

subsequently in collaboration with motion-picture production companies.

During Mr. Capstaff's early work on the Kodachrome process he discovered that the addition of a yellow dye to the emulsion provided a useful method of controlling the depth of the exposure and also had the effect of increasing the resolving power of the emulsion, thus greatly extending the latitude and lowering the maximum contrast. From this and other innovations, he devised special films which have contributed greatly to the technical excellence of modern motion pictures in black-and-white and in color, notably films for the production of duplicate negatives.

In 1927, he established the formula of a developer especially suitable for the production of fine-grained images on negative

film. This formula, D-76, met with ready acceptance and is used very widely by amateur and professional photographers for all classes of work.

No account of Mr. Capstaff's work would be complete without some mention of the training which he has given through the years to his associates and assistants. Many men in the organization of the Eastman Kodak Co. are proud to acknowledge with gratitude their obligation to him. This feeling is also shared by many motion-picture engineers throughout the industry, many of whom have been helped by his wide knowledge and ready invention.

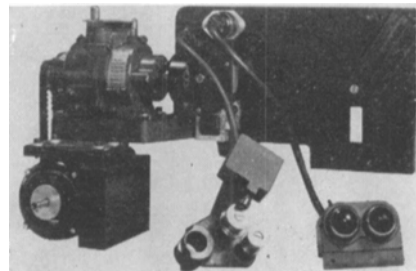
For his key inventions which are the basis of amateur movies, Mr. Capstaff received the Modern Pioneers Award of the National Association of Manufacturers in 1940. He

was awarded an honorary fellowship in the Royal Photographic Society in 1944 and received its Progress Medal in 1946. In 1950, the Photographic Society of America awarded him an honorary fellowship. The design of a processing machine incorporating several new principles brought him an honorary mention from the Academy of Motion Picture Arts and Sciences in 1943. The Society of Motion Picture and Television Engineers awarded him its Progress Medal in 1944.

Mr. Capstaff has published a number of papers on his work in photography (most recently, "An experimental 35mm multi-layer stripping negative film," in the April 1950 *Journal*) and has been granted over 75 patents. His work has been fruitful, and the high technical excellence of motion pictures today owes much to his pioneering efforts.—*R. G. Tarkington.*

## New Products

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.



An automatic fade attachment for use with Models D and J Bell & Howell Continuous Contact Printers is being made by the Motion Picture Printing Equipment Co., Skokie, Ill. In the fade attachment, the shutter blades are driven by a mechanical clutch which is connected to a variable-speed transmission whereby the fade lengths can be varied. Fades of from 10 to 100 frames can be obtained. The mechanical clutch is operated with a breaker box, which operates from a standard film notch placed in the negative on the soundtrack side of the negative. The attachment is provided with an indicator light unit which indicates when the shutter blades are opened and when closed. Two 4-w, 120-v lamps are mounted in this housing and are operated by a microswitch inside the fade attachment. For Model J the attachment costs \$695.00 f.o.b. the plant; and for Model D, \$745.00.

A slide rule calculator for estimating the relationship between running time, footage and cost of 16mm and 35mm films will be sent by Sidney P. Solow, Resident Manager, Consolidated Film Industries, 959 Seward St., Hollywood 38, to any Society member who sends him a self-addressed 9-in. envelope bearing 6¢ postage. Given the unit price per foot of film and either the running time in minutes or the footage, the total cost and either the footage or the running time are shown.

**Largest exclusive manufacturers  
of Photographic and  
Graphic Arts Chemicals  
in the  
United States!**

HUNT PLANTS, BRANCHES  
AND OFFICES

**Hunt Chemicals for both  
color and black and white motion picture processing  
conform to the photographic specifications  
of the American Standards Association.**

**FOR RESEARCH ASSISTANCE WRITE TO:**  
THOMAS T. HILL, *Director Photographic Research*

**FOR TECHNICAL SERVICE WRITE TO:**  
CHARLES F. LO BALBO, *Motion Picture Technical Advisor*

*Established 1909*

**PHILIP A. HUNT COMPANY**

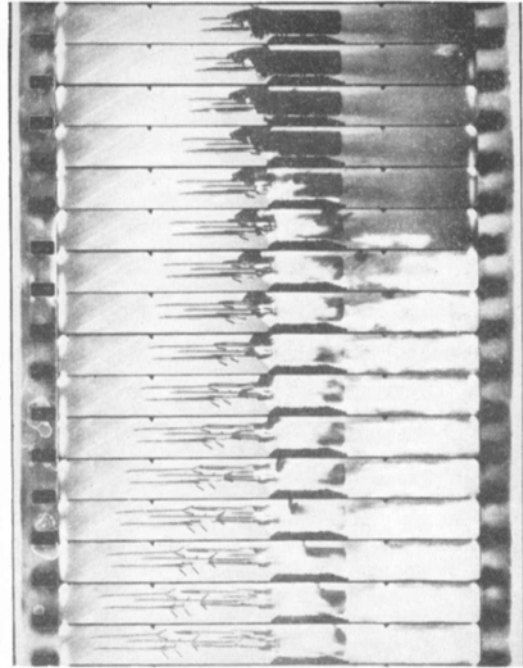
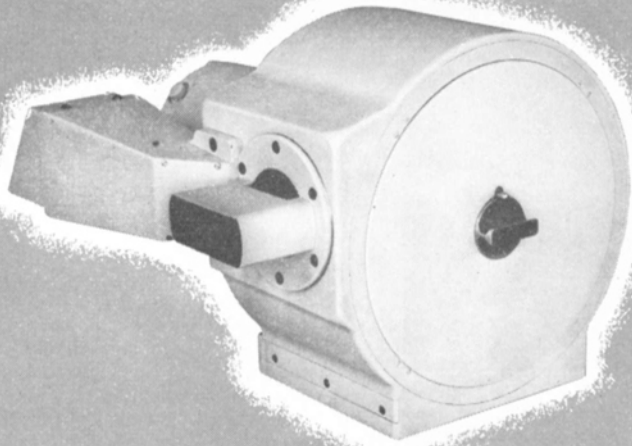
*Manufacturing Chemists*

**PALISADES PARK, N. J.**

*Brooklyn, N. Y. • Cambridge, Mass. • Chicago, Ill.*

*Cleveland, Ohio • Dallas, Tex. • Los Angeles, Calif.*

# PHOTO-SONICS INC.



Rocket firing photographed by 70MM-1A Camera  
Official Photograph U.S. Navy

## 70MM-1A *400 Frames Per Second Intermittently*

Aperture Size .218 x 2.25 inches—80 ft. film capacity  
Built in timing light system (Camera above has optional 25 Light Timer)  
Rigid construction makes camera ideally suited for Aircraft use.

### OTHER CAMERAS AVAILABLE

All cameras listed below are equipped with registration pins

#### 70MM-1B

FRAME SIZE: .218 x 2.218 inches  
MAXIMUM FRAME RATE: 400 frames per sec.  
FILM LOAD: 400 or 1000 ft. magazine

#### 70MM-5B

FRAME SIZE: 1.156 x 2.25 inches  
MAXIMUM FRAME RATE: 80 frames per sec.  
FILM LOAD: 400 or 1000 ft. magazine

#### 70MM-5A

For Aircraft Use

FRAME SIZE: 1.156 x 2.25 inches  
MAXIMUM FRAME RATE: 60 frames per sec.  
FILM LOAD: 400 ft. daylight loading spool

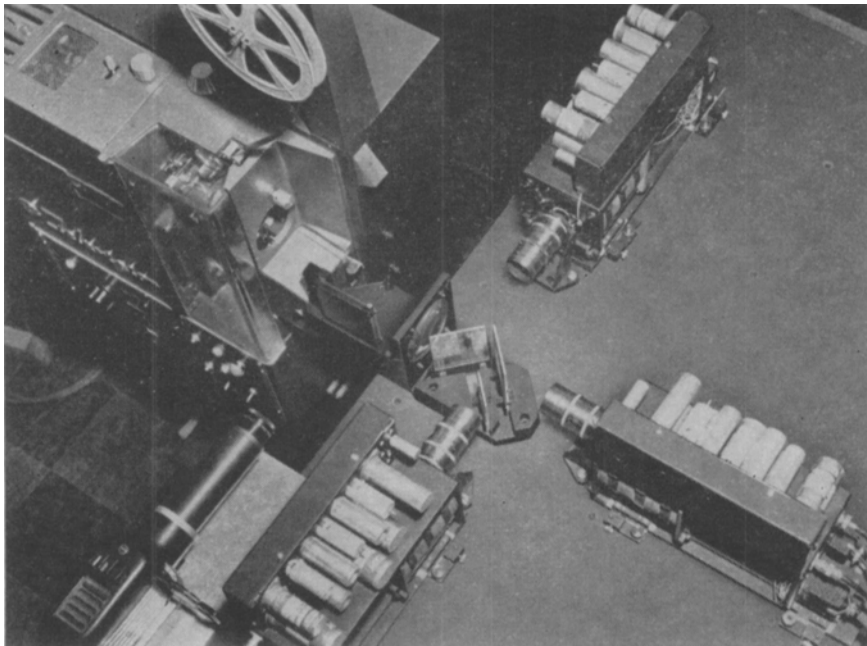
#### 70MM10A

FRAME SIZE: 2.25 x 2.25 inches  
MAXIMUM FRAME RATE: 60 frames per sec.  
FILM LOAD: 400 or 1000 ft. magazine

*Additional information on request*

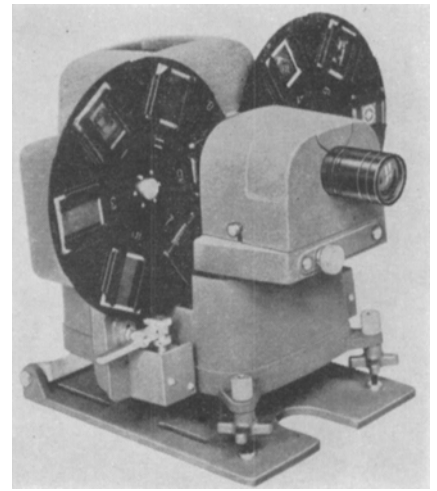
## PHOTO-SONICS INCORPORATED

2704 West Olive Avenue, Burbank, California



This new RCA "3-V" Camera for televising color motion-picture films and slides uses three RCA Vidicon pickup tubes and a light-splitting optical system in the arrangement illustrated by this developmental model. The color image produced by the projector at the upper left is focused on the first of two dichroic mirrors mounted at angles in front of the projector. The first light-splitting mirror reflects the blue

portions of the image to the Vidicon at upper right, but transmits the red and green portions to the second mirror which transmits the green picture elements to the Vidicon at lower right, but reflects the red portions to the one at lower left. The small vertical element mounted between the second mirror and the lens of the Vidicon at lower left is a filter which screens out unwanted infrared wavelengths and passes only the visible red light.



The Gray 3-B Single Lens Telojector is a newly designed projector for 35mm transparent slides in television stations, available from the Gray Research and Development Co., 658 Hilliard St., Manchester, Conn. It comes equipped with either a 6-in. or 7½-in. coated projection lens. Main power required for the unit is 115-v, 60-cycle, a-c with 300-w maximum. The control circuit operates from 24-v d-c, 10-w maximum; and two 150-w projection lamps operate at reduced voltage. The unit's system superimposes two images on one optical axis, to permit smooth lap dissolves and rapid switching. Pushbutton operation is either remote or local, with automatic changes through a sequence of 12 slides. It is designed for easy substitution of additional loaded turrets. The unit weighs about 35 lb and is 14½ in. high, 18½ in. wide and 16 in. or 19 in. long, depending on the lens.

## Professional Services

### ELLIS W. D'ARCY & ASSOCIATES

Consulting and Development Engineers  
Xenon-Arc Applications  
Motion-Picture Projection  
Magnetic Recording and Reproduction  
7045 N. Osceola Ave., Chicago  
Phone: Chicago — Newcastle 1-0993  
Washington — Oliver 2-2340

### 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. 52nd St., NYC  
Cable: REEVESQUIP

### LAB-TV

PROFESSIONAL  
16mm Black and White  
REVERSAL PROCESSING  
Processing on hourly schedules for  
TV Stations and Producers  
Write for Circular  
247 W. 46th St., New York 36

### WILLIAM B. SNOW

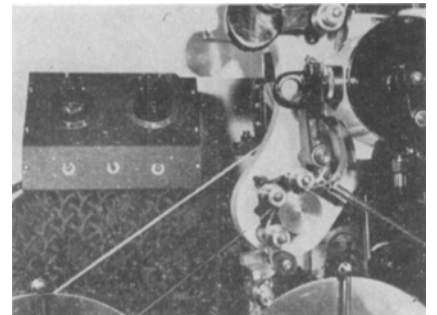
Consulting Engineer  
Acoustics — Electronics  
Stereophonic Recording  
1011 Georgina Avenue  
Santa Monica, California  
EXbrook 4-8345

### HIGH-SPEED PHOTOGRAPHY

Fastax Representative  
Fastax Cameras, Accessories, Film  
Fastax Photographic Service  
Photographic Analysis Company  
100 Rock Hill Rd., Clifton, N. J.  
Phone: Prescott 8-6436

### FILM PRODUCTION EQUIPMENT

From a single source, equipment for  
Production—Processing  
Recording—Editing  
Domestic and Foreign  
S.O.S. Cinema Supply Corp.  
Dept. TE, 602 W. 52nd St., N.Y.C.  
Cable: SOSOUND

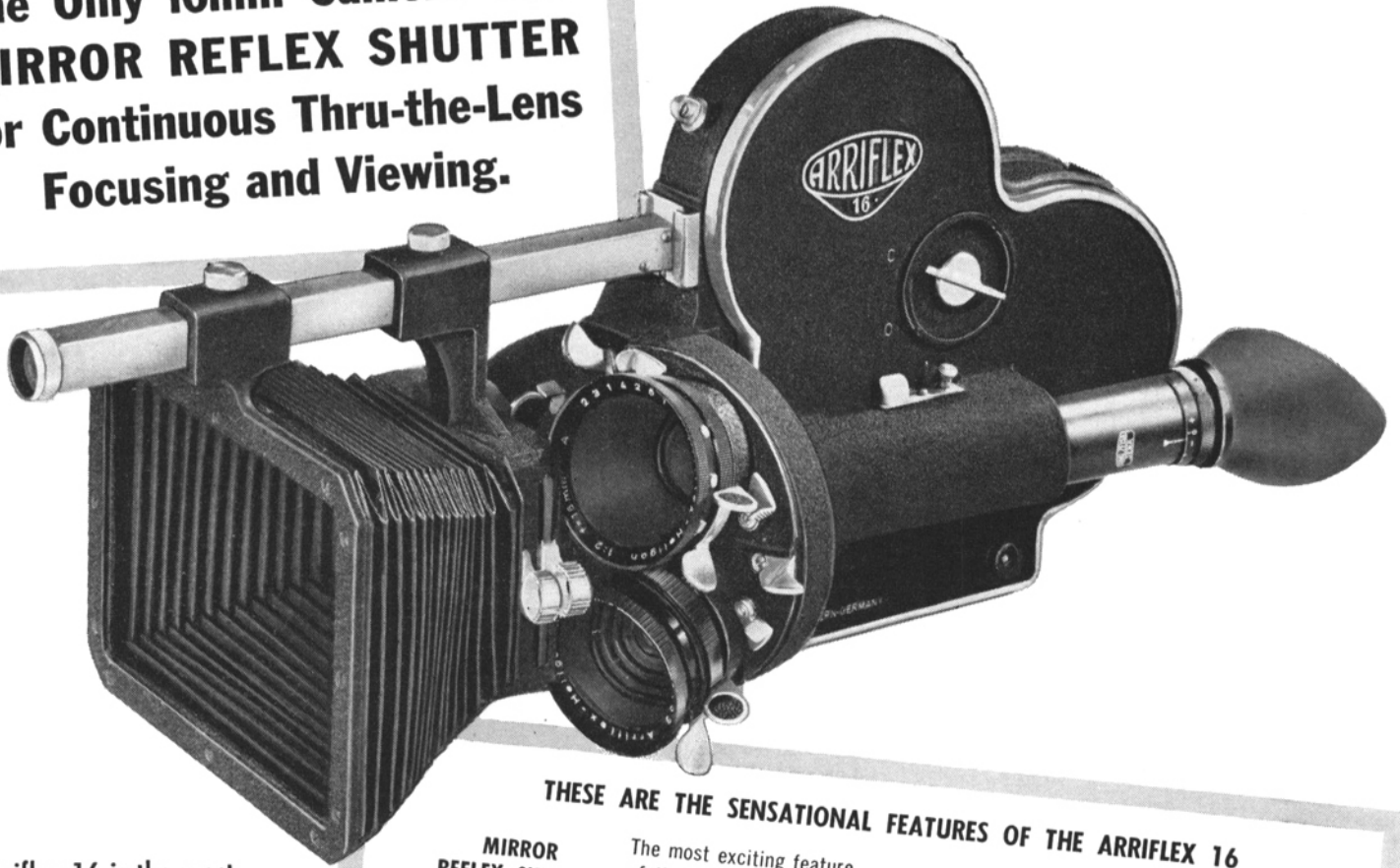


A cuing device for "metallic cuing" to obviate edge notching is being offered by the Motion Picture Printing Equipment Co., Skokie, Ill. The unit is an electronic, two independent-channel relay which will operate the light shutter or light control board on one channel and the fade unit or color filter change unit on the second channel. It is designed so that, by setting the dial, the timing distance can be controlled from 32 frames to 10 frames. In the illustration, the cuing head, which mounts on the printer, may be seen on the right. The head shown is designed for the Bell & Howell 16mm Model J Printer. It is designed as a package unit for ease of installation. The cuing device is \$279.00 f.o.b. the plant.

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

# The New Revolutionary ARRIFLEX 16

The Only 16mm Camera with  
**MIRROR REFLEX SHUTTER**  
for Continuous Thru-the-Lens  
Focusing and Viewing.



The Arriflex 16 is the most advanced camera in the 16mm field. No comparison can be made with any existing equipment. It is in a class by itself... unique for its features, and outstanding for its workmanship.

## THESE ARE THE SENSATIONAL FEATURES OF THE ARRIFLEX 16

### MIRROR REFLEX SHUTTER

The most exciting feature of them all: for accurate framing and critical follow-focus, through the taking lens, even during the actual shooting. Image on ground glass is brilliant, uninverted and right-side-up, magnified 10x through a highly corrected optical system. No parallax, and no need for accessory finders.

### REGISTRATION PIN

Found only in cameras selling for \$3000 or more. Automatically engages and locks film during exposure. Assures absolute frame registration, and picture steadiness.

### ELECTRIC MOTOR DRIVE

No need to stop a scene to wind a spring. Has variable-speed 6-volt DC motor with forward and reverse switch. Operates from portable, rechargeable battery pack, dry cell batteries, or with Transformer-Rectifier Unit on 115 volts AC. Easily interchangeable with Synchronous Motor Unit (available as accessory).

### DIVERGENT 3-LENS TURRET

Accommodates lenses from 11.5mm extreme wide angle to longest telephotos. Lenses quickly interchangeable. Wide angle and 300mm telephoto can be mounted simultaneously without mechanical or optical interference.

## OTHER ARRIFLEX PROFESSIONAL FEATURES

**FOOTAGE & FRAME COUNTERS**—for forward and reverse action.

**TACHOMETER**—indicates speeds from 1 to 50 frames-per-second.

**CONTOUR GRIP**—provides a natural and firm grip for handheld shooting.

**DETACHABLE NECKSTRAP**—for handheld filming.

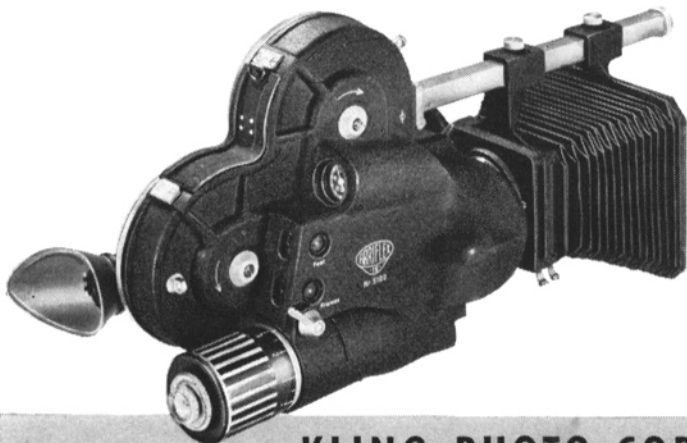
**LIGHTWEIGHT**—camera with Matte Box weighs only 7½ pounds.

**FILM CAPACITY**—50 and 100-foot standard daylight spools.

**400-FOOT MAGAZINE**—accommodates External Film Magazine. (This accessory will be available at a later date.)

**DETACHABLE MATTE BOX-FILTER HOLDER**—has stationary and rotating filter stages for color filters, polarizing filters, fades, dissolves, and other effects.

**SINGLE SPROCKET DRIVE**—for either silent or sound-perforated film.



**KLING PHOTO CORPORATION**

235 Fourth Ave., New York 3, N. Y. • GRamercy 5-1120  
7303 Melrose Ave., Hollywood 46, Calif. • WYoming 9026



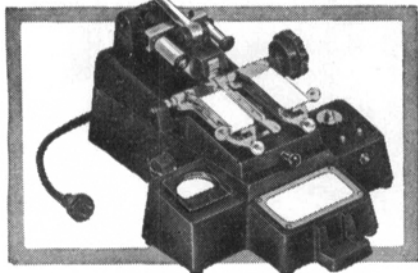
**Time It!  
Test It!**

**Producers!  
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**Now Ready for Delivery**

**The New  
"Miracle-Butt-Weld"  
PRESTO-SPLICER**

**with NEW PLUG-IN heater block  
eliminating down time!**



... produces miracle-fast splice on all types of film, that lasts the life of the film itself ...

**permanently in 10 seconds!**

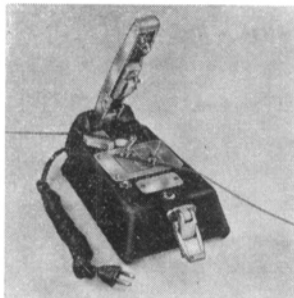
Add or cut one or more frames.

... replasticized! Eliminates drying out, no overlap, no cement, brushes or scraping, no double thickness or distortion. Guarantees perfect frame alignment. No light required.

**Also, The New**

**MT-1M PRESTO SPLICER**

**for welding together  
1/4" Mylar & Acetate Tapes  
without cement or adhesives**

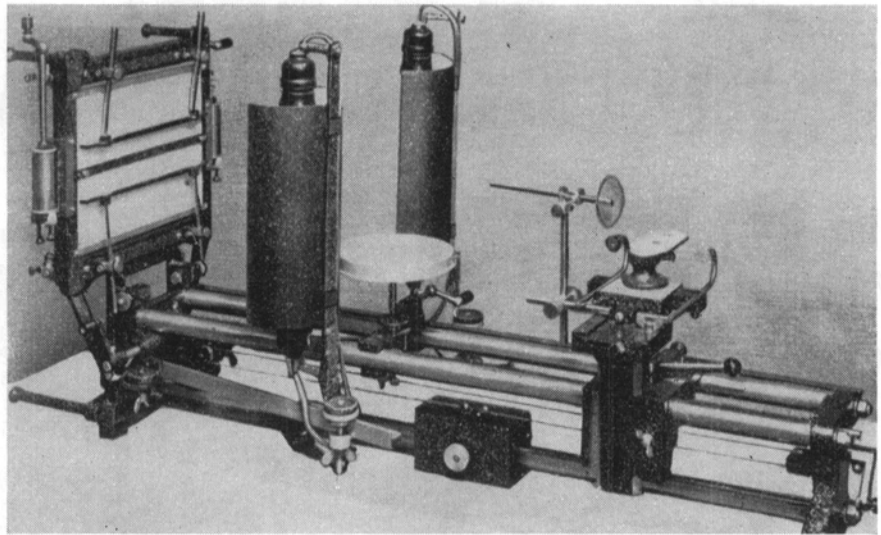


- Diagonal cut capable of withstanding 3 pound pull
- Inaudible with playback amplifier gain at maximum

Sample splice and Brochure on request.

**PRESTOSEAL MFG. CORP.**

**3727 33rd St., Long Island City 1, N. Y.**



This Titler and the accompanying Special Effects Kit have been introduced by S.O.S. Cinema Supply Corp., 602 W. 52 St., New York 19. There are three models, TG-II, TG-III and TG-IV, with title boards  $5\frac{1}{8} \times 7\frac{1}{8}$  in. or  $7\frac{1}{8} \times 9\frac{1}{2}$  in. and with varying weights of construction. The largest measures  $40 \times 15 \times 12$  in. and weighs 40 lb. All are designed for table top use.

Designed for use on a wide range of titles, trick films, cartoons and animation, the table is adjustable north, east, south and west. Front and rear illumination are provided. Accessories included are: title card frame with platens, distance scale for setting camera lens, climbing and running title devices, turntable for rotating small objects and optical axis attachment. Prices are from \$159.50 to \$295.00.

**A Standard Playback Characteristic for Lateral Disk Recording** has been published as a tentative standard, AES T-1 dated December 21, 1953, by the Audio Engineering Society, which is submitting it to the American Standards Association. Committee Z57 of ASA now has it under consideration. William H. Offenhauser, Jr., is chairman of the AES Standards Committee. Reprints of this Tentative Standard are available at nominal cost from the AES at P.O. Box 12, Old Chelsea Station, New York 11.

**American Standard Letter Symbols for Acoustics**, ASA Y10.11-1953, contains more than one hundred symbols for terms used in acoustics measurements. Harry F. Olson, RCA Laboratories, Princeton, N.J., chaired the group which prepared the list. The standard may be obtained for \$1.00 from the Order Dept., American Society of Mechanical Engineers, 29 W. 39 St., New York 18. Discounts are available for quantity orders.

**The Society of Cinema Collectors and Historians** has completed its first year and is planning a meeting and exhibition in the New York area in September, after which its first Journal will be published, with information of meetings, findings and personnel. Members are being sought among historians and students of the cinema and those associated with the motion-picture industry in production, writing or collecting. Membership application and brochure are available from the Secretary, Saul Haber, 4221 4th St., S.E., Washington, D.C.

**Employment Service**

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

**Positions Wanted**

**Photographic Engineer:** M.A.; age, 28. Desires challenging, responsible position where technical knowledge and ingenuity will be fully utilized; 8 yrs diversified experience pertaining to the photographic process, with particular emphasis on photographic instrumentation for data recording. Background includes a thorough working knowledge of electronics, the graphic arts, color, machine-shop practice, high-speed photography, etc. Presently engaged as a senior member of a well-known industrial research organization where all kinds of photographic techniques are used as research and service tools. Willing to relocate. Write: P.O. Box 259, New York 36.

**Cameraman and special effects producer:** For news, educational or advertising films; technical and musical education; camera and 35mm film strip and color development experience. Write: Vitold Bredshnyder, 812 N. Monroe St., Monroe, Mich.

**Positions Available**

**16mm Printers, Color Timer, Negative Converter:** Permanent positions for qualified, experienced personnel. Company benefits. Send complete information and small photograph to Byron, Inc., 1226 Wisconsin Ave., Washington 7, D.C.

**Photographer (Motion-Picture Animation), GS-9:** Require 5 yr experience in photography, 4 yr of it as animation photographer in production of cel animation work in motion-picture production. Also included must be at least 1 yr in technical animation photography. \$5060/yr. Obtain Form SF 57 at any first class Post Office or Government Agency; forward or deliver completed to Civilian Personnel Div., Signal Corps Fictorial Center, 35-11 35 Ave., Long Island City, N.Y.

**Permanent Employment:** Open for mechanical engineers or physicists with at least 1 yr optics experience. Knowledge of camera mechanism, auxiliary timing apparatus and control equipment, precision camera mounts, photography and a general overall knowledge of fundamental optics highly desirable. Positions are located near Cocoa, Fla., at RCA Missile Test Project. Send completed résumés or requests for applications to Harold D. Storz, Employment Sec., RCA Service Co., Box 11, O M U, Patrick AFB, Fla.