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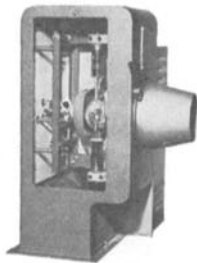
PRODUCTS DIVISION

Special Light Sources for
Audio Visual Applications

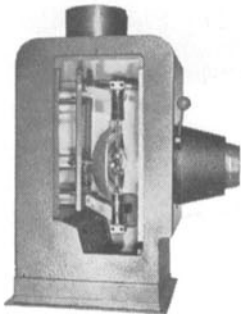
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CX-900 Ideal light source for screening rooms,
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CJX-450
Console version of stand-
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control panel. High in-
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great increase in screen
brightness.

Also Available

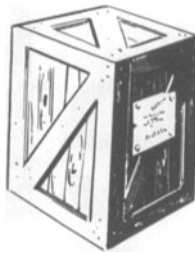
CJX-1000 Provides maximum screen re-
sults for 16mm projector.

Literature on request.
Dealerships available.

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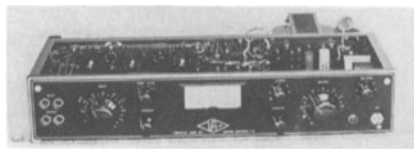
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new products

(and developments)

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



The **Universal Audio 176 Limiting Amplifier** featuring variable compression ratios has been announced by Universal Audio Div., Studio Electronics Corp., 11922 Valerio St., North Hollywood, Calif. The amplifier is designed for recording, broadcasting, sound reinforcement and motion-picture applications. It has four switch-selectable compression ratios ranging from 12:1 to 2:1. The attack time is adjustable by front-panel control from 100 to 1,000 ms. Release time is adjustable from 27 to 527 ms and is independent of the duration and amount of limiting. Separate but identical attenuator controls are provided for input and output. A special feature of the amplifier is a provision for dynamic balancing without external test equipment. An internal signal allows the amplifier to be balanced under dynamic conditions to assure thump-free operation. The unit is priced at \$480.

A **pulse generator** for general laboratory use, designated Model M201, has been announced by PEK Labs Inc., 825 E. Evelyn Ave., Sunnyvale, Calif. The model features output up to 200 pulses/s with all input shapes and a maximum capability of 400 pulses/s. Other features include 50-kW peak output power, output sync pulse, solid state construction and either internal or external mounting of the pulse transformer. The generator can be triggered from a local or remote switch or from an external trigger. Rack mounting or unit construction is available. The M201 is priced at \$220.

A **solid state flutter meter** called the 8100 has been announced by Micom, Inc., 2570 Leghorn St., Mountain View, Calif. 94040. The flutter meter provides meter readout for both drift and flutter and is automatically self-calibrating. The unit can be used for tape transports and operates either from reproduce electronics output or directly from the playback head. It can also be used with phonograph turntables, motion-picture equipment and in-

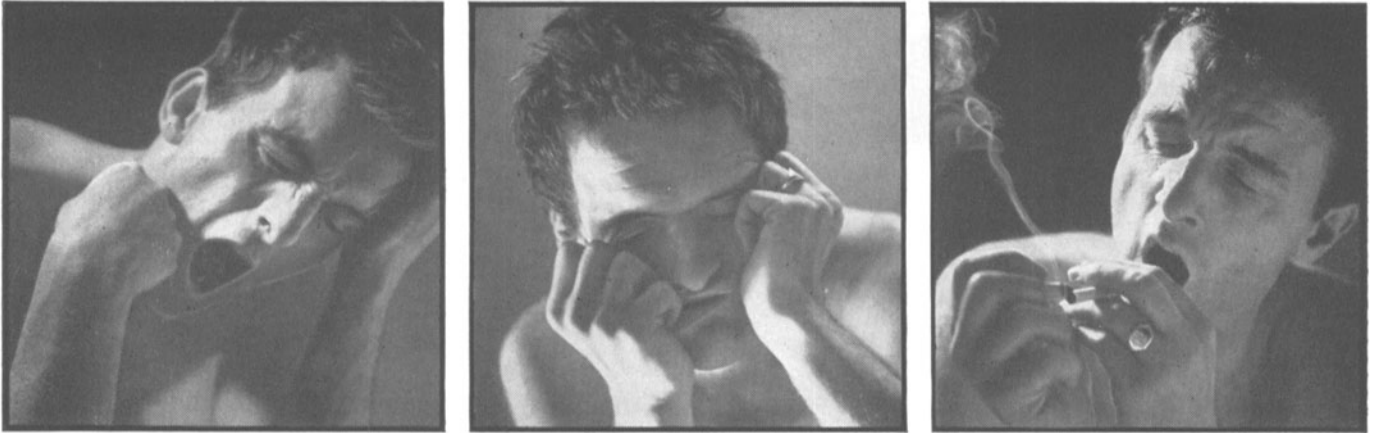
dustrial rotational apparatus. Features of the Micom 8100 include separate metering for flutter and drift; rms and peak measurements, weighted or unweighted; automatic input level indication and simultaneous indication of drift and flutter. Other features include full-scale flutter ranges of 0.01% to 10%, full-scale drift ranges of $\pm 0.03\%$ to $\pm 10\%$, demodulator output accuracy of $\pm 2\%$ on all ranges, frequency range of dc to 200 Hz and an input sensitivity of 5mV to 5V. It is priced at \$1,450.

A **color TV tape recorder** called the TR-70 has been introduced by Radio Corp. of America. Described as "versatile and sophisticated," the system is said to be the first high-band color recording system to be completely factory-assembled and ready for use upon installation. The system is designed to produce re-recordings of taped programs into the fourth generation with no significant loss in picture quality. Instant selection by switch of three recording standards, low-band monochrome, low-band color, or high-band monochrome/color makes the TR-70 compatible with most other broadcast-quality recorders now in use. The system is priced at \$82,500.



A **solid-state portable video-tape recorder** called the SV-700 has been announced by Shibaden Corp. of America, 58-25 Brooklyn-Queens Expressway, Woodside, N.Y. 11377. The SV-700 employs two rotary magnetic heads in a helical scanning system to provide a response of 3 MHz or more with 300 lines horizontal resolution and 36 dB or more in SNR. Designed for operational simplicity, the video and audio levels are set according to the level indicator. The $\frac{1}{2}$ -in. video tape permits 60 min of continuous recording on a 7-in. reel at 7.5 in./s. Recording signals may be standard TV or closed-circuit outputs. The machine is 15 $\frac{1}{4}$ in. wide, 15 $\frac{1}{4}$ in. deep and 9 $\frac{1}{4}$ in. high. It is priced at \$1,100.

A **solid-state television modulator** designed especially for use in educational television has been announced by Catel Co., 1375 Laurel St., San Carlos, Calif. 94070. Designated Model TM 2200A, the modulator has both microphone and program inputs at the audio input. It contains a meter for modulation monitor and can be used with color as well as black-and-white. The modulator is priced at \$625.

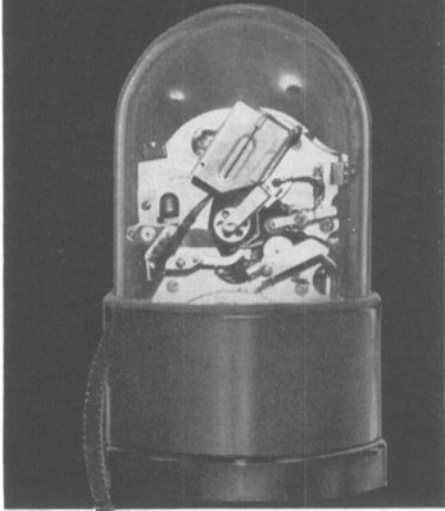


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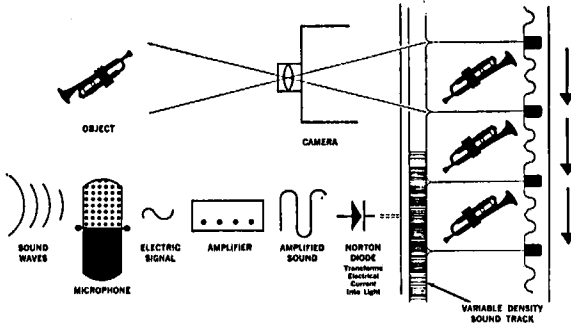
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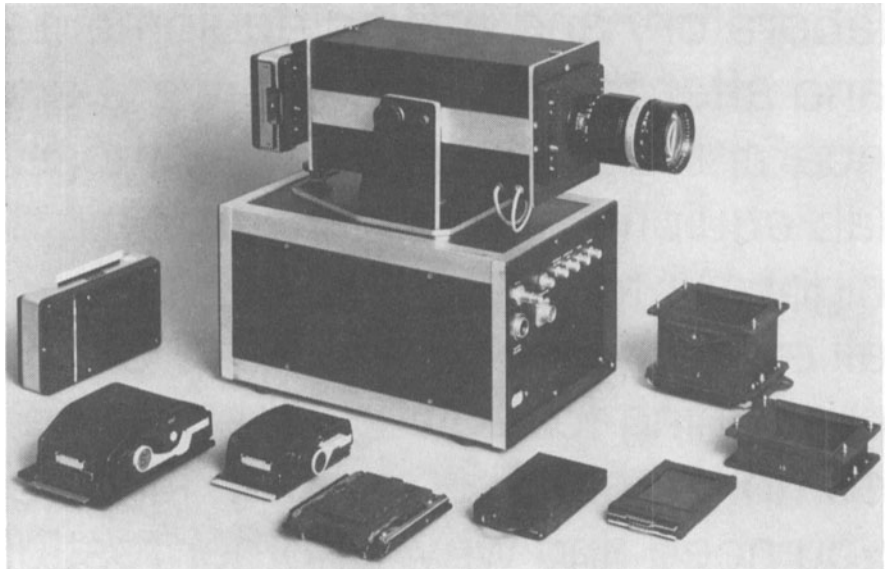
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SCHEMATIC DIAGRAM OF NORTON SOUND SYSTEM



A new process for making silicon carbide electroluminescent diodes has been announced by Norton Company, Worcester, Mass. 01606. Described as "the first practical process," the development provides a means of repeatedly producing silicon carbide diodes with light-emitting characteristics and thus makes possible a means of recording sound film for home movies with components that take up less than ten per cent of the space required for

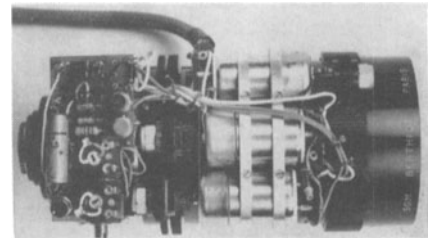
conventional equipment. Based on the principle of converting electrical energy directly into a needle-thin beam of light, the light thus produced "writes" the sound on the film as the movie is made. The diode requires no lenses or optics and is less than one-thousandth cubic inch in volume (smaller than a match head). It needs only a small solid state amplifier plus a microphone to record sound on film, the announcement stated.



A building block image converter camera system called the X500 has been announced by Electro-Optical Instruments, Beckman & Whitley, Inc., 441 Whisman Rd., Mountain View, Calif. 94040. The camera is said to record at exposure times from 5 to 1000 ns. Pictures recorded are up to 3½ in. in diameter with 760 resolved

line pairs linear across the field. The system components are interchangeable and there are three interchangeable camera heads for a choice of image size and optical sensitivity. There are two different controls for single- or multiframe control configurations. All the camera heads utilize biplanar image tubes. Prices start at \$4,950.

The G/A Model IR 1000 is an infrared-sensitive, high-resolution, closed-circuit TV system introduced by Granger Associates, 1601 California Ave., Palo Alto, Calif. 94304. The camera is said to have sensitivity down to 2 microns and designed for use in such applications as detecting crystal dislocations in silicon and germanium, checking laser patterns, seeing hydrogen flames in sunlight, etc. With infrared floodlights, the camera can be used as a "secret" surveillance unit. The IR 1000 is a 1029-line system. The control unit handles one or two cameras. The system is solid state with silicon transistors, silicon micrologic elements and tantalum capacitors. The control unit can be cabinet or rack mounted in 3½ in. of vertical space.



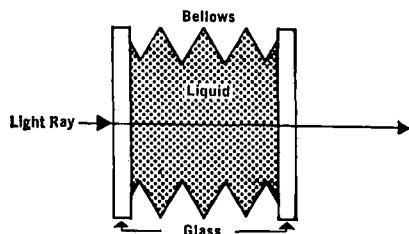
S.O.P.E.L.E.M. (Société d'Optique, Précision, Electronique et Mécanique), 102 Rue Chaptal, 92-Levallois-Perret, France, showed a number of new Som-Berthiot lenses at Photokina in Cologne.

For 16mm film shooting there are two variable-focus lenses, one an 8 to 24mm, 1:1.6, particularly suited for interior color

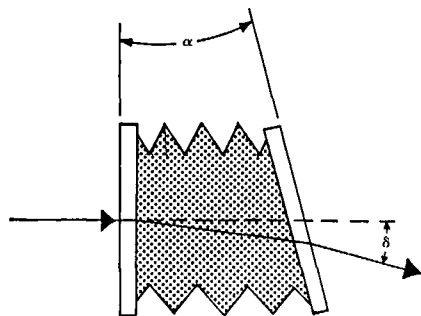
shots, and a 12 to 120mm, 1:2. Both lenses will be available in 1967. For projection, a 40 to 70mm, 1:1.6 zoom lens was introduced.

For super 8, the film showed, in addition to its 7.5 to 60mm, 1:1.9, and 8 to 40mm, 1:1.9, lenses, two new ones, a 12-36mm, 1:2 zoom, and a 10-44mm, 1:2 zoom. The two new ones are intended for camera construction and are not for general sale.

For closed-circuit television, two remote-control zoom lenses were displayed—17 to 130mm, 1:2.7 for vidicon, and 24 to 180mm, 1:3.4 for vidicon or Plumbicon, with automatic diaphragm to protect the tube in case of power failure.



1 DYNALENS — BASIC ELEMENT



2 LIGHT BEAM PATH DURING OPERATION

Dynalens, a gyro-stabilized lens system, designed to eliminate unwanted effects of television or film camera vibrations, is available from Albion Optical Co., 260 N. Route 303, West Nyack, New York 10994. The system was developed by Dynasciences Corp. of Fort Washington, Pa., and introduced by CBS Television Network (see "A Gyro-Stabilized Lens System" by K. Blair Benson and John R. Whittaker, *Journal*, pp. 916-918, Oct. 1965). The system is based on use of an optical element consisting of a clear fluid contained between two normally parallel glass plates located in front of the camera lens. Two gyroscope rate-sensing systems are incorporated to correct vertical movement or tilt and horizontal movement. The system has been used for shooting pictures from a moving vehicle and also for television coverage of space vehicle launches from liftoff to recovery.

Lightweight carrying cases designed to accommodate various combinations of ColorTran lights and related accessories have been announced by ColorTran Industries, Inc., 1015 Chestnut St., Burbank, Calif. 91502. The cases are made of heavy-gauge vulcanized fiber fortified with plywood. Corners are metal reinforced. Some styles are foam-lined. The cases are available in weights of 6 to 18 lb from \$21 to \$66.

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4 1/2" X 6" for Colortran Mini-Lite 10	30.85
7 3/8" X 7 3/8" for Colortran 1000 w. Quartz Wide Flood, Multi-Beam; Mole-Quartz Mickey Mole	38.50
7 1/2" X 8" for Colortran 1000 w. Quartz Variable Broads	56.50
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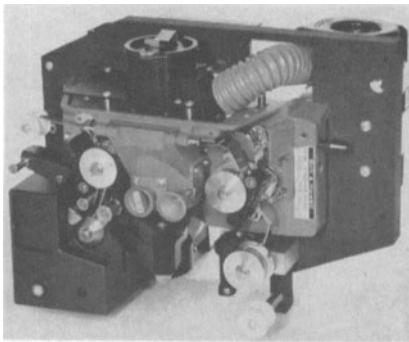
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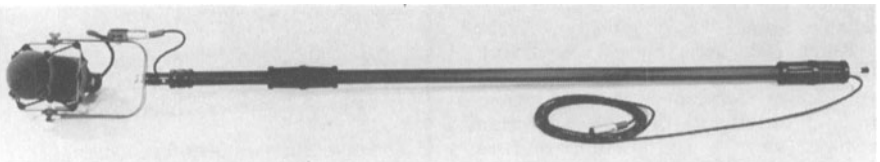


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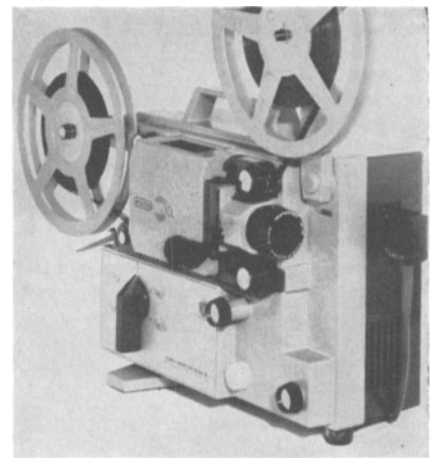


The CEC/Bell & Howell airline motion-picture entertainment system is being installed in American Airlines fleet of 707 Astrojets. The system is manufactured by Consolidated Electrodynamics Corp., a Bell & Howell subsidiary, 360 Sierra Madre Villa, Pasadena, Calif. 91109. The system provides multiple viewing stations throughout the cabin to give each passenger an unobstructed, wide-screen picture in color. Each viewing station contains a Bell & Howell projection mechanism, rear-projection screen, functional control unit and audio amplifier. It has been flight-tested under operating conditions on transcontinental flights. The projection mechanism has been especially designed for airborne use.

Merix Anti-Static #79 (also known as Rins) is used on films, particularly raw films to prevent static and thus keep the film dust-free, according to an announcement from the manufacturer, Merix Chemical Co., 2234 E. 75 St., Chicago, Ill. 60649. For use on films the solution is diluted at the rate of 10 cm³ of the concentrate to 1,000 cm³ of water. It can be applied by running the film between sponges kept moist with the solution or it can be rinsed in the solution. A quart of the concentrate is priced at \$5.95.



A lightweight "fish pole" microphone boom has been announced by Studio Electronics Co., 5415 N. Clark St., Chicago, Ill. The boom is made of aluminum. The head end accommodates a microphone and the other hand has a bumper attached so that it can be stood upright without damag-



Three new Eumig products have been announced by the United States distributor, Charvoz-Carsen Corp., 5 Daniel Rd., Fairfield, N.J. 07006. The Eumig Mark DL projector accommodates either super 8 or double 8 film. Features include a new illumination system which, with a halogen lamp, is said to provide an extremely high light output. An elliptical cold light reflector is an integral part of the projector. The reflector has 20 dielectric coating layers, each optically $\frac{1}{4}$ wavelength in thickness to reflect only the rays of the visible region of the spectrum and pass the infrared heat radiation. The projector is priced at \$229.95.

The Eumig Chemo splicer features a butt splice along a serrated edge which is chemically welded. The splice is said to be free of overlap, rigidity or brittleness. The splicer is priced at \$29.95. Also available is the Submarine underwater housing for the Viennette camera. For underwater photography, the camera is easily inserted in the housing and full reflex through-the-lens viewing is maintained as well as power zoom control of the camera lens.

ing the wire that goes through it. The boom is available in four telescoping models: 4 ft extending to 8 ft; 6 ft to 12 ft; 8 ft to 16 ft; and a 4-section model that extends from 4 ft to 16 ft. The price range is from \$35 to \$40.

SMPTE Test Films

A catalog containing details and prices of all SMPTE test films can be obtained from Society headquarters.

The new SMPTE subjective color television test film and slides are now available. Details were published in the March, 1966 *Journal*, pp. 218-220.

Most SMPTE test films are prepared in accordance with ASA/SMPTE Standards. The films are used for testing picture steadiness, traveling ghosts, framing, alignment, and focusing. Sound test films are used to check sound system frequency response, magnetic head or optical train alignment, and sound optics focusing.