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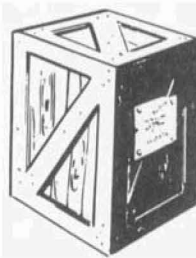


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Providence, RI 02903. He has been an adjunct teacher in the department since 1972. He was formerly Administrative Art Director, serving as artist and designer for the film studio of Educational Development Center, Inc., Newton, Mass., where he had overall responsibility for all film graphics, still photography and publications used in connection with the various film series.

Joseph Roizen, President of Telegen, Inc.,
4015 Fabian Way, Palo Alto, CA 94303,



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 ETV-616, a 16mm high-resolution, low-light-level TV camera, has been announced by Westinghouse Electric Corp., Westinghouse Bldg., Gateway Center, Pittsburg, PA 15222. The camera was designed for such applications as astronomy, bio-medical research, electron microscopy, spectroscopy and non-destructive testing. The ETV-616 system consists of a small (17-in) camera head and a camera control unit connected by a 10-ft (or longer) cable. The camera tube is a 16mm EBS (Electron Bombarded Silicon) tube (WL-31960). It has high sensitivity, high signal current output and high resistance to burn from bright light sources. The camera is ruggedly constructed, compact and light weight (4 lb), portable and easy to operate. It has an automatic gain control range of 10,000:1. The price is \$10,900.

The Supermatic Film Videoplayer VP-1 (*Journal*, p. 524, June 1973) is now priced at \$1,095, it was announced by Eastman Kodak Co., 343 State St., Rochester, NY 14650. The price was formerly \$1,195. The reduction in price is due to recent technological advancements and anticipated manufacturing efficiencies, the announcement stated. The VP-1 allows color and sound super-8 film to be played over a

has been awarded the EMI Premium by the Royal Television Society of Great Britain (RTS) for a paper on the Rank Cintel 9000 Broadcast Videotape Recorder. The paper was presented at a meeting of RTS on 6 June 1973 in London. The 9000 is a segmented scan helical recorder for television program origination which had been developed under a joint program by International Video Corp., Sunnyvale, Calif., Rank Cintel of Great Britain, and Thomson-CSF of France. Mr. Roizen had been a consultant on the project since its inception.

standard television receiver or a television distribution network.

The Sony Color Video Projection System which enables viewers to watch color video and TV pictures on a 50-in (diagonal) screen has been announced by Sony Corp. of America, 9 W. 57 St., New York, NY 10019. The color picture light source is the Trinitron® tube specially developed for projection purposes. The source brightness is more than 500 fL and the picture brightness is more than 10 fL. The projection system consists of the VPP-2000 color video projector, the VTU-200 video tuner and the VPS-500 video screen. It projects direct color TV broadcast pictures or images from a videotape or videocassette player or recorder or a closed-circuit camera using the single-gun, 3-beam Trinitron tube and a specially designed large projection lens. Optimum viewing is from 10 to 50 ft from the screen. Viewing is possible in moderately lighted rooms; total darkness is not required. Price of the system including tuner, projector and screen is \$3,045.



Three new television monitors—two color and one monochrome—have been announced by Conrac Division, 600 N. Rimsdale Ave., Covina, CA 91722. The first new color monitor is the latest version of Conrac's RHB Series. It incorporates a number of improvements including a switchable corrective color matrix which corrects for colorimetry errors introduced by the difference between NTSC encoded camera outputs and modern rare earth phosphors. Picture tubes in use today have different color phosphors than those specified in NTSC standards, which were formulated before rare earth phosphors were available. By correcting for the differences, the RHB color matrix enables the program director or technical director to see much



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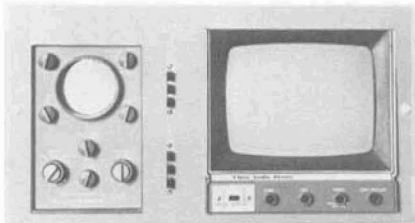
more precisely the actual colorimetry of the final transmitted signal. The price is \$3,500.

The second color monitor is the Model 5500 Series 12-in color monitor. Improvements include greater stability of the luminance channel through a change to ac coupling. New operator conveniences include the addition of preset controls on all versions for chroma, phase, brightness and contrast. The price range is \$2,130 through \$2,440.

The new monochrome monitor, the QQA, is a high-resolution unit featuring switch-selectable field rate. It is intended for medical x-ray, document viewing and military applications. It is available in 14-, 17- and 21-in versions with a price range from \$1,195 through \$1,335.

The Model SP-425-MRG, a versatile unit which reads or generates any one of nine IRIG time codes, has been announced by Datametrics, Inc., 340 Fordham Rd., Wilmington, MA 01887. The unit provides time of year information on a front panel LED display in days, hours, minutes, seconds and milliseconds. It includes an internal crystal-controlled time base and manual clock set controls. As a reader, the unit includes a wideband AGC amplifier and error bypass for reliable operation when reading time code from magnetic tape. The basic Model SP-425-MRG provides serial time code output and parallel BCD outputs for operation with the Model

SP-425-TS tape search unit. Options include dual switch selectable filters for playback and search speeds, AGC time constant switching and slow code outputs. Prices begin at \$3,245.



Model WP-39, a rack-mounted combination of a waveform monitor and pulse cross monitor, has been announced by Ultra Audio Pixtec, Box 921, Beverly Hills, CA 90213. The instrument requires a height of six rack-units. A pushbutton accessory provides independent 3-source input selection for each monitor. The price is \$1,290.

The CVI Model 350 Video Analyzer, designed to provide a means of checking television waveforms by displaying them directly on the screen of an ordinary TV monitor, has been announced by Colorado Video Inc., P.O. Box 928, Boulder, CO 80302. The waveform generated by the 350 is superimposed directly over the TV image in the form of a clear, white trace on the left side of the TV screen. Reference lines are also generated electrically to assist in the proper setting of video levels.

The unit can operate in two different modes. In one a narrow strip of information is shown vertically down the center of the TV picture providing the vertical equivalent of line selection making it possible to analyze the relative brightness of subjects in the center of the TV raster for lighting or contrast adjustments. The second mode of operation detects video peaks anywhere in the TV raster and displays the resultant composite signal as a single trace on the left side of the TV screen. Model 350 is priced at \$400.

The Mark II Automatic Skew Corrector, a device that eliminates picture distortion in videocassette playback has been made available by Goldmark Communications Corp., One Communication Plaza, Stamford, CT 06904. Skew, or horizontal picture distortion, has been a major problem for users of helical-scan cassette videotape players. If the tape tension is not correct a resulting timing error causes the picture to be skewed to the left or the right. The Mark II in operation senses any change in periodic timing of video pulse synchronization and automatically adjusts tape tension to eliminate picture distortions. Consequently picture skew is detected and corrected before it reaches the viewer's television screen.

The Automatic Skew Correcter was described by Thorsten P. Cook in the April 1973 issue of the *Journal* ("An Automatic Skew Corrector for Helical-Scan Cassette Videotape Players" (pp. 287-289)). The device (patent pending) is priced at \$350. Nonexclusive marketing licenses have been granted by Goldmark Communications to Dayton Communications of Ohio and Applied Electronics, Toronto, Canada.



The 75 Ω Pulse Delay Unit UN068 has been announced by Matthey Printed Products Ltd., William Clowes St., Burslem, Stoke-on-Trent, England. It is available in the United States from Television Equipment Assoc., Box 1391, Bayville, NY 11709. The instrument, described as a "do-it-yourself" unit, consists of a metal box with BNC connectors providing a programmable delay section which the engineer can easily connect to the delay required. Wiring instructions are printed inside the box. If a change of delay time should become necessary, the connections can easily be altered. The delay range covered is from 5 ns to 4500 ns. The degree of accuracy required can be either steps of 5 ns or 100 ns. Prices range from \$61 to \$118.

The Beaulieu 4008M3 super-8 camera has been announced by Herculite Corp., 14225 Ventura Blvd., Sherman Oaks, CA 91403. It is equipped with a Beaulieu-Optivaron

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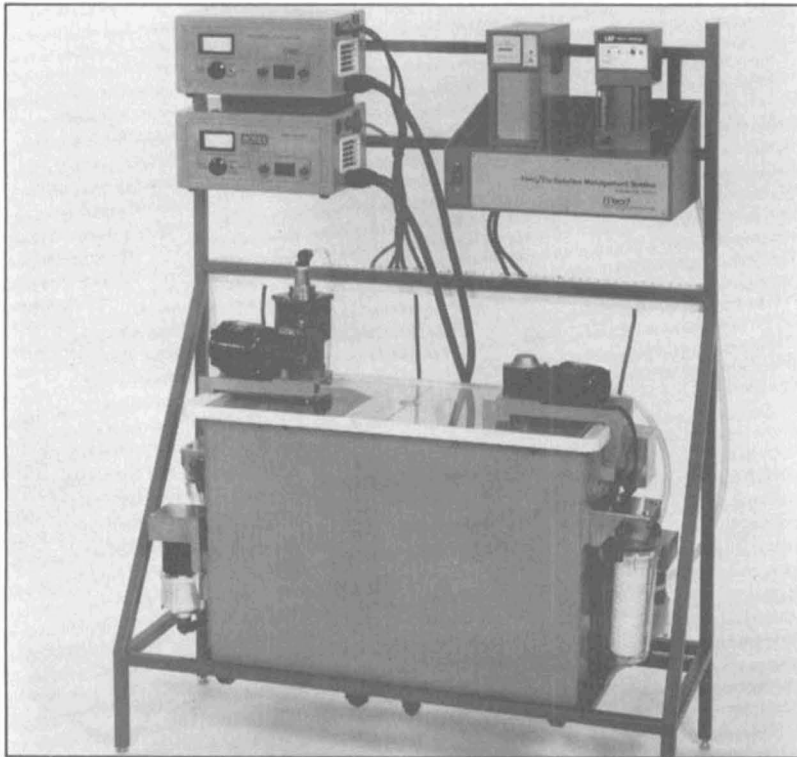
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The Model 674/XL super-8 low-light movie camera has been announced by Bell & Howell, Consumer and Audio-Visual Product Group, 2201 Howard St., Evanston, IL 60202. Features include a contrast control switch to adjust the electric eye setting to compensate for backlit conditions or extreme contrast situations. The camera is equipped with a specially-designed shutter and fast lens, making it possible to produce movies without movie lights and even in many minimum lighting situations. Other features include the Focus-Matic® sensor device to determine accurately the camera-to-subject distance, reflex viewing for accurate framing of the subject and a CdS electric eye to assure the correct lens opening. Price of the 674/XL is \$229.95.



The Bolex 480 Macrozoom, a super-8 camera combining an 8:1 zooming range

with macrofilming capability, has been announced by Paillard Inc., 1900 Lower Rd., Linden, NJ 07036. An "action light" at the front of the camera indicates to the actors when they are "on camera." The camera has the capability of focusing from infinity to the point where the *f*/1.8, 7-56 zoom lens touches the subject. Other features include a slow-motion speed capability of 40 frames/s in addition to normal speeds of 18 and 24 frames/s. The camera also offers single-frame filming and a contact for electronic flash in single-frame filming. This contact is also used for connection to a tape recorder for sync sound filming. A cable release is supplied for continuous or single-frame filming. Other features include an adjustable footage counter and marking disc to indicate correct footage even when a cartridge is changed in mid-roll. Zooming is done either manually or electrically with a two-speed power zoom. The Bolex 480 is priced at \$429.50.



The Bauer Top Star XL super-8 camera, described as the "smallest XL camera with a power zoom lens" has been announced by AIC Photo, Inc., 168 Glen Cove Rd., Carle Place, NY 11514. The pocket-sized camera is equipped with a 2.5× power zoom lens with a range from 8mm wide angle to 20mm telephoto. It has an *f*/1.2 lens and automatic through-the-lens exposure control which can close down to *f*/32. The 225° shutter has an additional half-stop to allow maximum light to reach the film to permit filming in low light conditions. The power zoom is controlled by two separate pushbuttons, one for wide angle and the other for telephoto in a shooting range from 5 ft to infinity. The camera weighs 1 lb and is 6 in long. The price is \$199.95.

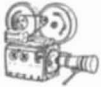


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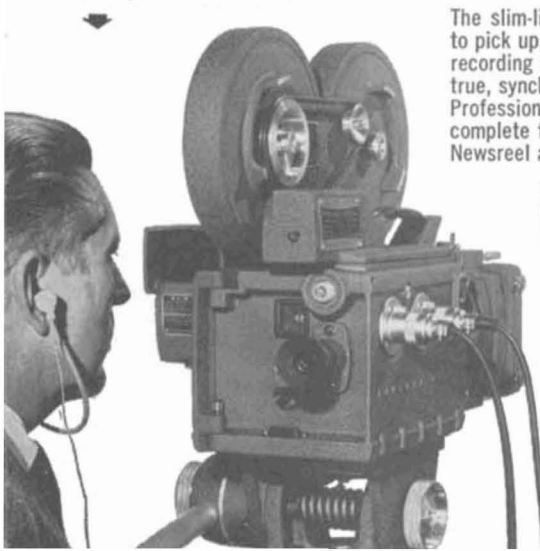


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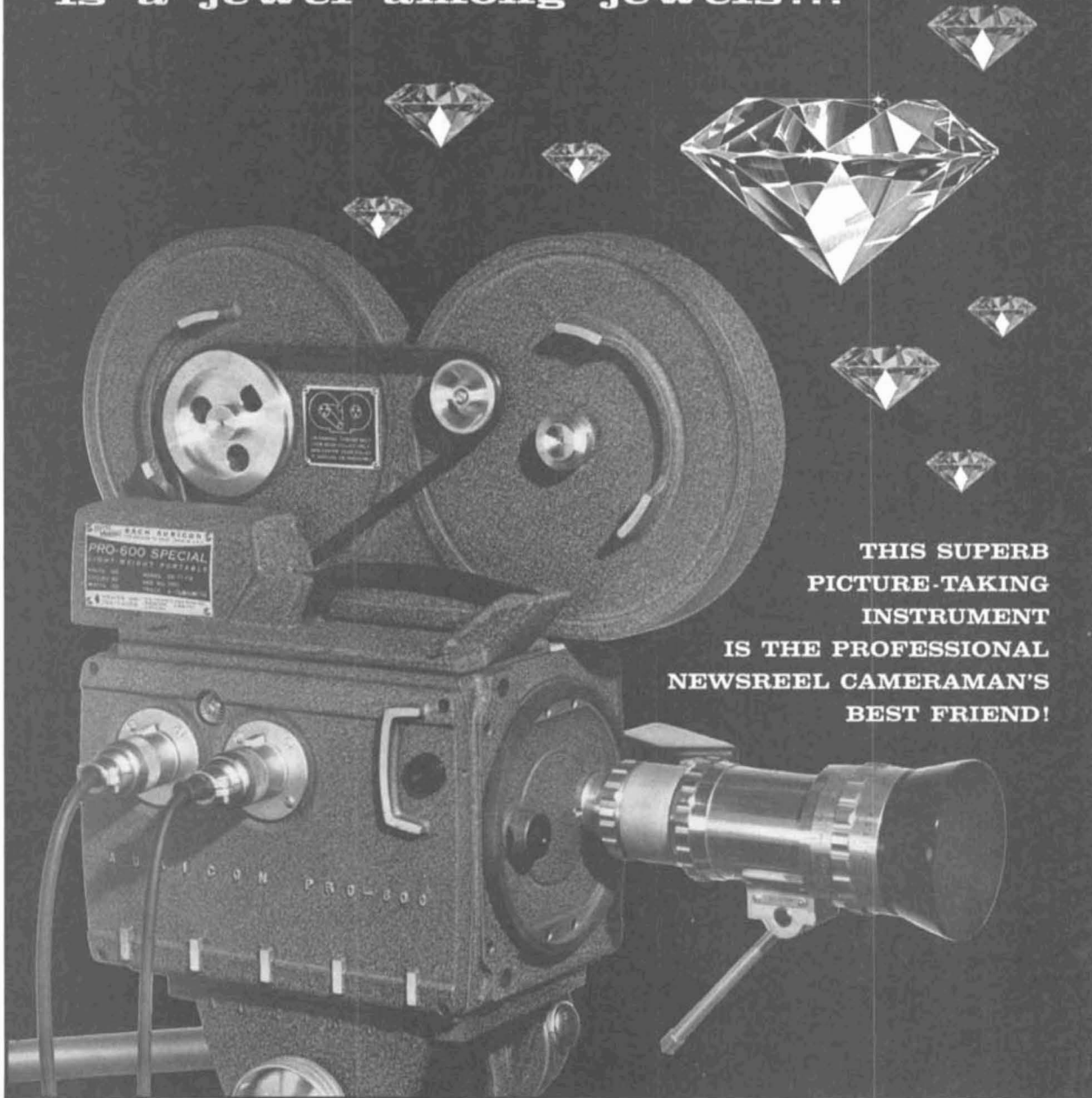
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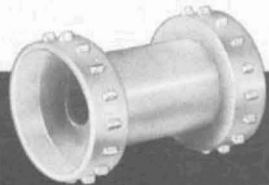
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nounced by Arriflex Co. of America, Box 1050, Woodside, NY 11377. The required 8-V or 12-V output is selected automatically by means of the special wiring in the 5-pin power cables of the respective cameras. The new Duro-Pack has a capacity of 2 Ah; at 70°F it can drive Arriflex cameras with 400-ft magazines from 1200 to 1800 ft. The new battery can be recharged in 12 h or less by means of its own external miniature charger from regular 120 V, 60 Hz, ac power lines. The battery measures 6½ by 4½ by 1¼ in and weighs 33 oz. The price of \$196 includes the separate charger.

The Cine-Slave CS-4, an improved version of the Cine-Slave Synchronizer (*Journal*, p. 336, April 1973) has been announced by Inner Space Systems, Inc., 102 West Nelson St., Deerfield, WI 53531. The front panel has been rearranged for greater convenience and the box itself changed to a more distinctive design. The Cine-Slave CS-4 is equipped with a new "brain" card which has a memory, enabling it to remember if the slave device has gained or lost sync pulses. Although needs vary with different pieces of equipment the card can be put together to remember from 1 to 2000 pulses lost or gained. The new card is planned to eliminate problems, such as loss of sync due to sticking film cartridges. Price of the CS-4 is \$329.70.



The Universal Synchronizing Unit, a special type of digital phase-locked loop that drives a motor control unit for super-8 and 16mm cameras, has been announced by Digital Film Equipment Div., Whitehead Enterprises, 1205 West Drew, Houston, TX 77006. It is designed primarily for wireless sync shooting in which the camera is not connected to the tape recorder. The loop is compatible with a wide variety of cameras and ensures a rapid start. The unit compares the speed of two machines and adjusts the speed of the slave to match the speed of the master. The loop receives electrical pulses from the machines to indicate their speeds and either directly or through accessories can control the motor of various types of film equipment. The 24-60 (or 25-50) pulse rates can be used for either the master or the slave or an internal crystal can be used for the master. The Universal Synchronizing Unit is priced at \$300.

The Mini-Q/11, a memory control system for theatrical and television lighting which

can store 128 complete cues or presets for up to 96 dimmer units, has been announced by Strand Century Inc., 20 Bushes Lane, Elmwood Park, NJ 07407. The system, of modular design, is completely self-contained. Each module with its mounted electronic components, potentiometers, switches and other devices, plugs directly into a master console. Modules can be added to, substituted or removed from the system without affecting its overall operation. Prices begin at about \$12,500.

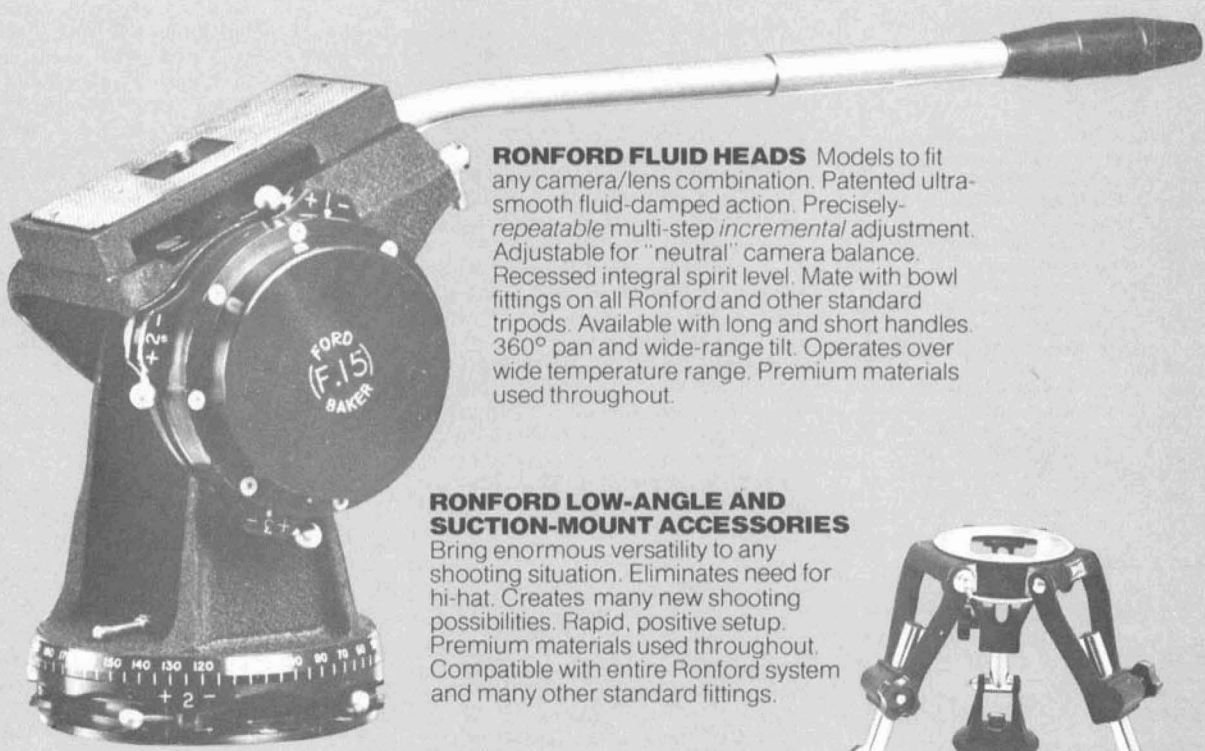
Designer patterns for use in framing (ellipsoidal reflector) spotlights have been announced by Berkey Colortran, 1015 Chestnut St., Burbank, CA 91502. Designed by 10 well-known set designers, the patterns are fabricated from thin section stainless steel and are strong enough to be used in any make of 4½ to 12-in diameter lens units. They can be cut to size with scissors. Twenty-four patterns are available, including Arabesques by Boris Aronson, Windows by Jules Fisher, Clouds by Danny Franks and Fire Escapes by Robin Wagner. The actual pattern size is 3 in in diameter. The patterns are supported in a universal 3⅞ by 4⅞-in frame that can be cut to fit almost any pattern holder or slot. Single units are priced at \$6.00. They are also available in kits of six at a price of \$29.50 or 24 at a price of \$99.50.



Grandson, Model 110 (Grandson of 36 Grand), an expandable, modular professional recording/remixing/on-air audio control console, has been announced by Auditronics, Inc., 180-B S. Cooper St., Memphis, TN 38104. (The Son of 36 Grand is described on p. 706 of the August 1973 issue of the *Journal*.) Model 110 is a free-standing unit designed to accommodate up to 16-track recording and on-air applications. It is expandable to 18 mixing positions (36 inputs) in 36-in width. Features include complete metering, two echo send/receive channels, talkback communications, separate control room and studio monitoring, test oscillator and matching accessories including a plug-in patch bay. The Grandson has been designed to fill the gap between conventional broadcast consoles and sophisticated recording consoles, the announcement stated.

Monitoring functions and muting circuitry are TTL controlled and may be reprogrammed to meet specific requirements. The unit is available with 2, 4 or 8 program output channels. A stereo panpot and multi-station switches at each input position provide assignment to one or more program output busses simultaneously. The 2-channel Grandson console is priced at \$2,435. A 4-channel console is available at a price of \$3,010.

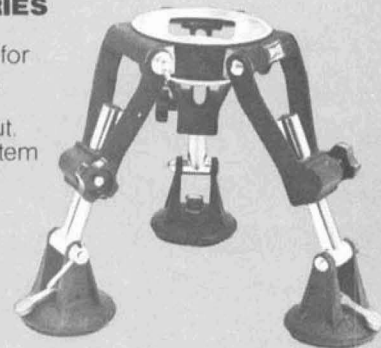
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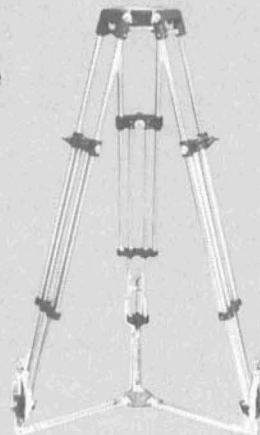
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Accessories available for both watches include the "THIRD HAND" velcro wrist band kit for mounting as a wrist watch and a RUBBER NOISE SUPPRESSOR and SHOCK ABSORBER COVER. BIRNS & SAWYER, INC., 1026 North Highland Avenue, Dept. A, Los Angeles, California 90038, (213) 466-8211, Telex 673280, Cable: BIRNSAW HOLLYWOOD.



A voice-activated microphone gain controller with a response-shaped "voice-frequency" sensor has been announced by Shure Brothers Inc., 222 Hartrey Ave., Evanston, IL 60204. Designated the Model M625 Voicegate, the device functions between the microphone and the mixer. It attenuates the microphone output signal by about 16 dB until the microphone is excited by a voice. The Voicegate then removes the attenuation almost instantaneously, allowing the unattenuated microphone signals to enter the mixer, thus allowing all microphones in a multi-microphone installation to be "on" when required while minimizing ambient noise pickup and feedback danger. Use of the device makes unnecessary a sound engineer to monitor and control microphone gain. Model M625 is ac-powered and can also be powered by a 9- and 30-V external dc source. It is priced at \$120. Also available is the Model M625AM, a modular unit which takes its power from the M625. It is priced at \$97.50.

The Acme System 3, a laboratory system containing an optical printer, an additive lamphouse and a liquid film gate in one complete package has been announced by the Acme Products Div. of PSC Technology Inc., 1200 Grand Central Ave., Glendale, CA 91201. The step optical printer is complete with camera and projector, pin-registered film movements and an optical system for blow-up, reduction and 1-to-1 printing. The additive lamphouse is a manual additive light source with adjustable dichroic light valves to provide print color balance and density control over a range of four f/stops in each color of "one-light printing." The liquid gate provides a choice of super-8, 16mm, super-16 or 35mm liquid film gates fully pin-registered and interchangeable with dry movements without the need for tools. A support system is provided to supply the liquid to the gate. The liquid gate conceals scratches and abrasions, removes surface debris and produces clean prints. Price of System 3 is \$39,950.

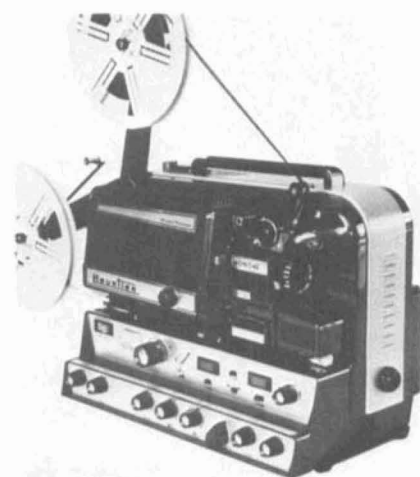
The 529 Series Cine/Strip Processors has been announced by Pako Corp., 6300 Olson Memorial Hwy., Minneapolis, MN 55440. The processors, designed to meet the needs of both large and small laboratories, are available in four models for films ranging in size from 8mm to 70mm. Features include compact size, modular design, cradle-drive film transport system and stainless-steel construction. Other features include accurate temperature controls, built-in alarm systems, in-line dryer and rotary buffer system. A centralized control panel simplifies operation while

providing control over time, temperature, agitation, replenishment and wash water flow rates. Daylight and darkroom models are available. Prices range from \$16,900 through \$18,975.

An improvement in code number designations for Kodak Control Strips, Process ME-4 and Process ECO-3, has been announced by Eastman Kodak Co., 343 State St., Rochester, NY 14650. The code numbers were changed to provide for less sensitometric variability between the Kodak Reference Strip of processed film and the pre-exposed control strips packaged in the same carton. The four-digit code number used to identify each batch has been expanded by one digit (e.g., ME-4-4017-2) to designate a specific lot within the batch. The expanded number will be printed on the carton, on the can, and on the paper sleeve containing the reference strip. The lot identification appears on the reference strip itself as a punched number at the end of the strip. However, only the batch number without the lot identification appears on each of the pre-exposed control strips.

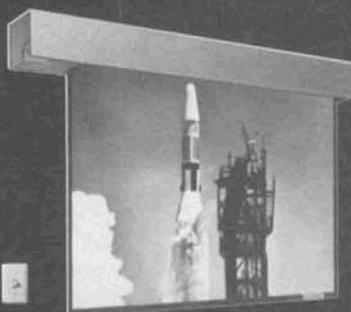
The Hercul/Cinekon dual 8 viewer editor has been announced by Hercul Corp., 14225 Ventura Blvd., Sherman Oaks, CA 91403. Designed for ease of operation, features include "one-touch" film format changeover to permit viewing of 8mm and super-8 films, a Fresnel lens screen 3½ by 5 in for maximum screen brightness, a built-in On/Off switch and a winding brake to prevent the film from becoming loose. The new viewer/editor is priced at \$49.95.

The Hercul/Minette tape splicer for super-8 and 8mm films has been announced by Hercul Corp., 14225 Ventura Blvd., Sherman Oaks, CA 91403. The splicing tape is affixed to a paper surface and it is from the paper surface that the tape is transferred during the final steps of making the splice. The splicer allows for a 1-mm "clearing" on the recorded side of the film so that the soundtrack will not be affected or damaged. The splicer is priced at \$9.95.



The Heurtier ST 42 Duo-Play super-8 sound projector has been announced by Hercul Corp., 14225 Ventura Blvd., Sherman Oaks, CA 91403. The new projector

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The Sennheiser MKH 415 Super-Cardioid
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provides for sound recording on both tracks of Kodak Ektasound film or film sound-stripped by Hervic Corp. The Duo-Play has three magnetic sound heads to permit sound recording on either or both of the stripes ("sound" and "balance") of Ektasound film. Described as "balance stripe recording," recording of additional sound, such as background music, commentary, etc., can be made directly onto the balance stripe without harming the original recorded sound. The Duo-Play has projection speeds of 18 and 24 frames/s, forward and reverse. The price is \$799.

The Hamton Educator, a newly designed study carrel incorporating a pair of projectors and a rear-projection screen as well as a cassette playback deck, has been announced by Hamton Engineering Associates Inc., 735 Providence Hwy., Norwood, MA 02062. The projectors are housed in a lockable cabinet and the cassette deck is flush-mounted in the table surface to the right of the screen housing. Sound motion pictures are displayed by a modified Kodak Supermatic 60 or 70 super-8 sound projector. Slides are projected by a Kodak Carousel or Ektagraph projector. Depending on various electronic options, the system may be programmed to completely automate the entire device, including running the film, and alternating with slides as desired, or it may be used simply to provide audio information instructing the student as to which controls to actuate at any given point in the pro-

gram. Price range of the Hamton Educator is \$1200 to \$1500.

Also announced was the SuperShow Topper, a rear-projection device designed to fit all Kodak Supermatic 60 or 70 projectors. The Topper uses a supplemental lens to provide a full 17-in (diagonal) image at the front of the projector. The device reduces mechanical noise while keeping the projector and film dust-free. The supplemental lens can be used to double the image size when used for normal projection outside of the SuperShow hood. The price is \$150.

Condensing lenses in various diameters and focal lengths, mostly plano-convex are manufactured by Fish-Schurman Corp., 70 Portman Rd., New Rochelle, NY 10802 in heat-resisting and non-heat-resisting glass. The heat-resisting type is usually made from a high-grade, low-expansion borosilicate glass with a coefficient of expansion of 32×10^{-7} . The glass for the $4\frac{1}{2} \times 6\frac{1}{2}$ in, $4\frac{1}{2} \times 12$ in, 6×12 in, 6×16 in and 8×20 in is optically strain-free and so can be used in making polariscopes or photoelasticity machines in addition to projectors, photographic enlargers, spotlights, etc. Because the low-expansion glass readily transmits in the infrared, it may also be used with xenon or halogen lamps to assist in illuminating the infrared region with low-light-level pickup tubes. Prices for each piece of heat-resisting glass range from \$3.00 to \$25, and for non-heat-resisting glass prices range

from \$3.00 to \$125.00. Aspheric lenses are available on special order.

The AG-440C Series professional audio recorder/reproducer for recording studios, radio stations and professional recording uses in education, industry and government has been announced by Ampex Corp., 401 Broadway, Redwood City, CA 94063. The design of the 440C stems from the AG-440 and 440B Series. The new design incorporates improvements in the manual controls, tape guidance, electronics, signal-to-noise ratio, tape editing and serviceability. The 440C transport eliminates the problem of switching from fast forward-rewind to play by adding motion sensing. Edit control releases the transport brakes, eliminating handling of the tension arm. Sapphire guides and a flutter idler reduce skew, thereby improving tracking. The AG-440C is available in full-track, $\frac{1}{2}$ -track, two-track and $\frac{1}{4}$ -track configurations for $\frac{1}{4}$ -in tape and a four-track configuration for $\frac{1}{2}$ -in tape. Prices for the AG-440C series range from \$2,585 to \$9,950.

The EMT-117TS Tuning Generator, A self-powered, handheld device with a self-contained loudspeaker which emits an oboe-like tone tunable precisely in 1-Hz steps from 435 Hz to 445 Hz, has been announced by Gotham Audio Corp., 741 Washington St., New York, NY 10014. A switch activates a tremulant generator which imparts to this tone the human qualities of an oboe actually being played. The unit has a connector which allows external 9-V powering and which feeds the audio signal to larger speaker systems when required. The price is \$370.

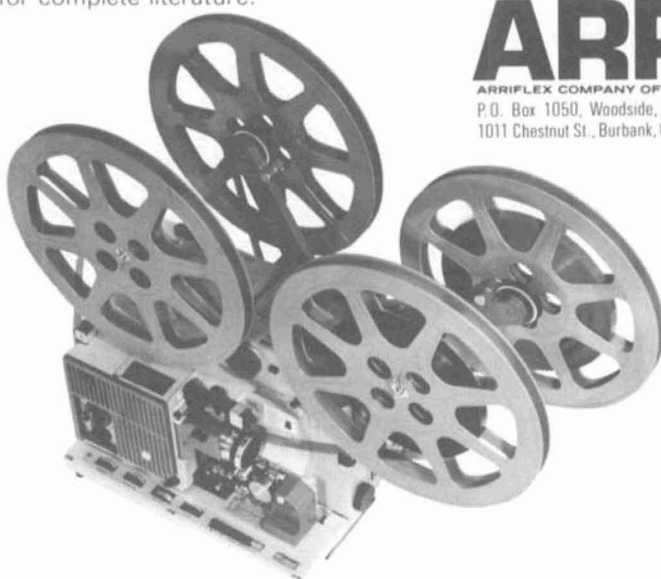
The Fishpole Plus, a versatile pole designed for adaptability, and the Universal Microphone Suspension, a device with adjustable floating strength (elasticity) using ordinary rubber bands, have been announced by LM Devices, Box 327-A, Cove Rd., Putnam Valley, NY 10579. The fishpole, complete with counterweight, weighs 5 lb. Silent microphone cuing is achieved with a closed grease-packed right-angle flexible shaft in ball bearings. The microphone cable is inside the 12-ft telescoping pole terminating in an XL receptacle and plug. The pole is silent, whether it is sliding, swinging or rotating. A fork (rotating in a nylon sleeve on top of the vertical pole) holds an aluminum sleeve lined with canvas containing the fishpole. The fork has a locking device to hold the fishpole in one position. For transportation, the components are packed in a plastic container 5 ft long, 3 in in diameter with walls $\frac{1}{4}$ in thick. The price of \$195 includes the transport case.

The microphone suspension device can be used with microphones from $\frac{3}{4}$ - to 1-in diameter. It permits the microphone to be held in any position with balanced suspension and firmly locked. The price is \$36.

The Model 560 color TV projector, a solid-state unit capable of projecting full color pictures on screens 6 to 12 ft wide, has been announced by Projection Systems, Inc., 590 Alps Rd., Wayne, NJ 07470. The projector accepts video signals from sources such as off-the-air broadcasts using an external RD demodulator; closed-

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circuit cameras; videotape recorders; cable TV; or computer terminals. The unit uses three high-brightness, rare earth phosphor, 5-in projection tubes operating at 40,000 V. Each tube is mounted in a computer-matched optical system for maximum brightness and resolution. Model 560 is priced at \$12,500.



A pocket-sized calculator providing programming capability has been announced by Hewlett-Packard, 1501 Page Mill Rd., Palo Alto, CA 94304. Designated the HP-65 calculator, it enables users to write and edit their own programs; to use prerecorded programs developed by Hewlett-Packard to solve frequently encountered engineering problems; and to operate the 51 keyboard functions preprogrammed into the machine. Price of the 11-oz, battery-powered machine is \$795.



The improved Minolta TV Color Analyzer has been announced by Sargent-Welch Scientific Co., 7300 N. Linder Ave., Skokie, IL 60076. The instrument is designed to eliminate the variations of visual judgment occurring in visual balancing of TV color monitors and quality control during color receiver manufacturing. It permits precise color balancing through independent or simultaneous readings of primary colors against an objectively measured white standard. Once the instrument has been properly balanced, the characteristics may be stored in a removable memory module and repeated as often as desired without variation. A pre-calibrated module can be used daily to check the performance of a color monitor against its previous performance. The memory module can also be used as a reference for several monitors providing they are similar in

phosphor characteristics. A specially designed matrix system eliminates crossover interference and error with no effect on signal-to-noise ratio. The instrument's power circuit is stabilized to guard against fluctuations in ac voltage. The instrument is priced at \$1,995; extra modules are priced at \$250.

The X-Y Memory, Model TK2214, announced by Marconi Instruments, Div. of Marconi Electronics Inc., 111 Cedar Lane, Englewood, NJ 07631, has been designed to enable any oscilloscope to present a continuous, flicker-free picture of slow-moving repetitive or single recurring signals. X and Y information from the measuring system is fed to the input of Model 2214 where it is digitized and stored in a memory comprising MOS dynamic shift registers. The output from the memory is then continuously scanned and converted back to analog together with a coincident X-ramp which can then be displayed with infinite persistence on a simple display unit. A dual memory mode is an added feature which allows retention and display of half the memory while displaying the real time characteristic using the other half. The X-Y Memory is priced at \$1,295.

A new solid-state reference generator has been announced by Hammond Electro-Mechanical 4806 Colfax Ave., North Hollywood, CA 91601. The unit provides reference frequencies for material shot at 24 frames/50 Hz; 25 frames/50 Hz; and 25

frames/60 Hz. Output is compatible with Magna-Tech 92C and Nagra SLO resolvers. Either 1 $\frac{3}{4}$ -in rack mount or Black Box models are available at a price of \$159.

A field mobile frequency counter in an improved version of Model 2424 has been announced by Marconi Instruments Div. of Marconi Electronics Inc., 111 Cedar Lane, Englewood, NJ 07631. The new version has been designated Model 2424A. Continuous frequency coverage from 10 Hz to 512 MHz together with a low 10-mV input sensitivity make it possible to use the instrument for general laboratory applications as well as for field portable applications. Frequency is displayed by a four-digit solid-state LED readout with an effective eight-digit count achieved by means of front panel switches giving a 10-Hz resolution with a reading time of 3.2 s. Model 2424A is priced at \$1,295.

A new FM/AM modulation meter, Model 2300B, has been announced by Marconi Instruments Div. of Marconi Electronics Inc., 111 Cedar Lane, Englewood, NJ 07631. A new electrically-tuned local oscillator reduces FM noise and virtually eliminates microphony. Model 2300B measures FM deviation up to 500 KHz at carrier frequencies up to 1200 MHz and AM depth up to 95% at carrier frequencies up to 400 MHz. Because of its wide range of deviation frequency, modulation bandwidth and carrier frequency, the instrument can be used with equipment for fixed and mobile communica-

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There are two basic types of test film. The first, for projection performance — picture only, is the **SMPTE 8mm Registration Test Film** (50 or 100 ft). This film has no sound track. Its purpose is to measure and help you adjust the optical and mechanical performance of your projection equipment. The patterns are designed to measure and adjust aperture size and position, jump, weave, travel ghost, lens focus, and film buckling.

The second type is for Super 8 Magnetic Sound. There are four all together, each of which was recorded on full-coat magnetic stock with a Super 8mm .1667-in pitch, and contains a 24-mil record in the edge track position.

- The four films now available are:
- 1. Azimuth Alignment Test Film** (50 ft) which is used to align the azimuth position of the recording and reproducing heads on magnetic sound equipment.
 - 2. Flutter Test Film** (50 ft) to measure flutter introduced by sound reproducers, contains an original recording with extremely low flutter content.
 - 3. Signal Level Test Film** (50 ft) helps measure and balance the power level output from motion picture sound reproducers. The recorded level does not in itself indicate a program level, but provides a reproducible reference from which a recommended program level can be determined.
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For further information, please mail the coupon immediately.

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<input type="checkbox"/> Multifrequency	<input type="checkbox"/> Signal Level
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Co. or organization _____	
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City _____	
State _____ Zip _____	

tions, telemetry and multichannel links. Model 2300B is priced at \$2,650.

A new 35mm 2000-ft shipping reel made of Plio-Magic has been announced by Plastic Reel Corp. of America, 640 South Commercial Ave., Carlstadt, NJ 07072. The new reel weighs 1 lb as compared to the weight of a steel reel of about 2½ lb. The Plio-Magic reels are resistant to bending, breaking, binding, warping and chipping.

Two new electronic counters, with high-stability crystal time bases, 25-mV sensitivity, that ratio as well as frequency measurements, have been announced by Hewlett-Packard, 1501 Page Mill Rd., Palo Alto, CA 94304. The displays are high-visibility 7-segment LED's. The 80-MHz Model 5381A, presents a 7-digit display. Model 5382A counts to 225 MHz and displays 8 digits. Resolution of each instrument is 10 Hz at 0.1-s gate time, 1 Hz at 1 s and 0.1 Hz in 10 s. Both instruments can operate on external precision time-base

through a built-in rear connector, working at levels from 250 mV to 25 V. Price of Model 5381A is \$249; 5382A is priced at \$450.

Video-Tise (Advertising Through Videocassette), a new videocassette system designed to enable advertisers to tell their stories in color, sound and motion at the point of purchase, has been announced by Video-Tise, Inc., Cinevideo City, Woodbury, NY 11797. The display unit consists of a cabinet, about 5 ft high, 2 ft wide and 2 ft deep, equipped with a 17-in color TV set, a Sony U-Matic videocassette player and other electronic components. Operation is automatic. The unit can be set to rewind and repeat up to a one-hour program automatically by throwing one interior hidden switch. The machine operates on a 110-V line; and a built-in timer and counter provide an automatic check of the number of plays. In addition to advertising, the Video-Tise can be programmed as a communications or educational medium. It is available on a rental basis.

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Positions Available

Production Supervisor/Shop Foreman. Growing manufacturer of motion-picture laboratory equipment seeks young, aggressive machinist for junior management position. Must have laboratory experience or equivalent. Salary and fringe benefits commensurate with background. Foreign applicants invited. Contact Clay Ogletree, Carter Equipment Co., Inc., 1050 W. Florence Ave., Inglewood, CA 90301; (213) 677-6117.

TV Maintenance/Operations Engineer. For Public TV color station in W. Virginia. Excellent opportunities, geographic area, and equipment. Forward resume to: Mr. E. J. Podeszwa, Personnel Officer, West Virginia University, Morgantown, WV 26506. An equal opportunity/affirmative action employer.

Animation Cameraman. Experience desirable. Top professional and technical skill needed for a top studio. Experimental graphics and stop motion. Unique staff opportunity to join one of the best in the country. Goldsholl Associates, Inc. Call Tom Freese or Morton Goldsholl (312) 446-8300

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Systems Development Engineer. Two years experience with digital circuitry required, with good working knowledge of motion-picture and video tape equipment. The engineer must be innovative and able to take responsibility for moving products from R&D to production with minimum supervision. Work will lead to involvement with mini-computer film and VTR production systems. Applicant should enjoy country living. Send resume to Inner Space Systems Inc., 102 W. Nelson St., Deerfield, Wis. 53531. All replies confidential.



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