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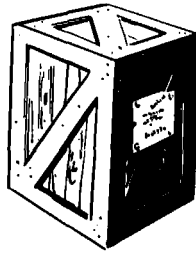
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Further information about these items can be obtained direct from the addresses given. As in the case of technical papers, the Society is not responsible for manufacturers' statements, and publication of these items does not constitute endorsement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

An experimental TV projector that projects TV images directly onto a 3- by 4-ft motion-picture screen has been developed at RCA Laboratories, Princeton, N.J., for possible educational, industrial or home use. The simplified system employs an electron beam, a 500-W light bulb and a special mirror. Heart of the system is an extremely thin metal film, or mirror, that can be deformed electrostatically at TV speeds. Light from a very bright external source strikes the thin film mirror and is reflected onto a screen. The projected image is made up of reflections from the points at which the thin film mirror is deformed while its contrast is determined by the amount of deformation at each point.

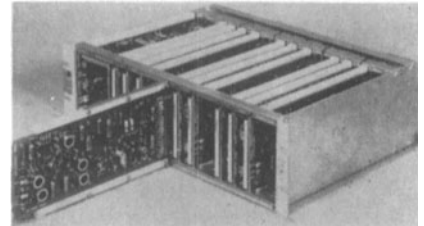
The electrostatic deformation is accomplished through the use of an electron beam, similar to the beams that excite the phosphor screen of a conventional TV picture tube. The thin film mirror is a 5- by 5-cm square of nickel alloy that is 0.2 to 0.6 μm thick. The film is mounted on a series of grid supports 50 to 100 μm apart that keeps the film about 5 μm from a glass substrate. When the thin film mirror is undeformed the incident light is reflected by the film to an optical stop that prevents the light from reaching the screen. Light reflected by a deformed spot misses the optical stop and is imaged onto the screen.

In operation, an electron beam, whose intensity is modulated by the video signal, scans the target as it would the phosphor screen in a conventional kinescope. The electron beam penetrates the metal film and deposits an electronic charge on the glass substrate in proportion to the intensity of the video picture at each spot. The charge electrostatically attracts and thus deforms the metal film and the projection system converts the amplitude of the deformation into an analogous brightness on the screen.

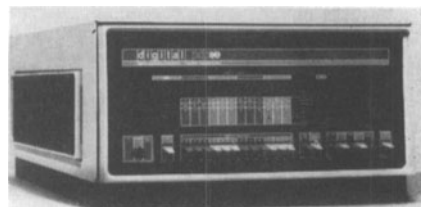
Three new color TV studio system packages for use in CATV industrial, medical and educational television programs production have been announced by International Video Corp., 675 Almanor Ave., Sunnyvale, CA 94086. The basic studio system, called Colorcaster I, includes one IVC-90 camera, one IVC-600 color videotape recorder, one color monitor, audio system and cabling. It is priced at \$12,400.



Colorcaster II, designed for film and tape programming, includes film and slide projectors, multiplexer, color monitor, audio system and cabling as well as an IVC-92 color film chain camera and an IVC-820C color videotape recorder. It is priced at \$20,700. Colorcaster III is a complete production facility and provides all the necessary equipment to permit sophisticated studio production in color.



Tarif colorimetry equipment to correct color errors in TV films and slides has been announced by Rank Precision Industries, Inc., 260 North Route 303, West Nyack, NY 10994. The equipment has been designed so that it can be operated by nontechnical personnel. The system is composed of an electronics unit and a control panel which can be mounted remotely. It has been designed to process the Red, Green, Blue video outputs of TV film and slide-scanning equipment in order to correct for color bias errors. Color correction is made by calibrated controls so that all film or slide sources can be balanced one to another and to studio cameras at one central point under controlled conditions and using a common color monitor. The observed picture may be corrected for color bias errors by adjusting for color balance in the high- and low-lights. The Tarif equipment is priced at \$5,100.



A small computer, the PDP-8/E, has been announced by Digital Equipment Corp., 146 Main St., Maynard, MA 01754. Features include a specially designed internal bus or data path system called Omnibus that allows peripherals (subordinate devices that attach to the basic computer) to be connected to any available position in the central processor. The Omnibus construction eliminates back-panel wiring. Since each slot in the bus is electrically identical, processor, memory and options can be plugged into any available position. Up to 32,768 words of core memory and several peripheral interfaces can be contained in the basic 10.5- by 19- by 24-in cabinet. PDP-8 computers have been used in various motion-picture and TV systems. An earlier model is in use at Japan Broadcasting Co. (NHK) in Tokyo for TV camera colorimetric studies. The PDP-8/E is priced at \$4,990 without the Teletype and \$6,490 with the Teletype. The price includes 4,096 words of basic core memory.

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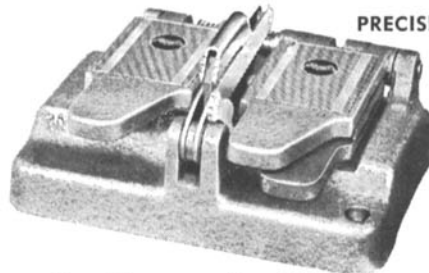
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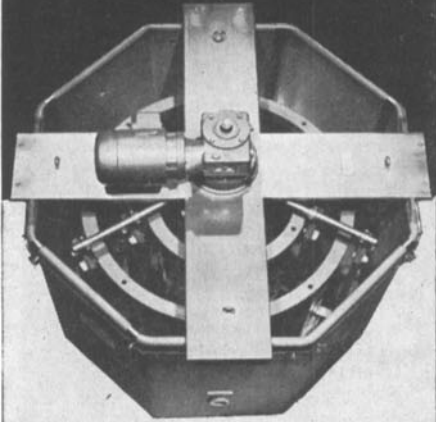
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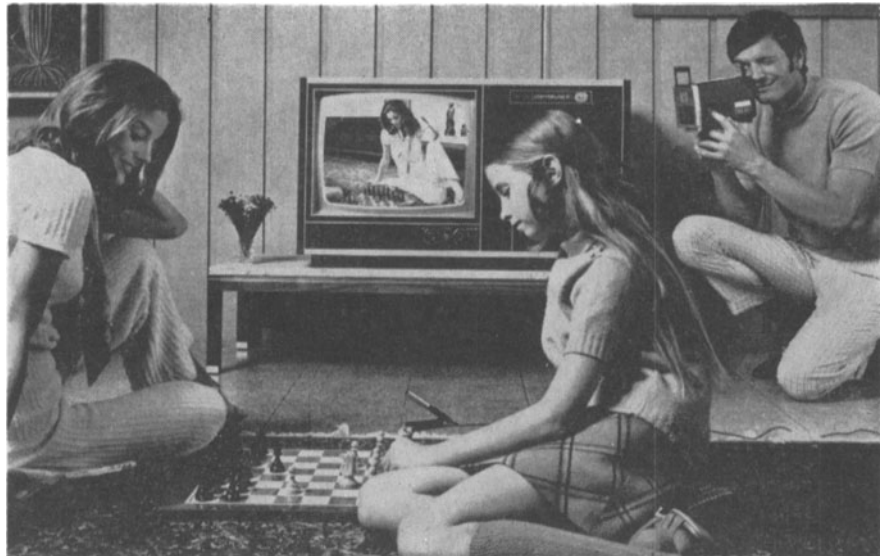
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Avco CTV Cartrivision, a home cartridge TV system, has been introduced by Cartridge Television, Inc., a subsidiary of Avco Corp., 1115 Broadway, New York, NY 10010. Principal component of the Cartrivision system is a solid-state combination receiver-recorder-playback unit consisting of a special tape deck and a 19-in color TV receiver built into a single self-contained unit.

The system is designed to play pre-recorded cartridges in color on a TV receiver and to record TV programs off the air with instant playback. The system is also designed to make and play cartridges of "home movies," including sound, on blank video cartridges using a special camera

featuring Instant Replay™. Cartrivision can also automatically record television programs off the air while unattended, shutting off the entire system when the cartridge has come to an end.

The Cartrivision tape cartridges slip into a slot in the record-playback unit at the side of the viewing screen for recording or playback. Cartridges to be used with the Cartrivision system will be available in 15-min, 30-min, 1-hr or 2-hr formats on blank or prerecorded cartridges. Prerecorded full-length motion pictures will be available for rental.

The system will be priced in the \$800 to \$900 range. It is expected to be commercially available early in 1971.

Tivicon, a new light-sensitive camera tube that can "see in the dark" has been announced by Texas Instruments, Inc., P.O. Box 5012, Dallas, TX 75222. The new tube uses a slice of silicon 0.875 in in diameter onto which 750 rows of 1000 light-sensitive diodes have been photochemically formed. Each diode measures two ten-thousandths of an inch in diameter, spaced at five ten-thousandths inch intervals. This array of more than half a million semiconductor diodes cannot be "burned" by exposure to intense light. The Tivicon can "see" at mid and deep infrared. A solid-state infrared illuminator the size of a thimble can illuminate a 300-ft² area of total darkness for a Tivicon-equipped camera and show the scene on a TV screen. No one in the scene would be aware that he was being photographed.

The outer dimensions of the new tube match those of the Type 8507 vidicon so the new tube can be used in most cameras with some resetting of the controls. It can operate within a temperature range of -40° to +150°F. Resolution approaches 900 lines. Price range is from \$750 to \$3,000.

A new di/namic gate silicon controlled rectifier featuring low switching losses for high di/dt ratings and fast turn-off times has been announced by Westinghouse Electric Corp., P.O. Box 868, Pittsburgh, PA 15230. Designated the T507, the device

has a dynamic forward voltage drop of 4.5 V maximum and can handle a forward current of up to 110 A. It has a high di/dt of 800 A/μs with typical soft gate control. Compression bonding encapsulation eliminates thermal fatigue. Price of the 600-V T507 is \$43.50.

Monochromator density-wavelength (DW) crossed-wedge filters for applications which require a dispersed "equal energy" visible light source having the same 1000 : 1 range of intensity for each spectral color have been announced by Fish-Schurman Corp., 70 Portman Rd., New Rochelle, NY 10802. An equal energy output from the crossed wedge may be obtained by using it with a source of collimated light and with the compensating filter or filters needed for the desired spectral energy uniformity. Compensating filters are available for obtaining approximately equal spectral energies from a specified source temperature such as 2860 K. The DW crossed-wedge filters consist of an interference-type linear wavelength monochromator wedge covering 400 to 700 nm combined with a linear density gray glass wedge. The two linear-wedge filters are superimposed with their gradients cross-ways so the wavelength changes in one direction and the optical density in the other. The filters are available in two sizes which have the 400- to 700-nm wavelength range in lengths 60 mm or 200 mm but the

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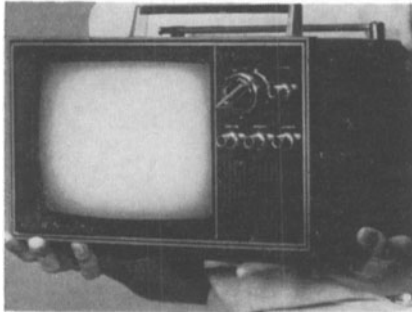
Built to withstand rugged use, the ECM-51 operates up to 3000 hours with a standard internal battery. Used in conjunction with a battery-powered tape recorder, it gives you the edge in on-the-scene interviews.

The Sony ECM-51 is available at select Superscope Special Application Products dealers. For their names, as well as complete details and specifications, please write Special Application Products Division, Sony/Superscope, 8150 Vineland Avenue, Sun Valley, California 91352.

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same width of 25 mm for the optical density change of 0.3-3.3. The DW 60 is 60- by 25-mm and is priced at \$350. The DW 200 is 200- by 25-mm and is priced at about \$600. Other sizes are available on special order.



A closed-circuit TV monitor with a 9-in diagonal picture tube and all-channel off-air TV reception capability has been announced by General Electric Co., VCPD-A&SP, #2 Electronics Park, Syracuse, NY 13201. Designated the TH-32-A, the monitor's total picture area is 38 in². The resolution is 350 lines as a closed-circuit TV video monitor with a 1.0-V composite video feed. The monitor can be switched from closed-circuit video input to off-air VHF and UHF reception. It is 11.75 in wide, 7.62 in high, 9 in deep, and weighs 12 lb. Its small size makes it suitable for security and surveillance applications. It is priced at \$195.

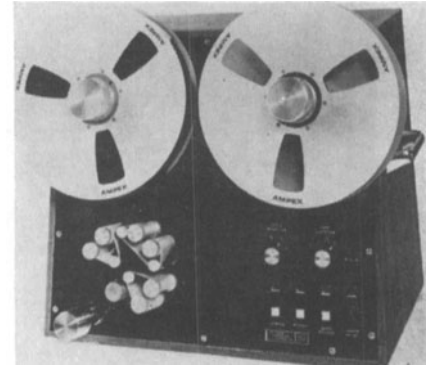
A new color videotape recorder for closed-circuit use featuring both insert

and assemble editing has been announced by International Video Corp., 675 Almanor Ave., Sunnyvale, CA 94086. Designated the IVC-870, the recorder's vertical interval editor inserts new material into previously recorded programing and electronically splices or assembles material from two separate program sources, such as live cameras or other recorders. Features include capstan servo for precise timing of programing, a second audio track and a built-in speaker-amplifier. It is available as a deck for rack mounting or in a portable carrying case weighing 78 lb. It is priced at \$8,000. A monochrome version is available at a price of \$7,500.

A conversion kit to modify Model AVR-1 videotape recorders for production of mirror-image master recordings for use with the Model ADR-150 videotape duplicator has been announced by Ampex Corp., 401 Broadway, Redwood City, CA 94063. The mirror-image kit is designed to permit field modification of the AVR-1 for production of duplication masters or back to standard recording configuration condition in less than an hour. The ADR-150 is a contact duplication system capable of making up to five duplicate recordings simultaneously from a single mirror-image master. An hour of recorded programing can be copied in six minutes.

An optical kit for use with closed-circuit TV systems to provide three-dimensional pictures has been announced by Stereotronics Television Co., 13720 Riverside Dr.,

Sherman Oaks, CA 91403. The kit consists of the Stereo-Captor, an optical device to be installed on the lens of the camera, the Stereo-Screen to replace the glass plate in front of the TV monitor and Stereo-Glasses to be used by the viewer. The 3-D system is optical and no electronic modifications are required. The Stereo-Captor, Model 5002, is priced at \$1,750. The Stereo-Screen, Model 6001 for 8-in monitors, is priced at \$150. Stereo-Glasses, Model 7001, are priced at \$35 each.



Magnetek I videotape cleaner designed to remove dirt, oxide particles, etc., from 1- and 2-in videotapes has been announced by Advanced Transducer Systems Ltd., Box 307, Station "U," Toronto 18, Ont., Can. In the cleaning process the oxide surface of the tape passes over tungsten carbide blades which remove loose or embedded oxide particles, backing materials or other foreign particles. Embedded parti-

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cles are "sliced" to avoid depressions or pitholes in the tape but enough recording area is left around the "sliced" particles to permit full recording.

Particles are wiped simultaneously from both sides of the tape by a silicon-impregnated tissue which moves continuously in synchronization with the tape's movement. The tissue removes loose particles from the back before the tape is cleaned by the blade. A second cleaning assembly removes residue from the oxide surface as the tape advances from the cleaning assembly. The unit weighs 100 lb and measures 22 in high, 25 in wide and 19 in deep. It is priced at \$3,500.

A new cassette copier has been announced by Infonics, Inc., 1723 Cloverfield Blvd., Santa Monica, CA 90404. The copier produces two standard C-30 cassettes a minute from a master cassette at a duplicating speed of 30 in/s. Both tracks are copied simultaneously. After duplicating, all three cassettes can be rewound in 30 s by the copier. Features include automatic end-of-tape shutoff and automatic gain control. It is priced at \$1,295 and can be leased for \$45 a month.

A new Programme Effects Generator, used to provide instant sound effects, spot commercials, radio and TV inserts, etc., has been announced by the manufacturers, Mellotronics Ltd., 28-30 Market Pl., London, W.1, England. The four-channel model consists of four interchangeable modules assembled with a control unit in

a single cabinet. The modules drop into the cabinet in vertical slides and can be lifted out without interfering with the operation of the remaining modules. Features include cassette loading and immediate rewind. The Mellotronics Sound Effects Console was described by George Clouston and Edmund Chilton in a paper presented at the Society's 103d Conference in Los Angeles ("Current Procedures for Providing Sound Effects"). The console was also described briefly in the January 1968 issue of the *Journal* (p. 84).

A self-contained power generator for film production with a noise emission level as low as 55 dB at 6 ft has been announced by Birns & Sawyer, Inc., 1026 North Highland Ave., Los Angeles, CA 90038. The generator is a 120-V, 1000-A diesel-powered unit manufactured by Saab-Scania of Sweden. The engine is a 673-in³, four-stroke, six-cylinder, in-line diesel engine coupled to an English Mawdsley generator and enclosed in a specially-engineered soundproof cabinet which baffles the wind direction as well as absorbs engine and exhaust wind noise. A reverse fan on the engine and increased cooling as well as a special sound enclosure for the exhaust system are provided. Birns & Sawyer mounted the generator on a GMC 6500 truck chassis and built fitted boxes for carrying lighting equipment and accessories. A power-operated cable reel at the rear of the generator carries 1200 ft (1400 lb) of heavy-duty cable.

Hervi-Quartz lighting kits, #6 and #7, for use on motion-picture location lighting assignments, have been announced by Hervic Corp., 14225 Ventura Blvd., Sherman Oaks, CA 91403. The basic light fixture for each of the kits is the Hervi-Quartz JR/650 fixture which produces 100 fc at 10-ft using a 650-W FAD quartz lamp. The light fixture is equipped with integral four-way barndoors and a 12-ft cable with an in-line on-off switch. The kits are contained in carrying cases measuring 20.5- by 15- by 5.5- in. Kit #6 is equipped with three JR/650 fixtures and light stands. It weighs 21 lb and is priced at \$248.90. Kit #7 is equipped with two of the light fixtures and stands. It weighs 16 lb and is priced at \$177.60.

A new sync generator which permits the Beaulieu 16mm camera to provide magnetic sound in synchronization with professional 0.25-in sync tape recorders has been announced by Hervic Corp., 14225 Ventura Blvd., Sherman Oaks, CA 91403. The Beaulieu sync generator has been designed to extend slightly over 1 in from the camera body making the camera more compact for handheld filming. It is priced at \$225.

The Comparascope, an oscilloscope test instrument designed especially for photographic applications, has been introduced by National Camera, Inc., Englewood, CO 80110. The instrument is used to examine actions occurring in intervals from 9.99 s down to 0.0001 s. ANS Standard shutter



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speeds are pushbutton selected. Various synchronization and other test settings are also pushbutton controlled. The instrument is priced at \$950.

The firm has also introduced the Model C-6810 Auto-Collimator for testing lenses. The instrument is equipped with a pellicle rather than a beamsplitting prism to provide a four-times (two f-stops) increase in brightness. The instrument has a 300mm objective lens and can be used to check all lenses, even long focal length lenses. It is priced at \$575.

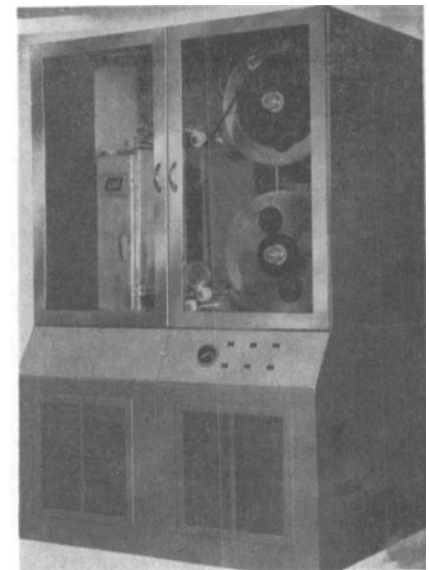


The Leavers-Rich 8-track studio master recorder has been announced by Leavers-Rich Equipment Ltd., 319 Trinity Rd., Wandsworth, London, S.W. 18, England. The recorder is available in two configurations, Series G (1-in, 25mm) and Series H (0.5-in, 12.5mm). Built on the modular system, the recorder includes record, replay and sync amplifiers for 600-Ω line operation and equalization to either NAB or CCIR characteristic at tape speeds of 19 and 38 cm/s. Solid-state electronics are used throughout. Model G4S-8/8S (with recorder/reproducer and sync replay) is priced at £ 5450, and Model H4S4/4-S at £ 3300.

An automatic replenishing system for automatic processors has been announced by Electronic Mechanical Products Co., 929-935 Atlantic Ave., Atlantic City, NJ 08404. The system, called the RM-398, continuously monitors the developer activity by reading the density of an 8mm (200-ft reel) film traveling 0.125 in/min. When the film density reading is below normal the automatic replenishing unit calls for replenisher. A pointer on the control box gives the operator a continuous visual audit of the developer activity. The visual meter readout can be calibrated in actual densities. The RM-398 is priced at \$2,550.

The Ag-O-Mat silver recovery unit, produced by Oscar Fisher Co., P.O. Box 2305, Newburgh, NY 12550, is now equipped with a sensor to assure automatically that

a bright silver plate is produced. The sensor acts as a safety valve which automatically shuts down the plating circuit when the silver has been removed from the fixer, thus preventing plating of the graphite cathodes onto the silver-plated anode after the silver content has been exhausted. It also aids in prolonging the useful life of the graphite rods. The Ag-O-Mat silver recover unit is priced at \$750.



The Ultrasonic Film and Tape Cleaner, Model FT 1000, designed to clean, dry and eliminate static at speeds from 50 to 100 ft/min has been announced by Clean Air Inc., Glastonbury, CT 06033. The cleaner is housed in a cabinet 78 in high, 44 in wide and 30.5 in deep which contains a Westinghouse cylindrical ultrasonic cleaner, a boil sump and a mechanical water separator. The boil sump has a 300-W strip heater wrapped around the cylinder and 700-W strip heaters attached to the bottom of the boil sump. Purpose of the boil sump is to separate the oil and waxes removed from the film from the solvent. The solvent is returned as a vapor condensed by means of chill coils and is returned as clean solvent.

Particulate matter is removed by a membrane filter which is part of the recirculating system that takes dirty solvent from the bottom of the cleaning chamber and returns it as clean solvent to the top of the cleaning chamber. The mechanical water separator removes all water during the normal recirculating cycle. A 4.5-gal solvent storage tank automatically supplies clean solvent to the cleaning tank as required. Features include snap-on rollers to accommodate various film sizes. The solvent used (Freon TF) is nontoxic and nonflammable. No exhaust duct is required. Some 40,000 ft of film can be cleaned without adding more solvent. The FT 1000 is priced at \$15,495.

The Clean Air Curtain for laminar flow packaging stations has been announced by Clean Air Inc., Glastonbury, CT 06033. A supplemental air curtain surrounds the work area, eliminating eddying and back currents. The periphery-directed curtain of air around the work bench assures a high degree of protection from outside

contamination. The Clean Air laminar flow work benches are constructed of formica-covered flake board. A 4-ft packaging station with the clean air curtain is priced at \$1,562.

The Clean Air Shower, consisting of a 5-in HEPA filter, blower and prefilter for installation over the transport of a videotape recorder has been announced by Television Equipment Associates, Box 1391, Bayville, NY 11709. Clean air (to 100 particles per ft³) showers over the transport at 100 ft/min virtually eliminating the airborne dust and dirt contributing to headware. (A normal dust count is about 800,000 to one million particles per ft³.) The system is priced at \$750.

A new ball head omnidirectional dynamic microphone that incorporates an integral filter to eliminate "pop" and "blast" noises has been announced by Astatic Corp., Conneaut, OH 44030. The microphone is designed with a grille assembly consisting of a stainless-steel mesh that encloses a foam filter and fine magnetic screen to prevent dust and magnetic particles from reaching the diaphragm. The diaphragm is shock-mounted and is made of Du Pont Mylar to withstand moisture, temperature extremes (-80 F to +300 F), fungus, most acids, alkalis, solvents and contaminated air. The microphone is available in two configurations, Model 860s, which incorporates an on-off DPDT switch built into the swivel assembly and Model 860 which has a stand mount that permits the microphone to be transferred quickly and quietly from stand to handheld use. Model 860s is priced at \$95 and Model 860 is priced at \$89.50.



The Graflex 16 Insta-Load 16mm motion-picture projector and three new Study Mate filmstrip projectors, the Study Mate II, Audio Study Mate and Auto-Vance Study Mate, have been announced by Graflex Div., Singer Education and Training Products, 3750 Monroe Ave., Rochester, NY 14603. The Insta-Load features instant loading and in-path rewind. Threading is accomplished by attaching the reels, pulling the film through the loading slot and raising the control lever. The in-path rewinding feature permits rewinding up to 2,000 ft of film in less than three minutes. A framing control allows adjustments

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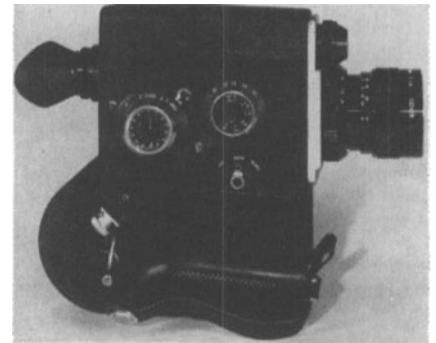


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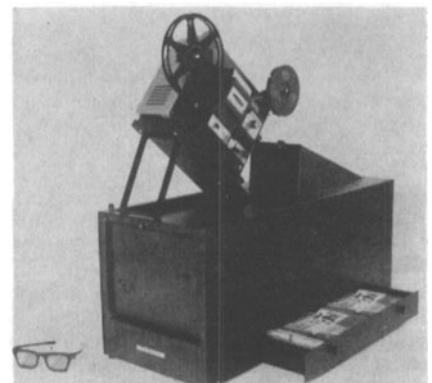
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without disturbing the position of the picture on the screen. A synchronization loop control enables reestablishment of sound synchronization with a touch of the finger. The Insta-Load Model 1115 is priced at \$760. Model 1120 is priced at \$795.

The Study Mate II, a 35mm rear-screen filmstrip projector designed for use on a desk top and in study carrels, is light and compact enough to fit into an attache case or be stored under a desk. It is priced at \$26.50. The Audio Study Mate has been designed for presentations to small groups. Features include a cassette magnetic tape deck for audio descriptions to embellish filmstrip visuals. Filmstrips are advanced manually. It is priced at \$79.95. The Auto-Vance Study Mate operates automatically and provides synchronized sound accompaniment. It is priced at \$99.95.



A professional double super-8 camera, the Canon Zoom DS-8, has been announced by Bell & Howell, 7100 N. McCormick Rd., Chicago, IL 60645. The camera utilizes a 100-ft spool of double super-8 film. The double format is essentially 16mm film with two rows of super-8 perforations. In filming, one 100-ft side of the film is exposed. It is then turned in the camera and the other side is exposed. The film is then processed and slit, providing 200 ft of super 8 film for projecting. Features include variable shutter control and powered rewinding mechanisms for fading and overlapping. The shutter angle can be regulated from zero degree to 165° by turning the control lever. The Electric Eye incorporates a new automatic control circuit system in which there are diaphragm mechanisms inside both the taking lens and in front of the CdS photocell for adjusting the illumination on the film plane and the CdS photocell. The camera is priced at \$1,000.



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super-8 movies in 3-D with the aid of polarizing glasses, has been announced by Ingeniatics, Inc., 16000 Industrial Dr., Gaithersburg, MD 20760. The system includes a self-threading projector with three speeds forward and reverse, 3-D conversion optics, a built-in screen and a dozen pairs of viewing spectacles. The system is compact, portable and can be folded for storage. The projector can also be used for conventional two-dimensional viewing. The price is \$498.

A new packaging for 16mm, 35mm and 70mm professional motion-picture films has been announced by the Motion Pic-

ture and Education Markets Div. of Eastman Kodak Co. Black plastic material is used to enclose films before placing them in a film can instead of the black paper envelope in use for many years. The plastic material affords the light protection and cleanliness provided by the black paper envelopes and also has additional advantages. The plastic material conforms better to the roll of film and eliminates the need for bulky paper material being folded under the roll. It is also tougher and more resilient and can be reused by the customer if desired. It also provides a cleaner package since it does not generate dust if it should scuff inside the film can during handling.

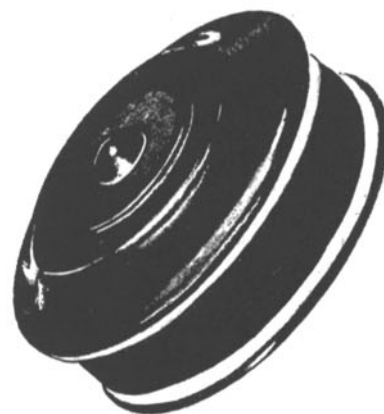
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