

HILLS FILMATIC COLOR PROCESSOR FOR EKTACHROME ME-4 CONTINUOUS FILM PROCESSING

No Other Film Processor Provides So Much Dependability

- Dry-to-Dry only 28 minutes
- Full view monitoring.
- Simple installation. Requires only water-in, water-out, electricity, and tie-in to replenishment tanks.
- High Velocity circulation-filtration.
- Factory fixed thermostatic controls.
- Factory supervised on-the-job training by a HILLS expert.
- Compact, fits limited space.

MORE THAN 85 MOTION PICTURE
LABORATORIES AND TV STATIONS
are processing their film on HILLS
Processors . . . the world's finest
equipment of its kind . . . built
with pride!



Write, wire, 'phone for complete details

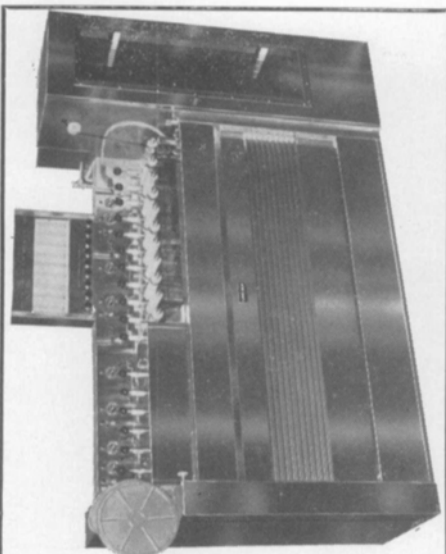
U. S. PHOTOGRAPHIC EQUIPMENT CORPORATION

40-13 104th Street, Corona, New York 11368 • (212) 672-3140

SALES ENGINEERS FOR HILLS MANUFACTURING COMPANY, INC.

Manufacturers of Film Processing Equipment from 16mm to 70mm for any Color or Black or White process

at
the
choice



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.



A new type of photodetector, a metal semiconductor diode with an antireflection coating, has been developed at Bell Telephone Laboratories. The device consists of a silicon substrate which is first coated with a semitransparent gold film, then with an antireflective coating of zinc sulfide. A gold contact dot and wire near the edge of the metal film collect the photoelectric current created within the semiconductor's depletion layer, a region of high electric field adjacent to the metal film.

In operation, when the beam from a helium-neon laser strikes the surface of the photodiode, 70% of the beam's photons are transmitted through the gold film contact. The antireflective zinc sulfide coating and the thinness of the gold film make this high degree of transmission possible. The photons of light that pass through the metal contact create electron-hole pairs at the gold-silicon junction. An electric field sweeps the carriers across the junction — or depletion layer — to their respective contacts, and the current flows in an external circuit which is connected to the contact wire and the back contact.

A sensory loudness level monitor and automatic control system for broadcasters has been developed by CBS Laboratories, High Ridge Road, Stamford, Conn., following several years of extensive studies. The studies concerned the sensory or physiological aspects of loudness, resulting from the action of the physical properties of sound upon an individual's hearing mechanism, rather than with the psychological or subjective aspects of sound. Use of conventional VU meters was found to be of little value in obtaining accurate measurement of sensory loudness. In testing sensory responses, an audio-tape recording was played backward to divert it of semantic content. Three separate groups of nine or ten individuals were tested. The groups listened to "pink" noise, which has equal energy distribution per octave band, presented in 1-dB step adjustments in 1-s periods, alternating with a comparison tone of 1/3 octave band of pink noise centered at 1000 Hz. Each listener entered his own judgment of the loudness on a tally sheet. The results of the tests formed the basis for the development of the loudness level monitor and control. The studies leading to the development of the control instrument

were described in a paper by B. B. Bauer, E. L. Torick and A. J. Rosenheck of CBS Laboratories, "The Measurement of Loudness Level," which was presented recently at the Society's 101st Technical Conference in New York.



Mass production of sound-color release prints is accomplished by a new system developed by Eastman Kodak Co. and demonstrated at the Society's 101st Technical Conference in New York ("Evaluation of Equipment for a System of 35mm/Super 8 Print Production," by R. C. Lovick and W. L. Stockdale). Capable of three-minute printing of enough sound film to run two hours on the screen, the system is designed to provide low-cost film prints for nontheatrical use.

The system uses Eastman Color Print Film, Type 7380, a film designed specifically for making color prints in super 8 format, which was recently announced by Eastman Kodak. The new film is said to have significantly finer grain and a slight improvement in sharpness. It is available pre-stripped with a magnetic sound stripe. The theoretical approach to the system was described earlier in a paper by C. Loren Graham, Willis L. Stockdale and Allan L. Williams ("A Systematic Approach to the Mass Production of Commercial Super 8 Prints," *Journal*, pp. 1067-1070, Nov. 1966).

To make mass-produced prints, the movie is filmed on a 16mm or 35mm color original film. It is then optically reduced and transferred to an internegative of 35mm film made up of four rows of images in the super 8 format. From this internegative, four rows of color prints are made at a speed of 200 ft/min. Simultaneously the soundtrack is automatically transferred to four magnetic stripes on the color print film. Sound monitoring for quality is also done simultaneously. The final operation is automatically slitting the 35mm "four-up" color print into four separate super 8 sound-color prints.

A new splicing cement for Cronar polyester film and other polyester-based motion-picture and instrumentation film was described at the Society's 101st Technical Conference in New York by A. Wasy D'Crux, of E. I. Du Pont de Nemours & Co., Parlin, N.J., in a paper on "Liquid Cement for Splicing Cronar Polyester Cine Films." The new splicing cement employs conventional solvent splicing techniques. A required dwell time of 30 to 45 seconds with sufficient pressure to maintain intimate contact will produce easily handled splices said to be strong enough to go through a

M.T.E.
1000
SERIES
MASTER
MAGNETIC
RECORDER

Presents a new approach to:

POST-SYNCING
ELECTRONIC EDITING
SOUND MIXING

Features:

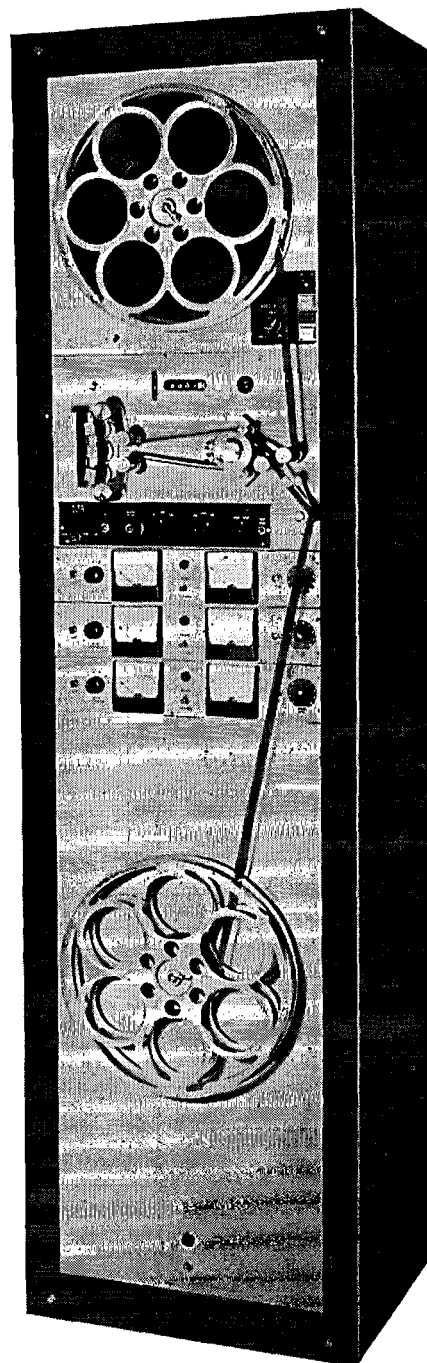
Record and erase ON or OFF not discernible

Cutting IN or OUT during dialogue or music passage makes possible corrections on recorded tracks

Controls for selective or simultaneous recording on multi-track models can be remotod

Automatic record defeat in reverse

Plug-in head assemblies interchangeable for 35mm, multi track and 16mm



MAGNA-TECH ELECTRONIC CO., INC.

630 Ninth Avenue, New York N. Y.



**By George!
I Think
they've got it!**

AIR SQUEEGEES

We admit it...
there are none better!

CUEMATIC

Cues your film but
doesn't touch your negative!

SCRATCH DETECTOR

This one will make
invisible scratches visible!

UNIVERSAL POWER REWIND

Does more
than we have space to list!

ROLLER SWITCH

Relax... this will tell you
when a roll of film is ended!

POWER TAKE UP

Would you believe
a 6,000 ft. roll of film?

FILM GAUGES

Be a "Pro"...
Use our no guess gauges!

FILM SPLICER

You wanted a great splicer...
here it is!

PROCESSING PREVIEWER

Be clever...
stop action while processing!

FILM TRIMMER

Accuracy...
nothing but beautiful accuracy!

STAINLESS FILM ROLLERS

These last longer
than the processing machine!

Call or Write:

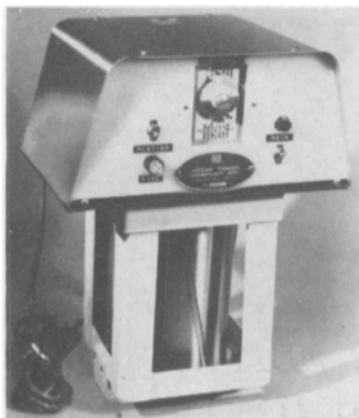


**GRYPHON
CORPORATION**

2806 W. BURBANK BLVD.
BURBANK, CALIFORNIA 91505
(213) 845-7807

projector in a few minutes. A typical composition of the splicing cement is polyurethane mixed with isopropanol and methylene chloride. Temperature and humidity conditions have little effect on the new cement. These have been tested by Du Pont at 120 F and at 98% humidity with no appreciable loss in tensile strength.

A new Rapid FloFilm processor that automatically processes motion-picture film as well as black-and-white roll or sheet film at speeds up to 40 ft/min has been announced by Itck Corp., 10 Maguire Rd., Lexington, Mass. 02173. The machine can process 16mm, 35mm and 70mm film in multiple strands up to 11 in. The machine features a series of six horizontal drawer-like processing tiers that allow immediate access to all key processing components for cleaning and maintenance. The bottom tier contains developer and short stop; the second, hypo; the third, hypo eliminator; the fourth, wash. The two top tiers are used for drying. Film is transported from one tier to the next by a turnaround device which slides out for quick inspection.



The Ag-O-Mat, a silver recovery unit said to recover 98% pure silver from used fixer solutions at the rate of 2 oz/h, has been announced by Oscar Fisher Co., P.O. Box 2305, Newburgh, N.Y. 12550. The unit is said to be suitable for both recirculating and tailing when utilizing both automatic processors and manual tanks and can be used both continuously or intermittently. An electric timer can be set to turn on and off at present intervals. Agitation is produced by Type 316L stainless-steel cathode-impeller. The four anodes are stationary graphite rods. The unit is supplied with a portable stainless-steel cart and 12-gal polyethylene drum with a drain valve. Silver estimating and Ph papers are also supplied. The unit is priced at \$650.

The Leo-Pod (*Journal*, p. 77, Jan, 1967) has been redesigned to accommodate Eclair cameras, it was announced by Leopold Enterprises, Inc., 1 N. Merrick Ave., Merrick, L.I., N.Y. The new model retains the features of the original 5-lb Leo-Pod. It provides horizontal tilt by a simple hand device as well as tilting the camera upwards and downwards. It is designed for the comfort of the cameraman by eliminating the necessity for body motions since the body brace can be moved in any direction for filming. The newly designed model for Eclair cameras is priced at \$215.

The Leo-Pod Volta-Pack Type 1273 has been designed for use with the Leo-Pod Brace (*Journal*, p. 77, Jan, 1967), by Leopold Enterprises, Inc., 1 N. Merrick Ave., Merrick, L.I., N.Y. Inserted into the horizontal camera support tubing of the body brace, it provides power to operate any 16mm camera requiring 6 to 8 V for about 20 min, or 800 ft of film while adding only 16 oz of weight to the body brace. The power is obtained from a nickel-cadmium rechargeable battery manufactured by General Electric Co. especially for Leopold Enterprises. A charger is supplied with the Volta-Pack to allow recharging of a completely discharged battery within 12 h from a 110-V ac 50/60-Hz source. Life expectancy of the unit is said to be five years.

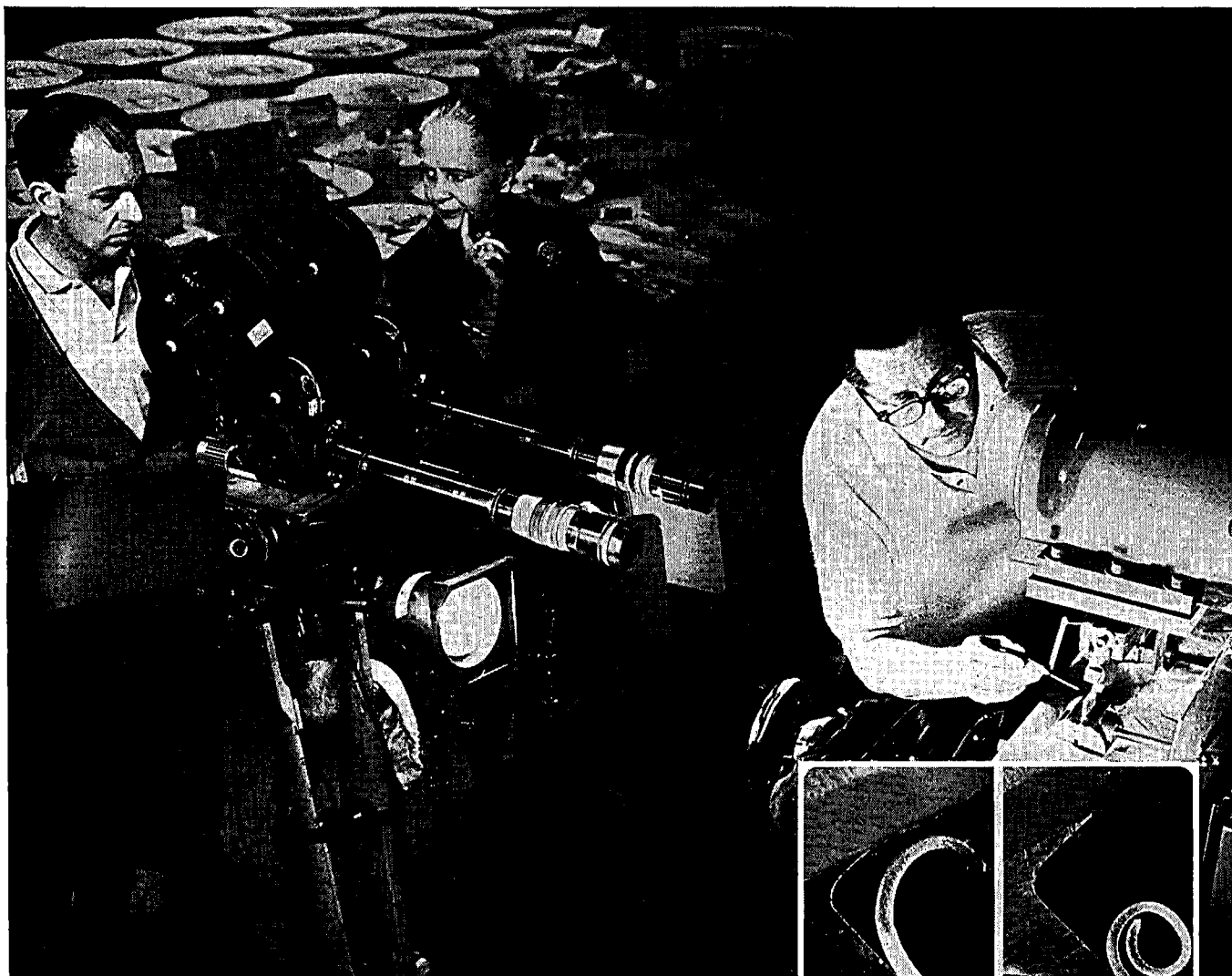


The Newsbreaker 400, a 16mm color film processor design for TV station and network news film processing has been introduced by Television Zoomar Co., 500 Fifth Ave., Room 5520, New York, N.Y. 10036. Dimensions are 5 ft long by 2½ ft wide. Up to 400 ft of 16mm reversal film and 35mm slides may be automatically processed with the Kodak ME4 process. Exposed film is rewound onto special processing cores which are inserted into a cylindrical processing chamber. The cores are automatically agitated while the nine chemicals of the ME4 process are pumped in and out of the processing chamber. After 19 min of wet processing, the cores are transported to a second drying chamber prior to projection. The announcement stated that up to 1200 ft of 16mm film can be processed in one hour. The machine is priced at \$14,800.

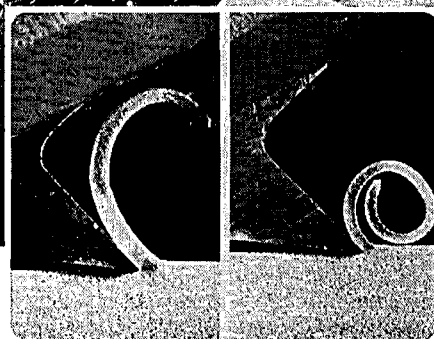
The ACN-1 active combining network for use in audio control consoles has been announced by Electrodyne Corp., 10747 Chandler Blvd., North Hollywood, Calif. 91601. The network is said to permit the combining of up to 21 inputs without loss and can be strapped for 10 or 20 dB of gain, while maintaining over 70 dB of input isolation. It is priced at \$95.

An audio input component which integrates microphone, equalizers and line amplifiers in a single plug-in module has been announced by Audio Designs and Manufacturing, Inc., 17510 Wyoming Ave., Detroit, Mich. 48221. Two types are available, the ADM 700, the rotary version,

ARRIFLEX at work — ONE OF A SERIES



COMPOSITE FRAME: ▶
Left—Dry Cut; Right—Fluid Cut



TWIN ARRIFLEX'S PROBE METAL WORKING "MIRACLE AT POINT OF CUT"

Extremely sharp, close-up photography of minute chip-forming differences was the basic consideration in filming "Miracle At Point of Cut", a 28-minute 16mm color-sound motion picture for Master Chemical Corporation, Perrysburg, Ohio. The film, produced by Focus Unlimited, Inc., Maumee, Ohio and carries an introduction by Lowell Thomas. It deals in a direct, informative way with the phenomena of dry vs applied fluid machining of nine different space-age metal alloys.

This unique research project was accomplished with twin, interlocked Arriflex 16 cameras equipped with extension tubes and Macro Kilar lenses. Each camera (framed left or right) pho-

tographed a single cutting operation, covering an area approximately $\frac{1}{4}$ " square, actual size. Both camera rolls were subsequently "matte" printed side-by-side for analysis. Tool positions and horizontal work material had to match. "Thanks to the Arriflex's mirror-shutter reflex system and precise pin-registration movement, they did," said cinematographer Robert Deming. He concluded, "The reliability and ready adaptability of Arriflex equipment greatly aided an initially complex problem."

Why not put Arriflex's extraordinary problem-solving capability to work for you on your next production?

Write Dept. SM for Literature

ARRIFLEX CORPORATION
OF AMERICA

25-20 BROOKLYN-QUEENS EXPRESSWAY WEST
WOODSIDE, NEW YORK 11377

RECORD PROFESSIONAL SOUND ANYWHERE..

with the new



SOS/EMI TRANSISTORIZED PORTABLE TAPE RECORDER!

For motion picture production, radio and TV mobile news coverage, interviews and sports events... look into the outstanding features of the new SOS/EMI Transistorized Portable Tape Recorder: Neopilot sync head for double system pulse recording; dual microphone input with independent gain controls for superb quality remote interviews.

The SOS/EMI Tape Recorder is powered with life-long rechargeable batteries to eliminate untimely power breaks and unnecessary weight. Its rugged and tropicalized construction makes the SOS/EMI Tape Recorder stand up to severe shocks and extreme weather and temperature conditions. For complete freedom of movement for recording on-the-spot events, take SOS/EMI Tape Recorder — and depend on it!

only **\$850 00**

ADDITIONAL EXCLUSIVE FEATURES:

- Weighs only 10¼ pounds
- Tape speeds: 7½ ips and 3¾ ips
- Signal-to-noise ratio better than 50 db
- Full erase facilities
- Star indicator on cover
- Motor rewind
- Press-button operation
- Two microphone inputs with separate gain controls
- A-B switch, meter and audio
- Loudspeaker with separate 200 mW amplifier
- Half or full track versions
- Line in and line out jacket sockets
- Microphone bass cut switch (dialogue filter)
- Meter monitoring of battery, hf bias, modulation
- 14V rechargeable battery (charger available).

**Another SOS exclusive product
for the motion picture industry!**

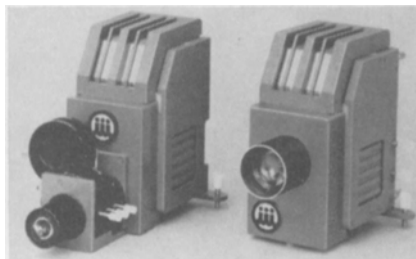
For complete details write:

SOS
SOS PHOTO-CINE-OPTICS, INC.

East Coast:
387 Park Avenue South
New York, N. Y. 10016
(212) MU 9-9150
West Coast:
10633 Burbank Blvd
N. Hollywood, Calif. 91601
213 877-5326

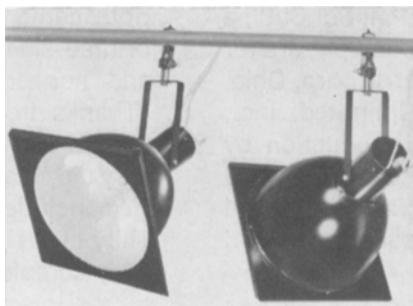
Over 40 years of quality service

and the ADM 700-S, the linear motion version. The instruments are fully silicon transistorized and combine low- and high-level inputs, three frequency ranges of equalization, and three isolated outputs — Main (transformer), Cue and Echo (unbalanced).

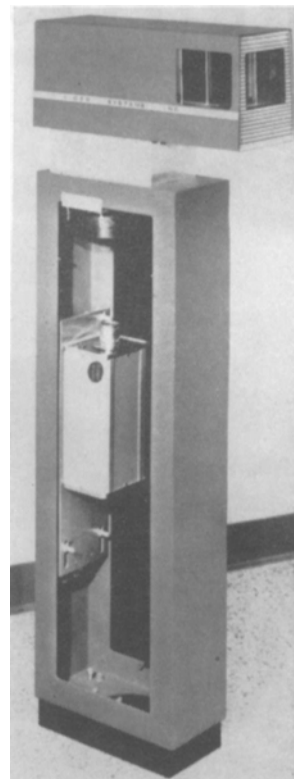


Two lamphouses designed to accept either xenon or mercury short-arc lamps from 35 to 200 W have been announced by Illumination Industries, Inc., 610 Vaqueros Ave., Sunnyvale, Calif. Model LH-360 is designed primarily for fluorescent-microscopy applications. It has accessory filters and heat-collecting water cell. Model LH-350 is specifically designed for semiconductor photoresist systems or general laboratory applications. The lens assembly consists of a three-element condenser or Pyrex or quartz. It can be adjusted from a point focus to a collimated 2-in. beam. The basic housing is about 6 in. long by 8 in. high by 4½ in. wide. A removable backplate permits visual prealignment with the first-surface rear mirror. Prices range from \$225 to \$295.

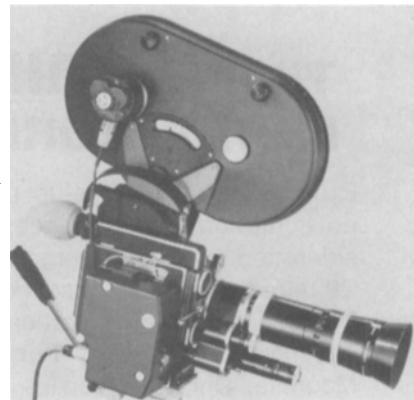
A new 20-kW xenon short-arc lamp has been announced by PEK, Inc., 825 E. Evelyn Ave., Sunnyvale, Calif. The lamp has a spectral distribution including visible light, a near ultraviolet continuum and several peaks in the near infrared region. The unit operates across an operating power range of from 5 to 20 kW in either a horizontal or vertical position. The lamp features peak brightness (after 150 h) of 7,600 cd/mm² and an average arc brightness of 3,000 cd/mm². Luminous flux after 150 h is rated at 1,150,000 lm. Luminous efficiency is reported at 57 lm/W. Operating current is 400 A (±5 A); operating voltage is 50 V. Arc size is 12.5 mm × 6 mm. The unit is water cooled. It is priced at \$2,500.



A new focusing scoop with a 14-in. diameter Mat Alzak reflector has been announced by Lighting & Electronics, Inc., 423 South Broadway, Yonkers, N.Y. 10705. The scoop, designated Q73-16, has a medium prefocus porcelain socket, a malleable iron clamp and a sheet steel frame 16 in. square to accommodate spun glass diffuser or color media. The scoop is priced at \$58.

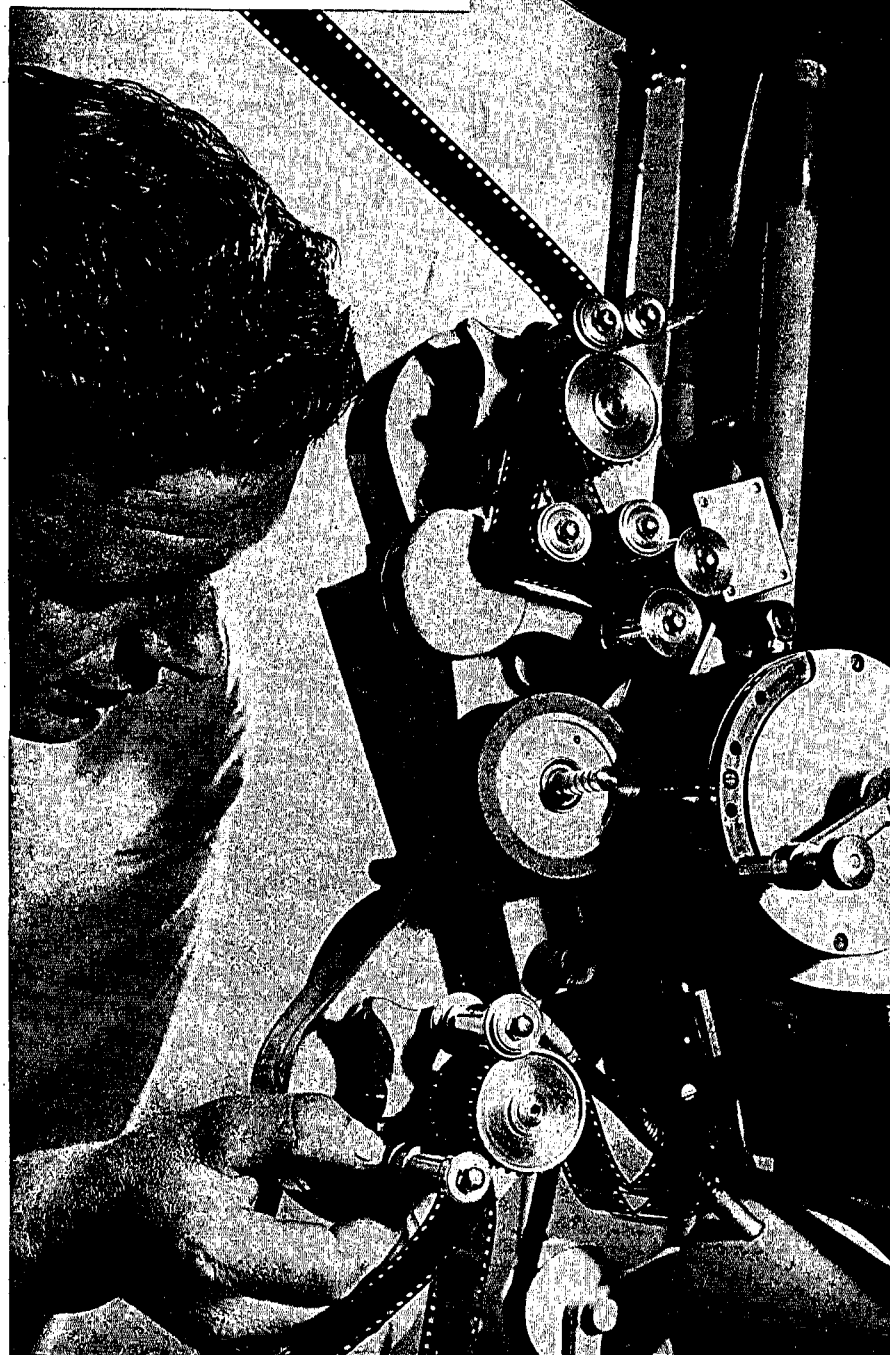


The G/A camera, Model BC-1000, a vidicon camera, designed for use with a standard optical multiplexer/projector film chain, or as a remote-controlled studio camera, has been announced by Granger Associates, 1601 California Ave., Palo Alto, Calif. 94304. The control unit can operate two cameras and can be cabinet- or rack-mounted in 3½ in. of vertical space. Both camera and control unit are all-solid-state units with silicon transistors, silicon micrologic elements and tantalum capacitors. The price is under \$3,700.



The Bolex H-16 Rex 5, a 16mm, 400-ft capacity camera which weighs only slightly over 12 lb, has been announced by Pailard, Inc., 1900 Lower Road, Linden, N.J. 07036. The Bolex 24-frames/s constant-speed motor is used to drive the camera. An electric grip with a built-in electrical start and stop switch may be attached to the camera for handheld operation. The 400-ft magazine is made from injection-molded Macrolon. It takes either single- or double-perforated, plain or striped 16mm film on 400-ft cores, or 200-ft reels. The motor has a built-in sync pulse generator for sound recording indoors or out in combination with

PRINT QUALITY IS WHAT THE AUDIENCE SEES AND HEARS



For both image and sound quality choose a reliable Agfa-Gevaert print film. Gevacolor Positive film provides brilliant color copies with high saturation. Positive Fine Grain film gives black-and-white release prints with excellent gradation and perfect sound reproduction. Gevaprnt film for TV is specially designed for printing copies with ideal contrast and finest grain for TV transmission. Conventional positive film processing. Duplicating Reversal 16 mm film is a low speed film of high resolving power designed for printing from reversal originals or dupe positive films.

Apply for detailed information to
GEVAERT-AGFA N.V., ANTWERP-BELGIUM

In the U.S.A. : **AGFA-GEVAERT, Inc.**
 275 North Street, Teletoro, New Jersey

In Canada : **Photo Importing Agencies, Ltd.**
 29 Gurney Cressent, Toronto, Ontario, Canada

MOTION PICTURE FILMS



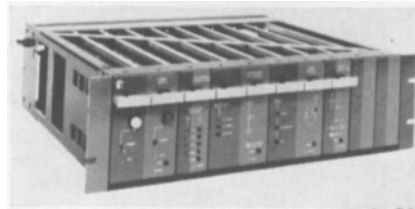
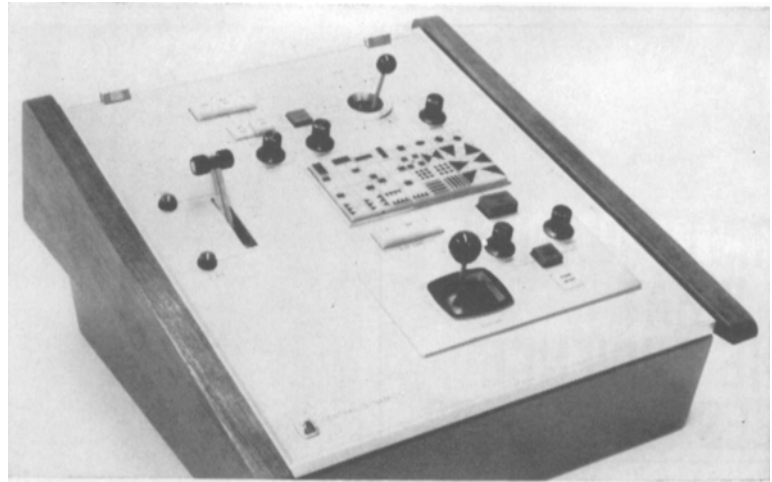
AGFA-GEVAERT

a $\frac{1}{4}$ -in. tape recorder. Prices begin at \$1,162.50.

Two new super 8 movie cameras have been announced by Konica Camera Corp., 25-20 Brooklyn-Queens Expressway West, Woodside, N.Y. 11377. The Konica Super-8 6-TL features an automatic exposure control to overcome the lag in exposure adjustment of a CdS cell when the light changes during filming. Battery-powered with motor drive and zoom and exposure setting, the camera has a 6:1 zoom lens. It is priced at less than \$260.

The Konica Super-8 3TL features a zoom lens, through-the-lens meter reading for only that portion of the scene being filmed, and battery-power operation. It is priced at less than \$130.

An electronic viewfinder monochrome television camera designed specifically for use with video-tape recorders as well as general closed-circuit and broadcast applications has been announced by Ampex Corp., 2201 Lunt Ave., Elk Grove Village, Ill. 60007. Designated the CC-326 series, six models are available. All models in the series have identical frames and basic operating features. A 9-in. electronic viewfinder monitors the playback from a video recorder as well as live action. The camera is driven by an external EIA blanking and synchronizing generator. A four-position lens turret is controlled from the rear. Horizontal and vertical drive output pulses permit synchronization of additional cameras. Prices range from \$1,795 to \$2,445.



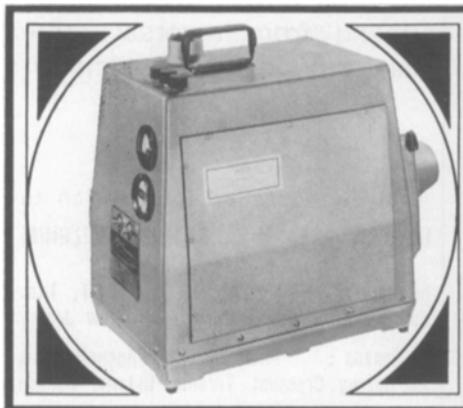
A special effects generator with 32 wipe patterns, 12 rewipe patterns and interior/exterior keying has been announced by Central Dynamics Ltd., 147 Hymus Blvd., Pointe Claire, Montreal, Que., Canada. (Information also is available from Central Dynamics Corp., 903 Main St., Cambridge, Mass. 02139.) The all solid state unit provides simultaneous wiping and

keying to operate with color/mono and comp/noncomp inputs. Other features include joystick control of hue and saturation, independent luminance control to provide color matting; joystick control of positioner to enable positioning of wipe to any part of the picture; and built-in oscillator for modulation of wipe patterns. The unit is designed for operation with eventual automation. The price is \$5,950.

Turret modification of the Mitchell "16" enabling it to accommodate the Angenieux 12-120 Model AZO and other "C" mount lenses is available from Gordon Enterprises, 5362 N. Cahuenga Blvd., North Hollywood, Calif. The modification affects only one of the lens mounts on the camera. The remaining three mounts are unaffected and accept conventional Mitchell lenses. The adaptation is priced at \$250.

Triple layer low reflecting coatings, said to reduce reflection to better than 0.2% to 0.6% and increase transmission, as compared to an uncoated glass of 8.0% reflection, have been announced by Fish-Schurman Corp., 70 Portman Rd., New Rochelle, N.Y. The coatings, called Type III MLF, are said to meet all environmental requirements of heat and cold and can be made electrically conductive with a resistance of 10^8 to 10^8 ohms per square to avoid static build-up charges. The coatings are available in sheets about 60 by 30 in. or 30 by 30 in., 1.8 to 2.2 mm thick at a price of \$8.00 per ft². They are also available on special order in the form of cut and edged discs or plates and on plate glass of any desired thickness.

The Taylor-Hobson-Cooke 12.5 Kinetel lens has been redesigned and is available for Arriflex 16S and 16M cameras, it was announced by Arriflex Corp. of America, 25-20 Brooklyn-Queens Expressway West, Woodside, N.Y. 11377. The new design has resulted in a considerable reduction in the physical size of the front lens element. The new Kinetel may now be mounted on the divergent turret of the 16S and 16M cameras without optical or mechanical interference with most other lenses on the turret. The lens is supplied with its own retaining ring and now accepts standard series 6 filters. The redesigned Kinetel is priced at \$485.



At Last—
A Compact, Light,
Portable Lamp
for 16mm and 35mm
Theatre-Quality
Projection.

The "MIGHTY MITE" Xenon Arc Ideal for screening rooms

A steady, high intensity light that permits projection of big, brilliant pictures—a pure daylight white light that assures faithful reproduction of color.

It is easily mounted on 35mm projectors 16mm projectors which accommodate carbon arcs, and some incandescent projectors.

Screen illumination for 16mm projectors approximates eight times that obtained from incandescent sources—the maximum that this narrow gauge film can withstand, and twice that obtained from the lower power enclosed arc sources.

Screen illumination for 35mm projection is comparable to low powered carbon arc lighting and with a low degree of aperture heat.

Operation is simple and costs are about the same as for carbon arcs which project an equal amount of light. The bulb has a life expectancy of over 2,000 hours. No moving parts to wear out. No dirt or carbon soot to adversely affect reflector efficiency. The "Mighty Mite" System, in any of three available wattages, 450, 900 or 1600, includes the lamphouse, silicon transformer-rectifier power supply and bulb. Dimensions of lamp: 12" wide, 19" high and 18 $\frac{1}{4}$ " long.

Write for brochure

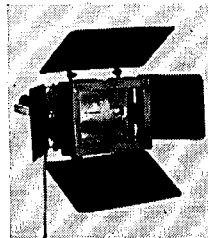
THE Strong ELECTRIC CORPORATION
539 CITY PARK AVENUE • TOLEDO, OHIO 43601

 A SUBSIDIARY OF GENERAL PRECISION EQUIPMENT CORPORATION

Dichroism (di'kro·izm),*n.* The property by which a crystalized body exhibits different color according to the direction of light transmitted through it.

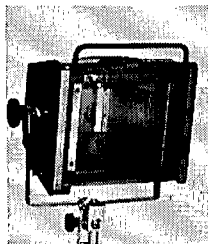


A dichroic filter has the ability to both transmit and reflect the different primary colors of an artificial light source. Its purpose is to convert the Kelvin color temperature from 3200° K, standard for interior lighting, to 5600° K, the ideal simulation of sunlight. Boston-Lite dichroic daylight conversion filters do NOT add blue to the light source, as conventional glass filters do. Instead, their dichroic coatings reflect the red portion of the spectrum, and permit the intense blue region to be transmitted.



Boston-Lite dichroic daylight conversion filters are specifically formulated in a high-vacuum deposition chamber by an extremely precise and patented process. This new development assures a normal operating corrected Kelvin color temperature of 5600° (±200°), and complete stability. Color temperature will not vary with age or heat! They're easy and safe to clean—fingerprints wash right off. Pyrex glass construction, in a sturdy steel frame.

ACTUAL COMPARISON TESTS:*



	foot candles	Kelvin degrees
BOSTON-LITE Dichroic	200	5400°
Dichroic "X"	245	over 6000°
Dichroic "Y"	265	4700°
Blue Glass "Z"	170	5400°

*Names of brands X, Y and Z plus details of test certified by a licensed illumination engineer, are available on request.

Model No.	Sizes Available:		Price
6	5¼" X 5¾"	for Colortran 650 w. Quartz Duals	\$23.75
M-6	4¾" X 4¾"	for Colortran Mini-Lite 6	23.75
10	6¾" X 6¾"	for Colortran Quartz 1000 w. Duals; 650 w. Multi-Beam	30.85
M-10	4½" X 6"	for Colortran Mini-Lite 10	30.85
5	7¾" X 7¾"	for Colortran 1000 w. Quartz Wide Flood, Multi-Beam; Mole Quartz Mickey Mole	38.50
MB-10	6½" X 11¾"	for Colortran 1000 w. Quartz Single; Multi-Beam Broads	59.50
VB-10	7½" X 8¾"	for Colortran 1000 w. Quartz Variable Broads	56.50

Other sizes available on special order.

Mail Orders Promptly Filled

Available at Most Leading Dealers or
F&B/CECO I N C.



MAIN OFFICE: 315 West 43rd Street, New York, N. Y. 10036 • (212) JU 6-1420
Cable Address: CINEQUIP
Telex: 1-25497
 Branches in: Hialeah, Fla./ Washington, D.C./ Atlanta/ New Orleans/ Cleveland

XETRON

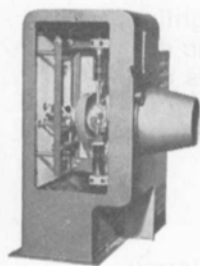
PRODUCTS DIVISION

Special Light Sources for
Audio Visual Applications

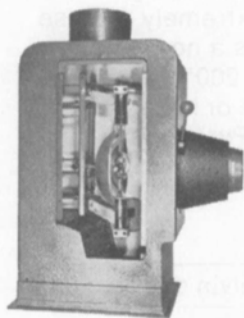
XETRON LAMPHOUSES

XETRON POWER SUPPLIES

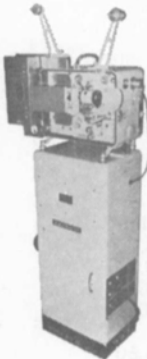
XETRON BULBS



CX-450
Miniature light source
suitable for many 16mm
and 35mm projector
applications.



CX-900 Ideal light source for screening rooms,
laboratories and small theatres. Adaptable to all
projection equipment.



CJX-450
Console version of stand-
ard JX-450 modification
with power supply and
control panel. High in-
tensity type light provides
great increase in screen
brightness.

Also Available

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

Literature on request.
Dealerships available.

XETRON

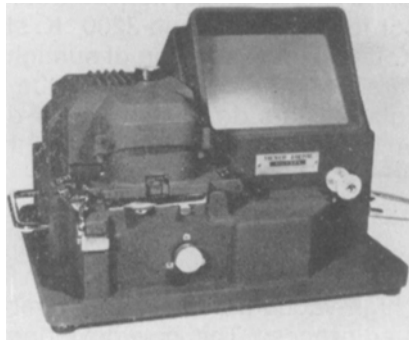
PRODUCTS DIVISION



CARBONS, Inc.

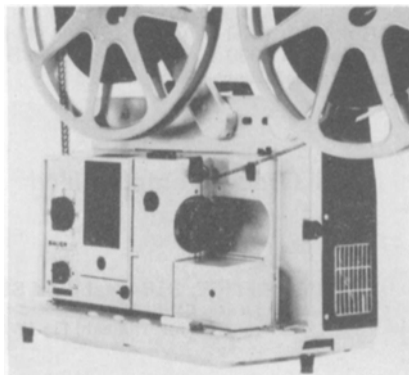
10 Saddle Road
Cedar Knolls New Jersey
P.O. Box K 07927

The Vario-S Travenon lens, a new zoom projection lens for the Siemens 2000 16/16 projector has been announced by Arriflex Corp. of America, 25-20 Brooklyn Queens Expressway West, Woodside, N.Y. 11377, sole U.S. agents for Siemens motion-picture projectors. The lens has a variable focal length of 30-50mm and an $f/1.5$ aperture. The lens is designed so that it can be easily interchanged with the lens supplied with the projector. At a projection throw of 15 ft its coverage is said to be from 3 ft 2 in. to 5 ft. 3 in. screen width. It is priced at \$140.



A portable 16mm viewer/editor, Model 1600, has been announced by Maier-Hancock Sales, Inc., 14106 Ventura Blvd., Sherman Oaks, Calif. Designed as a companion to the Maier-Hancock portable hot splicer, the viewer/editor incorporates four rollers, one sprocket wheel, film notcher and film pressure plate with a special mirror finish to prevent scratching or other damage to the film. The optical system is protected with a dust filter that is removable for cleaning. The viewing screen measures $4\frac{1}{2}$ by $3\frac{1}{2}$ in. The machine has a crescent-shaped film notch. It uses a 6-V lamp, transformer operated on 110- to 120-V ac. The unit is priced at \$159.50.

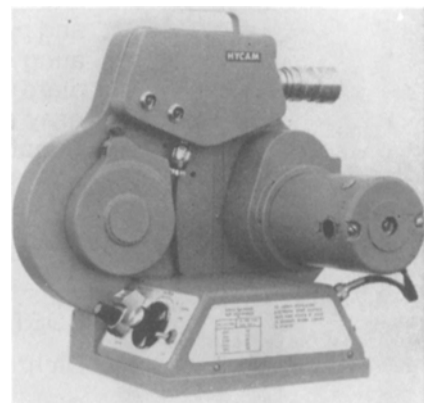
The Bauer T3 super 8 projector has been announced by Interstate Photo Supply Corp., 300 Park Ave. South, New York, N.Y. 10010. The projector has a 200-ft reel and uses automatic threading. It uses an 8-V, 50-W low-voltage bulb fitted with an interior reflector. Normal running speed is 18 frames/s. It is priced at less than \$80 with 20mm $f/1.3$ lens or at less than \$100 with $f/1.4$ 18-30mm zoom lens.



The Bauer P6, a 16mm projector, has been announced by the exclusive United States importer, Allied Impex Corp., 300 Park Ave. South, New York, N.Y. 10010. (Interstate Photo Supply Corp. is exclusive

United States distributor.) The projector weighs 32 lb, complete with 15-W amplifier and built-in loudspeaker. Film capacity is 2,000 ft. The projector accommodates both optical and magnetic sound reproduction as well as magnetic recording with a 15-W transistor amplifier. It has a 50mm $f/1.3$ lens and a 25-W quartz-iodine lamp. The price is \$1,250.

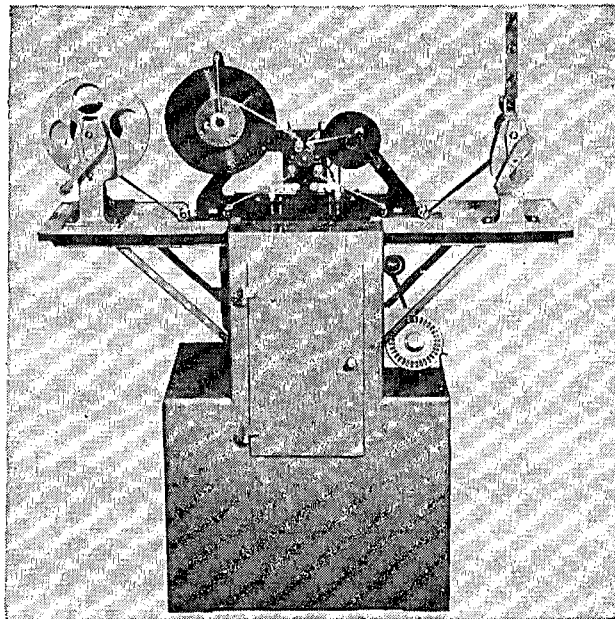
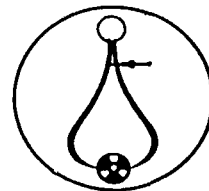
The L-W Motion Analyzer Model 900, a 16mm motion-analysis projector for screening films at low frame rates without flicker, has been announced by L-W Photo, Inc., 15451 Cabrito Rd., Van Nuys, Calif. 91406. The projector is a modified Eastman Analyt and can be operated at a variable speed between one and 8 frames/s as well as at standard rates of 16 and 24 frames/s. A compact control box permits one-handed operation of the projector, including single-frame projection and selection of all operating speeds and modes. Instantaneous stop, reverse and forward operation are possible. A special cooling technique protects the film. The projector is priced at less than \$1,000.



A new Hycam streak camera based on the design of the 400-ft Hycam high-speed camera has been announced by Red Lake Laboratories, 2971 Corvin Drive, Kifer Industrial Park, Santa Clara, Calif. 95051. The new camera has electronically regulated film speeds from 3 in./s to 150 ft/s with a top speed of 275 ft/s, unregulated. The 32-lb camera utilizes standard 16mm film on 400-ft daylight-loading spools. Features include an event synchronizer, footage counter and dual timing lights. It is said to have the ability to operate throughout its total speed range without the use of autotransformers or other auxiliary control devices directly off the line with either 115- or 230-V 50/60-Hz operation. The double-blade focal-plane slit is fully adjustable from 0 to 0.3 in. in height. The optical system is arranged so that an oscilloscope trace or other second image can be superimposed on the primary streak. The camera is priced at \$2,375.

A new line of small, cylindrical Kerr cells has been introduced by Technical Operations, Beckman & Whitley Div., 441 North Whisman Rd., Mountain View, Calif. 94040. The Kerr cells are designed for compatibility with all standard makes of Kerr cell cameras and laser Q switching equipment. Apertures from 0.24 in. to 0.6 in. are offered and smaller and larger sizes are available on special order. Space charges

HFC COLOR SCENE TESTER



FEATURES

1. The exposure of the negative being tested is always precisely controlled. This is accomplished by use of the Xenon flashtube whose light output is directly proportional to the electrical energy supplied to it.
2. A 16 frame exposure gate permits a range of 6 different exposures with the standard color pack combination and 10 frames with a range intensity and hue differences.
3. The platen, color positive raw stock and guides are moved down to the negative in the exposure gate by a pneumatic cylinder thereby eliminating physical labor.
4. When the positive film and the platen contact the negative in the flat gate, there is no shifting of the negative position and contact is firm.
5. After each exposure the positive film is advanced by a time controlled motor. The time control is adjustable therefore spacing between exposed strips can be changed.
6. Each frame of the exposure gate is provided with guides so that proper filter combinations can be inserted without difficulty.
7. The basic color pack which has to be adjusted for emulsion changes, is easily accessible through an opening at the front of the machine.
8. To meet conditions of developer modifications and emulsion changes, the overall light output is adjusted by a 30 point switch. This switch controls the energy supplied to the lamp by changing the amount of capacitance across the lamp, this direct control of energy input to the lamp, by discrete amounts of capacitance, with the voltage held constant, provides excellent, simple, control procedure.
9. The power supply has been conservatively designed so that when the unit is connected to a regulated A.C. supply, the light output at a given capacitance setting is accurately reproduced.
10. A characteristic of the Xenon flashtube is that the color quality of the light is not changed during the life of the tube.
11. The basic Xenon flashtube with its electrical circuitry is inherently simple and dependable.
12. The power supply has been designed to allow rapid charging of the capacitor bank so that no time is lost between successive exposure of strips.
13. The negative film is guided over the flat exposure gates on rails which are spring loaded to float above the engraved glass in the exposure gate, thus eliminating possible negative scratches. Firm negative/positive contact at time of exposure is accomplished by the spring loaded platen.
14. In this tester there are no meters, no shutters, no optics, no motors and no moving parts between the light source and the negative positive plane.

FOR FURTHER INFORMATION WRITE TO:

HOLLYWOOD FILM COMPANY

956 SEWARD STREET • HOLLYWOOD, CALIF. 90038

(213) 462-3284

CHICAGO • NEW YORK

MACKENZIE EQUIPMENT COMPANY

2 HOMEWOOD AVE. • TORONTO 5, ONTARIO, CANADA

Professional Services

MAGNETIC SOUND STRIPING

16mm Super-8mm 8mm

- Precision Liquid Dispersion
- Processed or Raw Stock Film
- Quality Guaranteed—Fast Service

AERCO

Box 171 Pennsauken, N.J.

DELONICS CORPORATION

electronic • chemical • mechanical
ENGINEERING CONSULTANTS

Research, Design and Development
32 Union Square, New York, N.Y. 10003
(212) 982-2552

M. RETTINGER

Consultant on Acoustics

Analysis, Room Design, Noise Reduction
5007 Haskell Ave., Encino, Calif.
Tel: 213-784-3985

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 5-5995

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

RENT

SEND FOR CATALOG

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

GORDON ENTERPRISES
5362 N. Cahuenga, North Hollywood, Calif.

FILM PRODUCTION EQUIP. RENT • LEASE • SERVICE

World's largest source of equipment for producing, processing, recording, editing, etc.
S.O.S. PHOTO-CINE-OPTICS, Inc.
New York City: 387 Park Ave. S., 212/MU 9-9150
N. Hollywood, Calif.: 10635 Burbank Blvd., 877-5326

MUSIC FOR EVERY MOOD

Complete background music library cleared for RADIO-TV-MOTION PICTURES
Quality recordings by full-sized orchestras
Complete selection of sound-effects records also available

WRITE FOR CLEARANCE APPLICATION FORMS AND CATALOGS
THE CAMERA MART, INC.
1845 Broadway, New York 23

FRANK P. HERRNFELD

Engineering Consultant

(Formerly with Frank Herrnfeld Engineering Corp.)

P.O. Box 34802
Los Angeles, California 90034
(213) 870-2867

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

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 "film-saver" 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

REELS • CANS • FIBER CASES

MOTION PICTURE ENTERPRISES

Tarrytown, N.Y. 10592
N.Y.C. Tel: 212 CI 5-0970

STANCIL-HOFFMAN CORP.

- MAGNETIC FILM RECORDERS, 87, 16, 17½ & 35MM, All Plug-In Transistor Electronics
 - TAPE ¼" FOR MONO, STEREO & SYNC PULSE R70
 - BROADCAST LOGGING, 24 HOURS CONTINUOUS 7" REELS UP TO 4 CHANNELS
- 921 N. Highland Ave., Hollywood, Calif. 90038

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

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.

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)

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

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) 674-5700
PERMAFILM INC. OF CALIFORNIA
814 N. Cole Ave., Hollywood, Cal. 90038

SOUND STUDIO EQUIPMENT

Selsyn distributors, fluid starting direct drive on run. From \$1,800.00
Loop racks—Relay rack mount. \$175.00
"Fishpole" mike booms telescoping 4'-8' 6'-12', 8'-16'—\$35.00-\$40.00

Don Walton, Studio Electronics Co. of Chicago
5415 N. Clark St., Chicago, Ill. 60640
(312) 561-0022

ELLIS W. D'ARCY & ASSOCIATES

Consulting and Development Engineers

8mm Magnetic Sound Printers
Motion-Picture Projection

Magnetic Recording and Reproduction
Box 1103, Ogden Dunes, Portage, Ind. 46368
Phone: (219) 895-2585

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 prolongs the life of new prints
Rapid Film Technique, Inc., 37-02 27 St., Long Island City 1, N.Y. STILwell 6-4600

AURICON & K-100 CONVERSIONS to 400 & 1200 ft.

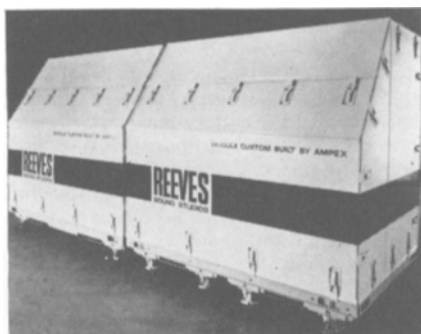
Filter slot Auricons & Filmos
Transistor amplifiers, processors, etc.

Write for details
GORDON YODER
Professional Cine Products
2959 Ladybird Lane, Dallas, Texas 75220

SMPTE Members only—\$60.00 per year

are eliminated and the electric field is said to be uniform due to an improved method of nitrobenzene purification. The new Kerr cells are priced at \$1,600 each, including polarizers and cylindrical enclosure. The cells are also available in the standard box enclosure at a price of \$1,200.

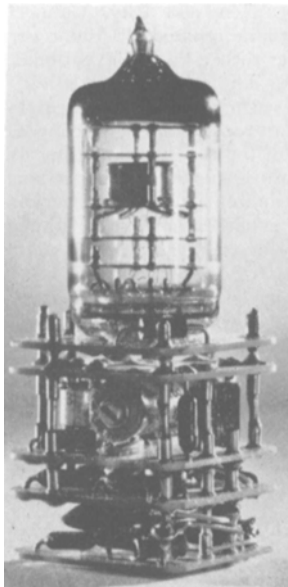
Teleindicator display modules have been added to the Solari line of digital display modules, it was announced by Visual Electronics Corp., 356 W. 40 St., New York, N.Y. 10018, exclusive distributors for Solari & C/Udine, Italy. The ac-operated modules, types S11 and MR40 are described as "flap units" to enable the broadcaster to utilize the modular displays with simplified control systems for the display of election returns, sporting events, quiz shows, and the like. They are available with character sizes of $\frac{3}{4}$ in., $2\frac{3}{8}$ in., 4 in. and $9\frac{1}{2}$ in. high.



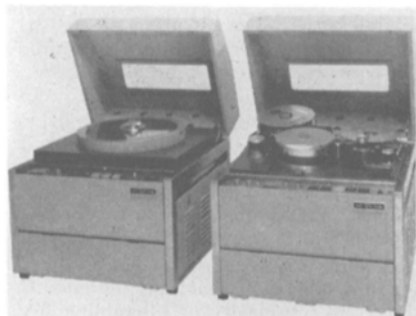
A location video package called **Airmobile-Video™** has been developed by Reeves Sound Studios division of Reeves Broadcasting Corp., 304 E. 44 St., New York, N.Y. 10017. Based on a modular "building block" technique for flexibility in matching equipment to job requirements, the equipment is mounted in standardized jet air cargo packages rather than being tied to permanent mounting in van-type trailer trucks. The self-contained packages can therefore be expected to reach any jet port in the world within a 24-h shipping time. The package consists of five basic modules. Module 1 is a camera/control unit for two- or four-camera operation. It is equipped with two Norelco Plumbicon color cameras with Taylor Hobson 21-210mm zoom lenses which can be set for 11 preselected zoom rates of $\frac{3}{4}$ s to more than 5 min and seven preselected zoom angles. Also included are complete camera chains for four-camera operation featuring complete Riker 540F effects and color sync, bar and dot, black burst and color bar generators; two Gates remote audio mixers and five microphones; Ampex 602 audio recorder and Ampex audio console; Ampex intercom system; Conrac video monitors; Tektronix waveform monitor, vectorscope and oscilloscope; automatic voltage regulation; 48,000-BTU cooling and 20,000-BTU heating.

Module 2 houses two Plumbicon cameras and color camera chains. It does not contain control equipment and must be used in conjunction with Module 1 or Module 3. Module 3 is a control unit for two-, four-, or six-camera operation and can be used where separate control facilities are required. Model 4 contains complete recording facilities. It is equipped with an Ampex VR 2000 high-band video-tape

recorder/reproducer complete with Amtec time element compensator, electronic editing, automatic velocity compensator, special 6×2 switching, color monitor and 6,000-BTU cooling and heating. Module 5 is identical to Module 4 but without electronic editing facilities. Either Module 4 or 5 or both can be used with the camera, control, and camera/control modules. Several smaller auxiliary modules provide storage for Onan 15-kW generators, microphones, booms, lights, tripods, power lines cables and miscellaneous equipment.

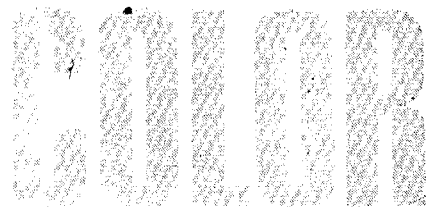


Miniature master oscillators designed to implement a temperature stabilization technique employing a microelectronic circuit have been announced by the Specialized Components Div. of Marconi Company, Chelmsford, Essex, England. The oscillators, which have a short-term stability of one part in 100 million, are designed for such applications as airborne equipment and portable man-pack receivers. The first model, Type F3180, is designed to operate in a temperature of -55 C to $+90$ C and can be supplied preset to any frequency between 10 and 15 MHz. The microelectronic circuit is used only for stabilizing the temperature of the crystal. If the surrounding atmosphere becomes colder, the circuit conducts more and heats up, compensating for the change outside.



The stop-frame video disc recorder, SF-1000B (shown above, left) has been announced by the Victor Company of Japan, Ltd., 1-1 4-Chome, Nihonbashi-Honcho, Chuo-ku, Tokyo, Japan. Designed mainly for use in education and research, the picture can be viewed frame by frame.

a
new
service
from
LAB-TV



**DEVELOPING
AND
PRINTING**

for

**EKTACHROME
EF/MS**

Fast Hourly Service

LAB-TV inc.

723 Seventh Ave., New York 19, N.Y. • JU 6-2293

WESTERN Cine LABS



LOCATED BEST . . . FOR SERVICE WEST!

Dependable fast service because we're "Located Best to Serve the Entire West" with ideal air and rail schedules. Finest quality and workmanship because we've made it so since 1952!

EKTACHROME COMMERCIAL 16mm Film

Originals and workprints in color or black and white . . . also fast processing of Ektachrome ER and MS Film.

PROCESSING:

Ektachrome Commercial	.07 per ft.
Ektachrome ER, MS	.07 per ft.

WORKPRINTS:

(with ink edge numbers)

Color	.11 per ft.
Black & White	.07 per ft.

ULTRASONIC FILM CLEANING!

Academy Award winning
Lipsner-Smith Ultrasonic Film
Cleaning equipment
cleans all original film
prior to printing.

SEND FOR PRODUCERS'

NET PRICE LIST



312 S. Pearl St.
Denver, Colo. 80209

1138 N. La Brea
Hollywood, Calif. 90038

The machine is 20 in. wide, 18.5 in. deep and 17 in. high.

The high-resolution small video-tape recorder (SVC-1000B) (right) is designed for showing x-ray pictures. Horizontal resolution is said to be more than 600 lines. Video SNR is over 42 dB and frequency response is 8 MHz \pm 2dB. It is 20 in. wide, 18.5 in. deep and 17 in. high.

A new high-band color/disc-recording system designed to provide color instant replays in slow motion and stop action has been introduced by Ampex Corp., 401 Broadway, Redwood City, Calif. 94063. The system, designated HS-100, records on metal discs rather than conventional magnetic tape. The system records and plays back 30 seconds of action in high-band color. For replay of significant action, any part of the 30-s recording may be cued for on-the-air use in four seconds. The system's capabilities include reverse action playback at either normal or slow-motion and frame-by-frame advance for animation or analysis of highlights. Disc recordings may be mixed with tape and film recordings in production without degradation of quality, the announcement stated.

A compact, low-cost closed-circuit television camera designed for ease of operation has been announced by Ampex Corp., 2201 Lunt Ave., Elk Grove Village, Ill. Designated Model CC-6007, the all-solid-state camera has automatic electronic circuitry to eliminate the need for external controls. It is said to produce a picture with a horizontal resolution at the center of better than 550 lines. It is priced at \$399.95.

Two new color video-tape recorders have been announced by Ampex Corp., 2201 Lunt Ave., Elk Grove Village, Ill. 60007. Both recorders use 1-in. tape with a tape speed of 9.6 in./s. Model 7500-C, for closed-circuit use, is priced at \$4,495. Model 7800 has advanced features for production of finished industrial and educational programs. It is priced at \$7,995.

A 16mm color film scanner and 2 x 2 slide scanner for broadcasting color television and slide programs have been announced by Visual Electronics Corp., 356 W. 40 St., New York, N.Y. 10018. The film system utilizes the technique of rapid film pulldown to transport the film frame-to-frame within the television vertical blanking period. The picture is created by one flying-spot raster of white light from a color-corrected scanner tube focused on a stationary film frame. The spot in the raster passing through the film need not be in focus. It is then routed through dichroic light-splitting optics and into three photo-multiplier tubes (red, blue, green). Since the light is not an image all registration and imaging optics are eliminated.

Two new television switchers designed to reduce the complexity of assembling TV program segments and distributing the finished production have been introduced by Radio Corp. of America. Each of the solid-state units provides 16 inputs and four outputs. The TS-50 video distribution switcher routes TV signals to the transmitter, to network, tape recording or

throughout the station plant. The TS-51 production switcher is a vertical interval switcher that handles synchronous and nonsynchronous and composite and non-composite signals in the same matrix.

The Laboratory Laser Light Modulator, Model 10, announced by Beckman & Whitley, 441 N. Whisman Rd., Mountain View, Calif. 94040, is a multiple-crystal device that operates at low modulation voltages. Designed to compensate for normal changes in ambient temperature, it has an operating bandwidth of from 1 Hz to 100 MHz. The piezoelectric effect, inherent in electrooptic crystals, has been reduced to a negligible amount and as a result frequency response is nominally flat across the entire operating bandwidth. The modulator is 8 in. long and 2 in. in diameter. It is priced at \$3,350.

TV Colorgard, a color sensing meter for balancing color monitors, has been introduced by TV Zoomar Co., Glen Cove, L.I., N.Y. The instrument was developed by Gardner Laboratory, Bethesda, Md. The handheld, battery-powered meter senses the red, green and blue colors on the screen. Use of the Colorgard is said to reduce time required for monitor setup time (when the engineer uses his eye as a color comparator) from about an hour to less than five minutes. Price of the instrument is \$1,330.

A new 110-kW UHF transmitter that provides "tailored" signal coverage patterns of 5 MW when used with RCA ultragrain antennas has been introduced by Radio Corp. of America. The new transmitter, Type TTU-110A, achieves its maximum 5 MW crp (minimum 1 MW) on Channels 14 through 50 in shaped signal patterns when the new transmitter is combined with RCA pylon or VEE and VEE ZEE panel antennas. The transmitter uses a minimum of three klystrons of the vapor-cooled integral cavity type. It uses solid-state circuitry and has built-in provision for remote control. The price is \$425,000.

A new line of video and pulse distribution amplifiers, designated Mark IX-A, has been announced by Ball Brothers Research Corp., P.O. Box 1062, Boulder, Colo. 80302. The amplifiers have been designed especially for color studio applications. They are fully transistorized and feature 20-MHz broad-band amplification, low differential gain and phase distortion and individual self-contained electronically regulated power supplies. Prices start at \$255.

Plastic-encased silicon rectifiers are now available in a low-priced line (30 cents through \$2.01) from Westinghouse Semiconductor Div., Westinghouse Electric Corp., Youngwood, Pa. The rectifiers feature void-free, transfer-molded cases of reinforced plastic; diffused junctions; and plastic-to-metal bonding. The devices are said to have good mechanical and handling strength, electrical stability, low thermal impedance, low reverse current, long leakage path and proven hermeticity.