

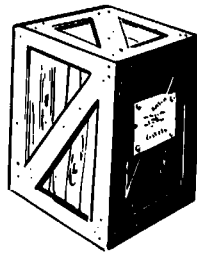


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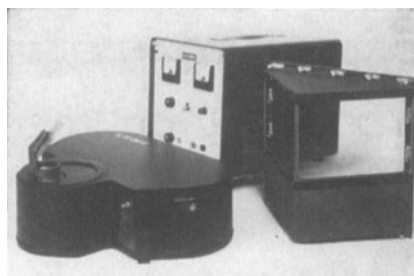
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new products (and developments)

.....
 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.



The Minipan is a 35mm high-speed 180°-field panoramic camera developed primarily for military aircraft use by Perkin-Elmer Corp., Electro-Optical Div., Main Ave., Norwalk, Conn. The 10-lb panoramic camera can operate in any of three scan modes — fore-to-aft; transverse; and forward, side or rear oblique. It is equipped for image motion compensation (IMC) in the fore-to-aft and transverse scan modes. Primarily intended for use in low-level, high-speed aircraft operating at altitudes of 200 ft or above, the camera is designed so that curvature in horizontal terrain views from the oblique mode is optically eliminated so that horizons appear flat and true. A stabilized lens is not required since a resolution of 60 lines/mm (0.8 in. at 200 ft) is achieved through the use of high shutter speeds and a novel design employing continuous film advance in conjunction with a rotating mirror and lens system. Other features include continuous, nonintermittent operation of film spools, continuous rotation of the optical system, ability to introduce a choice of IMC mechanisms suited to the scan mode, and 180° scan coverage.

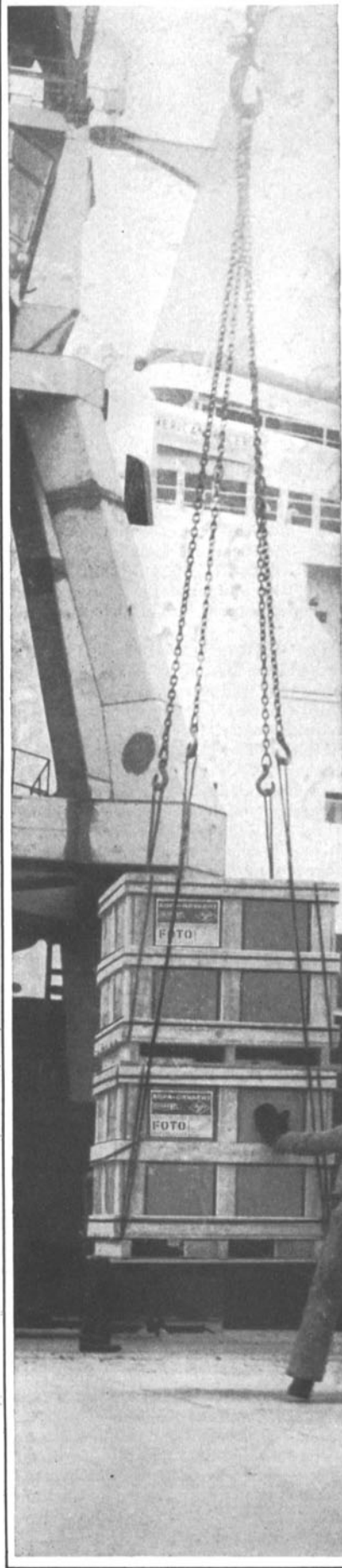
Two Hasselblad cameras, the 2½ × 2½ 500C and the Super-Wide C, were carried on the Gemini 8 flight March 16, it was announced by Paillard Inc., 1900 Lower Rd., Linden, N.J. 07036. The Super-Wide C has a built-in 38mm lens capable of photographing a 90° horizontal field and was intended to film the planned three-hour walk in space. Both cameras are slightly modified versions of those for consumer use. The camera backs are interchangeable in seconds, an especial advantage in space photography. Most space photographs have been taken with special thin-base MS Ektachrome S.O. 217 film (ASA 64) made by Eastman Kodak, the announcement stated.



Canon Scoopic, a 16mm camera that combines automatic CdS exposure control, a built-in 13mm to 76mm zoom lens with through-the-lens reflex viewing, electric drive and automatic loading, has been announced by Canon USA, Inc., 554 Fifth Ave., New York, N.Y. 10036. A cross-coupled CdS cell, located above the lens mount is designed to set the desired exposure from *f*/1.6 to *f*/22 automatically. An illuminated scale located inside the reflex viewfinder shows the aperture selected by the exposure system. The apertures can also be selected manually. The lens is a Canon *f*/1.6 13mm to 76mm zoom in a focusing mount. The optical design of the lens consists of 18 elements in 12 components. A manual zoom lever is employed to change focal lengths. The camera weighs only 7 lb 5 oz and measures 8¼ × 11¼ × 5¼ in. The electric motor, which runs at 16, 25, 32, and 48 frames/s, is powered by a single 12.5-V rechargeable and interchangeable nickel-cadmium battery. The Scoopic 16 System includes camera and lens, metal compartment case, nickel-cadmium battery, battery recharger, lens hood, UV, Y-3 and R filters. The price is \$1,250.

Accessories for the Polaroid CU-5 Land camera, a handheld unit designed specifically for making instant close-up pictures in color or black-and-white, have been announced by Polaroid Corp., Cambridge, Mass. 02139. The accessories include four framing kits for additional reproduction ratios, a Polaroid polarizing filter and a Y-cord connection. Each framing kit consists of a metal field frame, supplementary close-up (Proxar-type) lens, metal legs to fix the exact focus and an accessory mount which clips to the front of the camera. The polarizing filter is used for pictures of highly reflective objects, such as cultures in a covered glass petri dish, or highly polished metal. The Y-cord, which connects both to the camera and the ac power pack of the camera's electronic flash unit, permits using off-camera synchronized flash, by-passing the camera's built-in ringlight.

The new Universal Geared Base System for all Arriflex-35 cameras has been announced by Arriflex Corp. of America 25-20 Brooklyn-Queens Expressway (West) Woodside, N.Y. 11377. The system is developed around a base which features a new lock arrangement by means of which motors may be locked on or removed instantly without tools of any kind. Also, the camera can be attached or removed from the base without the need for tools. Features include



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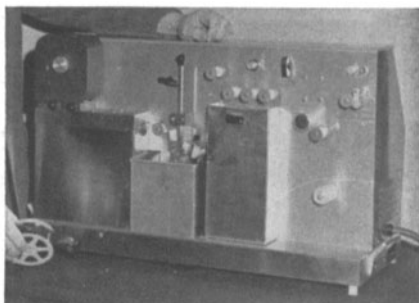
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a gear train acoustically isolated from the base casting. The camera is connected to the gear train by means of a rubber coupling and the motor is coupled to the gear train by a similar connector to reduce noise level.



The Maurer Matic Processor, Model 153M, for 16mm and 35mm black-and-white film has been announced by Pako Corp., 6300 Olson Memorial Highway, Minneapolis, Minn. 55440. With a processing rate of 15 ft/min, the machine uses monobath chemistry and has thermostatically controlled drying, circulation and filtration of the process solution. The processor occupies less than 2½ ft² of table or shelf space and weighs 42 lb. The machine has stainless-steel tanks, epoxy-coated anodized aluminum housing and Teflon rollers. Power requirement is 115-V ac, 50 to 60 Hz, 12 A. Film capacity per batch of chemistry is 600 ft, 35mm, and 1,200 ft, 16mm. The price is \$2,195.



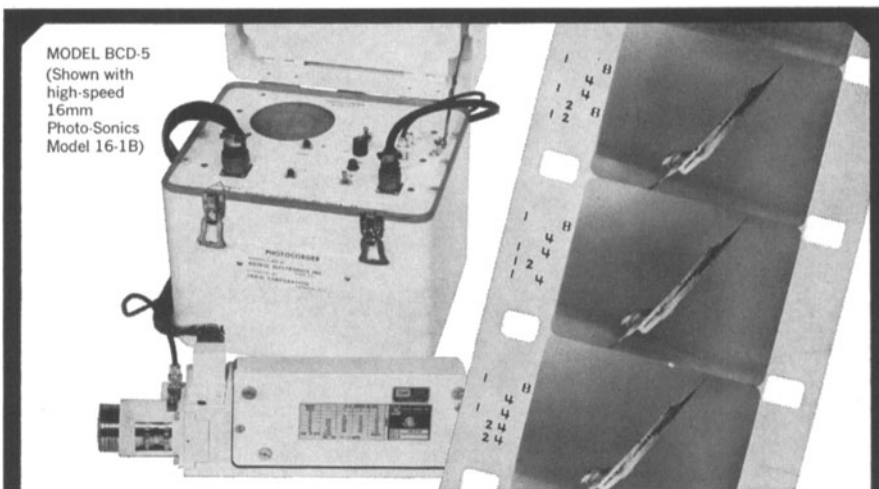
A new video-tape recorder featuring instant play, ease of operation and a long life recording head has been announced by 3M Company, Revere-Minicom Div. 220-5E, 2501 Hudson Rd., St. Paul, Minn. 55119. Called the Wollensak VTR-150, the recorder has been designed primarily for educational, industrial and military applications. The unit contains all transistor, solid-state circuitry which, together with a 2-motor drive, produces a run-up time of 8 s. Heart of the helical scan recording process used in the machine is a 1-in. diameter ferrite recording head said to produce sharp, clear pictures and to have significant

long-life qualities. Recording and playback speed is 7½ in./s. The machine uses ½-in. video tape and will record and replay up to 1 hr on a 7-in. reel containing 2,400 ft of tape. Specifications include 2-Hz bandwidth, video SNR of 35 dB, audio SNR of 40 dB, wow and flutter 0.3% and an audio-frequency response from 50 to 10 kc ± 3 dB.

The VTR can record live material through the use of an accessory vidicon camera, as well as record UHF, VHF and closed-circuit TV signals and play back pre-recorded material prepared on any other VTR-150. The recorder weighs 50 lb and measures 14 × 20 × 9 in. It is available as a recording and playback device or installed in a mobile console. The recorder alone is priced at \$1,495 and at less than \$3,000 for the mobile console package, which includes the recorder, a roll of "Scotch" brand video tape, camera, television receiver, microphone headset and accessory cords.

The Niles Multi-Sync system, an electronic switching system for multicamera filming, has been introduced by Fred A. Niles Communications Centers, Inc., 1058 West Washington Blvd., Chicago, Ill. 60607. Designed primarily for 16mm color film, in operation the director sets the cameras before a sequence is shot for close-ups, long shots, etc., as he would normally in working with more than one camera. Once the "events sequence" is established, the director stations himself at the camera switching console and conducts the filming by remote control. Rather than all cameras shooting at one time, only one shoots at a time, with the director switching from camera to camera for essential coverage only.

A home video-tape recorder called the Model TCV 2020 has been announced by Sony Corp. of America, 580 Fifth Ave., New York, N.Y. 10036. The machine is a more elaborate version of the firm's earlier recorder (*Journal*, p. 642, July 1965). It has a timing device that can be preset to turn on the machine automatically to record a desired television program which can be viewed at a later time. Except for the timing device the new recorder is technically the same as the earlier model. The TCV 2020 is contained in a walnut cabinet and priced at \$1,150.



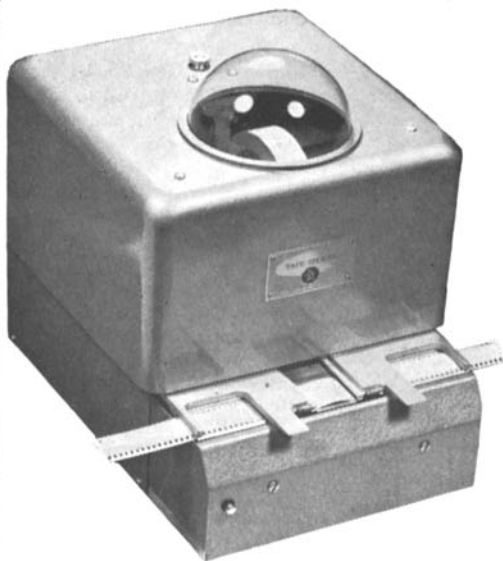
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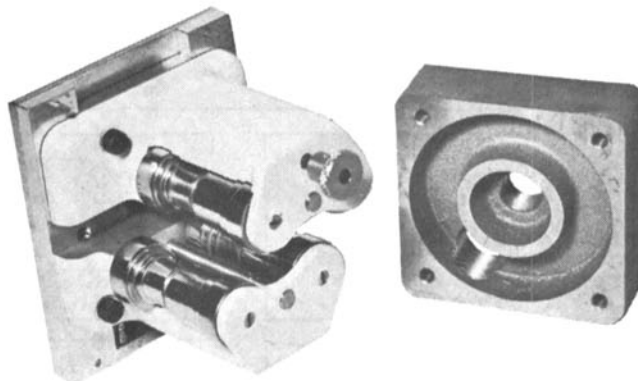
MODELS

A-2816 (16mm)	\$1595.00
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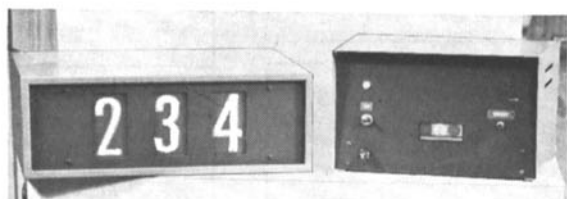
MODELS

AV-15 (16-35)	\$285.00	AV-35 (35mm)	\$285.00
AV-16 (16mm)	\$285.00	AV-35R3 (16 Double Rank)	\$295.00

(When ordering, please advise the name and model of the printer it is to be used on)

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Model E-4509	\$695.00
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A magnetic tape recorder called the Model YE has been announced by Kinelogic Corp., 29 South Pasadena Ave., Pasadena, Calif. It is a small general purpose instrument with 4,600 ft of 1.1-mil tape capacity. Weighing less than 40 lb, the recorder can carry internally 16 tracks of data electronics. The instrument uses standard 10.5-in. instrumentation reels compatible with standard IRIG ground stations or computer transports. The tape is driven by the firm's Iso-Elastic Drive designed to eliminate motors, clutches, brakes, springs, differentials, etc. The entire tape transport is driven by a single hysteresis synchronous motor.

A magnetic tape loop transport called Impellor II has been announced by S.

Himmelstein and Company, 2500 Estes Ave., Elk Grove Village, Ill. 60007. Features include pneumatic tape drive, tape tensioning, tape buffering and dynamic braking. Pinch rollers have been eliminated; only the heads touch the tape oxide. Tape speeds range from 7½ to 240 in./s in six binary steps. The machine will handle ¼-, ½- or 1-in.-wide paper, plastic or metal base tapes. Tape loop lengths may be varied from 36 in. to 650 ft.

A new line of magnetic video tapes for use in helical scan video recorders has been announced by Magnetic Products Div., 3M Company, 2501 Hudson Rd., St. Paul, Minn. 55119. The new tape is designed especially for use with the lower-priced re-

ording equipment presently in use in closed-circuit television or in the classroom.

A 2-mil high-temperature magnetic recording tape has been added to the Pyrotrak line, according to an announcement from Lash Laboratories, 6152 Mission Gorge Rd., San Diego, Calif. 92120. The Pyrotrak films are on a metal-plated Kapton base and are said to have a working temperature range from -100 F to +500 F.

A new line of Japanese-manufactured 16mm lenses called the F & B Ceco Kino-Cosmicar have been introduced by F & B Ceco, Inc., 315 W. 43 St., New York, N.Y. 10036. The new series of lenses will be supplied initially in standard 16mm C mounts.

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The first three lenses of the series will be (1) a 12.5mm *f*/1.4 retrofocus type priced at \$104.50; (2) a 25mm *f*/1.4 "Standard" lens at \$97.50; and (3) a 50mm *f*/1.9 "long-focus" lens at \$77.50. The lenses all stop down to *f*/22 and are in focusing mounts calibrated in both feet and meters. The 12.5mm lens focuses to less than 10 in., the 25mm to less than 2 ft, and the 50mm to within 3 ft.

The new Kodak Carousel AV-900, a slide projector designed expressly for audio-visual applications, weighs only 10½ lb, a reduction of 7½ lb below the weight of the Model AV-580 which it succeeds. Announced by the Motion Picture and Education Markets Div., Eastman Kodak Co., Rochester, N.Y. 14650, the new projector has a 2,000-hr motor with an average life said to be four times as great as the earlier Carousel, enabling some 8 months of continuous operation 8 hr/day. The optical system of the Model AV-900 is identical with that of the earlier model. It incorporates a 500-W DEK lamp and offers a choice of lenses. Prices remain the same as for the earlier model.

The Kodak Carousel Motion Adapter is a device to simulate animation when used with specially prepared "Technamated" slides. Various types of motion, such as moving water, explosions, current or liquid materials flow can be displayed. In preparing the slides for Technamation, normal artwork is prepared in color, photographed on 35mm film and then sandwiched between two sheets of acetate with some raised plastic surfaces designed to bend light rays at specific angles. When a slide is placed in a Carousel projector equipped with the Motion Adapter, the lamp's rays pass through the slide and onto the screen. When the light rays pass through the tiny raised surfaces of the slide, the rays emerge in straight lines and at a specific angle set by the special laminated surface.

All light emerges from the projector lens to pass through the adapter which is a rotating acetate disc composed of thousands of straight lines. Since the rays are polarized in straight lines they regularly pass or do not pass between the lines of the spinning disc. Normal portions of the slide pass through the spinner relatively unchanged, while progressively angled animated portions are filtered by the spinning disc to achieve a flowing or blinking effect. The adapter is priced at under \$32.

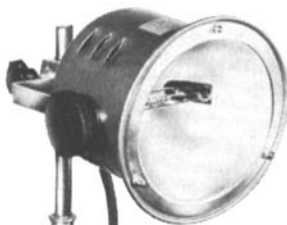
The Kodak Carousel Dissolve Control links two Carousel projectors together to allow slide projectionists to fade one scene into the next without any intervening dark interval. The Dissolve Control is plugged into a power outlet and is then connected by two plugs to the Carousel. In operation the lamp of one projector projects a scene on the screen. At the end of a selected time interval or at the push of a remote control button, the lamp of the second projector gradually brightens to superimpose a second image on the screen while the original slide image dims and fades off the screen. While the lamp in the first projector is turned off, the slide is changed and the process may be repeated up to 159 times before changing trays. The price is less than \$200.

The Kodak Carousel Sound Synchronizer can be used with the Dissolve Control as



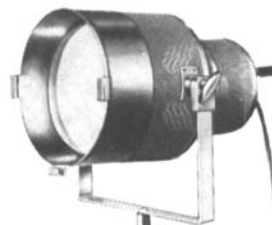
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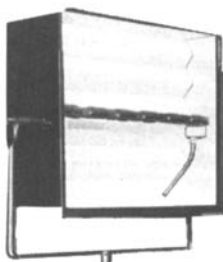
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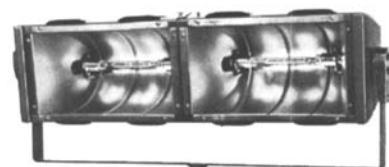
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well as with Carousel projectors and stereo tape recorders without the dissolve control. It is priced at less than \$30.



A dynamic cardioid microphone produced for Norelco in Austria by AKG has been granted a U.S. Patent, according to an announcement from North American Philips Co., 100 E. 42 St., New York, N.Y. 10017. The microphone, designated D-202ES, is based on a moving coil arrangement in which two independent capsules are in physical juxtaposition in a single microphone housing and electrically interconnected through filters so as to effect independent frequency responses in different frequency ranges for each of the capsules. The individual capsules have essentially identical directional patterns. The diaphragms of the capsules are similar, but the mountings and acoustical elements coupled to each diaphragm differ to achieve a low-frequency and high-frequency combination. The microphone is priced at \$130.

A general purpose panchromatic film called Vivipan-A has been introduced by General Aniline & Film Corp., 140 W. 51 St., New York, N.Y. 10020. The film has been designed for development in roller transport processing machines, as well as by conventional rack-and-tank methods. A thinner emulsion layer permits more rapid penetration of solutions for reduced developing and fixing times. The thin layers absorb only a small amount of solution, thus reducing washing and drying times. The film is protected by specially formulated, scratch-resistant surfaces for both the emulsion and back coating. Characteristics include extremely fine grain and high acutance. Possible applications include portrait and illustration photography as well as industrial and scientific. It is available in standard sheets and heavy base roll sizes.

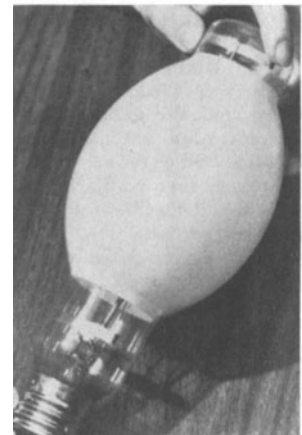
A series of Type III 35-W, xenon short-arc lamps has been announced by Illumination Industries Inc., 610 Vaqueros Ave., Sunnyvale, Calif. 94086. The lamps are available in versions with and without a starting electrode. Designed for dc operation, the lamps can be modulated to ultrasonic frequencies or pulsed to several joules in a few microseconds. The spectral output, in the visible portion is reported to have a color temperature of 6,000 K. The ultraviolet portion extends to about 190 nm, and the infrared output consists of pressure-broadened xenon lines. Constructed of clear, fused quartz, the lamps are normally con-

vection cooled. However, they may be housed in an envelope as small as 3.5 in.³ with forced-air cooling. Typical operating characteristics include: arc size 0.010 in.²; average luminance, 50,000 cd/cm²; minimum starting voltage, 15 kV; and average life, 200 hr. Prices begin at \$32.

A film cleaning and conditioning system for 8mm, 16mm and 35mm motion-picture or strip film has been announced by Electro-Chemical Products Corp., 89 Walnut St., Montclair, N.J. The system consists of a roll applicator of cast aluminum construction plus a quart of Ecco 1500 antistatic cleaner and conditioning fluid and 6 cleaning flannel rolls. Supplied with an unbreakable poly-fluid feed cup, it provides fluid to a sight feed valve which automatically regulates the flow of solution. The system is priced at \$37.50.

The E 91 High Resolution Developer for Technical and Scientific Photography, a liquid version of the firm's D-19 powder formula, has been announced by The FR Corp., 951 Brook Ave., Bronx, N.Y. 10451. The developer is available in concentrated form in 12-oz bottles, making 1 gal of developer or in 1 gal bottles, each bottle, making 5 gal of developer. The 12-oz bottles are priced at \$1.75 and the 1-gal bottles are priced at \$6.23.

Scanaprint is a new high-speed enlarging paper designed for making prints with Log-Etronic equipment. Introduced by General Aniline & Film Corp., 140 W. 51 St., New York, N.Y. 10020, it is a moderately cold-tone, single-weight paper designed to reduce exposure time in the equipment. The paper is available in sheet sizes of 8 × 10 in., and larger, and in 5-in. to 11-in. rolls.



The long-life ColorArc lamp for studio lighting has been announced by Sylvania Electric Products Inc., a subsidiary of General Telephone & Electronics Corp., 730 Third Ave., New York, N.Y. 10017. The lamp operates in conjunction with a ballast which controls the applied power. The color temperature of the 400-W ColorArc when operated vertically at rated input to its ballast has a range of 3,200 to 3,600 K. When operated horizontally, the range is 3,400 to 3,800 K. The lamp initially produces 85 lm/W. The lamp is expected to have an average rated life of 7,500 hr in motion-picture studio applications. Use of the new lamp in existing fixtures will re-

quire a possible change or adaptation of the socket and the addition of a ballast.

The firm has also introduced a line of tungsten halogen lamps for lighting applications in the theater, television, motion-picture and commercial photography.

A halogen projector lamp for slide projectors has been announced by Sylvania Electric Products, Inc., 730 Third Ave., New York, N.Y. 10017. The lamp, designated ASA code FBD, has an average rated life of 50 h. It is rated at 500-W, 120-V and has a two-pin base design.

The firm has also announced a new dichroic Tru-Beam projector lamp for Super 8 movie projectors. Designated the Super Q, it has a rating of 150-W, 21-V and a rated average life of 15 h. It is an open-faced lamp.

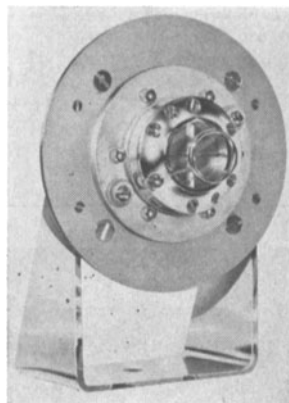


The Model 2000 Telephotometer, an instrument designed to measure the luminance (fL) of a small area at a distance, has been announced by Gamna Scientific, Inc., 5841 Mission Gorge Rd., San Diego, Calif. 92120. The instrument consists of two elements: the optical head and the control unit. The optical head houses the optical systems, the photosensor, the aperture probes and the filter wheel. Apertures from 2 minutes of arc to 3 degrees are selected from the control panel by means of a rotatable turret. The lenses are interchangeable and long focal length telescopic lenses as well as microscope objectives can be used. The photosensor is connected to the control unit by means of a 12-ft cable. The electronics, the meter and either the battery or interchangeable regulated ac power supply are contained in the control unit. Features include a built-in tungsten lamp reference and an integral computer used to dial in the aperture diameter, filter factor, electrical sensitivity setting and to get the full scale reading in foot-lamberts. The instrument is priced at \$2,860.

The new Nikon Intervalometer, Model NC-1, designed to provide a broad continuous range of time intervals from $\frac{1}{2}$ s to 8 min, has been announced by Ehrenreich Photo-Optical Industries, Inc., 623 Stewart Ave., Garden City, N.Y. 11533. The instrument, said to have accuracy of $\pm 3\%$, is intended to condense events extending over periods from seconds to weeks on any given number of still or motion-picture frames. It is compact ($5\frac{1}{2} \times 4\frac{1}{2} \times 3\frac{1}{2}$ in.) and portable (weight, 2 lb). It operates from its own internal battery; however an external dc source may be used, such as a battery or other source supplying between 35 and 40 V which is fed through an external jack. The timing cycle is started either by a "Start" button on the instrument's housing or by remote control, including wireless re-

mote. The unit operates by closing electrical contacts. A 4-digit automatic counter keeps count of the number of such closings, consequently, of the number of exposures. The counter resets to "0000" by means of a button on the housing.

The Adtrol Photocorder, Model BCD-5, a timing device designed to print elapsed time in between the sprocket holes on 16mm film, up to 1,500 frames/s, has been announced by Traid Corp., 777 Flower St., Glendale, Calif. 91201. The instrument is used to record azimuth, elevation, etc., as well as elapsed time data, in the form of actual numerals in BCD (binary coded decimal). A 1,000-Hz time base is provided internally for independent timing, and an input is available for an external time signal at clock frequencies up to 10,000 Hz. The instrument operates interchangeably with most of the leading high-speed cameras. Traid has also announced the Northridge 16N Flickerless Projector. The machine can be used for conventional projection or stop-motion studies. The projector's capabilities include forward, reverse, cine-stop, pulse or cine with sound, all switch-controlled.



Artificial Mouths, devices to produce a sound pressure source for frequency response measurements of acoustical transducers, are produced by Altec Lansing, a division of LTV Ling Altec, Inc., 1515 S. Manchester Ave., Anaheim, Calif. 92803. Each Artificial Mouth consists of a permanent magnet, moving coil, loudspeaking driver unit and an equalizer. The equalizer is designed to prevent any rapid change in slope throughout the rated frequency range as well as to compensate for variations in the loudspeaking units and thus to provide a constant sound pressure within the specified frequency range. Each equalizer is housed in a container filled with a synthetic rubber potting compound to prevent any value change or damage to the circuitry. Artificial Mouths are available in three types, Model A 44, frequency range, 400 to 3,000 Hz; Model A 45, frequency range, 400 to 4,000 Hz; and Model A 46, frequency range 100 to 6,000 Hz.

The TM-Diascope, Model 252, an instrument for measuring and adjusting vidicon cameras, is a product of Tele-Measurements Inc., 145 Main Ave., Clifton, N.J. 07014. It consists of a pretested alignment gage that fits onto the camera in place of the lens to project a built-in test pattern onto the surface of the vidicon to produce

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an image of the test pattern on the monitor. The Diascope is designed so that the image on the monitor will be an exact replica of the original pattern if the surface of the vidicon is in optical axis and at a distance of 0.69 in. from the front of the C mount of the camera; otherwise the camera and the vidicon have to be realigned optically, mechanically and electronically until the correct image appears on the monitor. The device has a self-contained lamp and power source.

A narrow bandpass filter consisting of a single wafer of quartz has been developed at Bell Telephone Laboratories. The filter replaces a conventional filter network of two hybrid transformers, four variable capacitors and two crystal resonator units. The device can be fabricated for use at frequencies ranging from 1 to 150 MHz. It is made from a circular wafer of quartz, approximately 10 mm in diameter and 1 mm thick on which two gold electrodes are deposited. Each electrode consists of two identical rectangular sections deposited on each side of the quartz wafer which is then mounted in an hermetically sealed cylinder about $\frac{1}{4}$ in. in diameter and $\frac{1}{4}$ in. high.

Such a device exhibits the transmission properties of a conventional filter network if the electrodes and the spacing between them are properly designed. Essentially the device is designed so that the quartz under both electrodes has a single resonant frequency. However, when the device is used as a filter, the crystal resonates

at two different frequencies; one below the original design resonance and one above the original resonance. The property of dual resonance is attributed to mechanical coupling of energy between the resonators.

New TNC and BNC insertion units, series 091 and 090, respectively, have been announced by Bishop Instrument, 440 Forest Ave., Portland, Maine 04101. The units, designed to provide convenient housings for networks to be inserted in coaxial lines, have component cavities 1 in. in diameter with lengths of 1, 2 or 3 in. The housing is nickel-plated brass that can be soldered at any point for minimum inductance ground connections with Teflon insulation. Connectors include 2 TNC jacks, 2 BNC jacks or 1 BNC plug and 1 BNC jack. Prices are from \$12.00 to \$14.00.

Products recently announced by Microwave Associates, Inc., Burlington, Mass., include the MA-2A 2-W, 2 GHz all solid-state microwave, STL, intercity or TV pickup relay, and the MA-7A $\frac{1}{4}$ -W, 7 GHz, STL, intercity or TV pickup all solid-state TV relay. The FRV 7001 is a 7 GHz $\frac{1}{4}$ -W all solid-state heterodyne TV relay for intercity multihop and STL service. Other products include a tunnel diode low-noise RF receiver preamplifier for 2 GHz, 7 GHz and 13 GHz auxiliary relay use and a low-noise all solid-state AFC TV relay receiver at 2 GHz, 7 GHz, and 13 GHz for use with klystron relay transmitters.



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Electronic Engineer. B.E.E., 1943. M.E.E., 1951. Diversified research and development exp. in instrumentation and communications. Desire challenging position in N.Y.C. in TV or related areas in m-p. Write Ap't. S.T., 578 E. 16th St., Brooklyn, N.Y. 11226.

Cameraman-Editor-Recordist. 2 years college, 16 years exp. in electronics and photography. At home in all phases recording, sound, m-p and still photography, editing. Desire to relocate on Eastern Seaboard in responsible position with reliable concern. Résumé on request. Gillespie, 2505 Pershing Ave., Richmond, Va. 23228.

Experienced film maker. With latest camera and sound recording equipment, seeks connection in New York metropolitan area. Leo E. Zappe, 321 River Rd., Nutley, N.J. Tel: 201 667-2323.

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