CORPORATION OF AMERICA
SYLVANIA-COMM. ELECTRONICS DIV
TELE-MEASUREMENTS, INC.
VISUAL ELECTRONICS CORP
VISUAL ELECTRONIC LABS
WINSTON RESEARCH CORP.

RECORDERS, PAPER, LOGGING AND GRAPHIC

API INSTRUMENTS CO.
ATC DIV. GATES RADIO
B & K INSTRUMENTS, INC.
GENERAL ELECTRIC CO
HEATH CO
HEWLETT-PACKARD CO.
HICKOK ELECTRICAL INSTRUMENT
MOSELEY ASSOCIATES INC.
NESCO INSTRUMENTS DIV.
YOKOGAWA ELECTRIC WORKS

RECORDERS, VIDEO, KINESCOPE

GORDON ENTERPRISES
MARCONI DIVISION
D. B. MILLIKEN COMPANY
MVR CORPORATION
RAYTHEON LEARNING SYSTEMS CO.
RCA BROADCAST PRODS.
SYLVANIA-COMM. ELECTRONICS DIV
TELE-MEASUREMENTS INC.
TELEVISION UTILITIES CORP
WINSTON RESEARCH CORP.

RECORDING SERVICE, AUDIO

ALCOR, INC.
AUDIO MAGNETICS CORP.
ELECTRO-SOUND ACOUSTICS
EMC CORP.
THE JAMES FLOYD FORD CO
MAGNETIC STUDIOS CORP.
NEMO RECORDING LAB'S
SINGER PRODUCTS CO.
SOUND STUDIOS INC.

RECORDS, BLANK, ACETATE, FOR RECORDING

ASCO SONOCRAFT CORP
DUOTONE COMPANY INC
MAGNETIC STUDIOS CORP.
SINGER PRODUCTS CO.
TRANSCO PRODUCTS, INLT

RECORDS, BLANK, LACQUER, FOR RECORDING

AUDIO DEVICES
TRANSCO PRODUCTS, INTL
SINGER PRODUCTS CO.

RECORDS, SOUND EFFECT

EMC CORP.
SINGER PRODUCTS CO.

RECORDS, TEST

B & K INSTRUMENTS, INC.
C B S LABORATORIES
DIACOUSTIC LABORATORY
SINGER PRODUCTS CO.

RECTIFIERS - ALSO SEE SEMI- CONDUCTORS AND VACUUM TUBES

COLLINS RADIO COMPANY
EIMAC DIVISION OF VARIAN
ENGINEERING ASSOCIATES
GENERAL ELECTRIC CO
GENERAL INSTRUMENT CORP.
HEINTZ & KAUFMAN, LTD
INTERNATIONAL RECTIFIER
IRC, INC.
MALLORY DISTRIBUTOR PRODUCTS
MOTOROLA SEMICONDUCTOR
RCA ELECTRONIC COMPONENTS
SCIENTIFIC ELECTRONIC PRODUCTS
SINGER PRODUCTS CO.
SOLITRON DEVICES
STANDARD ELECTRONICS CORP.
TEXAS INSTRUMENTS
WILKINSON ELECTRONICS, INC

RECTIFIERS, SELENIUM

AMERICAN ELITE
COLLINS RADIO COMPANY
ENGINEERING ASSOCIATES
GENERAL ELECTRIC CO
INTERNATIONAL RECTIFIER
IRC, INC.
SINGER PRODUCTS CO.

REELS, CABLE, AUTOMATIC

GENERAL MACHINE PRODUCTS CO.
INDUSTRIAL ELECTRIC REELS
INDUSTRIAL DEVICES, INC.
SINGER PRODUCTS CO.
VENT-RAK INCORPORATED

REELS, FILM

AMERLINE CORPORATION
AUDIO DEVICES
HARWALD COMPANY
METROFILM CORP.
NEUMADE PRODUCTS CORPORATION
RCA BROADCAST PRODS.
STANCIL-HOFFMAN CORPORATION

REELS, TAPE

AMERLINE CORPORATION
AMPEX CORPORATION
AUDIO DEVICES
AUDIO MAGNETICS CORP.
MAGNECORD
MINNESOTA MINING - 3 M
RCA BROADCAST PRODS.
ROBINS INDUSTRIES CORP.
ROCKE INTERNATIONAL CORP.
SINGER PRODUCTS CO.
SONY CORPORATION OF AMERICA
STANDARD RECORD MFG. CO.
WIDE RESPONSE

REFLECTOMETERS, TIME DOMAIN

COLLINS RADIO COMPANY
HEWLETT-PACKARD CO.
ROHDE & SCHWARTZ SALES CO.

REFLECTORS, PASSIVE

ADVANCE INDUSTRIES
COLLINS RADIO COMPANY
FORT WORTH TOWER CO., INC.
GABRIEL ELECTRONICS DIV.
MASTER TOWER CO
MICROFLECT COMPANY INC.
ROHN MANUFACTURING CO.
SINGER PRODUCTS CO.
STAINLESS, INC.
UTILITY TOWER CO.

REGULATORS, CURRENT

COLLINS RADIO COMPANY
G E SUPPLY COMPANY
GENERAL ELECTRIC CO
SOLA ELECTRIC

REGULATORS, FREQUENCY

COLLINS RADIO COMPANY
GENERAL ELECTRIC CO

REGULATORS, VOLTAGE

COLLINS RADIO COMPANY
ENGINEERING ASSOCIATES
FAIRLANE ELECTRONICS
G E SUPPLY COMPANY
GENERAL ELECTRIC CO
GENERAL INSTRUMENT CORP.
GENERAL RADIO CO
IKEGAMI TSUSHINKI CO., LTD.
ROCKE INTERNATIONAL CORP.
SOLA ELECTRIC
STACO, INC.

RELAYS, ANTENNA

COLLINS RADIO COMPANY
E F JOHNSON COMPANY
MONITOR CONTROLLER CO.
SINGER PRODUCTS CO.

RELAYS, BREAK-IN

ESSEX WIRE CORPORATION

RELAYS, COAXIAL

AMPHENOL CORP.
AVA ELECTRONICS & MACHINE CORP
COLLINS RADIO COMPANY
ITT JENNINGS DIV.
MICROWAVE ASSOCIATES, INC.
SINGER PRODUCTS CO.
STRUTHERS-DUNN
TROMPETER ELECTRONICS

RELAYS, GENERAL PURPOSE

ALLIED ELECTRONICS CORP
COOK ELECTRIC COMPANY
CORNELL-DUBILIER ELECTRONICS
ESSEX WIRE CORPORATION
GENERAL ELECTRIC CO
OHMITE MANUFACTURING COMPANY
RBM CONTROLS
SIGMA INSTRUMENTS INC.
STRUTHERS-DUNN,

RELAYS, LATCHING

AMERICAN ELITE
COOK ELECTRIC COMPANY
CORNELL-DUBILIER ELECTRONICS
GENERAL ELECTRIC CO
ITT JENNINGS DIV.
OHMITE MANUFACTURING COMPANY
RBM CONTROLS
RUST CORP.
SIGMA INSTRUMENTS INC.
STRUTHERS-DUNN,

RELAYS, LIGHT INDICATING

COOK ELECTRIC COMPANY
HUGHEY & PHILLIPS
OHMITE MANUFACTURING COMPANY

RELAYS, OVERLOAD

API INSTRUMENTS CO.
COOK ELECTRIC COMPANY
CORNELL-DUBILIER ELECTRONICS
ESSEX WIRE CORPORATION
GENERAL ELECTRIC CO
G-V CONTROLS INC.
ITT JENNINGS DIV.
SIGMA INSTRUMENTS INC.
STRUTHERS-DUNN,

RELAYS, PHOTOELECTRIC

CORNELL-DUBILIER ELECTRONICS
FAIRLANE ELECTRONICS
GENERAL ELECTRIC CO
HOUSTON ELECTRONICS CO.
HUGHEY & PHILLIPS
SIGMA INSTRUMENTS INC.
STEPHENS ELECTRONICS

RELAYS, PLUG IN

COOK ELECTRIC COMPANY
CORNELL-DUBILIER ELECTRONICS
ESSEX WIRE CORPORATION
OHMITE MANUFACTURING COMPANY
RBM CONTROLS
SIGMA INSTRUMENTS INC.
SINGER PRODUCTS CO.
STEPHENS ELECTRONICS
STRUTHERS-DUNN,
TREPAC CORPORATION OF AMERICA

RELAYS, POWER

COOK ELECTRIC COMPANY
CORNELL-DUBILIER ELECTRONICS
ESSEX WIRE CORPORATION
GENERAL ELECTRIC CO
ITT JENNINGS DIV.
MONITOR CONTROLLER CO.
OHMITE MANUFACTURING COMPANY
RBM CONTROLS
SIGMA INSTRUMENTS INC.
SINGER PRODUCTS CO.
STRUTHERS-DUNN,

RELAYS, SEQUENCING

COOK ELECTRIC COMPANY
CORNELL-DUBILIER ELECTRONICS
ESSEX WIRE CORPORATION
SIGMA INSTRUMENTS INC.
STRUTHERS-DUNN,
TROMPETER ELECTRONICS

RELAYS, STEPPING

COOK ELECTRIC COMPANY
CORNELL-DUBILIER ELECTRONICS
ITT JENNINGS DIV.
STRUTHERS-DUNN,
TROMPETER ELECTRONICS

RELAYS, TELEPHONE

ANRITSU ELECTRIC CO., LTD.
COOK ELECTRIC COMPANY
CORNELL-DUBILIER ELECTRONICS
ESSEX WIRE CORPORATION
THE JAMES FLOYD FORD CO
ITT TELECOMMUNICATIONS
RBM CONTROLS
SIGMA INSTRUMENTS INC.

RELAYS, THERMAL

COOK ELECTRIC COMPANY
DIALIGHT CORPORATION

ESSEX WIRE CORPORATION
GENERAL ELECTRIC CO
G-V CONTROLS INC.

RELAYS, TIME DELAY

AMPERITE CO
COOK ELECTRIC COMPANY
CORNELL-DUBILIER ELECTRONICS
CRAMER DIV., CONREC CORP.
DIALIGHT CORPORATION
ESSEX WIRE CORPORATION
GENERAL ELECTRIC CO
G-V CONTROLS INC.
HOUSTON ELECTRONICS CO.
OHMITE MANUFACTURING COMPANY
RBM CONTROLS
STRUTHERS-DUNN,
TREPAC CORPORATION OF AMERICA

REMOTE CONTROL SYSTEMS

ALCOR, INC.
AMPEX CORPORATION
RF TRANSMISSION DEPT, AMPEX
BAUER BROADCAST PRODUCTS DIV.
BIONIC INSTRUMENTS, INC.
CCA ELECTRONICS CORPORATION
COLLINS RADIO COMPANY
CONTINENTAL ELECTRONICS MFG
DIAMOND POWER SPECIALTY CORP.
F & M SYSTEMS COMPANY
GATES RADIO COMPANY
GENERAL ELECTRIC CO
GORDON ENTERPRISES
HANCOCK TELECONTROL
IKEGAMI TSUSHINKI CO., LTD.
LTV LING ALTEC, INC.
MARTI ELECTRONICS
MICRO-LINK SYSTEMS-VARIAN
MILES REPRODUCER CO
MOSELEY ASSOCIATES INC.
ORBIT RADIO
RAYTHEON LEARNING SYSTEMS CO.
RCA BROADCAST PRODS.
RICHMOND HILL LABORATORIES
ROCKE INTERNATIONAL CORP.
RUST CORP.
SCHAFFER ELECTRONICS
SINGER PRODUCTS CO.
SOUTHWESTERN COMMUNICATIONS
THE TECHNICAL MATERIEL CORP
TELECONTROL CORP.
TELE-MEASUREMENTS INC.
TELEMET COMPANY
TELETRONIX
TELEVISION UTILITIES CORP
TREPAC CORPORATION OF AMERICA
VISUAL ELECTRONICS CORP

RESISTORS, FIXED, CARBON

AEROVOX CORP.
AMERICAN ELITE
AMPEREX ELECTRONIC CORP
G E ELECTRONICS COMPANY
IRC, INC.
OHMITE MANUFACTURING COMPANY
SINGER PRODUCTS CO.
TEXAS INSTRUMENTS

RESISTORS, FIXED, NONINDUCTIVE

DAVEN DIV. - EDISON INDUS.
GENERAL RADIO CO
IRC, INC.
JORDAN ELECTRIC COMPANY
OHMITE MANUFACTURING COMPANY
SHALLCROSS MFG. CO.
SINGER PRODUCTS CO.
VISHAY RESISTOR PRODUCTS DIV

RESISTORS, FIXED, PRECISION

AEROVOX CORP.
DAVEN DIV. - EDISON INDUS.
GENERAL RADIO CO
IRC, INC.
JORDAN ELECTRIC COMPANY
MALLORY DISTRIBUTOR PRODUCTS
OHMITE MANUFACTURING COMPANY
SHALLCROSS MFG. CO.
SINGER PRODUCTS CO.
TEXAS INSTRUMENTS
VISHAY RESISTOR PRODUCTS DIV

RESISTORS, FIXED, WIREWOUND

DAVEN DIV. - EDISON INDUS.
GENERAL ELECTRIC CO
HAMILTON HALL RESISTOR CORP.
IRC, INC.
JORDAN ELECTRIC COMPANY
MALLORY DISTRIBUTOR PRODUCTS
OHMITE MANUFACTURING COMPANY
SHALLCROSS MFG. CO.
SINGER PRODUCTS CO.

RESISTORS, FIXED, OTHER

AEROVOX CORP.

AMPEREX ELECTRONIC CORP
DAVEN DIV. - EDISON INDUS.
IRC, INC.
MALLORY DISTRIBUTOR PRODUCTS
OHMITE MANUFACTURING COMPANY
SINGER PRODUCTS CO.

RESISTORS, VARIABLE, CARBON

OHMITE MANUFACTURING COMPANY
SINGER PRODUCTS CO.

RESISTORS, VARIABLE, WIREWOUND

AMPHENOL CORP.
IRC, INC.
MALLORY DISTRIBUTOR PRODUCTS
OHMITE MANUFACTURING COMPANY
SINGER PRODUCTS CO.
WATERS MANUFACTURING

**REVERBERATION DEVICES
ALSO SEE AMPLIFIERS**

AMPLIFIER CORP OF AMERICA
AUDIO INSTRUMENT CO
BAUER BROADCAST PRODUCTS DIV.
CLEVELAND ELECTRONICS
FAIRCHILD RECORDING EQUIPMENT
GOTHAM AUDIO CORPORATION
GREGORY AMPLIFIER CORP
LITTLE JOE ENTERPRISES
LTV LING ALTEC, INC.
ORBIT RADIO
ROCKE INTERNATIONAL CORP.
SINGER PRODUCTS CO
SPARTA ELECTRONIC CORPORATION
STEPHENS ELECTRONICS
ULTRA AUDIO PRODUCTS

REWINDERS, FILM

MAGNASYNC-MOVIOLA CORP.
METROFILM CORP.
NEUMADE PRODUCTS CORPORATION
RCA BROADCAST PRODS.

REWINDERS, TAPE

A & B DUPLICATORS DIV.
AMPEX CORPORATION
HARVEY RADIO CO. INC.
NEUMADE PRODUCTS CORPORATION
ROBINS INDUSTRIES CORP.
SINGER PRODUCTS CO.
SPARTA ELECTRONIC CORPORATION

RHEOSTATS

GENERAL ELECTRIC CO
GENERAL RADIO CO
MALLORY DISTRIBUTOR PRODUCTS
OHMITE MANUFACTURING COMPANY
SINGER PRODUCTS CO.

RODS, GROUND

AMPLIVISION CORPORATION
COPPERWELD STEEL COMPANY
DRESSER CRANE HOIST & TOWER
G C ELECTRONICS COMPANY

SAFETY DEVICES, CLIMBING

AIR SPACE DEVICES
GENERAL MACHINE PRODUCTS CO.
PRUZAN COMPANY
UTILITY PRODUCTS CO.

SCRAMBLERS, SPEECH

COLLINS RADIO COMPANY
THE JAMES FLOYD FORD CO
HEWLETT-PACKARD CO.
SINGER PRODUCTS CO
TREPAC CORPORATION OF AMERICA

SCREENS, PROJECTION, FRONT

ASCO SONOCRAFT CORP
GORDON ENTERPRISES
RAVEN SCREEN CORPORATION
TELE-MEASUREMENTS INC.

SCREENS, PROJECTION, REAR

DISPLAY TECHNOLOGIES INC
GORDON ENTERPRISES
RAVEN SCREEN CORPORATION
TELE-MEASUREMENTS INC.
H. WILSON CORPORATION

SEMICONDUCTOR DIODES

AMERICAN ELITE
AMPEREX ELECTRONIC CORP
G E DISTRIBUTOR SALES FORCE
GENERAL ELECTRIC CO
GENERAL INSTRUMENT CORP.
HEWLETT-PACKARD CO.
INTERNATIONAL ELECTRONICS CORP
INTERNATIONAL RECTIFIER
IRC, INC.
MALLORY DISTRIBUTOR PRODUCTS
MICROWAVE ASSOCIATES, INC.
MOTOROLA SEMICONDUCTOR
OHMITE MANUFACTURING COMPANY
RCA ELECTRONIC COMPONENTS
ROCKE INTERNATIONAL CORP.
SARKES-TARZIAN
SCIENTIFIC ELECTRONIC PRODUCTS
SINGER PRODUCTS CO.
SOLITRON DEVICES
SYLVANIA-SEMICONDUCTOR DIV.
TEXAS INSTRUMENTS
THOR ELECTRONICS
TRW ELECTRONICS

SEMICONDUCTOR RECTIFIERS, GENERAL

AMPEREX ELECTRONIC CORP
COLLINS RADIO COMPANY
G E DISTRIBUTOR SALES FORCE
GENERAL ELECTRIC CO
GENERAL INSTRUMENT CORP.
INTERNATIONAL ELECTRONICS CORP
INTERNATIONAL RECTIFIER
IRC, INC.
MALLORY DISTRIBUTOR PRODUCTS
MOTOROLA SEMICONDUCTOR
RCA ELECTRONIC COMPONENTS
ROCKE INTERNATIONAL CORP.
SARKES-TARZIAN
SCIENTIFIC ELECTRONIC PRODUCTS
SINGER PRODUCTS CO.
SOLITRON DEVICES
SYLVANIA-SEMICONDUCTOR DIV.
TEXAS INSTRUMENTS
THOR ELECTRONICS
TRW ELECTRONICS
WILKINSON ELECTRONICS, INC

SEMICONDUCTOR RECTIFIERS, HIGH VOLTAGE

AMPEREX ELECTRONIC CORP
COLLINS RADIO COMPANY
G E DISTRIBUTOR SALES FORCE
GENERAL INSTRUMENT CORP.
INTERNATIONAL RECTIFIER
MALLORY DISTRIBUTOR PRODUCTS
MOTOROLA SEMICONDUCTOR
RCA ELECTRONIC COMPONENTS
ROCKE INTERNATIONAL CORP.
SCIENTIFIC ELECTRONIC PRODUCTS
SINGER PRODUCTS CO.
SOLITRON DEVICES
TEXAS INSTRUMENTS
THOR ELECTRONICS
TRW ELECTRONICS
WILKINSON ELECTRONICS, INC

SEMICONDUCTOR RECTIFIERS, POWER

AMPEREX ELECTRONIC CORP
COLLINS RADIO COMPANY
G E DISTRIBUTOR SALES FORCE
GENERAL ELECTRIC CO
GENERAL INSTRUMENT CORP.
INTERNATIONAL RECTIFIER
IRC, INC.
MALLORY DISTRIBUTOR PRODUCTS
MOTOROLA SEMICONDUCTOR
RCA ELECTRONIC COMPONENTS
ROCKE INTERNATIONAL CORP.
SARKES-TARZIAN
SCIENTIFIC ELECTRONIC PRODUCTS
SINGER PRODUCTS CO.
SOLITRON DEVICES
SYLVANIA-SEMICONDUCTOR DIV.
TEXAS INSTRUMENTS
THOR ELECTRONICS
WILKINSON ELECTRONICS, INC

SEMICONDUCTOR RECTIFIERS, SILICON CONTROLLED - SCR

AMPEREX ELECTRONIC CORP
COLLINS RADIO COMPANY
DELCO RADIO DIV
G E DISTRIBUTOR SALES FORCE
GENERAL ELECTRIC CO
INTERNATIONAL RECTIFIER
IRC, INC.
MOTOROLA SEMICONDUCTOR
RCA ELECTRONIC COMPONENTS
ROCKE INTERNATIONAL CORP.

SARKES-TARZIAN
SINGER PRODUCTS CO.
TEXAS INSTRUMENTS
THOR ELECTRONICS

SEMICONDUCTORS, THYRISTORS

AMPEREX ELECTRONIC CORP
G E DISTRIBUTOR SALES FORCE
INTERNATIONAL RECTIFIER
IRC, INC.
MOTOROLA SEMICONDUCTOR
RCA ELECTRONIC COMPONENTS
SINGER PRODUCTS CO.
TEXAS INSTRUMENTS
THOR ELECTRONICS

SEMICONDUCTORS, TRANSISTORS, AF

AMERICAN ELITE
AMPEREX ELECTRONIC CORP
DELCO RADIO DIV
G E DISTRIBUTOR SALES FORCE
GENERAL INSTRUMENT CORP.
INTERNATIONAL ELECTRONICS CORP
LAKE ELECTRONICS, INC.
MOTOROLA SEMICONDUCTOR
RCA ELECTRONIC COMPONENTS
ROCKE INTERNATIONAL CORP.
SCIENTIFIC ELECTRONIC PRODUCTS
SINGER PRODUCTS CO.
SOLITRON DEVICES
SYLVANIA-SEMICONDUCTOR DIV.
TEXAS INSTRUMENTS
THOR ELECTRONICS

SEMICONDUCTORS, TRANSISTORS, FE

AMPEREX ELECTRONIC CORP
G E DISTRIBUTOR SALES FORCE
GENERAL INSTRUMENT CORP.
MOTOROLA SEMICONDUCTOR
RCA ELECTRONIC COMPONENTS
SINGER PRODUCTS CO.
TEXAS INSTRUMENTS
THOR ELECTRONICS

SEMICONDUCTORS, TRANSISTORS, GENERAL

AMPEREX ELECTRONIC CORP
DELCO RADIO DIV
GENERAL ELECTRIC CO
GENERAL INSTRUMENT CORP.
G E DISTRIBUTOR SALES FORCE
INTERNATIONAL ELECTRONICS CORP
LAKE ELECTRONICS, INC.
MOTOROLA SEMICONDUCTOR
RAC ELECTRONIC COMPONENTS
ROCKE INTERNATIONAL CORP.
SCIENTIFIC ELECTRONIC PRODUCTS
SINGER PRODUCTS CO.
SOLITRON DEVICES
SYLVANIA-SEMICONDUCTOR DIV.
TEXAS INSTRUMENTS
THOR ELECTRONICS
TRW ELECTRONICS

SEMICONDUCTORS, TRANSISTORS, RF

AMERICAN ELITE
AMPEREX ELECTRONIC CORP
G E DISTRIBUTOR SALES FORCE
GENERAL INSTRUMENT CORP.
MOTOROLA SEMICONDUCTOR
RCA ELECTRONIC COMPONENTS
SCIENTIFIC ELECTRONIC PRODUCTS
SINGER PRODUCTS CO.
SOLITRON DEVICES
SYLVANIA-SEMICONDUCTOR DIV.
TEXAS INSTRUMENTS
THOR ELECTRONICS
TRW ELECTRONICS

SERVICES, INSTALLATION

ALCOR, INC.
COLLINS RADIO COMPANY
DRESSER CRANE HOIST & TOWER
GRINNAN FIXTURE COMPANY
GULF ELECTRO-SALES INC
HAMILTON ERECTION, INC.
ROCKE INTERNATIONAL CORP.
SARKES-TARZIAN
SINGER PRODUCTS CO.
THE TECHNICAL MATERIEL CORP
TELE-MEASUREMENTS INC.
TRYLON INCORPORATED
UTILITY PRODUCTS CO.

SHIELDING, SHEET AND SCREEN

SINGER PRODUCTS CO.

SHIELDINGS, TUBE

ELECTRONICS ESSENTIALS OF CCC
SINGER PRODUCTS CO.

SHIFTERS, PHASE, MICROWAVE

COLLINS RADIO COMPANY
DEMORNAV - BONARDI DIVISION
HEWLETT-PACKARD CO.
MICROLAB - FXR
MICROWAVE ASSOCIATES, INC.
NARDA MICROWAVE CORPORATION
PRODELIN, INCORPORATED
RCA ELECTRONIC COMPONENTS

SHUNTS, METER

G E INDUSTRIAL SALES OPERATION
GENERAL ELECTRIC CO
HEWLETT-PACKARD CO.
THE SINGER CO - METRICS DIV
TRIPLETT ELECTRICAL INSTRUMENT

SLIDES, CHASSIS

BUD RADIO, INC
CHASSIS TRAK
ELECTRONICS ESSENTIALS OF CCC
VENT-RAK INCORPORATED

SLOTTED SECTIONS

ALFORD MANUFACTURING COMPANY
COMMUNICATIONS PRODUCTS CO
DEMORNAV - BONARDI DIVISION
GENERAL MICROWAVE CORPORATION
HEWLETT-PACKARD CO.
MICROLAB - FXR
NARDA MICROWAVE CORPORATION
PHELPS DODGE
PRODELIN, INCORPORATED
ROHDE & SCHWARZ SALES CO.

SOCKETS, CRYSTAL

INDUSTRIAL ELECTRONIC HARDWARE
E F JOHNSON COMPANY
SINGER PRODUCTS CO.

SOCKETS, LAMP

DIALIGHT CORPORATION
ELECTRONICS ESSENTIALS OF CCC
INDUSTRIAL ELECTRONIC HARDWARE
E F JOHNSON COMPANY
SINGER PRODUCTS CO.

SOCKETS, RELAY

AMPHENOL CORP.
INDUSTRIAL ELECTRONIC HARDWARE
SINGER PRODUCTS CO.

SOCKETS, SEMICONDUCTOR

G C ELECTRONICS COMPANY
SINGER PRODUCTS CO.

SOCKETS, TUBE

AEROVOX CORP.
AMPHENOL CORP.
EIMAC DIVISION OF VARIAN
ELECTRONICS ESSENTIALS OF CCC
G C ELECTRONICS COMPANY
INDUSTRIAL ELECTRONIC HARDWARE
E F JOHNSON COMPANY
SINGER PRODUCTS CO.

SOLDER

GENERAL MACHINE PRODUCTS CO.
SINGER PRODUCTS CO.

SOLVENTS AND CLEANERS

G C ELECTRONICS COMPANY
GENERAL MACHINE PRODUCTS CO.
HARWALD COMPANY
NEUMADE PRODUCTS CORPORATION
SINGER PRODUCTS CO.
THE TEXWIPE COMPANY

SOUND SYSTEMS, OUTDOOR

ALCOR, INC.
ALLIED ELECTRONICS CORP
AMERICAN GELOSO ELECTRONICS
AMPEX CORPORATION
APPLIED ELECTRO-MECHANICS
BELL P-A PRODUCTS CORP.
BOGEN COMMUNICATIONS DIV.
BRADFORD INFORMATION SYSTEMS
ELECTRO-VOICE INC
FOURJAY INDUSTRIES

GREGORY AMPLIFIER CORP
HARVEY RADIO CO. INC.
HOUSTON ELECTRONICS CO.
JENSEN MANUFACTURING
LTV LING ALTEC, INC.
MAGNETIC STUDIOS CORP.
MCMARTIN INDUSTRIES
NEMO RECORDING LAB'S
NORTH AMERICAN PHILIPS CO
RCA BROADCAST PRODS.
SOUTHWESTERN COMMUNICATIONS
TRUSONIC

SOUND SYSTEMS, PORTABLE

ALCOR, INC.
ALLIED ELECTRONICS CORP
AMERICAN GELOSO ELECTRONICS
AMPEX CORPORATION
APPLIED ELECTRO-MECHANICS
BELL P-A PRODUCTS CORP.
BOGEN COMMUNICATIONS DIV.
CALBEST ELECTRONICS
CALIFONE-ROBERTS
ELECTRO-VOICE INC
FAIRCHILD RECORDING EQUIPMENT
GREGORY AMPLIFIER CORP
HARVEY RADIO CO. INC.
HOUSTON ELECTRONICS CO.
JENSEN MANUFACTURING
LTV LING ALTEC, INC.
MAGNETIC STUDIOS CORP.
MCMARTIN INDUSTRIES
NORTH AMERICAN PHILIPS CO
ORBIT RADIO
RCA BROADCAST PRODS.
SONY CORPORATION OF AMERICA
SOUTHWESTERN COMMUNICATIONS
TRUSONIC

SOUND SYSTEMS, THEATER

ALCOR, INC.
AMERICAN GELOSO ELECTRONICS
AMPEX CORPORATION
BOGEN COMMUNICATIONS DIV.
CENTURY PROJECTOR CORPORATION
GREGORY AMPLIFIER CORP
HARVEY RADIO CO. INC.
HOLMES PROJECTOR CO., INC.
HOUSTON ELECTRONICS CO.
JENSEN MANUFACTURING
LTV LING ALTEC, INC.
MAGNETIC STUDIOS CORP.
MCMARTIN INDUSTRIES
MID AMERICA ELECTRONICS CORP
NEMO RECORDING LABS
NORTH AMERICAN PHILIPS CO
RCA BROADCAST PRODS.
TRUSONIC
W.R.S. ELECTRONICS, LTD.

SPEAKER COMPONENTS

AMERICAN GELOSO ELECTRONICS
ELECTRONICS ESSENTIALS OF CCC
ELECTRO SOUND ACOUSTICS
INDUSTRIAL ELECTRONIC HARDWARE
INTERNATIONAL ELECTRONICS CORP
JENSEN MANUFACTURING
LTV LING ALTEC, INC.
NORTH AMERICAN PHILIPS CO
PERMOFLUX CORPORATION
SINGER PRODUCTS CO
SONY CORPORATION OF AMERICA
TRUSONIC

SPEAKERS

ALLIED ELECTRONICS CORP
AMERICAN ELITE
AMERICAN GELOSO ELECTRONICS
AMPEX CORPORATION
ATLAS SOUND
BELL P-A PRODUCTS CORP.
BOGEN COMMUNICATIONS DIV.
CALIFONE-ROBERTS
CLEVELAND ELECTRONICS
ELECTRO-SOUND ACOUSTICS
ELECTRO-VOICE INC
FOURJAY INDUSTRIES
GREGORY AMPLIFIER CORP
HARTLEY PRODUCTS
INTERNATIONAL ELECTRONICS CORP
JENSEN MANUFACTURING
KOSS ELECTRONICS, INC.
LAKE ELECTRONICS, INC.
JAMES B. LANSENG SOUND, INC.
LTV LING ALTEC, INC.
MCMARTIN INDUSTRIES
NESHAMINY ELECTRONIC CORP.
NORTH AMERICAN PHILIPS CO
OAKTRON INDUSTRIES, INC.
PERMOFLUX CORPORATION
RCA BROADCAST PRODS.
ROCKE INTERNATIONAL CORP.
SINGER PRODUCTS CO
SONY CORPORATION OF AMERICA
TANDBERG OF AMERICA, INC.
TRUSONIC
TRW ELECTRONICS

SPLICERS, MAGNETIC TAPE AND FILM

AMPEX CORPORATION
G C ELECTRONICS COMPANY
HARWALD COMPANY
METROFILM CORP.
NEUMADE PRODUCTS CORPORATION
PRECISION LABORATORIES
RCA BROADCAST PRODS.
ROBINS INDUSTRIES CORP.
SINGER PRODUCTS CO.

STANDS, TELEVISION MONITOR

AMPEX CORPORATION
BALL BROTHERS RESEARCH
GENERAL TELEVISION NETWORK
NEUMADE PRODUCTS CORPORATION
TELE-MEASUREMENTS INC.
TELEQUIP CORPORATION
TELEVISION UTILITIES CORP
VIDEO COMPONENTS, INC.

STL EQUIPMENT

KEITZ ANDERSON CO
ANDREW CORPORATION
COLLINS RADIO COMPANY
ELECTRONICS DEVELOPMENT CORP.
G E VISUAL COMMUNICATIONS PROD
IKEGAMI TSUSCINKI CO., LTD.
JERROLD ELECTRONICS CORP
MARTI ELECTRONICS
MCMARTIN INDUSTRIES
MIRCO-LINK SYSTEMS-VARIAN
MICROWAVE ASSOCIATES, INC.
MOSELEY ASSOCIATES INC.
RCA BROADCAST PRODS.
RHG ELECTRONICS LABORATORY
SINGER PRODUCTS CO
TELETRONIX
TREPAC CORPORATION OF AMERICA

STROBE, DISCS

GENERAL RADIO CO
LANG ELECTRONICS, INC
ROBINS INDUSTRIES CORP.

STROBE, LIGHTS

BERKEY TECHNICAL CORP
B & K INSTRUMENTS, INC.
ELECTRONIC LIGHTS, INC.
GENERAL RADIO CO
HUGHEY & PHILLIPS
SINGER PRODUCTS CO.

STYLI, CUTTING

THE ASTATIC CORPORATION
DIACOUSTIC LABORATORY
DUOTONE COMPANY INC
MAGNETIC STUDIOS CORP.
MILES REPRODUCER CO
SINGER PRODUCTS CO.
TRANSCO PRODUCTS, INTL
WESTREX

STYLI, PLAYBACK

THE ASTATIC CORPORATION
DIACOUSTIC LABORATORY
DUOTONE COMPANY INC
ELECTRO-VOICE INC.
MILES REPRODUCER CO
SHURE BROTHERS, INC.
SINGER PRODUCTS CO.
TRANSCO PRODUCTS, INTL

SWITCHERS

ALMA ENGINEERING INC
AMECO, INC.
AMERICAN PAMCOR, INC
BRADFORD INFORMATION SYSTEMS
CENTRAL DYNAMICS CORPORATION
COHU ELECTRONICS
DYNAIR ELECTRONICS, INC.
INTERNATIONAL GOOD MUSIC
RIKER VIDEO INDUSTRIES
SCHAFER ELECTRONICS
SINGER PRODUCTS CO.
SOUTHWESTERN COMMUNICATIONS
TELEMATION, INC.
TELEVISION UTILITIES CORP
TREPAC CORPORATION OF AMERICA
VIDEON CORPORATION
VISUAL ELECTRONICS CORP
WARD ELECTRONIC INDUSTRIES

SWITCHES, COAXIAL

ALFORD MANUFACTURING COMPANY
AMPHENOL CORP.
ANDREW CORPORATION
AVA ELECTRONICS & MACHINE CORP
BARKER & WILLIAMSON
BIRD ELECTRONIC CORPORATION
BLONDER-TONGUE LABORATORIES
CEI
COHU ELECTRONICS

COLLINS RADIO COMPANY
ELECTROMAGNETIC RADIATION LABS
HEWLETT-PACKARD CO.
ITT JENNINGS DIV.
JERROLD ELECTRONICS CORP
MARCONI DIVISION
MARCONI INSTRUMENTS
MICROLAB - FXR
MICROWAVE ASSOCIATES, INC.
NARDA MICROWAVE CORPORATION
PRODELIN, INCORPORATED
ROCKE INTERNATIONAL CORP.
OAK MANUFACTURING CO
SINGER PRODUCTS CO.
THE TECHNICAL MATERIEL CORP
TROMPETER ELECTRONICS
WATERS MANUFACTURING

SWITCHES, CROSSBAR

ANDREW CORPORATION
CENTRAL DYNAMICS CORPORATION
COLLINS RADIO COMPANY
ITT JENNINGS DIV.
ITT TELECOMMUNICATIONS
SINGER PRODUCTS CO.
TROMPETER ELECTRONICS
VITAL INDUSTRIES

SWITCHES, FOOT

GENERAL ELECTRIC CO

SWITCHES, ILLUMINATED

COLLINS RADIO COMPANY
DIALIGHT CORPORATION
GENERAL ELECTRIC CO
DONALD P. MOSSMAN, INC.
OAK MANUFACTURING CO
SINGER PRODUCTS CO.
STEPHENS ELECTRONICS
SWITCHCRAFT, INC.

SWITCHES, INTERLOCK

COLLINS RADIO COMPANY
GENERAL ELECTRIC CO
DONALD P. MOSSMAN, INC.
OAK MANUFACTURING CO
SWITCHCRAFT, INC.

SWITCHES, KNIFE

BIRNBACH CO
COLLINS RADIO COMPANY
GENERAL ELECTRIC CO
E F JOHNSON COMPANY
METROPOLITAN ELECTRIC MFG CO
SINGER PRODUCTS CO.

SWITCHES, LEVER

BIRNBACH CO
CENTRALAB
COLLINS RADIO COMPANY
GENERAL ELECTRIC CO
DONALD P. MOSSMAN, INC.
SINGER PRODUCTS CO.
SWITCHCRAFT, INC.

SWITCHES, MECHANICALLY ACTUATED

COLLINS RADIO COMPANY
DAVEN DIV. - EDISON INDUS.
GENERAL ELECTRIC CO
ITT JENNINGS DIV.
OAK MANUFACTURING CO
ROCKE INTERNATIONAL CORP.
SINGER PRODUCTS CO.
SWITCHCRAFT, INC.
WABER ELECTRONICS, INC.

SWITCHES, MULTICONTACT

CENTRALAB
COLLINS RADIO COMPANY
G C ELECTRONICS COMPANY
GENERAL ELECTRIC CO
HICKOK ELECTRICAL INSTRUMENT
LANGEVIN
LTV LING ALTEC, INC.
DONALD P. MOSSMAN, INC.
JAK MANUFACTURING CO
OHMITE MANUFACTURING COMPANY
SINGER PRODUCTS CO.
SWITCHCRAFT, INC.

SWITCHES, PUSHBUTTON,

AMERICAN ELITE
BIRNBACH CO
CENTRALAB
COLLINS RADIO COMPANY
G C ELECTRONICS COMPANY

GENERAL ELECTRIC CO
MONITOR CONTROLLER CO.
DONALD P. MOSSMAN, INC.
OAK MANUFACTURING CO
SINGER PRODUCTS CO.
SWITCHCRAFT, INC.

SWITCHES, ROTARY

AMERICAN ELITE
BIRNBACH CO
CENTRALAB
COLLINS RADIO COMPANY
DAVEN DIV. - EDISON INDUS.
GENERAL ELECTRIC CO
GENERAL MICROWAVE CORPORATION
INDUSTRIAL DEVICES, INC.
LANGEVIN
LTV LING ALTEC, INC.
OAK MANUFACTURING CO
OHMITE MANUFACTURING COMPANY
SHALLCROSS MFG. CO.
SINGER PRODUCTS CO.
SWITCHCRAFT, INC.

SWITCHES, SLIDE

AMERICAN ELITE
BIRNBACH CO
CENTRALAB
COLLINS RADIO COMPANY
ELECTRONICS ESSENTIALS OF CCC
G C ELECTRONICS COMPANY
GENERAL ELECTRIC CO
INDUSTRIAL ELECTRONIC HARDWARE
LTV LING ALTEC, INC.
OAK MANUFACTURING CO
SINGER PRODUCTS CO.
SWITCHCRAFT, INC.

SWITCHES, SNAP

BIRNBACH CO
COLLINS RADIO COMPANY
ELECTRONIC RESEARCH COMPANY
ELECTRONICS ESSENTIALS OF CCC
G C ELECTRONICS COMPANY
E F JOHNSON COMPANY
OAK MANUFACTURING CO
SINGER PRODUCTS CO.

SWITCHES, TELEPHONE TYPE

COLLINS RADIO COMPANY
THE JAMES FLOYD FORD CO
ITT TELECOMMUNICATIONS
DONALD P. MOSSMAN, INC.
SINGER PRODUCTS CO.

SWITCHES, THERMAL

COLLINS RADIO COMPANY
ELECTRONIC RESEARCH COMPANY
GENERAL ELECTRIC CO
G-V CONTROLS INC.
SINGER PRODUCTS CO.

SWITCHES, TOGGLE

AMERICAN ELITE
BIRNBACH CO
COLLINS RADIO COMPANY
ELECTRONICS ESSENTIALS OF CCC
G C ELECTRONICS COMPANY
GENERAL ELECTRIC CO
SINGER PRODUCTS CO.
SWITCHCRAFT, INC.

SWITCHES, WAVEGUIDE

AMPHENOL CORP.
ANDREW CORPORATION
COLLINS RADIO COMPANY
DEMORNAY - BONARDI DIVISION
ELECTROMAGNETIC RADIATION LABS
GENERAL MICROWAVE CORPORATION
MICROLAB - FXR
MICROWAVE ASSOCIATES, INC.
SINGER PRODUCTS CO.

SWITCHING MATRIXES

ALMA ENGINEERING INC
AMERICAN ELECTRONIC LABS
AMERICAN PAMCOR, INC
ANDREW CORPORATION
CEI
CENTRAL DYNAMICS CORPORATION
COHU ELECTRONICS
COLLINS RADIO COMPANY
DELTA ELECTRONICS INC
ELECTROMAGNETIC RADIATION LABS
INTERNATIONAL NUCLEAR CORP.
ITT JENNINGS DIV.
MULTRONICS
ROCKE INTERNATIONAL CORP.
SCHAFER ELECTRONICS

SINGER PRODUCTS CO.
S. STERLING COMPANY
SWITCHCRAFT, INC.
THE TECHNICAL MATERIEL CORP
TREPAC CORPORATION OF AMERICA
TROMPETER ELECTRONICS
VISUAL ELECTRONICS CORP
VIDEON CORPORATION
VIRGINIA ELECTRONICS CO., INC.
WARD ELECTRONIC INDUSTRIES

SWITCHING SYSTEMS

ALMA ENGINEERING INC
AMERICAN ELECTRONIC LABS
AMERICAN PAMCOR, INC
ARBOR SYSTEMS, INC.
AVA ELECTRONICS & MACHINE CORP
CENTRAL DYNAMICS CORPORATION
CHRONO-LOG CORPORATION
COHU ELECTRONICS
COLLINS RADIO COMPANY
DYNAIR ELECTRONICS, INC.
ELECTROMAGNETIC RADIATION LABS
F & M SYSTEMS COMPANY
THE JAMES FLOYD FORD CO
GATES RADIO COMPANY
HANCOCK TELECONTROL
INTERNATIONAL GOOD MUSIC
INTERNATIONAL NUCLEAR CORP.
ITT JENNINGS DIV.
ITT TELECOMMUNICATIONS
MARCONI DIVISION
RAYTHEON LEARNING SYSTEMS CO.
RCA BROADCAST PRODS.
RICHMOND HILL LABORATORIES
RIKER VIDEO INDUSTRIES
ROCKE INTERNATIONAL CORP.
RUST CORP.
SINGER PRODUCTS CO.
STEPHENS ELECTRONICS
S. STERLING COMPANY
TELECONTROL CORP.
TELEMATION, INC.
TELE-MEASUREMENTS INC.
TELEVISION UTILITIES CORP
TROMPETER ELECTRONICS
VIDEON CORPORATION
VIDEO SYSTEMS
VIRGO, INC.
VITAL INDUSTRIES
WARD ELECTRONIC INDUSTRIES

TAPE ACCESSORIES

AMPEX CORPORATION
AUDIO DEVICES
GATES RADIO COMPANY
G C ELECTRONICS COMPANY
HEWLETT-PACKARD CO.
MAGNETIC STUDIOS CORP.
MINNESOTA MINING - 3 M
NORTRONICS COMPANY, INC
PRO-TEX REEL BAND COMPANY
ROBERTS DIV. OF RHEEM MFG CO.
ROBINS INDUSTRIES CORP.
SINGER PRODUCTS CO.
SPARTA ELECTRONIC CORPORATION
SUPERSCOPE, INC.
SWITCHCRAFT, INC.

TAPE DECKS, MAGNETIC

A & B DUPLICATORS DIV.
AMPEX CORPORATION
AMPLIVISION CORPORATION
ASCO SONOCRAFT CORP
AUDIO INSTRUMENT CO
BELL P-A PRODUCTS CORP.
BROADCAST ELECTRONICS, INC
COLLINS RADIO COMPANY
CROWN INTERNATIONAL
DIACOUSTIC LABORATORY
DISPLAY TECHNOLOGIES INC
GATES RADIO COMPANY
HEWLETT-PACKARD CO.
IMPX ELECTRONICS CORP
INTERNATIONAL GOOD MUSIC
JETRONIC INDUSTRIES, INC.
KRS INSTRUMENTS DIVISION
MAGNENIE LABORATORIES
MAGNASYNC-MOVIOLA CORP.
MAGNA-TECH CORPORATION
MAGNECORD
METROTECH INCORPORATED
MINNESOTA MINING - 3 M
RAYTHEON LEARNING SYSTEMS CO.
RCA BROADCAST PRODS.
ROBERTS DIV. OF RHEEM MFG CO.
SCHAFER ELECTRONICS
SINGER PRODUCTS CO
SPARTA ELECTRONIC CORPORATION
STACO, INC.
STANCIL-HOFFMAN CORPORATION
SUPERSCOPE, INC.
TAPE-ATHON CORPORATION
VIKING TAPE RECORDERS
VISUAL ELECTRONICS CORP

TAPE DUPLICATORS

A & B DUPLICATORS DIV.
ALCOR, INC.

AMPEX CORPORATION
ASCO SONOCRAFT CORP
BIONIC INSTRUMENTS, INC.
CROWN INTERNATIONAL
EMC CORP.
HARVEY RADIO CO. INC.
LANG ELECTRONICS, INC
MAGNA-TECH CORPORATION
MAGNECORD
MAGNETIC STUDIOS CORP.
ROCKE INTERNATIONAL CORP.
SOUND STUDIOS INC.
VIKING TAPE RECORDERS

TAPE, MAGNETIC RECORDING, AUDIO

A & B DUPLICATORS DIV.
ALLIED ELECTRONICS CORP
AMERICAN GELOSO ELECTRONICS
AMPEX CORPORATION
ASCO SONOCRAFT CORP
THE ASTATIC CORPORATION
AUDIO DEVICES
AUDIO MAGNETICS CORP.
BURGESS BATTERY COMPANY
COMPUTRON INC
CONCERTONE, INC.
DIAOUSTIC LABORATORY
DUOTONE COMPANY INC
IMPEX ELECTRONICS CORP
MAGNETIC MEDIA CORPORATION
MAGNETIC STUDIOS CORP.
METROFILM CORP.
MINNESOTA MINING - 3 M
RCA BROADCAST PRODS.
REEVES SOUNDRAFT
ROBINS INDUSTRIES CORP.
ROCKE INTERNATIONAL CORP.
SINGER PRODUCTS CO
SUPERSCOPE, INC.
TAPECASTER ELECTRONICS
WIDE RESPONSE

TAPE, MAGNETIC RECORDING, AUDIO, CARTRIDGE

AMERICAN GELOSO ELECTRONICS
AMPEX CORPORATION
ATC DIV. GATES RADIO
AUDIO DEVICES
AUDIO MAGNETICS CORP.
BROADCAST ELECTRONICS, INC
CONCERTONE, INC.
JOA CARTRIDGE SERVICE
MARATHON BROADCAST EQUIPMENT
MINNESOTA MINING
RCA BROADCAST PRODS.
ROBINS INDUSTRIES CORP.
ROCKE INTERNATIONAL CORP.
SINGER PRODUCTS CO.
SPARTA ELECTRONIC CORPORATION

TAPE, MAGNETIC RECORDING, COMPUTER

AMPEX CORPORATION
AUDIO DEVICES
COMPUTRON INC
MAGNETIC MEDIA CORPORATION
MEMOREX CORPORATION
MINNESOTA MINING - 3 M
REEVES SOUNDRAFT
ROCKE INTERNATIONAL CORP.
SINGER PRODUCTS CO.

TAPE, MAGNETIC RECORDING, TEST

AMPEX CORPORATION
AUDIO DEVICES
MEMOREX CORPORATION
MINNESOTA MINING - 3 M
NORTONICS COMPANY, INC
ORBIT RADIO
RCA BROADCAST PRODS.
ROCKE INTERNATIONAL CORP.
TELE-MEASUREMENTS, INC.

TAPE, MAGNETIC RECORDING, VIDEO

AMECO, INC.
AMPEX CORPORATION
AMPLIVISION CORPORATION
ASCO SONOCRAFT CORP
AUDIO DEVICES
GENERAL ELECTRIC CO.
MAGNETIC MEDIA CORPORATION
MEMOREX CORPORATION
MINNESOTA MINING - 3 M
RCA BROADCAST PRODS.
SONY CORPORATION OF AMERICA
TELE-MEASUREMENTS INC.

TAPE, MAGNETIC, GRAPHIC

AMPEX CORPORATION
AUDIO DEVICES
KRS INSTRUMENTS DIVISION

TAPE, RECORDING, LOGGING
AMPEX CORPORATION
AUDIO DEVICES
ROCKE INTERNATIONAL CORP.

TELEPHONE EQUIPMENT

AMERICAN ELITE
ANRITSU ELECTRIC CO., LTD.
B & K INSTRUMENTS, INC.
COLLINS RADIO COMPANY
ELECTRONICS ESSENTIALS OF CCC
THE JAMES FLOYD FORD CO
ITT TELECOMMUNICATIONS
LTV LING ALTEC, INC.
ROANWELL CORPORATION
SUPERIOR CONTINENTAL CORP.
TELEMET COMPANY

TERMINAL BLOCKS

ADC PRODUCTS
AMERICAN PAMCOR, INC
AMPHENOL CORP.
AUDIO ACCESSORIES
BIRNBACH CO
BUCHANAN ELECTRICAL PRODS CORP
COLLINS RADIO COMPANY
COOK ELECTRIC, WIRECOM DIV.
ELECTRONICS ESSENTIALS OF CCC
GATES RADIO COMPANY
GENERAL ELECTRIC CO
RELIABLE ELECTRIC
SINGER PRODUCTS CO.
THE THOMAS & BETTS CO

TERMINAL BOARDS

ADC PRODUCTS
AMPHENOL CORP
BUCHANAN ELECTRICAL PRODS CORP
COLLINS RADIO COMPANY
D & B ELECTRONICS COMPANY
ELECTRONICS ESSENTIALS OF CCC
GENERAL ELECTRIC CO
INDUSTRIAL ELECTRONIC HARDWARE
SINGER PRODUCTS CO.
THE THOMAS & BETTS CO
UTILITY PRODUCTS CO.

TERMINAL CARDS

ACME VISIBLE RECORDS
BUCHANAN ELECTRICAL PRODS CORP
COLLINS RADIO COMPANY
D & B ELECTRONICS COMPANY
SINGER PRODUCTS CO.

TERMINAL STRIPS

ADC PRODUCTS
AMPHENOL CORP.
BIRNBACH CO
BUCHANAN ELECTRICAL PRODS CORP
COLLINS RADIO COMPANY
D & B ELECTRONICS COMPANY
ELECTRONICS ESSENTIALS OF CCC
GENERAL ELECTRIC CO
INDUSTRIAL ELECTRONIC HARDWARE
SINGER PRODUCTS CO.
VITRO ELECTRONICS

TERMINALS, BARRIER

BUCHANAN ELECTRICAL PRODS CORP
ELECTRONICS ESSENTIALS OF CCC
SINGER PRODUCTS CO.
THE THOMAS & BETTS CO

TERMINALS, HIGH VOLTAGE

AMERICAN PAMCOR, INC
ELECTRONICS ESSENTIALS OF CCC
PHELPS DODGE
RELIABLE ELECTRIC
SINGER PRODUCTS CO.

TERMINALS, LUG

AMERICAN PAMCOR, INC
BIRNBACH CO
BUCHANAN ELECTRICAL PRODS CORP
ELECTRONICS ESSENTIALS OF CCC
GENERAL ELECTRIC CO
HOLLINGSWORTH SOLDERLESS
INDUSTRIAL ELECTRONIC HARDWARE
SINGER PRODUCTS CO.
THE THOMAS & BETTS CO

TERMINALS, SOLDER

BIRNBACH CO
BUCHANAN ELECTRICAL PRODS CORP
COOK ELECTRIC, WIRECOM DIV.
CRAFTSMAN ELECTRONICS PRODUCTS
ELECTRONICS ESSENTIALS OF CCC
G C ELECTRONICS COMPANY
SINGER PRODUCTS CO.

TERMINALS, SOLDERLESS

AEROVOX CORP.
AMERICAN PAMCOR, INC
BIRNBACH CO
BUCHANAN ELECTRICAL PRODS CORP
COOK ELECTRIC, WIRECOM DIV.
CRAFTSMAN ELECTRONICS PRODUCTS
ELECTRONICS ESSENTIALS OF CCC
G C ELECTRONICS COMPANY
HOLLINGSWORTH SOLDERLESS

RELIABLE ELECTRIC
SINGER PRODUCTS CO.
THE THOMAS & BETTS CO
VACO PRODUCTS CO.

TESTERS, BATTERY

GENERAL ELECTRIC CO
GOTHAM AUDIO CORPORATION
HICKOK ELECTRICAL INSTRUMENT
RCA ELECTRONIC COMPONENTS
SINGER PRODUCTS CO.

TESTERS, CAPACITOR

CORNELL-DUBILIER ELECTRONICS
GENERAL RADIO CO
HICKOK ELECTRICAL INSTRUMENT
ROHDE & SCHWARZ SALES CO.
SINGER PRODUCTS CO.
TEKTRONIX INC

TESTERS, INSULATION

GENERAL ELECTRIC CO
GENERAL MACHINE PRODUCTS CO.
GENERAL RADIO CO
GOTHAM AUDIO CORPORATION
ROHDE & SCHWARZ SALES CO.
SINGER PRODUCTS CO
YOKOGAWA ELECTRIC WORKS

TESTERS, SEMICONDUCTOR

COLLINS RADIO COMPANY
DELTA ELECTRONICS, INC. — NC
DIVERSIFIED ELECTRONIC CORP
HICKOK ELECTRICAL INSTRUMENT
RCA ELECTRONIC COMPONENTS
ROHDE & SCHWARZ SALES CO.
SINGER PRODUCTS CO.
SOLITRON DEVICES
TEKTRONIX INC
TRIPLETT ELECTRICAL INSTRUMENT

TESTERS, VACUUM TUBE

ALLIED ELECTRONICS CORP
DIVERSIFIED ELECTRONIC CORP
HICKOK ELECTRICAL INSTRUMENT
RCA ELECTRONIC COMPONENTS
SINGER PRODUCTS CO.
TRIPLETT ELECTRICAL INSTRUMENT

TIMERS, ELECTRIC

CHRONO-LOG CORPORATION
CRAMER DIV., CONRAC CORP.
CURTIS INSTRUMENTS
GENERAL ELECTRIC CO
GIBBS MFG. AND RESEARCH CORP.
G-V CONTROLS INC.
HICKOK ELECTRICAL INSTRUMENT
MALLORY DISTRIBUTOR PRODUCTS
RICHMOND HILL LABORATORIES
SELA ELECTRONICS CO.
STANDARD ELECTRIC TIME CO.
TREPAC CORPORATION OF AMERICA

TIMERS, MANUAL

COOK ELECTRIC COMPANY
THE ELMOR COMPANY
GENERAL ELECTRIC CO
JULES RACINE CO INC

TOOLS, ALIGNMENT

G C ELECTRONICS COMPANY

TOOLS, CLAMPS

AMECO, INC.
CHANNELLOCK, INC.
GENERAL MACHINE PRODUCTS CO.
SINGER PRODUCTS CO.

TOOLS, CRIMPERS

AEROVOX CORP.
AMECO, INC.
AMERICAN PAMCOR, INC
AMPHENOL CORP.
BUCHANAN ELECTRICAL PRODS CORP
GENERAL MACHINE PRODUCTS CO.
HOLLINGSWORTH SOLDERLESS
MATHIAS KLEIN & SONS
H. K. PORTER INC.
SINGER PRODUCTS CO.
THE THOMAS & BETTS CO
VACO PRODUCTS CO.
VIKOA, INC.

TOOLS, CUTTERS

CHANNELLOCK, INC.
DIAMOND TOOL AND HORSESHOE CO.
ERIKSON SPECIALIZED TOOL CO.
MATHIAS KLEIN & SONS
H. K. PORTER INC.
SINGER PRODUCTS CO.
THE THOMAS & BETTS CO
VACO PRODUCTS CO.
VIKOA, INC.

TOOLS, HAND

CHANNELLOCK, INC.
DIAMOND EXPANSION BOLT CO INC
DIAMOND TOOL AND HORSESHOE CO.
ELECTRONICS ESSENTIALS OF CCC
ERIKSON SPECIALIZED TOOL CO.
GENERAL MACHINE PRODUCTS CO.
HOLLINGSWORTH SOLDERLESS
ITT CANNON ELECTRIC
MATHIAS KLEIN & SONS
H. K. PORTER INC.
SINGER PRODUCTS CO.
THE THOMAS & BETTS CO
UPSON TOOLS, INC.

VACO PRODUCTS CO.

TOOLS, HOLE CUTTERS

ERIKSON SPECIALIZED TOOL CO.

TOOLS, PLIERS

CHANNELLOCK, INC.
DIAMOND TOOL AND HORSESHOE CO.
ERIKSON SPECIALIZED TOOL CO.
MATHIAS KLEIN & SONS
SINGER PRODUCTS CO.
VACO PRODUCTS CO.
XCELITE INCORPORATED

TOOLS, PUNCH, CHASSIS

GREENLEE TOOL COMPANY
SINGER PRODUCTS CO.
UPSON TOOLS, INC.

TOOLS, SCREWDRIVERS

CHANNELLOCK, INC.
ELECTRONICS ESSENTIALS OF CCC
ERIKSON SPECIALIZED TOOL CO.
MATHIAS KLEIN & SONS
SINGER PRODUCTS CO.
UPSON TOOLS, INC.
VACO PRODUCTS CO.
XCELITE INCORPORATED

TOOLS, SOLDERING AIDS

G C ELECTRONICS COMPANY

TOOLS, SOLDERING IRONS, GUN
SINGER PRODUCTS CO.

TOOLS, SOLDERING IRONS, INDUSTRIAL

GENERAL ELECTRIC CO
GENERAL MACHINE PRODUCTS CO.
SINGER PRODUCTS CO.
UNGAR ELECTRIC TOOLS

TOOLS, WRENCHES

CHANNELLOCK, INC.
DIAMOND TOOL AND HORSESHOE CO.
ELECTRONICS ESSENTIALS OF CCC
GENERAL MACHINE PRODUCTS CO.
ERIKSON SPECIALIZED TOOL CO.
MATHIAS KLEIN & SONS
SINGER PRODUCTS CO.
UPSON TOOLS, INC.
VACO PRODUCTS CO.
XCELITE INCORPORATED

TOWERS, ANTENNA,

CAS MANUFACTURING CO.
JAMPRO ANTENNA COMPANY
KATONA ELECTRONICS CO.
ROCKE INTERNATIONAL CORP.
TELETRONIX
TRYLON INCORPORATED

TOWERS, ANTENNA, CAV, HEAD-END

ADVANCE INDUSTRIES
AMECO, INC.
AMPLIVISION CORPORATION
ANTENNA PRODUCTS COMPANY
BLAW-KNOX COMPANY
CAS MANUFACTURING CO.
DRESSER CRANE HOIST & TOWER
FORT WORTH TOWER CO., INC.
HY-GAIN ELECTRONICS
JAMPRO ANTENNA COMPANY
KATONA ELECTRONICS CO.
KLINE IRON & STEEL COMPANY
LIBERTY TOWER MFG. CO
LITTLE JOE ENTERPRISES
MASTER TOWER CO
MICROFLECT COMPANY INC.
PACIFIC TOWER CO
ROCKE INTERNATIONAL CORP.
ROHN MANUFACTURING CO.
STAINLESS, INC.
SWAGER TOWER CORPORATION
TELETRONIX
TRYLON INCORPORATED
UNITED STATES TOWERS
UP-RIGHT SCAFFOLDS
UTILITY TOWER CO.

TOWERS, ANTENNA, RECEIVING

ADVANCE INDUSTRIES
AMECO, INC.
ANTENNA PRODUCTS COMPANY
DRESSER CRANE HOIST & TOWER
FORT WORTH TOWER CO., INC.
JAMPRO ANTENNA COMPANY
KLINE IRON & STEEL COMPANY
LIBERTY TOWER MFG. CO
LITTLE JOE ENTERPRISES
MASTER TOWER CO
MICROFLECT COMPANY INC.
ROCKE INTERNATIONAL CORP.
SINGER PRODUCTS CO
ROHN MANUFACTURING CO.
STAINLESS, INC.
SWAGER TOWER CORPORATION
TELETRONIX
TRYLON INCORPORATED
UNITED STATES TOWERS
UP-RIGHT SCAFFOLDS
UTILITY TOWER CO.

YOU WON'T FIND A PANIC BUTTON ON A MAGNECORD!



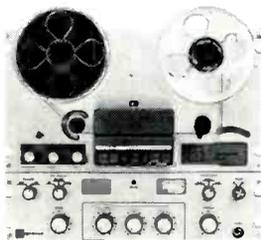
When Magnecord engineered a long list of safety factors into their professional line of tape recorder/reproducers . . . they engineered the emergencies out! A sturdy die-cast mainplate, supporting the transport in every model, insures precise location of internal parts under the roughest operating conditions. Rigid die-cast head mounts eliminate alignment problems. Professional quality hysteresis synchronous

capstan motor and individual reel drive motors are heavy duty models, and the capstan shaft assembly is re-inforced for extra strength and longer life.

While you are taping, safe-guard operating features protect your thinnest tapes. With Magnecord you get top-notch performance and superb fidelity to keep your taping facility operating at maximum capacity, even after years of constant use. Ask a broadcaster who uses one . . . Magnecords are built to take it!

Write now for the full story on the complete line of durable quality Magnecord tape instruments.

Magnecord 8+ Reels now available from Audiotape®. See your local dealer.



MAGNECORD MODEL 1021
Fully transistorized professional tape recorder / reproducer for monaural operation. For use in main or production control room.



MAGNECORD MODEL 1022
Fully transistorized professional tape recorder / reproducer two channel (stereo) for use in main or production control room.



MAGNECORD MODEL 1028
Professional quality 2 channel (stereo) tape recorder / reproducer for recording master tapes. (10½" reel capacity) Available in ½- or ¼-track.



MAGNECORD MODEL 1048
Professional 2 channel (stereo) recorder/reproducer for use in main studio, production studio or conference recording. (10½" reel capacity) Model 1048 is available in ½- or ¼-track.

PRODUCTS OF SOUND RESEARCH
MAGNECORD
tape recorders
DIVISION OF THE TELEX CORPORATION
9600 ALDRICH AVENUE SOUTH
MINNEAPOLIS, MINNESOTA 55420

TOWERS, ANTENNA, TRANSMITTING, AM

ADVANCE INDUSTRIES
ANTENNA PRODUCTS COMPANY
BLAW-KNOX COMPANY
COLLINS RADIO COMPANY
DRESSER CRANE HOIST & TOWER
FORT WORTH TOWER CO., INC.
GATES RADIO COMPANY
JAMPRO ANTENNA COMPANY
KLINE IRON & STEEL COMPANY
LIBERTY TOWER MFG. CO.
LITTLE JOE ENTERPRISES
MASTER TOWER CO.
MICROFLECT COMPANY INC.
GUNNAR A OLSEN CORP
PACIFIC TOWER CO.
RCA BROADCAST PRODS.
ROCKE INTERNATIONAL CORP.
ROHN MANUFACTURING CO.
SINGER PRODUCTS CO.
STAINLESS, INC.
SWAGER TOWER CORPORATION
TELETRONIX
TRYLON INCORPORATED
UNITED STATES TOWERS
UP-RIGHT SCAFFOLDS
UTILITY TOWER CO.
VISUAL ELECTRONICS CORP

TOWERS, ANTENNA, TRANSMITTING, FM

ADVANCE INDUSTRIES
ANTENNA PRODUCTS COMPANY
BLAW-KNOX COMPANY
COLLINS RADIO COMPANY
DRESSER CRANE HOIST & TOWER
FORT WORTH TOWER CO., INC.
GATES RADIO COMPANY
JAMPRO ANTENNA COMPANY
KLINE IRON & STEEL COMPANY
LIBERTY TOWER MFG. CO.
LITTLE JOE ENTERPRISES
MASTER TOWER CO.
MICROFLECT COMPANY INC.
MOTOROLA COMMUNICATIONS
GUNNAR A OLSEN CORP
PACIFIC TOWER CO.
RCA BROADCAST PRODS.
ROCKE INTERNATIONAL CORP.
ROHN MANUFACTURING CO.
SINGER PRODUCTS CO.
STAINLESS, INC.
SWAGER TOWER CORPORATION
TELETRONIX
TRYLON INCORPORATED
UNITED STATES TOWERS
UP-RIGHT SCAFFOLDS
UTILITY TOWER CO.
VISUAL ELECTRONICS CORP

TOWERS, ANTENNA, TRANSMITTING, TV

ADVANCE INDUSTRIES
ANTENNA PRODUCTS COMPANY
BLAW-KNOX COMPANY
DRESSER CRANE HOIST & TOWER
FORT WORTH TOWER CO., INC.
JAMPRO ANTENNA COMPANY
KLINE IRON & STEEL COMPANY
LIBERTY TOWER MFG. CO.
MASTER TOWER CO.
MICROFLECT COMPANY INC.
GUNNAR A OLSEN CORP
PACIFIC TOWER CO.
RCA BROADCAST PRODS.
ROCKE INTERNATIONAL CORP.
ROHN MANUFACTURING CO.
SINGER PRODUCTS CO.
STAINLESS, INC.
SWAGER TOWER CORPORATION
TELETRONIX
TRYLON INCORPORATED
UNITED STATES TOWERS
UP-RIGHT SCAFFOLDS
UTILITY TOWER CO.
VISUAL ELECTRONICS CORP

TRACK, SCENERY PERIMETER

THE JANSON INDUSTRIES

TRANSFORMERS, AUDIO, ISOLATION

ADC PRODUCTS
B & K INSTRUMENTS, INC.
BRADFORD INFORMATION SYSTEMS
ESSEX WIRE CORPORATION
GOTHAM AUDIO CORPORATION
JENSEN MANUFACTURING
LAFAYETTE RADIO ELECTRONICS
LTV LING ALTEC, INC.
NESHAMINY ELECTRONIC CORP.
PERMOFLUX CORPORATION
ROCKE INTERNATIONAL CORP.
SCIENTIFIC ELECTRONIC PRODUCTS

SINGER PRODUCTS CO.
STACO, INC.
TRW ELECTRONICS
UNITED TRANSFORMER COMPANY
VIRGINIA ELECTRONICS CO., INC.

TRANSFORMERS, AUDIO, MATCHING

ADC PRODUCTS
ALLIED ELECTRONICS CORP
B & K INSTRUMENTS, INC.
BOGEN COMMUNICATIONS DIV.
BRADFORD INFORMATION SYSTEMS
ESSEX WIRE CORPORATION
GOTHAM AUDIO CORPORATION
JENSEN MANUFACTURING
LAFAYETTE RADIO ELECTRONICS
LAKE ELECTRONICS INC.
LTV LING ALTEC, INC.
NESHAMINY ELECTRONIC CORP.
PERMOFLUX CORPORATION
ROCKE INTERNATIONAL CORP.
SCIENTIFIC ELECTRONIC PRODUCTS
SINGER PRODUCTS CO.
STACO, INC.
TRW ELECTRONICS
TV CABLE SUPPLY CO
UNITED TRANSFORMER COMPANY
VIRGINIA ELECTRONICS CO., INC.

TRANSFORMERS, AUDIO, POWER OUTPUT

ADC PRODUCTS
ALLIED ELECTRONICS CORP
ESSEX WIRE CORPORATION
IKEGAMI TSUSHINKI CO., LTD.
LAFAYETTE RADIO ELECTRONICS
LAKE ELECTRONICS, INC.
LTV LING ALTEC, INC.
NESHAMINY ELECTRONIC CORP.
PERMOFLUX CORPORATION
ROCKE INTERNATIONAL CORP.
SCIENTIFIC ELECTRONIC PRODUCTS
SINGER PRODUCTS CO.
STACO, INC.
TRW ELECTRONICS
UNITED TRANSFORMER COMPANY
VIRGINIA ELECTRONICS CO., INC.

TRANSFORMERS, AUTO

ADC PRODUCTS
ESSEX WIRE CORPORATION
GENERAL ELECTRIC CO
JENSEN MANUFACTURING
LAFAYETTE RADIO ELECTRONICS
LTV LING ALTEC, INC.
NESHAMINY ELECTRONIC CORP.
PERMOFLUX CORPORATION
ROCKE INTERNATIONAL CORP.
SCIENTIFIC ELECTRONIC PRODUCTS
SINGER PRODUCTS CO.
SOLA ELECTRIC
STACO, INC.
TRW ELECTRONICS
UNITED TRANSFORMER COMPANY
VIRGINIA ELECTRONICS CO., INC.

TRANSFORMERS, COUPLING

ADC PRODUCTS
ALLIED ELECTRONICS CORP
BARKER & WILLIAMSON
ESSEX WIRE CORPORATION
JENSEN MANUFACTURING
LTV LING ALTEC, INC.
NESHAMINY ELECTRONIC CORP.
PERMOFLUX CORPORATION
ROCKE INTERNATIONAL CORP.
SCIENTIFIC ELECTRONIC PRODUCTS
SINGER PRODUCTS CO.
TRW ELECTRONICS
UNITED TRANSFORMER COMPANY
VIRGINIA ELECTRONICS CO., INC.

TRANSFORMERS, FILAMENT

ADC PRODUCTS
ALLIED ELECTRONICS CORP
ESSEX WIRE CORPORATION
GENERAL ELECTRIC CO
IKEGAMI TSUSHINKI CO., LTD.
LAFAYETTE RADIO ELECTRONICS
LAKE ELECTRONICS, INC.
LTV LING ALTEC, INC.
MARYLAND TELECOMMUNICATIONS
NESHAMINY ELECTRONIC CORP.
PERMOFLUX CORPORATION
ROCKE INTERNATIONAL CORP.
SCIENTIFIC ELECTRONIC PRODUCTS
SINGER PRODUCTS CO.
SOLA ELECTRIC
STACO, INC.
TRW ELECTRONICS
UNITED TRANSFORMER COMPANY
VIRGINIA ELECTRONICS CO., INC.

TRANSFORMERS, GENERAL

ADC PRODUCTS
ALLIED ELECTRONICS CORP
ANACONDA ASTRODATA CO
ESSEX WIRE CORPORATION
G & E INDUSTRIAL SALES OPERATION
GENERAL ELECTRIC CO
LAFAYETTE RADIO ELECTRONICS
LAKE ELECTRONICS, INC.
LTV LING ALTEC, INC.
MARYLAND TELECOMMUNICATIONS
NESHAMINY ELECTRONIC CORP.
PERMOFLUX CORPORATION
ROCKE INTERNATIONAL CORP.
SCIENTIFIC ELECTRONIC PRODUCTS
SINGER PRODUCTS CO.
SOLA ELECTRIC
STACO, INC.
TRW ELECTRONICS
TV CABLE SUPPLY CO
UNITED TRANSFORMER COMPANY
VIRGINIA ELECTRONICS CO., INC.

TRANSFORMERS, PLATE

ADC PRODUCTS
ESSEX WIRE CORPORATION
LAKE ELECTRONICS, INC.
LTV LING ALTEC, INC.
NESHAMINY ELECTRONIC CORP.
PERMOFLUX CORPORATION
ROCKE INTERNATIONAL CORP.
SCIENTIFIC ELECTRONIC PRODUCTS
SINGER PRODUCTS CO.
SOLA ELECTRIC
STACO, INC.
TRW ELECTRONICS
UNITED TRANSFORMER COMPANY
VIRGINIA ELECTRONICS CO., INC.

TRANSFORMERS, POWER

ADC PRODUCTS
ALLIED ELECTRONICS CORP
ESSEX WIRE CORPORATION
GENERAL ELECTRIC CO
HUGHEY & PHILLIPS
IKEGAMI TSUSHINKI CO., LTD.
LAFAYETTE RADIO ELECTRONICS
LAKE ELECTRONICS, INC.
LTV LING ALTEC, INC.
MARYLAND TELECOMMUNICATIONS
NESHAMINY ELECTRONIC CORP.
PERMOFLUX CORPORATION
ROCKE INTERNATIONAL CORP.
SCIENTIFIC ELECTRONIC PRODUCTS
SOLA ELECTRIC
STACO, INC.
TRW ELECTRONICS
UNITED TRANSFORMER COMPANY

TRANSFORMERS, RF

ADC PRODUCTS
ALFORD MANUFACTURING COMPANY
AMERICAN CABLE ELECTRONICS
ANTENNA PRODUCTS COMPANY
BARKER & WILLIAMSON
BLONDER-TONGUE LABORATORIES
COLLINS RADIO COMPANY
CRAFTSMAN ELECTRONICS PRODUCTS
D & B ELECTRONICS COMPANY
ELECTROMAGNETIC RADIATION LACS
ESSEX WIRE CORPORATION
KAPPA NETWORKS, INC
KATONA ELECTRONICS CO.
LAKE ELECTRONICS, INC.
MARYLAND TELECOMMUNICATIONS
J. W. MILLER CO.
NESHAMINY ELECTRONIC CORP.
ROCKE INTERNATIONAL CORP.
SCIENTIFIC ELECTRONIC PRODUCTS
SINGER PRODUCTS CO.
UNITED TRANSFORMER COMPANY
VIRGOA, INC.
VIRGINIA ELECTRONICS CO., INC.

TRANSFORMERS, TRANSISTOR

ADC PRODUCTS
ALLIED ELECTRONICS CORP
ESSEX WIRE CORPORATION
GOTHAM AUDIO CORPORATION
INTERNATIONAL ELECTRONICS CORP
LAFAYETTE RADIO ELECTRONICS
LAKE ELECTRONICS, INC.
LTV LING ALTEC, INC.
MARYLAND TELECOMMUNICATIONS
NESHAMINY ELECTRONIC CORP.
SCIENTIFIC ELECTRONIC PRODUCTS
SINGER PRODUCTS CO.
STACO, INC.
TRW ELECTRONICS
UNITED TRANSFORMER COMPANY
VIRGINIA ELECTRONICS CO., INC.

TRANSFORMERS, VARIABLE

ESSEX WIRE CORPORATION
GENERAL ELECTRIC CO
GENERAL RADIO CO
IKEGAMI TSUSHINKI CO., LTD.
JENSEN MANUFACTURING
LAKE ELECTRONICS, INC.
LTV LING ALTEC, INC.
NESHAMINY ELECTRONIC CORP.
OHMITE MANUFACTURING COMPANY
RCA ELECTRONIC COMPONENTS
SCIENTIFIC ELECTRONIC PRODUCTS
SINGER PRODUCTS CO.
STACO, INC.
TRW ELECTRONICS
UNITED TRANSFORMER COMPANY

TRANSLATOR SYSTEMS

AMPLIVISION CORPORATION
KEITH ANDERSON CO
BENCO TELEVISION ASSOCIATES
CATEL COMPANY
COLLINS RADIO COMPANY
EMCEE
F & M SYSTEMS COMPANY
LITTON EDUCATIONAL TELE DIV
RCA BROADCAST PRODS.
ROCKE INTERNATIONAL CORP.
SIGNAL ENGINEERING & SALES INC

TRANSMISSION LINES

ALFORD MANUFACTURING COMPANY
AMECO, INC.
ANDREW CORPORATION
ANTENNA PRODUCTS COMPANY
CONTINENTAL ELECTRONICS MFG
COPPERWELD STEEL COMPANY
ELECTROMAGNETIC RADIATION LABS
GATES RADIO COMPANY
NARDA MICROWAVE CORPORATION
PHELPS DODGE
RCA BROADCAST PRODS.
ROCKE INTERNATIONAL CORP.
SINGER PRODUCTS CO.
UTILITY PRODUCTS CO.

TRANSMISSION TEST SETS

BALL BROTHERS RESEARCH
OAVEN DIV. - EDISON INDUS.
ELECTRONIC DESIGNERS INC.
HEWLETT-PACKARD CO.
NARDA MICROWAVE CORPORATION
PHELPS DODGE
RIKER VIDEO INDUSTRIES
ROCKE INTERNATIONAL CORP.
TELE-MEASUREMENTS INC.
TELEMET COMPANY
VIDIOMETRICS, INC.
VIDEON CORPORATION
WAVEFORMS, INCORPORATED

TRANSMITTER KITS

ALLIED ELECTRONICS CORP
AMERICAN ELECTRONIC LABS
BAUER BROADCAST PRODUCTS DIV.
GATES RADIO COMPANY
E F JOHNSON COMPANY
ROCKE INTERNATIONAL CORP.
SCIENTIFIC ELECTRONIC PRODUCTS

TRANSMITTERS, AM, CARRIER

ANRITSU ELECTRIC CO. LTD.
BAUER BROADCAST PRODUCTS DIV.
COLLINS RADIO COMPANY
LOW POWER
LTV LING ALTEC, INC.
ROCKE INTERNATIONAL CORP.
SINGER PRODUCTS CO.
THE TECHNICAL MATERIEL CORP

TRANSMITTERS, AM, LOW POWER

AMERICAN ELECTRONIC LABS
BAUER BROADCAST PRODUCTS DIV.
CCA ELECTRONICS CORPORATION
COLLINS RADIO COMPANY
GATES RADIO COMPANY
LOW POWER
LTV LING ALTEC, INC.
RCA BROADCAST PRODS.
ROCKE INTERNATIONAL CORP.
SINGER PRODUCTS CO.
THE TECHNICAL MATERIEL CORP
VISUAL ELECTRONICS CORP

TRANSMITTERS, AM, 250 WATT

AMERICAN ELECTRONIC LABS
ANRITSU ELECTRIC CO., LTD.
BAUER BROADCAST PRODUCTS DIV.
CCA ELECTRONICS CORPORATION
COLLINS RADIO COMPANY
GATES RADIO COMPANY
IKEGAMI TSUSHINKI CO., LTD.
E F JOHNSON COMPANY
LTV LING ALTEC, INC.
ROCKE INTERNATIONAL CORP.
SINGER PRODUCTS CO
THE TECHNICAL MATERIEL CORP
TELETRONIX
VISUAL ELECTRONICS CORP

TRANSMITTERS, AM, 500 WATT

AMERICAN ELECTRONIC LABS
ANRITSU ELECTRIC CO., LTD.
BAUER BROADCAST PRODUCTS DIV.
CCA ELECTRONICS CORPORATION
COLLINS RADIO COMPANY
GATES RADIO COMPANY
IKEGAMI TSUSHINKI CO., LTD.
LTV LING ALTEC, INC.
ROCKE INTERNATIONAL CORP.
SINGER PRODUCTS CO
THE TECHNICAL MATERIEL CORP
VISUAL ELECTRONICS CORP

TRANSMITTERS, AM 1 KW

AMERICAN ELECTRONIC LABS
ANRITSU ELECTRIC CO., LTD.
BAUER BROADCAST PRODUCTS DIV.
CCA ELECTRONICS CORPORATION
COLLINS RADIO COMPANY
GATES RADIO COMPANY
IKEGAMI TSUSHINKI CO., LTD.
E F JOHNSON COMPANY
MARCONI DIVISION
RCA BROADCAST PRODS.
ROCKE INTERNATIONAL CORP.
SCIENTIFIC ELECTRONIC PRODUCTS
SINGER PRODUCTS CO
THE TECHNICAL MATERIEL CORP
TELETRONIX
VISUAL ELECTRONICS CORP
WILKINSON ELECTRONICS, INC

TRANSMITTERS, AM, 5 KW

AMERICAN ELECTRONIC LABS
BAUER BROADCAST PRODUCTS DIV.
CCA ELECTRONICS CORPORATION
COLLINS RADIO COMPANY
CONTINENTAL ELECTRONICS MFG
GATES RADIO COMPANY
IKEGAMI TSUSHINKI CO., LTD.
RCA BROADCAST PRODS.
ROCKE INTERNATIONAL CORP.
SCIENTIFIC ELECTRONIC PRODUCTS
SINGER PRODUCTS CO
THE TECHNICAL MATERIEL CORP
TELETRONIX
VISUAL ELECTRONICS CORP
WILKINSON ELECTRONICS, INC

TRANSMITTERS, AM, 10 KW

CONTINENTAL ELECTRONICS LABS
AMERICAN ELITE
BAUER BROADCAST PRODUCTS DIV.
CCA ELECTRONICS CORPORATION
COLLINS RADIO COMPANY
CONTINENTAL ELECTRONICS MFG
GATES RADIO COMPANY
IKEGAMI TSUSHINKI CO., LTD.
MARCONI DIVISION
RCA BROADCAST PRODS.
ROCKE INTERNATIONAL CORP.
SCIENTIFIC ELECTRONIC PRODUCTS
SINGER PRODUCTS CO
THE TECHNICAL MATERIEL CORP
TELETRONIX
VISUAL ELECTRONICS CORP
WILKINSON ELECTRONICS, INC

TRANSMITTERS, AM, 25 KW

AMERICAN ELECTRONIC LABS
CCA ELECTRONICS CORPORATION
CONTINENTAL ELECTRONICS MFG
GATES RADIO COMPANY
IKEGAMI TSUSHINKI CO., LTD.
RCA BROADCAST PRODS.
ROCKE INTERNATIONAL CORP.
SCIENTIFIC ELECTRONIC PRODUCTS
SINGER PRODUCTS CO
THE TECHNICAL MATERIEL CORP
VISUAL ELECTRONICS CORP

TRANSMITTERS AM, 50 KW

AMERICAN ELECTRONIC LABS
AMERICAN ELITE
CCA ELECTRONICS CORPORATION
CONTINENTAL ELECTRONICS MFG
GATES RADIO COMPANY
G E VISUAL COMMUNICATIONS PROD
IKEGAMI TSUSHINKI CO., LTD.

MARCONI DIVISION
RCA BROADCAST PRODS.
ROCKE INTERNATIONAL CORP.
SINGER PRODUCTS CO
THE TECHNICAL MATERIEL CORP
TELETRONIX
VISUAL ELECTRONICS CORP

TRANSMITTERS, AM, OVER 50 KW

AMERICAN ELECTRONIC LABS
AMERICAN ELITE
CCA ELECTRONICS CORPORATION
COLLINS RADIO COMPANY
CONTINENTAL ELECTRONICS MFG
GATES RADIO COMPANY
MARCONI DIVISION
ROCKE INTERNATIONAL CCRP.
SINGER PRODUCTS CO
THE TECHNICAL MATERIEL CORP

TRANSMITTERS, AM, TO ORDER

AMERICAN ELECTRONIC LABS
ANRITSU ELECTRIC CO., LTD.
BAUER BROADCAST PRODUCTS DIV.

CCA ELECTRONICS CORPORATION
COLLINS RADIO COMPANY
CONTINENTAL ELECTRONICS MFG
EITEL ELECTRONICS
GATES RADIO COMPANY
RCA BROADCAST PRODS.
ROCKE INTERNATIONAL CORP.
SINGER PRODUCTS CO.
THE TECHNICAL MATERIEL CORP

TRANSMITTERS, FM

KEITH ANDERSON CO
BAUER BROADCAST PRODUCTS DIV.
ELECTRONICS DEVELOPMENT CORP.
GATES RADIO COMPANY
IKEGAMI TSUSHINKI CO., LTD.
JERROLD ELECTRONICS CORP
LTV LING ALTEC, INC.
MILES REPRODUCER CO
RCA BROADCAST PRODS.
RHG ELECTRONICS LABORATORY
ROCKE INTERNATIONAL CORP.
SINGER PRODUCTS CO.
THOMSON ELECTRIC CO

UTICA ELECTRONICS
VEGA ELECTRONICS CORP
VISUAL ELECTRONICS CORP

TRANSMITTERS, FM, 10 WATTS

AMERICAN ELECTRONIC LABS
ANRITSU ELECTRIC CO., LTD.
RF TRANSMISSION DEPT, AMPEX
BAUER BROADCAST PRODUCTS DIV.
CCA ELECTRONICS CORPORATION
COLLINS RADIO COMPANY
ELECTRONICS DEVELOPMENT CORP.
GATES RADIO COMPANY
IKEGAMI TSUSHINKI CO. LTD.
LTV LING ALTEC, INC.
MARTI ELECTRONICS
MOSELEY ASSOCIATES INC.
ROCKE INTERNATIONAL CORP.
SCIENTIFIC ELECTRONIC PRODUCTS
SINGER PRODUCTS CO
VISUAL ELECTRONICS CORP

TRANSMITTERS, FM, 50 WATTS

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IKEGAMI TSUSHINKI CO., LTD.
LTV LING ALTEC, INC.
MOSELEY ASSOCIATES INC.
ROCKE INTERNATIONAL CORP.
SCIENTIFIC ELECTRONIC PRODUCTS
SINGER PRODUCTS CO.
UTICA ELECTRONICS
VISUAL ELECTRONICS CORP

TRANSMITTERS, FM, 100 WATTS

AMERICAN ELECTRONIC LABS
BAUER BROADCAST PRODUCTS DIV.
CCA ELECTRONICS CORPORATION
COLLINS RADIO COMPANY
ELECTRONIC DEVELOPMENT CORP.
GATES RADIO COMPANY
HAMMARLUND MANUFACTURING CO.
IKEGAMI TSUSHINKI CO., LTD.
IKEGAMI TSUSHINKI CO., LTD.
LTV LING ALTEC, INC.
MARTI ELECTRONICS
SINGER PRODUCTS CO
VISUAL ELECTRONICS CORP

TRANSMITTERS, FM, 250 WATTS

AMERICAN ELECTRONIC LABS
RF TRANSMISSION DEPT, AMPEX
BAUER BROADCAST PRODUCTS DIV.
CCA ELECTRONICS CORPORATION
COLLINS RADIO COMPANY
ELECTRONICS DEVELOPMENT CORP.
GATES RADIO COMPANY
IKEGAMI TSUSHINKI CO., LTD.
ROCKE INTERNATIONAL CORP.
SINGER PRODUCTS CO
STANDARD ELECTRONICS CORP.
TELETRONIX
VISUAL ELECTRONICS CORP

TRANSMITTERS FM, 1 KW

AMERICAN ELECTRONIC LABS
RF TRANSMISSION DEPT. AMPEX
BAUER BROADCAST PRODUCTS DIV.

CCA ELECTRONICS CORPORATION
COLLINS RADIO COMPANY
GATES RADIO COMPANY
IKEGAMI TSUSHINKI CO., LTD.
RCA BROADCAST PRODS.
ROCKE INTERNATIONAL CORP.
SINGER PRODUCTS CO
STANDARD ELECTRONICS CORP.
TELETRONIX
VISUAL ELECTRONICS CORP
WILKINSON ELECTRONICS, INC

TRANSMITTERS, FM, 3 KW

AMERICAN ELECTRONIC LABS
BAUER BROADCAST PRODUCTS DIV.
CCA ELECTRONICS CORPORATION
COLLINS RADIO COMPANY
GATES RADIO COMPANY
IKEGAMI TSUSHINKI CO., LTD.
RCA BROADCAST PRODS.
ROCKE INTERNATIONAL CORP.
SINGER PRODUCTS CO.
TELETRONIX
VISUAL ELECTRONICS CORP

TRANSMITTERS, FM, 5 KW

AMERICAN ELECTRONIC LABS
AMERICAN ELITE
RF TRANSMISSION DEPT, AMPEX
BAUER BROADCAST PRODUCTS DIV
CCA ELECTRONICS CORPORATION
COLLINS RADIO COMPANY
GATES RADIO COMPANY
IKEGAMI TSUSHINKI CO., LTD.
MARCONI DIVISION
RCA BROADCAST PRODS
ROCKE INTERNATIONAL CORP.
SINGER PRODUCTS CO
STANDARD ELECTRONICS CORP.
TELETRONIX
VISUAL ELECTRONICS CORP
WILKINSON ELECTRONICS, INC

TRANSMITTERS, FM, 7.5 KW

AMERICAN ELECTRONIC LABS
BAUER BROADCAST PRODUCTS DIV.
CCA ELECTRONICS CORPORATION
COLLINS RADIO COMPANY
GATES RADIO COMPANY

ROCKE INTERNATIONAL CORP.
SINGER PRODUCTS CO.
VISUAL ELECTRONICS CORP
WILKINSON ELECTRONICS, INC

TRANSMITTERS FM, 10 KW

AMERICAN ELECTRONIC LABS
AMERICAN ELITE
RF TRANSMISSION DEPT, AMPEX
BAUER BROADCAST PRODUCTS DIV.
CCA ELECTRONICS CORPORATION
COLLINS RADIO COMPANY
GATES RADIO COMPANY
RCA BROADCAST PRODS
ROCKE INTERNATIONAL CORP.
SINGER PRODUCTS CO.
STANDARD ELECTRONICS CORP.
TELETRONIX
VISUAL ELECTRONICS CORP
WILKINSON ELECTRONICS, INC

TRANSMITTERS, FM, 15 KW

AMERICAN ELECTRONIC LABS
RF TRANSMISSION DEPT, AMPEX
CCA ELECTRONICS CORPORATION
COLLINS RADIO COMPANY
GATES RADIO COMPANY
SINGER PRODUCTS CO.
VISUAL ELECTRONICS CORP

TRANSMITTERS, FM, 20 KW

AMERICAN ELECTRONIC LABS
CCA ELECTRONICS CORPORATION
COLLINS RADIO COMPANY
GATES RADIO COMPANY
RCA BROADCAST PRODS
ROCKE INTERNATIONAL CORP.
SINGER PRODUCTS CO
STANDARD ELECTRONICS CORP.
WILKINSON ELECTRONICS, INC

TRANSMITTERS, FM, 40 KW

AMERICAN ELECTRONIC LABS
CCA ELECTRONICS CORPORATION
COLLINS RADIO COMPANY
GATES RADIO COMPANY
ROCKE INTERNATIONAL CORP.

SINGER PRODUCTS CO.
VISUAL ELECTRONICS CORP

TRANSMITTERS, FM, 50 KW

AMERICAN ELECTRONIC LABS
AMERICAN ELITE
CCA ELECTRONICS CORPORATION
GATES RADIO COMPANY
RCA BROADCAST PRODS.
SINGER PRODUCTS CO.

TRANSMITTERS, FM, 100 KW

AMERICAN ELECTRONIC LABS
AMERICAN ELITE
CCA ELECTRONICS CORPORATION
GATES RADIO COMPANY
RCA BROADCAST PRODS.
SINGER PRODUCTS CO.

TRANSMITTERS FM, SPECIFY POWER

AMERICAN ELECTRONIC LABS
CCA ELECTRONICS CORPORATION
COLLINS RADIO COMPANY
GATES RADIO COMPANY
RCA BROADCAST PRODS.
ROCKE INTERNATIONAL CORP.
SINGER PRODUCTS CO.

TRANSMITTERS, FM, TO ORDER

AMERICAN ELECTRONIC LABS
ANRITSU ELECTRIC CO., LTD.
BAUER BROADCAST PRODUCTS DIV.
CCA ELECTRONICS CORPORATION
EITEL ELECTRONICS
GATES RADIO COMPANY
RCA BROADCAST PRODS.
RHG ELECTRONICS LABORATORY
ROCKE INTERNATIONAL CORP.
SINGER PRODUCTS CO.

TRANSMITTERS, TV

ELECTRONICS DEVELOPMENT CORP.
EMCEE
GATES RADIO COMPANY

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612	0-20/80	30-500	\$175	43	1-10000	0.5-2300	\$ 95*
6154	0-5/15/50/150	25-1000	\$265	4311	as 43, Peak and CW		\$575*
67(shown)	0-25/100/500	30-500	\$350	4340	0-100	2-1000	
					Lab Standard		\$895

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GATES RADIO COMPANY
JERROLD ELECTRONICS CORP
MICRO-LINK SYSTEMS-VARIAN
ROHDE & SCHWARZ SALES CO.

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RF TRANSMISSION DEPT, AMPX
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ELECTRONICS DEVELOPMENT CORP.
GATES RADIO COMPANY
MICRO-LINK SYSTEMS-VARIAN

TRANSMITTERS, TV, 20 WATTS
ELECTRONICS DEVELOPMENT CORP.
GATES RADIO COMPANY

TRANSMITTERS, TV 60 WATTS
ELECTRONICS DEVELOPMENT CORP.
GATES RADIO COMPANY

TRANSMITTERS, TV, 100 WATTS
RF TRANSMISSION DEPT, AMPX
ELECTRONICS DEVELOPMENT CORP.
GATES RADIO COMPANY
G E VISUAL COMMUNICATIONS PROD
ROCKE INTERNATIONAL CORP.

TRANSMITTERS, TV, 500 WATTS
ELECTRONICS DEVELOPMENT CORP.
GATES RADIO COMPANY
ROCKE INTERNATIONAL CORP.
STANDARD ELECTRONICS CORP .

TRANSMITTERS, TV, 1 KW
RF TRANSMISSION DEPT, AMPX
G E VISUAL COMMUNICATIONS PROD
RCA BROADCAST PRODS.

TRANSMITTERS, TV, 5 KW
GATES RADIO COMPANY
G E VISUAL COMMUNICATIONS PROD
MARCONI DIVISION
RCA BROADCAST PRODS
ROCKE INTERNATIONAL CORP.
STANDARD ELECTRONICS CORP .

TRANSMITTERS, TV, 10 KW
RF TRANSMISSION DEPT, AMPX
G E VISUAL COMMUNICATIONS PROD
MARCONI DIVISION
RCA BROADCAST PRODS.
STANDARD ELECTRONICS CORP .

TRANSMITTERS, TV, 11 KW
G E VISUAL COMMUNICATIONS PROD

TRANSMITTERS, TV, 12 KW
RCA BROADCAST PRODS

TRANSMITTERS, TV, 15 KW
RF TRANSMISSION DEPT, AMPX
G E VISUAL COMMUNICATIONS PROD

TRANSMITTERS, TV, 25 KW
MARCONI DIVISION
RCA BROADCAST PRODS.
STANDARD ELECTRONICS CORP.

TRANSMITTERS, TV, 30 KW
RF TRANSMISSION DEPT, AMPX
G E VISUAL COMMUNICATIONS PROD
RCA BROADCAST PRODS

TRANSMITTERS, TV, 35 KW
G E VISUAL COMMUNICATIONS PROD
STANDARD ELECTRONICS CORP .

TRANSMITTERS, TV, 50 KW
G E VISUAL COMMUNICATIONS PROD
MARCONI DIVISION
RCA BROADCAST PRODS
STANDARD ELECTRONICS CORP .

TRANSMITTERS, TV, 55 KW
F TRANSMISSION DEPT, AMPX
RCA BROADCAST PRODS.

TRANSMITTERS, TV, 70 KW
RF TRANSMISSION DEPT, AMPX
STANDARD ELECTRONICS CORP .

TRANSMITTERS, TV, 100 KW
G E VISUAL COMMUNICATIONS PROD
RCA BROADCAST PRODS.

TRANSMITTERS, TV, SPECIFY POWER
GATES RADIO COMPANY
G E VISUAL COMMUNICATIONS PROD
RCA BROADCAST PRODS.
ROCKE INTERNATIONAL CORP.
THE TECHNICAL MATERIEL CORP.

TRANSMITTERS, TV, TO ORDER
EITEL ELECTRONICS
RCA BROADCAST PRODS.
RHG ELECTRONICS LABORATORY
ROCKE INTERNATIONAL CORP.
THE TECHNICAL MATERIEL CORP

TURNTABLES, PHONOGRAPH
ALLIED ELECTRONICS CORP
BELL P-A PRODUCTS CORP.
BENJAMIN ELECTRONIC SCUND CORP
BOGEN COMMUNICATIONS DIV.
COLLINS RADIO COMPANY
DISPLAY TECHNOLOGIES INC
FAIRCHILD RECORDING EQUIPMENT
GATES RADIO COMPANY
GOTHAM AUDIO CORPORATION
GRAY RESEARCH & DEVELOPMENT CO
KOSS ELECTRONICS, INC.
MARANTZ COMPANY
Q R K ELECTRONIC PRODUCTS
RCA BROADCAST PRODS.
ROBERTS DIV. OF RHEEM MFG CO.
ROCKE INTERNATIONAL CORP.
RUSSCO ELECTRONICS MFG.
THE SINGER CO - METRICS DIV
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SONY CORPORATION OF AMERICA
SPARTA ELECTRONIC CORPORATION
TELE-MEASUREMENTS INC.

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AMECO, INC.
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AMPLIVISION CORPORATION
ANACONDA ASTRODATA CO
KEITH ANDERSON CO
ATV RESEARCH
BIONIC INSTRUMENTS, INC.
BLONDER-TONGUE LABORATORIES
CENTRAL DYNAMICS CORPORATION
COHY ELECTRONICS COLORADO VIDEO
DAGE-BELL CORPORATION
GENERAL ELECTRIC CO.
DIAMOND ELECTRONICS
DIAMOND POWER SPECIALTY CORP.
DIECRAFT, INC
F & M SYSTEMS COMPANY
GBC AMERICA CORPORATION
G E VISUAL COMMUNICATIONS PROD
GENERAL ELECTRIC CO
GORDON ENTERPRISES
GPL DIV.

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J M ELECTRONICS COMPANY
KAISER-COX
KATONA ELECTRONICS CO
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MARCONI DIVISION
MARYLAND TELECOMMUNICATIONS
MICRO-LINK SYSTEMS-VARIAN
MIRATEL ELECTRONICS, INC
MOTOROLA COMMUNICATIONS
PACKARD BELL ELECTRONICS
RAYTHEON LEARNING SYSTEMS CO.
RCA BROADCAST PRODS.
RIKER VIDEO INDUSTRIES

ROCKE INTERNATIONAL CORP.
SARKES-TARZIAN
SIGMA INDUSTRIES
SINGER PRODUCTS CO.
SONY CORPORATION OF AMERICA
SPENCER-KENNEDY LABORATORIES
STANDARD ELECTRONICS CORP .
S. STERLING COMPANY
SUPERIOR CONTINENTAL CORP.
SYLVANIA-COMM. ELECTRONICS DIV
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TELEMATION, INC.
TELE-MEASUREMENTS INC.
TELEMET COMPANY
TELEVISION UTILITIES CORP
TELTRON, INC
THOMSON ELECTRIC CO
VIDEO SYSTEMS
VISUAL ELECTRONICS CORP

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AMPERITE CO
INTERNATIONAL ELECTRONICS CORP
LEWIS AND KAUFMAN, LTD.
THOR ELECTRONICS

VACUUM TUBES, CAMERA, IMAGE - ORTHICON
AMPEREX ELECTRONIC CORP
AMPX CORPORATION
THE ENGLISH ELECTRIC CORP.
G E PICKUP TUBE OPERATION
GENERAL ELECTRIC CO
RCA BROADCAST PRODS.
RCA ELECTRONIC COMPONENTS
SINGER PRODUCTS CO.
TELTRON, INC
THOR ELECTRONICS
VISUAL ELECTRONICS CORP
WESTINGHOUSE ELECTRIC CORP

VACUUM TUBES, CAMERA, PLUMBICON
AMPEREX ELECTRONIC CORP
NORTH AMERICAN PHILIPS CO
RCA ELECTRONIC COMPONENTS
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VISUAL ELECTRONICS CORP

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THE ENGLISH ELECTRIC CORP.
GBC AMERICA CORPORATION
G E PICKUP TUBE OPERATION
GENERAL ELECTRIC CO
LEWIS AND KAUFMAN, LTD.
NORTH AMERICAN PHILIPS CO.
RCA BROADCAST PRODS.
RCA ELECTRONIC COMPONENTS
SINGER PRODUCTS CO.
TELEVISION UTILITIES CORP
THOR ELECTRONICS
VISUAL ELECTRONICS CORP
WESTINGHOUSE ELECTRIC CORP

VACUUM TUBES, CATHODE RAY, OSCILLOSCOPE
AMPEREX ELECTRONIC CORP
CALVERT ELECTRONICS
INTERNATIONAL ELECTRONICS CORP
RCA ELECTRONIC COMPONENTS
SINGER PRODUCTS CO.

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AMPEREX ELECTRONIC CORP
G E DISTRIBUTOR SALES FORCE
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RCA ELECTRONIC COMPONENTS
SINGER PRODUCTS CO.
THOR ELECTRONICS
WESTINGHOUSE ELECTRIC CORP

VACUUM TUBES, CATHODE RAY TV, MONOCHROME
AMERICAN ELITE
CALVERT ELECTRONICS
G E DISTRIBUTOR SALES FORCE
LEWIS AND KAUFMAN, LTD.
RCA ELECTRONIC COMPONENTS
SINGER PRODUCTS CO.
THOR ELECTRONICS
WESTINGHOUSE ELECTRIC CORP

VACUUM TUBES, RECEIVING
ALLIED ELECTRONICS CORP

AMERICAN ELITE
AMPEREX ELECTRONIC CORP
CALVERT ELECTRONICS
G E DISTRIBUTOR SALES FORCE
GENERAL ELECTRIC CO
HEINTZ & KAUFMAN, LTD
INTERNATIONAL ELECTRONICS CORP
LEWIS AND KAUFMAN, LTD.
RCA ELECTRONIC COMPONENTS
SINGER PRODUCTS CO.
THOR ELECTRONICS
WESTINGHOUSE ELECTRIC CORP

VACUUM TUBES, RECTIFIERS
AMPEREX ELECTRONIC CORP
CALVERT ELECTRONICS
GENERAL ELECTRIC CO
INTERNATIONAL ELECTRONICS CORP
RCA ELECTRONIC COMPONENTS
SINGER PRODUCTS CO.

VACUUM TUBES, TRANSMITTING
AMECO, INC.
AMERICAN ELITE
AMPEREX ELECTRONIC CORP
CALVERT ELECTRONICS
EIMAC DIVISION OF VARIAN
THE ENGLISH ELECTRIC CORP.
G E DISTRIBUTOR SALES FORCE
GENERAL ELECTRIC CO
HEINTZ & KAUFMAN, LTD
LEWIS AND KAUFMAN, LTD.
THE MACHLETT LABORATORIES
RCA ELECTRONIC COMPONENTS
ROCKE INTERNATIONAL CORP.
SINGER PRODUCTS CO.
THOR ELECTRONICS
WESTINGHOUSE ELECTRIC CORP

VESTIGIAL SIDEBAND FILTERS
ALFORD MANUFACTURING COMPANY
RF TRANSMISSION DEPT, AMPX
G E VISUAL COMMUNICATIONS PROD
RCA BROADCAST PRODS.
ROCKE INTERNATIONAL CORP.

VOLTMETERS, AC
ALLIED ELECTRONICS CORP
API INSTRUMENTS CO.
BENRUS
B & K INSTRUMENTS, INC.
COHU ELECTRONICS
COLUMBIA ELECTRIC MFG CO
DATA INSTRUMENT DIVISION
G E INDUSTRIAL SALES OPERATION
GENERAL ELECTRIC CO
GENERAL RADIO CO
GOTHAM AUDIO CORPORATION
HEATH CO.
HEWLETT-PACKARD CO.
HICKOK ELECTRICAL INSTRUMENT
TEST INSTR. DIV. HONEYWELL
INSTRUMENT LABORATORIES CORP
MARCONI INSTRUMENTS
RCA ELECTRONIC COMPONENTS
ROHDE & SCHWARZ SALES CO.
THE SINGER CO - METRICS DIV
SINGER PRODUCTS CO.
TEXAS ELECTRONICS
TRIPLETT ELECTRICAL INSTRUMENT
WABER ELECTRONICS, INC.
WAVEFORMS INCORPORATED
YOKOGAWA ELECTRIC WORKS

VOLTMETERS, DC
ALLIED ELECTRONICS CORP
API INSTRUMENTS CO.
BENRUS
COHU ELECTRONICS
COLUMBIA ELECTRIC MFG CO
DATA INSTRUMENT DIVISION
G E INDUSTRIAL SALES OPERATION
GENERAL ELECTRIC CO
GENERAL RADIO CO
HEATH CO
HEWLETT-PACKARD CO.
HICKOK ELECTRICAL INSTRUMENT
TEST INSTR. DIV. HONEYWELL
INSTRUMENT LABORATORIES CORP
MARCONI INSTRUMENTS
RCA ELECTRONIC COMPONENTS
THE SINGER CO - METRICS DIV
SINGER PRODUCTS CO.
TEXAS ELECTRONICS
TRIPLETT ELECTRICAL INSTRUMENT
YOKOGAWA ELECTRIC WORKS

VOLTMETERS, VACUUM TUBE
ALLIED ELECTRONICS CORP
ANRITSU ELECTRIC CO., LTD.
B & K INSTRUMENTS, INC.
COHU ELECTRONICS
DIVERSIFIED ELECTRONIC CORP
ENGINEERING ASSOCIATES
GENERAL RADIO CO

HEATH CO
HEWLETT-PACKARD CO.
HICKOK ELECTRICAL INSTRUMENT
INSTRUMENT LABORATORIES CORP
ITT JENNINGS DIV.
MARCONI INSTRUMENTS
RCA ELECTRONIC COMPONENTS
SINGER PRODUCTS CO.
TRIPLETT ELECTRICAL INSTRUMENT
WAVEFORMS, INCORPORATED

WATTMETERS

F W BELL, INC
BIRD ELECTRONIC CORPORATION
G E INDUSTRIAL SALES OPERATION
GENERAL ELECTRIC CO.
GENERAL MICROWAVE CORPORATION
HICKOK ELECTRICAL INSTRUMENT
MARCONI INSTRUMENTS
ROCKE INTERNATIONAL CORP.
ROHDE & SCHWARZ SALES CO.
THE SINGER CO - METRICS DIV
SINGER PRODUCTS CO.
STANDARD ELECTRONICS CORP
TRIPLETT ELECTRICAL INSTRUMENT
WATERS MANUFACTURING
YOKOGAWA ELECTRIC WORKS

WAVEGUIDE AND ASSOCIATED COMPONENTS

AMPHENOL CORP.
ANDREW CORPORATION
CARDWELL CONDENSER CORP
COLLINS RADIO COMPANY
D & B ELECTRONICS COMPANY
DEMORNAY - BONARDI DIVISION
ELECTROMAGNETIC RADIATION LABS
GABRIEL ELECTRONICS DIV.
GENERAL MICROWAVE CORPORATION
JERICHO ELECTRONICS SUPPLY
MICROLAB - FXR
MICROWAVE ASSOCIATES, INC.
PHELPS DODGE

TECHNICAL APPLIANCE CORP

WEATHER INSTRUMENTS

AMECO, INC.
BECKMAN & WHITLEY
CARDION COMMUNICATIONS
ROCKE INTERNATIONAL CORP.
TEXAS ELECTRONICS

WINDERS, CARTRIDGE

BROADCAST ELECTRONICS, INC

WIRE, BARE, COPPER

ALPHA WIRE
AMECO, INC.
AMPHENOL CORP.
BELDEN MANUFACTURING CO
BIRNBACH CO
COPPERWELD STEEL COMPANY
IRC, INC.
PACIFIC TOWER CO
RCA ELECTRONIC COMPONENTS
SAXTON PRODUCTS
SINGER PRODUCTS CO.
SWAGER TOWER CORPORATION
UTILITY TOWER CO.

WIRE, BARE, COPPER STRAP

ALPHA WIRE
AMPHENOL CORP.
BIRNBACH CO
COLLINS RADIO COMPANY
SAXTON PRODUCTS
SINGER PRODUCTS CO.
SWAGER TOWER CORPORATION
UTILITY TOWER CO.

WIRE, BARE, STEEL

BIRNBACH CO
COPPERWELD STEEL COMPANY
GENERAL MACHINE PRODUCTS CO.
SAXTON PRODUCTS
SINGER PRODUCTS CO.

WIRE, INSULATED, HIGH VDLTAGE

ALPHA WIRE
BELDEN MANUFACTURING CO
BIRNBACH CO
BOSTON INSULATED WIRE & CABLE
IRC, INC.
ITT WIRE & CABLE DIVISION
LENZ ELECTRIC MANUFACTURING CO
SAXTON PRODUCTS
SINGER PRODUCTS CO.
TENSOLITE INSULATED WIRE CO.

WIRE, INSULATED, HOOKUP

ALPHA WIRE
AMPHENOL CORP.
ANSONIA WIRE AND CABLE CO
BELDEN MANUFACTURING CO
BIRNBACH CO
BOSTON INSULATED WIRE & CABLE
IRC, INC.
ITT WIRE & CABLE DIVISION
LENZ ELECTRIC MANUFACTURING CO
SAXTON PRODUCTS
SINGER PRODUCTS CO.
SUPERIOR CONTINENTAL CORP.
TELEQUIP CORPORATION
TENSOLITE INSULATED WIRE CO.
VIKOA, INC.

WIRE, SHIELDED

ALPHA WIRE
ANSONIA WIRE AND CABLE CO

BELDEN MANUFACTURING CO
BIRNBACH CO
BOSTON INSULATED WIRE & CABLE
IRC, INC.
ITT WIRE & CABLE DIVISION
LENZ ELECTRIC MANUFACTURING CO
THE PLASTIC WIRE & CABLE CORP.
SAXTON PRODUCTS
SINGER PRODUCTS CO.
SUPERIOR CONTINENTAL CORP.
TELEQUIP CORPORATION
TENSOLITE INSULATED WIRE CO.
VIKOA, INC.

WIRING AND CABLING SERVICES

ALPHA WIRE
AMECO, INC.
AMPHENOL CORP.
ANSONIA WIRE AND CABLE CO
APPLIED ELECTRO-MECHANICS
BOSTON INSULATED WIRE & CABLE
D & B ELECTRONICS COMPANY
IRC, INC.
PALL TRINITY MICRO CORP
SAXTON PRODUCTS
SINGER PRODUCTS CO.
SUPERIOR CONTINENTAL CORP.
TENSOLITE INSULATED WIRE CO.
VIKOA, INC.
VITRO ELECTRONICS

YOKES, DEFLECTION

AMERICAN ELITE
ATV RESEARCH
LAKE ELECTRONICS, INC.
SINGER PRODUCTS CO.

MEMO

TO: General Manager
FROM: Director of Engineering

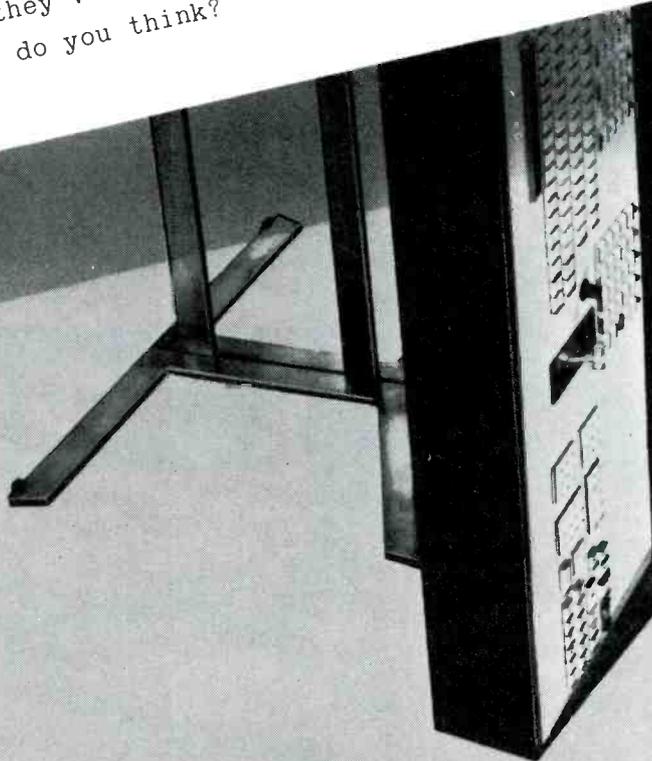
Like for you to look over this Computer-Programmer. I've been checking into what's available and this looks like the one for us, for several reasons:

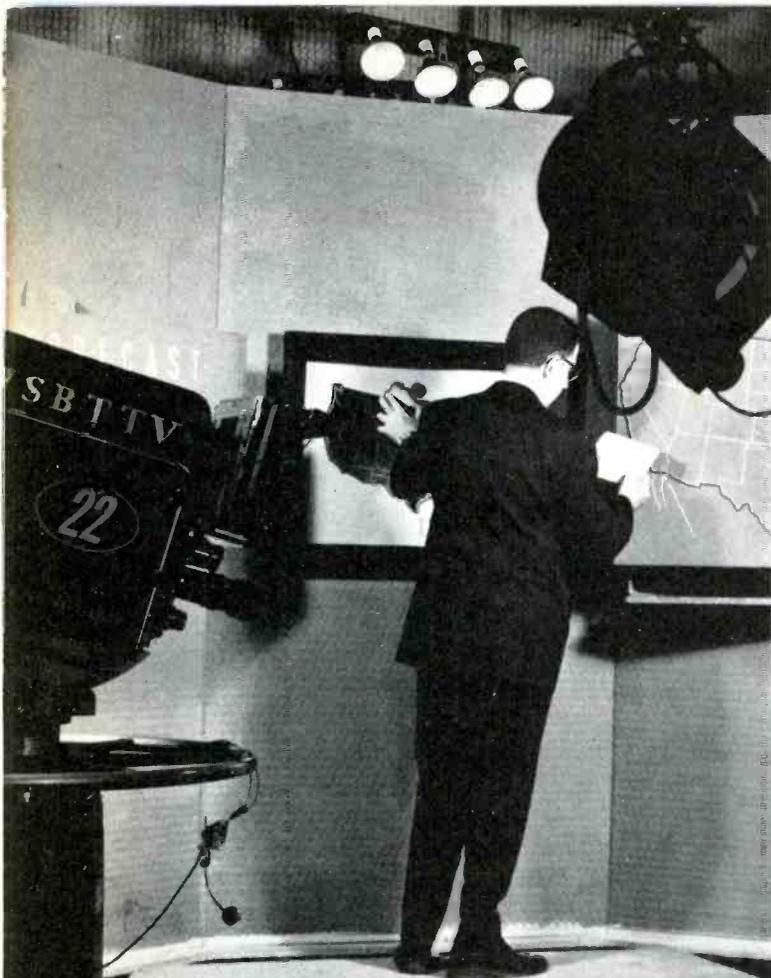
1. It's a pretty sophisticated system. We could integrate our entire studio operation—master control switching, studio switching, audio functions, machine controls—the whole works.

2. All the peripheral equipment—machine control interfaces, video and audio switching gear, etc.—comes with it.

3. Most important—it works! It's made by Sarkes Tarzian, Inc. in Bloomington, Ind. They're the only ones I've found with actual computer experience in broadcasting—in both large and small stations. This 4th generation model of theirs has all the bugs worked out. Looks like they meet our basic criteria: and they've got the experience, the equipment, and they've applied both.

What do you think?





The Year-'Round Lavalier

(E-V) Around most TV stations, E-V lavaliers are taken pretty much for granted. Just hang one around your neck, or clip it onto lapel or pocket—and start talking.

Nothing could make us happier. Because we take great pains to insure the absolute reliability of these tiny microphones. And frankly, no other type of microphone poses a bigger design problem. The lavalier gets dropped, stepped on, swung by its cord, smashed and banged—not once, but often during its life. Most of the abuse is accidental—but inevitable.

So we developed a “nesting” principle of construction that is based on tolerances so tight that the internal element acts as a solid mass, reducing damage due to shock. And we use nothing but Acoustalloy® diaphragms . . . almost indestructible despite heat, humidity, dirt, or high intensity noise or shock.

We've also spent years developing cable specifications—and methods for attaching it. We've taken into account all the tugs and twists that are the fate of any lavalier cable. That's why our strain relief is so effective. And knowing that no cable can last forever, we've made replacement easy and fast.

Of course reliability by itself is not enough. So our field testing of E-V lavaliers is also devoted to sound quality. We must satisfy major network and independent stations on every score. As a result, E-V lavaliers can be mixed in the same program with stand microphones with no change in voice quality.

In the process of developing the lavalier, we've also made it smaller. Our original model was 7" long and 1" in diameter. Today's Model 649B is just 2-1/4" long, 3/4" in diameter, and weighs a mere 31 grams!



Normal trade discounts apply to list prices shown.

Of course TV studios aren't the only places you'll find E-V lavaliers. They're used in classrooms, lecture halls, conferences, stages and business meetings. And they offer the same year-round reliability with no compromise of sound quality.

Every E-V professional lavalier is protected by our unique 2-year unconditional warranty against failure of any kind, plus the lifetime guarantee of workmanship and materials that is an integral part of every E-V microphone. Full details are waiting at your nearby Electro-Voice microphone headquarters. Or write us about your special needs. We're ready to solve the toughest sound problems—off the shelf—all year 'round!

high fidelity systems and speakers • tuners, amplifiers, receivers
public address loudspeakers • microphones • phono needles
and cartridges • organs • space and defense electronics



ELECTRO-VOICE, INC., Dept. 181V,
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Look the same? Right, they look the same. But the one on top is the old TDA2 . . . the first and original Transistorized Distribution Amplifier on the commercial market, and the standard of the industry. The new one is the TDA2-D. The D stands for Differential Input, which we have added to the TDA2. And not only did we add a differential input, we subtracted 30 dollars from the price. Now you can order the new TDA2-D for \$295.00. Let us send you more information.

TDA2-D Specifications.

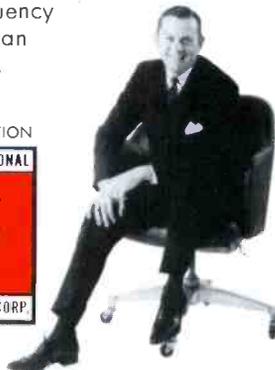
Printed Circuit—All Transistor—Bridging input—
 —4 to +12 db gain—4 outputs at 75 ohms—Differential phase less than 0.5 degrees—Differential gain

less than 1%—Draws 4 watts of power—weighs 4 lbs.
 —Frequency response flat within $\pm 1/4$ db from 10 cycles per second to 10 megacycles.
 Differential Input has common mode rejection of 26 db, a maximum common mode voltage of 3 p-p and is effective over a wide frequency range. Differential Input can be disconnected if desired.

Write or wire or phone collect:

Roy Weiland, President
 INTERNATIONAL NUCLEAR CORPORATION
 608 Norris Avenue
 Nashville, Tennessee
 (615) 254-3365

"Transistorizing the
 Television Industry"



The Old One



The New One

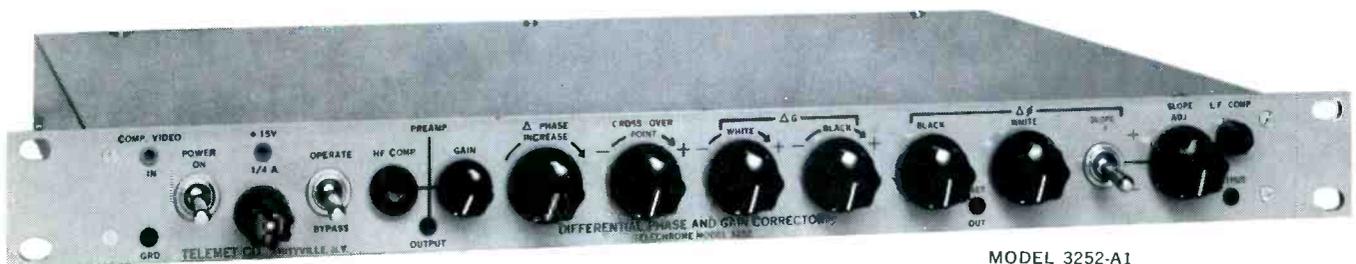
MEASURE AND CORRECT Differential Phase and Gain



MODEL 3701-A1

DIFFERENTIAL PHASE AND GAIN TEST RECEIVER

- Simplified measuring of differential phase and gain
 - 75 ohm unbalanced or 124 ohm balanced inputs
 - All silicon solid state circuitry
 - VIT line or active line scope trigger



MODEL 3252-A1

DIFFERENTIAL PHASE AND GAIN CORRECTOR

- Corrects $\pm 5^\circ$ differential phase error
 - Corrects $\pm 5\%$ differential gain error
 - Bypass mode
 - Two inputs: one line and one monitor
 - Flat gain range ± 6 db



TELEMET COMPANY

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