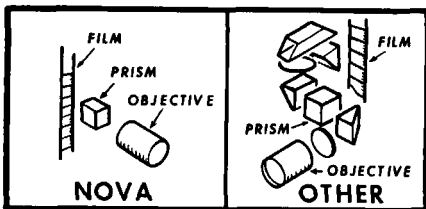


## Here's why the PHOTO-KINETICS "NOVA" HIGH SPEED CAMERA is the finest and most versatile!

The Photo-Kinetics Nova High Speed Camera is superior to any other in speed range, resolution, sharpness, it is easy to operate and it is rugged. Unique changeable film magazines provide great versatility.

The speed range is 10 pps. to 8,500 pps. for the basic 100' camera, 10 to 10,000 pps. with the 400' magazine; and with the 1200' magazine 3,000 pps. with infinitely variable controlled speed to 1% (patented). The 16mm prism assembly is interchangeable with 1/2 frame, 1/4 frame, and streak prisms for frame rates up to 40,000 pps. and 3,000" per sec. in the streak made. Uses standard or thin base films. Complete line of lenses and accessories are available.



The "Nova" provides exceptionally sharp pictures because of its simple straight-through lens design. This provides a number of advantages over five-prism designs with their attendant image loss and extra light requirements. The Nova optical system is less liable to get out of alignment. The NOVA design also enables the film to be stopped and started and acceleration is smoother.

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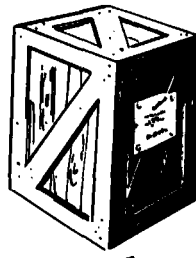
**RENTAL SERVICE:** Try the Nova before deciding to buy or rent it just for a special job. Full instructions provided. It's the low cost way to try high speed photography.

**REPAIR:** We, the original manufacturers of the Fastax, offer excellent repair service for these cameras.

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## 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.

The type AVF Video Distribution Amplifier has been announced by Rohde & Schwarz Sales Co. (U.S.A.) Inc., 111 Lexington Ave., Passaic, NJ 07055. The instrument has a wide frequency range and close tolerances and can be used for NTSC, PAL and SECAM systems. Type AVF has two independent amplifiers, each equipped with one bridging-type input and six resistor decoupled outputs, five outputs on the rear and one output for monitoring purposes on the front panel. Each amplifier has a gain adjustment of  $\pm 6$  dB. Source impedance is 75 and return loss is better than 40 dB up to 6 MHz and better than 34 dB up to 10 MHz. The frequency range is 1 Hz to 20 MHz. The instrument is solid state and is 1 3/4" in high for 19-in rack mounting. The amplifier is priced at \$750.

A laser is used as a kind of optical branding iron to impress holograms into thin metal films for use as fixed, high-capacity computer memories in an experimental technique developed at RCA Laboratories in Princeton, N.J. When the laser light falls on the metal film, it is converted to heat of sufficient intensity to evaporate portions of the film, producing a kind of holographic engraving in from five to 20 billionths of a second. The new technique eliminates chemical development and the massive, low-vibration tables required in the making of conventional holograms.

An extremely thin film of a metal, such as bismuth, tellurium, aluminum or gold, is first deposited on a glass substrate. Next, the light from a pulsed laser is split into two beams, one going directly to the metal film and the other going first to the object to be holographed and then to the metal film. At those points where the two beams interfere constructively (add their powers together) heat converted from laser light absorbed by the metal atoms evaporates the metal. Where the two beams interfere destructively (tend to cancel each other out) nothing happens.

Because a very short, but powerful, laser pulse is used, the evaporation of the film is proportional to the amount of laser light striking the holographic plate. As a result, the pattern that remains on the plate closely resembles the pattern of the light interference pattern of the two laser beams normally recorded in conventional

holography. The metal film hologram can be read out immediately after it is exposed by shining a low-powered continuous wave laser beam through it or by reflecting the beam from it. Because the new holographic technique depends upon the heat rather than the light of a laser beam, it can be used with laser beams of any wavelength, thus making it, in essence, pan-chromatic. For this reason, metal film holograms can be used for applications using the more efficient infrared lasers whose wavelengths are not suitable for use with photographic film. The thinness of the recording medium minimizes restrictions on the wavelength difference between the recording and readout lasers which makes it possible to use less expensive gas lasers for readout in many applications with the thin film holograms.

Prefabricated clean rooms manufactured by Agnew-Higgins, Inc., P.O. Box 857, Garden Grove, CA 92642, are now available with factory-assembled air conditioning units, it was recently announced. The air conditioned clean rooms are available up to 1000 ft<sup>2</sup>. The air-conditioning unit controls the temperature and relative humidity to recommended levels.

The Rosco Color Media Drawer, a product of Rosco Laboratories, Inc., 214 Harrison Ave., Harrison, NY 10528, is a stackable, pullout drawer used to store sheets of color lighting media. The drawer is made of heavy-gauge, treated corrugated board. It has a protective fully enclosed sleeve and can hold full-size 20- by 24-in sheets of lighting media. The drawers are stackable. Each drawer is priced at \$3.25.

A new system for automatic rewinding of motion-picture film while it is being projected has been announced by the Motion Picture Equipment Div. of North American Philips Corp., One Philips Parkway, Montvale, NJ 07645. The system comprises three components, a film supply/take-up/make-up unit consisting of three large aluminum discs horizontally mounted on a stand; a make-up table to prepare and break down the program; and a control unit. The program to be projected is spliced together on the make-up table and transferred to the middle disc. A plug-in



film supply control unit is inserted in the middle of this disc and the film is fed

# Photo-Sonics<sup>®</sup> total systems capability in photo instrumentation

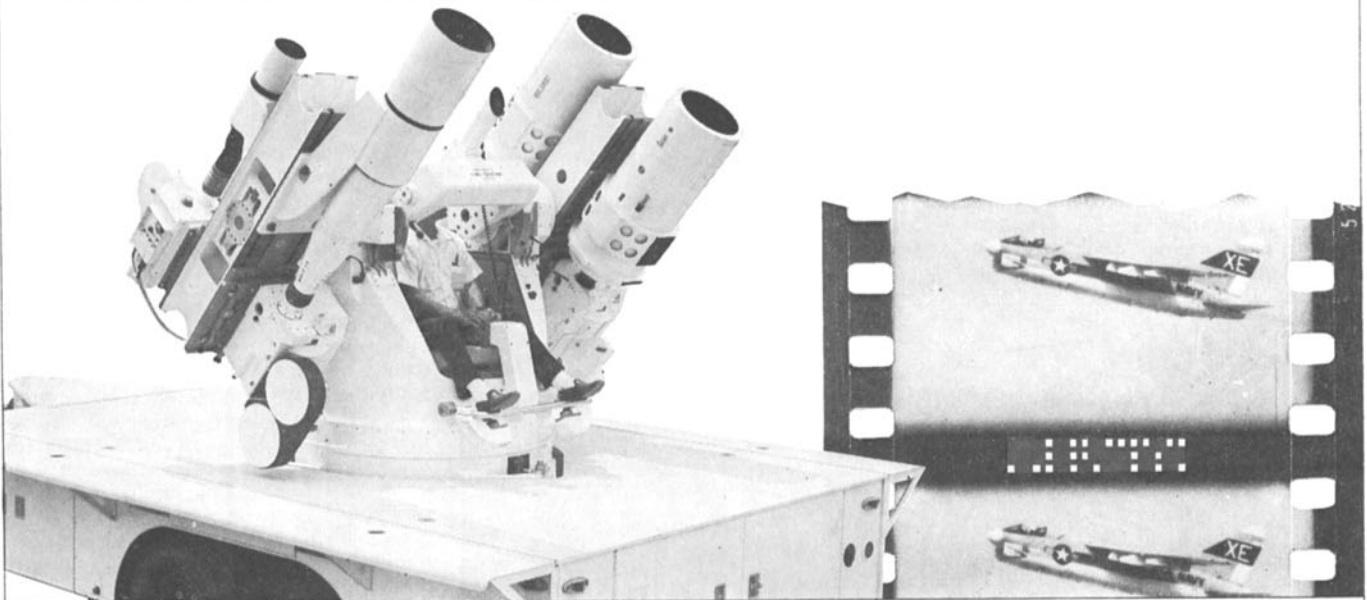


... from tracking mounts, both fixed and mobile, to cameras and associated hardware, Photo-Sonics' systems record azimuth, elevation and time in each frame of any film format.

The years of experience in integrating radar and laser ranging devices and TV and infra-red automatic tracking systems has made the name Photo-Sonics synonymous with the finest quality photo instrumentation.

Photo-Sonics' 16mm, 35mm and 70mm intermittent pin-registered and rotary prism cameras have been used for years on ranges, in laboratories and in many military applications. These reliable cameras feature many unique characteristics such as magazine loading, automatic exposure control and solid state electronics.

Photo-Sonics' manufactures U.S. Navy's KB-19A/B cameras and the USAF KB-21 airborne gun cameras.



## 16mm Cameras



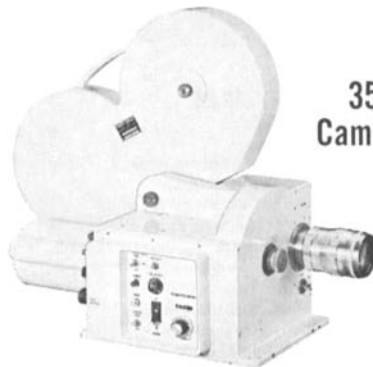
### Intermittent-pin registered

- Speeds to 800 fps
- Capacities to 1200 ft.
- Automatic exposure controls, integral and add-on
- DC and/or AC models

### Rotary prism

- Speeds to 4000 fps
- Capacities to 1200 ft.
- DC and/or AC models

## 35mm Cameras



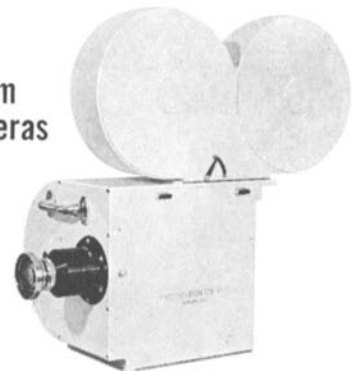
### Intermittent-pin registered

- Speeds to 360 fps
- Capacities to 1000 ft.

### Rotary prism

- Speeds to 3250 fps
- Capacities to 1000 ft.
- DC and/or AC models

## 70mm Cameras



### Intermittent-pin registered

- Speeds to 80 fps.
- Capacities to 1000 ft.

### Rotary prism

- Speeds to 360 fps.
- Capacities to 1000 ft.

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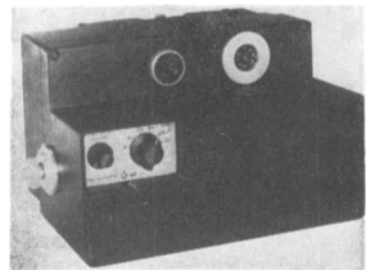
through it and over the rollers on the stand to the projector.

After passing through the projector, the film goes over the rollers on the stand and onto the take-up ring on the disc selected as the take-up disc (either the top or bottom disc). When the film has been completely rewound, the take-up ring and the film supply control unit are unplugged from their respective discs and interchanged. The film can then be projected without removing it from its disc. Each disc has its own set of controls on the control unit, permitting the operator to prepare a second film program on the make-up table and transfer it to the middle disc while the other two discs are performing their feed and take-up functions. The no-rewind system is available in two models, one for use with the Norelco FP-20 35mm projectors, priced at \$6,900, and the other for use with the Norelco DP-75 70/35mm, priced at \$7,900.

**Two new films**, Gevachrome Type 6.00, a reversal color film with ASA 50 tungsten rating, and Gevachrome Type 6.05, with ASA 125 tungsten rating, have been announced by Agfa-Gevaert, Inc., 275 North St., Teterboro, NJ 07608. Both films are multilayer, low-contrast reversal-type color films designed for both exterior and interior filming. Because of the low contrast both films can be used for color TV transmission. Duplication can be obtained by printing onto reversal color print films,

such as Gevachrome Print Film Type 9.02. Both films are balanced for 3200 K illumination and can be used in daylight or with carbon arcs or photofloods with appropriate filters. The resolving power of Type 6.00 is 120 lines/mm and that of Type 6.05, is 100 lines/mm. Both films are available in lengths from 100 to 1200 ft.

**A new cordless motor drive** for the Mitchell BNC 35 mm camera has been announced by Cinema Product Development Co., 2044 Cotner Ave., Los Angeles, CA 90025. The drive, a crystal control motor, capable of driving a BNC under all environmental conditions, was developed in accordance with specifications established by the Research Center of the Motion Picture and Television Producers Association. The motor drives directly into the movement shaft for maximum efficiency and minimum sound. The speed selector switch, forward-reverse switch, 50/60 H2 output selector switch and sonalert level control are located on the motor housing. A power cable connects to the specially designed motor blimp housing. A switchbox, containing the on/off power switch, circuit breaker and reverse polarity protection diode, is located in the cable. The camera has been tested over a temperature range of -2 F through 140 F with performance data indicating an accuracy of  $\pm 5$  parts per million. The aluminum housing is isolated from the control circuit and acts as an effective radiation shield. The



motor door has a boxlike configuration and contains all the circuitry in addition to the motor. Total weight is about 19 lb and the blimp housing profile is the same as with existing housing. Price of the motor, including a new motor blimp housing, control box and cable, is \$4,000.

**The Century Sound Blimp** for the Bolex Rex-5 camera has been announced by Century Precision Cine/Optics, 10661 Burbank Blvd., North Hollywood, CA 91601. The blimp is designed to provide professional quality sound with lip-sync filming. It can be quickly reconverted for non-sound use. Features include full zooming control and reflex viewfinding and optical windows for lenses and film scale. Sound damping is 31 dB at 36 in. The blimp is 21½ in high, 11¼ in wide and weighs 11¼ lb. It is available in five basic models for zoom and nonzoom to be used with various lenses. Prices begin at \$495.

**A tripod** designed to support large professional cameras has been announced by Le Grange, Inc., 1139 N. Highland Ave., Hollywood, CA 90038. Designated the Slick SL-67, the extended height of the three-section tripod is 81 in. Features include the free turn system, simulating universal ball joint action and a lock-down revolving base plate providing 360° panoramic horizontal panning or camera positioning and 180° vertical swing capability. Slick tripods are available in various models ranging in price from \$24.80 to \$495.

**Lenses for 35mm motion-picture cameras**, including varifocal-zoom lenses, will be manufactured by Canon, Inc., of Japan and exported by Ryu-Den-Sha & Co. Ltd., 12-21, 4-chome, Shimbashi, Minato-ku, Tokyo, Japan. Design characteristics of the new lenses were worked out in cooperation with the Motion Picture and Television Research Center of the Association of Motion Picture and Television Producers. The new lenses will be zoom lenses but they will be designed so that when adjusted to any focal length within their focal length range they will provide image quality equal to that of high-quality fixed focal length lenses of the same focal length. Varifocal-zoom lenses of both anamorphic and nonanamorphic types will be manufactured.

**The Vario-Switar POE f/1.9 zoom lens** designed especially for Bolex 16mm cameras has been announced by Paillard Inc., 1900 Lower Rd., Linden, NJ 07036. The new lens has a 6.25:1 zoom range with built-in

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"HELLO DOLLY"  
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"BUTCH CASSIDY AND THE SUNDANCE KID"

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*National Academy of Television Arts and Sciences  
May 23rd Creative Crafts Emmy Awards*

HAWAII FIVE-O  
THE CHALLENGERS  
LOVE AMERICAN STYLE  
FIRST TUESDAY  
MARCUS WELBY, M.D.  
RITUAL OF EVIL  
HUNTLEY-BRINKLEY REPORT

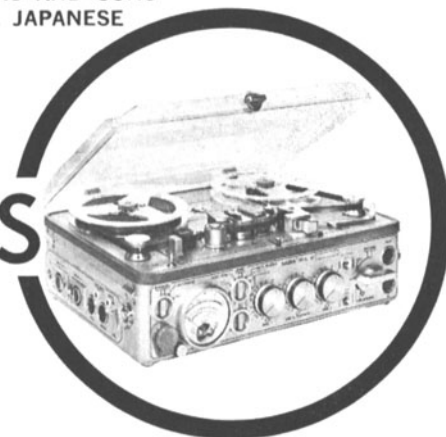
SAHARA  
BRACKEN'S WORLD  
WORLD PREMIERE  
MISSION IMPOSSIBLE  
DESERT WHALES  
MOVIE OF THE WEEK  
GUNSMOKE

*National Academy of Television Arts and Sciences  
June 7th 22nd Annual Telecast Emmy Winners*

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THE GHOST AND MRS. MUIR  
MANNIX  
MY SWEET CHARLIE  
ABC NEWS

NBC NEWS  
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FATHERS AND SONS  
THE JAPANESE

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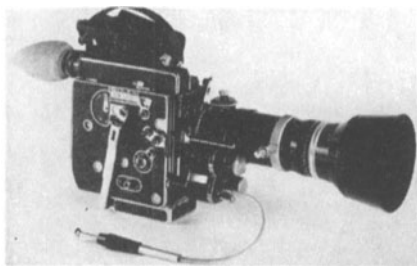
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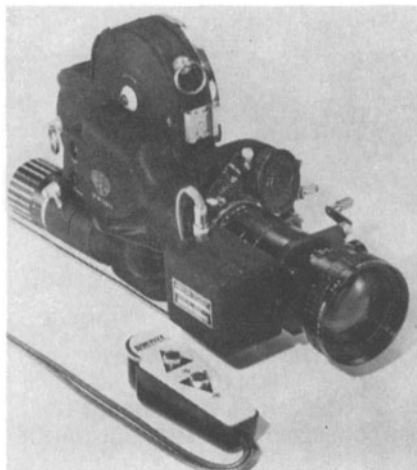
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power zooming and automatic through-the-lens light measuring. Zooming the full range takes from four to six seconds. Manual zoom control is provided for very fast or slow zooming. The lens can also be used with fully automatic exposure, manual diaphragm setting or selective automation. Light is measured through the lens by a CdS photoresistor which is powered by a single PX-1 Mallory battery. The sensitivity range is 10 to 200 ASA for camera speeds of 12 to 64 frames/s. The speeds are marked on a scale and locked. The new lens is priced at \$800.

The **Zeiss Vario Sonnar 10-100**, a new lens for 16mm cameras, has been announced by Arriflex Corp. of America, 25-20 Brooklyn-Queens Expwy West, Woodside, NY 11377. The lens has a focal length range of 10mm to 100mm. It is composed of 16 elements in 12 groups. The length, fully extended is 159.5 mm. The largest diameter is 79.5 mm. It weighs 32 oz. The new lens is available for all Arriflex 16mm cameras in both Arriflex mounts, standard and steel-bayonet. It is priced at \$1076 with the bayonet-lock lens mount.

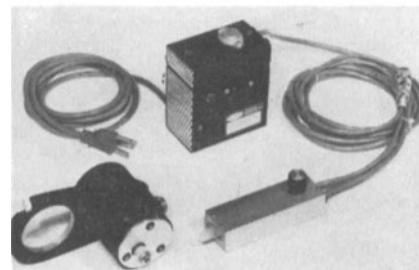
A new, fully transistorized quiet zoom drive for the Angenieux 12-120 lens has been announced by Arriflex Corp. of America, 25-20 Brooklyn-Queens Expwy West, Woodside, NY 11377. The drive uti-



lizes a specially designed and custom-wound motor for smooth operation in every speed range. A new hand control contains all electronics on a printed circuit board and the transistorized design makes possible a wide range of operating speeds. An Arriflex 8-V power pack can provide zoom speeds of 6 s to 50 s for the entire focal length change of 12 to 120mm. Sound insulating shock mounts in the motor compartment reduce the operating variety of dc power sources ranging from about 5 to 16 V. Current draw is about

0.25 A. The new motor (No. 339-325) is priced at \$280.

A new compact servo-zoom drive featuring silent action and constant torque throughout the 360:1 speed range has been announced by Vicon Industries, Inc., 13 Stepar Pl., Huntington Sta., NY 11746. It is



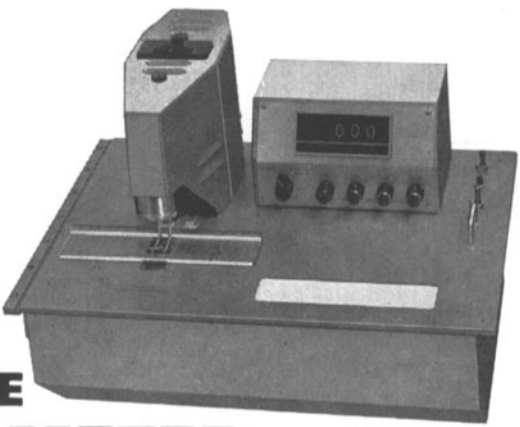
available in various models designed to fit the Angenieux 12-120mm and 25-250mm lenses as well as Arriflex 16 BL lenses. Models to fit other lenses are also available. A specially designed timing-belt-drive permits rapid installation of the servo-zoom drive in the studio or on location. A special slip-clutch provides added protection for motor and lens. Price range is \$715 through \$725.

A new motorized zoom lens designed for use on "C" mount closed-circuit TV cameras has been announced by Zolomatics Div. of Spectran, Inc., 941 N. Highland Ave., Hollywood, CA 90038. The lens is 6



in long and 2.25 in in diameter. It has a maximum aperture of f/2.5 and 5:1 zoom ratio with a 20 to 100mm focal length. The zoom control is motorized by a 2-V, 3-A miniature motor with a control box. The lens is priced at \$495.


Testing equipment for use by TV stations to aid in obtaining better broadcast results from 16mm color film has been developed by Eastman Kodak Co. The equipment consists of a new Inconel metal field lens test slide, featuring a stepped neutral gray scale for use in generating the test signal needed to evaluate a telecine chain, a new picture monitor comparator and a two-minute TV anthology test film. The Inconel alloy, evaporated in density gradients on the new slide, holds its stability over long periods of time. The new slide has been packaged for mounting in a field lens—the only common point of focus for all film projection sources. The resulting display of the test slide signal on the



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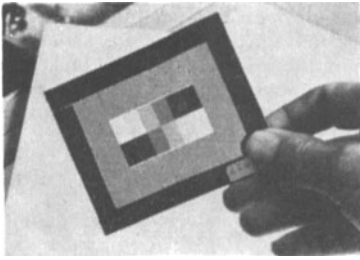
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The Westrex RA-1100-J is a direct reading densitometer that incorporates its own integral power supply, regulated to assure a constant, reliable light source. Its digital meter minimizes operator error and eliminates read-out ambiguities. Binary coded decimal (BCD) output is available for driving external equipment such as printers and recorders. Though it is designed for 35mm, the RA-1100-J can be used on any width film. Write for detailed information.



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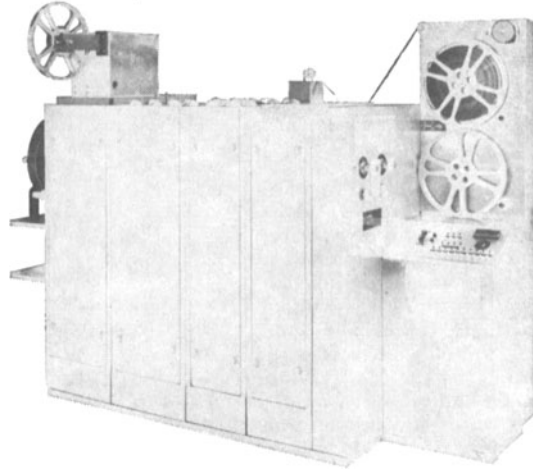
waveform monitor of a typical telecine chain can be analyzed for comparison with an ideal waveform to enable the operator to adjust controls for correct transfer characteristic and color channel matching. The new testing equipment and methods for use were described in a paper, "A Program to Improve Telecine Performance" by Ward Vuillemot, which was presented at Society's 107th Technical Conference in Chicago.

A color TV program origination system for community antenna TV (CATV) has been announced by Visual Electronics Corp., 356 W. 40 St., New York, NY 10018. The system includes a film island and a control console assembly. The film island contains a color film camera, a multiplexer assembly, two JAN 16mm film projectors with pedestal, 4-in lens and color correction kit and a Kodak Carousel slide projector and lens. The control console assembly includes a projector control panel and relay unit to operate an optical transfer unit, an audio mixer, an audio/video switcher, a dual 9-in monitor (rack mount), a control rack with internal wiring and a power strip, a lavalier microphone and two videotape recorders, one rack mounted and the other portable. The system also includes an interconnecting cable (up to 75 ft) between the film island and the control rack. The system is priced at \$16,950.

A single-tube black-and-white TV camera that can be converted to full color operation has been announced by RCA Corp. Designated the PK-430, the new camera produces color pictures when a special color-encoding optical system is added and a small package of color processing electronics is plugged in. In the one-tube system (introduced by RCA Corp. in a color TV camera in 1968), color information is obtained by passing light from the televised scene through two striped filters before it reaches the pickup tube. This technique also produces other essential information about picture detail, content and brightness. The information is gathered on the face of the single tube and processed electronically to produce the color picture. When the PK-430 is converted for color, it employs this optical system in conjunction with an electronic color processor which occupies only about 10 in of space in the standard TV equipment rack. The basic black-and-white camera includes a 10:1 zoom and a type 8507 vidicon which provides horizontal resolution of 600 lines. The PK-430 is priced at \$5,995 and the equipment needed to modify it for color operation is priced at \$4,755.

The DBM-AR5, an airborne video film recorder, designed to provide high-resolution black-and-white 16mm film record-

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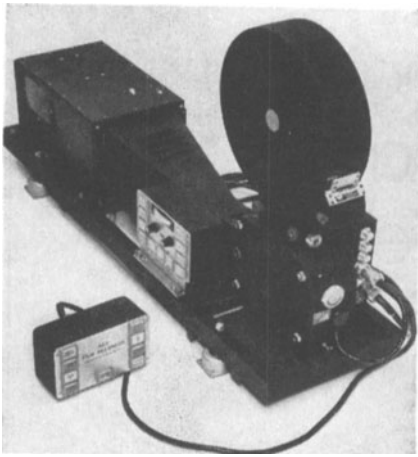
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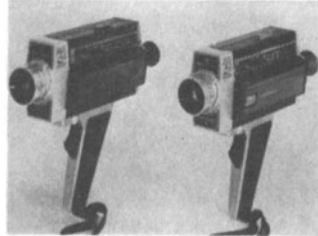
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EQUIPMENT DIVISION  
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ings of video signals in airborne applications, has been announced by Teledyne Camera Systems, 131 N. Fifth Ave., Arcadia, CA 91006. The system consists of a Milliken DBM-5 camera in conjunction with a high-resolution airborne qualified TV monitor and logic circuit. The monitor displays a picture only when it is required for recording by the camera. The monitor is keyed on and off automatically by logic elements which also initiate film pulldown. The system is synchronous to the input video signal and records at any speed up to 10 frames/s. A phase lock servo is available that allows the system to record up to 30 frames/s. Price range for the DBM-AR5 is from \$15,000 to \$25,000.

Two new super 8 cameras, Model 376 and Model 376S, have been announced by Bell

& Howell, 7100 N. McCormick Rd., Chicago, IL 60645. The new cameras have all the features of the previously introduced Models 374 and 375S cameras (*Journal*, p. 922, Oct. 1969) plus the additional capability of power zooming. Both cameras have a 12.5mm to 25mm power or manual zoom, Focus-Matic distance measuring, large and bright reflex viewfinders, automatic exposure control, under-exposure signal in the viewfinder and a detachable pistol grip. Each camera measures  $3\frac{1}{4}$  by  $2\frac{1}{4}$  by  $6\frac{7}{8}$  in. Model 376S can be used



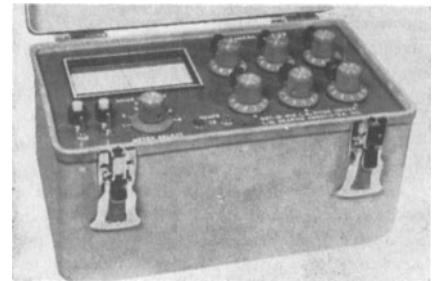
with Filmsound 8 (*Journal*, p. 1160, Oct. 1968) for making synchronized sound movies. It is priced at \$119.95. Model 376 does not have the synchronous sound capability. It is priced at \$109.95.

A new Zeiss Ikon Moviscop S8 editor-viewer for super 8 films and a companion Movipress S8 film splicer are available in the United States, according to an announcement from Camera Industries of West Germany, 11 W. 42 St., New York, NY 10036. The editor-viewer has a viewing field of 3 by 4 in illuminated by a 10-W, 6-V halogen lamp. A 1:1 hand crank feeds

the film through an open guide, forward or reverse, and a notching device, actuated by a pushbutton, identifies individual frames for subsequent cutting. Folding arms can hold film reels of up to 400-ft capacity. The editor-viewer is priced at \$99.95. The film splicer is priced at \$75.

A portable solid state inverter for the operation of 117-V, 60-Hz ac equipment from 12-V dc storage battery power has been announced by ATR Electronics, Inc., 300 E. 4th St., St. Paul, MN. Designated Model 12U-S2A, the instrument has an output capacity of 275 W continuous and 300 W intermittent while maintaining stable frequency of 60 Hz with varying load or input voltage. The inverter is used for the operation of various equipments including tape recorders, TV sets, test instruments, small ac-dc universal type motors and similar equipments. The inverter is supplied with battery cables. The price is \$139.50.

The SST-III Multi-Output L.E. Diode Driver Model M 16 has been announced by L. M. Dearing Associates, Inc., 12345 Ventura Blvd., Suite R, Studio City, CA 91604. The M 16 is basically a simplified



signal amplifier and processor designed to provide power amplification and switching to allow outputs for six individual cameras for timing on one side of the film or for individual cameras providing timing on both sides of the film using gallium arsenide phosphide diodes. The outputs of the driver are controllable and arc metered to assure proper driving currents for all types of cameras and all types of film stocks. Model M 16 is available for 115-V ac or for 28-V dc at a price of \$780. It is available for both ac and dc at a price of \$810.

A new SST-III Coded Timing Pulse Generator and Driver, Model CTPG-14, has been announced by L. M. Dearing Assoc., Inc., 12345 Ventura Blvd., Suite R, Studio City, CA 91604. It is a self-contained source of coded timing signals for recording on film or other media time-related pulse codes for purposes of identifying data phenomena as they are recorded upon instrumentation film. The pulse generator has four separately adjustable output channels for driving four light emitting diodes in up to four cameras. In addition to the internal coded timing pulse generator, Model CTPG-14 has a connector and circuits to accept an external timing or event signal so that two of the four outputs can be switched to be driven from an external input signal to allow different coded markings on two sides of the film of two cameras simulta-

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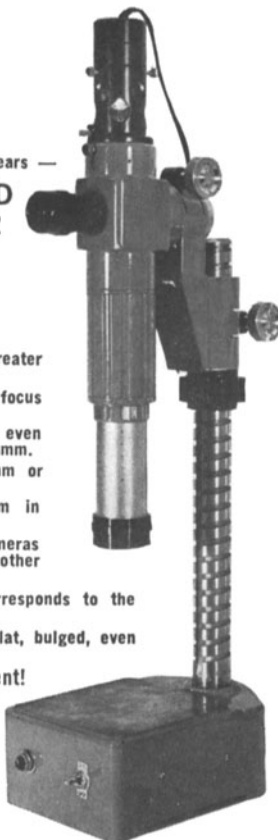
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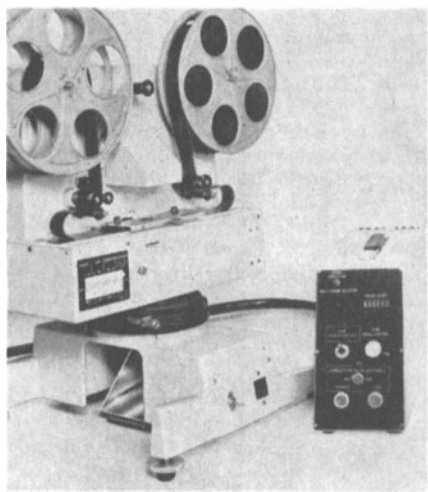


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neously. The internal generator can provide coded pulse widths and periods ranging from 1 pulse/s to 100,000 pulses/s. Model CTPG-14 is powered from 115-v ac line current. It weighs 3 lb and is priced at \$790.

A new 35mm motion analysis projector, the Vanguard Model M-35CF/S-1, has been announced by Instrumentation Marketing Corp., 820 S. Mariposa St., Burbank, CA 91506. Designed for qualitative



presentation for analyzing such films as cine-x-ray or cinefluorographic, instrumentation, etc., its features include flicker-free projection from less than 1 frame/s to 25 frames/s in forward or reverse. It has a 1,200-ft capacity and a high-speed rewind. A frame counter adds and subtracts. The stand utilizes a first-surface mirror that directs light horizontally and the head turns so that the projected image can be rotated 360° or locked in any position. The price is \$5750.

**Metering pumps** that provide continuous metering of photochemical processing solutions are produced by Bran & Lubbe, Inc., 105 W. Adams St., Chicago, IL 60603. The pumps are of the reciprocating plunger type and the displacement per stroke is adjustable from zero to maximum. They are designed to correct six situations that cause continuous altering of photographic solutions: (1) the developer is repeatedly enriched with bromine ions from the photographic material; (2) silver ions are reduced by the organic developing liquids to silver and are oxidized in the process; (3) the pH value of the bath falls due to the formation of hydrogen ions; (4) organic reducing agents are partially oxidized by the surrounding air; (5) sodium thiosulfate changes to silver thiosulfate so that the solubility of the silver bromine in the fixing bath is reduced; and (6) materials are altered because of the carryover from one bath to another.

The Bran & Lubbe pumps transport the liquid, measure the quantity to be transferred and regulate the amount displaced. The pumpheads, whose maximum capacity is decided by the plunger diameter, are constructed of hard PVC, stainless-steel or ceramic material. Pumpheads manufactured from these various materials are also interchangeable. A linear dial, which can

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be altered while the pump is running and stationary, has graduations with subdivisions of 0.02 mm. The automatic control of the various constituents, which depends on the rate of photographic material processed through the baths, is possible with the aid of variable-speed control. For this purpose, the speed of the developing machine is fitted with a transmitter which gives a signal proportional to its speed. A controller compares the signal from the developing machine with the signal from the metering pump and actuates an electric motor to adjust the rate to suit the developing machine. The rate of addition is increased or decreased according to the rate of the machine. Both signals can also be separately indicated to give a visual check of the rates.

A new portable hot splicer, Model 816-SE, designed for handling two full-frame short ends of all 16mm A or B wind film and cine 8, has been announced by Maier-Hancock Sales, Inc., 14106 Ventura Blvd., Box 5135, Sherman Oaks, CA 91413. The machine has eight register pins and a built-in life-time carbide scraper blade that springs back out of the way when the scraping operation is complete. Other features include hardened chrome steel cutter blades and narrow, low visibility weld at the frame line. Model 816-SE is priced at \$364.

The Optronics Mark X high-speed super 8 quad printer, designed by John A. Maurer specifically for color release prints, has been announced by Optronics Technology, Inc., 118 W. 29 St., New York, NY 10001. The Mark X operates from 16mm color internegatives for continuous flow optical reduction printing of four rows of images on 35mm film perforated in the "5 rank" pattern. Using Type 7380 raw stock, the printer is capable of production rates of 200 to 400 ft/min. The machine is equipped with 3000-ft film capacity, forward and reverse operation, constant tension takeups, custom-designed pupil-split-

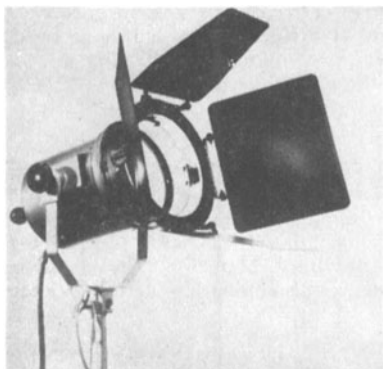
ting apochromatic lens system, oil-drip lubrication and ball-bearing drive system. Available options include 72-light additive lamp source with manual light valves or tape-reader light valves, subtractive lamp source, 4-track optical sound reduction optics, 4-track magnetic transfer system, vacuum squeegees and various cueing systems. The price range is \$75,000 to \$125,000.

A new silver recovery system called Ag-Get has been announced by W. B. Snook Manufacturing Co., 751 Loma Verde Ave., Palo Alto, CA 94303. The unit can recover up to one troy ounce of nearly pure silver per hour from each gallon of silver-laden hypo. The machine is designed for long periods of continuous operation. The 5-gal tank is made of reinforced molded fiber glass. Stainless-steel and corrosion resistant plastic are used throughout. The amperage setting is shown on a simplified control panel. The silver-capturing cathode employs a patented rotating disc technique for plating the silver from the hypo solution. The Ag-Get is 18 in high and requires less than 1 ft<sup>2</sup> of shelf space. It is priced at \$299.

The Educom 620P portable tape recorder, a recorder/amplifier/speaker system designed to provide a recorder of professional quality for educational use, has been announced by Visual Educom Inc., Michigan City, IN 46360. The 620P consists of a magazine-type tape deck, dual channel amplifier and speaker system packaged in a carrying case weighing 29 lb. The magazine tape deck employs a single rotary control for rewind, stop, play and fast forward operation. The mechanical braking utilizes special clutches to minimize tape stress. The tape magazine of transparent plastic (300- or 500-ft capacity) features snap-in loading. The tape is completely enclosed in the magazine so no hands touch the tape and the magazine can be removed from the tape transport instantly without rewinding. The 620P is priced at \$300.



A new version of the Multi-Beam 1000 light fixture has been announced by Berkey-ColorTran, Inc., 1015 Chestnut St., Burbank, CA 91502. New features include

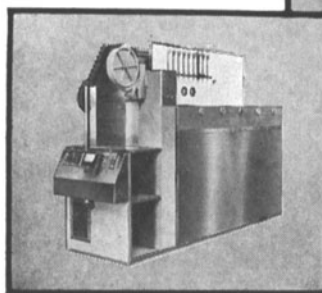
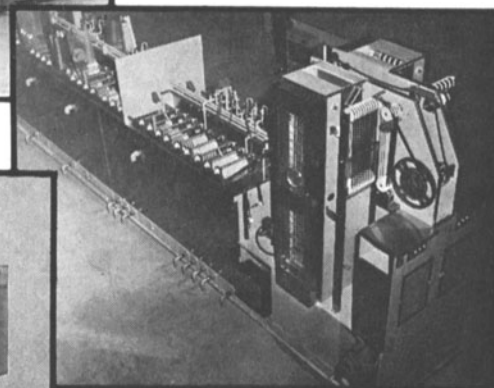
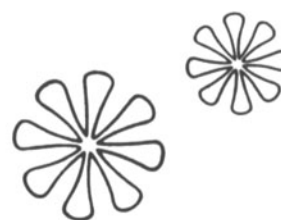
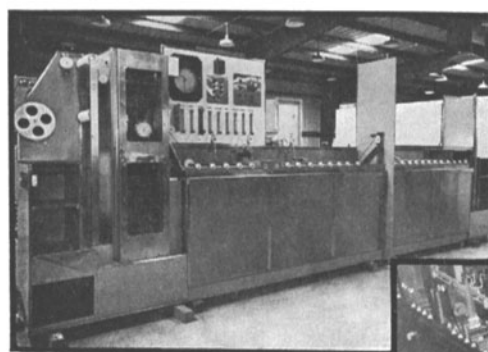


a built-in accessory holder with a specially designed safety clip lock for accessories. The Multi-Beam 1000 is continuously variable focus from spot to flood with a smooth field. A new heavy-duty socket provides increased cooling and longer lamp life. The fixture weighs 6½ lb and is priced at \$84.

The Educom RP-9511 program source, a reel-to-reel automatic recycling remote program source for learning laboratories, has been announced by Visual Educom Inc., Michigan City, IN 46360. It is a two-speed, four-channel, quarter-track playback unit with 7-in reel capacity. The unit is built for standard EIA rack mounting and is hinge-mounted for ease of servicing. The machine operates by either demand or clock control. In demand programming, the machine senses the demand of the student, turns itself on, runs until the last student disconnects or the end of the program is reached, rewinds, automatically returns to the start of the program and shuts itself off. If the demand continues it will restart and rerun the program until the last student disconnects. Using clock or external control, the source turns itself on, runs through to the end of the program, recues and shuts itself off. The RP-9511 is priced at \$422.

A cassette duplicator designed to permit duplication of a master tape with the blank tape loaded in the cassette has been announced by Computerized Electronic Education, Inc., 214 Long Lane, Upper Darby, PA 19082. Designated Model DC1542, the duplicator is available in a two-track monaural version. In one pass, both halftrack recorded bands are duplicated at four times normal speed. Standard reel-to-reel configuration is used for the master playback tape. Four cassettes at one time are duplicated. While the master tape moves at 15 in/s the cassettes move at 7.5 in/s. All masters are at 3.75 in/s speed. The frequency response of the copied tape is 80 Hz to 10,000 Hz, 3dB with a high signal-to-noise ratio. Model DC1542 is priced at \$2,575. An additional 8-copy slave unit, Model DC1542C, is available at a price of \$2,375. Also available is the Model 2C75 cassette adaptor which allows the cassette to be the master. It is priced at \$399.

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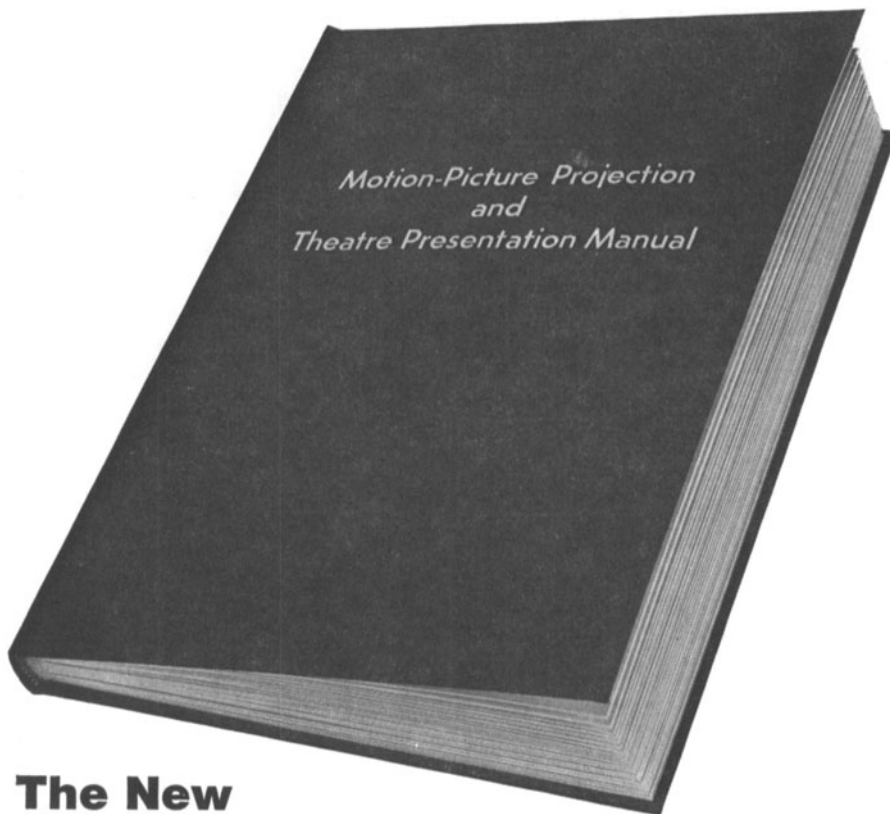
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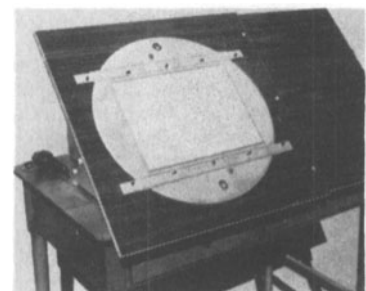
A new cassette duplicator called the Infonics Dualmaster Duplicator has been announced by Infonics, Inc., 1723 Cloverfield Blvd., Santa Monica, CA 90404. The new duplicator is designed to copy either reel-to-reel or cassette masters in one compact unit. It produces three half-hour cassettes every two minutes, duplicating all tracks at the same time. It is priced at \$2,995.

The Environ, Model 2N1, a new microphone which features switchable control of environmental sounds, has been announced by Ingenuics, Inc., 16000 Industrial Dr., Gaithersburg, MD 20760. By means of a distance discriminating network, integral



with the microphone, the user can switch from the Super Omni mode to the Noise Cancel mode. In the Super Omni mode, all sounds, both near and far, are picked up uniformly over wide acceptance angles. In the Noise Cancel mode the microphone responds to near sources of sound while suppressing, over a broad frequency spectrum, sounds which originate at a distance. The microphone is priced at \$189.

An animation package consisting of the Polytechnic Camera Stand (*Journal*, p. 392, Apr. 1970) plus the Animation Disk Easel and an acme-hole punch for art component register has been announced by Merv's Animation Aids, 17040 Otsego, Encino, CA 91316. The easel, designed to



systematize art production for any camera stand, is available with various combinations of pegs and bars. The easel can be placed on a desk or table at the desired working height and angle. Fluorescent backlight facilitates tracing, title, overlay make-up and register for art and matte work. The acme-hole punch has been designed for simplicity and economy while maintaining precision and durability. The package is priced at \$1000.

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