

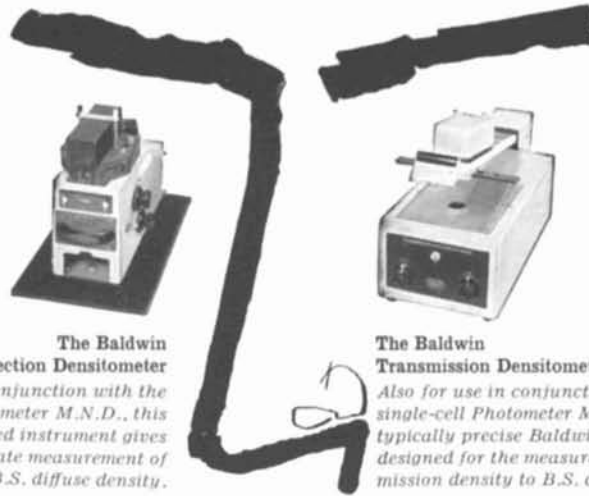
new products

(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.

A high-intensity light source for photographic motion studies has been announced by Avco Research and Advanced Development Division, 201 Lowell St., Wilmington, Mass. Originally developed to study hypervelocity flights of model nose cones for the Air Force Titan and Minuteman ICBMs on the Avco Ballistics Range, it is designed to be incorporated into instrumented shadowgraph and schlieren systems or to be used alone, in a manner similar to the open-shutter flash bulb technique, in a basic shadowgraph system for laboratory work. Four models are available to provide spark light duration from 0.3 to 1 μ sec. Size of the point light source varies in diameter from 0.015 to 0.060 in., depending on the energy level which may range from 2 to 20 joules. The spark pulse may be synchronized with a Kerr cell shutter. A voltage pulse is also produced to initiate other measuring devices. The unit is contained in a cylindrical package, 12½ in. long, 5 in. in diameter, with a coaxial discharge path. The outer case, which serves as an r-f shield, is designed so that when the unit is positioned, the component package may be removed, adjusted and returned to the case without disturbing the optical alignment. In operation the coaxial capacitor is discharged in an air gap. Designated the Type LS-020 Package Light Source, it is priced at approximately \$900.

A pneumatic powered shock test machine for production testing of small electronic components has been announced by the Industrial Products Subdivision, Avco Research and Advanced Development Division, 201 Lowell St., Wilmington, Mass. The machine is designed to handle specimen loads up to 30 lb and to produce all shock pulses required for testing electronic components with an impact velocity of up to 192 in./sec. The machine has no superstructure and relies on control of air pressure into and out of a pneumatic cylinder. The specimen carriage is connected to the pneumatic cylinder by a guide rod and in operation is raised and propelled downward by a discharge of air. The machine, called the Avco SM-005 Shock Machine is composed of five major assemblies: base, brake, carriage, control panel and actuator.



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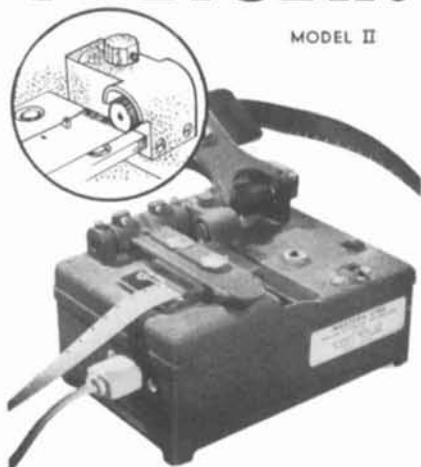


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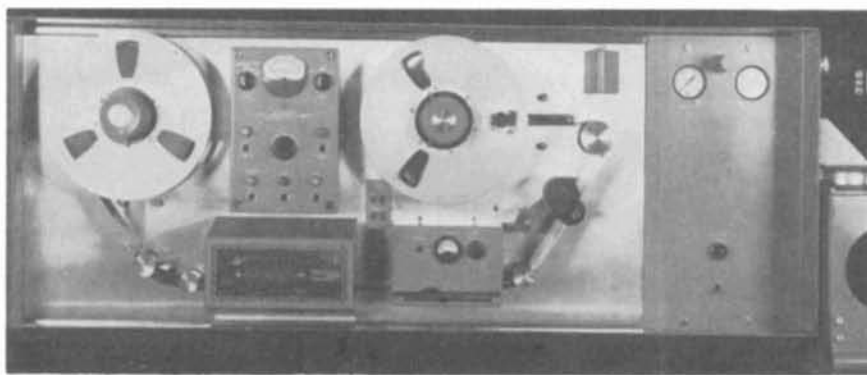
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A video-tape recording of the underside of giant icebergs in the Arctic Circle has been made possible by the development of small (20 in. by 20 in. by 100 in.) transistorized recorder, a joint effort of RCA and the U.S. Navy, specially designed to fit in the torpedo room of the *Seadragon*, the nuclear submarine which rode under the ice on its way to the North Pole. The recorder uses a 2-in. tape developed by

Minnesota Mining and Mfg. Co. The tape, on 10½-in reels moves past a normal video scanning type recording head at 15-in./sec. Played back at the Navy Electronics Laboratory in San Diego, Calif., on an RCA, TRT-1A recorder (the type used by commercial television stations), the recorded under-ice characteristics can be studied by crews being trained for polar navigation.



A new high-vacuum tube, type WX-4047, for intensifying light radiation by electronic means is now produced by Westinghouse Electric Corp., Electronic Tube Div., P.O. Box 284, Elmira, N.Y. The new tube, the Astracon image amplifier, produces an image of reduced size whose brightness is increased by a factor of 2500 for actinic blue input radiation and of 1000 for input radiation at a color temperature of 2870 K. In operation, incoming radiation impinges on a 5-in. photosurface which converts the light image to an electron image. Deposited directly on the internal surface of the polished bulb face, the photocathode is capable of functioning as an integral part of an external optical system. After conversion, the electron image is focused and accelerated toward an aluminum-backed phosphor screen. Through the use of short-persistence P15 phosphor in the tube, the brightness decays to 10% in 2.0 μsec. Input resolution is 75 line pairs/in. The threshold for imaging is 10⁻⁷ ft-c.

Maximum ratings are 30 kv (anode screen to photocathode) and 1-ma peak pulse anode screen current. The tube weighs 6½ lb, has a maximum diameter of 8½ in. and is 15½ in. long. The tube and its uses were the subject of Paper No. 24, by A. E. Anderson and G. W. Goetze at the 5th International Congress on High-Speed Photography.



A television zoom camera which incorporates a modified design of the Taylor-Hobson Varital III Zoom Lens has been developed jointly by the British Broadcasting Corp. and Taylor, Taylor and Hobson Division of Rank Precision Industries Ltd., 37-41 Mortimer St., London, W.1. The camera has been announced as the first with an integral zoom lens contained inside the camera body. The focal range is from 2 in. to 40 in. The compact construction was made possible by the use of mirrors to fold the path of light behind the lens. This enables the lens and the image-orthicon tube with its electronics to be arranged side by side rather than in the usual "in line" arrangement, thus keeping down the overall length of the assembly.

The lens system has four separate ranges of viewing angle and on two of these the minimum distance at which objects can

be focused is as little as 2 ft 6 in. Selection of the required range can be carried out while the camera is on transmission. The electronic components of this prototype camera are those of the Marconi Mark III image orthicon used in many of the BBC television remote and also in many BBC television studios. The camera can therefore be used in place of one of the conventional cameras under a wide range of remote broadcasts and studio conditions.



The Sachtler and Wolf Double-Gyro Tripod, designed especially for the Arriflex 35, has been introduced in the United States by Cine 60, Film Center Bldg., 630 Ninth Ave., New York 36. The gyro mechanism is designed for the greatest possible control of panning and tilting action, with a quarter turn of the lever for each gyro disengaging the horizontal and vertical gyros. The company, which has been announced as developing and importing accessories especially for Arriflex, but also for other motion-picture cameras, has also introduced a shoulder tripod designed to fit conventional motion-picture cameras. For the Arriflex 35, a special adapter plate is supplied which provides an opening for the hand-grip motor. Used in photography of sports or wildlife, a battery may be attached to the tripod. The shoulder tripod is priced at \$89.

A closed-loop TV transmission system employing transistors in the repeater and terminal equipments has been constructed by research engineers of Bell Telephone Laboratories. Designed to reduce power requirements and size of apparatus, the system operates on an experimental basis between Holmdel and Murray Hill, N.J. Reported advantages of the system include eliminating the necessity for a local power supply because operating power can be transmitted over the coaxial cable. Thus, small amplifiers can be mounted on telephone poles or installed underground without complex housings. In the Murray-Hill—Holmdel demonstration, the three general circuit classifica-

tions for the hookup were the transmitting terminal, the cable repeaters, and the receiving terminal. A monitor was arranged so that it could be connected to either the input or the output of the system. The experiment showed the video response to the 6-mile system to be down by less than 2 db at 6 mc.

A photoemissive material developed by Westinghouse Electronic Tube Division under a research contract with the Bureau of Ships is of bi-alkali type, made by combining sodium and potassium with antimony. (The major constituent of many photoemissive materials is cesium.) Developed especially for use in such devices as imaging and photomultiplier tubes in which photosurfaces convert radiant energy into electrical energy, the material is reported to maintain a high level of sensitivity over many hours of operation at 250 F and is expected to permit operation of these photosurfaces over periods up to 140 hr. It was also found that during operation in total darkness the "dark current" (residual current) was significantly less than that noted for conventional materials. In work with a number of experimental tubes this material has been applied as a semitransparent surface over a glass substrate. Photoresponse values up to 80 $\mu\text{a}/\text{lm}$ were recorded with response uniform within 10% over the useful cathode area.

Key TV, developed by TelePrompTer Corp. to permit television viewers to "talk back," was exhibited at the Convention of the National Community Television Association held in Miami Beach in June. The viewer presses a button which registers at a central control point, opening communication to the broadcaster. A limited use for educational TV examinations and opinion polls has been suggested.

A damping diode, tube type 6CQ4, for use in horizontal deflection circuits of television receivers has been announced by Electronic Tube Division, Westinghouse Electric Corp., P.O. Box 284, Elmira, N.Y. Rated at 5500 v (peak) and 190 ma (average plate current), it replaces some older types with lower ratings. Design features include a glass-ring plate suspension which eliminates mica arc over; a mechanically anchored spiral insulator between heater and cathode to permit higher heater-to-cathode voltage ratings than do cemented assemblies; and a high-voltage tube base in which base pins are mounted in wells to increase between-pin insulation.

Two new power supply systems have been announced by Foto-Video Electronics, Inc., 36 Commerce Rd., Cedar Grove, N.J. The V-410 all-transistor regulated power supply system includes a semiconductor rectifier-filter and an all-transistorized regulator. The P-30-36, 30-amp, 0-36 v regulated power supply has silicon rectifiers and an all-transistorized regulator. It is smaller and lighter in weight than power supplies using selenium rectifiers and magnetic amplifiers. Panel-mounted controls include 4-range output voltage switch, vernier voltage control, circuit breaker for overload protection and power switch, and pilot light. A volt-



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meter and an ammeter are mounted on the front panel.

Multiple-speed transmission units developed by Autotronics, Inc., P.O. Box 208, Florissant, Mo., consist of two or more gear trains with friction disc electromagnetic clutches inserted between them. The desired speed ratios are produced by energizing one or more clutches to couple the gear trains in appropriate combinations. The clutches are electrically controlled, permitting speed changes to be made automatically by a sequencing switch as well as manually with push-buttons. They can also be controlled remotely by a direct wire hook-up or through a telemetering system. Presently available are 2, 4, 15, and 30 speed units with dimensions ranging from 3 in. in diameter to 4½ in. and 2½ in. to 7¼ in. in length.

A close-up mounting stand that allows a direct-wire television camera to be used in connection with microscopes, close-up work, demonstrations, or the scanning of a fixed area has been announced by Argus Cameras, Inc., 405 Fourth St., Ann Arbor, Mich., a marketing subsidiary of Sylvania Electric Products Inc., a subsidiary of General Telephone and Electronics Corp. The stand is designed to permit the vertical mounting of a TV camera, by the addition of a particle screen within the camera to protect the vidicon tube. It is priced at \$179.95. Accessories include a lighting kit containing two light fixtures and bracket, priced at

\$24.95 and a kit consisting of four extension tubes with lengths ranging from 5 to 40mm priced at \$16.95.

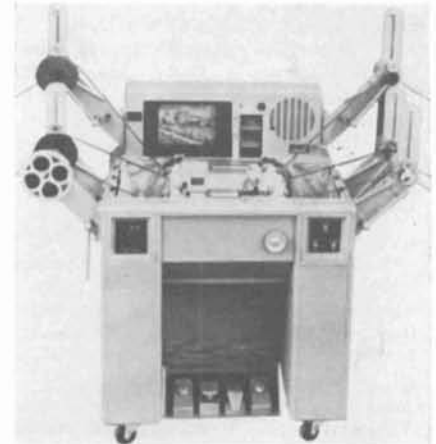
The AnSCO Automatic Recording Microdensitometer is designed for measuring and recording transmission and reflection densities of micro images in the field of photography and the graphic arts where critical measurements of acutance, granularity, resolution, and related studies are essential to the evaluation of image quality. Developed by AnSCO Division, General Aniline & Film Corp., Vestal Parkway East, Binghamton, N.Y., the instrument consists of a traveling stage projection microscope with a photomultiplier tube for measuring the light in the projected image. The limiting aperture, which can be adjusted to determine the reading area in the projected image plane, is immediately in front of the phototube. The phototube is operated in conjunction with an AnSCO Model 12A Densitometer circuit providing an output linear with optical density which is recorded on a strip chart recorder.

Three dimensional, pressure-sensitive letters for titling that can be easily used by the amateur photographer have been announced by Hernard Mfg. Co., 21 Saw Mill River Rd., Yonker, N.Y. The letters can be coated with a special adhesive and applied to nonabsorbant objects. Sets are priced at \$4.95 and are available with ¾-in. letters, copperplate style, or ¼-in. Gothic Condensed.

Traffic problems in the Lincoln Tunnel between New York City and New Jersey are nearer solution because of the installation of a closed-circuit TV system to provide comprehensive traffic control information. A closed-circuit camera on top of the 35-story McGraw-Hill building in New York which looks over the New York approaches to the tunnel is operated from a New Jersey traffic control center. Port of New York Authority officials are enabled to study traffic patterns in order to vary the use of the center tube of the tunnel.



A ball-socket, quick-leveling Arri 16 Hi-Hat has been announced by Birns & Sawyer Cine Equipment Co., 6424 Santa Monica Blvd., Hollywood 38. The hemispherical collar is adjustable and is designed to accept the Arriflex pan heads, as well as various types of ball adapters. It is priced at \$34.00 and is described in Birns & Sawyer Catalogue as No. 1123.



The Acmade Mark II Editing Table, manufactured in England by Acmade Ltd. and distributed in the United States by Intercinema Corp., P.O. Box 3452, New York 17, is available from Florman & Babb, Inc., 68 W. 45 St., New York 36. The machine features continuous (rather than intermittent) movement. It can be operated at variable or sync speeds with instant-stop foot or hand controls. Projected picture size is 8 by 6 in. The unit is supplied in 16mm and/or 35mm with separate optical and/or magnetic track or in any combination and with extra tracks. The complete machine is priced at \$2975.

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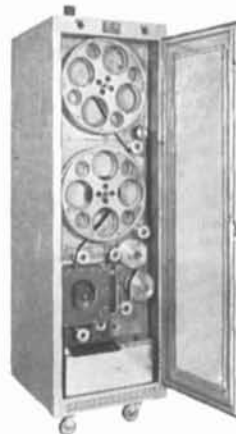
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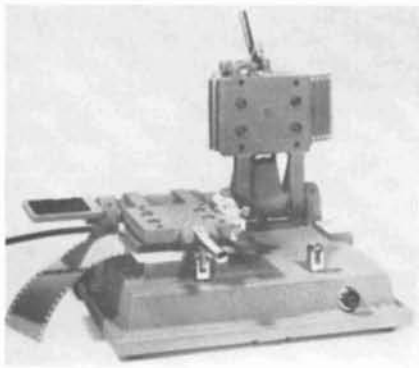


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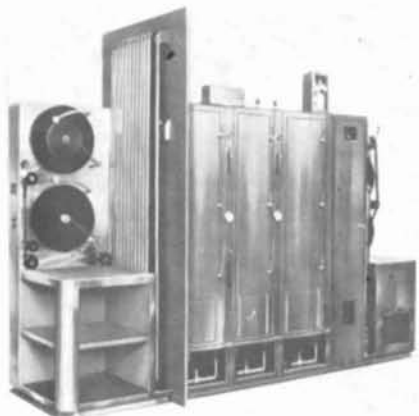
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The Traid 170, a portable hot splicer for 70mm motion-picture film, has been announced by Traid Corp., P.O. Box 638, Encino, Calif. The splicer is designed with full-fitting pilot pins to make splices 0.080 in. wide between perforations. Thermostatically heated cutter blades are made of hardened chrome steel and the scraper block is removable. The splicer weighs about 15 lb. The power requirement is 115 v a-c. It is priced at \$745. Models are available for ASA Type I or Type II perforations or for 55mm and 65mm films.



A new Rapid Spray Film Processor for 16mm or 35mm black-and-white motion-picture film has been announced by Houston Fearless Corp., 11827 W. Olympic Blvd., Los Angeles 64. Speeds up to 150 ft/min are reported for positive film and 100 ft/min for negative, with a complete processing cycle from dry to dry in less than 5 min. An improved spray bar has been incorporated in each of the three chambers for uniform processing of all types of black-and-white film under varying conditions of speed and temperature. Other improved features include a direct film drive incorporating separate gear boxes for each compartment, automatic film tension control, Thermistor-type temperature control, two-station, tear-drop-shaped air squeegees and electric tachometer. The machine is constructed of stainless steel. A wax or silicone applicator is optional. If desired, the machine can be equipped to give an archival wash. The price is in the area of \$30,000.

A simplified communication system called Scan-A-Graph 500 is a device that transmits and enlarges subject matter that will fit into an 8½ by 11-in. area (16mm film or slides, handwritten or typed copy) so that it is shown on a 27-in. TV screen. Operating without lights or camera, the device, described as a closed-circuit TV transmitter, is used to display flight information at airports and for similar situations where typed or printed material is to be transmitted over a considerable distance. The system has been developed by Television Utilities Corp., a division of Nord, 300 Denton Ave., New Hyde Park, L.I., N.Y.



The Autorac Processall, an automatic processor featuring no-thread loading, has been announced by Oscar Fisher Co., Box 426, Newburgh, N.Y. Designed to process motion-picture film at a speed of 50 ft/min and roll and sheet films and papers at a speed of up to 9 ft/min, the film or paper rolls are wound on take-up reels and sheet films are dropped into a basket. The unit is constructed of passivated 316L stainless steel.

Capacitor reforming service is offered to purchasers of Syntron electronic flash equipment by Electro Powerpacs, Inc., a subsidiary of Hydra-Power Corp., 5 Hadley St., Cambridge 40, Mass., manufacturers of the equipment. Pinpointed as one of the prime causes of electronic flash malfunction, capacitor power loss, mainly due to storage, can be halted and the capacitor restored to effective load level by the use of voltage and amperage reforming units. Two such reformings are offered as a service to purchasers and dealers without charge over a three-year period.

The Sun Gun, a small, compact lighting unit for 8mm motion-picture photography, has been announced by Sylvania Electric Products Inc., a subsidiary of General Telephone & Electronics Corp., 730 Third Ave., New York 17. It is a hand-held, single-source light which can be attached to standard 8mm cameras by means of an adjustable bar. The light uni-



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lizes a halogen lamp in a 2 $\frac{3}{4}$ -in. reflector. Overall dimensions without mounting bracket are 9 $\frac{3}{4}$ -in. high, 4 $\frac{3}{4}$ -in wide and 2 $\frac{1}{4}$ -in. deep. It is balanced for 3400 K. The unit has been announced at the price of \$24.95, with replacement lamps prices given as \$7.98

A rapid calculator for determining correct lens stops when using filters or shooting above or below normal speeds is offered professional motion - picture photographers without charge upon request to Natural Lighting Corp., 630 S. Flower St., Burbank, Calif. The wallet-size calculator is permanently imprinted on Metalphoto metal and is calibrated to quarter stops.

A special multipurpose truck for motion-picture cameramen has been developed by Jack Frost Electric Co., 234 Piquette, Detroit 2. The truck is said to be vibration-free under loads varying from 1000 to 3500 lb without modifying the truck's springs or suspension system. The truck is equipped with outsize flotation tires supplied by Harmo Tire and Rubber Corp., Detroit, to achieve a jiggle-free ride at speeds up to 100 mph.

Fourteen Christie Arc Lamp Rectifiers, distributed by National Theatre Supply Co., have been purchased by the city of Los Angeles for installation in the new \$6 million Memorial Sports Arena. The rectifiers are designed to feed a maximum of 150 kw of d-c power to the banks of Super Arc Lamps that line the arena's overhead circle of suspended catwalks. The type ME4 lamps being used as spots

were manufactured by Genarco, Inc., Jamaica, N.Y., to utilize a maximum capacity of 130 amp at 72 v.

A subaudio variable filter, an octave band analyzer and a dynamic microphone accessory kit are among products recently announced by Allison Laboratories, Inc., 11301 E. Ocean Ave., La Habra, Calif. The filter, called Allison Model 201, is designed especially for studies of low-level transient phenomena, such as heart studies, geophysical work, thermocouples and low-frequency vibrations. The filter has high cutoff and low cutoff sections. The multiplier dial is tunable over a range of one octave. The instrument is designed with no transistors, no vacuum tubes and no power supply. The noise level is primarily determined by the pickup in the leads. The distortion introduced by the filter is dependent upon the voltage applied to the inductors. At $\frac{1}{2}$ v the distortion is said to be approximately 0.1%. It is priced at \$695.

The octave band analyzer, Model 532, is designed to be a simply operated compact lightweight audio spectrum analyzer. It is used with a sound level meter, tape recorder, microphone preamplifier or similar equipment. It is transistorized, operates with batteries, has low power consumption and has a dynamic range of 66 db. The cost is \$425.

The dynamic microphone accessory kit has been made especially for operation with the Model 532. The kit consists of a dynamic microphone, adjustable tripod, 15 ft of cable and a matching transformer. It is priced at \$135.

The MX-35, a compact 4-position, 2-channel mixer has been announced by Ampex Professional Products Corp., 934 Charter St., Redwood City, Calif. Special coupling connectors are provided to give additional facilities where up to four of the mixers can be coupled together with overall master gain controlled by the last unit in the system. Each mixer position has a reset indicator which permits return to a previous level and is supplied with a key switch which permits feeding up to four microphones and two high-level line inputs to either the left or right output, or divided equally into both outputs. It is priced at \$395. Also recently announced, the Model 354 recorder is designed specifically for the recording and reproduction of stereophonic sound.

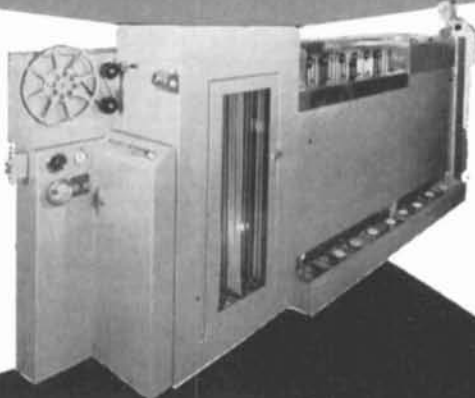
A 3-speed recorder, Model G-258/A, which weighs 13 lb and records for 10 hours on one 5-in. reel of $\frac{1}{4}$ -in. magnetic tape, has been announced by American Geloso Electronics, Inc., 251 Park Ave., South, New York 10. The machine records at 3 $\frac{3}{4}$, 1 $\frac{1}{2}$ and $\frac{1}{8}$ in./sec. It is priced at \$199.95.

The Ecco-Fonic Accompanist, a development of Ecco-Fonic, Inc., 905 S. Vermont, Los Angeles, is a device to permit a singer or musician to control the amount and volume of the echo, the span of delay of the echo, and the amount and volume of the reverberation. In operation the microphone is plugged in and the controls adjusted by the musician. Two models are available, a portable, professional model incorporating a 15-in./sec tape recorder with a repeating memory cartridge, and a studio model. The studio model incorporates two tape recorders with dual endless tape loops operating at either 15 in./sec or 30 in./sec with separate motors on separate decks. Price range of the smaller model is expected to be from \$360 to \$400. Price of the studio model will be under \$1700.

A magnetic recorder conversion unit, consisting of recording amplifier, connecting cables and head and mount assembly to fit most 16mm optical sound projectors, has been announced by Greg, Box 11, East Side Station, Binghamton, N.Y. The recording head leads the picture by 28 frames; 4 to 8 frames separate it from the erase head. Described as a professional quality unit, it is recommended by the manufacturer for use by "serious amateurs, schools, churches, industry and government." It is priced at \$185. A playback-only conversion unit is marketed at \$99.50.

Pressure shoes of nylon are installed on RCA motion-picture projectors for longer life and gentler film handling. An announcement by RCA Audio Products Marketing reports that the use of nylon instead of metal for pressure shoes has been found to provide quieter projector operation. It is also reported that the new D Series of RCA projectors have a one-piece intermittent gear and cam assembly.

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