

FOR
FASTEST
SERVICE

**WESTERN
Cine
LABS**

DENVER
●
HOLLYWOOD

COLOR PROCESSING
EKTACHROME COMMERCIAL
EF, MS and ER

RELEASE PRINTING
(Fast service on answer and
release prints)

- COLOR INTERNEGATIVE
- COLOR POSITIVE
- COLOR REVERSAL

WORKPRINTS
(With ink edge numbers)
COLOR • BLACK & WHITE

plus...

LIPSNER-SMITH ULTRASONIC
FILM CLEANING
ON ALL ORIGINALS

COMPLETE RECORDING, MIXING
AND OPTICAL PRINTING TRACKS

OPTICAL PRINTING
(16mm to 16mm & 35mm to 16mm)

TITLING

ALL BLACK & WHITE
16mm SERVICES
(Reversal, Negative, Positive)

INTERLOCK PROJECTION
8mm PRINTING

SEND FOR PRODUCERS'
NET PRICE LIST


WESTERN Cine

312 SO. PEARL STREET
DENVER, COLORADO 80209

1138 NO. LA BREA
HOLLYWOOD, CALIF. 90038

Photographic relief images, Howard M. Smith, *Jour. Optical Soc. Am.*, 58: 533-539, Apr. 1968.

A systematic study has been made of the formation of photographic relief images for sinusoidal exposures in the spatial frequency range 0 to 200 lines/mm. It is found that, for a given process and emulsion, the differential height of the surface relief between minimum and maximum density points is strongly dependent on frequency. For a given peak-to-peak density swing, the relief

height is very small at zero frequency, builds up to a maximum at a spatial frequency which is inversely proportional to the emulsion thickness, and then declines slowly with increasing spatial frequency. The effect is explained in terms of the differential tanning action of the developer between high- and low-exposure regions. The effect has been studied as a function of several emulsion parameters, processing, spatial frequency, peak-to-peak density swing, and emulsion thickness.



CAPE KENNEDY, May 18 — Solona Studios in Naples, Fla. hosted an informal meeting of the **Cape Kennedy Section** attended by 35 members and guests. Solona is an unusual motion picture and still facility combined. It was conceived and nurtured from an avocation into a successful public service organization by its founder S. F. Briggs, retired Chairman of the Board.

The meeting started with a warm welcome by host Fred Hillman of Outboard Marine Corporation. Hillman screened two very fine films, the first of which has gained some fame through television exposure. It was entitled *The Gooney Bird* and dealt with the famous gooney birds that inhabit Midway Island. The film was conceived and photographed by S. F. Briggs.

The second film, *Welcome to Winter*, was made by Florida-based producer John Paterson. Photographed in the Grand Tetons, the snowscapes and wildlife shots were beautiful and exciting.

Following the films Bill Sheahan reported on some of the activities at the Los Angeles convention and reminded those present that he would call a meeting of chairmen for the 1969 convention shortly.

Since the meeting was quite a distance from many members' homes, arrangements were made for an overnight stay at the Buccaneer Motel. The meeting was followed by a pool-side party and dinner.—H. Richard Hertel, *Secretary-Treasurer*, Technicolor Corp., Riverside, Fla.

CLEVELAND, June 4 — The third formal meeting of the newly-formed **Ohio Section**, held at Cinecraft, Inc., was attended by approximately 30 members and guests. Chairman George Golden announced that this would be the final meeting before summer vacation and that regular meetings would resume in September, at which time members will be notified.

The meeting was then turned over to William Hedden of Calvin Productions, Inc., Kansas City, Mo., who presented 2½ hours of film and slide highlights from the 22nd Annual Calvin Workshop. Filmmakers, educators and other interested persons from 47 states and Canada participated in the three-day event held Feb. 5-7,

1968. Discussions during the Workshop included two dealing with the potential of 8mm and super 8 in the film industry and the distribution of films. Among the demonstrations was one on aerial combat photography and one on the picture and sound-track qualities of 8mm film.

The presentation was well-received.—Robert W. Wagner, *Secretary-Treasurer*, Ohio State University, Columbus, Ohio.

HOLLYWOOD, June 18 — Three papers from the recent 103rd SMPTE Conference were presented to 105 members and guests at a meeting of the **Hollywood Section**. The gathering was held at the Lytton Center of the Visual Arts.

Chris Condon, Century Precision Optics, North Hollywood, spoke on "A Silenced 35mm Hand-Held Motion Picture Camera Suitable for Double System Sound Recording" and "A Sound Blimp for 16mm Bolex and Beaulieu Cameras."

Using Eastman Color Negative film, with type 5251 as the duplicate negative stock, Roger Richardson, Consolidated Film Industries, Hollywood, Calif., presented his paper on "Improved Technique for Generating Color Duplicate Negatives."

Ed Blasko wound up the evening speaking on "A New Higher Speed Color Negative Film," which dealt with Eastman Kodak's new camera negative film designated as Eastman Kodak Color Negative Film, Type 5254, having an exposure index of 100 compared to that of the current negative film which has an index of 50.

A pre-meeting dinner, attended by 42 persons, was enjoyed at Villa Frascati Restaurant.—Howard Stucker, *Secretary-Treasurer*, California State College at Los Angeles, Los Angeles, Calif.

HUNTSVILLE, June 5 — The Television Department of the U.S. Army Missile and Munitions Center and School, Redstone Arsenal, Ala., hosted a meeting of the **Huntsville Section** attended by 19 members and guests.

The program, "MMCS Television Operations," was hosted by Lt. Richard W. Bielen, acting Director of the Television Department. Lt. Bielen described the de-

THERE'S ONLY ONE PRO-JR.

FIRST CHOICE OF PROFESSIONALS

The Pro-Jr. line of tripods has been a mark of excellence for over 27 years. More than 30,000 have been sold all over the world.

Write for detailed specification sheets describing our whole line of Pro-Jr. Tripods, Ball Joint Heads, Hi-Hats, cases and accessories.



PRO-JR. MARK II FRICTION HEAD

The new Mark II Pro Jr. Head with Teflon® bearings combines fluid-head smoothness with the fast, free movement of a friction head. Features include "T" level; accessible knob for mounting camera; adjustable angle telescoping pan and tilt handle; 3 positions for attaching pan handle; tension control knobs.

Head **\$150.00** only with Pro-Jr. **\$250.00** V-Grooved legs



PRO-JR. FLUID DRIVE HEAD

Just as the original Pro-Jr. Friction Head was a world leader in reliability, this has created a new standard for fluid heads in the motion picture industry. Exclusive formula of silicone fluid assures maximum smoothness. Features positive grip locks; camera balancing and tightening lever; removable pan handle adjusts in any position; "T" level; accommodates any camera up to 30 lbs.

Head **\$395.00** only with Pro-Jr. **\$495.00** V-Grooved legs



PROFESSIONAL "BALANCED" TV HEAD. MODEL "C"

HEAVY DUTY MODEL FOR
CAMERAS WEIGHING UP TO 135 LBS.

Offers smooth tilt and pan action, perfect balance. Quick release handle locks in position. Mechanism is enclosed, rust proof, needs no lubrication. Has tension adjustment, built in spirit level and telescoping extension pan handle. Slotted tie-down screw counterbalances camera for film load or long focal length lenses. Mounts on professional type or all-metal tripod.

Head **\$750.00** only



PRO-JR. ADJUSTABLE V-GROOVED TRIPOD LEGS

Constructed of hard maple wood with aluminum and steel hardware. For use with all Pro Jr. tripod heads, except integral ball joints. The "V" groove design gives almost twice the gripping surface as before and greater rigidity at any extension is assured.

\$110.00

PRO-JR. ADJUSTABLE V-GROOVED BABY TRIPOD LEGS

Specially designed shoe and spur for added sturdiness. Constructed of hard maple wood with aluminum and steel hardware. For use with all Pro Jr. tripod heads, except integral ball joint.



\$110.00

PROFESSIONAL ALL-METAL TRIPOD



Has cast top flanges and upper leg portion made of one piece aluminum alloy casting. Lower legs are 1½ inch seamless steel tubes, hard chromed to prevent corrosion. Calibrated legs slide easily and have tie rods to center tube for automatic leveling.

For use with Model "C" type head.

\$350.00

F&B/CECO I N C.

HEADQUARTERS:

Dept. 56, 315 West 43rd Street,
New York, New York 10036
Phone (212) JU 6-1420
Cable: CINEQUIP—Telex: 1-25497

7051 Santa Monica Boulevard,
Hollywood, Calif. 90038
(213) 469-3601—Telex: 67-4536

51 East 10th Avenue
Hialeah, Florida 33010
(305) 888-4604—Telex: 51532

Branches in:
Washington, D.C./Atlanta/New Orleans/Cleveland

PRO-JR. STA SETS

Prevent the tripod from slipping on highly finished surfaces such as marble, tile, etc. Especially useful where limited space prohibits use of triangle. Installed or removed in seconds and may be carried on the tripod legs.



SET OF THREE:

\$7.50



PRO-JR. 3 WHEEL PORTABLE DOLLY

Features single positive leg lock to position 4" wheels accurately, two position locks at each caster enables operator to dolly in straight line or to "free wheel" quickly. Collapses into easy to carry package.

\$125.00

HEAVY DUTY MODEL W/
5" WHEELS: **\$175.00**

MODEL "C" PRO-JR. METAL COLLAPSIBLE TRIANGLES

Insures rigidity, prevents tripod legs from slipping. Adjustable feature permits extensions of triangle to vary leg spread. Collapses for easy portability. Model "C" with leg clamps. **\$39.50** Model "B" without leg clamps. **\$32.00**



SMPTE test films for television



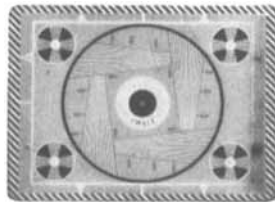
NETWORK, LOCAL, CCTV...

a test film library for
engineering and telecine

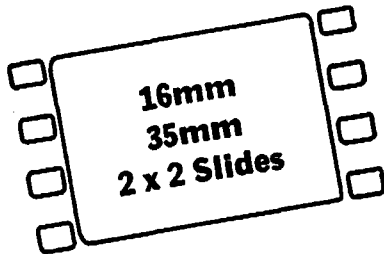
VIDEO TEST FILMS

TEST FUNCTIONS:

- alignment • resolution
- focus • linearity
- low and medium frequency response
- storage and transfer characteristics
- automatic brightness control
- qualitative picture analysis



FOR COLOR TELEVISION

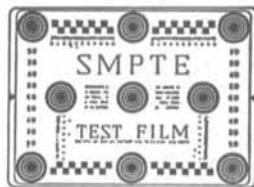


comparative and qualitative test of system's
ability to reproduce color

PROJECTOR PERFORMANCE

Test and Adjust:

- picture steadiness • jump and weave
- shutter timing (travel ghost)
- framing • focusing
- aperture alignment



SOUND REPRODUCTION *optical / magnetic*

Test, Adjust and Calibrate Projector

- scanning beam slit position
- multi-frequency response
- azimuth and focus of sound optical train
- signal level and balancing, output flutter
- scanning beam illumination



FOR THE SCREENING ROOM

Jiffy Test Film: a time saving quick evaluation of 16mm sound projector system performance

for further information
and for a complete listing of test films, write to Department TF

Society of Motion Picture and Television Engineers

9 EAST 41st ST., NEW YORK, N.Y. 10017

partment's mission, which began in 1958, to train students via television. The department was then expanded to provide regional production support for 8 other Continental Army Command schools. A videotape, was shown, "Educational Applications of Television," explaining the methods and advantages of teaching by televised videotape.

Mr. Donald Gesner, Assistant Chief of the department's Operations and Engineering Div., conducted a tour through the production facility which contains over a million dollars worth of equipment.

A social hour, with coffee and doughnuts, followed the meeting. — Karl LaRoche, Jr., Secretary-Treasurer, RCA Service Co., Huntsville, Ala.

HUNTSVILLE, June 25 — Following a dinner reception for the guest speaker, the Huntsville Section met at the Sheraton Motor Inn to attend a condensed version of "The Calvin Workshop," presented by William D. Hedden, Vice-President of Calvin Productions, Inc., of Kansas City, Mo.

Hedden covered the spectrum from script to screen, using film and slides to illustrate his presentation. The program was enthusiastically received by an attendance of 36 members and guests. — Karl LaRoche, Jr., Secretary-Treasurer, RCA Service Co., Huntsville, Ala.

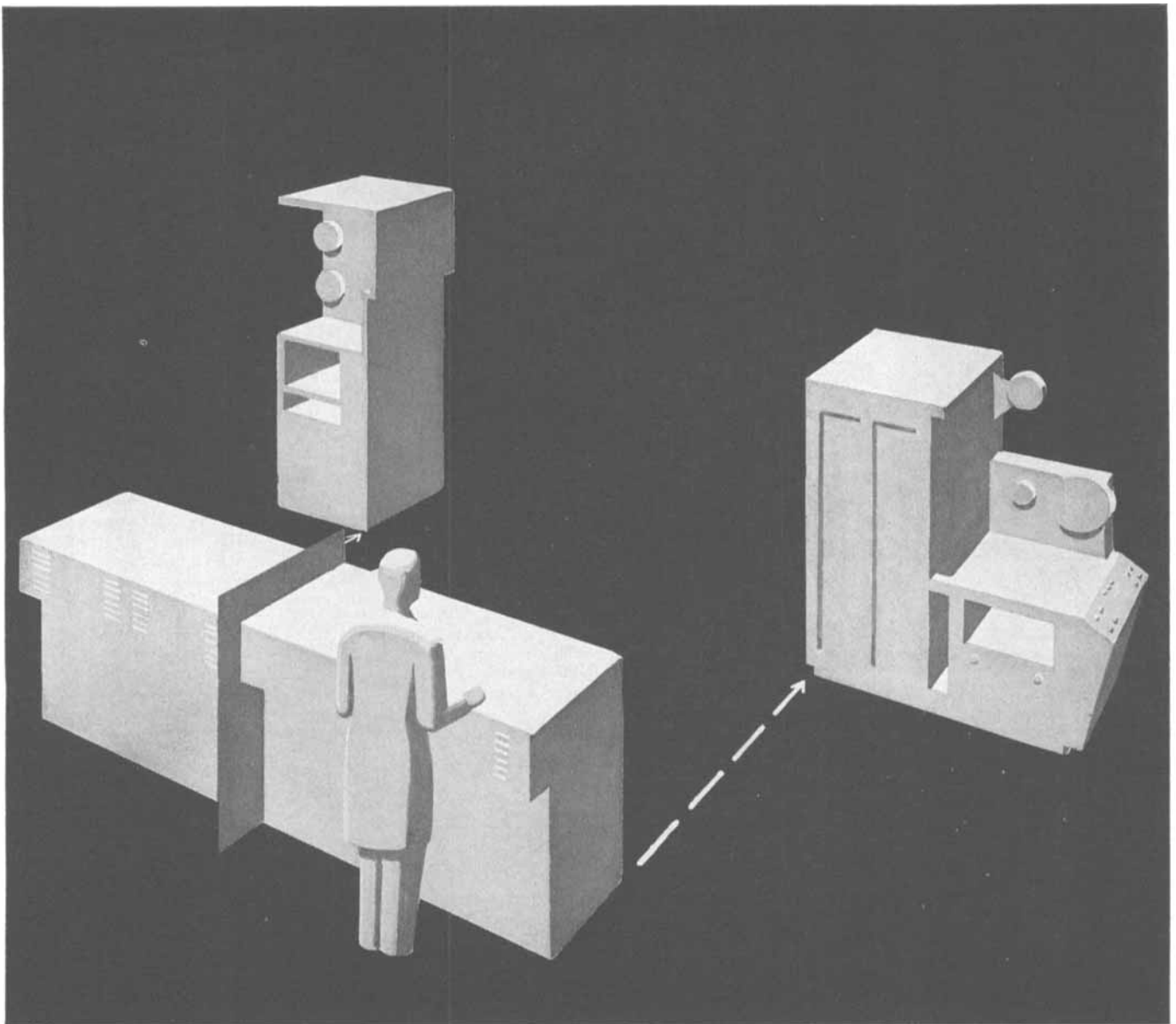
ROCHESTER, June 6 — Presentation of prize-winning papers on photographic research projects took place at a joint meeting of the Rochester Section and the SPSE. A group of 200 members and guests met in the R. I. T. Main Auditorium.

Dr. William Feldman, Eastman Kodak Co., the Project Manager, presented awards to the winning authors and gave a short dissertation on the role of photographic scientists and photographic engineers in industry. To emphasize his theme, Dr. Feldman used the development of the lunar orbiter program at Eastman Kodak as an example, illustrating his remarks with outstanding photographs taken by lunar orbiters 1 and 2.

The first-prize winner was a dissertation on "The Solubility of Silver Halide in Concentrated Iodobromide Solution at 50°C.," by James Forsythe III and William Savuto. The paper was presented by James Forsythe, since William Savuto is currently serving in the U.S. Air Force and could not attend the presentation.

The second-place award was for "A Comparison of Forced and Free Scanning Techniques for Use in Data Extraction from Projected Images," by William Karp and Michael Leary. Third place went to "Effect of Amount of Iodide in an Iodobromide Emulsion on Adjacency Effects at an Edge," by Alvis Uptis and Robert Van Aresdale. The fourth slot was filled by "The Use of a Variable Frequency, Variable Contract Crenelate Distribution Target for a Visual Approximation of the Modulation Transfer Function Curve," by John Seibt and Mark Weinstein.

Each of the authors received an engraved plaque commemorating his presentation. A monetary award was given the co-authors of the first-prize paper. — Roland J. Zavada, Secretary-Treasurer, Eastman Kodak Co., Rochester, N.Y.



Your "Custom" processor is already built

Pako's unique building-block design enables us to make more than 40 processor models to handle nearly any film at nearly any speed. We simply assemble the right combination of modules (loader, tank section and dryer) test it, and ship it.

Which means you don't have to worry about custom-made parts or a slight error in custom-engineering and construction (the reliability of a Pako Ciné Processor is only exceeded by its consistent top quality results—but not by very much). You don't have to worry about custom-made prices, either. Or months upon months of custom-made waiting.

All Pako Ciné Processors feature *bottom drive*, the most successful, trouble-free rack system on the market. Constant film tension, maintained by the speed ratio of drive spools to idler spools, virtually eliminates film breakage.

Other features include an easy-access electrical control panel, air squeegee wiping system, film elevators and take-up reel, "light side" remote main control unit, and, on some models, a fail-safe re-exposure system.

If you're interested in a ciné processor, contact your Pako Distributor or write to us. We have over 40 different "custom" models waiting.

PAKO CORPORATION **PAKO**
 6300 Olson Memorial Highway, Minneapolis, Minnesota 55440
PS Processing Systems for the Photographic, Graphic Arts,
 Motion Picture, Medical and Industrial X-Ray Industries

PROCESsing COLOR B & W SOUND LAB 24/HOUR SERVICE

United Film Industries, Inc., the Rocky Mountain Region's most complete laboratory facilities for processing, work printing, edge numbering, and release print production - including complete sound recording, music library, editing, titting, and stop motion work.

Fast service on 16mm Ektachrome MS, EF, ER, and ECO emulsions, and Ektachrome R (7388) sound track application. Processing 8mm and 16mm, 7 days a week, for film producers, businessmen, scientific labs, test and research centers, experiment stations, hospitals, schools, and television.

Air Express or Air Freight shipment. Write or phone for full information and price list.

**United film
industries, inc.**

1028 ACOMA STREET
DENVER, COLO. 80204
PHONE 303/244-4629



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.

New models of the Spectra Universal, Professional and Combi incident exposure meters have been announced by Photo Research Corp., 3000 N. Hollywood Way, Burbank, Calif. 91502. Principal feature of the new models is an improved photogrid for reflected light reading designed to retain maximum meter sensitivity. The photogrid is standard equipment with the new Professional and Combi models and is optional with the new Universal at a price of \$7.50. Earlier Spectra meters may be adapted for use with the new photogrid at a price of \$12.00. In addition to the photogrid the price includes a new computer. Other new features include a more legible meter scale, a simplified computer and a revised instruction manual. Prices for the new models start at \$79.50.

Two new tungsten-halogen quartz focusing and non-focusing scoops, the "1000" and "2000," have been introduced by Berkey-Color-Tran, Inc., 1015 Chestnut St., Burbank, Calif. 91502. The focusing models feature a specially designed diffusion lens which produces a softer, more even beam pattern. When higher intensities are required the diffusion lens may be easily removed. Features include an integral stiffening frame providing for extra rigidity around the reflector front. The frame has a positive locking device to allow for simple and easy installation of the Diffusion/Gel Frame accessory. Prices for the focusing and nonfocusing fixtures range from \$75 to \$125.

The AKG F.E.T. condenser microphone modular system, built around a newly developed C-415E preamplifier has been announced by North American Philips Co., 100 E. 42 St., New York, N.Y. 10017, distributors. The preamplifier uses audio-frequency circuitry with field effect transistors, rather than tubes, to achieve low current consumption at low voltage. The unit incorporates a stabilizing circuit which limits the operating voltage to 9.1 V, independent of supply voltage. The supply voltage may range from 7.5 V to 52 V. It is fed to the microphone via a phantom circuit. The low supply voltage permits direct feeding from almost any commonly used amplifier. The C-415E system is priced at \$179, including microphone preampli-

fier, cardioid capsule, stand adapter and wind screen.

Filmoods Company, Box 475, Scarsdale, N.Y. 10583, has announced the release of Filmoods Volume 1, a 12-in. 33 $\frac{1}{2}$ record containing 21 bands of music specially composed and recorded. Subjects range from action to romance, from comedy to mystery, from science to the sea. Playing times vary from 3 $\frac{1}{2}$ -min compositions to 5-s musical effects. The record is the first in a planned series. Purchase price of the records includes all rights for full use, such as dubbing, etc., without any restrictions, such as additional fees or reports. Volume One of the series is priced at \$9.95.

E-Z-See Zoom Scales providing an enlarged view of diaphragm and focusing controls have been announced by Birns & Sawyer, Inc., 6424 Santa Monica Blvd., Hollywood, Calif. 90038. The scales are designed to provide a convenient, clear and enlarged view of controls on the Angenieux 12-120 zoom lens results. The data rings can be positioned on the top, bottom or side for easier viewing. Price of the attachment is \$59.50.



A new 12-V dc battery weighing less than 5 lb has been announced by F&B/Ceco, Inc., 315 W. 43 St., New York, N.Y. 10036. The battery is designed with a special shape to fit the contour of the body. It delivers 4.0 Ah and can be used with the Eclair NPR camera with bloop, the Arri BL and the F&B/Ceco Cinevoice Conversion with Minisync. The battery contains nickel cadmium rechargeable cells. It has a built-in charger and indicator light. Charging time is 15 h from either 220-V or 110-V ac current and the system contains a constant current charger to prevent overcharging. The battery, complete with case, is priced at \$249.50.



A new film processor and a 126-size preplicator have been announced by 3M/Dynacolor Corp., Photofinishing Equipment



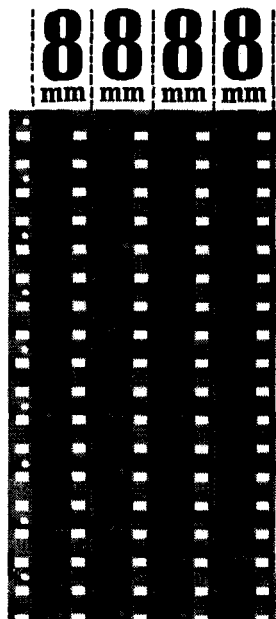
New
CZECH FILMS

enjoy international success in Hollywood, Cannes, Brussels, Montreal, and Mannheim. They are the art of Czech directors and actors using modern film and television equipment, laboratories and studios, coming traditionally from the film industry of Prague – Barrandov and *exported to the whole world by*



TECHNOEXPORT, PRAGUE, VACLAVSKE NAM. 56.
VISIT THE CZECHOSLOVAK EXPOSITION
"PHOTOKINA" IN COLOGNE
FROM SEPTEMBER 28 TO OCTOBER 9, 1968
HALL 10/E STAND

Quad Quality



This actual size Quad sample shows four 8mm negatives made at one time. After printing they are slit into 4 separate prints. Send for Free Quad film.

In all the U.S. only **Cine Magnetics** gives you **Quad Quality** for duplicating original 16mm into Super 8 or Regular 8, Sound or Silent. **Quad Quality** means more consistent quality for all your duplicate prints—10 or 100 or 10,000.

Quad Quality means better service because 4 prints are being made at once. This also gives you a better price structure for such high quality. (Quad is available in either the reduction or contact process for custom or mass production orders.)

Only at **Cine Magnetics** do you have the most complete choice of film duplicating and allied pre-print services, plus sound track capabilities. Each service brings you specific advantages; many of them, like **Quad Quality**, are exclusive at **Cine Magnetics**.

Write for a Free section of a Quad Quality film.

Cine Magnetics Inc.
514 N. Barry Ave.
Mamaroneck, N.Y. 10543
N.Y.C. Receiving Center: 212 MU 2-2780

Div., 634 Lexington Ave., Rochester, N.Y. 14613. The new processor, Model C-22, is capable of processing 126, 35mm or 828 film and, with modifications, 16mm, 8mm and super 8. Processing speed is over 25 ft/min or about 1,000 rolls/hr. Features include heavy-duty stainless-steel construction and standard, readily available, electrical and plumbing parts for rapid maintenance and inexpensive modifications. Other features include a "no material" and water pressure alarm system and solution temperature controls accurate to 2/10 of 1°. Price of the unit ranges from \$32,000 to \$36,000, depending on modifications.

The pre-splicer, Model M-1 126 (shown above), features an automatic take-up reel and an optical identification system which photographs the identification number on the twin check portion of film rolls. The pre-splicer handles up to 250 rolls/hr. It is priced at \$4,300.



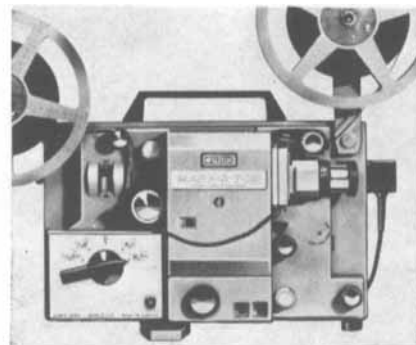
The **Lowell Grip**, **Lowell Clip** and **Lowell Water Weight** are among new products announced by Lowell-Light Photo Engineering, 421 W. 54 St., New York, N.Y. 10019. The grip is a new universal clamp and gobo head that fits on any size stand up to 1/2 in. and holds virtually any object from a thin rod to a 2-by 4-in. It tilts 180° and pans 360°. It is also one of the components in the Lowell Link System for essential lighting support and control equipment for location work.

The clip is used to attach electrical and microphone cables to stands, booms and pipes and also to secure cable coiled for storage and travel. A bag of 40 clips is priced at \$3.95.

The water weight is intended to eliminate transportation of unnecessary dead weight to location. It is a 6-oz "sand bag" that weighs 21 lb when filled with water. A special handle hooks onto stands and tripods for increased stability and safety. The weights are rugged enough to allow rough handling. They fold flat for travel. The price is \$3.95.

The new, all-electronic, solid-state analyzer, manufactured by Eastman Kodak Co., has been installed at Consolidated Film Industries, 959 Seward St., Hollywood, Calif. 90038. The analyzer, used to determine correct color values for making Eastman color prints, uses a field-sequential system with a single-gun white cathode-ray tube and rotating filters specially selected to correlate with the dyes used in Eastman color positive stock. The color analyzer is in addition to the latest model of the Hazeltine color analyzer which CFI has also received.

A movable clean work station mounted on casters has been announced by Agnew-Higgins, Inc., 7532 Anthony Ave., Garden Grove, Calif. 92641. Designated Model 468C, the unit is 6 ft wide and provides a work area 24 in. deep and 28 1/2 in. high. The work station has a laminar flow blower-filter system and has fluorescent lamps in the overhead canopy to provide 150 fc to the work counter. The unit is self-contained and requires only an electrical outlet for immediate operation. It is designed especially for applications where work stations must be relocated from time to time. The work station has an open-front design, inset work counter and Plexiglas side panels so that it can be aligned side by side with other identical units. The cabinet has an overall depth of 35 1/2 in. to enable it to pass through a 3-ft doorway. It is priced at \$1,257.



The **Mark-S-709**, a sound projector accepting both 8mm and super 8 film, has been announced by Eumig (U.S.A.) Inc., 101 W. 31 St., New York, N.Y. 10001. Sound separation is 18 frames for super 8 and 56 frames for standard 8mm. Features of the new projector include the Sound on Sound Auto Blend. By pressing the appropriate key before recording, the projector is set for superimposition. Then, when speaking into the microphone, whenever and as often as desired, speech is automatically added to previous recordings. The projector weighs 22 lb and is 12 1/2 in. long, 5 1/2 in. wide and 8 1/2 in. high. It is priced at \$379.



The **Panacolor Projector** with a built-in rear projection screen has been announced by Panacolor, Inc., 100 E. 42 St., New York, N.Y. 10017. Features include a film magazine with a two-hour capacity. The projector has a capstan drive, similar to that of a tape recorder, which, combined with a new optical prism system, replaces the usual claw pulldown and intermittent

Professional Services

**TIME LAPSE—HIGH SPEED
SCIENCE MOTION PICTURES**
Bacteriology, chemistry, scientific special
effects applied to motion pictures and TV
Consultation and production since 1929
**LESTER V. BERGMAN AND
ASSOCIATES, INC.**
732 Eastern Parkway, Brooklyn, N. Y. 11213
SLocum 6-0434

FRANK P. HERRNFELD
Engineering Consultant
(Formerly with
Frank Herrnfeld Engineering Corp.)
P.O. Box 34802
Los Angeles, California 90034
(213) 870-2867

M. RETTINGER
Consultant on Acoustics
Analysis, Room Design, Noise Reduction
8007 Haskell Ave., Encino, Calif.
Tel: 213-784-3985

**Professional Motion Picture Equipment
RENTALS * SALES * SERVICE**
Phone or write for latest
Rental & Sales Catalogs
Birns & Sawyer Cine Equipment Co., Inc.
6424 Santa Monica Blvd.,
Hollywood, Calif. 90038
(213) HO 4-5166

MILTON LAIKIN
Optical Consultant
LENS DESIGNS • OPTICAL SYSTEMS
1913 Prouss Rd., Los Angeles, Calif. 90034
Tel: (213) 838-1504

**RESEARCH, DESIGN AND
DEVELOPMENT OF EQUIPMENT
FOR THE PHOTO INDUSTRY**
Complete Line of Animation, Filmstrip and
Special Effects Equipment
RICHMARK CAMERA SERVICE, INC.
516 Timpson Pl. Bronx, N.Y. 10455
LU 5-0730 LU 5-8998

WORN FILM RESTORED
Now—no need to throw away damaged, stained
or worn film! Send it to **CAPITAL** for speedy
restoration to original, never-used quality! Our
new "filmsever" machine will completely restore
your damaged originals of negatives and prints—
protect and prolong the life of new prints.
Write or phone today:
CAPITAL FILM SERVICES, INC.
1001 Terminal Road
Lansing, Michigan 48906 (517) 487-3735

FILM TRANSPORTS
Custom design and fabrication
of motion-picture systems,
optical and mechanical
MOTION PICTURE ENGINEERING
7302 Earldom Ave., Playa Del Rey, Calif. 90291

**FILM PRODUCTION EQUIP.
RENT • LEASE • SERVICE**
World's largest source of equipment for pro-
ducing, processing, recording, editing, etc.
S.O.S. PHOTO-CINE-OPTICS, Inc.
New York City: 311 West 43rd St., 212/MU 9-8150
Hollywood, Calif.: 7051 Santa Monica Blvd.,
213/HO8-3801

**ZOOM LENS
REPAIRS**
Expert repairs and servicing
on all types of Zoom lenses.
18 years experience. Fast service.
CENTURY PRECISION OPTICS
10659 Burbank Blvd., No. Hollywood, Calif.
(213) 766-3715

REELS • CANS • FIBER CASES
MOTION PICTURE ENTERPRISES
Tarrytown, N.Y. 10592
N.Y.C. Tel: 212 CI 8-0970

Quality and Service for the 16MM Movie
Producer. Daily Processing of all
Ektachrome Films®
Licensed by Eastman Kodak
"Triad" Color Printing—Scene-to-Scene
Color Correction
Send for Price List
SOUTHWEST FILM LAB., INC.
3024 Ft. Worth Ave., Dallas, Texas 75211
A/C 214 FE 1-8347

**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

TUFF COAT
Cleans, kills static, lubricates and invisibly coats
and protects all types of film against scratches
and abrasions. SAFE, easy to use. NO carbon
tet. Special type available for magstripe and
video tape. Write for brochure "S"
NICHOLSON PRODUCTS COMPANY
3403 Cahuenga Blvd. Los Angeles 28, Calif.

STANCIL-HOFFMAN CORP.
• **MAGNETIC FILM RECORDERS, ST, 16,
17½ & 35MM, All Plug-In Transistor Elec-
tronics**
• **TAPE ¼" FOR MONO, STEREO & SYNC
PULSE R70**
• **BROADCAST LOGGING, 24 HOURS
CONTINUOUS 7" REELS UP TO 4 CHAN-
NELS**
921 N. Highland Ave., Hollywood, Calif. 90038

ELLIS W. D'ARCY & ASSOCIATES
Consulting and Development Engineers
8mm Magnetic Sound Printers
Motion-Picture Projection
Magnetic Recording and Reproduction
Box 1103, Opden Dunes, Portage, Ind. 46368
Phone: (219) 895-2585

**SAVE
25-50%
ON
PRINT
COSTS**
Users of Permafilm Protection and
Perma-New Scratch Removal show
savings ranging from 25% to 50%
and more by lengthening the life of
their prints. A money-back test will
convince you.
PERMAFILM INCORPORATED
257 Park Ave. S., N. Y. 10010
(212) 674-5766
PERMAFILM INC. OF CALIFORNIA
814 N. Cole Ave., Hollywood, Cal. 90038

PROJECTION SCREENS
Professional, Seamless, Front & Rear Projection
Consulting service custom sizes for theatres,
TV & MP studios, viewing rooms. Rigid
rear projection for plotting and display. New
"Porta-Pro" portable.
STEWART FILMSCREEN CORP.
Formerly Stewart-Trans-Lux Corp.
1161 W. Sepulveda, Torrance, Calif. 90503
Phone 326-1422 (213)

HERMAN GALLI CAMERA SERVICE
formerly Bryhn Camera Service
Expert repair and service
on all professional movie and
still cameras and accessories
ARRIFLEX specialist, modifications,
custom design
6904 Melrose Ave., Los Angeles, Calif. 90038
Phone 213-931-4111

MONTREAL—CANADA
Color 16mm Ektachrome EF, ECO
Processing & Printing
Complete 35mm & 16mm B & W Lab Facilities
Optical Transfers & Editing
QUEBEC FILM LABS
265 Vitre St. West, Montreal, Que., (514) 861-5483

SOUND STUDIO EQUIPMENT
Selsyn distributors, 220v 3 phase
fluid starting—synchronous direct drive
Digital footage counters
16mm and 35mm Looping boxes, rack mount
"Fishpole" microphone booms
Write for current prices
Don Walton, Studio Electronics Co.
5415 N. Clark St., Chicago, Ill. 60640

RENT
16 mm, 35mm, 70mm
Motion Picture Cameras
High Speed Cameras
Special Cameras
Lenses
Lights
Processing Equipment
Editing Equipment
SEND FOR
CATALOG
GORDON ENTERPRISES
5362 N. Cahuenga, North Hollywood, Calif.

DAMAGED FILM HOSPITAL
Why Junk Damaged, Scratched, Brittle,
Stained, "Rainy," Worn Film?
"THE FILM DOCTORS" Can Restore It To
Original Screening Quality With Amazing
R & R Treatments.
RAPIDWELD: restores damaged originals of
negatives and prints
RAPIDTREAT: completely protects and pro-
longs the life of new prints
Rapid Film Technique, Inc., 37-02 27 St.,
Long Island City 1, N.Y. STUwell 6-4600

AURICON & K-100 CONVERSIONS
to 400 & 1200 ft.
Filter slot Auricons & Films
Transistor amplifiers, processors, etc.
Write for details
GORDON YODER
Professional Cine Products
2959 Ladybird Lane, Dallas, Texas 75220

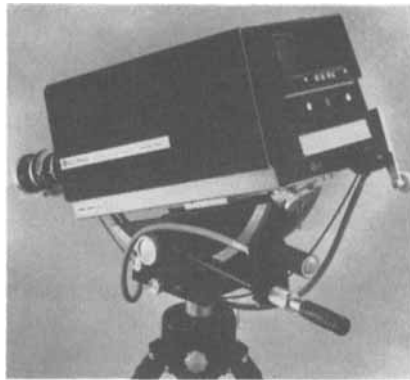
movement arrangement. Images can be projected in forward, reverse, stop, frame-by-frame or slow motion. Two remote controls are available, one of which is cordless.

Each magazine contains a strip of 70mm Kodak film. Twelve rows of images and 12 rows of optical sound are printed lengthwise on the strip. Each magazine can accommodate as many as six separate subjects, each up to 20 min in length.



A broadcast version of the IVC-100 color TV camera has been announced by International Video Corp., 67 East Evelyn Ave., Mountain View, Calif. The camera uses three vidicons and produces an NTSC color signal. A plate beam splitter is incorporated to provide accurate colorimetry without the need for trimming filters. The camera is designed to operate at light levels as low as 300 fc. Mirror positions and vidicon lateral and vertical positions are fixed. The viewfinder has a switcher that enables viewing of red, green or blue luminance signal. External features include

gain, pedestal, iris, zoom and focus controls as well as intercom jack and tally light. Camera resolution is 400 lines at the center and corners. A paper describing this camera was presented at the Society's 103d Technical Conference by Athey and Hobbs and appears on earlier pages of this issue of the *Journal*. The camera weighs 67 lb. It is priced at \$18,500.

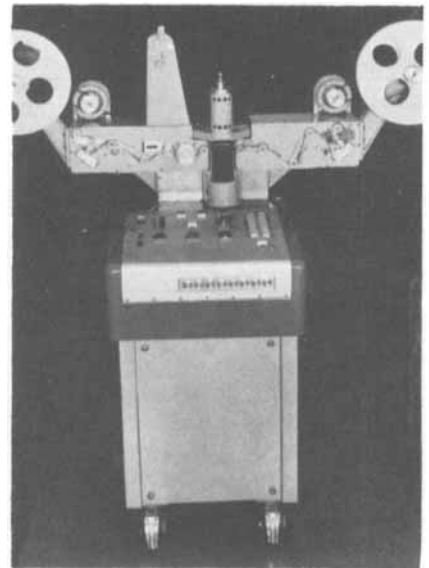


A color TV camera, Model 2970, and a color tape recorder, Model 2920, have been announced by Bell & Howell, 7100 McCormick Rd., Chicago, Ill. 60645. The recorder is capable of full NTSC color. It weighs 65 lb (including case) and operates in both horizontal and vertical positions. Features include pushbutton control for all tape motion functions and special positioning of the head to allow it to be replaced in less than 60 s without special tools. Prices

for the various models of the recorder range from \$4,200 to \$6,200.

The 2970 closed-circuit color camera features all solid-state circuits, a built-in integrated circuit sync generator and electronically regulated supply voltages to assure stability. The camera is priced at \$14,000.

The Cole Mark "C" paralleling deck is a product of Cole Instrument, Div. of F. H. Cole Enterprises, 2034 Placentia Ave., Costa Mesa, Calif. 92627. The paralleling deck can be included with standard switch decks to meet specific switch characteristics. A typical paralleling deck consists of 32 positions spaced at $11\frac{1}{4}^\circ$. Thirty-one of the positions are shorted together by a one-piece brush assembly, consisting of 31 fingers, which is connected to one collector ring. A separate finger brush which contacts the remaining position is connected to a separate collector ring. As the switch is rotated, the separate brush makes contact with each switch position and all other positions are shorted together simultaneously. The multiple finger brushes are solid one-piece construction with no mechanical or soldered joints and are equipped with silver contacts. Stator contacts and collector rings are all of silver.

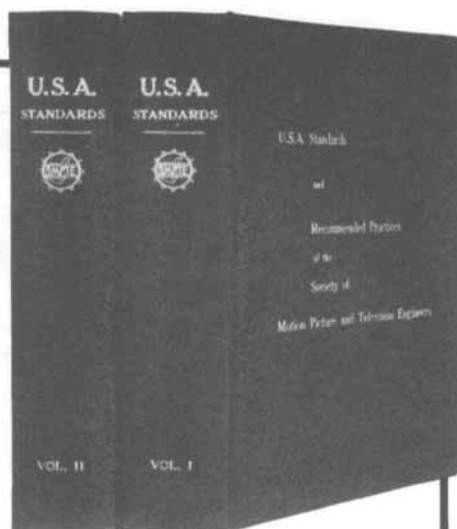


The Mikami Image Card Printer, a device for printing selected frames of 16mm motion-picture negative on cards for reference purposes, has been announced by Mikami & Co., Ltd., 10, 1-Chome, Kojimachi, Chiyoda, Tokyo, Japan. The machine accepts up to 1,200-ft rolls of processed 16mm negative film and prints photographic images on paper cards at pre-selected intervals. Such cards, when processed, can contain 20 photographic images which can be examined visually without mechanical aids. The images on the cards are slightly enlarged.

In operation, when the printer is loaded and the first negative frame positioned in the film gate, the interval selection button is pressed. The printer exposes, at pre-selected intervals (e.g., 5, 10 or 30 ft), 20 images per card. The exposed cards are automatically delivered to a take-up magazine and the space is filled by the unexposed cards.

Now Available!

Binders for
SMPTE - sponsored
U.S.A. Standards
and
SMPTE
Recommended
Practices



for convenience in assembling and storing the increasing number of Standards and Recommended Practices that need to be kept on file

Order these high-quality, durable leatherette ring binders, in sets of two, from SMPTE Headquarters. Price: \$8.00 the set

Society of Motion Picture and Television Engineers

9 East 41 Street, New York, N. Y. 10017