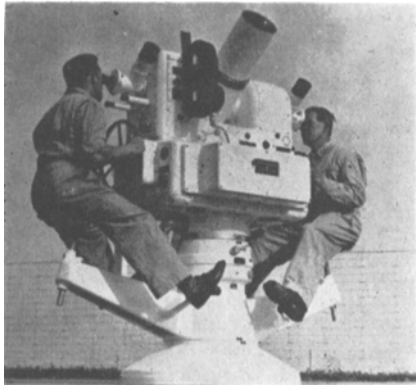


new products

(and developments)

.....
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.



J. W. Fecker Inc., 6592 Hamilton Ave., Pittsburgh 6, Pa., has been appointed exclusive sales and service representative in the United States for missile test range equipment produced by Contraves AG, Zurich, Switzerland. The Swiss firm was established in 1936 primarily as a research organization. Among its products are data processing equipment, missile testing devices and cinetheodolites. The American firm, a subsidiary of American Optical Co., manufactures missile and satellite tracking units, including the IGOR (*Journal*, p. 239, April 1958). The firm also produces other optical and electromechanical equipment.

"Shockwave Photography of Large Subjects in Daylight," by Harold E. Edgerton, appears in *The Review of Scientific Instruments*, pp. 171-172, Feb. 1958. The direct shadow method, most frequently used in ballistics photography is limited because photographs must be taken in the dark and on film of approximately the same size as the area to be studied. The method described in the article employs a large reflective screen. The object to be photographed travels between the screen and the camera. The screen, called Scotch-lite, is covered with small glass beads and has the property of reflecting light from a source back to the source. It is manufactured by Minneapolis Mining and Mfg. Co. One type of screen, Silver Type 244, is used at night, or in the dark; a second type, Black Type 234, is used in daylight.

In photographing a shockwave in daylight, a short exposure of the shutter is essential. The camera shutter can be used

to initiate the chain of events. As soon as the shutter is opened, an electrical signal fires the explosion through a firing unit. Early light from the explosion triggers a phototube device and the outgoing signal then triggers an electronic flashlamp located at the camera lens.

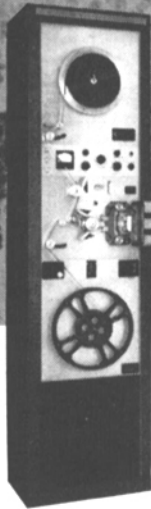
Reprints of the 2-page article are available upon request to Edgerton, Germeshausen & Grier, Inc., 160 Brookline Ave., Boston 15, Mass.

A low-noise UHF and microwave amplifier which uses semiconductor diodes as the active elements is now under development at Bell Telephone Laboratories. The amplifier is expected to improve the performance of radio receivers, such as those used in radar, radio astronomy,

over-the-horizon radio relay and UHF television systems, by reducing the noise added to incoming signals by presently available amplifiers and converters. This amplifier is one of a family of devices known as variable reactance amplifiers in which a variable reactance (varactor) serves as the active component. In this device the variable reactance is provided by a semiconductor diode (varactor diode) whose capacitance varies with the applied voltage.

The Panavision Brightness Meter is a product of Panavision Inc., 1917 Pontius Ave., Los Angeles 25. Designed primarily for theater use, its primary function is the measurement of brightness as expressed

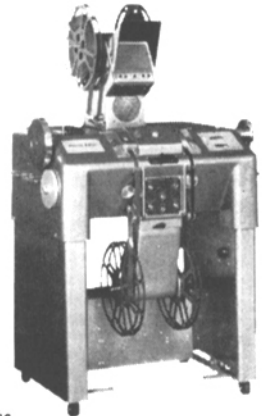
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THE WESTREX 16MM MAGNETIC RECORDER-REPRODUCER (Type RA-1562-G) is easy to control and operate. It records, re-records and reproduces. Fast rewind, minimum maintenance and full 2400-foot reel capacity are only a few of the features that make this equipment so valuable for high-quality 16mm production.

Today's expanding 16mm production requires precise and dependable equipment such as the new Westrex Recorder-Reproducer and the Academy Award-winning Westrex Editor to match Hollywood standards and to keep costs down.

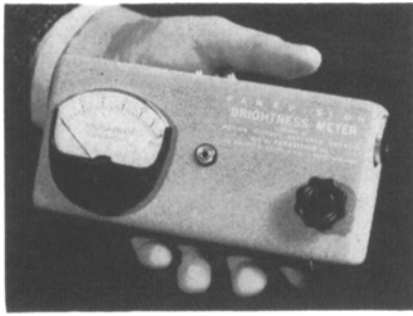
THE WESTREX 16MM EDITOR (Type RA-1527) is a versatile editing machine. Every feature to simplify viewing and synchronization is incorporated. Projection-viewing which requires no adjustment of the normal optical system is provided. It was designed in co-operation with leading Hollywood studios. It won an Academy Award for scientific and technical achievement.



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in foot-Lamberts. A plug-in photoelectric attachment permits measurement in foot-candles. The meter is of the visual comparison type and the field is color matched to provide accurate readings even by amateurs. It returns to its last previous reading when the switch is closed. The microammeter is automatically short-circuited when not in use to protect the meter during shipping and from rough handling. It is powered by a single 1½-v standard flash-light battery. The meter is priced at \$99.50 and the plug-in attachment for incident light is available at a price of \$22.50.

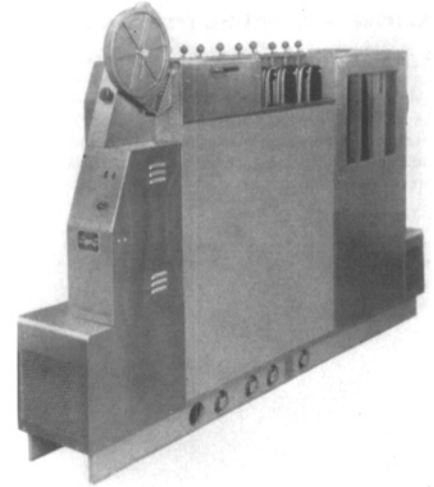
A cardioid condenser microphone weighing 1¾ oz and measuring ¾ in. in diameter and 7/8 in. in length has been announced by Altec Lansing Corp., Anaheim, Calif. Called the 29A, it has been designed for high sensitivity and discrimination and the frequency response has been announced as extending flat to 18,000 cycles with a range of 20-20,000 cycles.



Altec's M30 system is comprised of the microphone together with auxiliary equipment. The 175A base contains the impedance matching tube and connects the microphone and power supply. The 169A shock mount with swivel head can be used to eliminate transmission of mechanical vibrations from boom or stand. The new directional system is designed to complement the earlier system which has an omnidirectional microphone. The two microphones have similar operational characteristics. The M30 system is priced at \$334.00.

Ott-Lovick High-Efficiency Air Squeezes (*Journal*, pp. 191-194, Nov. 1954) are now available in custom-built models from BHO Instruments Inc., 20 Landing Road South, Rochester 10, N.Y. The

squeezes, made to Eastman specifications, are available in stainless-steel models, priced at \$375.00 and in chrome-plated brass at \$315.00. The company, which specializes in making projection, printing, processing and color measuring instruments not readily adaptable to mass production, offers Blo-Baks, for use with air or water in removing processing solutions and/or partial drying at various parts of the process, at prices ranging from \$30.00 for one to \$20.00 in orders of five or more.



A new model of the Houston Fearless Labmaster 16mm black-and-white film processor has been announced by Houston Fearless Corp., 11827 W. Olympic Blvd., Los Angeles 64. Of modular design, it can process negative or positive film and, with the addition of an extra unit, can also process reversal film. It is fully automatic, operating up to 40 ft/min. Features include stainless-steel tanks, built-in refrigeration, turbulation pumps on developer tanks, built-in air compressor, and clutch-drive film transport. The negative-positive model is priced at \$4,175.

Error: In the June 1958 *Journal*, p. 437, the story about the Houston Fearless Color Labmaster contained the wrong speed. That processing machine for 16mm Eastman Ektachrome 7255 and 16mm and 35mm Anscochrome has a variable speed up to 30 ft/min.

A special type of gas Maser has resulted from a study conducted for the Army Signal Engineering Laboratory by Philco Corp., Philadelphia. Described as an "atomic" amplifier, it demonstrates unilateral gain of microwave energy by means of two electrically isolated cavities connected by a beam of neutral ammonia gas molecules. Energy is transferred from one electromagnetically isolated point to another by the flow of these molecules. As the oscillating molecules pass through the second cavity, electromagnetic radiation is developed and it appears in the output waveguide. The original concept of amplification and oscillation by uncharged molecules through use of a Maser was demonstrated by Columbia University in 1955. Since Masers can provide amplification approaching the theoretical limit of no extraneous noise, this development has potential industrial as well as military applications.

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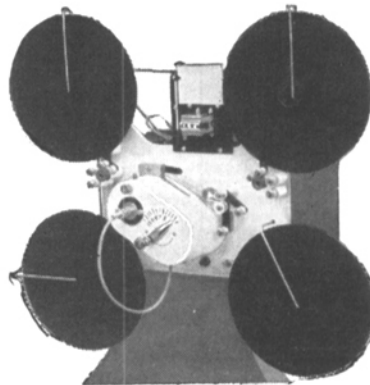
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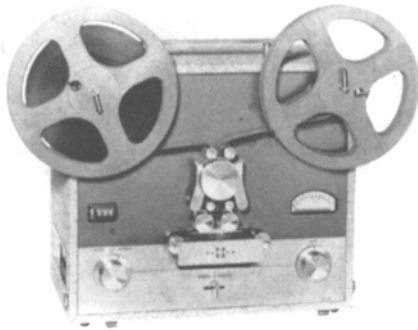


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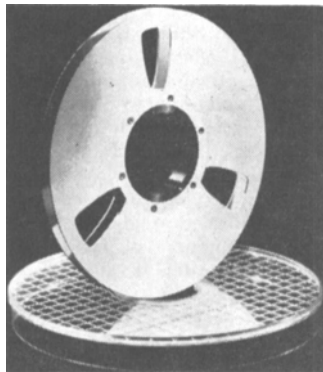
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Western Branch: 6331 Hollywood Blvd., Holly'd 28, Calif.

Kodachrome 8mm and 16mm Films and 35mm and 828 film for miniature cameras can now be purchased with "Kodak Pre-paid Processing Mailers," permitting sending exposed film to any Kodak laboratory in the United States, Europe, Africa, Asia, Australia, Canada and Mexico. After processing, Kodak will return the film by first-class mail. The service is expected to be especially useful for travelers.

Printing Color Negatives is a recent addition to the Kodak Color Data Book series. Of special interest to still photography, the 56-page booklet describes in detail the technique of printing on Kodak Ektacolor Paper. The booklet is illustrated with 8 pages in color and a 4-page insert on "Simplified Color Printing." It is priced at 75 cents and is available through Kodak dealers.



A portable film recording system, Model 1216, has been announced by Hallen Electronics Co., Div. of Schoen Products Co., 332 North La Brea Ave., Los Angeles 36. Features include encapsulated modular plug-in amplifier sections, 1200-ft capacity, precision nylon gears, the Davis tight-loop filter system and complete transistorization. The system weighs 25 lb and the panel size is slightly over 4½ by 12½ in. The system, for 16mm, is priced at \$895; 17½mm, \$940; 35mm, \$1020; and combination 17½mm/35mm, \$1085. Complete specifications and descriptions of accessories are available.



A precision-made "Scotch" brand reel for magnetic tape used in critical instrumentation recording applications has been announced by Minnesota Mining and Mfg. Co., Dept. A-8-172, 900 Bush St., St. Paul 6, Minn. The reel employs a new tape-threading device which eliminates the threading slot in the hub. Instead a high-friction synthetic rubber ring bonded to

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New "Freon"-TF solvent offers unique advantages for film cleaning without the need to change present procedures. Because "Freon"-TF solvent is exceptionally safe, it is ideal for hand cleaning methods. In machine cleaning, "Freon" readily removes oil, grease, gum, dirt and finger marks. Processing rate can be increased because "Freon" is faster-drying. Machine cleaning techniques can be simplified.

Cleaning and waxing or lubricating can be combined in one operation because "Freon" will carry lubricants such as paraffin or silicone oils. Since only normal room ventilation is required with "Freon"-TF, strong ventilating systems used on some machines to dissipate toxic solvents can be eliminated, thus reducing solvent loss and eliminating moisture condensation on film. Because "Freon" does not soften rubber rollers, soft rollers can be used in machines to help cut down film damage.

New "Freon"-TF solvent cleans color and black-and-white film without harm to film base or emulsions. Color film can be cleaned repeatedly without loss of color or brightness. "Freon" will not soften, warp or damage magnetic sound striping.

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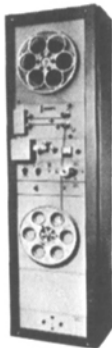
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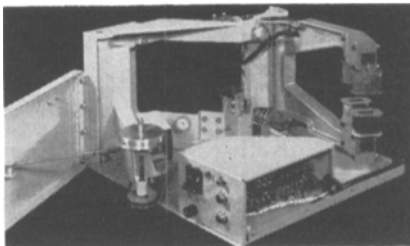
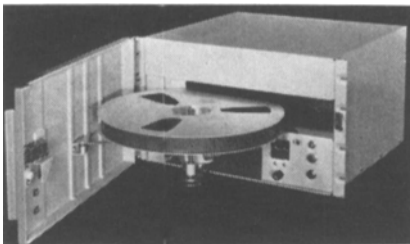
The perfect blend of the latest improvements in film-drive design and electronic magnetic recording are incorporated in this Magna-Tech Model for continuous commercial duty. The film drive employs the tight loop, double flywheel system, which provides continuous and constant film tension between the playback head and film surface. Thus, the shortcomings of the single flywheel film drive, such as drop-outs caused by variances in film thickness, curled film, or eccentric drums and/or bearings, are eliminated. An Air Dash pot is used to dampen the flutter suppressors, and no maintenance of this pot is required since it is of the silicone-oil type. There are some rather unique features incorporated in the Magna-Tech Dubber. By using small film sprockets, flutter is kept to an absolute minimum, which also eliminates problems encountered with shrunken films. Hum pick-up from the magnetic head is reduced considerably by the use of heavily Nu-Metal shielded heads; these non-microphonic heads do not require shock mounting. All parts in model OMD-135 are corrosion resistant, and shafts, bearings, springs and fasteners are stainless steel. Magna-Tech's complete line of recording equipment and accessories is one of the many photographic brands exclusively distributed throughout the world by —

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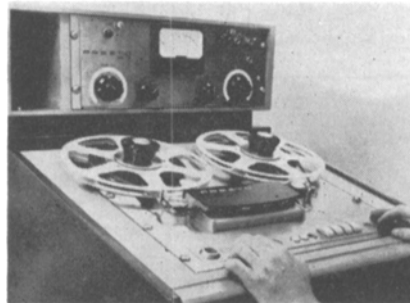
10 East 52nd Street New York 22, New York

Write Dept. S-8 for further information and a complete Reeves Catalog.

the hub enables the tape to grip the reel after only a single turn by hand. Designed for use in the telemetering field, the new reel has been field tested for use in video-tape recording, machine control systems, electronic computers and other critical instrumentation applications. The reel is available in 10½ in. and 14 in. diameters for use with ¼-in., ⅜-in. and 1-in. instrumentation tape and 2-in. "Scotch" brand video recording tape.



An automatic bulk tape eraser has been announced by Ampex Corp., Redwood City, Calif. Designed for fast, high-volume degaussing on a continuous or intermittent basis, the unit accommodates all types of metal and plastic reels in tape widths up to 1 in. and in diameters of 7 through 14 in. In operation, a reel of tape is placed on a spindle and the door is closed, initiating the automatic degaussing cycle. Moments later a green signal indicates completion of the cycle. Before the green light can appear, the moving parts of the degausser must have completed an uninterrupted cycle. During the operating sequence, a controlled relative motion of both tape and degaussing field produce an optimum erasing pattern, with signal and extraneous noise reduced below fundamental tape noise. The unit is priced at \$675.00. Shown is the model for rack mounting and an inside view of it. There is also a table model.



A new line of professional tape recorders has been announced by Presto Recording Corp., a subsidiary of Siegler Corp., P.O. Box 500, Paramus, N.J. Features of the Presto 800 series include a tape edit button to minimize editing time by facilitating

easy runoff of unwanted tape; a separate cue button for hand cuing without using motor or brakes; three motors (direct-drive hysteresis synchronous capstan motor and two torque motors); 10½-in. reel capacity, and a newly developed brake to stop tape passage at any speed. The brake drum is made of molded phenolic resin. Specifications are: speeds, 7.5 and 15 in./sec; speed regulator (wow and flutter), no more than 0.10% at 15 in./sec or 0.15% at 7.5 in./sec; signal-to-noise ratio, 60 db at 1.0% distortion; playback amplifier distortion, 1% (harmonic) at +18 dbm output from 35 to 15,000 cycles/sec; frequency response, 30–20,000 cycles/sec ±2 db at 15 in./sec and 40–12,000 cycles/sec ±2 db at 7.5 in./sec; heads accommodate up to four full or halftrack. Transport panel size is 19 in. by 15½ in. Preamplifier size is 19 in. by 7½ in. and separate power supply panel size is 19 by 3½ in. The C800-1 (in CC-10 console) is priced at \$1649.00. The C800-3 (in CC-11 console) is priced at \$2094.00.

An 8-page illustrated catalog describing synchronous ¼-in. magnetic recording equipment is available without charge from Rangertone Inc., 73 Winthrop St., Newark N.J. The catalog also contains a description of the company's Sync Kit which can be installed on most tape recorders for recording lip sync sound for motion pictures.

Color video-tape recordings of surgery were demonstrated as a new visual education aid before the recent American Medical Association Convention at San Francisco. Three operations were seen, first on closed-circuit color TV and later on a video-tape recording. The operations took place in San Francisco Hospital and were broadcast in color to the Civil Auditorium. At the same time an Ampex Videotape Recorder in Ward A of the hospital recorded magnetically everything the color TV camera caught. The Ampex color converter accessory was used with the VR-1000 for the color recording. The TV and video tape showings were presented cooperatively by Ampex Corp., Redwood City, Calif., and Smith, Kline and French Laboratories, Philadelphia, Pa.

The company also announced delivery of a VR-1000 recorder to Station WGBH-TV Boston — the first such installation in a noncommercial, educational station. Another announcement disclosed plans for installation of service and parts depots at various localities throughout the United States as a function of its Professional Products Div. The depots will carry stocks of parts for emergency repairs and will maintain a staff to service professional equipment. The first of the depots has been opened at 345 E. 48 St., New York. Joe E. Blanks has been appointed Service Engineer for the New York District.

The *Story of Magnetic Recording* is a history of the development of tape recording from "a little known laboratory oddity to a multimillion dollar industry," prepared by Minnesota Mining and Manufacturing Co., 900 Bush Ave., St. Paul 6, Minn. The his-

tory traces the development of magnetic recording from Poulsen's wire recorder, of about 1900, through World War II and into the present era, with special emphasis on the important progress made in the late 1940's. The history was presented to the Department of Audio Visual Instruction of the National Education Assn. during its National Meeting held in Minneapolis during April 1958. A limited number of copies are available from the company upon request.

A 300-w lamp which supplements the company's R-30 375-w lamp for black-and-white motion-picture and still photography has been announced by Sylvania Electric Products Inc., 1740 Broadway, New York 19. The new lamp is 4 $\frac{3}{4}$ in. in length. It is priced at \$1.35.



The **PerceptoScope** is a variable-speed 16mm projector manufactured by Perceptual Development Laboratories, 6767 Southwest Ave., St. Louis 17. Designed for audio-visual use, it is especially applicable for training programs and motion analysis. It can be used for motion-picture, slide or strip film projection or for tachistoscopic projection. It is also capable of projecting simultaneously two superimposed films, the second film superimposing images or control patterns on the first film. The second film can be cued to act as the "electronic brain" to control the advance of the front film. All functions of the projector can be controlled from a hand-sized, electronic remote-control unit on a 25-ft cord. Dimensions are 16 $\frac{1}{2}$ by 14 $\frac{3}{8}$ by 9 $\frac{1}{2}$ in., and it weighs 40 lb.

Standard programs of films, books and aids have been prepared for such subjects as reading, typing, office machine operation, industrial engineering, clerical skills and supervisor development.

LaVezzi Machine Works, 4635 West Lake St., Chicago 44, has announced Catalog L-50 which lists and describes the company's 35mm projector parts. The company is currently celebrating the 50th anniversary of its founding and the 46-page catalog is described as a "special issue." Among products listed and illustrated are: BB-66-type intermittent movements; intermittent movement repair kits; E-78-L removable film trap door assembly; RK-107 intermediate and main drive gears; magoptical conversion kits and aperture plates. The catalog also lists parts for various types of projectors and tools for projection repair. A price list is included. The catalog is available to interested persons without charge from the company.

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