

# new products

(and developments)

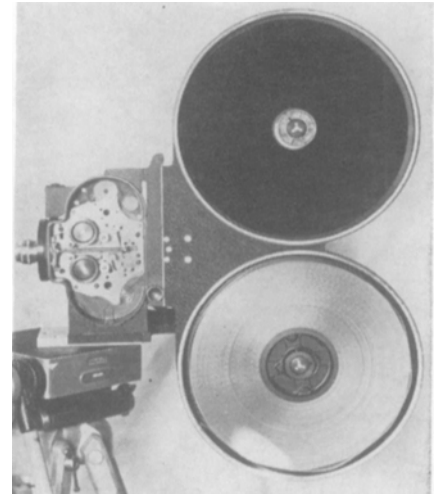
.....  
 Further information about these items can be obtained direct from the addresses given. As in the case of technical papers, the Society is not responsible for manufacturers' statements, and publication of these items does not constitute endorsement of the products or services.

An opto-electronic telescope that uses a supersensitive television camera has been developed by the Air Force and is in operation in the Weaver Observatory at Wittenberg College, Springfield, Ohio, where it has been used to take pictures of the moon. The system is based on a pickup tube developed by Westinghouse Electric Corp. Electronic Tube Div., Dayton, Ohio. It is said to be three to four times more sensitive to white light than tubes previously used for telescope photography. Its sensitivity to longer wavelengths in the spectrum from yellow to red makes possible remarkable

daylight pictures of the moon and planets. A composite photograph of the full moon, made up of more than 200 separate pictures, shows the rays of the crater Tycho and other awesome details which are indistinguishable in other photographs.

A 16mm Fastax high-speed camera, Model WF-3T, designed to supplement but not replace the standard 8mm and 16mm 4-sided prism cameras, has been announced by Wollensak Optical Co., Dept. FA-3, 850 Hudson Ave., Rochester 21, N.Y. The new camera has a high-index glass 2-sided prism shutter plus a new drive mechanism. The continuous rotating 2-sided prism is synchronized with film movement to take 150 to 6000 pictures/sec. The camera uses 100-ft daylight loading spools and is designed especially for studies of short duration. The new camera will be on display in Booth 45 at the Miami Beach Convention.

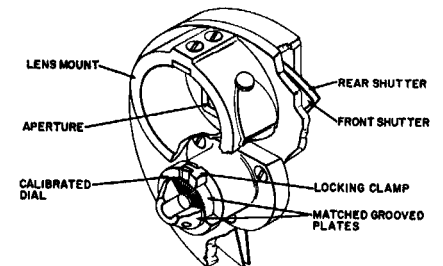
The Traid Model 805 Fototracer, a 16mm camera which holds 1200 ft of film and may be used for filming any events up to 50-min duration has been announced by Traid Corp., 17136 Ventura Blvd., Encino, Calif. Designed specifically for rocket engine testing, it is also suited for other applications requiring large film capacities. It is a ruggedized lightweight, intermittent-movement design and operates at 16, 24, 32 and 64 frames/sec from a governor-controlled heavy-duty motor. A fail-safe device automatically stops the camera if the film



breaks. Extra-large sprockets provide more teeth to engage the film perforations and provide greater pulling power on the roll of film.

A new Autex, Model VI-2, has been announced by Flight Research Inc., Box 1-F, Richmond 1, Va. The new automatic exposure control device is similar in principle to earlier models, but has been redesigned for increased ruggedness, reliability and convenience of operation. The control circuits are completely transistorized, employ the latest printed circuit techniques, and are potted in epoxy resin for the sake of reliability. The control box measures 1½ by 4 by 9¾ in. Batteries in the control box make the device independent of external power. Adapters are available for mounting the control head to any camera. The flexible drive cable used to couple the control head to the iris ring of the lens permits connection to any size of lens without interference between exposure control and lens focus adjustment.

This system is the subject of a paper and demonstration scheduled for May 5 at the Society's Convention at Miami Beach.



A variable shutter for the Flight Research 35mm Model IV-C Multidata Camera, designed primarily to meet the need for a convenient method of changing exposure with long focal length lenses has been developed by Flight Research Inc., Box 1-F, Richmond, Va. Designed to minimize inertia, the unit consists of two rotary shutters mounted on concentric shafts with the blades held together by matched grooved plates. The shutter opening can be changed from 0° to 130° in 2.5° gradations by means of a calibrated knob on the camera face. The knob locks in place to insure stability of the shutters in set position.

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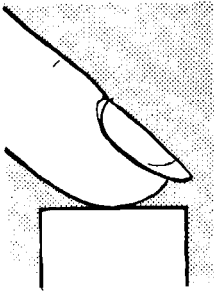
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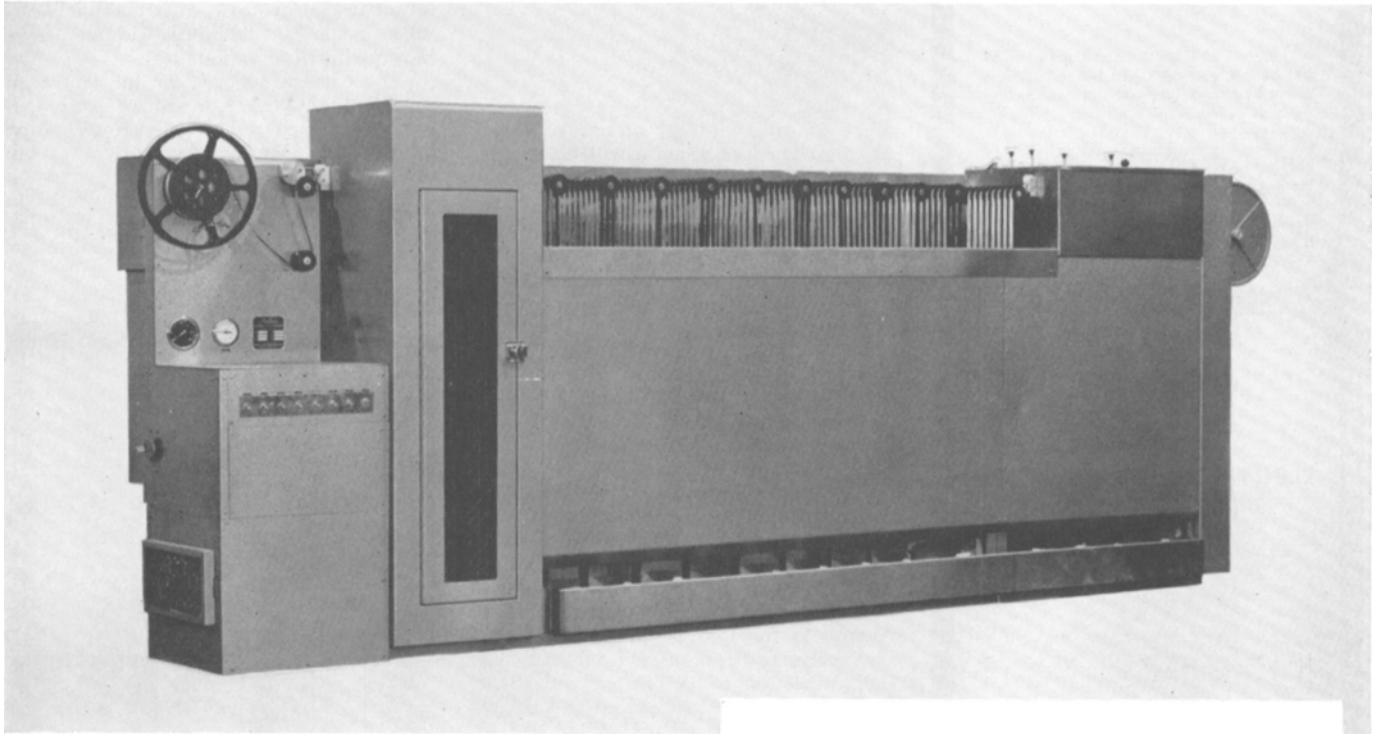
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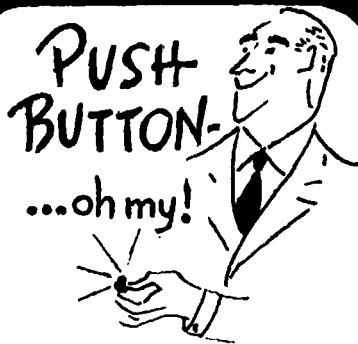
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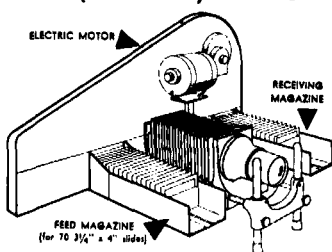
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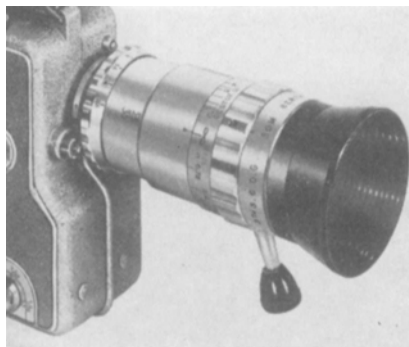
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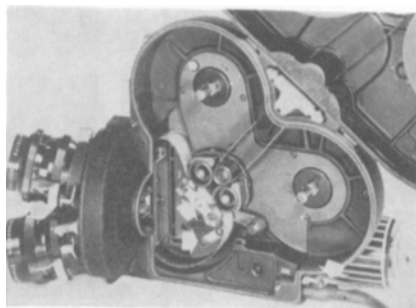
For Demonstration, or Literature,

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A series of lenses made of "non-browning" glass for use with industrial TV cameras in observation of radioactive areas has been announced by Wollensak Optical Co., Rochester 21, N.Y. Glass used in the lenses is reported to withstand one million Roentgen of gamma radiation (cobalt 60) at the rate of 240 Roentgens/min with less than 5% browning for the wavelength region 4500-7000 A. The lenses are described in detail in a paper scheduled for presentation at the SMPTE Convention in Miami, May 3-8.



The Pan-Cinor 10 to 30 mm f/2.8 Vari-focal Zoom-lens for the Camex Reflex 8 has been announced by Karl Heitz, Inc., 480 Lexington Ave., New York 17. Designed for continuous through-the-lens viewing and focusing while filming, a lever moves a group of internal lens elements to change the focal length from 10mm to 30mm to achieve simulated dolly effects. For sharpness of focus the lens is set at 30mm. As the focal length is decreased, the increasing depth-of-field automatically keeps the lens in focus. The lens, lens shade and filter together are priced at \$379.00. The lens alone is priced at \$199.00.

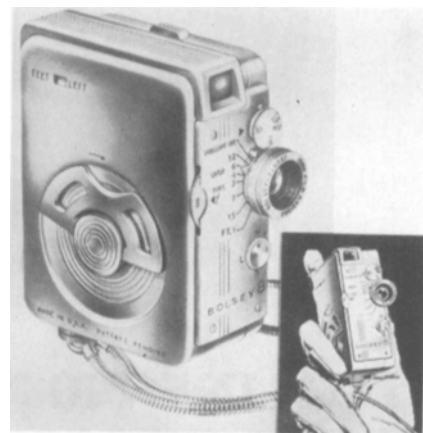


An automatic buckle switch, a sprocket roller guide assembly and a motor cable safety catch for the Arriflex 16 camera will be introduced by Kling Photo Corp., 257 Fourth Ave., New York 10, at the SMPTE International Equipment Exhibit held in connection with the Convention, May 4-8, in Miami Beach. The automatic buckle switch, located in the film path near the lower loop, shuts off the camera motor at the end of each film, or whenever the film jams. The switch is reset automatically when the film is placed through the sprocket rollers. The automatic cutoff is especially useful when the camera is used in a sound blimp. The motor cable catch lock automatically engages and locks the power supply cord to the camera plug-in receptacle to prevent accidental disconnection.

The premiere of the Studio Varotal Zoom Lens, developed jointly by Taylor, Taylor & Hobson Ltd., Stoughton St., Leicester, Eng., and the British Broadcasting Co., took place on December 25, 1958, when the lens was used by B.B.C. in broadcasting the Queen's speech. (The lens is described in a paper by Gordon Henry Cook, "Television zoom lenses," in the January 1959 *Journal*.) The lens was designed to perform the same function within the studio that an earlier lens, called the Outside Broadcast Varotal, was designed to accomplish outside the studio, that is, to make gradual changes between panoramic views and magnified close-ups without losing any quality of definition.

The camera controls for the lens used during the Queen's Broadcast were specially developed by the Engineering Division of B.B.C. The lens is operated by a capstan on the right-hand side of the camera. This rotates for focusing and slides backwards and forwards for zooming, enabling the cameraman to perform the whole operation with one hand.

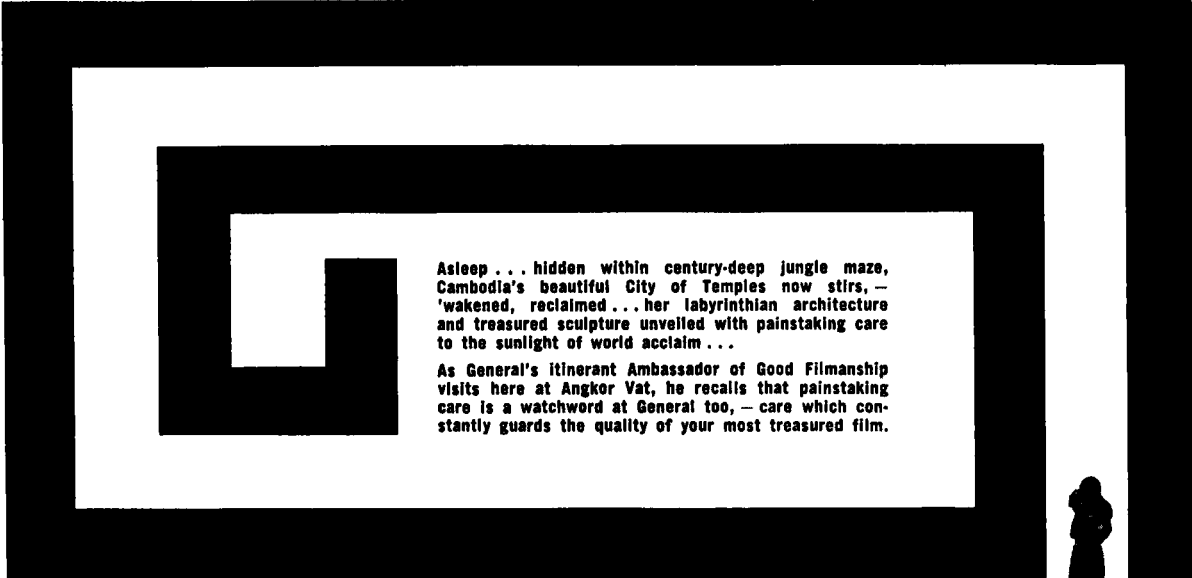
Representative in the United States for Taylor, Taylor & Hobson is Albion Optical Co., 1410 N. Van Ness Ave., Hollywood 28.



The Bolsey-8, a miniature 8mm camera "smaller than a king-size pack of cigarettes," has been announced by Bolsey-Delmonico, 42-24 Orchard St., Long Island City, N.Y. Measuring 3 1/2 by 1 1/2 in., the camera weighs 12 oz when fully loaded with 25 ft of single 8mm film in the magazine. Designed for practically fool-proof operation, one full winding of the key provides from 8 ft to 10 ft at 16 frames/sec, or for single-frame exposures for still pictures by rotating the exposure button from M to S. Variable shutter speeds allow exposure times ranging from 1/50 sec to 1/600 sec.

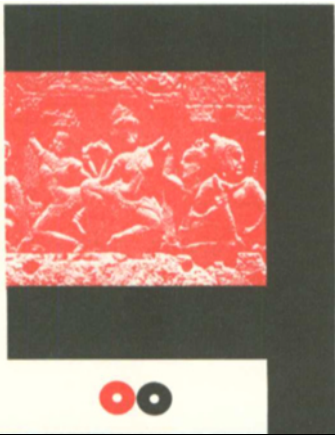
The inventor of the tiny instrument, and President of Bolsey Research and Development Corp., 11 W. 57 St., New York 19, is Jacques Bolsey, an early member of the Society who, at one time, resided in Switzerland and acted as the Society's European correspondent.

The Perfectone Model EP6A Portable Magnetic Recorder is a recent development of Produits Perfectone S.A., Eienne (Bern), Switzerland, designed for professional recording on 1/4-in. magnetic tape at a speed of 7 1/2 in./sec where no power



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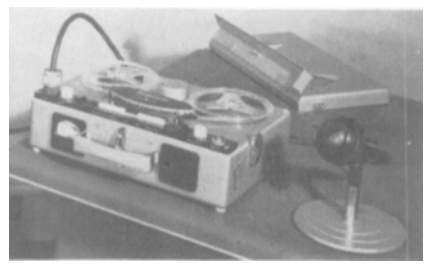
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supply is available. Transistorized circuits permit the overall dimensions to be kept to 12 by 6 by 2½ in. The recorder can be used in conjunction with a blimped Camerette camera with Pan-Cinor zoom lens.

A synchronizing signal, generated by the camera motor, is recorded on the magnetic tape. In transfer to perforated magnetic film, this signal is amplified to drive the motor of the re-recorder, thus holding the soundtrack in synchronism with the picture. The 12-v camera motor embodies a transistorized type of feedback speed control and a device for generating the 100-cycle synchronizing signal. The motor and its attachment fit on the Camerette camera inside the standard blimp.

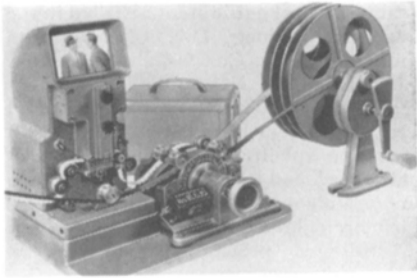
The recorder itself is driven by 12 elements of storage batteries contained inside the recorder; they will run for 17 hr continuously, and can be recharged up to 400 times. Power consumption is 4 w. Data provided by the Swiss Post Office authorities and by the Commission Supérieure Technique of France give the following characteristics: signal-to-noise ratio -55 db; harmonic distortion at 100% modulation better than 2.5%; peak-to-peak speed variation not exceeding 0.15%; wow/rms value better than 0.08%; flutter/rms value better than 0.06%.

On replay, the full width of the tape can be scanned, but since the synchronizing signals are in push-pull, they cancel out in reproduction. For transfer to perforated magnetic or optical film, the push-pull signals are fed into a synchronous amplifier where they are first amplified, then through a flywheel circuit converted to single-phase a-c and finally into 3-phase 220 v. The output of the power amplifier is 150 w, adequate for driving the motor of an RCA PM66 re-recording channel. For re-recorders with higher power requirements, a synchronous amplifier with a total output of 500 w, with 1000-w starting peak, would be used.

The Perfectone equipment, which will be on display at Booth 19 in the Equipment Exhibit at the 85th SMPTE Convention in Miami Beach, is represented in the U.S. by Benjamin Berg Co., 1410 N. Van Ness Ave., Hollywood 28.

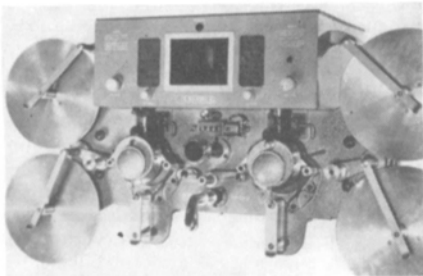
The Magniola line of 16mm double magnetic sound editors has been announced by S.O.S. Cinema Supply Corp., 602 W. 52 St., New York 19. Features include 3 by 4-in. picture, built-in cue marker, frame and footage counters, 2-gang synchronizer with magnetic soundhead and amplifier and speaker unit and automatic adjustment for shrunken or unshrunken film stock. It is priced at \$450.00. The Deluxe model, designed for single-system editing with

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magnetic soundtrack, has two magnetic heads, one for single system and both together for double-system sound. This model is priced at \$520.00.

The firm has also announced a Junior Tripod featuring professional grooved legs for rigidity, frontal star knob threading and curved aluminum support locks. It is priced at \$145.00.



The Editola Film Editing Machine is manufactured in England by the Photographic Electrical Co., Ltd., 71 Dean St., London W1. Picture and sound are reproduced in proximity, in order to give the effect of auditorium viewing. Virtual image size of the picture is 5 by 3½ in. Either optical or magnetic tracks can be reproduced. Features of this equipment include separate controls for picture light and sound, retractable magnetic head to save wear while optical track is being run, desynchronizing clutch to enable the picture to be run independently of the sound, footage counter with single-picture indicator, and constant-speed electric motor. The machine may be stopped within a frame. Either combined picture and sound or separate picture and sound may be run, also, with slight alteration, 17.5mm soundtrack. Accessibility to both film apertures is claimed as another feature permitting greater accuracy in making or erasing indication marks on the film.

A portable, plastic-encased pump and filter unit has been announced by Oscar Fisher Co., Newburgh, N.Y. The unit is said to remove all particulate insoluble matter from 5 microns up and including some from 5 microns down. The solution leaves the filter at the rate of 10 gal/min. The filter is rated at 125-psi maximum operating pressure at 120 F. The pump is rated at 50 lb. pressure and 12 gal/min. The unit operates on 110-v or 220-v 60-c

A newly styled and lower-priced 16mm sound motion-picture projector, the Film-O-Sound 384A, has been announced by Bell & Howell, 7100 McCormick Rd., Chicago 45. The new projector has a custom-built 5 by 7-in. oval speaker permanently built into the front of the projector. Features include simplified operation with no clutch

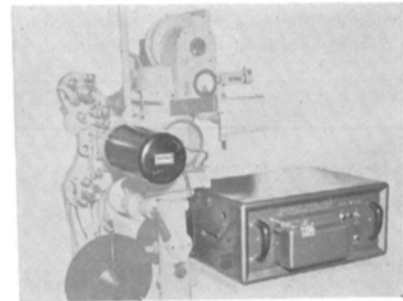
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or reverse, and a new rotary dial control for lamp and blower. It is priced at \$459.95.

Bell & Howell has also announced the 390TA Perpetua, a three-lens turret model 8mm electric eye camera priced at \$129.95. The system does not require manual setting and is designed to compensate automatically for indoor or outdoor color film.



The Elite 8, an 8mm sound projector, of Norwegian manufacture, which provides for recording a magnetic sound stripe on the film, has been announced by Tandberg of America Inc., 10 E. 52 St., New York 22. The projector operates at two speeds, 16 and 24 frames/sec. It has a newly designed

high-intensity, low-voltage lamp and uses an  $f/1.5$  lens. The recorder has a built-in amplifier, 6-in. loudspeaker and high-fidelity magnetic soundhead. Provision is also made for connecting the amplifier output to an external loudspeaker and high-fidelity magnetic soundhead. Provision is also made for connecting the amplifier output to an external loudspeaker or sound system. The projector is priced at \$398.00

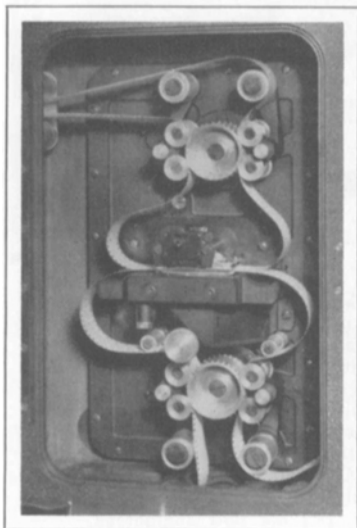
The MDC Model 100-1 Film Transport, featuring pin location of the film to within  $\pm 0.0005$  in. longitudinal and transverse accuracy, has been announced by Mast Development Co., 2212 E. 12 St., Davenport, Ia. Features include two speeds and single-frame operation in forward or reverse directions. It is announced as built primarily to replace the standard head of the Model C Recordak Film Reader but is designed to be adapted to other precision projection applications.

A prototype of a compatible stereophonic sound system was demonstrated by Motorola Inc., 4545 W. Augusta Blvd., Chicago 51, at Home Furnishings Show held at the Merchandise Mart, Chicago, during January. Viewers watched a 15-minute segment of a taped show and heard the corresponding sound first monaurally and then binaurally with the sound coming from two separate speaker cabinets, with the difference in sound being "immediately evident," the announcement stated. FM multiplexing techniques are used in constructing the sound system.

Quality-control equipment installed in the Magnetic Products Div. of Minnesota Mining and Mfg. Co., 900 Bush Ave., St. Paul 6, Minn., is expected to reduce greatly the number of field rejections of video tape. The equipment includes a video-tape quality control machine specially developed by CBS-TV, and also two Ampex Videotape recorders, with space for four more. Three electronics engineers and six assistants provide around-the-clock quality-control service.

A method of magnetic writing with an electron beam is described by the inventor, Ludwig Mayer, in an article in the October 1958 issue of the Journal of Applied Physics (pp. 1454-1456). The method is based on a thermal magnetic recording method called Curie-point writing. When a suitable pre-magnetized magnetic film is set up as an anode in a cathode-ray tube-like device, a focused electron beam heats the film in the areas where electrons impinged. If the dissipation of the electron beam is high enough to raise the temperature above the Curie point or any suitable transition temperature, the areas of the magnetic film heated by the electronic beam become non-magnetic. Traces of reversed magnetization have been recorded on MnBi films. Practical application of this method, with writing speeds between  $10^6$  and  $10^8$  bits/sec is possible, the article states, with increased speed possible if finer-grained magnetic films can be developed.

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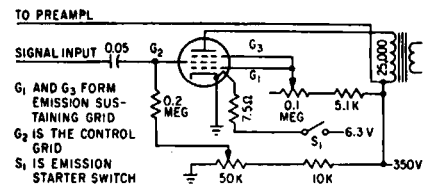
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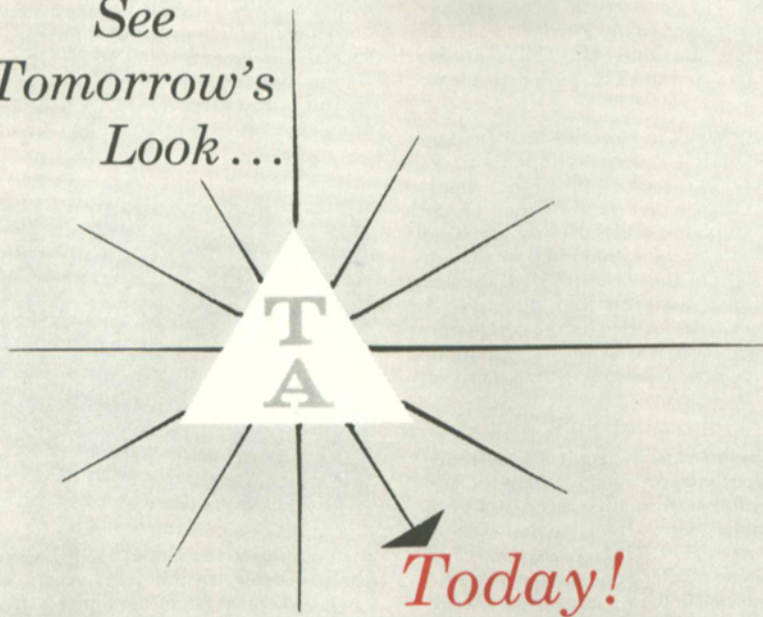
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A cold cathode tube, consisting essentially of a thin layer of magnesium oxide deposited on a nickel sleeve, has been announced jointly by the Army Signal Corps Research and Development Laboratory and Tung-Sol Electric Inc., 95 Eighth Ave., Newark 4, N.J. The cold cathode, based upon an electron emission phenomenon discovered at ASCRDL during a study on the field-enhanced secondary emission from MgO, is believed to be adaptable to almost all types of electron tubes, including TV screens, military communications equipment and industrial uses. Use of a pre-production cold cathode as an audio output amplifier has been demonstrated (see circuit above). The new tube is distinguished by a blue, luminescent glow (as opposed to the red glow of the hot cathode) and uses less than one-tenth the power of a standard tube. Laboratory life tests on the cold cathode indicate indefinite life. One cold cathode in a test socket emitted for over 14,000 hours with no apparent deterioration.

Theater-type television in a circular or semicircular sports arena with a seating capacity of 20,000 is a project of Giantview Television Network, 901 Livernois, Ferndale 20, Mich. Four lightweight motion-picture screens are suspended over the center ring of the arena in a hollow box for-

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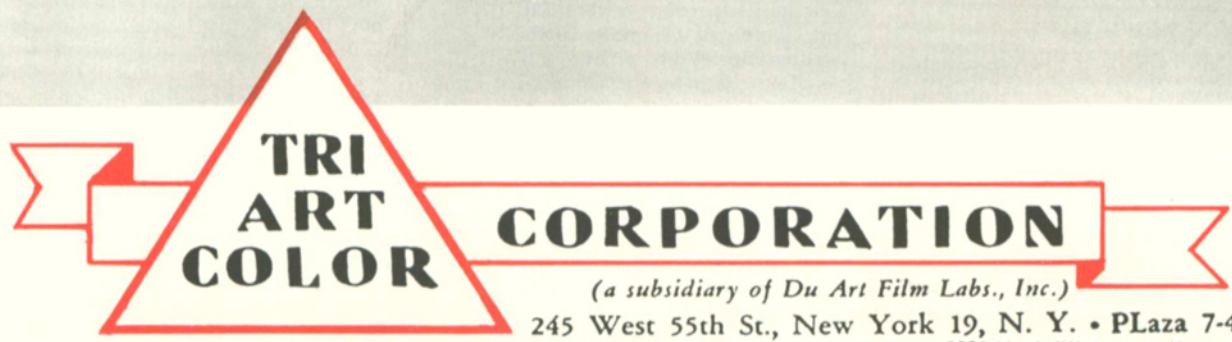
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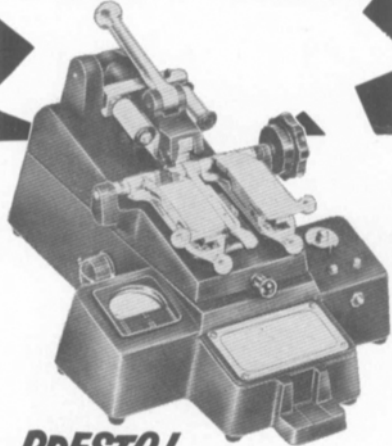


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mation. The corners of the frames of the screens are tied together with light twine. Each screen is served by a mobile television projector placed in a separate quadrant of the arena. The four-screen technique has recently been used in the Providence, R. I., Auditorium; the Ohio State University St. John Arena; and the Toledo Sports Arena.

**Symphony Week in Detroit** was opened by a closed-circuit TV presentation of a backstage recording session presented simultaneously with a live performance of the Detroit Symphony orchestra onstage. Two motion-picture screens mounted to the left and the right of the orchestra shell showed the recording engineers and directors. A third camera was focused on the conductor. The presentation was arranged by Giant-view Television Network, 901 Livernois, Ferndale 20, Mich.

**A new line of closed-circuit TV systems**, consisting of vidicon camera, monitor and control unit, has been announced by Industrial Products Div., International Tel. & Tel. Corp., 15191 Bledsoe St., San Fernando, Calif. An electronic light compensator is incorporated in the camera. Accessories include remote controls, explosion-proof and weather-proof housings, distribution amplifiers and multiple camera switches. The firm announced that its application engineers will adapt the systems to specific requirements.

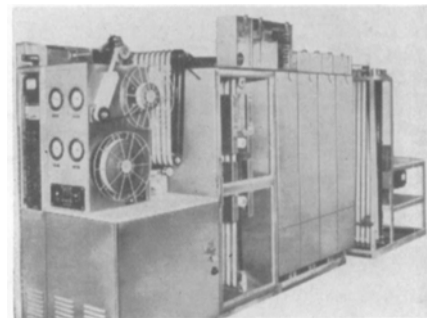
**A color processing laboratory** has been opened in Panama City, Panama, bringing to 13 the number of foreign laboratories opened by Eastman Kodak for processing Kodachrome film. The new laboratory will serve northern and western countries of South America, and parts of Central America and the West Indies.

Other Kodak color processing laboratories outside the United States are located in Mexico City; Toronto; Harrow, England; Sevan, France; Stuttgart, Germany; Lausanne, Switzerland; Milan, Italy; Johannesburg, South Africa; Bombay, India; Melbourne, Australia; Manila, Philippine Islands, and Honolulu, Hawaii.

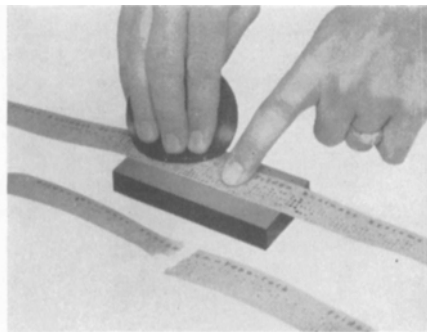
**A symposium on cinefluorography** was held at the University of Rochester Strong Memorial Hospital, Rochester, N. Y., Nov. 14-15, 1958. Among scientists who discussed various aspects of the technique of making x-ray motion pictures were George M. Corney of Kodak Research Laboratories; Frederick M. O'Brien, Jr., of Kodak's Apparatus and Optical Div.; Rudolf Kingslake, Director of Optical Design; and Gordon A. Chambers of the Motion Picture Film Dept. Among subjects discussed were films and developers, recording cameras, lenses and equipment for film printing and duplicating.

**Purchase of Times Facsimile Corp.**, a subsidiary of the New York Times Co., by Litton Industries of Beverly Hills, Calif., has been announced. The name will not be changed. W. Preston Corderman, a Vice-President of Litton, will become President of the Times Facsimile division. Austin G. Cooley, Executive Vice-President of Times

Facsimile will continue in that capacity. No personnel changes are planned. The Times Facsimile service dates back to 1935. In addition to facsimile equipment, the company has produced sonar recorders, chronometers, telemetering equipment and special instruments utilizing high-precision timing instruments. A system for transmitting x-ray films over telephone lines is scheduled for early production.



**A new model 16/35mm black-and-white film processor**, an improved version of the FA-100M, has been announced by Hi-Speed Equipment Inc., 73 Pond St., Waltham 54, Mass. Operated in daylight, the developer is reported to have a speed of 65 ft/min negative and 135 ft/min positive, with guaranteed gamma curves. Processing is done by open sprays. The impingement drier has been designed to provide full view of the drying operation. The equipment is of modular design and is 12 ft long, 2½ ft wide and 6 ft high. Price varies according to equipment but approximate price for a machine with four processing stations is \$36,000. The unit is supplied with a minimum of three processing stations, or it can be supplied with as many as may be required.

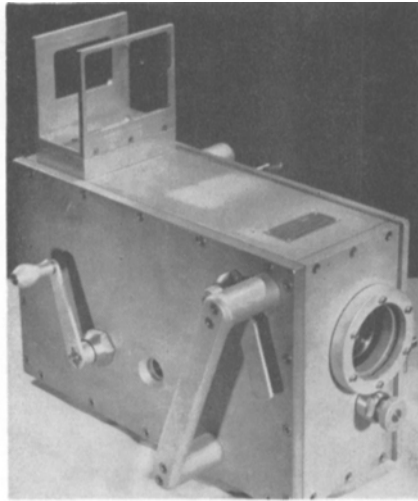


**Splicing kit Model A 4809**, made especially for perforated programming paper, aluminum, Mylar or other perforated tapes, has been announced by Unicorn Engineering Corp., 1040 North McCadden Place, Hollywood 38. Basically, the splicer consists of a small metal block with a row of small pins which fit into the feed holes of either the standard five- or eight-hole tapes. The tape's two broken ends are aligned on the metal block by the feed hole pins, pushed down and smoothed out, and a short piece of adhesive material with punched holes is placed over the joined ends. Overlapping splices may be cemented. The kit is priced at \$10.00.

**Planotype** is a new plastic letter made by Planoscope Corp. and distributed by Camera Equipment Co., Inc., 315 West 43 St., New York 36, for the photographic and motion-picture industries. It is used for motion-picture titling, TV slides, and in artwork for slide films. The letters come on an aluminum sheet, 12 by 15-in., and they range in size from  $\frac{3}{8}$  to  $1\frac{1}{2}$  in. They are available in a number of type designs. Normal temperature changes and amounts of moisture do not affect the plastic. The letters have beveled edges to keep them fitted to the artwork surface, yet they can be lifted and stored and re-used repeatedly. Planotype is now available as an opaque letter in black, white and red; as a transparency, in blue, red, green and yellow.

The **Craig Pro 16mm film viewer**, a product of Kalart Co., Plainville, Conn., is designed for heavy-duty use. Features include a 4 by 6-in. viewing screen and optical system to minimize eye fatigue, screen illumination of 20 ft-c, and coated optics which include a 3-element  $f/2.8$  projection lens, condenser lens and 4-sided rotating prism shutter. Light source is a 75-w projection lamp. The price is \$89.50.

**Rubber Properties for Stage and Screen** is a brief, illustrated article in *Rubber Developments*, Vol. 11, no. 4, Winter, 1958. It is available at no charge by writing to: Natural Rubber Bureau, 1631 K St., N. W., Washington 6, D. C.

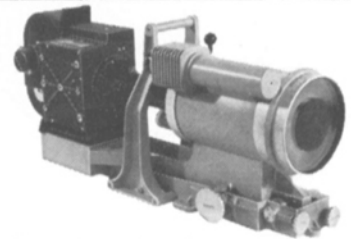


An **underwater housing** designed for use with the Kodak K-100 Camera has been announced by Camera Equipment Co., 315 W. 43 St., New York 36. The housing accommodates a 10mm  $f/1.8$  fixed-focus Angenieux lens. The iris can be controlled under water. An open sight viewfinder shows 10-mm field of view. Dimensions of the housing are  $12\frac{1}{2}$  by  $9\frac{1}{2}$  by  $12\frac{1}{2}$  in. Camera and housing together weigh 30 lb. Designed to withstand water pressure at a depth of 75 ft an accessory pressure valve is available to permit use at depths down to 175 ft.

**ZOOMAR**

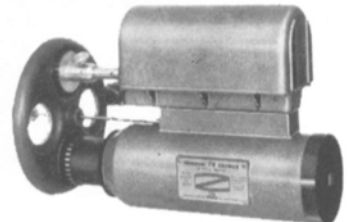
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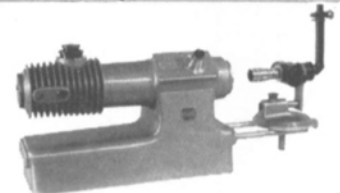
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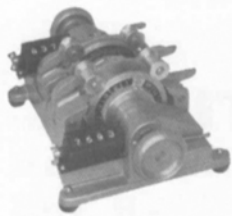
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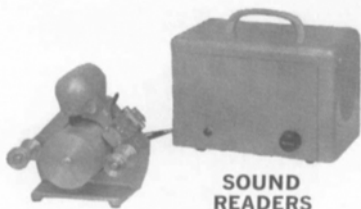
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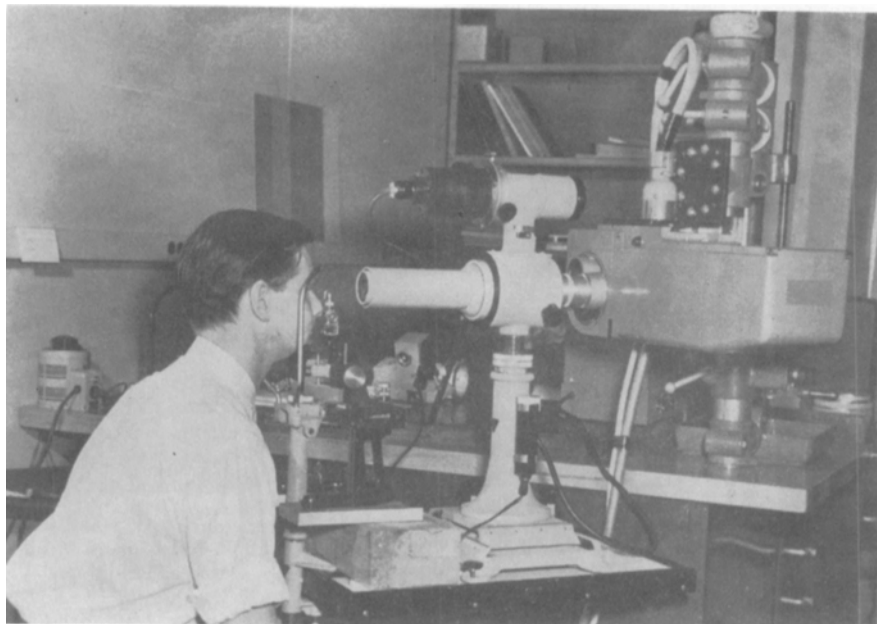


PICTURE  
AND  
SOUND  
EDITORS

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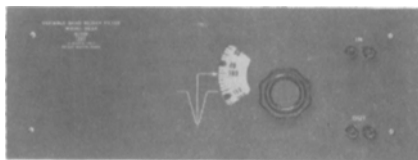


**MOVIOLA**  
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A field-sequential television system developed by CBS Laboratories, Stamford, Conn., for use in medical research, was demonstrated at the First Annual Conference on Television in Medical Education at the National Institutes of Health, Bethesda, Md. A color motion picture was shown of the back of a living, sighted human eye. The TV system, combined with

specially developed equipment, is expected to make possible advanced diagnostic techniques in studying ailments of the eye and the brain. The camera used in the system is more sensitive to light than the human eye, making possible detailed studies that could not otherwise be undertaken because of danger of tissue damage resulting from bright lights.



The BE6 Band Elimination Filter has been announced by Allison Laboratories Inc., 14185 Skyline Drive, La Puente, Calif. This is a continuously variable filter covering the range from 20 c to 20,000 c in passive network form. It has a direct reading dial and is tuned with one knob. It can be used to eliminate one frequency in measuring circuits where hum is interfering with normal measurements, or where the resonant response of an accelerometer prevents analysis of other frequencies present, or where it is desired to measure the distortion and hum present in an amplifier while eliminating the fundamental test frequency. It is priced at \$385.00.

A lease plan for television studio equipment has been announced by the Technical Products Dept., General Electric Co., Electronics Park, Syracuse, N. Y. Under this plan studios may rent equipment on a monthly basis over a five-year period. Minimum value of equipment covered under the monthly lease is \$5000.00. As new equipment is made available it may be substituted for the equipment leased originally on an option-to-replace arrangement. Monthly rates are to be adjusted accordingly.

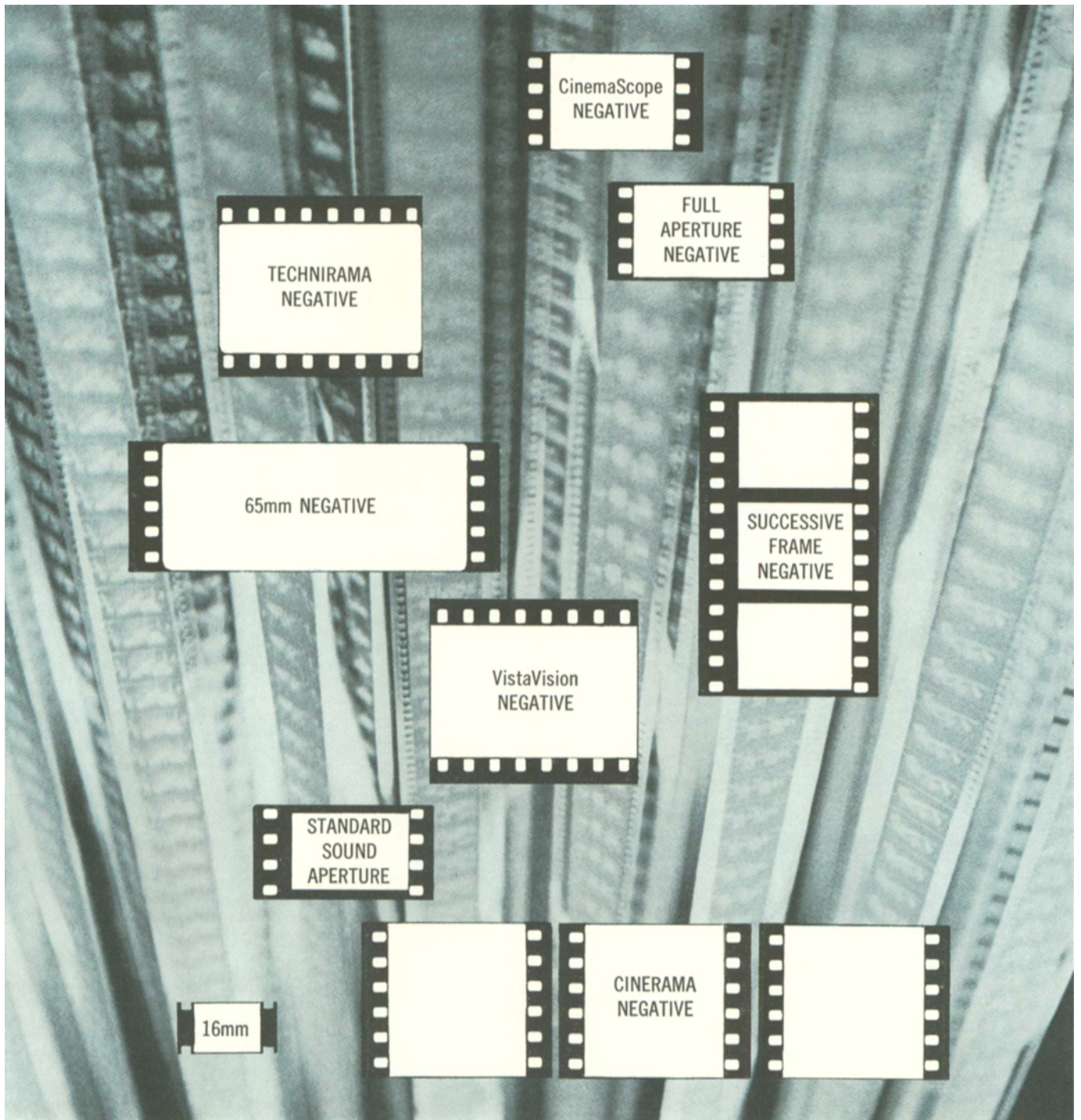
Color Television, a technical training manual published by Radio Corp. of America, is intended for use in planning

operating and maintaining color TV broadcasting stations. Eighth in a series of technical books, the manual first reviews the basic principles of color and then covers such areas as equipment, planning a color TV system, integration of color and monochrome equipment, transmitter adjustment, color tape recorder and microwave relay and other subjects of theoretical and practical interest. The book is priced at \$10.00. In addition to being made publicly available, it will be used as a textbook for RCA's technical training programs.

A ground weather radar system that enables TV stations to broadcast "pictures" of approaching storms as far away as 150 miles has been developed by Radio Corp. of America. The system's transmitter sends a high-power, rapidly pulsed signal to a disk-shaped antenna, which rotates 360° at 15 rpm within its protective housing, capped by a Plexiglas radome. When the signal encounters a storm or other weather target, some of the transmitted energy is reflected back to the system's receiver. The electronic circuit measures the length of time for the signal to make the round trip, and the data are pictorially displayed on the indicator screen in contour form, showing the storm core and areas of heaviest rainfall.

Through the use of a standard RCA studio vidicon film camera, the radar scope presentation of a storm may be transmitted to the TV station's viewers, with the radar "picture" superimposed on a map of the area for orientation.

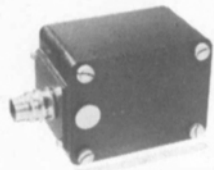
Lens formula data problems may be solved by a system of graphs, charts and



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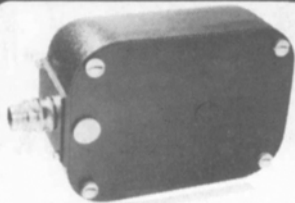
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dial-calculators called Keemag, a trademark for these aids developed by Joseph D. Brubaker, Photographic Design Engineer, 949 Sherman Ave., Evanston, Ill. Keemag (magnification is the key) is described in a folder as a system of pre-computed lens formula data of universal application, based upon ten factors affecting the practical use of photographic lenses at working distances less than 20 times their focal length, and at corresponding magnifications (image/object size ratios) of 1/20th to 20X.

**Solid optical glass filters** are described in a recent folder of The Ednalite Optical Co., Inc., 200 North Water St., Peckskill, N. Y. Besides describing precision characteristics and photographic advantages, the folder illustrates some of the 55 operations and inspections performed for the color glass filters.

**National Camera Repair School** has issued a 56-page booklet, *Open Door to Success*, which describes the training offered by NCRS, Box 174DS, Englewood, Colo. It is replete with testimonials and has outlines of all the lesson texts.

**Robert W. King and Leonard H. Reed** have been added to the staff of Traid Corp., 17136 Ventura Blvd., Encino, Calif. Both men are specialists in photographic instrumentation systems. Mr. Reed has accepted the post of Application and Service Engineer. Mr. King will specialize in the development of new airborne instrumentation systems.

A "how-to-do-it" folder on **tape splicing** is offered by Minnesota Mining and Mfg. Co., Dept. M8-340, St. Paul 6, Minn. A series of drawings shows how to cut tape, butt the edges together and what happens if the wrong angle is used. Tips on editing and storing are included.

**Planning and costs of closed-circuit TV programs** are covered in a 12-page booklet, issued by Giantview Television Network, 901 Livernois, Ferndale 20, Mich.

**Communications Productions Inc.** has opened offices at 1352 Beacon St., Brookline, Mass. The firm offers facilities for production and presentation of closed-circuit broadcasts.

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**Electronic Engineer.** Television Major, B.S.E.E., age 28, vet, 4 yrs military electronics and radar and 1 yr TV experience, specializing in broadcasting and recording. Knowledge of color and microwave systems. Competent in magnetic, photographic and kinescope recording. Thesis written on magnetic video tape recorders. Desires position in motion-picture sound or TV studio engineering. Civilian or military projects. Foreign or domestic assignments. Fluent in German. Excellent references. Available June 5, 1959. Andis Lepnis, 5401 So. Ellis Ave., Chicago 15, Ill.

**Chemical Engineer.** B.Ch.E. Clarkson College of Technology, Potsdam, N.Y., Sept. 1958. Desire position in production or pilot plant. Write: Robert H. Cleveland, 732 Parsons Rd., Ridge-wood, N.J.

**Motion-Picture Engineer.** 25 yrs responsible positions in large organizations. Expert in all technical phases motion-picture laboratory color or B&W. 2 yrs as technical director and sales engineer for representative of well-known motion-picture equipment. Motion-picture consultant to U.S. Govt. agencies in Washington. Will accept responsible position supervising laboratory operations in management, quality control, install new laboratories, etc., or as technical sales representative for motion-picture equipment. Will consider most sections of U.S. or certain overseas assignments. Excellent knowledge of three languages. U.S. citizen. Write: E.C.C., First Floor, 219-47 74th Ave., Bayside 64, L.I., N.Y.

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