

NEWS

from the far corners
of the world



..filmed with **AURICON** 16mm Filmagnetic Cameras
and **SOUNDCRAFT** Magna-Stripe raw stock!



News-gathering services all over the world bring Talking-Pictures with "Living Sound" to America's 45 million television screens—filmed with the incomparable Auricon Filmagnetic Camera and Soundcraft's Oscar-winning Magna-Stripe raw stock.

Magna-Stripe, Soundcraft's exclusive method of putting magnetic stripes on film, is unaffected by photo developing processes.

Using Auricon Filmagnetic Cameras loaded with Magna-Stripe raw stock, you get highest picture quality and all the advantages of magnetic tape —with no signal loss in transfer from the original to the final print!

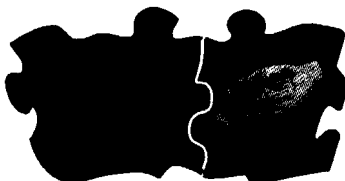
If it's news you're after, or the production of commercial and industrial sound-films, use Auricon Filmagnetic Cameras and Soundcraft Magna-Stripe raw stock—for high-fidelity results in single-system filming!

AURICON EQUIPMENT
IS SOLD WITH A 30 DAY MONEY-BACK GUARANTEE
AND A ONE YEAR SERVICE WARRANTY

Write for complete information about Soundcraft Magna-Stripe raw stock:

REEVES **SOUNDCRAFT** CORP.
Great Pasture Road, Danbury, Conn.
LOS ANGELES: 342 N. LA BREA AVENUE

"THEY GO TOGETHER"



Write for complete information about Auricon Filmagnetic Cameras:

BACH AURICON Inc. 
6998 Romaine St., Hollywood 38, Calif.
SOUND-ON-FILM EQUIPMENT SINCE 1931

NEWS

from the far corners
of the world



..filmed with **AURICON** 16mm Filmagnetic Cameras
and **SOUNDCRAFT** Magna-Stripe raw stock!



News-gathering services all over the world bring Talking-Pictures with "Living Sound" to America's 45 million television screens—filmed with the incomparable Auricon Filmagnetic Camera and Soundcraft's Oscar-winning Magna-Stripe raw stock.

Magna-Stripe, Soundcraft's exclusive method of putting magnetic stripes on film, is unaffected by photo developing processes.

Using Auricon Filmagnetic Cameras loaded with Magna-Stripe raw stock, you get highest picture quality and all the advantages of magnetic tape —with no signal loss in transfer from the original to the final print!

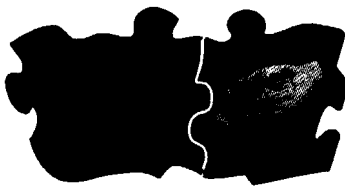
If it's news you're after, or the production of commercial and industrial sound-films, use Auricon Filmagnetic Cameras and Soundcraft Magna-Stripe raw stock—for high-fidelity results in single-system filming!

AURICON EQUIPMENT
IS SOLD WITH A 30 DAY MONEY-BACK GUARANTEE
AND A ONE YEAR SERVICE WARRANTY

Write for complete information about
Soundcraft Magna-Stripe raw stock:

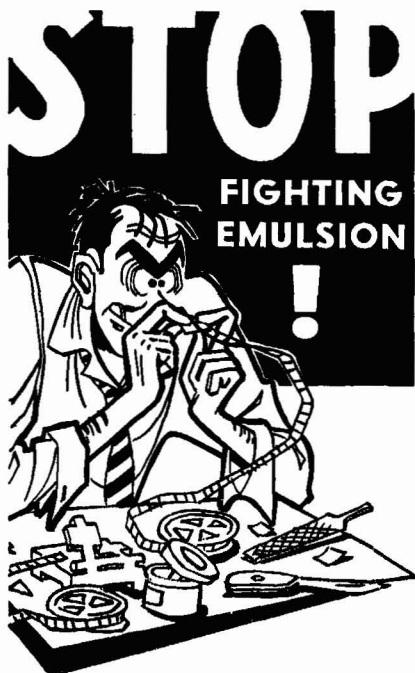
REEVES **SOUNDCRAFT** CORP.
Great Pasture Road, Danbury, Conn.
LOS ANGELES: 342 N. LA BREA AVENUE

"THEY GO TOGETHER"

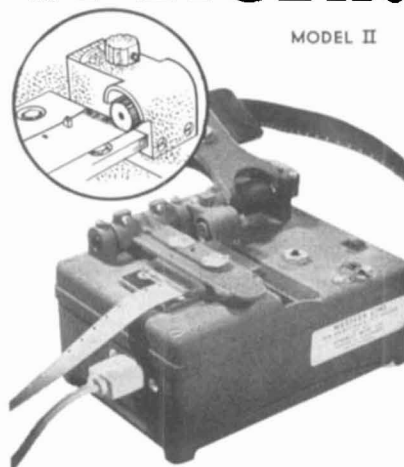


Write for complete information about
Auricon Filmagnetic Cameras:

BACH AURICON Inc. 
6998 Romaine St., Hollywood 38, Calif.
SOUND-ON-FILM EQUIPMENT SINCE 1931



**"BUZZ OFF" EMULSION
WITH
WESTERN Cine
16MM AUTOMATIC
SPLICER!**



**the most wanted splicer
IN AMERICA**

The all new Western Cine Automatic Splicer is the "hot" one to buy! It features an exclusive power driven rotary scraper that does all the work for you. It meets the most exacting requirements of the film industry; yet, it is so easy to operate that even the non-professional can make perfect splices every time . . . and in a few seconds! It's fully guaranteed. Get the details today!

SEE YOUR DEALER, OR WRITE



312 So. Pearl St. • Denver 9, Colo.

Equipments exhibited by Marconi's Wireless Telegraph Co. at the Second Industrial and Television Exhibition, held in London in November, included the Marconi-Siebe, Gorman underwater television camera. There was also a selection of closed-circuit television units and accessories. The underwater camera is designed to be handheld and can be buoyancy-adjusted for virtual weightlessness under water. Overall dimensions are 3 ft by 2 ft, 3 in. The closed-circuit equipment exhibited included a camera Type 4339A, lens turret, weatherproof housing and an industrial synchronizing generator.

Biographical Note



Fred E. Altman

Retirement of Fred E. Altman, Assistant Director of Optical Design for the Apparatus and Optical Division of Eastman Kodak Co., has been announced.

Widely known as an authority on optical design, he is a Fellow of the Society and his interests during his 45-year career with Kodak have been reflected in papers published in the *Journal*. He presently holds more than 40 U.S. Patents in the field of optical design. As early as 1934 he was engaged in the development of a lens for the "the so-called wide film. . .70mm" ("A Revolving Lens for Panoramic Pictures," by F. Altman, *Jour. SMPE*, 24: 383-394, May 1935).

With the Kodak Lens Design Department during World War I, Mr. Altman was engaged in designing optics for gun-sights and for the new field of aerial photography. During World War II, with the same department, he again worked on military optics, participating in the development of a telescopic tank sight in the short space of three weeks. Among Mr. Altman's inventions and the developments on which he worked is the *f*/1.9 Cine lens which has been continuously manufactured for 35 years.

Other interests of Mr. Altman's described in *Journal* papers include "An Optical System for the Reproduction of Sound From 35mm Film (co-author, J. H. McLeod), *Jour.*, 37: 36-45, July, 1938, and "35mm to 16mm Sound Reductions printer," (co-authors, C. W. Clutz and J. G. Streiffert) *Jour.*, 52: 669-675, June 1949.

Mr. Altman's retirement plans include further studies in optics, and a number of recreational activities including golf, woodworking, mountain hiking and photography.

Abstracts

Abstracts from other Journals, chosen for importance and timeliness, are published in the *Journal* from time to time. The greater numbers of these abstracts are translations, chiefly from the U.S.S.R., and made available by the *Kodak Monthly Abstract Bulletin*

The subject areas are grouped below

- High-Speed Photography and Instrumentation
- Printing and Optics
- Projection
- Sensitometry and Image Structure
- Sound Recording and Reproduction
- Television

**HIGH-SPEED PHOTOGRAPHY
AND INSTRUMENTATION**

Light Sources and Shutters for High-Speed Photography and Cinematography. (in Russian), V. G. Pell', *Tekh. Kino i Televideniya*, 4: 79-86, June 1960.

Western developments in spark, flash and discharge lamps and in Kerr-cell, Faraday and other high-speed shutters are reviewed.—S.C.G.

New Flash Lamps (in Russian), I. S. Marshak, V. I. Vasil'ev, A. I. Mironova, V. P. Ivanov and R. G. Vdovchenko, *Uspekhi Nauch. Fotografii*, 6: 43-52, 1959.

The characteristics of a number of flash-discharge tubes now being produced in the Soviet Union are described, and an attempt is made to classify them.—S.C.G.

Physical Mechanism of the Discharge in Tubular Electronic Flashlamps and Their Loading Limits (in Russian), I. S. Marshak, *Uspekhi Nauch. Fotografii*, 6: 16-26, 1959.

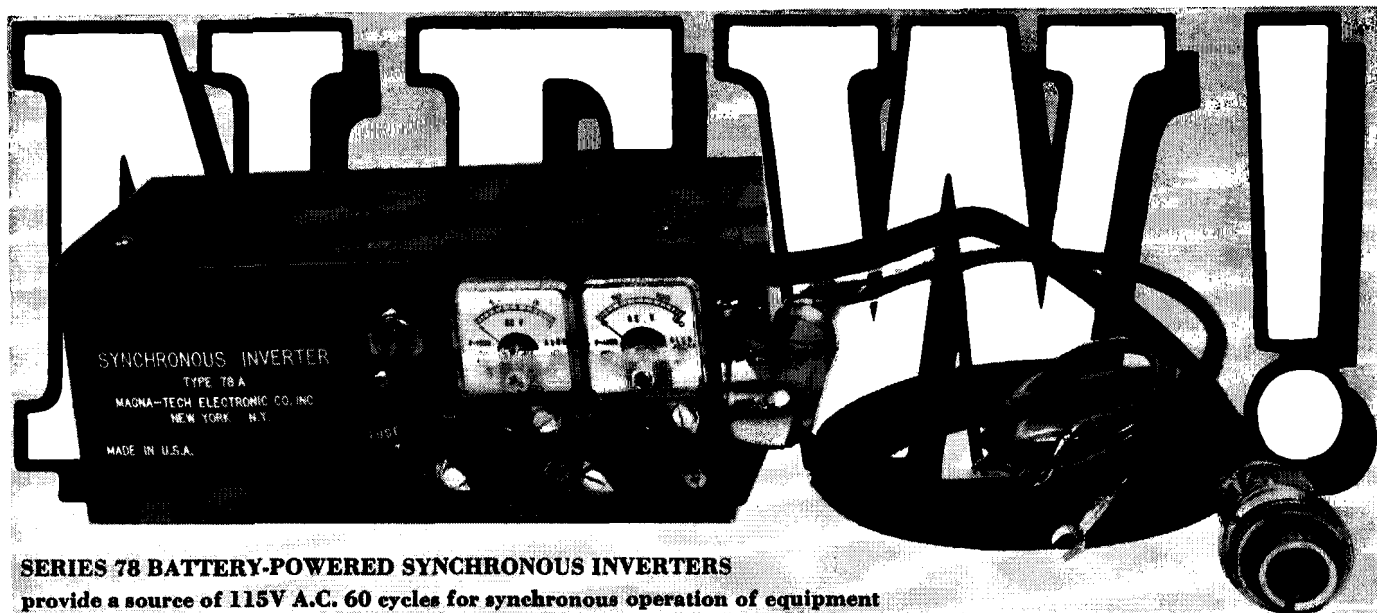
An analysis is made of the conditions during the quasistationary state of the discharge in an electronic flashtube when a large current is flowing. The theory of the striking of the discharge by the application of the small, high-frequency pulse is discussed. Formulas are worked out for the limiting loads set by the incipient destruction of the glass or quartz envelope.—S.C.G.

Study of the Brightness of a Flash-Discharge Channel (in Russian), K. S. Vul'fson and F. A. Charnaya, *Uspekhi Nauch. Fotografii*, 6: 27-30, 1959.

The variation of the maximum brightness of the discharge in an electronic flashlamp filled with different gases, as the pressure and electrical parameters are varied, is studied experimentally.—S.C.G.

Spectral Characteristics of Electronic Flashtubes (in Russian), B. M. Vodovatov and M. I. Epshtein, *Uspekhi Nauch. Fotografii*, 6: 35-42, 1959.

The method of testing of a number of Soviet-produced electronic flashlamps is described. The relative spectral-energy densities of the lamps are tabulated, and, for one of the lamps, a table gives the variation of the relative spectral-energy

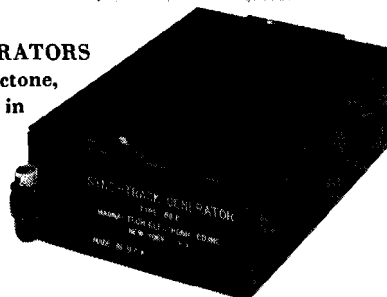


SERIES 78 BATTERY-POWERED SYNCHRONOUS INVERTERS

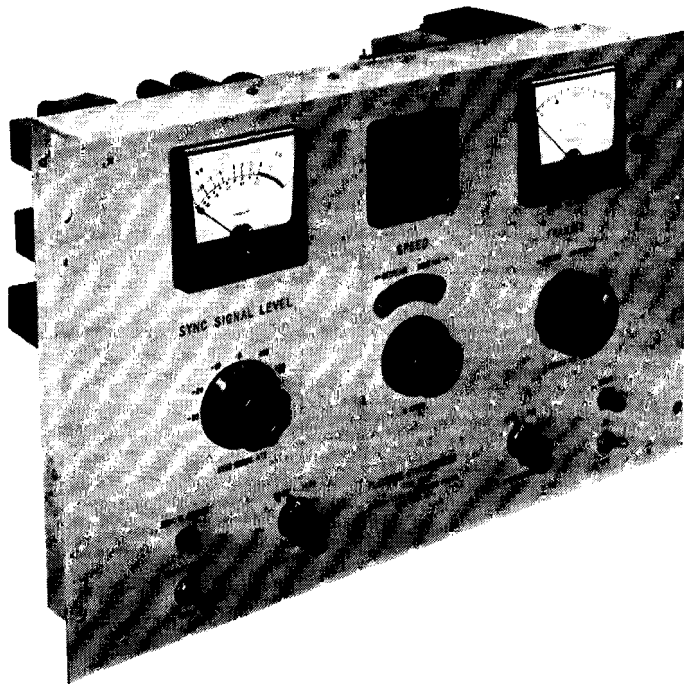
provide a source of 115V A.C. 60 cycles for synchronous operation of equipment in the field. A 10 minute take made with cameras and film recorders driven from these Inverters will be in precise lip-sync $\pm \frac{1}{4}$ frame. 50 Watt thru 500 Watt models are available for driving all cameras, such as Mitchell, Arriflex, Auricon, etc. or any film recorders. All solid state, the unit pictured above, Type 78A, 50 Watts, weight 5 pounds.

SERIES 88 BATTERY-OPERATED SYNC TRACK GENERATORS

for recording 60 cycles on $\frac{1}{4}$ " tape. Used with Nagra, Perfectone, or other battery operated tape recorders. All solid-state, fits in jacket pocket, or onboard on recorder. Also, A.C. powered Type 87, for both 14KC and 60 cycle sync track, available. All new, Series 78 and 88 provide **totally linkless** Double-System synchronism on location.



TYPE 92B PLAYBACK SYNCHRONIZER FOR SYNCHRONIZATION OF $\frac{1}{4}$ " TAPE IN PLAYBACK WITH SPROCKET DRIVEN FILM



Responsible for tape to film transfer? Check out this addition to the distinguished MTE line of synchronizing equipment. You'll find no other gives you all of the 92B's important benefits:

WIDE RANGE. can correct speed deviations of +20% to -20% from sync speed.

CONTINUOUS DISPLAY OF SYNC CONDITION so user knows exactly whether tape is in sync. Oscilloscope semi-circle pattern moving clockwise indicates tape speed fast, counter-clockwise indicates tape speed slow, semi-circle standing still indicates precise sync speed. In addition, Comparator-driven window dial registers % deviation from sync speed.

SYNC SIGNAL LEVEL IS INDICATED BY VU METER, an Attenuator provides for boosting weak signals 20 DB. Also a Volt Meter indicates voltage to capstan motor.

HAS MEMORY if sync signal is lost, tape runs at last sync-controlled speed.

ADVANCING OR RETARDING TAPE TO LIP-SYNCHRONISM with picture, when screening, is achieved with a Spinner Knob Framing Control.

VERSATILE REMOTE CONTROLS for operating tape recorder at the Synchronizer are incorporated.

FULLY AUTOMATIC. Choice of automatic speed control for sync transfer work or manual speed control for special effects, pitch change, trimming time spots, etc.

COMPACT. All solid state. Entire 92B unit mounts in $12\frac{1}{4}$ " of rack space, weighs 38 lbs.

COMPATIBLE. Can be used with tape transports including Ampex 350, 351, 354, 300, 400 and others. Uses 60 cycles or 14KC control track supplied by MTE type 87, 88, or any other control track generators.

ECONOMICAL. High utility in film studios, music studios, in-plant film production facilities. Solid state reliability eliminates maintenance.

Only \$1,920.00

M.T.E.

MAGNA-TECH ELECTRONIC CO. INC.
630 9TH AVE. N.Y. 36, N.Y.

density with different power supplies.—S.C.G.

Image Movement in Time Magnification With Image Compensation (in Russian), A. S. Dubovik, *Zhur. Nauch. i Priklad. Fotografii i Kinematografii*, 5: 209-217, No. 3, May-June 1960.

A mathematical analysis of image movement in time magnification with image compensation leads to the following conclusions: (1) The center of reflection of the scanning lens in systems with image compensation changes its position relative to the intermediate image in the time of exposure of one frame, leading to movement of the image. In choosing the general center

of reflection (scanning), it is necessary to take into account the magnitude of image motion for different parts of the working angle of the camera. (2) Image shift in depth has no influence on the photographic quality of the picture. (3) The movement of the image on exposure of a frame is proportional to the speed of the camera lens and, to a large degree, is determined by the distance of the reflecting plane of the mirror from its axis of rotation. (4) Movement of the image for a given lens speed is proportional to the size of the intermediate image (size of the mirror). The present investigation makes it possible to take image movement into account in correctly choosing an optical system for

constructing a high-speed camera with image compensation.—S.C.G. (Adapted from Author's Abstract.)

Camera RKS-1 for High-Speed Cinematography, S. M. Provornov and O. F. Grebennikov, *Instruments and Experimental Techniques* (transl. ed. of *Pribery i Tekh. Eksper.*), 961-964, No. 6, Nov.-Dec. 1959.

A high-speed, raster rotating-mirror Soviet camera, RKS-1, designed for research cinematography at a frequency of more than 10^8 frames/sec is described. Some of the motion-picture frames are reproduced. (Authors' Abstract.)

A Light Source for a High-Speed Motion-Picture Camera (in Russian), N. N. Ogurtsova and I. V. Podmoshenskiĭ, *Uspekhi Nauch. Fotografii*, 6: 58-61, 1959.

The light source described is a spark gap in which the spark is rendered more uniform by confining it in a channel of 2-mm diameter cut in a plate of Textolite (a resin-impregnated, laminated cloth). The power source is a bank of four capacitors and inductances. Current, voltage, light output, and spectral characteristics of the source have been recorded.—S.C.G.

Image-Converter Tubes for the Study of Ultrarapid Processes (in Russian), M. M. Butslav, *Uspekhi Nauch. Fotografii*, 6: 76-83, 1959.

Two Soviet-made impulse image-converters are described that are suitable for obtaining a series of frames of an ultrarapid event. They are the PIM-3 and the smaller PIM-4.—S.C.G.

High-Voltage Ceramic Condensers for Electronic Flash (in Russian), K. E. Medvedev, *Uspekhi Nauch. Fotografii*, 6: 75, 1959.

A Power-Supply Circuit for Electronic Flashlamps Under Conditions of Rapidly Repeated Flashing (in Russian), V. P. Ivanov, A. L. Vasserman, A. A. Bukareva and V. P. Zhil'tsov, *Uspekhi Nauch. Fotografii*, 6: 62-63, 1959.

Only a summary of the original paper is given. The general problem of the design of power-supply circuits for rapidly repeating flashlamps was discussed and individual circuits were described.—S.C.G.

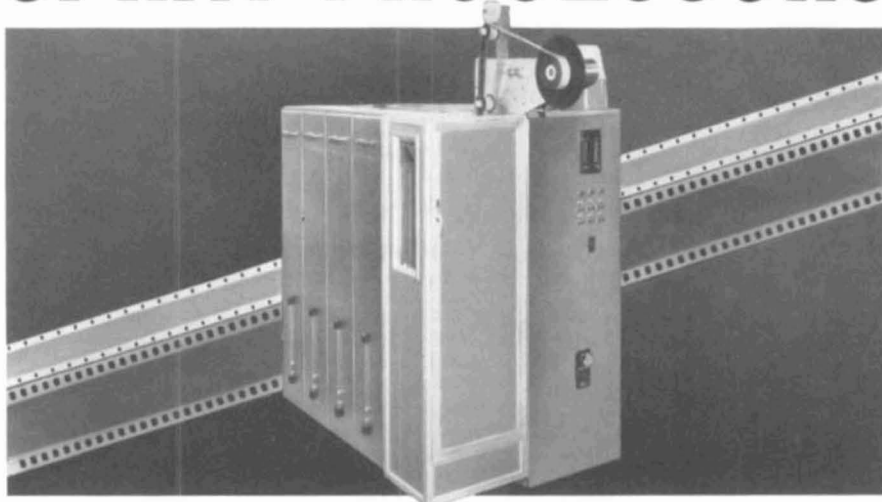
On the Use of Accumulators as a Power Supply for Flashlamps (in Russian), M. G. Feĭgenbaum, *Uspekhi Nauch. Fotografii*, 6: 64-67, 1959.

Two types of acid accumulator and one type of alkaline silver-zinc accumulator, both Soviet-made, were studied for use in the power pack of an electronic flashlamp, instead of the usual battery of condensers. The data obtained are tabulated.—S.C.G.

Electrolytic Condensers for Electronic Flash Equipment (in Russian), G. M. Gracheva, L. N. Zakgeĭm and V. F. Safonov, *Uspekhi Nauch. Fotografii*, 6: 72-74, 1959.

Methods of Practical Preparation of Optical Grids for High-Speed Photog-

SOMETHING REVOLUTIONARY HAS HAPPENED TO SPRAY PROCESSORS



This is the new FA-50, Hi-Speed's new, compact spray developing machine for 16/35mm black and white film.

What makes it revolutionary?

Two things.

One — this is a spray process unit — that means it utilizes the processing technique most experts agree is better than any other... both in terms of film quality and uniformity.

Two — it costs less than half of what any spray machine has ever cost before.

Less than half.

What does that prove?

It means that first quality film results — really first quality results — are within reach of every film processor.

Would you like us to prove it? Let us send you complete technical and cost information. Write today.

FEATURES:

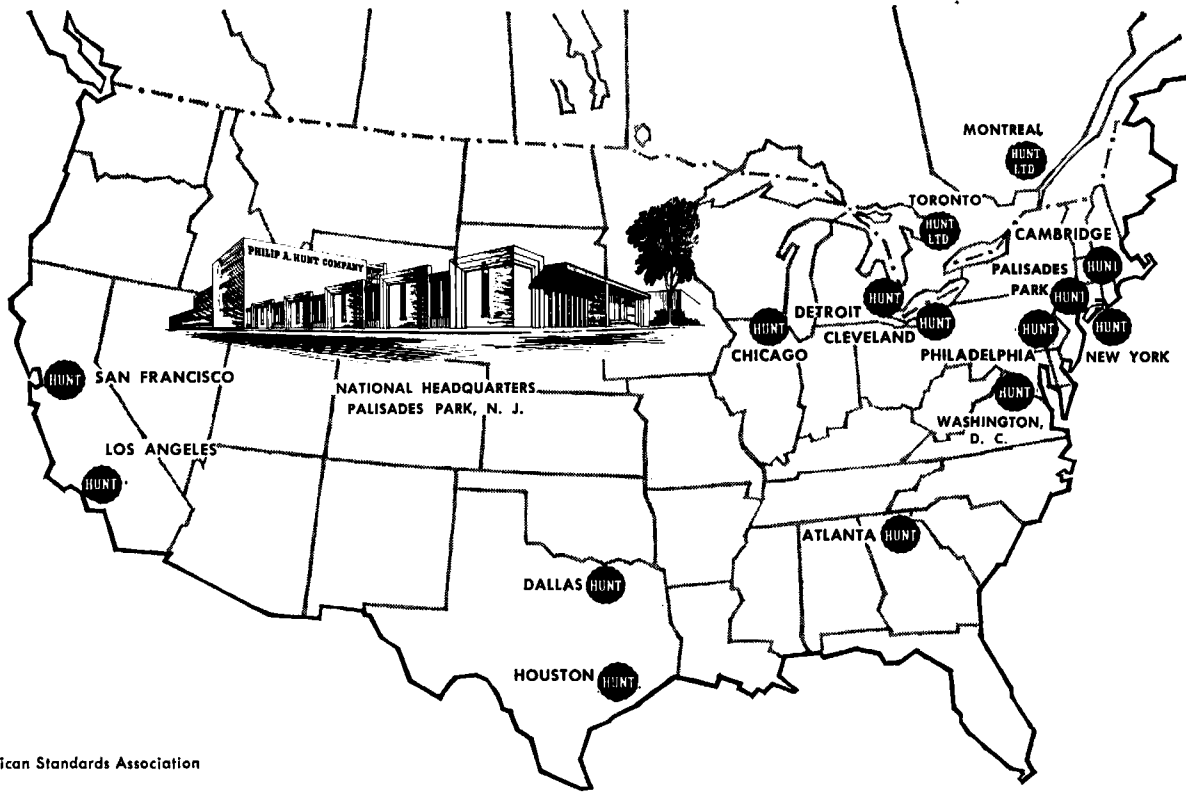
- Only 2 gallons of solution required
- Instantaneous results
- Professional quality
- 50 ft/minute positive — black and white
- 25 ft/minute negative — black and white
- Will process 16 mm and 35 mm, perforated and unperforated



hi-speed

EQUIPMENT, INC.
76 Pond Street, Waltham 54, Mass.

Rapid Deliveries Into Your Mixing Room
HUNT ASA* SPECIFICATION GRADE
PHOTOGRAPHIC CHEMICALS
Guaranteed FROM COAST TO COAST



*American Standards Association

WRITE, WIRE OR PHONE NEAREST HUNT OFFICE IN:

METROPOLITAN NEW YORK
 Long Island City
 47-20 30th Street
 Telephone—EMpire 1-9500

PHILADELPHIA
 401 North Broad Street
 Telephone—MARket 7-3212

WASHINGTON
 734 — 15th Street, N.W.
 Telephone—EXecutive 3-3872

ATLANTA
 1734 Candler Building
 Telephone—MURray 8-4944

CAMBRIDGE, MASS.
 111 Binney Street
 Telephone—TRowbridge 6-7050

CHICAGO
 2108 West Fullerton Avenue
 Telephone—HUMboldt 6-8500

CLEVELAND
 5150 Grant Avenue
 Telephone—DIamond 1-9132

DETROIT
 Telephone—WAlnut 5-5130

LOS ANGELES
 2252 East 37th Street
 Telephone—LUDlow 2-8136

SAN FRANCISCO
 420 Market Street
 Telephone—YUkon 6-4761

DALLAS
 2nd Unit, Sante Fe Building
 Telephone—RIVERSide 8-2279

HOUSTON
 Telephone—CAPitol 2-2537

CANADA —
 Philip A. Hunt Co. (Canada) Ltd.
 Toronto
 207 Queen's Quay West
 Telephone—EMpire 3-5456
 Montreal
 Telephone—WELLington 2-3607

FOR SUPERIOR RESULTS AROUND THE CLOCK USE HUNT GRAPHIC ARTS CHEMICALS

PHILIP A. HUNT COMPANY

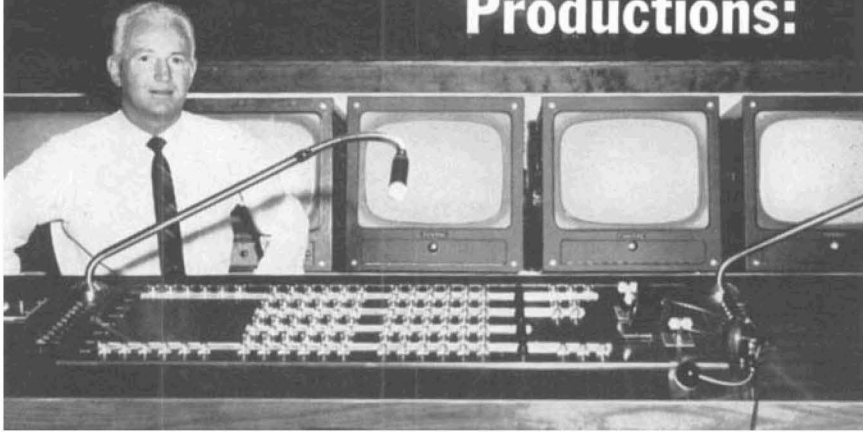
PALISADES PARK, NEW JERSEY

BRANCHES IN PRINCIPAL CITIES

In Canada: Philip A. Hunt Company (Canada) Ltd., 207 Queen's Quay West, Toronto



JOHN SILVA, Chief Engineer Paramount Television Productions:



In planning the new control room for their famous Stage 6, Paramount Television specified only the best equipment manufactured. Included in this choice, naturally, were Conrac video monitors. Why Conrac? "Because of their unfailing ability to display all the information just as it is, without distortion, and do it dependably day after day after day," is the way John Silva put it. Whether you're building a new facility or expanding your present operation, it will pay you, too, to select Conrac—the finest in video monitoring equipment.

"For our new control room, CONRAC MONITORS were the natural choice..."

EVERY CONRAC MONITOR FROM 8" THROUGH 27" BROADCAST OR UTILITY includes these

important features:

- ★ Video response flat to 10 megacycles
- ★ DC restorer — with "In-Out" switch
- ★ Provision for operation from external sync — with selector switch
- ★ Video line terminating resistor and switch



Conrac Monitors Are Distributed by — RCA

CONRAC, INC.

Makers of Fine Fleetwood Home Television Systems

Dept. K, Glendora, California

TELEPHONE: COVINA, CALIFORNIA, EDGEWOOD 5-0541

GENERAL ELECTRIC
AMPEX and
VISUAL ELECTRONICS

raphy, (in Russian), L. V. Akimkina, *Uspekhi Nauch. Fotografii*, 6: 152-154, 1959.

Optical grids decomposing an image into elements are required for a number of purposes, including high-speed cinematography and stereophotography. They may be made by mechanical methods involving casting or stamping from a metal matrix, or by photomechanical methods. A number of methods are briefly outlined. The paper is only a summary of the original lecture.—S.C.G.

A Raster Method of High-Speed Cinematography (in Russian), O. F. Grebennikov, *Uspekhi Nauch. Fotografii*, 6: 144-151, 1959.

The principles of image dissection in high-speed photography by means of a line or a point grid are outlined. The advantages of a point grid are discussed. Since 1954 a study has been made of the possibilities of using a point grid, consisting of a glass plate with an array of embossed spherical lenses, together with a system of rotating mirrors and a moving film. The necessary characteristics of such a camera required to give the maximum information content are analyzed in relation to the resolving power of the optical system and the photographic material.—S.C.G.

An Image-Converter Method of Photographing Ultrarapid Processes (in Russian), M. M. Butslav, E. K. Zavoiskii, A. G. Plakhov, G. E. Smolkin and S. D. Fanchenko, *Uspekhi Nauch. Fotografii*, 6: 84-89, 1959.

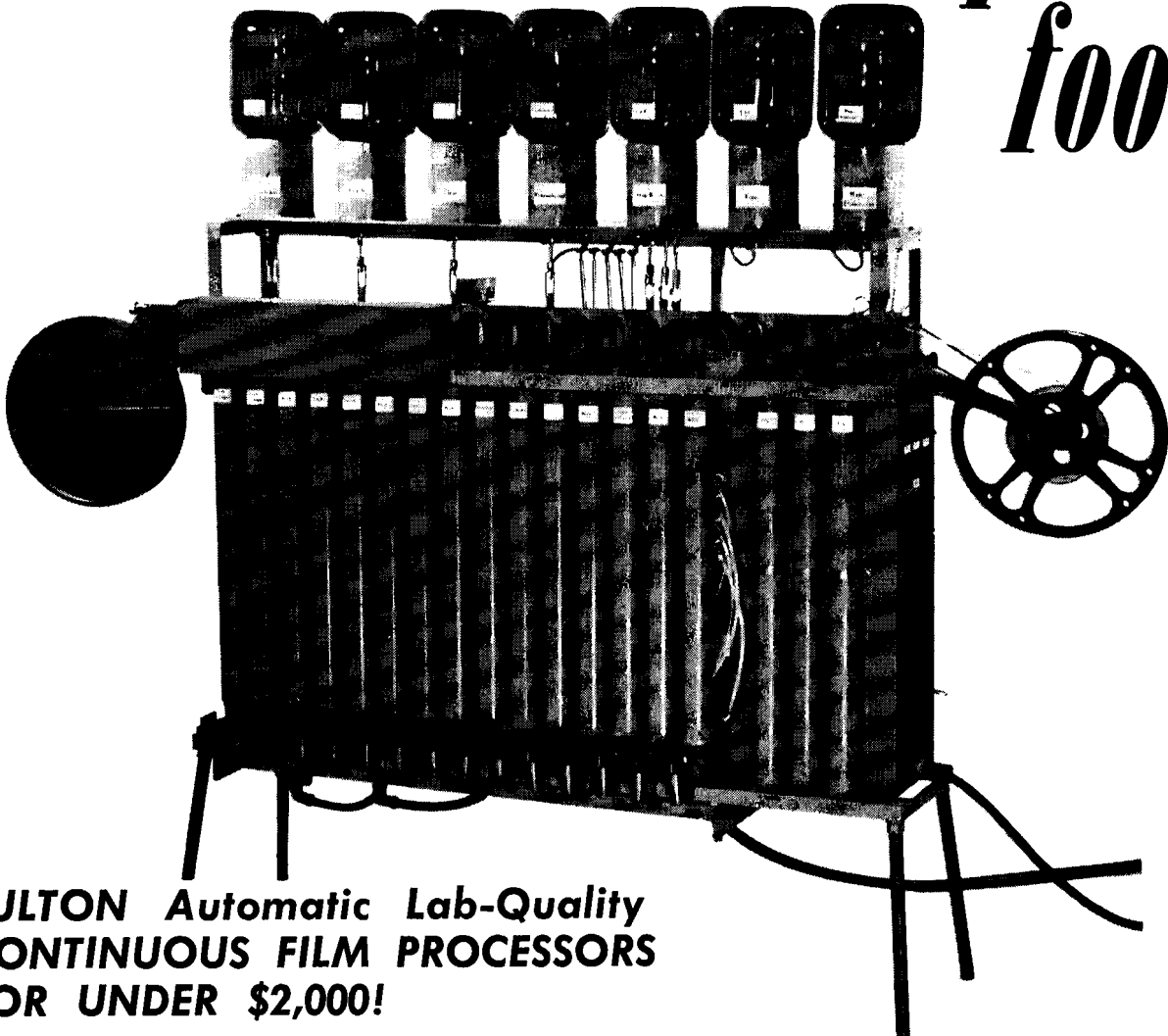
An image-converter tube is adapted for producing streak records of a small light source by introducing deflecting plates, as in the ordinary television tube. The applied deflecting voltages spread out the image into a circular arc. Time resolutions of the order of 10^{-12} sec can be obtained. Some experimental applications of such a tube are mentioned.—S.C.G.

PRINTING AND OPTICS

Study of the Change of Quality of a Photographic Image During Printing (in Russian), I. B. Blyumberg, T. M. Zyazina and G. I. Teregulov, *Tekh. Kino i Televideniya*, 4: 10-18, July 1960.

To study the photographic image during printing, a positive was obtained from an original negative with the insertion of two intermediate positives and two internegatives into the printing series. The quality of the image obtained at each stage was examined. With good contact during printing, the quality was independent of the use of diffuse or direct lighting. Poor contact was much more important when diffuse lighting was used than when the lighting was direct. During the printing series, picture sharpness did not fall as much as resolution. The graininess of a positive image obtained by printing was higher than the graininess of the negative if $\gamma_{\text{pos}} \gg 1.0$; and it was less if $\gamma_{\text{pos}} \ll 1.0$. There is a connection between the change in graininess on printing and changes in resolution and sharpness. The greater the fall in resolution and sharpness, the smaller will be the growth in graininess, and vice versa.—S.C.G.

LOWEST COST per foot



FULTON Automatic Lab-Quality CONTINUOUS FILM PROCESSORS FOR UNDER \$2,000!

The new FULTON AUTOMATIC FILM PROCESSOR produces laboratory-quality film at lower cost than ever before available. Motion pictures, microfilm and roll-film are processed, in black-and-white and color, for less than 25c per 100 feet. From light-tight magazine to projector-ready film in an extremely short time.

It is now possible and **practical** for every industrial plant, TV news department, and other users of motion pictures or microfilm to have their own high-quality continuous processor.

Outstanding features of the FULTON processor include: 16 ounces of working solution per tank; automatic replenishment; water consumption 2 gallons per minute.

The FULTON processor is daylight operated, completely portable, operates from any 115 volt outlet, and uses 3/4" garden hose for water and drain connections. **No installation costs!**

Models are available for negative, negative/positive, reversal, Ektachrome and Anscochrome, as well as all microfilm emulsions. They accept 16, 35, 70, 105, 16/35 or 35/70 films or film combinations.

Prices start as low as \$1875 for the standard 16mm black-and-white reversal model.

Get the full story on the automatic **continuous processor** that you can own and operate for less money than ever previously possible.

**FULTON
productions, inc**

Tulare, California

For complete descriptive literature and technical data address inquiries to:

Instrumentation Associates, Inc., 19458 Ventura Blvd., Tarzana, Calif., exclusive sales representatives.

Properties of a Single-Element Light Amplifier Using Sintered Cadmium Selenide Photoconductive Material

The use of photoconductive sintered cadmium selenide as the control element in a light amplifier offers the possibility of improved gain and speed of response. Such a single-element light amplifier has been made and tested. The results show that moderate gains with high output luminance are possible with speeds in a range suitable for moving pictures. Very high gains are possible if slow response can be tolerated.

Measurements were made over a range of operating frequencies and for various input levels. Data on rise time, decay time, and gain for tungsten-light input are given in curve form. From these curves the

operating range and input-output light levels for useful picture reproduction can be determined.—F. H. Nicoll, *RCA Review*, 20: 658-669, Dec. 1959.

Solid-State Image Intensifier Under Dynamic Operation

This paper describes the performance of photoconductor-electroluminescent-phosphor image intensifiers under dynamic conditions of operation. Both experimental data and theory are presented. The theory is based on some simplifying assumptions which allow easy analysis and permit an insight into the importance of the various parameters. The experimental data, however, confirm the applicability of the analy-

sis. Some suggestions concerning the possible improvement of intensifier performance are made.—C. P. Hadley and R. W. Christensen, *RCA Review*, 20: 670-681, Dec. 1959.

Solid-State Optoelectronics

A discussion of the harnessing of photoelectric and luminescent phenomena is preceded by a brief classification and explanation. This is followed by a description of optoelectronic modulators and amplifiers, i.e., devices which have mixed optical and electrical signal and power access. The technology of assembling image-transmitting, image-storing, and picture-reproducing panels from optoelectronic elements is reviewed.

The functioning of various optoelectronic logic nets and computer components is treated in detail. Finally, a synthesis of panel technology and logic circuitry into novel picture-processing panels and computer systems is proposed. The similarity between the organizational structure of such parallel processing systems and that of the neutron network of vertebrate retinas is pointed out.—E. E. Loebner, *RCA Review*, 20: 715-743, Dec. 1959.

Optical Feedback Type Storage Light Intensifiers

Three designs of storage light intensifiers were evaluated by building samples. One design uses a Fotoform glass structure to support the photoconductor and electro-luminor and to provide optical isolation of cells. Another uses a transparent (glass or plastic) multiple pedestal structure to provide light paths through the photoconductor and support the active materials. The photoconductor itself provides the optical isolation. The third design uses a flat glass plate as a support, the active materials and optical isolation being built up in layer fashion. Devices of the last type worked best. Typical operation provided optical trigger of 0.1 foot-candle second, half-hour storage and 0.1 second erasure in a 12 inch square panel with 250,000 storage cells. With suitable operating conditions, half-tone pictures could be displayed for one minute or longer.—H. O. Hook, *RCA Review*, 20: 744-752, Dec. 1959

PROJECTION

The Conditions for Perception of Films in Theaters in Relation to the Future Development of New Types of Cinematography. (in Russian), V. G. Komar, *Tekh. Kino i Televideniya*, 4: 28-37, June 1960.

Study of a 35mm Motion-Picture Projector with Optical Equalization of the Discontinuous Motion of the Film (in Russian), L. G. Tarasenko, *Tekh. Kino i Televideniya*, 4: 40-47, July 1960.

Results are given of a study of one of the mechanisms of optical equalization of the discontinuous motion of the film in relation to picture quality (stability, sharpness, brightness and flicker). It is shown that this method of motion-picture projection has a number of important advantages over the existing form.—S.C.G. (Translation of Author's Abstract.)



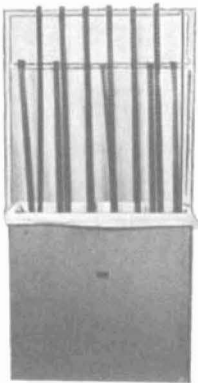
CAMART DUAL SOUND EDITOR MODEL SB-III



- Single & double system 16mm & 35mm optical or magnetic sound.
- Use with any 16mm motion picture viewer.
- Works from left to right or right to left. Dual Editor without viewer... **\$195.00**
Zeiss Moviscop viewer... **89.50**
Special editor viewer combination... **269.50**

NEW DESIGN FILM BIN WITH RACK

- Rectangular construction, 30 x 24 x 12.
- Fits easily into corners.
- Vulcanized fiber with reinforced metal frame, complete Bin Rack - linen bag w/ skids **\$45.25**
w/wheels **51.75**



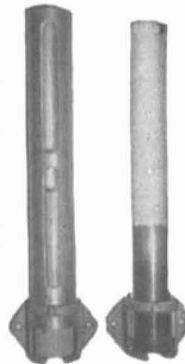
CAMART CORE DISPENSERS

Keeps film cores handy at all times. Attach to work table or wall.

Easy to remove — easy to fill. All aluminum construction. Adjustable to 16mm and 35mm cores.

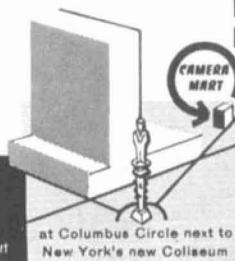
Sizes

- Length 16" ... **\$9.50**
- Length 24" ... **11.50**
- Length 36" ... **14.50**



CAMART TIGHTWIND ADAPTER

- The only BALLBEARING tightwind adapter.
- Eliminates cinching or abrasions.
- Winds film evenly—no slipping.
- Fits any 16 or 35mm rewind. **\$34.95**



the CAMERA MART inc.


1845 BROADWAY (at 60th St.) NEW YORK 23 • PLaza 7-6977 • Cable: Cameromart

at Columbus Circle next to New York's new Coliseum

in the east... it's
MOVIELAB

for

black
white



MOVIELAB

MOVIELAB FILM LABORATORIES
MOVIELAB BUILDING, 619 W. 54th ST.
NEW YORK 19, N.Y. JUDSON 6-0360

*developing color negatives • additive color printing • reduction printing including A & B • color slide film processing • blowups • internegatives • Kodachrome scene-to-scene color balanced printing • Ektachrome developing and printing • registration printing • plus complete black and white facilities including cutting rooms, storage rooms and the finest screening facilities in the east.

A Universal Motion-Picture Projector (in Russian), *Tekh. Kino i Televideniya*, 4: 47-48, July 1960.

A brief description is given of the Type TKPU-1 projector, made in the Kinap factory of Odessa. It is intended for the screening of 35mm film with photographic soundtrack; 35mm film with anamorphic image, photographic soundtrack and four magnetic soundtracks; and 70mm film with six magnetic soundtracks.—S.C.G.

The Problem of Stereoscopic Motion-Picture Projection in Polarized Light (in Russian).

A method of stereoscopic motion-picture projection using polarized light and the technical means of carrying it out are described. The following problems are considered: polarizing light-filters; the screen for polarized projection; the stereo projector; polarizing spectacles; and future developments.—S.C.G.

[Translated from *Tekh. Kino i Televideniya*] A. I. Levington and V. S. Shchekochikhin. *Trudy Vsesoyuz. Nauch.-Issled. Kinofotoinst.*, pp. 108-21, No. 31, 1959.

Yellow-Flame, High-Intensity Carbons With a Current Intensity of 225 A

Results are given of an experimental investigation of the construction of a powerful lamp with yellow-flame carbons for the shooting of color films on stock balanced for a color temperature of 3300°K.

The article considers the following problems: the requirements for new carbons; the chemical composition and geometrical variables of the carbon; characteristics of high-intensity yellow-flame carbons; and the spectral characteristics of high-intensity yellow-flame carbons. (S. C. G.)—[Translated from *Tekh. Kino i Televideniya*] T. V. Derbisher, L. F. Kabanova, and N. K. Zanina. *Trudy Vsesoyuz. Nauch.-Issled. Kinofotoinst.*, pp. 26-35, No. 30, 1959.

SENSITOMETRY AND IMAGE STRUCTURE

Some Points in the Production of Sharp Screen Images on Filming Fast-Moving Subjects (in Russian), M. P. Dolukhanov, *Tekh. Kino i Televideniya*, 4: 77-78, June 1960.

The exposure time for one frame of motion-picture film required to give a sharp image of a moving object is calculated. The actual exposure time obtainable with an 8mm camera is longer than this, but the resulting lack of sharpness is not noticeable. An explanation of this phenomenon is given in terms of information theory. Although a single frame may appear unsharp, the succession of slightly different images reduces the ambiguity and an impression of sharpness is obtained.—S.C.G.

SOUND RECORDING AND REPRODUCTION

The Problem of the Quality of Stereophonic Sound in Motion-Picture Theaters (in Russian), B. F. Natarov, *Tekh. Kino i Televideniya*, 4: 45-48, June 1960.

Feedback as a Method of Correction of the Frequency Characteristics of Electromechanical Light Modulators (in Russian), Yu. G. Zarenin, *Tekh. Kino i Televideniya*, 4: 38-44, June 1960.

A Reading System "with Back Scanning" (in Russian), L. Belyaeva, *Kinomekhanik*, 42-44, Jan. 1960.

In the usual form of reading of a soundtrack in a motion-picture projector, called in the article "with forward scanning," the image of a mechanical slit is formed on the soundtrack and the light passing through is received on a photocell. In the system described, "with back scanning," an image of the soundtrack is formed on the mechanical slit and the light passing through is received on the photocell. It is claimed that, with this system, more even illumination can be obtained and adjustment is easier. It has been incorporated in the KSS-35 projector.—S.C.G.

The Number of Stereophonic Sound-Reproducing Channels in Wide-Format Cinematography (in Russian), B. F. Natarov, *Tekh. Kino i Televideniya*, 4: 49-51, July 1960.

The author describes his experiences with a five-channel stereophonic system with one soundtrack for sound effects.—S.C.G.

TELEVISION

New Measurements on the Transfer Properties of Objectives from the Standpoint of Television Techniques (in German), D. Frenzel, *Hausmitteilungen, Jos. Schneider and Co. Optische Werke*, 12: 64-72, 90-96 and 111-112, Nos. 5/6, 7/8 and 9/10, 1960.

A method of measuring the line spread of lenses is sketched in which the test

Scratches on film distract attention

*The whole purpose
of your films may be frustrated
by damaged physical condition*

Peerless Reconditioning

*restores films to presentable condition
and keeps them in service*



PEERLESS
FILM PROCESSING CORPORATION
165 WEST 46th STREET, NEW YORK 36, NEW YORK
959 SEWARD STREET, HOLLYWOOD 38, CALIF.



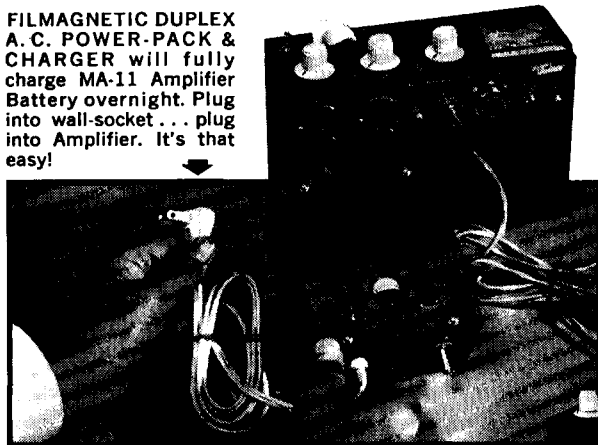
Announcing



ALL-TRANSISTORIZED FILMAGNETIC® RECORDING AMPLIFIER MODEL MA-11

- ★ All-transistorized! Bulky batteries and heavy transformers eliminated.
- ★ Rechargeable battery or continuous A.C. operation.
- ★ 14 transistors for frequency response to 12,000 cycles.
 - ★ Extreme portability and dependability. Weighs only 5 lbs.
 - ★ Temperature-compensated for world-wide use, winter and summer.
 - ★ Equipped with transistor-matched FILMAGNETIC heads.
 - ★ Fitted carrying case can be conveniently stored under pullman seat or carried as hand-luggage on plane.

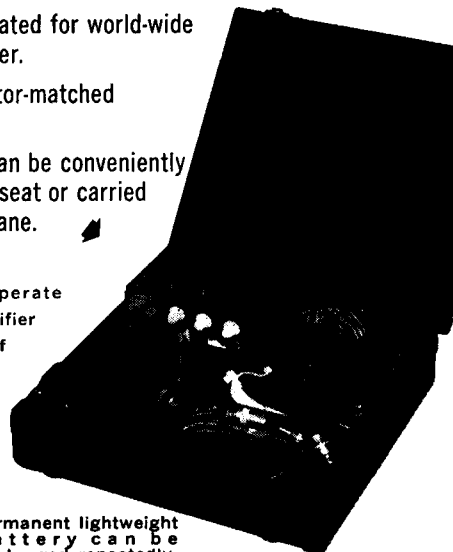
FILMAGNETIC DUPLEX A.C. POWER-PACK & CHARGER will fully charge MA-11 Amplifier Battery overnight. Plug into wall-socket . . . plug into Amplifier. It's that easy!



ALSO USED AS POWER-PACK for continuously operating Amplifier direct from 115 Volt A.C. current.

★ WRITE FOR FREE AURICON CATALOG WITH INFORMATION ON THE NEW ALL-TRANSISTORIZED FILMAGNETIC RECORDING SYSTEM . . .

Fully charged Battery will operate Filmagnetic Model MA-11 Amplifier for more than 8 hours of sound-on-film recording.



Permanent lightweight Battery can be re-charged repeatedly.

GUARANTEE

All Auricon Equipment is sold with a 30-day money back guarantee and a 1 year Service Warranty. You must be satisfied!



THIS IS THE FILMAGNETIC CAMERA UNIT for 16mm magnetic sound-on-film . . .

FILMAGNETIC sound-on-film recording can be factory installed on all existing, or earlier, Auricon Cameras. Recording on pre-stripe film, black-and-white or color, you get professional quality lip-sync talking pictures and brilliant music reproduction. After normal processing, the film can be shown on any 16mm magnetic-sound projector. In use since 1955, for exacting professional requirements, FILMAGNETIC, with the new MA-11 Amplifier, brings you the means for producing the finest in professional 16mm sound-on-film motion pictures. The optical sound-on-film capability of your Auricon Camera is not impaired. Change back and forth at will . . . without tools!

BACH AURICON, Inc.

8948 Romaine Street, Hollywood 38, California

HOLLYWOOD 2-0931

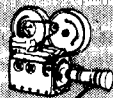


"FILMAGNETIC" SOUND FOR COLOR OR BLACK & WHITE

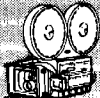
THE BACH Auricon LINE OF 16MM SOUND-ON-FILM CAMERAS



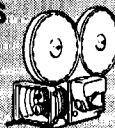
CINE VOICE II
100 ft. Runs 2 3/4 min.



AURICON "PRO-600 SPECIAL"
400 ft. Runs 11 min.



AURICON PRO-600
600 ft. Runs 16 1/2 min.



AURICON SUPER-1200
1200 ft. Runs 33 min.

AURICON . . . THE PROFESSIONAL CAMERA • STANDARD OF THE 16MM SOUND INDUSTRY SINCE 1931

object is rotated, and a cathode-ray oscilloscope displays the attenuation curve as a function of frequency. Graphs for several lenses are shown in which the attenuation in decibels for a line interval of 0.7 mm is plotted against field angle.—F.H.P. (Reprinted from *Rundfunktech. Mitteilungen*, 3: 235-241, 1959.)

A High-grade Industrial Television Channel with Reference to Infra-red Operation

The range and scope of the uses of television for industrial purposes are indicated to give some of the design requirements and to show broadly how they have been met

with reference to a particular television channel employing a vidicon camera tube. In addition, two special applications are described, namely the use of this channel with infra-red and ultra-violet light.—J. H. Taylor, *Jour. Brit. I.R.E.*, 20: 77-85, Jan. 1960.

The Equipment of the BBC Television Film Studios at Ealing

BBC film production facilities for the Television Service are based at the Television Film Studios, Ealing Green, London, W.5.

This monograph describes the operations which are involved and the facilities provided. Descriptions of the technical equipment and areas are included, together

with some discussion on the differences between cinema film production methods and television film operations.—N. F. Chapman, BBC Engineering Div. Monograph No. 27, Jan. 1960: BBC Publications, 35 Marylebone High St., London, W.1.

Reduction of Television Bandwidth by Frequency-Interlace

A method analogous to the N.T.S.C. colour television system is used to obtain a bandwidth reduction of a black-and-white video signal by a factor of approximately 2:1. The normal signal is split into two frequency bands, nominally zero to 1.5 mc/s and 1.5 to 3.0 mc/s. The latter is used to amplitude-modulate a sub-carrier, whose frequency is an odd multiple of half the line scanning rate. The lower sideband of the modulator output is selected and combined with the original zero-to-1.5 mc/s band, so that the spectra of the two signals interleave. The combined signal may now be sent over a channel of 1.5 mc/s nominal bandwidth. At the receiving end of the channel the composite signal is applied to a synchronous demodulator, fed also with sub-carrier of the same frequency as at the transmitter. The lower sideband of this demodulator is taken and combined with the received signal, to yield a "normal" video signal extending from zero to approximately 3 mc/s, together with an "interleaved" signal. The interleaved signal is such as to give an interference pattern on the display which in a stationary picture should optically cancel after four successive frame scans. However, the pattern is built up in such a way as to give rise to a "crawling" motion which is very noticeable at close viewing distances. Photographs of typical pictures obtained with and experimental apparatus are given, showing various interference effects produced.—E. A. Howson and D. A. Bell, *Jour. Brit. I.R.E.* 20: 127-136, Feb. 1960.

Microwave Television Mobile Relay for Outside Broadcasting

A brief account is given of the principal qualities required in mobile links. These include transmission of picture and sound without degradation of the quality and stability in time of the technical performances, and ease of operation as regards transport, installation, monitoring and maintenance. The essential causes of distortion introduced in the transmission by a microwave link are reviewed and the problem of crosstalk between the picture and the sound channels and the transmission of a colour television programme are dealt with in some detail. A short description is given of an equipment operating in the band 6400-6900 mc/s.—J. Polonsky, *Jour. Brit. I.R.E.* 20: 91-102, Feb. 1960.

The Combined Television-Radio Receiver and its Problems

The large number of frequency allocations in and around Band II compared with Bands I and III causes a serious selectivity problem in domestic combined receivers for television and f.m. sound broadcasts. The sound bandwidth of a television receiver is usually of the order of 500-1000 kc/s and since the frequency allocations of commercial radio transmitters are liable to be

NAIL DOWN YOUR PROFITS!

Cameras: 16mm & 35mm—Sound (Single or Double System)—Silent—Hi-Speed

Lighting: Arcs—Incandescents—Spots—Floods—Dimmers—Reflectors—All Lighting Accessories

Generators: Portable—Truck Mounted

Sound Equipment: Magnetic—Optical—Mikes—Booms

Grip Equipment: Parallels—Goboos—Other Grip accessories

Cranes, Dollies: Crab—Western—Portable Panoram

Lenses: Wide angle—Zoom—Telephoto—Anamorphic

Editing Equipment: Moviolas—Viewers—Splicers—Rewinders

Projection Equipment: 16mm & 35mm—Sound & Silent—Slide—Continuous

Television: Closed Circuit TV

Camera Cars:

*CECO—Trademark of Camera Equipment CO.

RENT FROM CECO*

CAMERAS • LIGHTS ACCESSORIES

Why be equipment-rich, but profits poor? If *your* main concern is making money, investigate full-service leasing from CECO. Some of America's largest corporations have such arrangements with us. Renting your cameras, lights, sound recorders and

accessories puts the problem of maintenance where it belongs—in the hands of factory-trained experts. Your accountant will explain the savings of renting versus buying. Want to talk about it? Call JUDson 6-1420. Today!

CAMERA EQUIPMENT CO., INC.
 315 W. 43rd St., N. Y. 36, N. Y.
 Hudson 6 1420
 In Hialeah, Florida:
 Camera Equipment Co., Inc. of Florida
 1335 East 10th Ave. • Hialeah 3 4604

Camera Equipment Co., Inc.
 Dept. JS-15, 315 W. 43rd St., N. Y. 36, N. Y.
 Gentlemen: Please rush me your FREE complete catalogue of Rental Equipment.

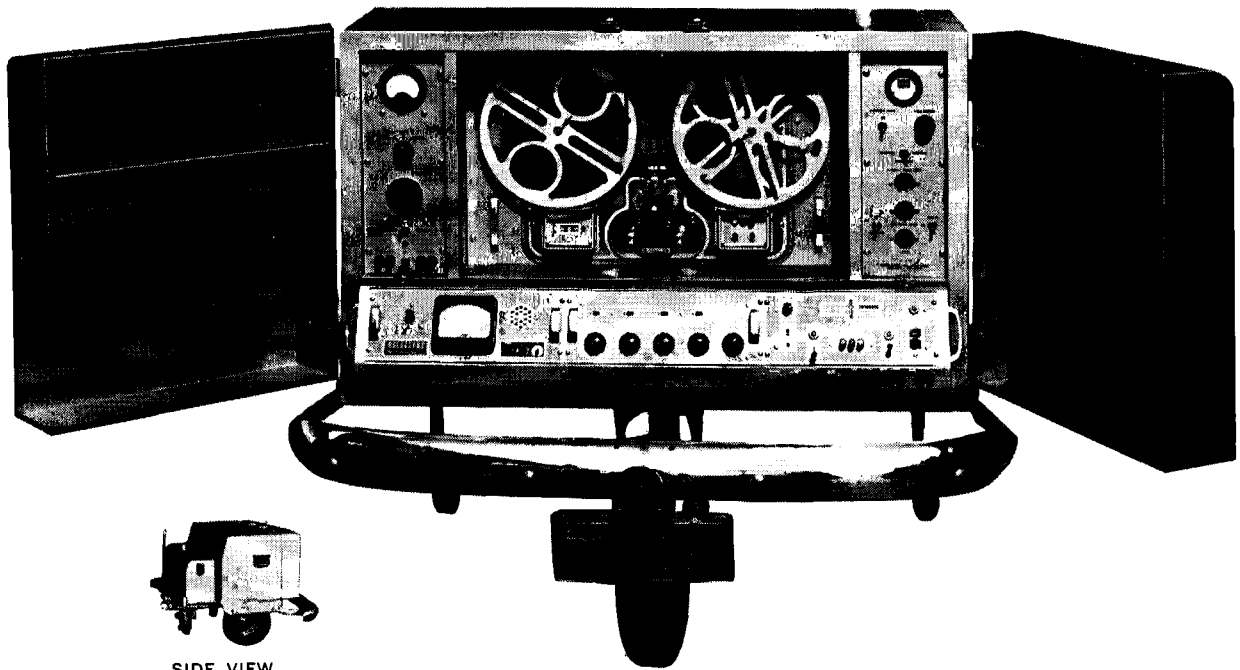
Name.....
 Firm.....
 Street.....
 City.....Zone.....State.....

Magnasync-Magnaphonic

safari

mobile recording console

... a complete "sound truck" trailer!



SIDE VIEW

The "Safari" Console features the incomparable Magnasync Mark IX film transport and amplifier housed in a blimped console for both studio and mobile trailer operation. Three-channel mixer and recorder controls are packaged in removable remote unit. This elegant sound recording system is ruggedized and climatized, has plug-in audio elements and is completely self-contained with integrated power supply for cameras as well as the recording channel. Built-in "test lab" is provided for system performance testing.

These and many other outstanding features assure the producer of flawless recording under the most adverse conditions... with reliability as the keynote.

GENERAL SPECIFICATIONS

Frequency Response: 40 cps to 8500 cps \pm 1.5 db
(16 mm at 36 f.p.m.)

40 cps to 13,000 cps \pm 1.5 db
(17½ mm or 35 mm at 90 f.p.m.)

Distortion: Less than 1% total harmonic

Signal-to-Noise Ratio: Greater than 55 db

Flutter and Wow: 0.1% maximum RMS in any band
0.15% maximum RMS overall

Price: from \$4,535.

Send for complete literature



MAGNASYNC CORPORATION

formerly Magnasync Manufacturing Co., Ltd.

5548 Satsuma Avenue, North Hollywood, California • TRiangle 7-0965 • Cable "MAGNASYNC"

International leaders in the design and manufacture of quality magnetic recording systems

Magnasync Studio Equipment Division Dealers:

CHICAGO: Zenith Cinema Service, Inc.; Behrend Cine Corp.; **LOS ANGELES:** Birns & Sawyer Cine Equipment; **NEW YORK:** Camera Equipment Co.; **SOUTH AFRICA:** Johannesburg, Photo Agencies Pty. Ltd.; **AUSTRALIA:** Sydney, New South Wales, Sixteen Millimetre Australia Pty. Ltd.; **BOLIVIA:** La Paz, Casa Kavlin; **BRAZIL:** Rio De Janeiro, Mesbla, S.A.; **BURMA:** Rangoon, G. K. Theatre Supply Co., Ltd.; **CANADA:** Toronto, Ontario, Alex L. Clark, Ltd.; **DENMARK:** Copenhagen, Kinovox Electric Corp.; **ENGLAND:** London, W-1, Delano Lea Processes, Ltd.; **FRANCE:** Paris, Brockless-Simplex S.A.; **GREECE:** Athens, Christos Axarlis; **HONGKONG:** Supreme Trading Co.; **INDIA:** Bombay, Kine Engineers; **ITALY:** Rome, Reportfilm, di J. M. Schuller, S.R.L.; **JAPAN:** Tokyo, J. Osawa & Co., Ltd.; **NEW ZEALAND:** Auckland, Kerridge Odeon Industries; **PAKISTAN:** Karachi 3, Film Factors Ltd.; **SOUTH RHODESIA:** Salisbury, William Over & Co. Pvt. Ltd.; **THAILAND:** Bangkok, G. Simon Radio Co., Ltd.

Complete 16mm Laboratory

FAST QUALITY SERVICE

Negative or Reversal Processing
Color Duplicating
Black-and-White Duplicating
Editing
Sound Recording
Titling
Animation

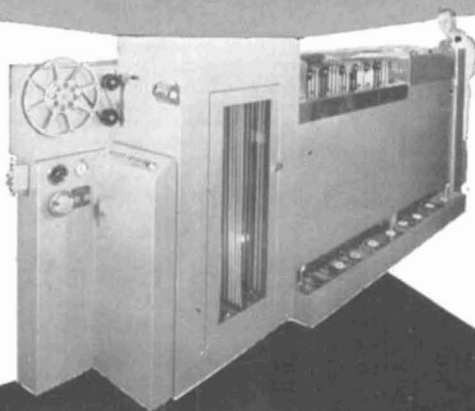
Write for Price Schedules



Pan-American Films

735 POYDRAS STREET, NEW ORLEANS, LA., JACKSON 2-5364

Filmline THE
ULTIMATE IN
FILM PROCESSING MACHINES



**CONTROLLED
PROCESSING**
FOR ALL BLACK & WHITE...
AND COLOR EMULSIONS

FILMLINE CORPORATION, DEPT. JS-61, MILFORD, CONN.

within 500 kc/s of the BBC transmitters, interference can occur. Interference can also occur between the various BBC regional transmitters whose frequency separation is usually 400 kc/s, but may be as little as 200 kc/s. The problem and a number of different solutions are discussed in detail. The circuit details of a commercially available combined receiver are then described. The sound i.f. circuits incorporate a double superheterodyne system, and the frequency of its r.f. oscillator is stabilized in Band II by means of an inexpensive a.f.c. system. Methods are described for measuring accurately the selectivity of a Band II receiver.—R. S. Hildersley, *Jour. Brit. I.R.E.*, 20: 155-166, Feb. 1960.

Automation of Television Programme Switching

The paper outlines a complete system under which nearly all the operations in programme switching are controlled by a punched paper tape derived directly from the preparation of the programme schedule. Simplified manual control facilities are provided for non-schedule operation. The term "Programmation has been coined to describe this field.—G. E. Partington, *Jour. Brit. I.R.E.*, 20: 181-196, Mar. 1960.

Waveform Distortion in Television Links

The linear transmission performance of television links is now measured and specified in terms of their response to certain standardized test waveforms. The aim of the paper is to provide a simple non-mathematical introduction to the basic ideas connected with the measurement of waveform distortion. A number of examples of simple waveform distortions are given to illustrate the advantages of waveform measurements and their connection with the more familiar steady-state responses. The application of tolerance limits to waveform responses is then considered and an outline is given of the routine-and-acceptance-test methods of determining the rating factor of a link. Finally a brief introduction is given to the basic ideas of the correction of waveform distortion without reference to the conventional steady-state measurement and equalization techniques.—I. F. Macdiarmid, *Jour. Brit. I.R.E.*, 20: 201-216, Mar. 1960.

The Application of Closed-circuit Television in the Nuclear Industry

This paper reviews briefly the historical development of industrial television systems, and the applications of conventional equipment in the many branches of industry which depend upon nuclear processes. Special systems must be designed for use in the intense radiation fields and high ambient temperatures and pressures which occur in a nuclear reactor. The possible ambient conditions and their influences upon television camera design are discussed, with indications of the ways in which specific problems may be solved. An assessment of future trends suggests that television equipment will be called upon to operate in increasingly unfavourable environments; simultaneously, standard television systems will be used extensively for remote observation and display.—P. Barratt and I. M. Waters, *Jour. Brit. I.R.E.*, 20: 225-241, Mar. 1960.

Complete 16mm Laboratory

FAST QUALITY SERVICE

Negative or Reversal Processing
Color Duplicating
Black-and-White Duplicating
Editing
Sound Recording
Titling
Animation

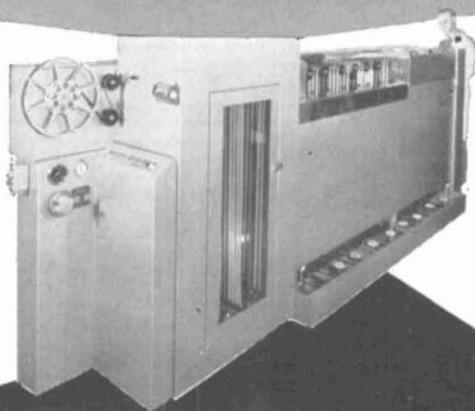
Write for Price Schedules



Pan-American Films

735 POYDRAS STREET, NEW ORLEANS, LA., JACKSON 2-5364

Filmline THE
ULTIMATE IN
FILM PROCESSING MACHINES



**CONTROLLED
PROCESSING**
FOR ALL BLACK & WHITE...
AND COLOR EMULSIONS

FILMLINE CORPORATION, DEPT. JS-61, MILFORD, CONN.

within 500 kc/s of the BBC transmitters, interference can occur. Interference can also occur between the various BBC regional transmitters whose frequency separation is usually 400 kc/s, but may be as little as 200 kc/s. The problem and a number of different solutions are discussed in detail. The circuit details of a commercially available combined receiver are then described. The sound i.f. circuits incorporate a double superheterodyne system, and the frequency of its r.f. oscillator is stabilized in Band II by means of an inexpensive a.f.c. system. Methods are described for measuring accurately the selectivity of a Band II receiver.—R. S. Hildersley, *Jour. Brit. I.R.E.*, 20: 155-166, Feb. 1960.

Automation of Television Programme Switching

The paper outlines a complete system under which nearly all the operations in programme switching are controlled by a punched paper tape derived directly from the preparation of the programme schedule. Simplified manual control facilities are provided for non-schedule operation. The term "Programmation has been coined to describe this field.—G. E. Partington, *Jour. Brit. I.R.E.*, 20: 181-196, Mar. 1960.

Waveform Distortion in Television Links

The linear transmission performance of television links is now measured and specified in terms of their response to certain standardized test waveforms. The aim of the paper is to provide a simple non-mathematical introduction to the basic ideas connected with the measurement of waveform distortion. A number of examples of simple waveform distortions are given to illustrate the advantages of waveform measurements and their connection with the more familiar steady-state responses. The application of tolerance limits to waveform responses is then considered and an outline is given of the routine-and-acceptance-test methods of determining the rating factor of a link. Finally a brief introduction is given to the basic ideas of the correction of waveform distortion without reference to the conventional steady-state measurement and equalization techniques.—I. F. Macdiarmid, *Jour. Brit. I.R.E.*, 20: 201-216, Mar. 1960.

The Application of Closed-circuit Television in the Nuclear Industry

This paper reviews briefly the historical development of industrial television systems, and the applications of conventional equipment in the many branches of industry which depend upon nuclear processes. Special systems must be designed for use in the intense radiation fields and high ambient temperatures and pressures which occur in a nuclear reactor. The possible ambient conditions and their influences upon television camera design are discussed, with indications of the ways in which specific problems may be solved. An assessment of future trends suggests that television equipment will be called upon to operate in increasingly unfavourable environments; simultaneously, standard television systems will be used extensively for remote observation and display.—P. Barratt and I. M. Waters, *Jour. Brit. I.R.E.*, 20: 225-241, Mar. 1960.

HFC

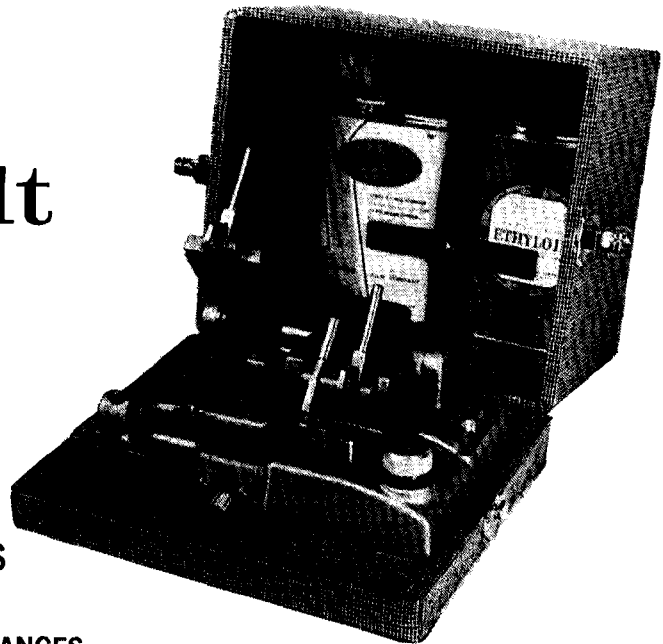
Hot Splicers

Now Available

in

Custom Built

Cases



NO DOWN TIME
 WHEN YOU USE HFC SPLICERS
 DOUBLE SCRAPING BLADES ON ALL UNITS
 MACHINE BLADES GROUND TO CLOSE TOLERANCES
 SEPARATE PROFESSIONAL SCRAPING BLOCK
 NO DOWN TIME WHEN SCRAPING BLADES BECOME DULL
 CHANGE BLADES IN SECONDS

SPECIAL OFFER!

8 & 16MM

70MM

16-35/32-35MM

<p>SPLICER (FS-816).....\$229.50 CUSTOM BUILT CASE.....15.00 1 PINT OF CEMENT.....2.25 1 PINT OF ACETONE......65 100 SCRAPING BLADES ...44.00 TOTAL VALUE\$291.40 SPECIAL\$245.00</p>	<p>SPLICER (FS-70-1) (Military perf #1) or (FS-70-2) Military perf #2)\$375.00 CUSTOM BUILT CASE.....20.00 1 PINT OF CEMENT.....2.25 1 PINT OF ACETONE......65 100 SCRAPING BLADES ...44.00 TOTAL VALUE\$441.90 SPECIAL\$395.00</p>	<p>SPLICER (FSC-1)\$329.50 CUSTOM BUILT CASE.....17.00 1 PINT OF CEMENT.....2.25 1 PINT OF ACETONE......65 100 SCRAPING BLADES ...44.00 TOTAL VALUE\$393.40 SPECIAL\$349.50</p>
---	---	---

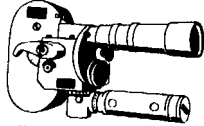
THIS OFFER EXPIRES MARCH 31, 1961



HOLLYWOOD FILM COMPANY 956 Seward, Hollywood, California, HO 2-3284 • 524 West 43rd St., New York LO 3-1546

GOV'T SURPLUS BARGAINS

Bell & Howell 35MM Camera—A6A



35mm movie camera, divergent 3 lens turret, 200 ft. mag., 28v. DC motor, used—in working cond. Accepts Eyemo lenses—double pulldown claw movement in mag.

Extra Spring wind motor, \$55
Extra 1000 ft. magazine, \$110

\$175
Only

B & H Eyemo 35MM Model 71-K Camera

With 2" lens, att. winding handle, w/ large deluxe case. Good cond.

\$110

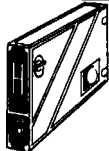


LENSES IN EYEMO "C" MOUNT

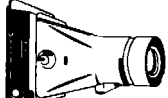
1" T2.5 Baltar ctd. L.N.	\$95.00
2" T2.5 Baltar ctd. L.N.	95.00
4" T2.5 Baltar ctd. L.N.	90.00
6" T4.6 Wollensak ctd. L.N.	80.00
10" T4.9 Miltar ctd. L.N.	80.00
4" F2.9 Cinemat ctd. L.N.	15.00
10" F4.5 Wollensak ctd. L.N.	40.00
10" Obj. View Finders	4.50
Ratchet Winding Cranks	9.00
Handle and Strap	2.00
400 ft. B & H Magazines.....	15.00
24v. Motors, as is	5.00

Cine Special 100 Ft. Mags.

NEW.....**\$250**
(list. \$425)
USED.....**\$70**
Good Cond.



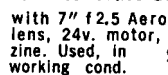
K-38 Fairchild Aircraft Camera



with 24" f6.0 Bausch & Lomb Aero Tessar lens, 28v. motor, used, in working cond.
24" f6 lens only.....**\$45.00**

\$65

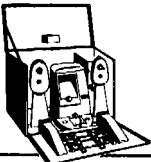
K-24 Aircraft Camera



with 7" f2.5 Aero Ektar lens, 24v. motor, magazine. Used, in working cond.
7" f2.5 Aero Ektar lens only.....**\$5.00**



Bell & Howell 16MM Editing Outfit



Including Filmo 16mm viewer, pair large geared 2-speed rewinds, B & H 16mm splicer, rewind arms, custom built carrying case.

\$95

2 Hub 16mm Neumade sync, w/ctr—NEW.....	\$60.00
Mitchell 35mm Std. Tripod—Used.....	85.00
12 gal. stainless steel tank 13" x 6" x 47"—NEW.....	65.00
Recordak "A" Micro Film Proj. 16-35, case	70.00
GSAP—16mm mag. camera w/lens, NEW	18.00
GSAP—16mm mag. camera less lens.....	11.00

INTERCINEMA CORP.

P. O. Box 3452, New York 17, N. Y.

New Members

The following members have been added to the Society's rolls since the April 1960 *Directory* and those listed in the September and November *Journals*. Also listed are those regrettably reported as deceased since the September listing. The designations of grades are the same as those used in the *Directory*. An up-to-date list of the Sustaining Members appears on the outside back cover of each month's *Journal*.

Fellow (F) <i>Deceased</i>	Active (M)	Associate (A)	Student (S)
Fred J. DeJaeger (A) A. C. Downes	Robert Duggan (A) Glen Glenn (M)	Hal Huff (A) Lloyd Thompson (F)	

Anerine, Peter J., Mot.-Pic. Cameraman, U.S. Naval Photographic Center, MPP Dept., Washington, D.C. (A)

Arakawa, Mitsuo, Eng., Far East Labs., Inc., 1-393 Gotanda, Shinagawa-Ku, Tokyo, Japan. (A)

Astradiningrat, R. Padma T., Studio Manager, National Film Studios, Indonesia. Mail: Dept. of Cinema, Univ. So. Calif., University Pk., Los Angeles 7. (A)

Awad, Babiker Mohamed, Lab. Asst., Min. of Inform. & Labour, Sudan. Mail: Dept. of Cinema, University of Southern California, University Pk., Los Angeles 7. (A)

Beiser, Leo, Staff Eng., Tech. Prod. Div., Radio Receptor Co. Mail: 169-24 21 Rd., Flushing Manor 57, N.Y. (M)

Benwell, George D., Tech. Dir., CJCH-TV. Mail: 44 Springvale Ave., Armdale, Halifax County, N.S., Can. (M)

Biondo, G. A., Executive, International Recording, S.P.A. Mail: Via C. Balbo, 5, Rome, Italy. (M)

Blais, Allain, Sales Repr., Gevaert Co. Mail: 9627 Lockwood, Skokie, Ill. (A)

Blois, Donald R., TV Supvr., CJCH Ltd., 741 Robie St., Halifax, N.S., Can. (M)

Booth, Robert S., Mot.-Pic. Cameraman, U.S. Public Health Service. Mail: 1247 Lyle Pl., N.W., Atlanta 13, Ga. (A)

Brokaw, Edgar L., Producer, New York Studios, Inc., 354 W. 45 St., New York 36. (M)

Brown, A. J., Teacher, Radio & TV Trades, No. Sydney Tech. College. Mail: 26 Winifred Ave., Epping, N.S.W., Australia. (A)

Brown, Peter S., Miami Univ. Mail: 3622 S.W. 22 Terrace, Miami 45, Fla. (S)

Burt, William M., Dir., Film & Equip. Exch., U.S. Army Valley Forge Gen. Hospital. Mail: Hares Hill Rd., Box 274, Kimberton, Pa. (A)

Buxbaum, Walter L., Supervising Film Editor, Dept. Health, Educ. & Welfare. Mail: 1170 Fine Ridge Rd., N.E., Atlanta 3, Ga. (A)

Cackowski, Stanley, Industrial Photo., IBM Co. Mail: 151 Cannon St., Poughkeepsie, N.Y. (A)

Cance, E. H., Tech. Mgr., Ancor Colourprint Laboratories, Ltd., Ormond House, Boswell St., London W.C. 2, Eng. (A)

Cavelli, Archie F., Quality Control, Movieclab Film Labs. Mail: 1072 Hetfield Ave., Scotch Plains, N.J. (via Westfield P.O.) (A)

Chladek, James J., Pres., Crest Films. Mail: 3547 N. 14 St., Milwaukee 6, Wis. (M)

Coleman, Leonard F., Mot.-Pic. Eng., Eastman Kodak Co. Mail: 544 Countryside La., Webster, N.Y. (M)

Collier, Roger A., Sr. TV Techn., Columbia Broadcasting System. Mail: 217 Niagara St., Winnipeg, Manit., Can. (A)

Collins, Jacques Antoine, Film Cameraman, Canadian Broadcasting Corp. Mail: 390 Rielle, Apt. 17, Verdun 19, Que., Can. (A)

Colson, James Burton, Univ. Calif. L.A. Mail: 604 1/2 Gayley Ave., Los Angeles 24. (S)

Crouch, Ernest Casimir, Chief Eng., Sound & TV Broadcasting, Country Broadcasting Services. Mail: 31 Lords Pl., Orange, N.S.W., Australia. (M)

Curtis, J. R., Techn., Canadian Marconi, CECF-TV. Mail: 722 Clermont Blvd., Laval des Rapides, Que., Can. (A)

de Brito, Robert F., Production Asst., Cinefonics-Cook Electric. Mail: Box 282, Skokie, Ill. (A)

Demetroules, Nick M., City Col. N.Y. Film Inst. Mail: 3458 30 St., Queens 6, N.Y. (S)

De Sanctis, Angelo, Mot.-Pic. Prod. Specialist, U.S.I.A. Mail: 367 E. 201 St., Bronx 58, N.Y. (A)

Dissman, James Harold, Univ. So. Calif. Mail: 808 1/2 N. Verdugo Blvd., Glendale, Calif. (S)

Dolan, James E., Mot.-Pic. Elect., IATSE Local 52. Mail: 430 Center Ave., Westwood, N.J. (A)

Doust, John, Lab. Techn., Vice-Pres., Cinelaboratorios Caribe C.A., Prados del Este, Caracas, Venezuela. (M)

Ducklow, Robert C., Photo. Dept. Head, Valley Iron Works Corp. Mail: 510 E. North St., Appleton, Wis. (A)

Dudley, Leslie P., Stereoscopia Cons., Leslie P. Dudley, Inc. Mail: Westwood Glen Apts., Apt. 4, 10740 Wilshire Blvd., Los Angeles 24. (M)

Engle, Morris A., Photo. Supvr., The Martin Co. Mail: 366 Clermont Pkwy., Denver 20, Colo. (A)

Fisher, Meyer, Lab. Techn., Color Labs., Inc. Mail: 1146 S. Spaulding Ave., Los Angeles. (A)

Ford, Harry C., Studio Elect., Filmways, Inc. Mail: 50-08 Overbrook St., Douglaston 62, N.Y. (A)

Forsdale, Louis, Professor, Teachers College, Columbia University, 525 W. 120 St., New York 27. (A)

Forst, Donald J., Rochester Inst. Tech. Mail: 56 Chestnut St., Rochester 7, N.Y. (S)

Fulton, Mervin E., Pres., Fulton Productions, Inc. Mail: Box 980, Tulare, Calif. (M)

Gabo, Farouk Khalid Alla, Lab. Asst., Min. of Information & Labour, Sudan. Mail: Dept. of Cinema, University Southern California, University Park, Los Angeles 7. (A)

Gaffney, Donald Arthur, Rochester Inst. Tech. Mail: 13826 Clifford Ave., Cleveland 35, Ohio. (S)

Gellman, Ernest S., City Col. N.Y. Mail: 312 W. 48 St., New York 36. (S)

Gerlach, R. P., TV Eng., Columbia Broadcasting System. Mail: 2718 W. 166 St., Gardena, Calif. (A)

Goodman, Sheldon Alan, Indiana Univ. Mail: 619 N. Fess Ave., Bloomington, Ind. (S)

Goodson, Curtis C., Univ. So. Calif. Mail: 3658 1/2 Glendon Ave., Los Angeles 34. (S)

Graham, George N., Sales Mgr., Kodak Processing Lab. Mail: 5604 Harwick Rd., Washington 16, D.C. (M)

Gray, Sanford D., Film Director-Prod., Instr., South Dakota State Univ. Mail: 222 N. Yale, Vermillion, S.D. (A)

Gubara, Gadalia Ibrahim, Film Producer, Information & Labour Ministry, Sudan. Mail: Dept. of Cinema, University Southern California University Park, Los Angeles 7. (M)

Haas, C. Harvey, Asst. Chief Eng., General Film Labs., 1546 N. Argyle, Hollywood 28. (A)

Harman, Fred C., Supvr., Telecine/Film Control Maint., CBS-TV. Mail: 360 Manor Rd., Douglaston 63, N.Y. (A)

Hayashi, James K., Electronic serviceman, 3255 Melemele Pl., Honolulu 14, Hawaii. (A)

Herring, Charles C., Chief, Bureau of Naval Weapons, Photo Div., Washington. Mail: 602 Meadow La., S.W., Vienna, Va. (A)

Herring, Kenneth George, Video Sales Supvr., Ampex Professional Products Co., 345 E. 48 St., New York 17. (A)

Hollis, W. B., Elect. Eng., Airtronics. Mail: 1338 Mission St., San Francisco, Calif. (A)

Holmes, Standish W., Editorial Publicity, Eastman Kodak Co. Mail: 134 Norcrest Dr., Rochester, N.Y. (A)

Horrall, Robert L., Rochester Inst. Tech. Mail: 95 Main St., W., Rochester 14, N.Y. (S)

Hughes, Jerry Glenn, Rochester Inst. Tech. Mail: Rm. 401, Men's Residence Hall, 95 Main St., W., Rochester 14, N.Y. (S)

Jacobsen, Theodore L., Sales Mgr., Westrex Corp., 6601 Romaine St., Hollywood. (M)

Jean, Yvon, Film Production Supvr., Canadian Broadcasting Corp. Mail: 5915 24th Rosemont Ave., Montreal, Que., Can. (M)

Jessen, Bruce Arnold, Iowa State Univ. Mail: 238 N. Hyland, Ames, Iowa. (S)

Johnson, F. M., Eng., American Broadcasting Company. Mail: 2905 Via San Delarrio, Montebello, Calif. (A)

Kaplow, Marvin, Pres., Hudson Photo. Industries. Mail: 15 Wells Ave., Croton-on-Hudson, N.Y. (A)

Karr, Paul Spencer, Mot.-Pic. & TV Producer-Dir., Paul S. Karr, Prod; and KVOG-TV. Mail: 1250 E. First So., Salt Lake City 2, Utah. (M)

Spotlight on

Gevapan 30

TYPE 165

Cine film

Gevapan 30, Type 165 is favored by experienced cameramen all over the world. This film gives uniform results, even when the shooting schedule calls for both interior and exterior shots. The fine grain and excellent gradation give extremely good definition with excellent tone rendition. The special sensitivity of this film also minimizes make-up and other photographic problems.

Negative films
Duplicating films
Sound recording films
Positive films
Reversal films
Gevacolor films
Magnetic film

GEVAERT Offers a complete line of quality photographic materials

GEVAERT PHOTO-PRODUCTEN N.V., 27, SEPTESTAAT, MORTSEL (ANTWERP) BELGIUM

In the U. S.: The Gevaert Company of America, Inc., 321 West 54 Street, New York 19

In Canada: Photo Importing Agencies Ltd., 345 Adelaide Street, West, Toronto 2B, Ontario

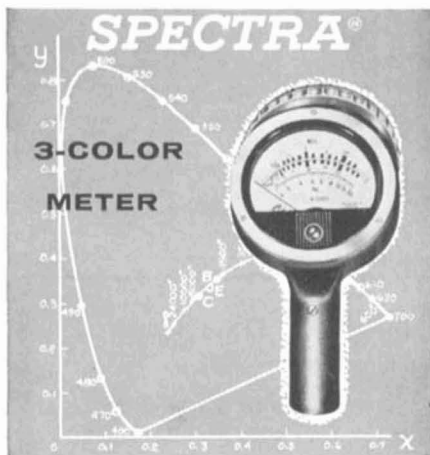


The ONLY Professional Meter...
measures
ILLUMINATION, CONTRAST and BRIGHTNESS!

SPECTRA
HAND CALIBRATED FOR ABSOLUTE ACCURACY...

When thousands of dollars of narrow-latitude color film is shot, exposure must be "on the button." No wonder, therefore, that Hollywood's top cameramen and lighting technicians rely exclusively on SPECTRA! For this is the only meter in the world employing bench-matched components, with individually calibrated direct reading slides for every ASA film rating, present or future! Directly shows "f" stop, and foot candles, as well as brightness and contrast, even in unusually low light levels. If you're serious about photography, there is only SPECTRA! Complete with 14 slides, grid, disc, handsome fitted case. . . \$97.50

Distrib. by Scopas, Inc., N.Y. 16, N.Y.
PHOTO RESEARCH CORP.
837 No. Cahuenga Blvd., Hollywood 38, Calif.



The ONLY meter that measures all light sources, including DAYLIGHT, accurately!

SPECTRA 3-color meter measures the proportionate amounts of all three primary colors present in the light source and indicates the filters necessary for positive color correction in Spectra Index Units. (°Kelvin conversion table supplied)



Write for descriptive literature and complete specifications.

PHOTO RESEARCH CORP.

Karl Freund, A.S.C., President
837 NO. CAHUENGA BLVD.
HOLLYWOOD 38, CALIFORNIA

- Kaufman, Herbert S.**, Electr. Sales Eng., Airtronics. Mail: 1338 Mission St., San Francisco. (A)
- Kimberly, Wilmer H.**, Mot.-Pic. Dir., U.S. Public Health Dept. Mail: 3445 Rockbridge Rd., R.D. 3, Stone Mountain, Ga. (M)
- Kirkman, W. Royston**, TV Maintenance Techn., CBC Radio Canada, 11832 General Giraud, Apt. 7, Cartierville, Que., Can. (A)
- Lamb, Kenneth Franklyn**, Univ. Miami. Mail: 27 Salamanca, Coral Gables, Fla. (S)
- Landers, Albert R.**, Asst. to Pres., General Film Labs., 1546 N. Argyle Ave., Hollywood 28. (M)
- Landre, John K.**, Eng., Zenith Radio Research Corp. 4040 Campbell Ave., Menlo Park, Calif. (A)
- Leidig, Joseph HORNER**, Photo., Corinthian Broadcasting, WISH-TV. Mail: 3107 Falcon Dr., Indianapolis 24, Ind. (A)
- Lencina, James F.**, Sound Recordist, N.Y. Studios, Inc. Mail: 28 Perry St., New York. (A)
- Lethin, Jay E.**, Electr. Eng., Airborne Instrument Lab., Melville, N.Y. (A)
- Lover, Anthony**, City Col. N.Y. Inst. Film Technique. Mail: 20-66 35 St., Queens 5, N.Y. (S)
- McAward, James C., Jr.**, TV Producer, William Esty Co. Mail: 47-12 245 St., Douglaston 62, N.Y. (A)
- McDonnell, Jerry, Lt.**, USNR, Photo. Pilot. Mail: BOQ 600, Rm. A-321, Naval Air Sta., Pensacola, Fla. (A)
- McDonough, John T.**, Film Editor, Bill Snyder Films. Mail: 1225 11¹/₂ St., N. Fargo, N.D. (A)
- Matthews, Donald H.**, Free-lance Mot.-Pic. Sound-man, 30934 Florence, Garden City, Mich. (A)
- Minturn, Paul A. L.**, Student, p/t Radio Eng., Dallas Theological Seminary Radio Dept. Mail: 3909 Swiss Ave., Dallas 4, Tex. (A)
- Mitchell, Charles H.**, Chief Eng., KSBY-TV, KVEC Radio. Mail: 250 Highland Dr., San Luis Obispo, Calif. (A)
- Montgomery, William E.**, Camera Oper., N.Y. Studios, Inc. Mail: 401 E. 50 St., New York 22. (A)
- Montvid, Robert**, Film Lab. Techn., Eagle Film Lab. Mail: 3852 W. 63 Pl., Chicago 29. (A)
- Obeid, Ahmed**, Asst. Film Prodn. Officer, Sudan Gov't. Mail: Dept. of Cinema, University Southern California, University Park, Los Angeles 7. (M)
- Osman, Abdel Karim**, Cinema Centre Electr. Supt. Mail: Ministry of Information & Labour, Khartoum, Sudan. (M)
- Pape, Leonard W.**, Closed-Circuit TV Eng., Chicago Communications Service. Mail: 4046 N. Whipple St., Chicago 18. (A)
- Parks, Donald R.**, Control Dept., Associated Screen Industries. 2000 Northcliffe Ave., Montreal, Que., Can. (A)
- Patel, Ramesh A.**, Dir., Patel India Pr. Ltd. Mail: Film Center, 68 Tardeo Rd., Bombay 7, India. (A)
- Peak, Robert I.**, Printer Lab. Techn., Wilding Picture Prod. Mail: 1844 W. Irving Park Rd., Chicago 13. (A)
- Pollster, Richard C.**, General Mgr., George Ryan Films. Mail: 1741 Glenview Ave., Saint Paul 12, Minn. (A)
- Pound, Earl F.**, Pres., The Cordin Co. Mail: 1356 Thornton Ave., Salt Lake City 5, Utah. (A)
- Powers, Edward A.**, Optical Eng., Bausch & Lomb, Inc., 635 St. Paul St., Rochester, N.Y. (A)
- Powles, Edward C.**, Tech. Dir., General Film Lab., Inc., 66 Sirley St., Detroit 1. (M)
- Reddy, Chirra Ramalinga**, Institute of Optics, University of Rochester, Rochester 20, N.Y. (S)
- Rettig, Charles F.**, Commercial Pilot, Essex Wire Corp. Mail: 1819 N. Glendale Dr., Ft. Wayne, Ind. (A)
- Ross, Louis**, Radio, TV Eng., USIA. Mail: 6759 Julian St., Springfield, Va. (A)
- Rudnick, B.**, Manager Photo. Dept., Republic Aviaton Corp. Mail: 89 Flower Hill Rd., Huntington, N.Y. (M)
- Ryan, Frank D.**, Production Mgr., Cine Projectors, Bell & Howell Company. Mail: 7100 McCormack Rd., Chicago 45. (A)
- Sadler, Bill**, Manager, Religious Film Productions. Mail: Box 2002, Tulsa 1, Okla. (M)
- Scales, Bobby Ray**, Univ. Calif. L.A. Mail: 1801 Centinela Ave., Santa Monica, Calif. (S)
- Schatz Jack**, Free-lance Mot.-Pic. Techn., 2115 E. 8 St., Brooklyn 23, N.Y. (A)
- Schon, Christopher R. S.**, Photo., Stills & Spec. Cine-Effects, Canadian Marconi, CFCF-TV. Mail: 621 Prince Arthur, W.#3, Montreal, Que., Can. (A)
- Schramka, Bernard**, Mot.-Pic. & Sound Techn., Bell & Howell Company. Mail: 4512 N. Harding Ave., Chicago 25. (A)
- Shannon, Warren B.**, Special Effects, Filmways, Inc. Mail: 1179 Bushwick Ave., Brooklyn, 21, N.Y. (A)
- Sisson, Waldo L.**, TV Eng., Times-Mirror Broadcasting, KTTV. Mail: 6123 Lexington, Apt. 6, Hollywood 38. (A)
- Sopstyle, Walter J.**, Mot.-Pic. Photo., National Aeronautics & Space Administration. Mail: 101 W. Federal St., Snow Hill, Md. (A)
- Sozio, George A.**, Newsreel Cameraman, Tele-news. Mail: 7009 Larrlyn Dr., Springfield, Va. (A)
- Standley, Arthur Clinton**, Eng., Bausch & Lomb Optical Co., 635 St. Paul St., Rochester, N.Y. (A)
- Steinberg, Alfred**, Chief Instrumentation Eng., Republic Aviation Corp. Mail: 30 Dennis La., Bethpage, N.Y. (A)
- Stellrecht, Karl**, Camera Techn., U.S. Armed Forces. Mail: 2553 Malone Pl., Santa Clara, Calif. (A)
- Swarthe, Eric**, Managing Dir., Systems Technology Films. Mail: 455 E. 51 St., New York 22. (M)
- Swerdlow, Donald Howard**, Inst. Film Techn., City Col. N.Y. Mail: 915 Elsmere Pl., Bronx 60, N.Y. (S)
- Takeuchi, Heihachiro**, Instructor, Institute of High-Speed Mechanics, Tohoku University, Sendai, Japan. (A)
- Theodore, Terry**, Univ. So. Calif. Mail: 3200 S. Hoover Blvd., Los Angeles 7. (S)
- Toler, William D.**, Photo. Mail: Box 2180, Research Center, Humble Oil Co., Houston, Tex. (A)
- Tregillus, Leonard**, Research Associate, Photo. Processing, Eastman Kodak Co. Mail: 297 Pinecrest Dr., Rochester 17, N.Y. (A)
- Uragami, Stanley Ichiro**, Univ. So. Calif. Mail: 3438 Fifth Ave., Los Angeles 18. (S)
- West, Albert J., Jr.**, Producer Services Mgr., General Film Labs. 106 W. 14 St., Kansas City 5, Mo. (M)
- White, Floyd E., Jr.**, Applications Elect. Eng., Scintilla Div., Bendix Corp. Mail: 13137-K Victory Blvd., Van Nuys, Calif. (A)
- Wichelman, Ronald J.**, Rochester Inst. Tech. Mail: 14 Arlington St., Apt. 2, Rochester 7, N.Y. (S)
- Wilhelm, Michael J.**, TV Tech. Dir., Univ. Detroit. Mail: 16852 Asbury Pk., Detroit 35. (A)
- Williams, John Scott**, Univ. So. Calif. Mail: 3133 Flower St., Huntington Park, Calif. (S)
- Wystup, Zbigniew J.**, Mgr. Stand. Dent., FODU Mot.-Pic. Research Center. Mail: Warsaw 31, Nowolipki 21B m.23, Poland. (A)
- Xander, Walter G.**, Mot.-Pic. Producer, Army Pict. Center. Mail: 420 Main Blvd., Allentown, Pa. (A)
- Yarnes, Donald C.**, TV & Film Rec. Systems Eng., Radio Corp. of America. Mail: 3801 Woodcliff Rd., Sherman Oaks, Calif. (M)
- Yavitz, Eric A.**, Eng., Eastman Kodak Co., Bldg. 35, Kodak Pk., Rochester 4, N.Y. (A)
- Zielinski, Waleryan W.**, Supt. of Mfg., Bell & Howell Canada. Mail: 264 Calvington Dr., Downsview, Ont., Can. (M)

SMPTE Test Films

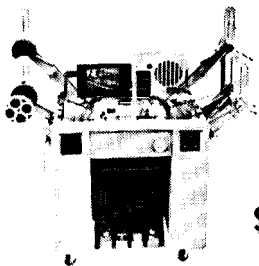
Test films planned by the Society's technical committees and produced under the Society's exact supervision are available from the headquarters office at 55 West 42 St., New York 36. A catalog containing brief descriptions of each film is obtainable on request.

These films are used by manufacturers for testing the performance of new equipment, by television station technicians for lining up and adjusting film pickup systems, by maintenance men for "in service" maintenance of projectors and sound equipment, and by dealers for testing and demonstration equipment.

Films are available as follows:

- Television — Picture Only, Color or Black-and-White
- CinemaScope
- Visual 35mm — Picture Only
- Magnetic — 16mm Sound Only
- Picture and Sound — 16mm
- Picture Only — 16mm
- Glass Slide — 16mm

ACMADE MARK II EDITING TABLE



**Makes
Editing
Easy!**

Prices are
in line—
complete
2 channel
unit

\$2975

f.o.b. New York

Operation of this simple, efficient editing machine can be mastered in minutes. Continuous movement provides absolute safety for your film. Instant controls and de-clutching allows up to 50% increase speed and efficiency in editing. Any combination of 2 or 3, 16mm or 35mm channels, plus magnetic and optical sound available.

WRITE FOR DETAILED BROCHURE

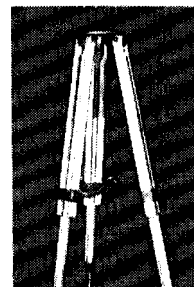
NEW F & B MARK III FLUID DRIVE TRIPOD



Complete outfit for 16mm cameras, 35mm Eyemos & Arris, at an amazingly low price.

\$139⁵⁰

Includes Tripod, Adapter and Visco-matic Fluid Head. With F & B's usual iron-clad guarantee.



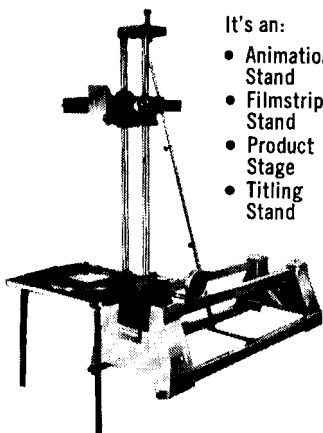
The day of the friction head is fast coming to an end. More cameramen now use fluid drive heads because they meet the demand for smooth, continuous, easily-controlled action.



Tripod legs only.....\$49.50
Baby tripod legs only..... 47.50
Fluid Head only..... 97.50
Leather & Vinyl case..... 12.50
Leather & Vinyl case for Baby..... 11.50

F & B Triplex ANIMATION STAND

The undisputed performance champion in the low-priced animation stand field.



It's an:

- Animation Stand
- Filmstrip Stand
- Product Stage
- Titling Stand

Compare these specifications:

- Zoom Range 1-30 Field
- Compound Camera Carriage 18" E-W, 12" N-S
- Tracking Accurate to 1/1000 of an inch

Weight 450 lbs. 14 Accessories Available

Basic Stand **\$995**



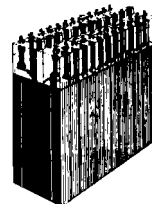
DIRECTORS' VIEWFINDERS

New, imported director's viewfinder with large, clear optics in 4 new models at very reasonable prices.

Model I—for 35mm, range 25mm-135mm\$49.50
Model IA—for 16mm, range 11.5mm-75mm 49.50
Model IB—for 16 mm, range 8mm-75mm 69.50
Model III—for 35mm Wide-Screen & TV Camera range 3-4 to 2.55-1, with sliding, adjustable marks 89.50

FREE —Neckchain and Leather !
Case with Order

F & B NICKEL CADMIUM BATTERIES



The perfect companion for your Arriflex, mounted in rugged aluminum case, with shoulder strap. Indestructible, high capacity Nickel Cadmium cells provide perfect power, absolutely guaranteed for 1 year.

7v. Battery (6 cells)\$85.00
10v. Battery (8 cells)100.00
15v. Battery (12 cells)135.00
Voltmeter attach. (opt) 20.00
Ammeter attach. (opt) 10.00
Miniaturized Charger 29.50
NEW—15v-7½v Battery—can be switched for 7½v or 15v for both 16mm and 35mm Arris\$155.00
With Built-In Charger 184.50

PORTMAN ANIMATION STAND

Our new streamlined design incorporates all the versatility of stands costing twice as much. Enthusiastic users from Australia to Venezuela endorse its rugged simplicity and efficiency.

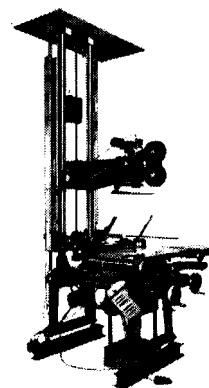
More than 45 accessories available including:

- Multi-Plane Table
- Aerial Image Projector
- Traverse Peg Bar
- Stop Motor Motor
- 12 Field Crawl Unit
- Acme Portman Rack-over, 16mm-35mm Camera

\$1595

Basic Stand

WRITE FOR COMPLETE 20 PAGE CATALOG



SERVING THE WORLD'S FINEST FILM MAKERS

FLORMAN & BABB, INC.

68 West 45th Street, New York 36, New York · MUrray Hill 2-2928

*

Of the fifteen 1960 Industrial Film Awards, **ten went to films shot with Arriflex 16mm and 35mm cameras**... a record unmatched by any other camera! A record approached only by Arriflex's winner-majority showing last year.

Why Arriflex? Simply because the Arriflex does the job better and more easily, faster and more economically! You ought to try one of these world-famous motion picture cameras soon.



* ANNUAL INDUSTRIAL FILM AWARDS -
conducted by the publishers of
Industrial Photography magazine.

FOR LITERATURE OR DEMONSTRATION OF ARRIFLEX 16
AND ARRIFLEX 35MM CAMERAS, WRITE TO:

ARRIFLEX
CORPORATION OF AMERICA

257 PARK AVENUE SOUTH, NEW YORK 10, N.Y.
WEST COAST: 826 NORTH COLE AVENUE, HOLLYWOOD 38, CALIF.

number of possible applications have been suggested including the accurate measurement of distances of many miles.

A booklet available without charge from H. W. Mattson, Bell Telephone Laboratories, Murray Hill, N.J., contains a detailed description of the optical maser at each stage of development.

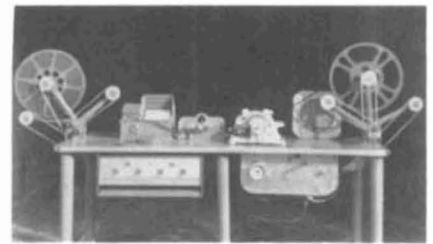
An optical maser, called a laser (from Light Amplification by Stimulated Emission of Radiation) has been developed in the laboratories of Hughes Aircraft Co., Culver City, Calif. The laser is constructed around a synthetic ruby crystal which is irradiated by a light source, such as a powerful flashtube lamp. The optical energy excites the atoms to a higher energy state from which the energy is reradiated in a narrow band of frequencies. The excited atoms are coupled to an atomic resonator and stimulated to emit the radiation together. According to the inventor, Theodore H. Maiman, the laser generates an almost perfectly parallel beam which, theoretically, could be directed at the moon, illuminating a lunar area less than 10 miles wide. The laser emits a sharp coherent light beam in the extremely high frequencies of optics — about 500,000 billion cycles/sec — where electromagnetic waves become light. Possible applications suggested by Dr. Maiman included use of the concentration of light energy to vaporize individual parts of bacteria, small plants and particles. It was also suggested that laser beam's light and heat could be used to induce chemical or metallurgical changes in biological, medical or industrial applications.

Experiments with ruby rods in the construction of optical masers are presently

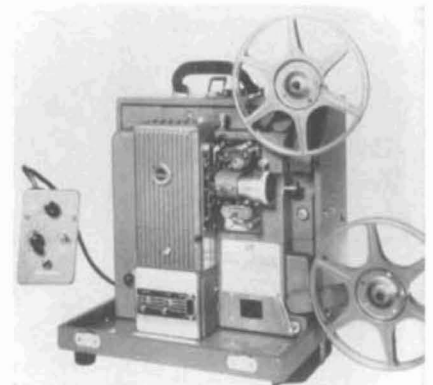
being conducted at Bell Telephone Laboratories.



An improved transistorized Filmagnetic sound recording system for use in Auricon cameras has been announced by Bach Auricon, Inc., 6950 Romaine St., Hollywood 38. The new Model MA-11 amplifier weighs only 5 lb and is designed for portability and dependability. The circuitry employs 14 transistors for amplifier frequency response to 12,000 cycles. New impedance matching techniques are used to eliminate heavy output transformers. The amplifier operates from a self-contained permanent rechargeable battery, or directly from 115-v house current for continuous operation. Three inputs (two microphone and one phono), with switch-operated compensation for speech or music, operate in conjunction with a visual recording-level indicator, with three individual input controls. Prices begin at \$960.



A 3-channel 16mm Editing Table has been announced by Palmer Editors, 73-40 Vleigh Place, Flushing 67, N.Y. The unit is power driven by a reversible synchronous motor. Two speeds are provided through a belt shift — sound speed for normal viewing and high speed for quick inspection. Instant stopping is provided for. The drive is through timing belts and a clutch is provided so that the film can be moved by hand in either direction. For convenience in operation, the sound slit is 26 frames away from the synchronizer index and the picture aperture is 60 frames from it.



The L-W Photo-Optical Data Analyzer is a 16mm projector designed for data reduction of instrumentation film. The Analyzer is produced by L-W Photo Products Co., P.O. Box 147, Northridge, Calif. Variable-speed viewing from "still" to 24 frames/sec is reported to be accomplished without flicker. Remote control of all operating speeds permits pushbutton single-frame projection as well as automatic projection at previously selected speeds. Direction change to forward or reverse may also be remotely controlled. The machine also incorporates a daylight viewer. The unit is 12½ in. long, 14½ in. high and 10¼ in. wide. It weighs 26 lb.

A 35,000-w VHF high-channel amplifier, said to have a driving power requirement of less than 5000 w has been developed by General Electric Co's Technical Products Operation, Communication Products Dept., Lynchburg, Va. Outlined in the announcement were such features as d-c filaments for improved signal-to-noise ratio; a triplex cavity with three parallel tubes; double-stub loading control to permit the exact degree of output loading required by the amplifier; and a built-in electronic r-f sweep generator to simplify tuning. The amplifier incorporates a semiconductor bias power supply which is basically a three-phase bridge circuit, the output of which is filtered for reduction of the 360-cycle component. Both the aural and visual amplifiers use a common power supply. The aural bias has self-bias adjustable resistors in each grid feed.



Off-The-Shelf Delivery!

IMAGE-ORTHICON, VIDICON LENSES

Rent or Buy Image Orthicon Lenses
from World's Greatest Selection . . . choose from 28mm focal
length to 60" . . . delivered right "Off-The-Shelf" at B & J
World's Lens Headquarters!

Here you'll find the lens you need for practically ALL T.V.
Cameras, R.C.A. (TK-41, TK-11); G. E. Black and white
or color; Du Mont, etc.! Rely on the Industry's Prime Optics-
Source . . . Pioneers in T.V. Optics Since 1936
and currently serving such stations as WGN,
WNBQ, ETC.

Our Instrument Shops and "Know-how" offer you
Special Mountings, Calibration and Custom Fit-
tings! (Also Cine & Slide Equipment for your
News Dept.!)
Write for New T.V. Optics Catalog.



BURKE & JAMES, INC. 321 S. Wabash, Chicago 4, Ill.

A six-camera closed-circuit television system built by General Electric Co. has been installed at Cape Canaveral so that missile launching can be observed by personnel stationed in a blockhouse at a distance of 1000 ft from the launching pad. One of the cameras is mounted directly over the flame bucket. This camera watches the proceedings during the four seconds between engine firing and missile launching. If a defect or malfunction is apparent to the observers in the blockhouse, the test can be halted in time to save the missile. One camera is mounted on the blockhouse to observe the missile during launching and in flight. The others are placed around the launching pad. The cameras are operated from a control console in the blockhouse and a permanent film record of the launchings is maintained.

The RCA Bi-Directional Distribution Systems, developed by Radio Corp. of America primarily for closed-circuit educational television, makes it possible to send signals in two directions simultaneously over the entire cable system without the use of parallel cable runs or switching methods. Each outlet on the distribution system serves a dual function. When a standard receiver is connected to the outlet, all r-f signals on the system can be seen. R-F signals fed into the outlet are then available at all other outlets. The output of the program originating equipment is in the form of a standard r-f TV signal. Off-the-air signals are fed into the main amplifier, are amplified, then passed through the mixer, distribution transformer and down the risers to the receivers. The signals from the closed-circuit program originating equipment are fed into the room outlet, go up the riser, pass through the distribution transformer and into the mixer. The mixer removes the r-f camera signal channel and feeds it to the converter where it is converted to another channel. The converted signal is fed into the amplifier where it is mixed with off-the-air signals and fed out over the system. The output of the camera equipment is fed to a video modulator that provides an r-f signal. The output frequency may be a standard TV channel or below the standard VHF channels. In this way, only one channel is required for distribution. The camera channel is returned to the system amplifier so that proper operating levels can be established.

The system is based on a special "hybrid" distribution performer. Using this device, signals fed into the input will appear at any of the outputs, and signals fed into an output will appear at the input but not at the other outputs.

The Amphicon 108, announced by Dalto Electronics Corp., Oak St., Norwood, N.J., is a portable TV projector which projects an image of up to 9 by 12-ft on a motion-picture screen or a wall. The design is based on a flat-faced direct projection video tube. At a distance of 16 ft from the screen it projects a 9 by 12-ft picture. As the projection head is moved closer to the screen, the picture becomes smaller. The unit, which is self-contained, includes high-fidelity audio. It uses any type of antenna and operates on standard house current.

The projection head may be separated from the tuning control, and the sound unit may be used in conjunction with existing sound systems. The complete unit weighs 95 lb.

The Zoomar Mark VI remote controlled ITV lens has been announced by Zoomar, Inc., 55 Sea Cliff Ave., Glen Cove, L.I., N.Y., as audio and r-f noiseless due to the use of a newly developed miniature d-c motor designed to eliminate noise and electrical interference. Principle features of the new design are a novel copper armature, a miniature commutator made of five white gold wires, and spring-loaded brushes of the same material to assure spark-free contact. The entire armature is sealed with a plastic cover which prevents dust from entering and also renders it explosion-proof. The new lens, priced at \$1350, is in full production and experiments, leading to the application of the same principle to the Mark IV lens are being conducted.

The firm has also announced availability of five conversion lenses for use with its Zoomar Service Collimator when a finite, rather than an infinite, target is desirable. An internal holder accepts conversion lenses which move the test target into a finite position. Target distances are 500 yd, 1000 yd, 2000 yd, 4000 yd and 8000 yd. The collimator with the five lenses is priced at \$5500 with Standard Air Force Target. Lenses for any desired distance are available on special order.

CLASSIFIED ADVERTISING

First 3 lines \$5.00
Each additional line \$1.00
per inch \$13.00

Bell & Howell gauges for film repair & service.
Gauge #S-4163-N1 for aperture alignment Price \$282.25
Gauge #S-3973-N1 for shuttle teeth Price \$ 59.37

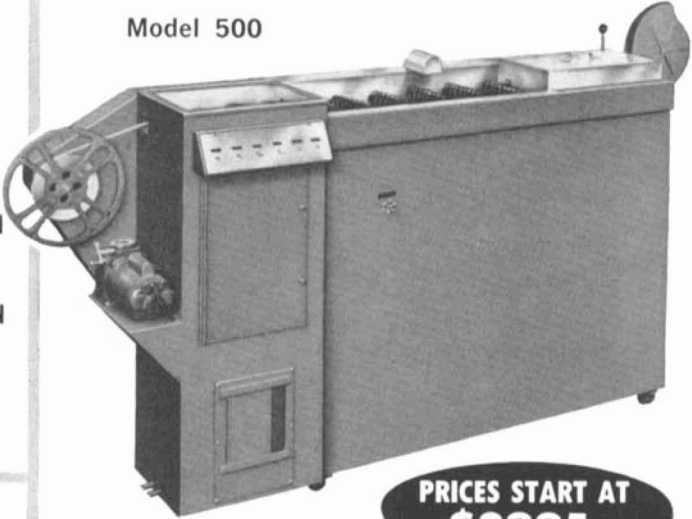
From Surplus new and unused
Both for only \$150.00
Quantities limited—ACT NOW
Intercinema Corp., Box 3452, New York 17, N.Y.

FOR SALE: Cine Kodak Special Camera, with f/1.4 Ektar lens, reflex finder, optical finder, carrying case, 15 mm lens, 63 mm lens, 152 mm lens. All in excellent condition. Will sell all for \$1200. Lawrence Beck, Beck Photo Shop, 5740 Rising Sun Ave., Philadelphia 20, Pa. Pilgrim 5-5990.

Achromat lenses providing high resolution in the 8-14 micron range are now being manufactured by the Servo Corp. of America, 111 New South Road, Hicksville, L.I., N.Y. These are in addition to achromats for 1-6 micron applications, according to a recent announcement. The firm has also announced a new computer program in its Optical Laboratory. The new program is expected to advance design and manufacturing operations in the production of Servacon lenses. The firm specializes in the manufacture of all types of infrared lenses and optical devices.


ALLEN REVERSAL PROCESSORS

Model 500



PRICES START AT \$2995.

- ★ SPEEDS TO 20 FT. PER MIN.
- ★ DAYLIGHT LOADING
- ★ COMPLETELY AUTOMATIC
- ★ VARIABLE SPEED DRIVE
- ★ AUTOMATIC REFRIGERATION
- ★ CHEMICAL RECIRCULATION
- ★ COMPLETE PLUMBING
- ★



For complete information, write:

S. O. S. CINEMA SUPPLY CORP.

Dept. T, 602 WEST 52nd ST., NEW YORK 19, N.Y.—PL 7-0440
Western Branch: 6331 Hollywood Blvd., Holly'd 28, Calif.—HO 7-2124

A six-camera closed-circuit television system built by General Electric Co. has been installed at Cape Canaveral so that missile launching can be observed by personnel stationed in a blockhouse at a distance of 1000 ft from the launching pad. One of the cameras is mounted directly over the flame bucket. This camera watches the proceedings during the four seconds between engine firing and missile launching. If a defect or malfunction is apparent to the observers in the blockhouse, the test can be halted in time to save the missile. One camera is mounted on the blockhouse to observe the missile during launching and in flight. The others are placed around the launching pad. The cameras are operated from a control console in the blockhouse and a permanent film record of the launchings is maintained.

The RCA Bi-Directional Distribution Systems, developed by Radio Corp. of America primarily for closed-circuit educational television, makes it possible to send signals in two directions simultaneously over the entire cable system without the use of parallel cable runs or switching methods. Each outlet on the distribution system serves a dual function. When a standard receiver is connected to the outlet, all r-f signals on the system can be seen. R-F signals fed into the outlet are then available at all other outlets. The output of the program originating equipment is in the form of a standard r-f TV signal. Off-the-air signals are fed into the main amplifier, are amplified, then passed through the mixer, distribution transformer and down the risers to the receivers. The signals from the closed-circuit program originating equipment are fed into the room outlet, go up the riser, pass through the distribution transformer and into the mixer. The mixer removes the r-f camera signal channel and feeds it to the converter where it is converted to another channel. The converted signal is fed into the amplifier where it is mixed with off-the-air signals and fed out over the system. The output of the camera equipment is fed to a video modulator that provides an r-f signal. The output frequency may be a standard TV channel or below the standard VHF channels. In this way, only one channel is required for distribution. The camera channel is returned to the system amplifier so that proper operating levels can be established.

The system is based on a special "hybrid" distribution performer. Using this device, signals fed into the input will appear at any of the outputs, and signals fed into an output will appear at the input but not at the other outputs.

The Amphicon 108, announced by Dalto Electronics Corp., Oak St., Norwood, N.J., is a portable TV projector which projects an image of up to 9 by 12-ft on a motion-picture screen or a wall. The design is based on a flat-faced direct projection video tube. At a distance of 16 ft from the screen it projects a 9 by 12-ft picture. As the projection head is moved closer to the screen, the picture becomes smaller. The unit, which is self-contained, includes high-fidelity audio. It uses any type of antenna and operates on standard house current.

The projection head may be separated from the tuning control, and the sound unit may be used in conjunction with existing sound systems. The complete unit weighs 95 lb.

The Zoomar Mark VI remote controlled ITV lens has been announced by Zoomar, Inc., 55 Sea Cliff Ave., Glen Cove, L.I., N.Y., as audio and r-f noiseless due to the use of a newly developed miniature d-c motor designed to eliminate noise and electrical interference. Principle features of the new design are a novel copper armature, a miniature commutator made of five white gold wires, and spring-loaded brushes of the same material to assure spark-free contact. The entire armature is sealed with a plastic cover which prevents dust from entering and also renders it explosion-proof. The new lens, priced at \$1350, is in full production and experiments, leading to the application of the same principle to the Mark IV lens are being conducted.

The firm has also announced availability of five conversion lenses for use with its Zoomar Service Collimator when a finite, rather than an infinite, target is desirable. An internal holder accepts conversion lenses which move the test target into a finite position. Target distances are 500 yd, 1000 yd, 2000 yd, 4000 yd and 8000 yd. The collimator with the five lenses is priced at \$5500 with Standard Air Force Target. Lenses for any desired distance are available on special order.

CLASSIFIED ADVERTISING

First 3 lines \$5.00
Each additional line \$1.00
per inch \$13.00

Bell & Howell gauges for film repair & service.
Gauge #S-4163-N1 for aperture alignment Price \$282.25
Gauge #S-3973-N1 for shuttle teeth Price \$ 59.37

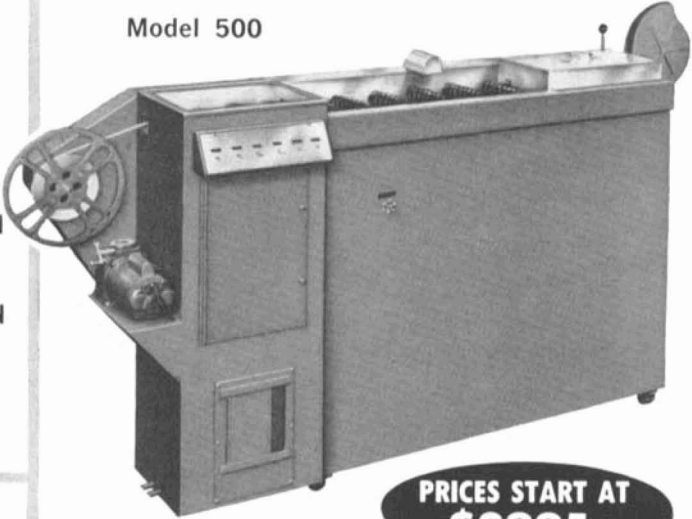
From Surplus new and unused
Both for only \$150.00
Quantities limited—ACT NOW
Inter cinema Corp., Box 3452, New York 17, N.Y.

FOR SALE: Cine Kodak Special Camera, with f/1.4 Ektar lens, reflex finder, optical finder, carrying case, 15 mm lens, 63 mm lens, 152 mm lens. All in excellent condition. Will sell all for \$1200. Lawrence Beck, Beck Photo Shop, 5740 Rising Sun Ave., Philadelphia 20, Pa. Pilgrim 5-5990.

Achromat lenses providing high resolution in the 8-14 micron range are now being manufactured by the Servo Corp. of America, 111 New South Road, Hicksville, L.I., N.Y. These are in addition to achromats for 1-6 micron applications, according to a recent announcement. The firm has also announced a new computer program in its Optical Laboratory. The new program is expected to advance design and manufacturing operations in the production of Servacon lenses. The firm specializes in the manufacture of all types of infrared lenses and optical devices.


ALLEN REVERSAL PROCESSORS

Model 500



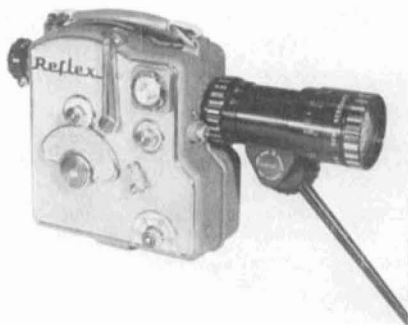
PRICES START AT \$2995.

- ★ SPEEDS TO 20 FT. PER MIN.
- ★ DAYLIGHT LOADING
- ★ COMPLETELY AUTOMATIC
- ★ VARIABLE SPEED DRIVE
- ★ AUTOMATIC REFRIGERATION
- ★ CHEMICAL RECIRCULATION
- ★ COMPLETE PLUMBING
- ★



For complete information, write:

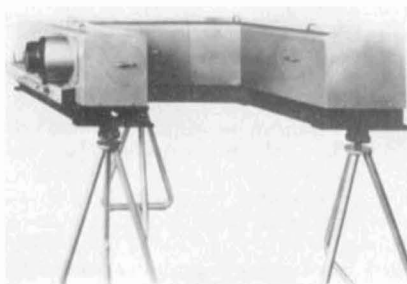
S. O. S. CINEMA SUPPLY CORP.
Dept. T, 602 WEST 52nd ST., NEW YORK 19, N.Y.—PL 7-0440
Western Branch: 6331 Hollywood Blvd., Holly'd 28, Calif.—HO 7-2124



A new varifocal lens for the Camex-Reflex 8mm single-lens camera has been announced by Karl Heitz, Inc., 480 Lexington Ave., New York 17. Designated the Pan-Cinor 8-40mm, the $f/1.9$ lens is said to provide a continuous zoom range of up to $5\times$ magnification. Available with 3-in. or 1-in. zoom lever, it focuses down to 3 ft. (with close-up lens to 1.5 ft). The lens is priced at \$189. A lever and scale to set the diaphragm while filming are also available.

A new ColorTran Converter, the Cinemaster Chief Mark II, designed for economy and efficiency, especially when used in rugged location work with portable power generators, has been announced by Natural Lighting Corp., 630 South Flower St., Burbank, Calif. Six outlets are provided, each independently controlled by color-coded and numbered pushbutton switches. Exact color temperatures can be monitored and intensities may be selected

and varied for each lamp or group on any outlet. The new unit also features a wider range input voltage control which allows compensation for line variations — 100/120 or 200/240 a-c. It is priced at \$309.



The Schardin-Mach-Zehnder Interferometer has been introduced in the United States by Zoomar, Inc., 55 Sea Cliff Ave., Glen Cove, L.I., N.Y. Developed from the original Mach-Zehnder Interferometer, the new instrument is designed for flexibility to permit use in either a vertical or horizontal position. Applications include interferometric, schlieren and shadow methods of photography in various areas of research.

An electronic device to improve the acoustics of churches and auditoriums has been announced by Westrex Corp., a Division of Litton Industries, 6601 Romaine St., Hollywood 38. Called the Westrex 1400 Distributed Reverberation System, the device is for use in auditoriums where

the natural reverberation time has been established primarily for voice sounds, and is thus too short for satisfactory reproduction of music. The system creates for each sound a complex train of repetitions in continuously diminishing volume from various parts of the auditorium. The sounds are repeated by recording them on magnetic tape and passing the tape over a succession of reproducing heads. Frequency of repetition is determined by tape speed and head spacing and can be adjusted to the requirements of the particular auditorium. The illusion of sound passing from front to back with successive reflections and diminishing volume is achieved by connecting each reproducing head to an individual pair of loudspeakers, distributed from front to back on opposite sides of the auditorium. Three groups of equipments are included in the basic system: tape transport, including erase, record and reproduce heads; distributed reverberation assembly, including recording and reproducing circuits; and an amplifier cabinet containing 60-w amplifiers for each speaker.

A tape head demagnetizer, featuring a special plastic sleeve on the tip of the probe to prevent accidental scratches, has been announced by Robins Industries Corp., Flushing 54, N.Y. Called the Model HD-3, it is designed mainly for amateur users of tape. It is priced at \$5.95. The firm also offers the Model HD-6, a professional unit priced at \$10.

A demagnetizer for bulk sound recording designed to serve the dual purpose of completely erasing the tape on the reel without rewinding, and demagnetizing record-playback and erase heads is manufactured by Amplifier Corp. of America, 398 Broadway, New York 13. The device, called the Magneraser, is available in two models, the 200C for 100 to 300 v, and the 220C for 200 to 260 v. Both models are priced at \$24.

Tin-A-Lum, a low-temperature fluxless solder, has been introduced in the United States by Metals for Industry, Inc., 299 Pavonia Ave., Jersey City, N.J. The solder melts at extremely low temperatures, thus eliminating the danger of metal destruction under heat. It is used on aluminum and its alloys, zinc, tin, pewter, magnesium and other metals as well as castings. It can be polished and chromium plated and is said to be an excellent conductor of heat and electricity.

The PW-2, a 2-w power wire-wound resistor, has been announced by International Resistance Co., 401 Broad St., Philadelphia 8. The firm also manufactures 3-, 5-, 7-, 10-, 15- and 20-w sizes. Resistance elements of the new unit are wound on glass fiber cores. Tinned copper leads are secured to the element and the element-lead assembly is sealed in a rectangular ceramic case, providing a mechanical protective bond linking the resistance element, terminals and case. The resistance range is from 0.24 to 8200 ohms, and standard tolerances of $\pm 5\%$ and $\pm 10\%$ are available. The price of the PW-2 is \$52 per thousand for the 10% tolerance unit.



Traid Professional Portable Hot Splicer

**THE ONLY
PROFESSIONAL
PORTABLE
HOT SPLICER
WITH A
BUILT-IN
CARBIDE SCRAPER
BLADE
BLADE GUARANTEED FOR LIFE!***

Model 135 (for 35 or 16 mm film)\$329.50
Model 116 (for 16 or 8 mm film)\$229.50
Scraper Pat. No. 2544082
See your photographic dealer or write to Traid Corporation for Specification Sheet No. 7.

TRAID CORPORATION

17136 Ventura Blvd., Encino, Calif., Telephone TRiangle 3-3373 or STate 8-2210
*Guarantee: Should blade ever need sharpening, Traid will sharpen for nominal handling charge of \$1.00.



employment service

.....
These notices are published for the service of the membership and the field. They are inserted three months, at no charge to the member. The Society's address cannot be used for replies.

Positions Wanted

Film and AV Executive. Presently Audio Visual Manager for major corporation. Extensive overseas experience writing, directing and producing educational, documentary, public relation films. Experienced in almost all fields of film production and AV media preparation and production. Seeking position with challenge and future. Age 36, Married, M.A. in Cinema. Write: John H. Humphrey, 72-10 41st Ave., Jackson Hts. 77, N.Y.

Cameraman-Director. Available for forthcoming Confederate Centennial assignments throughout the entire central and deep south. Located near actual battlefields and areas where Centennial will be staged. Also available for assignments to Smoky Mts., Blue Ridge Mts., Cumberlands, Mississippi Delta and Okefenokee areas. Twenty years experience in high budget documentary film production. John O. Evans, 2313-B Star-mount Cir., S.W., Huntsville, Ala.

Engineer-Administrator. Have designed, set up and managed motion-picture laboratories in color and black-and-white. Familiar with full range of operations and equipment in a laboratory. Graduate M.I.T.; M.S. in Chemical Engineering, B.S. in Business and Engineering Administration. Several languages. Desire challenging position. Apt. 2J, 130 Orient Way, Rutherford, N.J. WEBster 3-3238.

Representative. Graduate student working towards doctorate in Educational Television, receiving M.A. in motion pictures June 1961, B.A. in theater television, will be touring Latin America covering 64 cities in 20 countries and contacting over 100 television stations and 200 producers of newsreel, documentary, educational, television and feature films. Tour will be repeated each summer for three years. Also background three yrs electrical engineering and four yrs sales. Will represent your company and translate brochures into Spanish or Portuguese. Don Stewart, 2005 Sixth St., Santa Monica, Calif. EX 9-6795

Positions Available

Color Negative Printer Control Man. Photographic background, with color printing experience. Flexible hours. Paid benefits. New York City. Circle 6-5606. Mrs. Goldenberg.

Equipment Maintenance Men. Experienced in service and repair of one or more of the following types of equipment: Moviolas, sound projectors, Mitchell, Bell & Howell and Arriflex cameras, lens testing and calibration, audio and electronics for magnetic recorders and amplifiers, lighting and electrical equipment, machine shop. Write fully—experience and salary required. A. Florman, Florman & Babb, 68 West 45 St., New York 36.

Film Production Aide. The New York State Department of Civil Service will conduct an examination for Film Production Aide on April 29, 1961. Salary \$3500 to \$4350 in five annual increases. Open only to New York State residents. A Film Production Aide assists in preparations for shooting of motion picture film. Requires one year of paid experience in motion picture or television work and either one year of experience in operation of motion picture projector or one year of training in photography or television production or equivalent training and experience. For details contact the Recruitment Unit, Box 84-A, New York State Department of Civil Service, The State Campus, Albany 1, N.Y.

Soundman. Motion-picture recording studio requires alert soundman for staff. Must know all phases of sound recording including RCA equipment. Send resume to 446 East 86 St., At: Monahan, Rm. 6-C, New York 27.

Film Processor. Motion-picture recording studio requires man for developing film in laboratory. Experience. Permanent. Write particulars to Mrs. M. Monahan, 446 East 86 St., Rm 6-C, New York 28.

Journals Wanted

These notices are published as a service to expedite disposal and acquisition of out-of-print Journals. Please write direct to the persons and addresses listed.

Complete set of Journals from January 1934 through June 1960. Excellent condition. For sale only as a set. Write: Don Norwood, 1470 San Pasqual St., Pasadena, Calif.

Complete file, Vol. I No. 1 through Dec. 1959 with indexes. Fine condition: \$500. James G. Barrick, 15726 Fernway Ave., N. W., Cleveland 11, Ohio.

Complete set of Transactions, except Nos. 6 and 9, and all Journals published to date, including indexes. All in good condition. Price \$500. Also extra copies of Transactions Nos. 21, 31, 32. W. W. Hennessey, RFD #2, Pound Ridge, N. Y.

Complete set of Journals from May 1937 to June 1954, including special volumes and membership directories, excellent condition; also Mar., May 1934 and July 1935 issues. Write: Harry R. Lubcke, 2443 Creston Way, Hollywood 28, Calif. HO 9-3266.

Jan-Dec. 1950; Jan., Feb., Apr.-Dec. 1951; Jan-Mar. 1952. Also available are vols. 6 and 7 of The Television Society (British) covering the period Jan. 1950 through Sept. 1955. Write: Andrew N. McClellan, 65 Hillside Drive, Toronto 6, Ont., Canada.

Dec. 1946, Feb.-Dec. 1947, 1948-1955 complete. All copies in perfect condition; for sale as entire lot only. Write: Joseph W. MacDonald, 2414 Sullivant Ave., Columbus 4, Ohio.

Jan. 1947 to Dec. 1957 complete and in perfect condition. For sale only as a set. Write: Charles J. Marshall, 2816 Royalston Ave., Kettering 19, Ohio.

Complete set of Journals Jan. 1949 to Dec. 1958. Perfect condition. What offers? Write: J. G. Jackson, 210 Kingsway South, Port Alberni, B. C., Canada.

Complete set of Journals, perfect condition, including special parts, directories, high-speed, etc. from Jan. 1949 to Dec. 1960 inclusive. Write: Leslie Helthena, P.O. Box 643, Burbank, Calif.

ADD A SOUND HEAD to your MOVIOLA for multiple sound track editing



*Model UD-20-S shown
with cabinet extension and
extra sound head.



Cabinet extension bracket with mixing controls and coupling attachments complete.
\$77 50



16mm or 35mm**
Optical and magnetic sound head.
\$495 00

1. Provisions for separate magnetic volume control over each sound head.
2. Plug-in attachments to amplifier.
3. Strong, easy to install from furnished instructions.

*Specify existing model Moviola for which extension is required.
**Specify 16 mm or 35 mm when ordering separate sound head.

Moviola

MANUFACTURING CO.
1451 GORDON STREET • HOLLYWOOD • CALIFORNIA • HO. 7-3178

Selección y características de Pantallas de Proyección por transparencia

PETRO VLAHOS [89]

Se examinan detalladamente las características de la pantalla de proyección por transparencia. Se suministran constantes numéricas que definen estas características para pantallas prácticas, y se dan las conversiones de bujías-pié a lamberts-pié. Se dá un procedimiento mediante el cual se pueden obtener las especificaciones de una pantalla óptima para una aplicación determinada. Se contemplan los factores humanos y se dan los valores numéricos para la luminosidad y el contraste, para varios tipos de material proyectado.

Nuevos aspectos de las Técnicas de grabación ambulante independiente

JACK J. CLINK [96]

La grabación ambulante independiente (definida como la grabación que se hace con un canal de grabación completamente independiente que puede llevarse de un sitio a otro) es objeto del mayor interés para el productor independiente. Se exponen métodos de grabación concebidos para utilizar en la mejor forma posible los canales de grabación magnética de que se dispone al presente. Se hacen sugerencias acerca de como producir mejor un material de calidad uniformemente alta para el transpaso final de la pista sonora de una película a otra.

Control de ruidos exteriores en estudios de grabación

DONALD P. LOYE [98]

Recientemente se han perforado pozos de petroleo en terrenos de propiedad de estudios de grabación, lo que ha creado nuevos problemas de ruido y vibración. La solución de estos problemas

comprende la localización adecuada de cada sitio de perforación teniendo en cuenta las actividades de los estudios; aislamiento acústico de torres de perforación y otras instalaciones, y el montaje de la maquinaria sobre aisladores de vibración. Estos y otros problemas de ruido y vibración relacionados con carreteras, aeroplanos y plantas de energía eléctrica se describen en este artículo.

Regulación de destellos de xenon de gran potencia por interrupción magnética

E. J. G. BEESON [101]

La descarga del arco de xenon es muy susceptible a la influencia de un campo magnético; el arco puede ser desviado hasta su extinción. De este doble: emitir radiación luminosa durante su funcionamiento, y a la vez servir como su propio interruptor automático. Las investigaciones han girado en torno del diseño de una lámpara de xenon de fuente-compacta de 2 kilovatios, con gas a presiones crecientes y corrientes hasta de 1.000 amperios. Mediante el empleo de un campo magnético para extinguir el arco, y por consiguiente interrumpir la corriente de la lámpara, se obtienen considerables impulsos luminosos de onda rectangular en la zona de los 10 a los 100 μ seg. Con estas altas corrientes de la lámpara, para las cuales el acumulador de plomo constituye una fuente satisfactoria de energía eléctrica, y con destellos luminosos de hasta 50 kilovatios, se han estudiado las características de arco y la eficiencia luminosa de salida. Se hacen también comparaciones con los anteriores diseños de lámparas de descarga, las que son de especial interés en fotografía de alta velocidad.

La interrupción magnética del arco se está empleando ya con éxito para proveer de una luz de ocultaciones al faro Dungeness. Mayores potencias de destello se interrumpen con menores

intervalos permitiendo la operación de cámaras de mayor velocidad, con lo que se entra en un campo en el que las cámaras de espejo rotativo requieren aún mayores intensidades luminosas.

Técnicas de cámara de borrosidad

T. P. LIDDIARD, JR. y B. E.

DRIMMER

[106]

En el Laboratorio de Armas Navales y otros se han desarrollado varias técnicas que aumentan enormemente la utilidad de la cámara de borrosidad de espejo rotativo. Cuando no hay suficiente autoluminosidad, se emplean varios métodos para mejorar la iluminación, por ejemplo, cinta Scotch sobre superficies explosivas, intervalos de aire o de argon, una capa de microbalones, etc. Cuando se necesita luz exterior, se obtiene con alambres explosivos, lámparas instantáneas explosivas, etc. La luz reflejada sobre superficies de materiales opacos se emplea para registrar la llegada de ondas de choque a una superficie. Cuando la reflectividad de la superficie a prueba es baja, una película muy delgada de Mylar aluminizado indica claramente el tiempo de llegada de las ondas de choque. Empleando el método estrioscópico con luz reflejada o transmitida se observan perturbaciones muy débiles. Sistemas de múltiples ranuras, o rejillas de varias configuraciones, pueden usarse para aumentar la cantidad de información registrada. Pueden usarse "tubos de luz" de filamentos de vidrio para transmitir señales luminosas desde puntos inaccesibles a la observación directa hasta posiciones que quedan en línea con una ranura, o hasta otras configuraciones convenientes. Se describen otras técnicas, tales como la de sincronización de velocidad, la de verificación óptica de perfiles por reflexión Scotch-Lite, la del empleo de película de colores y la de espectroscopia en función del tiempo.

a new SMPTE publication

CONTROL TECHNIQUES IN FILM PROCESSING

Prepared by a Special Subcommittee of the Laboratory Practice Committee of the Society of Motion Picture and Television Engineers

WALTER I. KISNER
Subcommittee Chairman

Foreword by E. H. REICHARD
Chairman, Laboratory Practice Committee

CHAPTERS

1. Introduction
2. General Principles
3. General Aspects of Motion-Picture Film Processing
4. Mechanical Evaluation and Control
5. Instruments for Photographic Control
6. Control Strips and Sensitometric Curves
7. Sensitometric Control of a Standardized Process
8. Chemistry of Film Processing
9. Chemical Analysis and Control
10. Economic Considerations in Establishing a Process Control System

Two-page bulletin with description of subject matter of each chapter available without charge upon request to Society Headquarters

\$5.00

Available only for cash with order or by Company Purchase Order
Single copy price \$5.00 (less 20% to SMPTE Members, Libraries and Booksellers), F.O.B. Destination

5 through 49 copies at \$5.00 each, less 25%, plus foreign postage, F.O.B. Origin
50 copies or more at \$5.00 each, less 33 $\frac{1}{3}$ %, plus foreign postage, F.O.B. Origin
Within New York City Add 3% Sales Tax

Society of Motion Picture and Television Engineers 55 West 42nd Street, New York 36, N.Y.