

# new products

(and developments)

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

**Technirama**, the wide-screen system developed by Technicolor Corp., is about to employ new camera equipment, according to recent issues of the British *Kinematograph Weekly*. There is already a prototype of a new streamlined blimp, reported as very little larger than the Mitchell black-and-white blimp. It is made of a light alloy casting and has been illustrated on the Technirama camera equipped with 2000-ft magazine. Also reported are new light-weight Technirama cameras weighing only 50 lb with a 1000-ft magazine.

Some technical data and specifications for Technirama were given in this column

in the April 1957 *Journal*. A recapitulation, chiefly of the taking data, follows.

Similar in some ways to both VistaVision and CinemaScope, Technirama employs partial anamorphosis in the camera and further anamorphosis in the printing operation. Reported used for camera negative is Eastman Color Negative, with release prints supplied by Technicolor's dye transfer process.

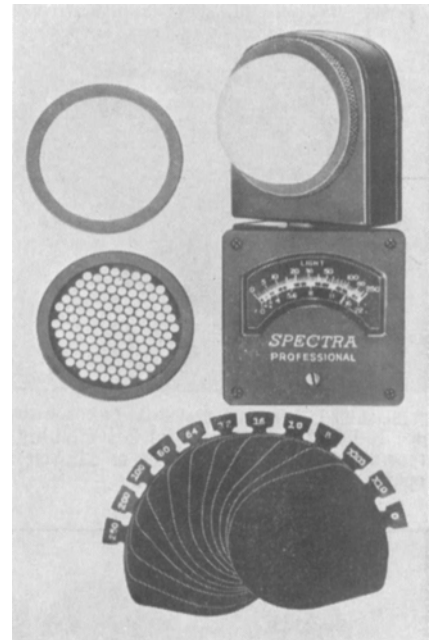
Film (35mm) travels horizontally through the camera, with the image taken at a 1.5 compression via an anamorphic optical system earlier reported as designed by N. V. Optische Industrie of Oude Delft, Holland. The camera aperture is 1.420 by 0.715 in.

From the partially anamorphosed negative a further squeeze to a lateral compression of 2:1 in the release print is accomplished by Technicolor with separation matrices made by optical printing with the image turned 90° so that film travel in the matrices and the release prints is vertical.

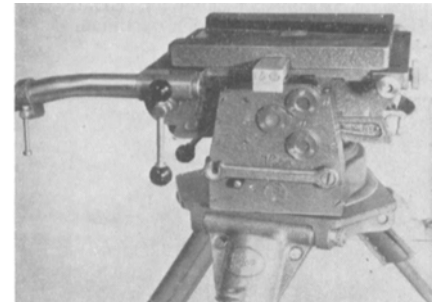
Technirama release prints made by dye-transfer process have an aspect ratio of 2.34:1 for single-track, photographic sound; and 2.55:1 for four-track magnetic sound. The photographic track is standard, 0.100 in. wide; and the magnetic track standards are three 0.063 in. wide, and one 0.041 in.

Further recapitulating: negative (double-frame) travels horizontally right to left in the camera at 24 frames/sec or 180 ft/min; positive (single-frame) travels vertically (down) in the projector at 24 frames/sec or 90 ft/min. Release prints with four-track

magnetic sound have been made on 35mm film with CinemaScope perforation holes; and prints with the single, photographic track, on 35mm film with Eastman standard perforations.



**The Spectra Professional** is announced as an improvement of the Model A incident light exposure meter by Photo Research Corp., 837 North Cahuenga Blvd., Hollywood 38. Production of the Model A was discontinued a few years ago because of contractual obligations with Donald W. Norwood. Upon expiration of the contract, certain improvements have been made in the meter and the new model put into production. Included in the price of \$97.50 are the disk, grid, 12 film-speed slides and carrying case.



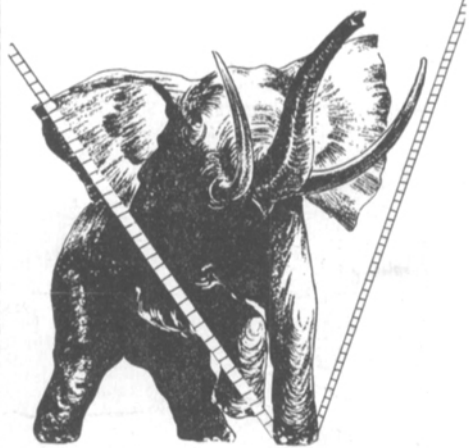
**The Camera Pan and Tilt Head Type III** introduced by W. Vinten Ltd., London, uses a new design principle to achieve balance and flexibility. The design is based on a simple mechanical principle which allows the center of gravity of the camera to move in a horizontal line parallel to the head mounting when tilted in either direction without making use of a spring or hydraulic counterbalance system. A tilt of up to 50° in either elevation or depression can be obtained. Now in use in TV studios in Europe, the unit has been found to be a suitable mounting for cameras fitted with zoom-type lenses. Information on the equipment can be obtained from Cinematograph Export Ltd., 715 North Circular Rd., London NW2.

## Strength in your splice

plus speed and economy found only in the "Miracle PRESTO SPLICER"

fused

in 2<sup>3</sup>/<sub>4</sub> seconds



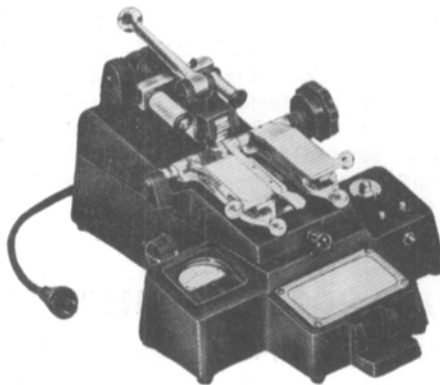
No Scraping  
No Cement  
No Adhesives  
Butt-welded (end to end)  
No Lost Picture  
Perfect Results on All Types Film or Tape

Write for brochure



**PRESTOSEAL MFG. CORP.**

3727—33rd ST., LONG ISLAND CITY 1, NEW YORK



NOW in the East it's ...

# MOVIELAB

for

# COLOR

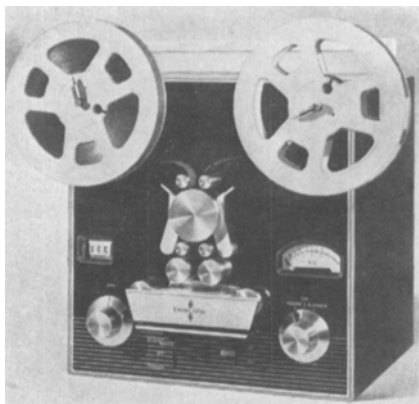
- 16mm-35mm EASTMAN COLOR  
Negative-Positive Processing

Plus exclusive **ADDITIVE**  
scene to scene—color balanced  
**KODACHROME** printing.



COLOR CORPORATION

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



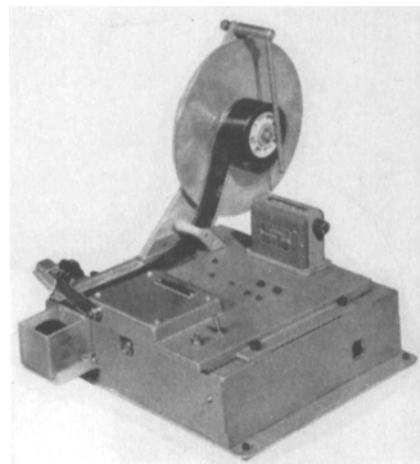
The 1958 Kinevox-Hallen Model 616, a 16mm portable magnetic recorder/reproducer is equipped with the Academy

Award winning Davis filter to assure smooth, flutter-free film motion in reverse or forward operation. The sprocket film drive is powered by a salient pole type synchronous motor equipped with nylon gears. The 28-lb unit is designed for portability and economy. To reduce weight and power consumption, the takeup and rewind reels are powered by clutches from the drive gear.

Specifications include: film capacity, 800 ft standard up to 1600 ft Mylar; film speed, 36 ft/min standard 16mm sound speed; footage counter, 3-digit; track placement, standard edge track (other track positions on order); monitor, simultaneous with 10-amp playback amplifier (accessory); frequency response, essentially flat from 50-8000 cycles; distortion, less than 1.5% total harmonic at 400 cycles; signal-to-noise ratio, not less than 50 db;

output level, normal 4 dbm; output impedance, 500 ohms balanced or unbalanced; flutter, less than 2%; microphone input, 50/250 ohms impedance; high level input, high impedance unbalanced; power, maximum 55-w, 115-v, 60-cycle, and 50-cycle 115-v or 220-v available.

A product of Kinevox-Hallen, a Division of Electromation Co., 1646 18th St., Santa Monica, Calif., the model was exhibited in New York in December by the distributors, S.O.S. Cinema Supply Corp., 602 W. 52 St., New York 19. It is priced at \$895.



A motor-driven 35mm cutter which can operate continuously or intermittently has been announced by the H. L. Instrument Co., 1104 Fair Oaks, South Pasadena, Calif. The machine has an automatic operating rate of 110 pieces of film a minute, or it may be placed in a semiautomatic position for single cuts by turning a switch. The cutter is completely mechanical and has no electronic parts. It is priced at \$395.00 without optional equipment which includes a roll holder and film collecting box.

**Freon-TF solvent**, a product of E. I. du Pont de Nemours & Co., Wilmington, Del., is a solvent developed especially for safe film cleaning. The solvent (chemical name: trichlorotrifluoroethane) for cleaning cellulose acetate and Cronar film bases and emulsions is described in an illustrated brochure available upon request from the company.

A new **Kodak Film Cleaner** that eliminates any hazard from flammability in cleaning black-and-white and color negatives or transparencies, has been introduced by Eastman Kodak Co. It is applied with a soft, lintless cloth to remove dust and dirt from films. Available through Kodak dealers it is listed at 90 cents for a 4-oz bottle.

**Tuff Coat**, a nonflammable film cleaner, is a product of Nicholson Products Co., 3403 Cahuenga Blvd., Los Angeles 28. The cleaner contains no carbon tetrachloride and is announced as a cleaner for all types of movie and still film and also as providing invisible impregnation to kill static and provide lubrication. Treatment is estimated at 15 cents a 1000 ft or \$12.00 a gallon, \$5.00 a quart.

**SHRINKAGE**  
CONSIGNS FILMS  
TO OBLIVION

**"Peer-Renu"**

RESTORES THEM  
TO LIFE...  
and EARNING POWER

\* \* \*

Let us review your shrunken  
negatives and color originals...  
Peerless will tell you if they  
can be restored to usefulness.

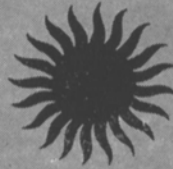
Write for PEER-RENU folder:  
"Thar's Gold in Them Old Films"

**PEERLESS**  
FILM PROCESSING CORPORATION

165 WEST 46TH STREET, NEW YORK 36, NEW YORK  
959 SEWARD STREET, HOLLYWOOD 38, CALIFORNIA

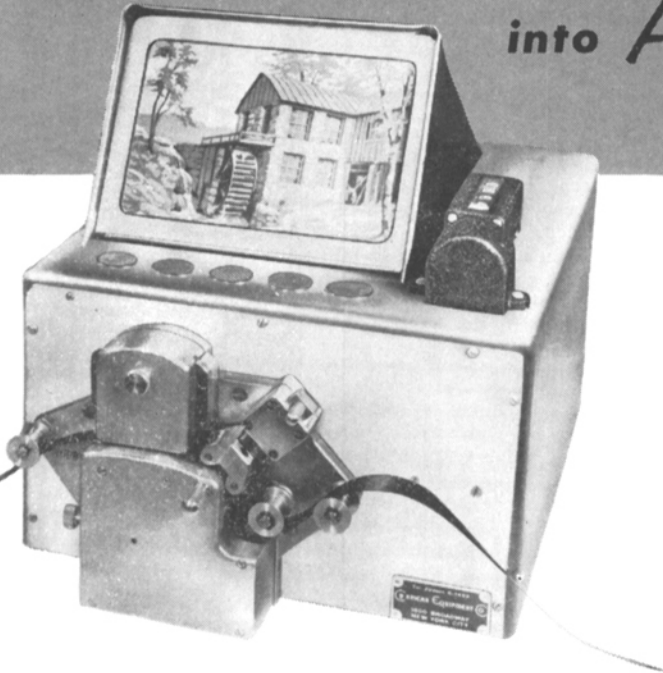
Protective film treatments... complete film distribution servicing  
... and other special services to aid producers and distributors.

Everything under the Sun



to translate **SCRIPTS**

into *Film*



**16MM Professional Film Viewer—**

Makes film editing a breeze. Easy threading, portable, will not scratch film. Enables editor to view film from left to right on large 6" x 4½" brilliantly illuminated screen. Sound Reader and/or Counter can be easily attached. Available in 35mm model.  
16mm PROFESSIONAL FILM VIEWER \$350.00. 35mm Model \$500.00

As every Pro knows, CECO carries just about every quality product under the photographic sun.

But you need more than cameras, tripods, dollies and recorders—you need more than lenses, viewers, blimps, generators and lights.

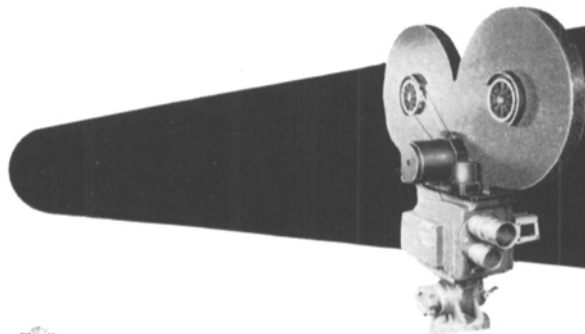
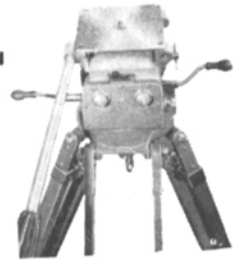
You need *answers* to important questions—how to successfully translate scripts into film. No one man knows all the answers.

That's why CECO employs a staff of experts in every category of film-making—cameras, recording, lighting and editing. Collectively we have all the answers to help make you an outstanding producer, director or cameraman.

You owe it to your career to use CECO service for Sales, Rentals, Repairs . . . and *advice*.

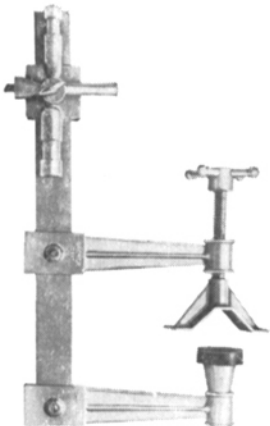
**CECO Small Gyro Tripod**

Features "controlled action" with slow and fast speeds for both panning and tilting. Weighs only 19 lbs. Ideal for 16mm Maurer, Mitchell, B & H Eyemo and similiar cameras.  
**\$650.00**



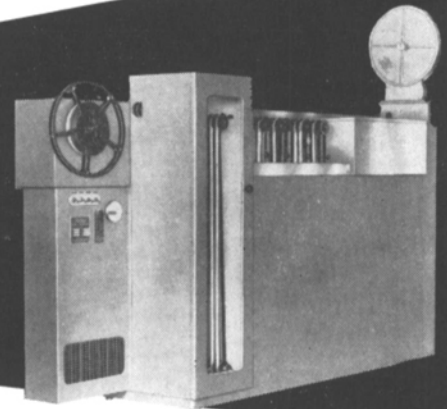
**Auricon Cine—Voice Conversion**

Cine—Voice Camera modified to accept 1200-ft, 600-ft, and 400-ft. magazines; has torque motor for take-up. Also includes Veeder footage counter and 3-lens turret. Conversion only—\$450.00 less magazine.



**GROVER Grip**

Holds a light wherever space is tight. No springs, no slip. Has 8" spread. Both ends padded against marring. Weighs less than 2 lbs. **\$6.85**

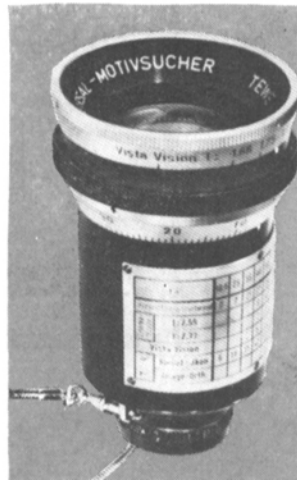


**R-15 FILMLINE Developer**

Develops reversal and negative-positive film at 1200 ft. per hour. Has variable speed drive. Permits complete daylight operation. Exclusive overdrive eliminates film breakage.  
**\$2,995.00**

**TEWE Directors View Finder Model C**

For academy aperture, wide screen, cinemascope, vistavision and IO TV cameras. Zoom type with chain & leather case **\$100.00.**



**ADDITIONAL PRODUCTS**

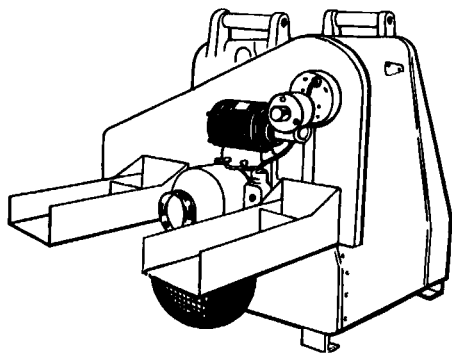
Camera Equipment Company offers the world's largest and most comprehensive line of professional cameras, accessories, lighting and editing equipment. The quality product isn't made that we don't carry. See our Splicers, — exposure meters — projectors — screens — marking pencils and pens — editors gloves — editing machines, racks, barrels, and tables — stop watches.

SALES • SERVICE • RENTALS

FRANK C. ZUCKER

**CAMERA EQUIPMENT CO., INC.**

Dept. I 315 West 43rd Street, New York 36, N. Y.



The SM.2, Genarco Slide projector, a 3000-w projector with a 70-slide changer is a product of Genarco Inc., 97-10 Sutphin Blvd., Jamaica, N.Y. The source of light is a 3000-w tungsten lamp with a life expectancy of 100 hr. Electric blowers of 280 cu ft/min capacity cool the mechanism and the slides which are also protected by a dichroic heat reflecting filter. The projector is supplied with a standard wide-angle lens suitable for rear projection on a translucent screen or with all dimensions of lenses for operation from a theater projection booth or from the back of a ballroom.

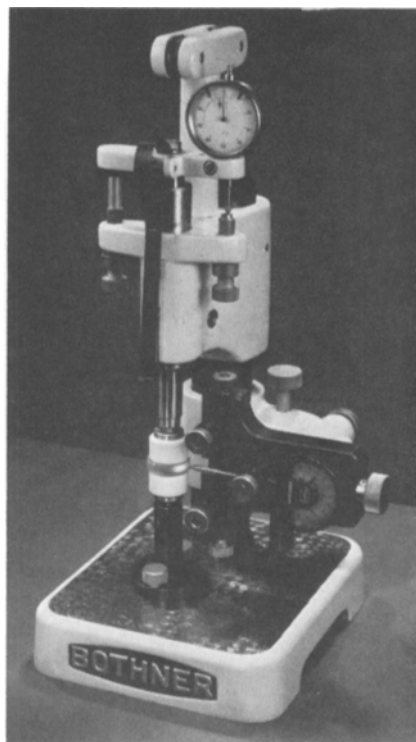
A 9mm positive projector carbon has been added to the Suprex line of copper-coated carbons produced by National Carbon Co., 30 E. 42 St., New York 17. The company is a division of Union Carbide Corp. The new carbon is recommended for operation in the 65- to 80-amp current

range and is designed to produce up to 10% more light while burning at a considerably slower rate than earlier carbons in its current range.

A honeycomb light-directional screen for viewing under bright ambient light conditions has been announced by Hexcel Products Inc., 951 61 St., Oakland 8, Calif. The screen, now being tested for commercial production for home TV sets, is made of aluminum in the form of hundreds of small hexagonal cells with very thin walls. The removable screen is attached to the front of the TV screen with magnetic clips. Honeycomb screens are also being considered for drive-in theaters and audio-visual uses.

The screen functions by blocking a large proportion of ambient light from the viewed surface, each cell of the structure acting as a hood or light-shield limiting the entrance angle of straight-line light. The degree of shielding and the arc of the viewing angle are determined by the cell size and depth. The optimum viewing angle has been determined to be 80°, or 40° each side of center. With the screen in place, the normal 180° exposure to ambient light is reduced to only 80°. The reduction is reported as usually sufficient to allow effective image contrast even in direct daylight.

The subject of honeycomb directional viewing has been explored in an article, "Minimizing the Effects of Ambient Light on Image Reproduction" by G. L. Beers, published in the *Journal* for June 1957, pp. 347-354.



The newly developed WB-30 lens centering tester, manufactured by Wilhelm Bothner & Co., Germany, makes it possible to check all physical specifications of centered and beveled lenses in one operation. The accuracy of this tester is reported to correspond to that of optical instruments used for similar purposes. Testing of thickness, diameter, cylinder, lower and upper bevel can be accomplished with all lenses centered and beveled by either automatic or conventional methods. Work diameters range from 5mm.,  $\frac{1}{8}$  in., to 120mm, 5 $\frac{1}{4}$  in., with edge thickness up to 40mm, 1 $\frac{1}{2}$  in. Further information is available from Alfa American Corp., 303 W. 42 St., New York 36.

## Send Your Film To The Complete 16MM Service Laboratory

Unsurpassed for ...

**SPEED**

**QUALITY**

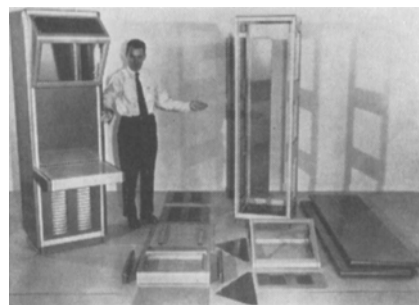
**Personalized  
SERVICE**

MOTION PICTURE LABORATORIES, INC

1672 Union Ave., Memphis 4, Tenn., Phone BRoadway 5-2323

**MPL**

*The Master Craftsmanship Your Film Deserves*



The Elgin Metalformers Corp., 630 Congdon Ave., Elgin, Ill., has expanded its Emcor Modular Enclosure System to include new component parts and to increase its load-carrying capacity. The system features basic "building block" frames and various panels and sub-parts that can be assembled to make various types of inter-connecting, expandable enclosures. A catalogue listing the cabinets and component parts is available from the company. Request should be addressed to John J. Sullivan, field sales supervisor, or Harold Bowen, sales correspondent.



# AUTOMATIC TRI-FILM PROCESSOR

**UP TO SIX FEET A MINUTE WITHOUT LOSS OF QUALITY!**



**T**HE transportable Mark 3 Automatic Tri-Film Processor develops and dries 16, 35 or 70 mm. film at 1½, 3 or 6 feet a minute! Four 400-ft. 16 mm. films can be handled simultaneously—or two 400-ft. 35 mm films—or one 400-ft. 70 mm length. The various film sizes are accommodated by simple adjustments of film separators. Separate temperature control of the processing solution is possible on each tank from 60 to 110 degrees F., within ± 1 degree. The latest high temperature chemical resistant plastics and Type 316 stainless steel are used in all chemical areas. Processing is controlled by a mechanical program unit after the film is loaded into the machine—no special “leader” or continuous tapes, chains or sprockets are used.

The need for stop baths and interbath rinses, normally required in many processes, is virtually eliminated because of a positive squeegee roller design.

A high-efficiency blower system and electrical heating ensure rapid drying in the machine. The Processor is perfect for newsreels, TV news on film, motion picture “rushes” in the field,—in all cases where speed plus quality are essential.

Write for literature and quotations.

## SPECIFICATIONS

### AUTOMATIC TRI-FILM PROCESSOR TYPE T246 Mk3

Size: 54" long, 22" wide, 51" high  
 Weight: 400 lbs.  
 Power Consumption: 5 KVA maximum single-phase: 110 volts, 45 amps, or according to customer requirements  
 Process Capacity: 1 to 4 rolls 16 mm length  
 1 or 2 rolls 35 mm to  
 1 roll 70 mm 400 ft.  
 Rate of Processing: 1½, 3 or 6 ft. per min.  
 Temperature-controlled solutions and dryer. Daylight operation except loading of film into magazine. Processes perforated or plain film.

## Canadian Applied Research Limited

(formerly PSC Applied Research Limited)

1500 O'CONNOR DRIVE  
 TORONTO 16, ONTARIO, CANADA  
 PLYMOUTH 5-3371

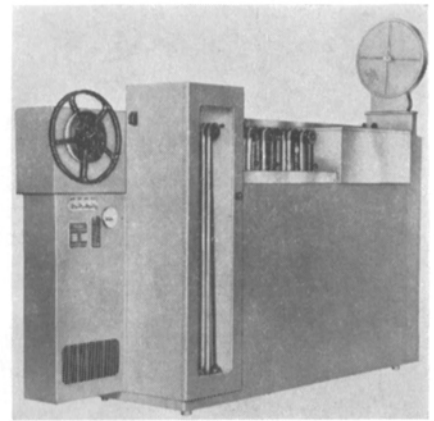
MEMBER: A. V. ROE CANADA LIMITED & HAWKER SIDDELEY GROUP





The Tewe Model "C" zoom-type viewfinder has been introduced by Camera Equipment Co., 315 W. 43 St., New York 36. Designed for directors' use, it is calibrated for Academy aperture, CinemaScope 255 and 233:1 as well as for image orthicon TV cameras. Calibration for VistaVision ratio is also included. It is priced at \$100.00 complete with leather carrying case and chain.

Model R-15 Combination Reversal and Negative-Positive Processor is a product of Filmline Corp., Milford, Conn. Designed for ease of installation and economy of operation, it does not require a darkroom. Features include precision-machined over-

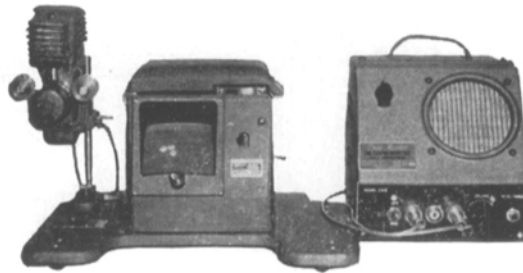


drive components, which are Filmline's friction-type transport system. The tanks are fabricated from heavy-gauge stainless steel and are heliarc welded to government specifications. Tank fittings and parts in contact with solutions are of stainless steel or inert materials. It is priced at \$2795.

**OUR EXPERIENCE IS YOUR KEY TO SERVICE & DEPENDABILITY**

**CAMART DUAL SOUND READER**

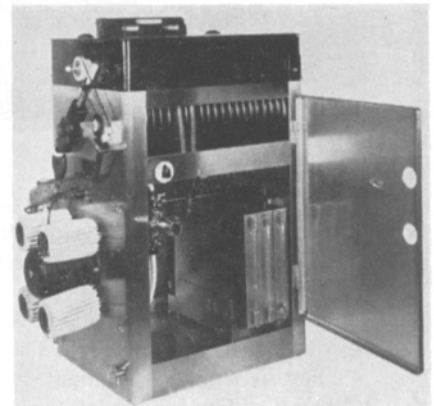
- 16mm or 35mm single and double system — optical or magnetic soundtrack.
- Synchronized to any picture viewer.
- Right to left or left to right operation.
- 16mm or 35mm Magnetic Model.....\$185.00
- 16mm or 35mm Optical Model.....\$195.00



**CAMART BABY DOLLY**

Only a four-wheel dolly will provide the balance and stability required for professional production. Adjustable seat for cameraman; platform accommodates assistant.....\$425.00

Dolly Tracks Available



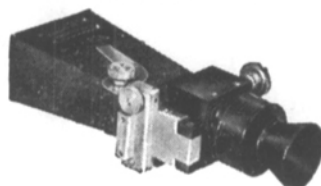
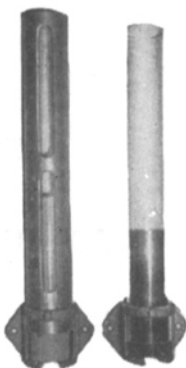
The Andre Debric Mfg. Corp., 114-01 14th Rd., College Point 56, N.Y., has announced a new daylight developing machine, the Aiglonne 16mm Black-and-White Reversal. The new machine processes all types of black-and-white films. Features include 23 processing tubes, one of which combines rinse and re-exposure. Footage output ranges from 7 ft/min at 68 F to 12 ft/min at 82 F. Film footage per volume of solution is approximately 250 ft/l. Test made with Tri-X and Plus-X films showed the total processing time to be 11.5 min. The unit weighs approximately 450 lb and the main housing and reserve tanks are of #316 stainless steel.

Two other Aiglonne daylight machines, Model DS for black-and-white 35mm and for 16mm, respectively, have been redesigned for increased efficiency and with added features. All three machines are now manufactured in the United States. The 35mm model is priced at \$5,650.00 and the 16mm at \$6,450.00. The new reversal machine is priced at \$7,650.00. Prices for each of the three models are for the complete unit including a dolly.

**CAMART CORE DISPENSER**

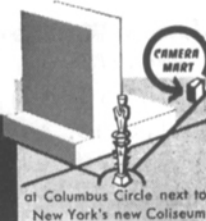
Why waste time searching for Lab Cores. Simply attach the dispenser to wall for keeping plastic lab cores handy at all times.

- Aluminum
- 16".....\$ 9.50
  - 24".....\$11.50
  - 36".....\$14.50



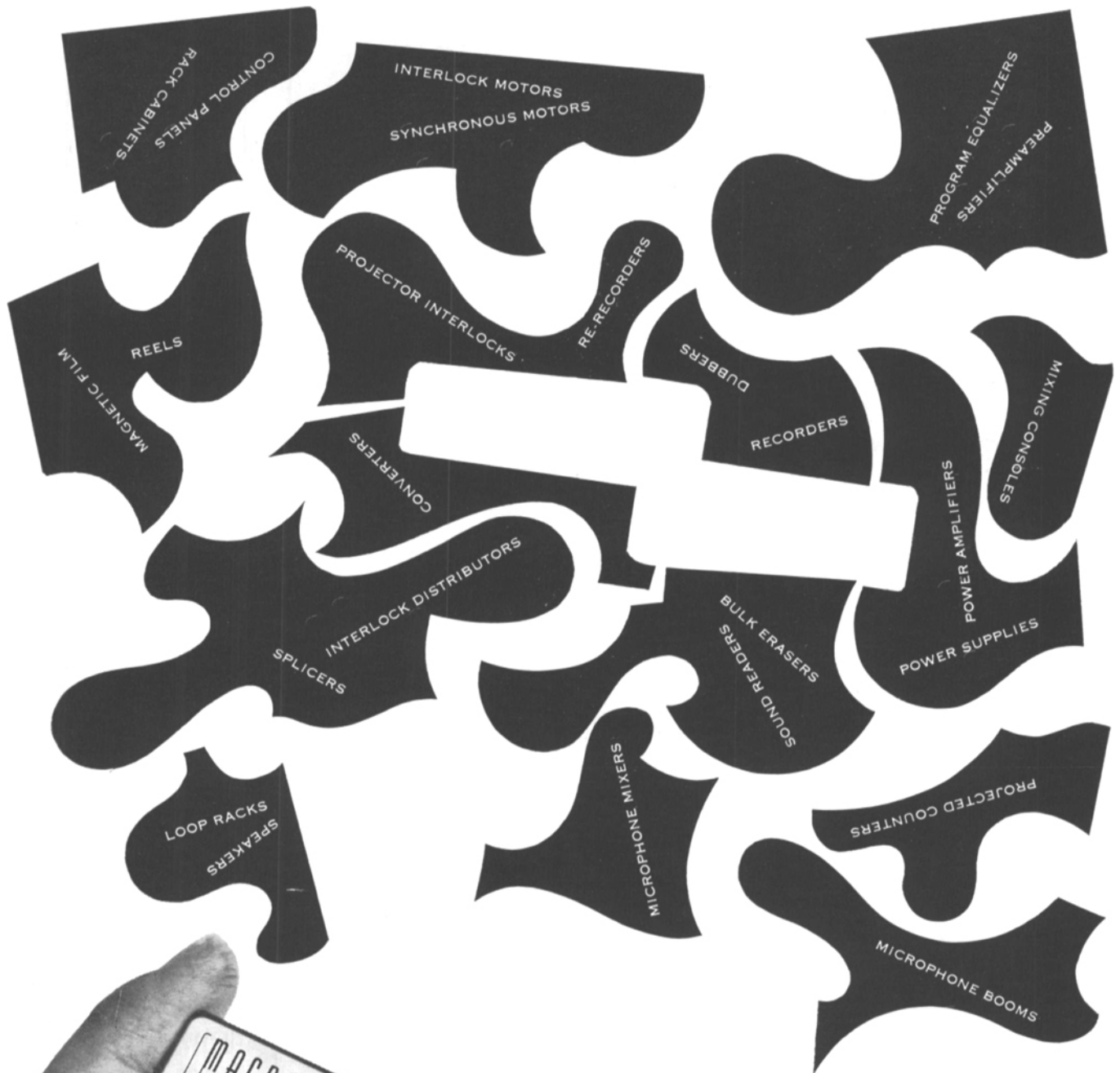
**MACO VIEWFINDER**

Professional type side viewfinder, with large bright, erect image. For Cine Special, Filmo, Bolex, & Cine Voice cameras.....\$139.50



A magnetic soundhead adaptation for the Arriflex 16mm camera has been introduced by Rank Precision Industries Ltd., 37-41 Mortimer St., London W1. Designed to record directly onto prestripped magnetic film while shooting is in progress, the 3-lb unit consists of a soundhead and recording

**the CAMERA MART inc.**  
 1845 BROADWAY (at 60th St.) NEW YORK 23 • PLaza 7-6977 • Cable: Camermart  
 at Columbus Circle next to New York's new Coliseum



ANSWER TO THE SOUND PUZZLE:  
*an integrated system by Magnasync*

No need to puzzle out that new sound system all alone. We have the engineers and the experience to assist you to custom-tailor a high-performance system. For a sound solution to *any* sound problem, call Magnasync.

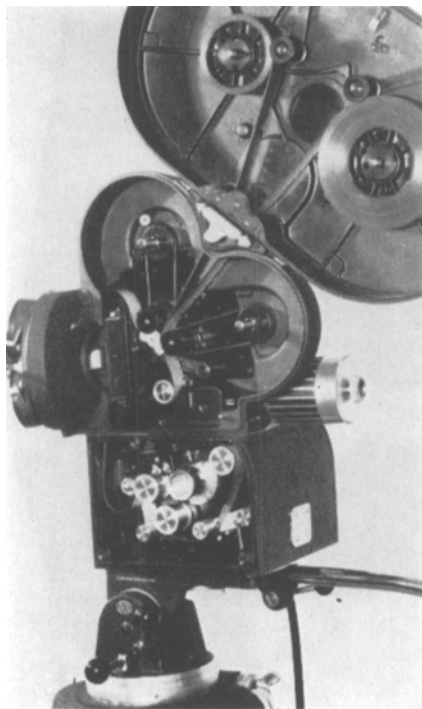
*dealers*

- NEW YORK — camera equipment co., 315 w. 43rd st. new york 36. judson 6-1420. cable address CINEQUIP.
- CHICAGO — zenith cinema service, inc., 3252 foster ave., chicago 25, ill. irving 8-2104.
- SAN FRANCISCO — brooks camera co., 45 kearney st., san francisco, calif. exbrook 2-7348.
- INDIA — kine engineers, 17 new queen's rd., bombay, india.

*just write or phone for information on a complete system, or any part*

MAGNASYNC MANUFACTURING CO., LTD.

5546 satsuma ave., no. hollywood, calif.



amplifier. The soundhead, which contains the film speed stabilizing system together with the record and playback heads, is fitted to the camera base (shown above with the doors removed).

The equipment features a transistor recording and mixing amplifier unit with the following specifications:

**Microphone inputs:** Two, for direct connection from microphones of 20- to 2000-ohm impedance. Optimum impedance for best signal-to-noise ratio is approximately 500 ohms.

**Gain controls:** Two, one in each input channel.

**Maximum sensitivity:** 0.2-mv input for full recording level at output.

**Recording frequency characteristic:** In conformity with C.C.I.R. standard.

**"Music" characteristic:**  $\pm 2$  db 100/8000 cycles.

**"Speech" characteristic:** 10 db attenuation at low-frequency end of spectrum.

**Recording H.F. bias:** 40 kc.

**Audio monitoring:** By means of headphones; adequate power for moving-coil type if desired; monitoring either "direct" off incoming signal or "playback" off recorded soundtrack.

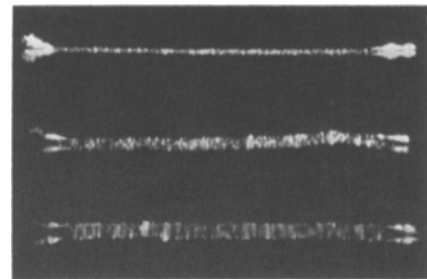
**Visual monitoring:** By a moving-coil meter which indicates recording level. The same meter can be switched to check bias current and battery voltage.

**Battery:** One 7 $\frac{1}{2}$ -v dry battery contained within the amplifier case, giving about 60 hr operation.

**Weight:** 3 $\frac{1}{2}$  lb with battery.

**Size:** 7 by 5 $\frac{1}{4}$  by 2 $\frac{3}{8}$  in.

**An ultra-high-speed camera** capable of taking pictures at five-billionths of one second has been developed by Electro-Optical Systems, Inc., 1001 E. Green St., Pasadena, Calif., for Samuel Feltman Ammunition Laboratories of Picatinny



Arsenal, Dover, N.J. The almost incredible shutter speed is based on an application of electronic circuitry to timing and operating. The large-aperture, wide-angle Kerr cell shutter has no moving parts and is hermetically sealed. It is pulsed electronically. The camera was designed for solving special problems of a scientific nature in the study of intense explosions, ultra-high-speed shockwaves, special nuclear reactions and similar problems.

The photograph above shows three aluminum wires 1/1000 in. in diameter and  $\frac{1}{4}$  in. long during electrical disintegration. Explosion of the wires was photographed at three phases in the exploding process: 20 billionths of a second, 30 billionths of a second, and 40 billionths of a second after the discharge was started. The effective exposure time for each photograph was 5 billionths of a second.

Electro-Optical Systems, Inc., was organized in 1956 by A. M. Zarem and F. R. Marshall who earlier worked together on the Zarem camera for Navy high-speed studies.

## Stewart ONEPIECE Seamless REAR PROJECTION SCREENS

One of These Three Fits Most Needs

### LUXCHROME

FOR VIEWING slides or motion pictures under roomlight conditions; for business, education, research, advertising, display.

### PROCESS

FOR PHOTOGRAPHIC BACKGROUNDS; special effects in motion picture and commercial still photography.

### TV BLUE

FOR TELECASTING live action in studio against projected "location" backgrounds.

**OTHER TYPES AVAILABLE FOR SPECIALIZED USES**  
STEWART . . . the screen preferred by 9 of the top 10 Hollywood motion picture studios . . . gives you brilliant, sharply defined rear projected images for either viewing or photographing.

You, too, can now have the quality of Stewart award-winning screens, born of the demands of critical motion picture and TV studio technicians. Here is the one truly one-piece screen for perfect rear projection, made in all sizes from table-top to large set proportions.

Specialists in professional screens: rear and front projection.

1161 W. SEPULVEDA BLVD.  
TORRANCE, CALIF.





for showing  
MOTION PICTURES  
SLIDE FILMS  
SLIDES  
STILLS

for  
LOW COST  
LOCATION  
SHOTS IN  
THE  
STUDIO

MAIL  
COUPON  
FOR FULL  
INFORMATION

STEWART-TRANS-LUX CORP. DEPT. SMT-12  
1161 WEST SEPULVEDA BLVD., TORRANCE, CALIF.

Send sample swatches of:  
LUXCHROME   
PROCESS   
TV BLUE

Please send full information on award winning Stewart screens.

NAME \_\_\_\_\_  
ADDRESS \_\_\_\_\_  
CITY \_\_\_\_\_ STATE \_\_\_\_\_

My interest is in: \_\_\_\_\_

# TRI ART COLOR

*CHOSEN AS THE FINEST  
...BY THE FINEST!*

- 35mm Eastman color release prints
- Kodachrome printing
- "Blow-ups" from 16mm Kodachrome to 35mm Eastman color negative

**TRI  
ART  
COLOR** **CORPORATION**  
*(a subsidiary of Du Art Film Labs., Inc.)*  
245 West 55th St., New York 19, N. Y. • PLaza 7-4580

**SAVE 200%**  
 OF YOUR  
**DEVELOPING COSTS**  
 ON  
**STILL & MOTION PICTURE**  
**FILMS**  
 WITH  
**PRA**  
**400**  
 the developer formula  
 with ENERGY-PLUS

developed  
 in fine-  
 grain



developed  
 in PRA  
 400

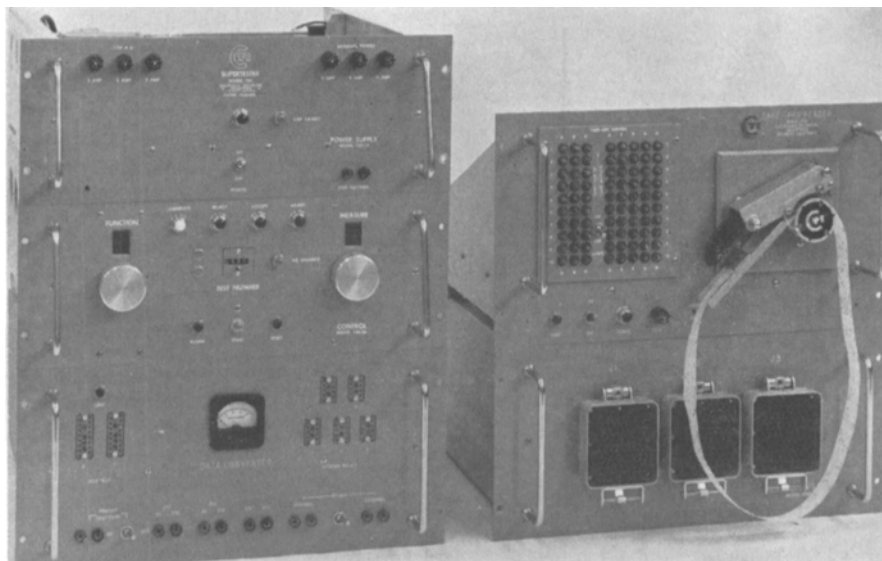
John I. Newell, Western Cine Service Inc. of Denver, Colorado says of PRA 400, "Two years ago we obtained a sample of the Hoffman Laboratories developer known as PRA 400. This formula had been very successfully used for fine-grain development of still film. OUR TESTS INDICATED THAT IT WOULD BE VERY WELL SUITED FOR MOTION PICTURE FILM DEVELOPMENT."

Enough of the prepared powder was obtained to mix 20 gal of developer plus a supply of the PRA 400 replenisher formula. "THIS INITIAL SOLUTION HAS BEEN USED TO PROCESS NEARLY 100,000 FT. OF NEGATIVE FILM IN THE PAST YEAR. THE INHERENT KEEPING QUALITY FAR EXCEEDED EXPECTATIONS. At standard ASA ratings, films were immersed for 2 min at 72 F in this developer. DELIVERY RATE TRIPLED OVER THAT OBTAINED WITH D-76 AND THE COST OF CHEMICALS WAS REDUCED.

"Image quality was noteworthy, grain at a minimum, even in forced processed negatives. Contrast remained normal throughout the scale of the film. No staining or spotting problems have ever been encountered. Direct comparisons of identical negative materials processed to equal gamma in PRA 400 and D-76 have been made. The PRA 400 has proven to be a finer-grain formula. In terms of density range, PRA 400 and D-76 are quite similar. On several occasions Eastman Type 7302 release positive was processed in this developer. The low-contrast result was well suited for telecasting. Kinescope recording film Type 7374 responded very well and proved quite simple to achieve the indicated gamma of 1.1 consistently. IN POINT OF FACT, WE HAVE BEEN ABLE TO PINPOINT OUR CONTROLS WITH FAR LESS DRIFT THAN EVER BEFORE."

**PRA PRODUCTS, INC.**  
 distributed by HOFFMAN LABS., INC.

350 W. 50th ST., NEW YORK, N.Y.



**A pushbutton-operated, tape-programmed tester**, the CTI Supertester Model 180, performs complex tape-controlled measurements on electronic and electrical equipment and can be operated by an unskilled worker, as recently announced by the producer, California Technical Industries Div., Textron Inc., 1513 Old County Rd., Belmont, Calif. Production and maintenance tests, including measurements of impedance, a-c and d-c voltage, resistance, leakage and continuity, are performed on a go/no-go basis according to the sequence, value, and tolerance information punched into a standard, 1-in. paper or paper-Mylar tape.

The device can be programmed to energize equipment under test, provide warm-up delay periods and stop when the operator is to perform a manual operation. An accessory printer to provide a permanent record of rejected tests can be supplied. An electrically operated tape punch and a tape duplicator to coordinate the punch with the reader for rapid copying or rapid editing of tapes can also be supplied as accessories.



**The Blutworth Marine Underwater TV Camera** was recently demonstrated by use in a thorough examination of the apron immediately below TVA's Wheeler Dam at Sheffield, Ala. The equipment which consists of a camera with automatic iris, control unit and monitor was used to inspect the spillway underwater construction for erosion and cracks. With the aid of special lighting a picture was obtained and

displayed on the monitor at two to three times normal size to permit clear observation of concrete surfaces 20 ft deep to as much as 100 ft from the control unit. The camera weighs 4 lb submerged and can be operated at depths down to 180 ft. Weight in air is 40 lb. Specifications are recorded as follows: overall dimensions of 6 $\frac{3}{4}$  in. high, 11 $\frac{1}{4}$  in. wide and 20 $\frac{1}{2}$  in. high; lens, 16mm f/1.8 (standard); scanning, 525 lines interlaced 2-to-1; sensitivity, usable picture at 5 ft-c in clear water; resolution, 600 lines; signal-to-noise ratio, 30 db; cable length, up to 500 ft, to be specified; tubes, 6BQ7A, 6U8, 6198 (vidicon); power consumption — supplied by camera control unit — 160-w at 117-v 60-cycle, a-c. Further information is available from Blutworth Marine Div., Kearfott Co., Inc., 1500 Main Ave., Clifton, N.J.

**A new color TV camera** which incorporates printed circuits and transistors in its design has been announced by General Electric Technical Products Dept., Electronics Park, Syracuse, N.Y. Circuitry has been specially designed for good registration of colors without blur or runover into other colors. A newly developed optical system is used to eliminate the need for many glass surfaces through which color signals would otherwise be required to pass. The 215-lb camera measures 34 by 18 by 22 in. A preproduction model was exhibited at the opening of the GE broadcasting center, WGY-WRGB, Schenectady, N.Y. Commercial production is expected in the near future.

**A 45,000-w UHF broadcast transmitter** designed by the Technical Products Dept., General Electric Co., Syracuse, N.Y., is coupled with a specially designed switching system and a high-gain helical antenna to produce a potential 2 million watts effective broadcasting power. Designed for WDAU-TV, the new Channel 22 at Scranton, Pa., the high-power operation permits better home reception of TV programs in the mountainous areas surrounding the Scranton-Wilkes Barre area. The building housing the unit was designed around the transmitter.

# "YOU CAN'T MISS with an ARRIFLEX 35"



*says Jack Painter, A.S.C.  
Chief Photographer, Movietone News, Inc.*

"I've travelled many times all over the world with my Arriflex 35, and have used it under the most trying conditions. It has never failed me," says the globe-girdling chief cameraman whose Fox Movietone newsreels are shown both here and abroad.

"Arriflex 35 was with me when I shot the Cinemascope color short about the 'A Bomb' called 'Survival City'. Travelogues and documentary pictures—in Cinemascope or 'plain'—both in foreign countries and in the United States were taken with my Arriflex 35. Arriflex was the only camera we had with us—no others could have done the job as well!

"Because it is a reflex camera, the Arriflex 35 has resolved our photographic problems. With an Arriflex 35 you know what you're getting."

*Photograph shows Jack Painter, a veteran of 39 years of service with Movietone News, Inc. shooting a street scene with his Arriflex and Pan-Cinor model 150 varifocal lens.*



SOLE U. S. DISTRIBUTOR

**KLING**  
PHOTO CORP

257 Fourth Avenue, New York 10, N. Y.  
7303 Melrose Avenue, Hollywood 46, Cal.



The Electro-Mechanical Development Co., 2337 Bissonnet St., Houston, Tex., has announced a time-lapse drive unit (Model 1325) for use with the Cine Kodak Special I or II Camera. Designed for flexibility it operates on 120-v 60-cycle a-c or it can be operated from a vibrator power supply operated from a 6-v storage battery. The drive unit may be externally pulsed at random intervals, and can be synchronized automatically with any event which can be made to close with a switch. The 8-lb unit is 11½ in. long, 8½ in. wide and 5 in. high. It is priced at \$395.

Publication of the Broadcast Transmission Line Equipment Catalog, 2d ed., has been announced by Radio Corp. of America, Commercial Electronic Products Div., Camden 2, N.J. The 68-page illustrated catalog contains descriptions of RCA equipment specifically designed for broadcast stations and closed-circuit use. Contents include information on the new Universal coaxial line, VHF coaxial line, line accessories; power switching, and directional couplers. Reference data and an index are provided.

Equipments for use in educational television are listed and described in a catalogue issued by Radio Corp. of America, Educational Services Dept. 57, Camden 2, N.J. The catalogue lists sound systems, multi-com and auto-dial systems, microphones, speakers, amplifiers, antenaplex, 16mm projectors, tape recorders, TV sets, teaching systems, educational broadcast equipment, electron microscopes, test equipment and electron tubes.

New Current Governors in a series of current control and testing devices pro-

## Professional Services

### APPRAISALS OF FILM PRODUCTION EQUIP.

Cameras, Lenses, Lights, Recorders, Cutting Rooms, Laboratories, Printers, Processors, etc. 32 years background, gilt-edged references, assure acceptance by banks, Small Business Administration. Confidential, fees reasonable. Appraisers, Room 610, 147 W. 42nd St., New York 36. Phone: PLera 7-5121.

### FILM PRODUCTION EQUIPMENT RENTALS SALES SERVICE

Cameras, Projectors, Recorders  
Lighting, Editing, Lab. Equipment  
Our Overseas Dept. Equipped for Fast  
Foreign Delivery  
Free Catalogs Available  
**FLORMAN & BABB**  
68 West 45th Street New York 36, New York  
Cable: FLORBABB, New York MU 2-2928

### SUPPLIERS PHOTOGRAPHIC CHEMICALS and

Consultants in Photographic Chemistry  
L. B. Russell Chemicals, Inc.  
14-33 Thirty-First Avenue  
Long Island City 6, New York  
Yellowstone 2-8500

### REVERSAL FILM CHEMICALS for FILM and TV LABORATORIES

**ATKINSON LABORATORY**  
7070 Santa Monica Blvd.  
Hollywood 38, California

### RENT

16mm, 35mm, 70mm  
Motion Picture Cameras  
High Speed Cameras  
Special Cameras  
Lenses  
Lights  
Processing Equipment  
Editing Equipment

**GORDON ENTERPRISES**  
8362 N. Cahuenga, North Hollywood, Calif.

### WILLIAM B. SNOW

Consulting Engineer  
**STUDIO ACOUSTICS  
NOISE CONTROL**  
1011 Georgina Avenue  
Santa Monica, California  
EXbrook 4-8345

### BERTIL I. CARLSON

Photoproducts Co.  
Consultants, designers, builders  
in **PHOTO INSTRUMENTATION**  
Color Processors • Cameras • Projectors  
Box 60, Fort Lee, N. J.  
N.Y. Tel. TWining 9-4823

### MITCHELL CAMERAS

Studio—Industry—Science—Research  
16mm—35mm—65mm and Accessories  
For Demonstrations Visit Our Showroom  
and Offices  
For Technical Information and Brochures Write  
**MITCHELL CAMERA OF NEW YORK, INC.**  
821 Fifth Ave., New York 17, N. Y. Oxford 7-0227

### FILM PRODUCTION EQUIP.

The world's largest source of supply for practically every need for producing, processing, recording and editing motion picture films.  
Domestic and Foreign  
**S.O.S. CINEMA SUPPLY CORP.**  
Dept. TE, 602 W. 52 St., N.Y.C. Cable: SOSOUND  
Western Branch: 6331 Holly d Blvd., Holly d, Cal.

### CRITERION FILM LABORATORIES, INC.

Complete laboratory facilities for 16  
& 35mm black-and-white and color  
33 West 60th St., New York 23, N. Y.  
Phone: Columbus 5-2180

### COLORTRAN CONVERTER LIGHTING EQUIPMENT

The most illumination for the least investment  
**CROSS COUNTRY RENTAL SYSTEM**  
ELIMINATES COSTLY SHIPPING  
write for catalog  
**NATURAL LIGHTING CORP.**  
612 W. Elk, Glendale 4, Calif.

### VIDEO

#### FILM LABORATORIES

16mm Anscochrome  
16mm B & W Reversal  
16mm Negative-Positive  
350 W. 80th St., New York 19. JUDson 6-7296

### ELLIS W. D'ARCY & ASSOCIATES

Consulting and Development Engineers  
Xenon-Arc Applications  
Motion-Picture Projection  
Magnetic Recording and Reproduction  
Box 1103, Ogden Dunes, Gary, Ind.  
Phone: Twin Oaks 8-4201

### PHOTOGRAPHIC INSTRUMENTATION

Specializing in  
**HIGH-SPEED**  
Motion-Picture Photography  
Photographic Analysis Company  
100 Rock Hill Rd., Clifton, N. J.  
Phone: Prescott 8-6436

### ROCKY MOUNTAIN HEADQUARTERS

For 16mm Film Services  
**B&W and Anscochrome Processing**  
Printing—Recording—Editing  
Production—Rental—Sales  
All types of film in stock  
Write for Price List  
**WESTERN CINE SERVICE, INC.**  
114 E. 8th Ave., Denver 3, Colo. TAbor 5-2812

### FISCHER PHOTOGRAPHIC LABORATORY, INC.

EUclid 6-6603  
6555 North Ave., Oak Park, Ill.

### PROFESSIONAL MOTION PICTURE PRODUCTION EQUIPMENT

Cameras, Sound Recording, Editing,  
Laboratory and Affiliated Equip.  
Consulting Services by Qualified Engineers  
Domestic and Foreign  
**REEVES EQUIPMENT CORP.**  
10 E. 82nd St. NYC  
Cable: REEVESQUIP

### EAGLE FILM LABORATORY, INC.

(Established 1951)  
**A 16MM SPECIALIST LABORATORY**  
341 E. Ohio St., Chicago 11, Ill.  
WHitehall 4-2295

Professional cards available to members 12 insertions, 2 x 1 in., \$60

duced by North Hills Electric Co., 402 Sagamore Ave., Mineola, N.Y., are described in Bulletin 957, available upon request from the company. Each governor has a range of from 1 ma to 30 amp and the current can be electronically switched, pulsed, swept, modulated and programmed.

**Two electronic storage display panels** developed by Radio Corp. of America were exhibited at the 3rd Annual Meeting of the Institute of Radio Engineers' Professional Group on Electron Devices held at Washington, D.C., in November. The panels were developed separately and are based on two different concepts. An experimental panel 3 inches square, developed at the David Sarnoff Research Center, Princeton, N.J., utilizes a newly discovered property of cadmium selenide to prolong images. The second panel, developed experimentally by an RCA Laboratories team under a Signal Corps contract, is made up of arrangements of photoconductive and electroluminescent materials in tiny cells on a specially fabricated glass plate.

In developing the first panel, it was found that under the influence of applied voltage and exposure to light, the conductivity of cadmium selenide will increase sharply and will remain high for long periods after the light source has been cut off. The panel is comprised of a thin layer of cadmium selenide photoconductor and a layer of electroluminescent material separated by a thin layer of opaque material. The electroluminescent material has the characteristic of emitting light under the influence of an applied voltage. To operate the panel, a voltage is applied across the whole assembly. In darkness, the current is prevented from flowing by the insulating property of the cadmium selenide layer. When the light of the projected image strikes this layer for even 1/100 sec the cadmium selenide becomes conducting in accordance with the pattern of light, allowing current to pass through the opaque layer to the luminescent layer. The electroluminescent material thereupon emits its own light in the same pattern, reproducing the original image. Since the cadmium selenide remains conducting for a long time after the light source has been cut off, the current keeps flowing to generate light in the electroluminescent layer. When the image is to be erased the voltage is interrupted for a fraction of a second. The cadmium selenide then drops back to the insulating condition, ready for the next exposure.

The development of the second panel was based upon the principle of employing light-induced conductivity in the photoconductor material to permit the flow of current to the electroluminescent layer. One panel has been made with 1275 cells to the square inch, and another with 1600. The storage is achieved by an optical feedback process with the light emitted by the electroluminescent material being used to maintain the conductivity of the photoconductor material. Storage is theoretically infinite, but the laboratory models have been limited to storage of about 15 minutes.


**A General Electric directionalized VHF helical antenna** which can adjust signal patterns to predetermined specifications is being used in an experimental program

conducted by WJMR-TV, New Orleans. The station is telecasting certain programs simultaneously on VHF and UHF channels in accordance with an experimental permit issued by the Federal Communications Commission. The experiment is expected to show that this type of simultaneous programming can be pinpointed into specific patterns with no overlap or interference into areas served by corresponding channels.

**The Shockley 4-layer npnp Silicon Diode** is a 2-terminal switching device developed at Bell Telephone Laboratories. It operates in an open or high-impedance state of 1 to 100 megohms, and in a closed or low-

impedance state of less than 20 ohms. Designed for versatility and simplicity, the device is recommended for application in sawtooth oscillators, pulse generators, bistable circuits, ring counters, and various switching functions. Further information is available from Shockley Semiconductor Laboratory, Beckman Instruments, Inc., Mountain View, Calif., or Helipot Corp. Div., Newport Beach, Calif.

**An experimental model of a memory device called the "Twistor,"** which embodies a new concept of memory systems, has been developed at Bell Telephone Laboratories, 463 West St., New York 14. Current research is directed toward the



# 4-Track Magnetic Test Films

Ten Different 35 mm Types  
Now Available For:

**CinemaScope-equipped  
Theaters and Theater  
Service Engineers**

			Code
1. Level Balance Film	1000-cycle, 4-track	50 ft.	(SL-1)
2. Multifrequency Reel	40 to 12,000 cycles, 4-track	425 ft.*	(MF-1)
3. Loudspeaker Balance Reel	Identical speech and music on four tracks progressively in this order—2,1,3,4	300 ft.*	(LB-1)
4. Stereophonic Reel	Picture with stereo sound and 12,000-cycle control signal on track four	330 ft.*	(ST-1)
5. Flutter Film	3000-cycle, 4-track	50 ft.	(FL-1)
6. Loudspeaker Phasing Film	Signal of uniform level, 400-cycle or 500-cycle frequency-warbled simultaneously on tracks 1,2, and 3, at a 5-cycle rate (specify cross-over frequency desired)	50 ft.	(LP-1)
7. Constant Level Film	8000-cycle, 4-track to check azimuth	50 ft.	(AZ-1)
8. Channel-Four Film	12,000/1000 cycle	50 ft.	(CH-4)
9. Projector Alignment Chart	Picture Only	100 ft.	(PR-1)
10. Projector Alignment Chart—Optical Track	Picture only, standard sprocket holes (made by Motion Picture Research Council)		CSOS
	*These lengths approximate.	100 ft.	

**BASIC SET** consists of types 1, 2, 7 and 9. This group is a "must" for every theater service engineer.

**CATALOG FROM:**  
**Society of Motion Picture and Television Engineers**

55 West 42d Street,

New York 36, N. Y.



possible construction of magnetic memory arrays by merely interweaving horizontal copper wires and vertical magnetic wires. The name "Twistor" comes from a characteristic of wire made of magnetic material. Torsion applied to such a wire shifts the preferred direction of magnetization from a longitudinal to a helical path. The coincidence of a circular and a longitudinal magnetic field can then be used to insert information into this wire in the form of a polarized helical magnetization, and the magnetic wire itself can be used as a sensing means.

In conventional magnetic core memory devices, conductors must be threaded through the cores to make up a suitable matrix. When a ferrite sheet is employed, either a threading or a plating operation is necessary suitably to locate the conductors. With the Twistor, the ferrite material is eliminated and no threading or plating is necessary. Present indications are that the drive circuits for a Twistor array can be readily transistorized.

**The Philco Exicon**, an electronic instrument that increases the readability of x-ray negatives through contrast enhancement, was exhibited during the 11th Annual Clinical Meeting of the American Medical Assn. held in Philadelphia, December 3-6. The contrast enhancement device utilizes a flying-spot scanner which converts the information on the x-ray negatives into an electrical signal. The x-ray picture is reproduced for viewing on a TV-type monitor.

## Journals Available

**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.**

Issues beginning in 1953 available on a nominal basis. Write: Mitchell M. Badler, 1711 Davidson Ave., Bronx 53, N.Y.

Jan. 1930 through Dec. 1937; Journal SMPE issues; and Jan. 1930 through Dec. 1935, bound volumes of SMPE Journal; SMPE Transactions: Apr. 1919:8, May 1920:10; May 1922:13; Oct. 1922:15; May 1925:21; Oct. 1925:24; Apr. 1927:30; Sept. 1927:32; Apr. 1928:33; Sept. 1928:36; SMPE Membership Listings: 1928, 1930, 1938; SMPE Index and Authors: 1930-1935; SMPE Miscellaneous: ASA Z22-1930; Dim Stab of M.P. Films 1934; ASA Z22-1935; High Intensity Lamps-1935; Program Spring Convention Apr. 26, 1939. Write John Faber, 5 Edgewater Drive, Denville, N.J. Phone Rockaway 9-2623M.

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.



.....  
**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

**Top Animation Cameraman** and technician with over 10 yr experience and 3000 commercial or show direction and production credits, desires position with live studio or TV station. Have own equipment including servo-automatic animation stand, adapted Mitchell 35mm camera, 35mm optical and magnetic recording equipment, rotoscopes, 3-D cameras, complete machine shop, still equipment. Experience as mixer, live cameraman, TV camera editor, art director, puppets, color processor, machinist, set construction, etc. Will relocate anywhere throughout the world. Write: Animated commercials, Inc., 451 West 50 St., New York 19.

**Motion-Picture Production.** Film student currently studying film at Institute of Film Techniques evenings, wishes full-time job in production, preferably in New York area. Recently finished ½-hr film at amusement park in N.J.; now working on experimental color film using animation. Energetic, with knowledge of many phases of film production; main interest and ambitions are in cinematography. Own 16mm equipment. Write: Leonard DeMunde, 534 Tillman St., Hillside 5, N.J.

**Motion Pictures.** Argentine, age 43, married, relocating permanently in U. S., seeks position with opportunity for advancement, preferably in California. 23 yr experience in photography, 12 yr teaching at government school; head of motion-picture dept. of local engineering college; familiar with most technical problems; lineal drawing; degree in optics; writer for photog. magazines; workable knowledge English language. Would prefer work in color lab but would consider other positions. For detailed information write or cable: Juan Esnaola, Lagos 1210, Rosario, Argentina.

**Studio Technician.** Young man (27), recent graduate of TV Workshop, finished in top three of class; thoroughly qualified audio engineer, TV cameraman, floor manager, video operator, dolly and boom operator, etc., with knowledge of scenery, special effects, lighting, color TV principles and operations. Seeking job in TV production. Willing to relocate anywhere (Timbuktu if necessary); will accept modest salary to start. Arthur K. Hirshman, 2242 Bragg St., Brooklyn 29, N.Y. Tel: N1ghtingale 6-3997.

*Specialists in the Manufacture of*

**HIGH PRECISION MACHINE PARTS**

**SINCE 1908**

The equipment you are designing or building may well include a number of small high precision machine parts, and you will be anxious to see that they are produced by a firm in which you can have complete confidence. A firm competently staffed, well equipped, with years of experience, and a reputation for high quality production and complete dependability. LaVeZZi, with a history of many years in this specialized field is the answer to this need, and earnestly solicits your quote requests. An illustrated brochure will be mailed promptly upon request.

**LaVeZZi MACHINE WORKS**

4635 WEST LAKE ST., CHICAGO, ILLINOIS