



new products

(and developments)

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 Further information about these items can be obtained direct from the addresses given. As in the case of technical papers, the Society is not responsible for manufacturers' statements, and publication of these items does not constitute endorsement of the products or services.

Erratum: The Bauer P6, a 16mm projector (*Journal*, p. 622, June 1967) has a 250-W quartz-iodine lamp, not a 25-W lamp as was erroneously published.



A focus coil unit, called Type F 1500 has been introduced by Marconi Company, Ltd., Chelmsford, Essex, England. The device is a refinement of the usual electromagnetic lens to focus to a point the beam of electrons which produces the spot of light on a television screen. It is said to produce a spot of light so small that on a 12-in. tube it can write a line "finer than a human hair," thus enabling high concentrations of data on cathode-ray-tube displays of the type used in radar and computer systems.

The focus-coil unit is made up of seven annular-shaped sections bolted together to form a compact cylinder which fits over the neck of a cathode-ray tube. There are three alignment coils, a focusing coil and two coils which correct for astigmatism in the electron beam. Magnetic parts are made of mumetal to minimize remanence or hysteresis effects. Thermistors are employed with the alignment and astigmatism correction coils to compensate for changes in temperature over the range from -10 C to +70 C. The coils and the thermistors are enclosed in high-compression plastic mouldings which have interlocking surfaces. The assembly can be used with all types of magnetically deflected cathode-ray tubes with neck diameters up to 35mm. Type F 1500 is priced at £55.

A solid-state image converter, second in a series, has been designed and built by the Aerospace Division of Westinghouse Defense and Space Center, Westinghouse Electric Corp., Box 2278, Pittsburgh, Pa. 15230. The new converter is part of a long-range program to develop a solid-state

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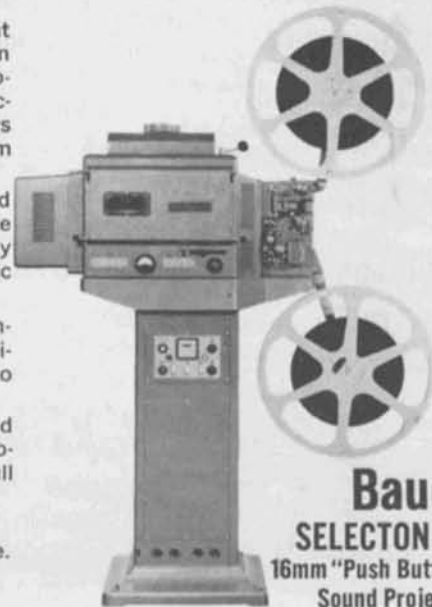
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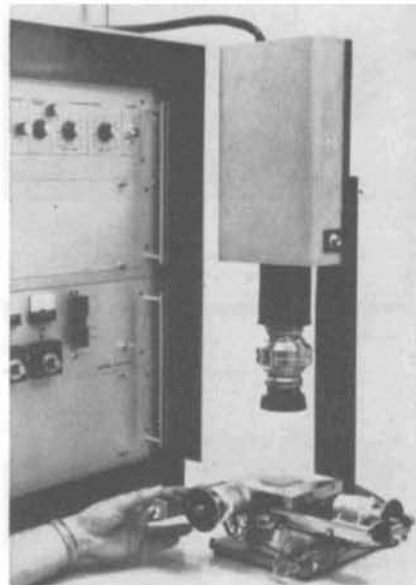
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television camera with imaging characteristics equivalent to those of a conventional vidicon camera. It is said to have a resolution of 100 lines and to be able to "see" images in six shades of gray. Heart of the system is a monolithic 100-by-128 element array of phototransistors fabricated on a 1/2-in. by 1/2-in. silicon substrate. The 12,800 phototransistors of the mosaic are addressed sequentially in a row-column fashion at rates up to 60 frames/s to provide a standard TV-type raster. Readout circuitry was designed to evaluate various readout techniques for the mosaic. It operates in any one of several modes. For flexibility, the readout circuits are constructed from standard integrated logic modules interconnected by back-panel wiring. A complete image converter, including the mosaic and all readout circuitry, could be packaged in a 2-in. cube and would dissipate less than 1 W of power.



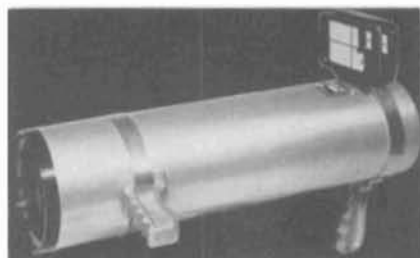
The Itek Electronic Eye is an electronic scanner used to direct automatically a servo system to position a semiconductor chip accurately. The system includes the scanner and related circuitry. Position sensing is accomplished by simultaneously scanning the semiconductor chip and a reference photograph (a photograph of the chip or any other chip of the same geometry). The reference photograph is produced in the same optics that are used for the scanning. Electrical signals derived from simultaneously scanning the semiconductor chip and reference photograph are compared by position-discriminating circuitry and converted to dc error signals which pass through zero volts dc at a slope of approximately 2 mV/μm of positional error of X and Y and 10 mV per degree of θ. Separate outputs are provided relating to X position, Y position and θ. The impedance is 500 Ω. When the device is used in conjunction with a high-speed servo, accurate positioning can be accomplished in about 20 ms. Because the eye is basically a null seeking device it is capable of correcting for some mechanical deficiencies in the servo system. In the final positioning only the metalization on the surface of the semiconductor chip is scanned. The chip's edges, which are a potential source of error, are not in the

field of view when final positioning is achieved. Price of a prototype in its present configuration is \$16,400.



The PhysiTech Model 39 Electro-Optical Position-Tracking Test Instrument is designed for detecting and measuring position, velocity, acceleration, or other displacement characteristics of optical discontinuities. It employs an electronic scanning technique rather than the conventional servo-locking technique. The system consists of a standard 7-in. high, 19-in. long control unit interconnected to an optical head less than 0.1 ft³ in size. The isolated optical head can be used for remote or hazardous duty since all adjustments and outputs are accessible at the control panel, which may be located at some distance from the optical head. The control unit is available in either a rack-mounted version or an enclosure for bench use.

The instrument has two outputs, one producing a voltage proportional to the position of a vertical discontinuity moving horizontally within the field of view and the other producing a voltage proportional to the position of a horizontal discontinuity moving vertically. The tracking system may be adjusted to track horizontally, vertically, or to alternate between horizontal and vertical tracking. In the alternate tracking mode, the switching rate is 100 kHz, resulting in horizontal and vertical sampling rates of 50 kHz. The tracking system may also be adjusted so as to rotate the tracking planes to any two orthogonal planes other than vertical and horizontal. The optical range (full scale displacement) is 0.002 in. to 50 ft, limited only by lens systems that may be attached to the optical head. Systems from microscopes to telescopes to wide-angle viewing systems are available. Model 39A is priced at \$5,400 without the lens. Lens prices vary from \$200, depending upon the application.



The new Rebikoff underwater camera has been announced by the distributor, Gordon Enterprises, 5362 N. Cahuenga

Bld., North Hollywood, Calif. The 16mm camera features a tubular configuration with dual adjustable hand grips, special underwater viewfinder and rear-mounted controls for ease of operation and maneuverability. It has a daylight-load spool capacity of 200 ft, 24-V dc variable-speed motor, rechargeable batteries and footage counter. It is equipped with a 9.5mm Angenieux Retrofocus $f/2.2$ lens, corrected for underwater distortions. Dimensions are 20 in. long and 5 in. in diameter. The camera weighs 15 lb (weightless in water) and has been tested to depths of 3,000 ft. It is priced at \$4,500. The camera is also available for rental.



The new Gibraltar Crab Pedestal designed for use with cameras and other equipments weighing up to 200 lb has been announced by Quick-Set, Inc., 8121 Central Park Ave., Skokie, Ill. 60078. The pedestal permits either crab or tricycle steering, selected by shifting a lever. A steering column, mounted on the end of the right rear arm, carries a 12-in. steering wheel to control the direction of the movement. The central pedestal contains an elevator mechanism to provide 20 in. of height adjustment. The pedestal is priced at \$1,035.



The Lowell Quartz System featuring remote control of spot flood and tilt mechanisms has been announced by Lowell Photo Engineering, 421 W. 54 St., New York, N.Y. 10019. The system also features an interchangeable reflector. The standard diffuse reflector has a 7:1 spot flood ratio (at 10 ft: 280 fc full flood, 2,000 fc full spot). It can be replaced with a specular, mirror-like reflector (6,400 fc). A gold reflector is available for special color effects. The Lowell Quartz can accommodate lamps of 500, 750 and 1,000 W. A special bracket is available to support the unit on walls, windows and sets. Price of the basic system including remote control light (without lamps) and diffuse reflector is \$76.

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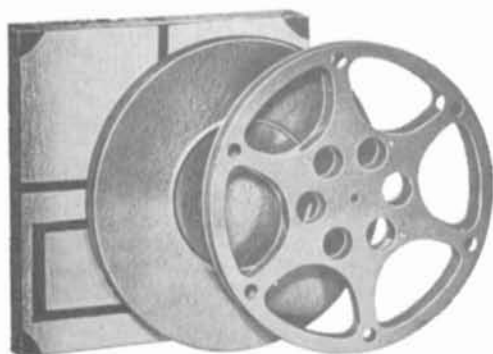
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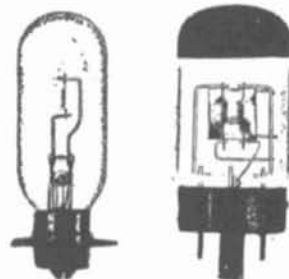
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The Tracking-Sports Viewfinder, formerly manufactured by Bell & Howell, is available from David Gemora, Precision Instruments, 5309 Etiwanda Ave., Tarzana, Calif. 91356. The instrument provides an erect 1:1 field of view with superimposed lens fields and centering crosshair. The area being photographed is viewed through the reflector plate and a reticle image, reflected from the reflector plate, is seen superimposed on the scene. Light from the area being photographed passes through the slots in the reticle and is reflected through the collimating lens by a mirror. The scene to be photographed is reflected toward the observer by the reflecting plate which is coated with a selective reflecting coating having a high reflection for yellow light and a high transmission for blue light. The area viewed appears slightly blue-tinged and the lens of the reticle image appears against it in bright yellow. The illuminated reticle allows the object being photographed to be seen before entering the actual field of view of the lens being used and thus assures accurate framing of the object during filming. The viewfinder is priced at \$235.



A new auditorium-type control console designated RC-1301/CIDR-100 has been announced by Acoustical Laboratories, Inc., 509 W. 2nd North, Salt Lake City, Utah. The system includes a phonograph turntable for recessed mounting in the desk top console and magnetic stereo phonocartilage; four-track stereo tape deck for mounting in turret; two-part console desk; operator's chair; power supply unit; monitor system amplifier unit; power amplifiers for program channels; two stereo-phonograph preamplifiers; 13 low-impedance microphone preamplifiers; two four-channel line amplifiers and two paging system relays. All circuitry is solid state and silicon transistors are employed throughout. Price range is from \$2,800 to \$3,500, depending upon the number and type of amplifiers, etc., selected.

A theater sound system featuring solid state electronics and designed to occupy about half the rack space of previous systems has been announced by Ampex Corp., 401 Broadway, Redwood City, Calif. 94063. The system is designed for magnetic four- six- and eight-channel stereophonic sound as well as single-channel optical sound. Designed especially for sound requirements of 70mm films the system can also be used for 35mm and drive-in theaters. The system has a building-block design that permits upgrading four-channel systems to six and eight channels without obsolescing the original system. Prices range

from about \$3,000 for the basic optical system to about \$10,000 for a complete six-channel optical/magnetic system.



The Model 9200 console, a basic enclosure for modular assembly of any desired components has been announced by Altec Lansing, a division of LTV Ling Altec, Inc., 1515 South Manchester Ave., Anaheim, Calif. 92803. The assembly begins with the basic cabinet which has the optional accessories of a cushion assembly for the front and a pair of aluminum supporting legs. A maximum of 27 modules can be attached individually to a continuous hinge across the front of the housing. The user can select whatever components are desired for each module. Typical accessories include master panel, talk-back panel, playback and monitor panel, pan pot panel, VU meter, designation strip, cue key, etc. The basic cabinet has an overall length of 51 in., 34 in. depth front to back by an average height of 9 in. The console cabinet alone is priced at \$693. The price of a typical, completely assembled console would be about \$14,000.



A new method of identifying filmed television commercials to eliminate improper telecasting due to mis-numbering, improper packaging and complicated rotation schedules has been announced by Trim Telefilm Service Corp., 619 W. 54 St., New York, N.Y. 10019. Using the new method, the code number is optically shot into the picture area of the commercial about 20 frames before the start of the fade-in. The code is within the frame lines but outside the TV aperture so that it cannot be seen on the air. During film production, the identification is inserted optically by the film production company from a fine-grain strip. The strip contains the exact commercial code number and the information becomes a part of the film so that it can always be accurately identified.

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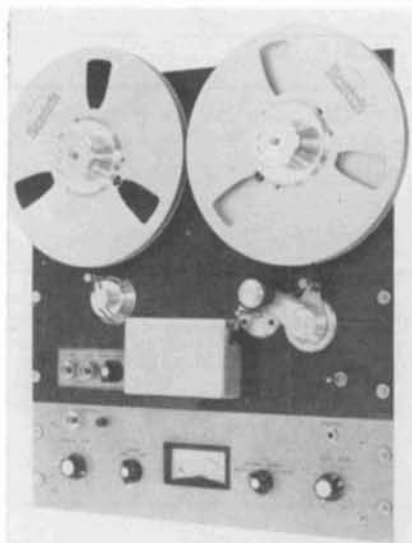
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A new line of magnetic products, including magnetic films and tapes, has been announced by Todd-AO, 1021 N. Seward St., Hollywood, Calif. 90038. The firm also announced its exclusive distributorship for the Mellotron Sound Effects Console. The console operates in a similar manner to the memory system of a computer. Programming is done by pushbutton selection. More than 1,260 sound effects are available and are stored on magnetic tape. Pushbutton switches above the keyboard select the range of effects, such as industrial sounds, animals, weather, aircraft, train, vehicles, etc., and versions of the groups, such as racing car, truck, etc. Each sound effect commences at the correct start of the item when a key is depressed. When the key is released the effect is again available. The key operation cannot break into the middle of an effect.

The firm has also announced a line of video tapes expected to be available next year.



The Series 330 Program Logger Recorder announced by Schafer Electronics, 9119 De Soto Ave., Chatsworth, Calif. 91311, is a completely transistorized, very slow speed recorder designed specifically to operate at speeds of $\frac{1}{4}$ or $\frac{1}{8}$ in./s. A new tape guidance system has been designed especially for this recorder. Frequency response at $\frac{1}{4}$ in./s is from 200 Hz to 4,000 Hz, weighted for maximum intelligibility. At $\frac{1}{8}$ in./s, a 1,200-ft roll of $\frac{1}{4}$ -in. tape will record continuously for 12 hr, and at $\frac{1}{4}$ in./s, for 24 hr. The recorder was designed originally as a program logger for radio stations. It is also used in other applications where continuous recording is required. The logger is available in two models. Model 331, designed to record one program source, is priced at \$1,895. Model 332, designed to record two simultaneous program sources, is priced at \$2,095.

The Dissolvotron, Model KC, a dissolving slide-projection control unit, has been announced by James Cleary Sound-Slides, Box 104, Wykagyl Station, New Rochelle, N.Y. 10804. The instrument, designed primarily for use with a pair of Kodak Carousel slide projectors and a stereo tape recorder, is built around an all-solid-state lamp-dimming circuit to produce smoothly

blended image changes from slide to slide. The unit has one control panel for all operations. Features include animation effects—a special circuit allows rapid A/B comparison between two slides to permit simulation of two-stage motion. The control unit is priced at \$469.

A new solid state compressor amplifier designated Model 1591A has been announced by Altec Lansing, a Division of Ling Altec, Inc., 1515 S. Manchester Ave., Anaheim, Calif., 92803. It is designed to increase average audio levels without exceeding dynamic range limitations in broadcast and recording applications. Gain reduction of up to 35 dB is provided with a compression ratio of 5:1 or 10:1 selectable with a front panel switch. Compression thresholds of 0 dBm and +8 are also selectable. The amplifier is designed to operate from microphone and line level sources and to provide outputs of up to +18 dBm into 150- and 160- Ω loads. It is priced at \$219.

The UHER 1000 Report Pilot, a battery-operated portable tape recorder operating at $7\frac{1}{2}$ in./s, has been announced by Martel Electronic Sales, Inc., 2339 S. Cotner Ave., Los Angeles, Calif. 90064. The recorder, featuring sound synchronization for motion-picture cameras, is fully transistorized and has a frequency response of 20 to 20,000 Hz. Features include interruptible automatic photoelectric level control and overhead filter, test buttons for Pilotone level and battery condition and continuous stroboscopic speed control. It is priced at less than \$1,000.



The Secor, a television camera system especially designed to record both transient and stationary images under low light level conditions has been announced by Westinghouse New Products Division, P.O. Box 8696, Pittsburgh, Pa. 15221. The system consists of a camera head, camera control unit and display monitor. The camera operates on the principle of secondary electron conduction. It has a limiting resolution of 600 lines at 5×10^{-3} fc photocathode illumination with a 200-line threshold illumination of 5×10^{-5} fc. It is available at any line-scanning rate between 525 (standard) and 945 (military). The camera control unit has a solid-state power supply and can be used to operate a number of different image tubes. The system is priced at \$18,500.

A solid-state microwave relay system for closed-circuit TV monitoring has been

announced by Micro-Link/Varian, Industrial TV Relay Dept., 19 Wartburg Ave., Copiague, N.Y. 11726. With the basic relay unit the camera can be located up to four miles from the observation monitor. The relay link utilizes the 2.5 GHz band. Designed for economical monitoring of distant events, the transmitting and receiving equipment comprising the basic system is priced at \$4,060. The price does not include masts or towers.

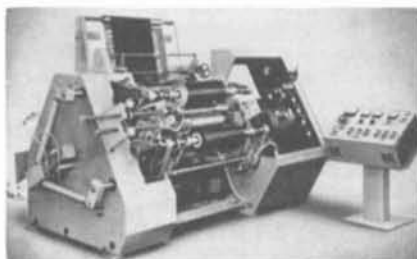
The new Zoomar tracking telescope introduced by Zoomar Inc., Glen Cove, N.Y. 11542, is designed to fit mounting flanges of the Photo-Sonics Cine Sextant and the Optical Tracker Iflot Mark III, and is adaptable to other mounts. The telescope, with 5X to 40X continuous zoom magnification, has an illuminated reticle designed so that it does not shift from the optical center during changes in magnification. Features include an automatically operated neutral density filter to protect the eyes of the operator when the telescope points toward the sun. Integrated electronic circuits are used in the connector to permit use of a single cable for 115-V, 60-Hz power source. Foot and hand switches are used to operate the motorized zoom and a slip clutch is used to prevent damage to the mechanism at the end of the zoom range.

The DuKane Commander, an automatic, battery-operated, tape-sound filmstrip projector has been announced by DuKane Corp., Audio Visual Div., St. Charles, Ill. 60174. The projector measures 7 in. wide, 10 in. high, 15½ in. long and weighs only 12¾ lb. The battery pack adds 1½ in. in height and 4½ lb to the weight. The projector utilizes standard 35mm single-frame filmstrip mounted in a continuous coil on a DuKane E-wire film holder. It has a picture capacity of 28 to 160 frames. Magnetic sound tape, enclosed in a cartridge, is capable of playing up to 20 min. Tape speed of 3¾ in./s is maintained at a constant rate by an electronic governor. The projector is priced at \$230 or \$310 with the battery pack.

Three new VU-meter panels, designed for use in sound systems, consoles and control cabinets, recording studios or broadcast and telecast monitors, have been announced by Altec Lansing, 1515 South Manchester Ave., Anaheim, Calif. 92803. The panels are available in three models designated 9708A, 9709A and 9710A, having one VU meter, two VU meters and three VU meters. The units are designed to measure and indicate visually in volume units the input power of an electrical signal made up of speech, music or other complex tones, to a transmitter or transmission line. The meter gives an indication of volume level as so many VU above a zero reference level of 1 mW. Model 9708A is priced at \$138, 9709A at \$243, and 9710A at \$324.

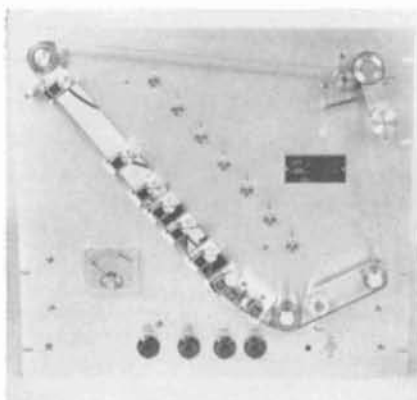
A sound-level calibrator, Type 1562-A, a compact, self-contained unit for making field calibrations on microphones and other sound-measuring instruments, has been announced by General Radio Co., West Concord, Mass. 01781. The instrument generates frequencies ranging from 125 to

2,000 Hz., ±3%, at a sound-pressure level of 114 dB. An electrical output of 1 V is provided for tests on instruments without microphones. Type 1562-A is priced at \$195.



A slitter rewriter specifically designed for the conversion of magnetic tape and similar materials has been announced by Arrow Converting Equipment, Inc., 1275 Bloomfield Ave., Fairfield, N.J. 07006. The machine, designated Model 401, utilizes solid knives for slitting and automatic tension control on both unwind and rewind. Features include no build-up in thickness of tape at the edges and considerably less skew in the tape as compared with tapes slit by conventional means.

A new magnetic tape designated TVP2 has been announced by Computron Inc., 122 Calvary St., Waltham, Mass. A new oxide binder system is used to provide long-term stability and a special slitting technique is employed to eliminate edge debris.



A new time delay recorder designated Model 303 has been announced by Audio Instrument Co., 311 Mountain Rd., Union City, N.J. 07087. It is designed to provide continuously variable delay from 25 ms to 375 ms at a speed of 30 in./s. Equipped for multiple head operation, the machine can accommodate as many as 15 playback heads. Frequency range is 50 to 15,000 Hz, ±2 dB; SNR, 50 dB; power, 117 V, 60 Hz, 85 W. The panel is 19 by 17½ in. The recorder is priced at \$1,650.

A new adjustable lumped constant delay line featuring a dielectric strength of 2,500-V dc has been announced by Kappa Networks, Inc., 165 Roosevelt Ave., Carteret, N.J. 07008. Designated Model 20E402, the delay line has a nominal delay of 3.5 μs at an impedance of 1500 ohm and a rise time of 0.2 μs, and accommodates a 2-MHz bandwidth. It is priced at \$75.

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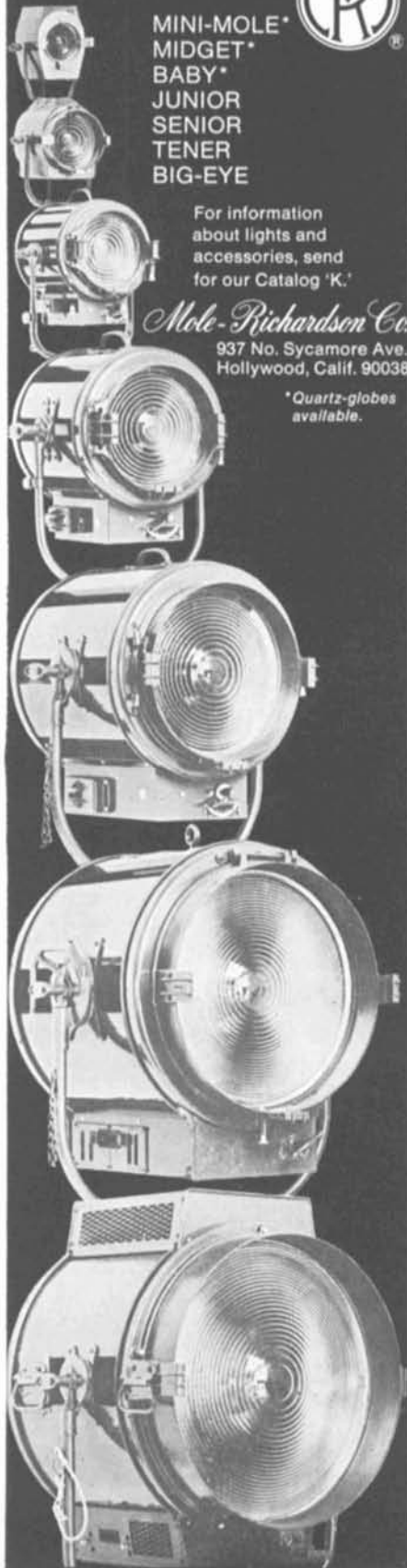
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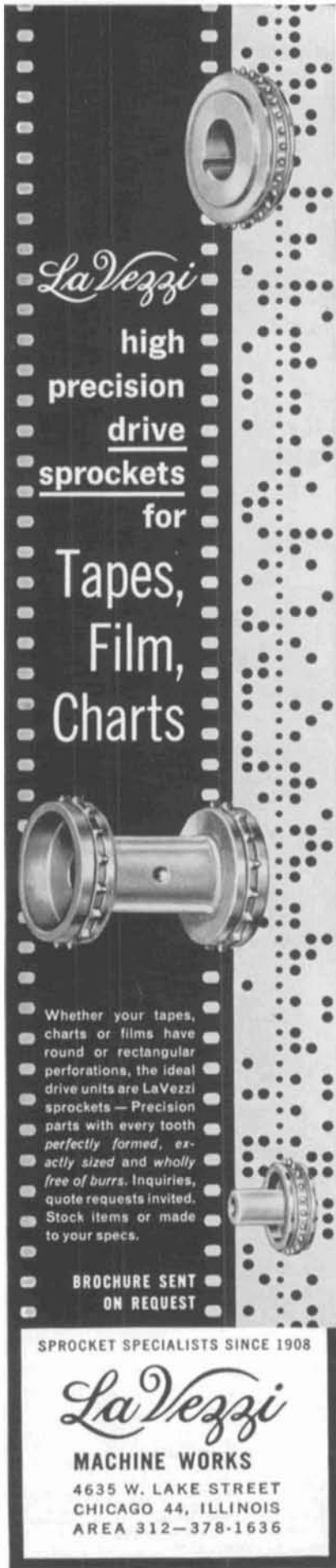
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A telephone-type microphone handset for use in Vocoder systems has been announced by Altec Lansing, a Division of LTV Ling Altec, Inc., 1515 S. Manchester Ave., Anaheim, Calif. 92803. Designed for use in environments of high ambient noise and reverberant acoustics, the unit, designated Model 697A, is said to maintain excellent speech reproduction without masking or distortion. The microphone has a frequency response of 70 to 5,000 Hz and noise discrimination is said to average 15 dB. The output impedance is 150/250 Ω . It is priced at \$56.25.

The Kappa Super-n Video Cable Simulator, for simulation of from 25 to 250 ft of video cable in decade steps, has been announced by Kappa Networks, Inc., 165 Roosevelt Ave., Carteret, N.J. 07008. The simulator is available in two models, KR-250, an individual module, and KR-250-4, an assembly of four separate rack-mounted modules. Amplitude response the simulator is reported as flat within ± 0.05 dB to 12 MHz; ripple, less than ± 0.05 dB and group delay, $\pm 0.5\%$ to 12 MHz. The KR-250 is priced at \$350. The four-unit model, KR-250-4 is priced at \$1,100.



The Thermo-Fogger, a wheel-mounted device for the control of pests in motion-picture theaters (i.e., roaches, flies, mosquitoes, etc.) has been announced by Burgess Vibrocrafters, Inc., Grayslake, Ill. Designated Model F-2104, the device uses a friction-disc assembly which preheats the insecticide and force-pumps it into a chamber where it is mixed with the hot engine exhaust. The liquid is then converted to a vapor and propelled through the discharge nozzle as fog. The fog can move behind the walls to seek out the little pests and destroy them. Price is under \$235.

An electrical connector system featuring high contact density for undersea applications has been announced by Revere Corp. of America, a subsidiary of Neptune Meter Co., 845 N. Colony Rd., Wallingford, Conn. 06493. The bulkhead connector and cable assemblies have been hydrostatically tested for use at 15,000 lbf/in.² (approximately the pressure at 30,000 ft below sea level). The system is designed especially to supply power to and take signals from a wide range of undersea instruments including sound pickups and television cameras. The assembly consists of cable,

plug and bulkhead. The cable is molded to the plug to form a one-piece, leak-proof unit. Metals such as stainless steel, monel, and neoprene are used throughout the system to resist corrosion.

Acoustical doors up to 8 by 8 ft in pairs and 4 by 8 ft in single units have been announced by Overly Manufacturing Co., 574 W. Otterman St., Greensburg, Pa. 15602. The doors are available in a sound transmission class rating range of 35 to 62 dB and in thicknesses ranging from 1 $\frac{3}{4}$ to 4 in., or more, depending upon the required sound reduction and size. Sealing devices made of compressible neoprene are provided at jambs, head and sill of each door. The 1 $\frac{3}{4}$ -in. doors were tested with conventional hardware consisting of key-in-knob type locks and 4 $\frac{1}{2}$ -in. butt hinges.

A clear plastic reel with a built-in splicing block is supplied with all Soundcraft 7-in. audio tape, it was announced by Reeves Soundcraft Division of Reeves Industries Inc., Great Pasture Road, Danbury, Conn. The reel also has an etched indicator to show the percentage of tape remaining to be played or recorded and an easy-threading hub cutout. Flanges are numbered "1" and "2" for side identification and each reel has a frosted area for numbering, titling and dating.



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Director/Cameraman. Strong background. Highly experienced in camera, editing, recording, with some writing. Desire position of high responsibility in industrial, public relations or documentary film production, preferably overseas or in eastern U.S.A. Some college. Available Sept. 1967. Résumé on request. Chris Cafego, 319 Inkopah St., Chula Vista, Calif. 92011.