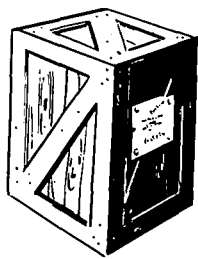


new products

(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 first bilingual drive-in theater in the world (and the first drive-in in Europe) opened in Rome last winter. Owned by Loew's Metro, the drive-in has a capacity of 800 cars and covers an area of about 66,000 sq yd. The parking area is divided into 17 ramps. The screen tower is 68 ft high and 125 ft wide and is constructed of reinforced concrete. The screen is tilted 5° and curved on a 755 ft radius. The projector booth is placed on the ninth ramp at a distance of about 450 ft from the screen. An aerial view is shown above.

Most of the sound equipment was installed by Westrex Co., Italy, which designed

and assembled the bilingual equipment. In the bilingual operation, the Italian language sound version is the standard photographic track of the release print and the original language version is a magnetic re-recorded soundtrack on a separate 35mm film.

To reproduce simultaneously the two soundtracks for bilingual transmission, a Westrex R6A photographic reproducer is mechanically interlocked with an R8B magnetic sound reproducer for standard single track reproduction. The viewer can change from one language to another by a turn of a switch on an in-car speaker.

Chroma-Key, an electronic color "process photography" system, is described in the January 1958 issue of *Electronic Age*, published by Radio Corp. of America. Now in use by the National Broadcasting Co. for live television production, the actors perform on a bare stage and the backgrounds are added electronically. The process is based upon patents taken out between 1929 and 1939 by A. N. Goldsmith, a Fellow and a Past-President (1932-34) of this Society.

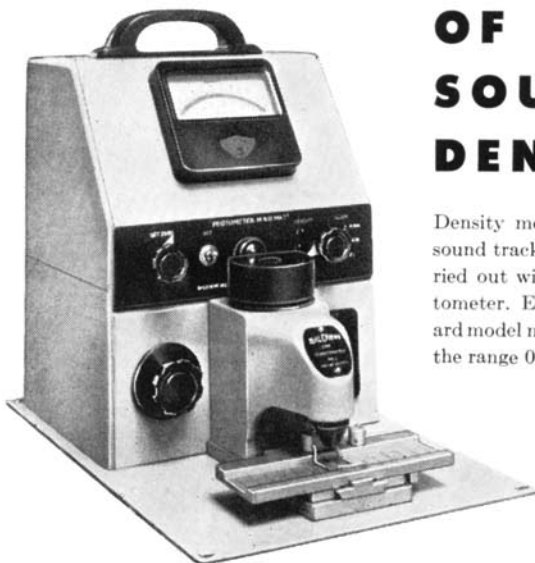
The floor and screen used as a backdrop for the actors are painted blue. The action in front of the screen is picked up by a regular TV camera, the signal going to a special effects amplifier which simultaneously receives the background picture signal from a second camera. A switching signal, or color key, controls the signal composed for transmission. While the live-action camera is scanning the blue of the background screen the other, or background, signal is automatically switched in; when the scanning signal reaches the live actors, the background signal is switched out. Actors cannot wear blue, on penalty of having background switched through that part of them. A third signal can be employed to put a middleground between the foreground and background.

When the live action is inserted within miniature sets, the perspective is controlled by the use of a long-focus lens to magnify the model to correspond with the size of the actors, or a short-focal length lens to reduce the actors to the size of the sets.

The process was brought to its present stage of development by RCA engineers working with the early patents granted Dr. Goldsmith. In this connection, it is interesting to refer to Dr. Goldsmith's ideas as expressed in articles published in the *Journal*, particularly "Theater Television — a General Analysis" in February 1948, pp. 95-121.

At the forthcoming Convention in Hollywood the system and equipment will be described by Frank J. Gaskins of NBC's Color City at Burbank, Calif., where the system has been used increasingly over the past year.

ACCURATE MEASUREMENT OF SOUND TRACK DENSITY



Density measurement of negative and positive sound tracks can be speedily and accurately carried out with the Baldwin Sound Track Densitometer. Easily fitted to a rewind desk, the standard model measures black and white density over the range 0—4.0 using an aperture 0.10" long by 0.02" wide, and colour density over the same range using an aperture 0.10" long by 0.045" wide. All models are supplied with the scanning slit parallel to the film perforation.

Complete, easy-to-read information on the Baldwin Sound Track Densitometer is given in Brochure 117—write now for your copy.

• •



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Whatever your magnetic recording medium—35mm film, $\frac{1}{4}$ " audio tape, or 2" video tape—the new RCA Model 10891 Eraser is the answer to the problem of effectively removing recorded magnetic signals. Several of these feature-packed erasers have already been installed in the studios of major television networks.

See the new RCA Bulk Tape and Film Eraser demonstrated at RCA booth, SMPTE Exhibit, Los Angeles, April 21-25.

Write RCA Film Recording, Dept. D-336, at address below for descriptive folder on RCA Eraser.

Check these important features:

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- **COMPACT**—48" long, 21 $\frac{1}{2}$ " wide, 15" high



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A black-and-white film process for color television has been developed by Bryg, Inc., 324 S. McKean St., Butler, Pa. Based on the principle that in human vision there is less sensitiveness to color detail

than to luminance (black-and-white) brightness details, the system uses a maximum frame size, in either 35mm or 16mm, for the black-and-white component. The other part of the double-frame contains two smaller images, in black-and-white, one filtered red, the other blue. Through electronic matrixing, the green signal is provided in the projected signal.

A technical presentation of the system is scheduled for the Spring Convention in Hollywood by Dr. Adolph Razdow, Vice-President for Engineering, Bryg, Inc.

Operational research and development equipment has been installed, and demonstrated, for some time at WJAC-TV, Channel 6, Johnstown, Pa.

Approximately 100 Ampex VR-1000 magnetic tape recorders are scheduled for delivery by Ampex Corp. before the beginning of Daylight Saving Time in April. Announced as "a major production achievement" by the company, it had previously stated that the backlog of orders could not be filled before November. Recorders have been reported en route to WFIL-TV, Philadelphia; WEAR-TV, Pensacola, Fla.; WOR-TV, New York; KENS, San Antonio, Tex.; WHAS-TV, Louisville, Ky.; and KHJ, Los Angeles. The units consist of a tape console and two racks of electronics with more than 190 tubes. Stations which recently received the recorders are: KING-TV, Seattle; KGW-TV, Portland, Ore.; KRON-TV San Francisco; KPRC-TV, Houston.

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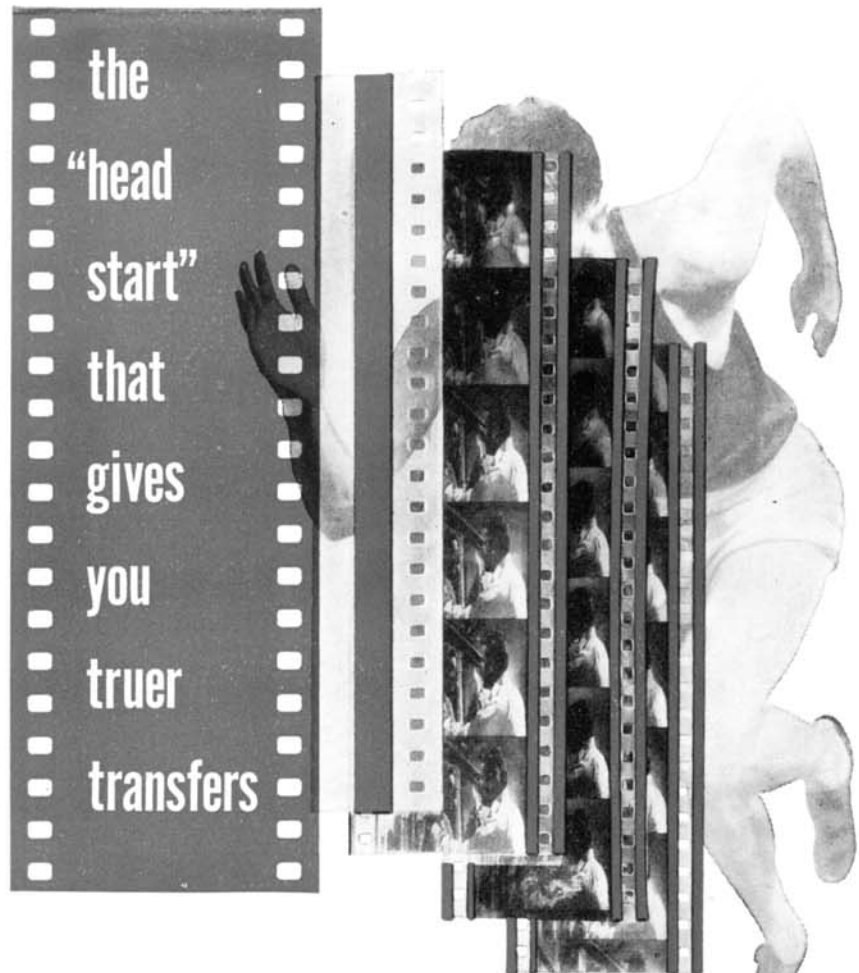
Triad Color Control, a 16mm reversal-additive printing process providing scene-to-scene color correction and control, has been introduced by Southwest Film Laboratories, 3024 Fort Worth Ave., Dallas 11, Tex. Described in a paper presented at the January meeting of the Dallas-Fort Worth Section by Southwest's Vice-President Jack Hopper, the process is designed for the highest possible color control, especially effective for scene-to-scene color balancing. Colors can be subdued or brightened as well as reproduced with exactitude. The entire operation is controlled electronically by punched tape, for effective production of numbers of prints.

A \$2 million dollar color film processing laboratory has been completed by Movielab Color Corp., 619 W. 54 St., New York 19. The plant has been designed to provide a complete range of service in both 16mm and 35mm color, the firm having for some time supplied a large capacity for black-and-white service as one of the country's most important independent film laboratories. Available at the expanded plant are the Movielab Color negative, color intermediate and positive processing, color-balanced additive scene-to-scene Kodachrome printing and "blow-ups" from Kodachrome to 35mm Eastman color negative.

At an Open House on February 11 guests were given a chart indicating ten different color duplicating methods and were given guided tours through the plant including the printing room which features an "electronic brain" for controlling scene-by-scene color balance for both 35mm and 16mm. Much of Movielab's equipment has been designed by the firm's own staff, for example, the Movielab Octette printer which makes eight reduction prints simultaneously with one pass of the 35mm negative through a single aperture.

The new laboratory was designed by the company's staff on which James W. Kaylor is Chief Engineer, and Nicholas Gensinger is Mechanical Superintendent. Saul Jeffee, President, has reported an increased volume of business during the past year and an increase in staff by 40%, with TV commercials, international TV program films and industrial motion pictures supplying an important volume.

Installation of a new Westrex high-fidelity sound recording system reported to be first of its kind in the 16mm film industry in the United States, has been announced by Byron Inc., 1226 Wisconsin Ave., N.W., Washington 7, D.C. The system includes two mixer studios, two narrator studios and a theater recording studio with 16mm and 35mm projection facilities. Recording facilities include two 35mm and two 16mm optical dubbers, two 35mm and four 16mm magnetic dubbers, three 16mm and one 35mm magnetic recorders, 16mm film recorder, ¼-in. tape with Rangertone sync. The 8-input re-recording console has sliding faders, graphic equalizers, effects filters, low and high position filters. The entire system is interlocked for forward or reverse. Other features include looping facilities, high-fidelity monitoring systems and special double-speed transfer system.



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Results of comparative tests of Soundcraft and competitive magnetic film at 1000 cps.	Relative Output Levels:
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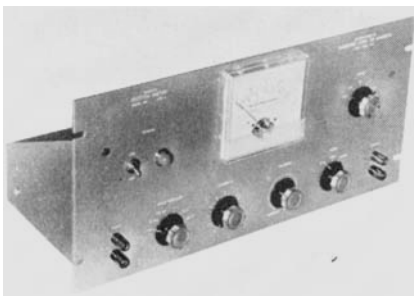
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The **Sellelevision** unit for a system of filmed programming has been brought out by Hallamore Electronics Co., a division of Siegler Corp., 6600 Sunset Blvd., Hollywood. The unit consists of a console which continuously projects slides or motion pictures on an eye-level screen in the upper part of the unit. The pictures, in color or black-and-white, are transmitted from a self-contained projector to the screen by means of three high-reflection mirrors. The system is designed for use in airline terminals, industrial plants, hotels and other commercial establishments. It is priced at \$1475 for the slidefilm model and \$1650 for the motion-picture model.

The **OMD 135 magnetic reproducer** has been announced by Reeves Equipment Corp., 10 E. 52 St., New York 22. A product of Magna-Tech, the reproducer employs a double flywheel system with a mu-metal shield covering head and sound drums. Controls are on one panel, including a microswitch which shuts off the motor when the rewind is completed. Maximum film capacity is 5000 ft of 35mm film. Rewind time is reported to be less than one minute for a 2000-ft reel. Internal connections are made through goldplated AN connectors. Modifications and additions, such as optical units or interlock motors, can be added.

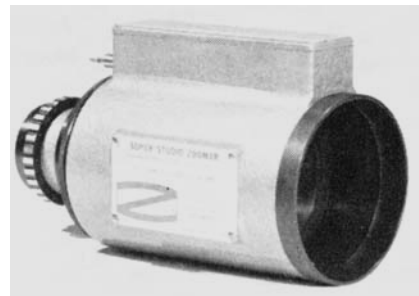


A **flutter meter** designed for visual indication of flutter and wow content of all types of film tape and disk recording and playback equipment has been announced by Amplifier Corp. of America, 398 Broadway, New York 13. Built to IRE standards, the meter features a built-in 3000-c oscillator for recording purposes.

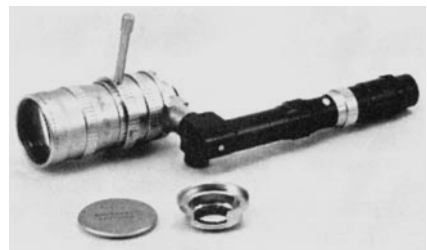
A three-range filter is included to study and isolate flutter and wow components. The ranges are 0.5- to 6-c for wow; 5- to 250-c for flutter; and combined flutter and wow of 0.5 to 250-c. A frequency discriminator is used to demodulate the flutter signals which are then read on a calibrated meter as an rms value of sine-wave flutter components. A built-in limiting amplifier is designed to prevent erroneous readings from amplitude modulation components.

The built-in preamplifier and input attenuator will accept voltages ranging from 1 mv to 100 v. Connection may be made directly across magnetic tape playback heads, or across high-level circuits delivering up to 100 v. Assembled on a standard rack panel, dimensions are 8 3/4 in. high, 19 in. wide and 8 in. deep, with a net weight of 18 lb.

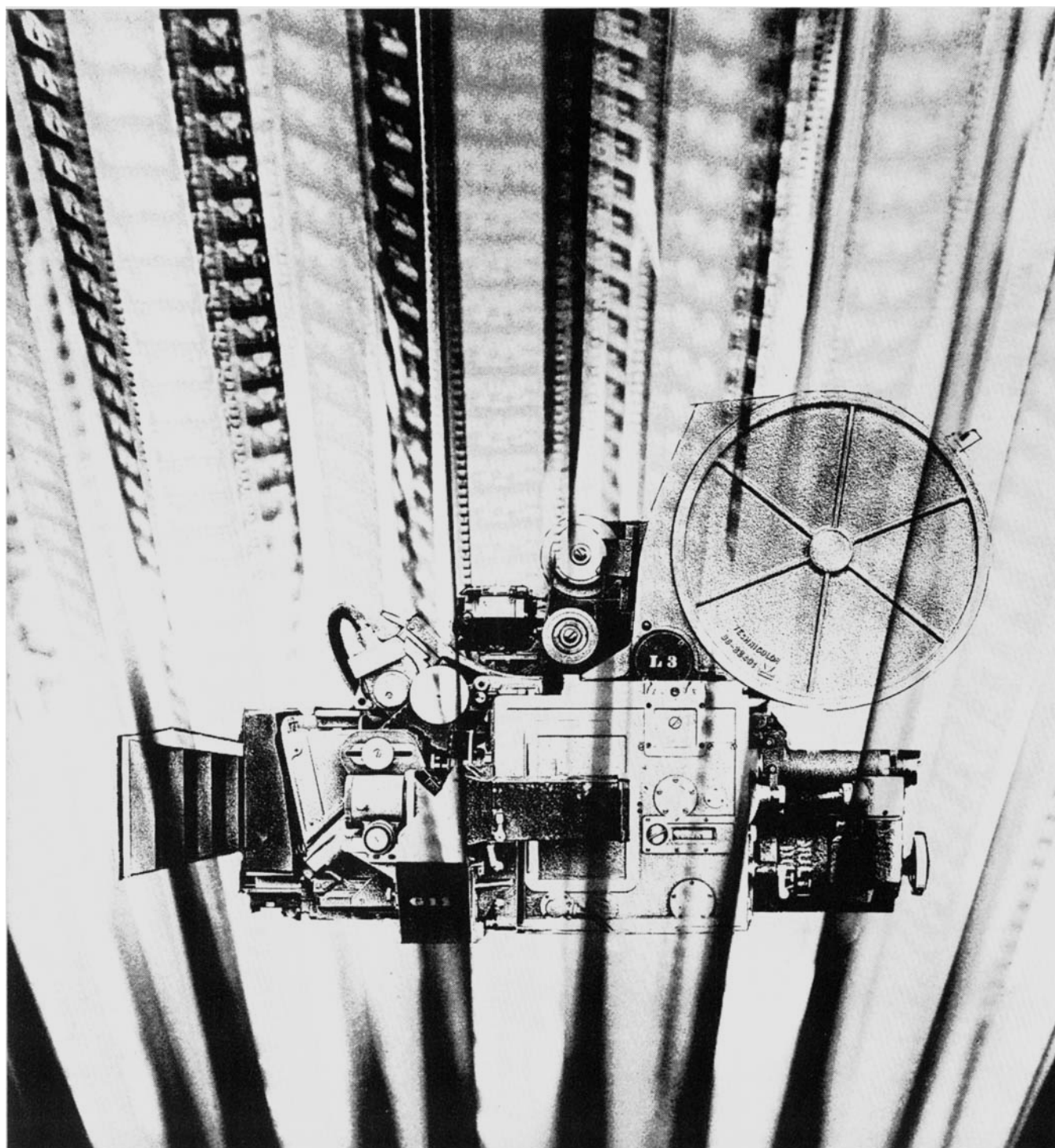
Educational Television Products Division of National Theatre Supply Co. has been appointed national distributor of General Precision Laboratory closed-circuit TV systems for educational institutions. Both companies are subsidiaries of General Precision Equipment Corp.



The **Super Studio Zoomar lens**, introduced by Television Zoomar Corp., 500 Fifth Ave., New York 36, is a further development of the company's Studio Zoomar. The new, 6-lb lens has a range of 55 to 180mm with a 3 1/2 to 1 ratio, color balance and correction laterally and longitudinally and speed increased to f/2.7. It has been designed for ease of interchanging between cameras.



The **Bell & Howell-Angenieux Zoom Lens** for 16mm cameras has a maximum lens opening of f/2.2 and a 4-to-1 range of focal-length variation. Designed for amateur use, the focal length is adjustable from 17mm to 68mm and is equipped with a reflex viewfinder. Priced at \$429.95, it fits all Bell & Howell 16mm cameras, except electric-eye models, and is standard equipment on the 240-Z camera. This camera features automatic threading and is priced at \$579.95. Further information is available from Bell & Howell Co., 7100 McCormick Rd., Chicago 45.



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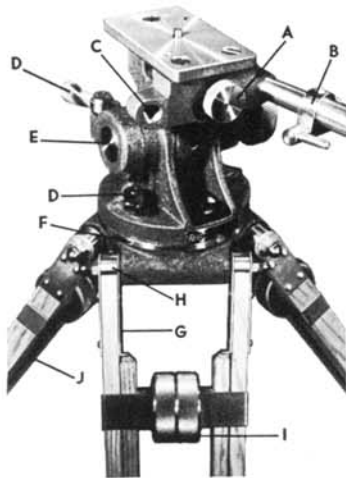
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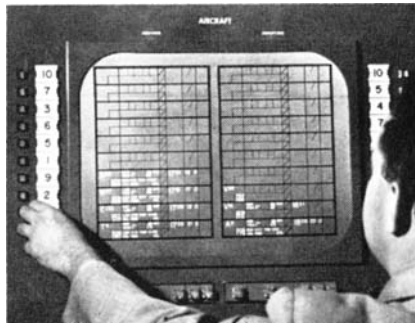
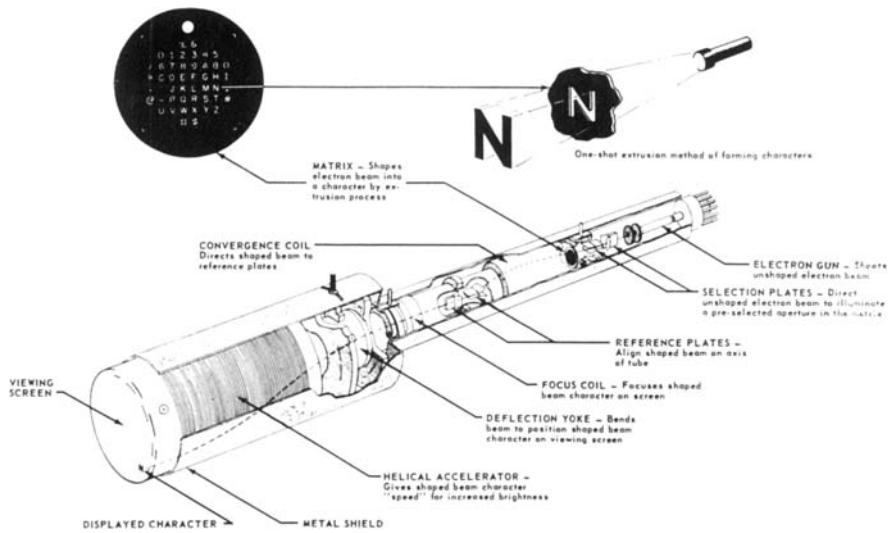


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The Charactron shaped-beam tube, Type C19Q, is a product of Stromberg-Carlson Division of General Dynamics Corp., Rochester 3, N.Y. The tube, which is similar to a TV tube, contains an electron gun which shoots its beams through

minute openings which form the beam into characters as shown in the diagram. A 7-in. tube can display approximately one million characters a minute. The shaped-beam tube has been used in print-out equipment and, among other applications, can be used in air traffic control.

In the traffic control system, information on the various incoming and outgoing flights is displayed by letters, numbers and symbols on the face of the tube (see photograph). The information, which can be shown at the rate of approximately 50,000 characters a second, will be placed on the flight strip through means of a keyboard used by the controller. Other C19Q tubes may be used as situation displays, combining radar "blips" with superimposed letters, numbers and symbols to facilitate the identification of planes.



A 28-lb viewfinder TV camera chain for classroom or studio use has been introduced by General Precision Laboratory Inc., Pleasantville, N.Y. Called GPL Model PD-250, the system consists of a vidicon camera with a 5-in. electronic viewfinder, 4-lens turret and portable or rack-mounted control unit. Equipment for studio installation is also available. Designed for one-man operation, the system incorporates printed camera wiring and silicon diode rectifiers in the electronically regulated power supply. The camera control unit supplies all control voltages, deflection signals, focusing current, intercom and operating power through a single cable which also feeds the video signal from the camera to the control unit for further amplification and distribution. The unit is available in portable housing or for mounting in standard 19-in. relay rack.

Among new equipment announced by Camera Equipment Co., 315 W. 43 St., New York 36, are a Balanced Pan and Tilt Head for Vidicon TV Cameras and a 110-v a-c Synchronous Stop-Motion Motor for the Maurer Camera. The pan and tilt head is spring balanced and features a built-in spirit level, telescoping pan handle and tension adjustment. The motor for the Maurer Camera features d-c braking, forward and reverse switches, continuous operation switches and a hand control switch for single-frame operation.

The second industrial TV training program for distributors of closed-circuit equipment manufactured by Allen B. Du Mont Laboratories, Inc., was held at the Boom Electric Co., 5226 West Grand Ave., Chicago, February 17-20. More than 50 representatives of distributors who have joined the Du Mont chain since August attended the sessions. Thirty-five franchised distributors, covering 119 metropolitan areas in the United States, have been appointed for Du Mont industrial TV equipment.

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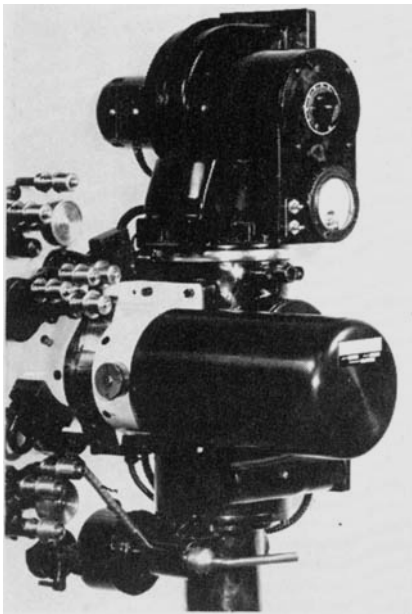
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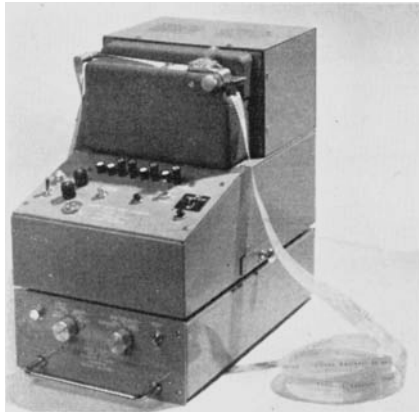
 **GENERAL**
FILM LABORATORIES CORP.

1546 NO. ARGYLE, HOLLYWOOD 28, CALIF. / HO. 2-6171



An automatic shutter for motion-picture printers has been announced by Electronic Systems of Illinois, Inc., 5433 W. Diversey Ave., Chicago 39. Manufactured for use with Bell & Howell printers, Models D and J, the shutter is also supplied with a modified mounting to adapt to the Peterson Printer. The shutter is fully automatic and provides a zero light in addition to the prescribed light intensities. Two types of control systems may be

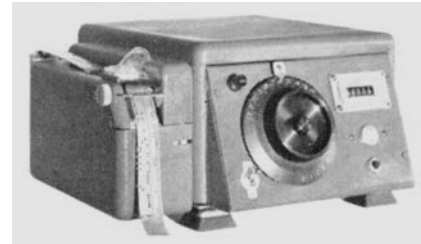
used with no modification of the shutter. One control system uses standard 1-in. paper tape coded to correspond with the Bell & Howell punch tape used on the color additive printer. The other system uses an automatic control panel which stores information for up to 150 scene changes in any one run. If more than 150 scene changes are required the operator may reset the first selector positions as the numerical indicator shows that they have been passed during the run. A full technical paper on the shutter is scheduled for presentation at the forthcoming Spring Convention by Theodore W. Batterman and Mathew Pobog of Electronic Systems.



A Tape Punch and a Tape Duplicator have been introduced by California Technical Industries, Division of Textron Inc.,

1513 Old County Rd., Belmont, Calif. Designed to speed processing of data punched in standard, 1-in. tapes, the new products augment the CTI Tape Reader, a device that presents 80 bits of information at each advance of the tape by simultaneously reading 10 transverse rows of 8 holes each. Conventional $\frac{1}{16}$ -in. hole spacing is employed so that any one of the three units can be adapted to existing equipment.

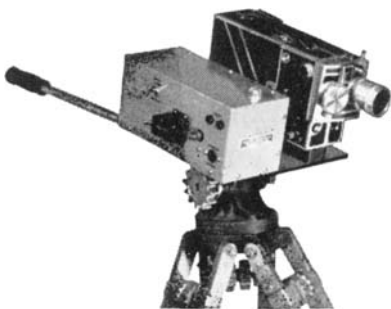
Electrically powered, the CTI Punch allows the operator to set up an 8-hole line on pushbuttons which illuminate when pressed. The line can be changed or corrected before the command to punch is given. The tape advances when punched, and a counter indicates the number of completed lines. The Duplicator automatically reproduces copies of tapes by coordinating the Punch with the Reader. The device, which punches over 900 lines a minute, is useful for making tapes for use at several stations and for editing and revising old tapes. Both units are $9\frac{1}{2}$ in. wide and 16 in. deep. The punch and Duplicator are 11 and $4\frac{1}{4}$ in. high, respectively.



The Dial-Matic Perforator, a self-contained unit using standard 8-hole 1-in. paper tape, is a product of Electronic Systems of Illinois, Inc., 5433 W. Diversey Ave., Chicago 39. Designed to be used with the Company's automatic shutter for motion-picture printers which uses standard binary codes, the unit can be adapted to perforate control tape for any system or control device where paper tape is used.

A portable echo chamber developed in Germany has been introduced by the Professional Dept., Hi-Fi Headquarters, 150 E. 46 St., New York 17. Called the EMT 140, its dimensions are 8 ft 2.4 in. by 1 ft 11.62 in. by 4 ft 3.17 in. It requires a 115-v power supply, has an input level of 1.55-v (program line), an output level of 1.55-v (program line) and a reverberation time between 1.2 and 6 sec. The echo chamber is described as offering a range of between 30 and 12,000 cycles. The chamber has been designed for installation so that several units can be operated next to one another without interference. It is described as made to sell under \$2,000.

The NAVA Membership List and Trade Directory lists 400 audio-visual dealers. Information on types of services offered and available equipment is included. Dealers are listed by geographical locations. The Directory is available without charge to audio-visual users from the National Audio-Visual Assn., Box 337, Fairfax, Va.



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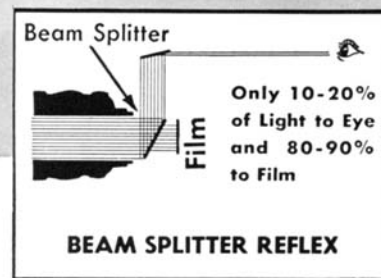
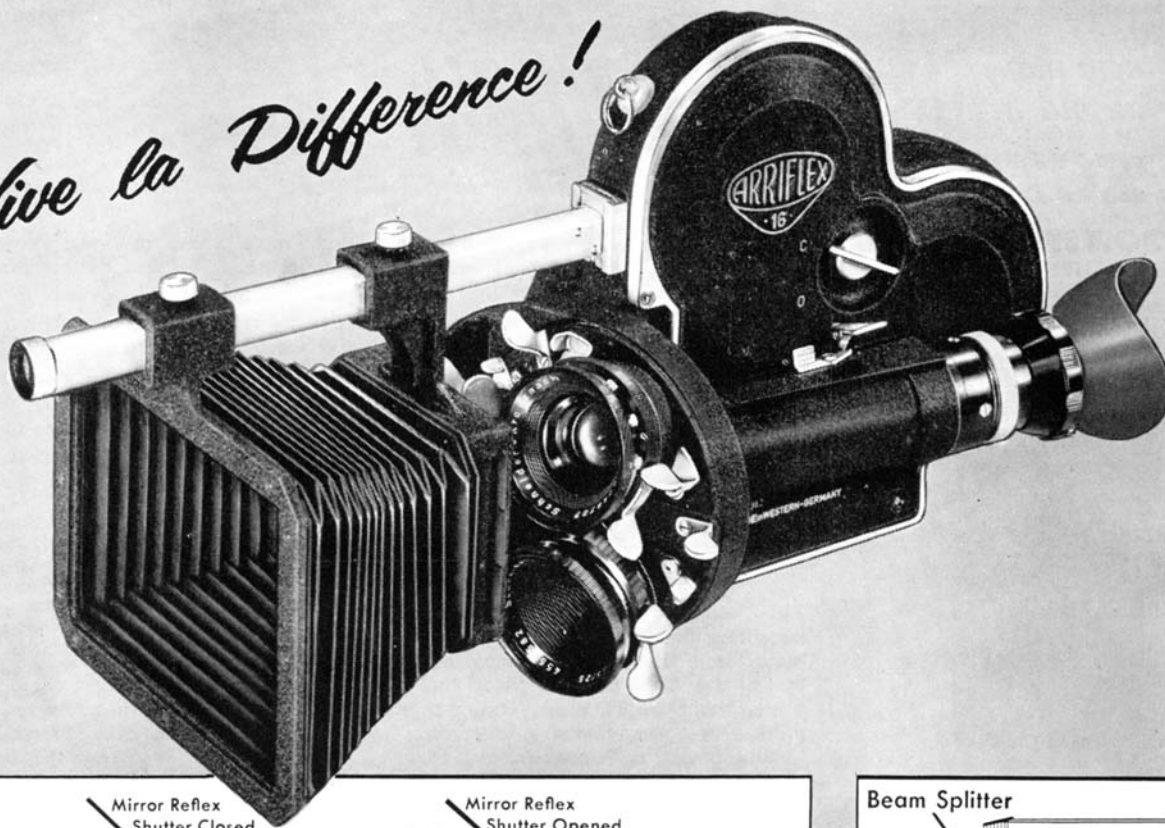
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The Arriflex—designed for the professional—uses the mirror reflex shutter, which of course is a much more costly design.

2. By means of a *beam splitting mirror or prism* which is mounted between lens and film. This reflects some of the light (about 20%) to the eye and transmits the balance to the film.

The disadvantages of this system are:

The light reflected to the eye is so weak that it is difficult to focus or even sight, unless the lens is wide open and the scene brightly illuminated. In dim light, or if the lens is stopped down, the finder image is so weak it is practically useless. But the light going to the finder is taken away from the film, requiring the f stops of the taking lens to be specially adjusted. The beam splitter permanently in the light path, and close to the film plane, frequently accumulates dust and other foreign matter which may ruin the picture.

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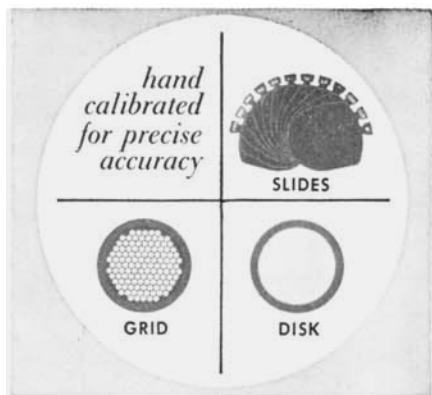
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An ultrasonic recorder, developed to test fuel elements for atomic reactors, has been used to photograph the bones in a living human arm. The technique of bone photography without x-rays is the same as that used in detecting flaws in reactor fuel elements. The recorder was developed at Argonne National Laboratory, P.O. Box 299, Lemont, Ill.

In testing reactor fuels, a fuel element is suspended in a tank of water. An assembly consisting of two crystals, one to transmit

and one to receive ultrasonic waves, traces across it repeatedly in narrow lines in a sawtooth pattern. When a flaw in the fuel element is "caught" between the crystals the waves are absorbed and the flaw appears as a white space on a sheet of electro-sensitive paper attached to the recorder. In bone photography, the same method is used, with the recorder adjusted so that differences between flesh and bone show on the electro-sensitive paper.

The Strobotac is a useful device for measuring the speed of rotating, reciprocating or other cyclic motion, manufactured by General Radio Co., 275 Massachusetts Ave., Cambridge 39, Mass. The machine supplies stroboscopic light which "freezes" rapidly moving parts or processes making possible detailed examination of the action while at full speed. The device has been used in laboratory testing to check on the uniformity of a sprocket drive (Robert O. Gale and John J. Graham, "Use of a motion-picture printer as a sensitometer," *Journal*, Feb., 1958, p. 86).

The George Scherr Co., 200 Lafayette St., New York 12, has announced a Lustrochrome Vernier Caliper made of stainless steel and faced with dull chromium throughout for ease in reading even in poor light. The Shop Vernier Caliper is for measuring outside, inside and depth dimensions up to $5\frac{1}{8}$ in. A double length vernier has been added and a raised edge design is used to protect the chromium surface. The caliper is graduated to $\frac{1}{1000}$ in. on lower scale and $\frac{1}{128}$ in. on upper scale. It is priced at \$23.75.

Kodak Linagraph Direct Print Paper is a new photo-recording paper which provides an immediate visible record of instrumentation test data. The paper has been made to supply data on in-flight missiles within 10 seconds after phenomena under observation take place. Additional information is available from Graphic Reproduction Sales Div., Eastman Kodak Co., Rochester 4, N.Y.

"Kodak Materials for Overhead Projection," is a new Eastman Kodak Co. folder, describing simple photographic procedures by which transparencies can be prepared for use in overhead projectors. The 4-page illustrated leaflet covers such subjects as positive transparencies from line originals on translucent stock, transparencies from originals on opaque stock, negative transparencies, changing the size of an original subject, adding color to transparencies, and making duplicate slides. The leaflet is available without charge from Sales Service Div., Eastman Kodak Co., Rochester 4, N.Y.

Photodrawings, a 12-page Eastman Kodak booklet describing the use of photodrawings for aiding engineering visualization, is of special interest to draftmen, engineers and industry production men. In using this technique, photographs are reproduced on a translucent material on which engineering detail and superimposed sketches can be added. From this master photodrawing, work prints can be made by conventional processes. The booklet contains sections on making the picture negative, equipment and materials needed, making the master photodrawing, direct process reproduction, half-tone methods, continuous tone methods, composite methods, blueprint reproduction and lithographic reproduction. The booklet (P-22) is available at no charge by writing Sales Service Division, Eastman Kodak Co., Rochester 4, N.Y.

Simplex projectors, sound systems and accessories are now manufactured in the plants of General Precision Laboratory, Pleasantville, N.Y. Manufacturing operations of the GPL subsidiary, Simplex Equipment Corp., Bloomfield, N.J., are being suspended March 31, 1958. Simplex headquarters and a number of key personnel are being transferred to Pleasantville.

A new series of National Projector Carbon Bulletins has been announced by National Carbon Co., 30 E. 42 St., New York 17. Issued quarterly, the illustrated bulletins contain operating data, screen illumination tables, characteristics and optics of various types of projector lamps and other information. The bulletins are available without charge to projectionists. Requests should be addressed to the company to the attention of C. G. Ollinger. A ring binder is supplied with the first bulletin.

Fairchild Camera and Instrument Corp., Robbins Lane, Syosset, L.I., N.Y., has integrated its Reconnaissance Systems and Electronics Divisions into a new Defense Products Division. Charles J. O'Donnell has been appointed General Manager of the new division. He was formerly General Manager of the Reconnaissance Systems Division. Raul H. Frye, who headed the Electronics Division, has been named Assistant General Manager in charge of marketing and sales.