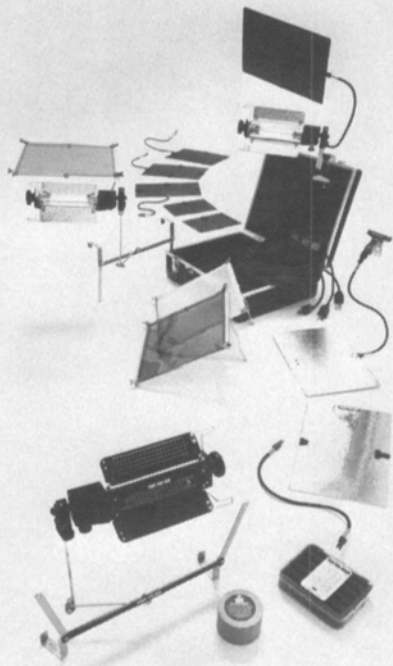


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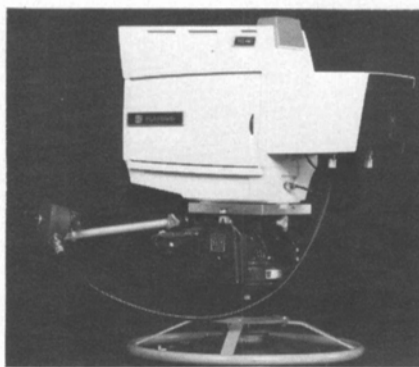
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New Products & Developments



A new series of ultra-high-speed prime lenses specially designed for 16mm cinematography has been announced by Cinema Products Corp., 2037 Granville Ave., Los Angeles, CA 90025. There are four lenses in the new Ultra T series — 9 mm (T1.35) and 12.6 mm, 16 mm and 25 mm (all three designated T1.25). The Ultra T prime lenses have focus and iris rings with built-in gears for motor-drive operation. The precisely calibrated focusing scale is removable to permit changing from the footage scale to an optional metric scale. The iris ring is marked in "T" stops only, with optional free or click-stop operation. There are spacer shims under all mounts to permit "fine tuning" by the user if desired. The helical focusing mount utilizes an intermediate fine-pitch, close-tolerance brass ring for aluminum-brass-aluminum thread contact for minimum wear and maximum focus scale expansion. Other features include easy interchangeability between CP mounts and other mounts. A set of the four Ultra T prime lenses supplied with CP mounts or other mounts is priced at \$4500. Each lens may also be purchased individually.



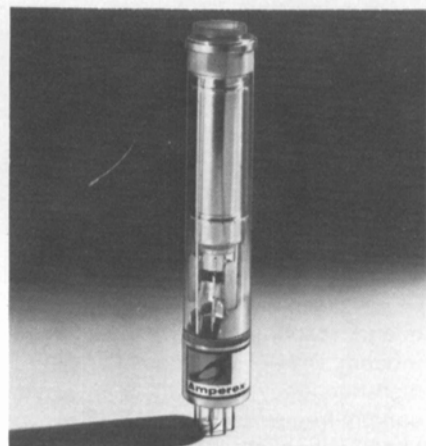
A new color television camera, the TC-50, a prism camera using three 1-in Plumbicons, has been announced by Harris Corp., Broadcast Products Div., P.O. Box 290, Quincy, IL 62301. The prism, which includes all color separation surfaces, is built and installed as a sealed package unit in the camera. A five-position color correction filter wheel is incorporated in the optical system to allow for varying light conditions. The TC-50 is said to have outstanding capability under low light conditions. The optical system includes an integral bias light which reduces lag when operating at low light levels.

The camera's controls are centralized at the Camera Control Unit, making it possible to set up and operate the camera from the CCU. The CCU has three components — operate panel,

set-up panel control drawer, and power supply. These can be rack-mounted in one location or the operate panel can be remoted to another location. The TC-50 has been designed to accept long, heavy lenses. Other features include triple voltage regulation for stability, a rugged cast aluminum frame for precision alignment, electronic picture rotation, and an integral encoder with color bars. Prices (not including lens and tubes) begin at \$32,200.



The Tele-Athenar II series of lenses, ranging in focal length from 230 mm $f/2.8$ to 1200 mm $f/6.8$, has been announced by Century Precision Cine/Optics, 10661 Burbank Blvd., North Hollywood, CA 91601. The lenses have been designed to fit virtually all motion-picture, television and 35mm SLR cameras currently available by means of an interchangeable mount system. The lenses are manufactured in a neutral mount and a complete series of adapters are available to fit the various cameras, enabling a single lens to be used on a variety of cameras and formats. Each lens in the series has a built-in gelatin filter holder and long lens shade. Most models also accept standard screw-in or drop-in glass filters. Shown above is the 385 mm $f/4.5$ Tele-Athenar II. It is priced at \$399.50. The price does not include bracket or adapter.



A new 1-in Plumbicon has been announced by Amperex Electronic Corp., a wholly-owned subsidiary of North American Philips Co., Slatersville Div., Slatersville, RI 02876. The new tube, designated type S73XQ, is intended to permit the design of portable cameras for use in electronic field production that will provide performance equal to that of high-quality broadcast equipment. Physically interchangeable with conventional Plumbicons, the S73XQ

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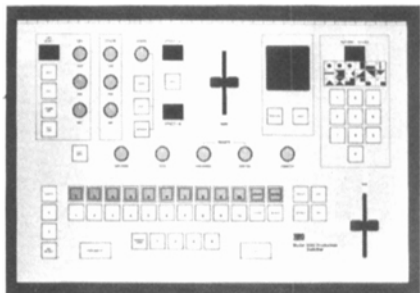
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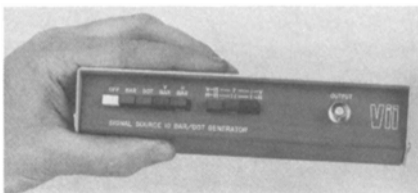
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can be used in existing cameras with only minor circuit modifications. Its limiting resolution is 1000 TV lines; modulation depth is 65% at 400 lines. Other features include increased beam acceptance of the tube's photoconductive layer, thus reducing signal decay lag even at low light levels. Decay lag at 50 ms is typically 2% at signal levels down to 50 nA. The S73XQ has an increase in beam reserve resulting in reduced comet-tailing and blooming and a low-capacitance target contact to allow overall SNR to be maximized. Another feature of the new tube is a modified triode electron gun operating in a diode mode. The "diode gun" is said to improve the electron beam's energy distribution uniformity to provide smaller spot size and better control over spot shape. The tube is priced at \$2200. The extended red tube is available at a price of \$2400.



A studio production switcher (Model 9000) with built-in microprocessors to provide event memory and simplified operation has been announced by 3M Company's Minicom Division, P.O. Box 33600, St. Paul, MN 55133. The use of micro-

processor technology allows for simplified control panel design and layout. A built-in memory allows preparation and storage of up to eight panel setups for recall during difficult production sequences. More than 20 effects are selected by a 10-key input bank. Twelve inputs including black burst and color background are available. Effects are generated in hard-switch, soft-switch or border-wipe form. A chroma-key feature is optional. The switcher's capabilities include wipes behind key, dissolves or cuts to key, dissolves to effects, fades to and from black, and dissolves behind chroma-key. The price is under \$15,000.



Signal Source 10, a device that develops a set of signals designed for display setup, has been announced by Visual Information Institute Inc., Box 33, Xenia, OH 45385. The composite video signal can also be used for "go — no go" video signal transmission testing in industrial distribution systems. The generator is 7½ in long, 3½ in wide and 1½ in high. It weighs 1 lb including batteries. It develops bars, dots, H bars or V bars in one of three modes — 21 × 15, 11 × 7 or 1 × 1 elements. The output signal is industrial interlace for the 525/60 scan rate at a level of 1 V overall (0.7 video + 0.3 sync) at a 75 Ω source impedance. Signal Source 10 is portable and

operates from two 9-V transistor radio batteries. Designed for field use, it is enclosed in a rugged metal case with all controls protected. It is priced at \$149.95. An optional external battery recharging unit is available with four batteries and two chargers to keep the unit in continuous operation. Battery life is approximately 2 h. An optional ac power supply for continuous bench operation is also available.

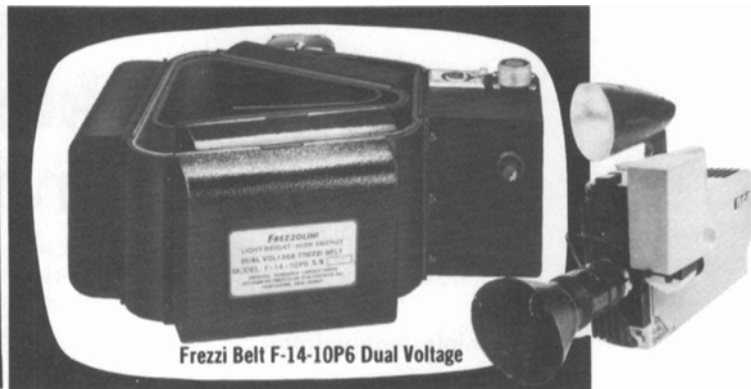
A new digital time base corrector, the TBC-2, has been announced by Ampex Corp., 401 Broadway, Redwood City, CA 94063. Developed for use with the new Type C helical videotape recorders, but compatible with all non-segmented VTRs, the TBC-2 features a correction window of 10 full lines in NTSC. The system makes possible continuous slow motion and picture in shuttle on the VPR-1 and VPR-2 production recorders. Color pictures at 10 times normal speed in either direction are possible. The Dynamic Correction™ features of the TBC-1, which combined "averaging" and line-by-line correction systems in a single unit, has been retained in the TBC-2.

When initially locking up and during severe error overloads, the TBC-2 uses an averaging correction technique that permits even severely degraded video to pass properly through the system. With normal quality video the TBC-2 automatically switches to line-by-line correction. In addition to Dynamic Correction the TBC-2 has fast and smooth overload characteristics should time-base errors exceed the 10-line correction window. This feature allows it to handle the severe gyroscopic errors of ¾-in recorders without degrading picture quality. A universal

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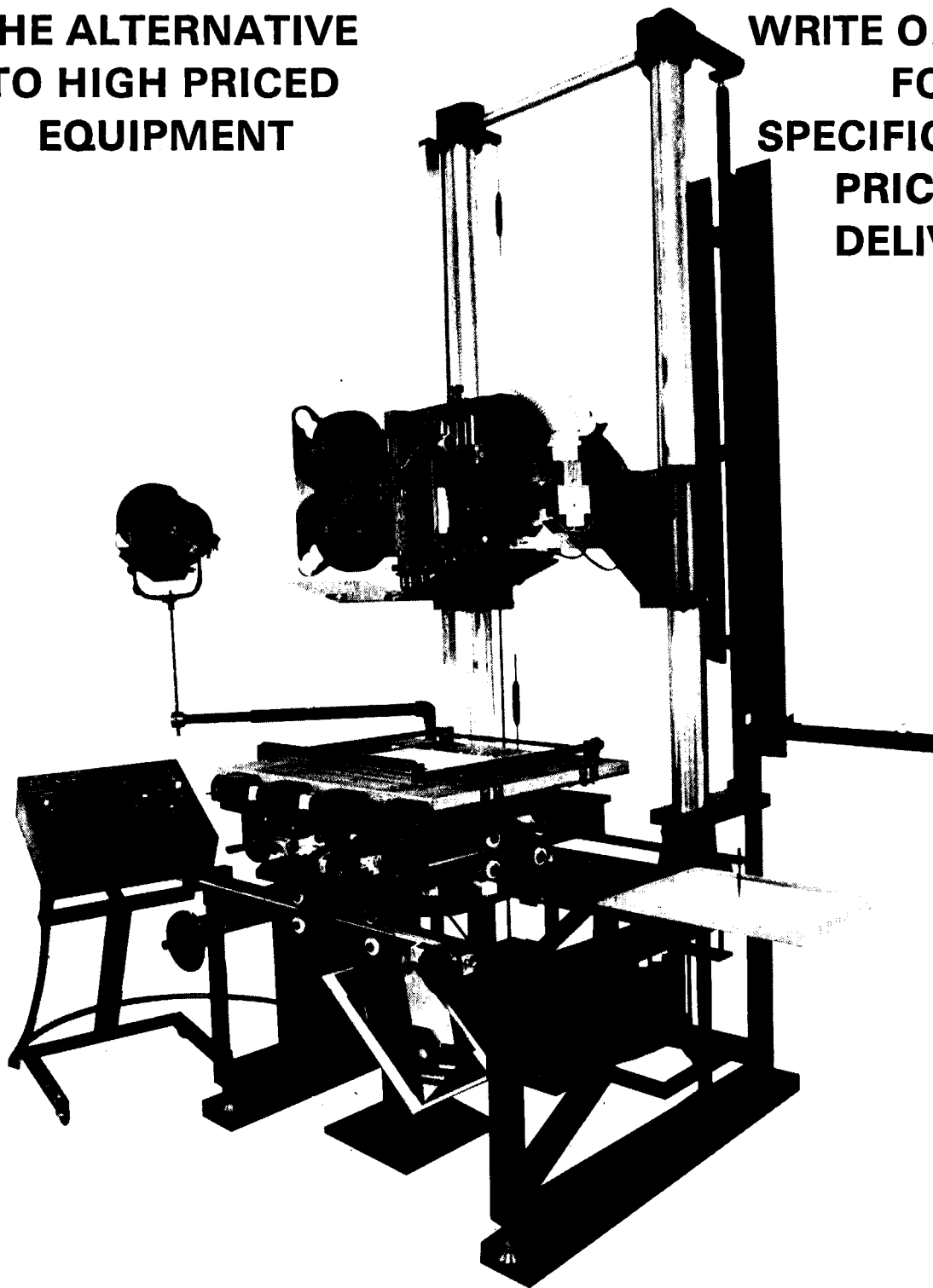


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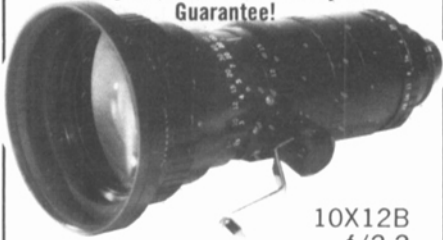
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VTR interface is built into the TBC-2 and no VTR modifications are required for most recorders. The TBC-2 is priced at \$17,600. Options include a line-by-line velocity compensator that enhances performance and improves the quality of multiple-generation dubs and a non-capstan servo VTR accessory. Also available are a dropout compensator that replaces dropouts with information from the previously correctly-phased line of video, and a heterodyne color processor that is switchable with the standard direct color recovery system.



The automatic JVC Vidstar VHS 1/2-in videocassette system has been announced by Media Concepts, Inc., 559 49th St. South, St. Petersburg, FL 33707. Designated Model MCI-A-3300, the system's features include automatic rewind at the conclusion of each full play and multi-programmable start times by means of an outboarded clock. It can accept VHS tapes ranging in length from 1/2 to 3 h. The system also allows the use of a character generator when no tape is playing. The price is \$1395.



A new anti-piracy videocassette program protection system which distorts or eliminates the video image reproduced from a cassette has been announced by Video Automation Systems Inc., Rt. 1, Box 21 A, Pound Ridge, NY 10576. Called Secure Copy 2, the system allows normal playback on conventional receivers. No decoder is necessary for Secure Copy 2 although the Secure Copy 1 system required a decoder. Through the use of the Secure Copy 2 electronic signal added in the recording process, unauthorized copying of programs on videotape can be prevented. The Secure Copy 2 system consists of a master video encoder together with an interface module for each recorder. Formats can be mixed in the same system and the number of recorders is unlimited. The cost of the system is based on the use and the number of the recorders used.

A new line of L-C filters for the video industry has been announced by Allen Avionics, Inc., 224 E. 2nd St., Mineola, NY 11501. Included are delay-equalized NTSC lowpass filters having sharp roll-offs and good passband delay linearity with cut-off frequencies from 0.1 MHz to 10



MHz. Some filters in the series are used to attenuate the harmonics of the NTSC color subcarrier frequency 3.58 MHz. Also available are NTSC reject filters that can be used in color systems for monochrome transmission to prevent color flashes from appearing on the screen. Also available is an NTSC bandpass filter, a low distortion unit designed to attenuate the luminance information in color television signals. Prices begin at \$125.



A new one-inch master broadcast videotape for professional applications has been announced by 3M Company's Magentic Audio/Video Products Division, P.O. Box 33600, St. Paul, MN 55133. Designated Scotch brand 479, the new tape is reported to have higher RF output (3 dB), SNR (2.5 dB) and color noise improvement (3 dB) than a standard high-density videotape. The new tape has 740-Oe coercivity, said to promote better magnetic performance. The tape has a rugged base permitting stop motion, frame-by-frame editing, jogging and slow motion. It is available in 30-, 45-, 60- and 90-min lengths.



The third generation compressed video system for all the transmission of still television pictures over standard "dial up" telephone lines has been announced by Colorado Video, Inc., Box 928, Boulder, CO 80306. The Model 260B Video Compressor accepts signals from a conventional closed-circuit camera and reduces the bandwidth by a factor of several thousand for coupling to the telephone system. At the receiving location, a Model 275B Video Expander with a solid state picture memory reconverts the slow scan signals to normal television standards for viewing, distribution or videotape recording. Nominally, 78 s are required to transmit a single image with a

resolution of 270 TV lines. An optional 35-s mode with lower resolution is available. Applications include teleconferencing, telemedicine, instruction, remote environmental monitoring and security. Either simplex or duplex configurations are available and the equipment may be interconnected with nearly all conventional closed-circuit or broadcast television equipment. Price of the 260B is \$3000.



A super-8 camera, the XL 61-200, accepting both 200-ft or 50-ft sound or silent film cartridges, has been announced by Sankyo Seiki (America) Inc., 149 Fifth Ave., New York, NY 10010. Features include a 6X zoom XL lens. The speed of the $f/1.2$ Sankyo XL lens and the wide 220° shutter opening combined with Ektachrome 7242 or 7244 permits filming in dim lighting conditions. The camera can stop down to $f/45$, focuses to 5 ft normally and also features macro focusing to the front lens element. The camera has two filming speeds — 18 and 24 frames/s — and is reported to have a good audio system providing a clear and clean recorded sound. Although totally automatic, the new camera provides manual overrides for individual filming needs. The XL 61-200 is priced at about \$665.



A super-8 movie camera, the ES-44XL VAF, which incorporates an electronic automatic focusing system, has been announced by Sankyo Seiki (America) Inc., 149 Fifth Ave., New York, NY 10010. The VAF feature (Visitronic Auto-Focus) is designed to permit the user to concentrate on tracking the scene and handling film techniques while the focusing and exposure are set automatically. Features of the new camera include a fast 8.5-to-34 mm, $f/1.2$ zoom lens and 220° shutter for shooting indoors without movie light; pushbutton 4X power zoom, plus manual zoom control; macro from 2 in;

oversize extra bright aerial reflex viewfinder; and choice of four filming speeds, 9 and 18 frames/s and single frame and slow motion for special effects. In the Auto-Focus system the focusing ring of the camera automatically rotates in response to varying subjects. Manual focusing is also available by shifting the Auto-Focus select switch. Changing from the manual focusing mode to auto during manual focus filming can be done instantly. A pre-focusing system permits the auto-focusing mechanism to function without pressing the shutter release tripper switch. Price of the ES 44XL VAF is about \$515.



A new super-8 camera, the Sankyo ES-88XL, has been announced by Sankyo Seiki (America) Inc., 149 Fifth Ave., New York, NY 10010. The camera has an $f/1.8$ lens with a 7.5 to 60 mm power zoom. Features include variable focal length macro capability, making it possible to switch from zoom to macro at all focal lengths between wide angle 25 mm and telephoto 60 mm and to continue to film the scene or subject up to 0 cm. The fast $f/1.8$ lens and a 220° degree shutter make filming possible in very low light. Other features include an auto-fader that fades in and out automatically in about 3 s. The camera has four filming speeds — 18, 24 and 36 frames/s and single frame. Price of the ES-88XL is \$335.



A super-8 silent movie camera featuring a 4X power zoom lens with macro focusing has been announced by Bell & Howell-Mamiya Co., 7100 McCormick Rd., Chicago, IL 60645. Designated Model 2144XL, the camera has a new low-light $f/1.2$ power zoom lens with a zoom range from 8.5 mm wide-angle to 34 mm telephoto and a normal focusing range from 5 ft to infinity. The lens also has a macro focusing capability making it possible to focus on subjects within several inches of the camera lens. The lens can be focused through a reflex viewfinder containing a through-the-lens rangefinder which provides a two-color optical dichroic split image. The camera's 225° low-light shutter can be op-

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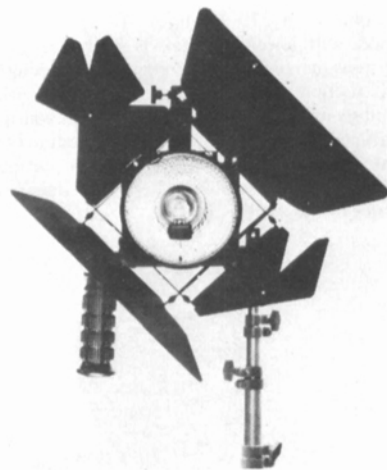
erated at a normal running speed of 18 frames/s, slow-motion speed of about 36 frames/s, or in a single frame mode. The camera weighs 1 lb 9 oz without batteries. The price is \$269.95.



A silent super-8 camera, the LXL-225, has been announced by Sankyo Seiki (America) Inc., 149 Fifth Ave., New York, NY 10010. Features include an $f/1.2$ lens and a 220° shutter for filming in any light variation indoors or out. Other features include aerial image focusing and an under-exposure warning flag in the viewfinder. The camera provides automatic power zoom plus manual zoom control. Zoom range is 9 to 22.5 mm and it holds a sharp focus as close as 5 ft. Filming is at 18 frames/s using a super-8 cartridge. The camera is priced at \$140.



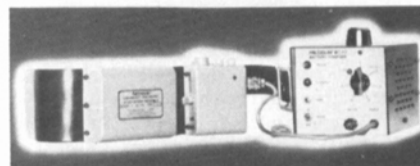
A new low-light super-8 magnetic-sound movie camera designated the SoundStar has been announced by Bell & Howell-Mamiya Co., 7100 McCormick Rd., Chicago, IL 60645. The camera has a low-light $f/1.3$ power zoom lens ranging from 8.5 mm wide-angle to 24 mm telephoto and is capable of focusing from 4 ft to infinity. Combined with a 200° low-light shutter, the power zoom lens makes moviemaking possible in practically all lighting and distance situations. The camera operates on six AA alkaline batteries and has a built-in Type A filter which is automatically activated by a film cartridge or movie light mounting bracket. The SoundStar accepts 50-ft sound and silent super-8 film cartridges, both running at 18 frames/s. Weight is 2.8 lb. The price is \$249.95.



The Omni-Light, a focusing spotlight with an extremely broad spot-to-flood focusing range, has been announced by Lowel-Light Mfg., Inc., 421 W. 54 St., New York, NY 10019. The Omni-Light can operate from 110- or 220/240-V line sources or from a 30-V battery supply for field use. Features include a fold-away handle, stand fitting and accessory bracket. A number of accessories are available. The Omni-Light alone is priced at \$89. Omni-Light and Omni/Tota-Light combination kits are available at prices beginning at \$775.



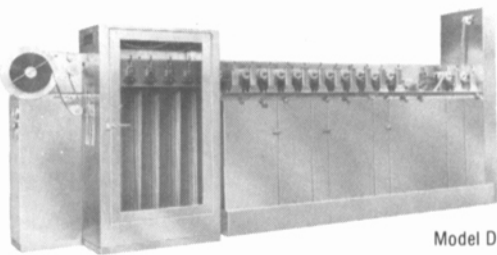
The battery-operated Reporter Lighting Kit used in filming in close quarters has been announced by LTM Corp. of America, 21200 Nordhoff St., Chatsworth, CA 91311, a subsidiary of LTM France. The kit is small and mobile, and the battery is formed to body shape. The kit has an LTM battery (7 Ah, 30 V, 250 W) with a running time of 45 to 55 min. Included in the kit is the battery (14 lb), head (2 lb), and charger (1 lb), with a total weight of 23 lb including the carrying case. In addition to the battery, head, and charger, the kit contains a dichroic filter, barndoor, filter frame, and cabling. The price is \$980.



The Frezzi Belt Battery Pack, Model F-12-77, a belt-style power supply designed to run Ikegami HL-77 or HL-37 video color cameras up to two hours, has been announced by Frezzolini Electronics Inc., 7 Valley St., Hawthorne, NJ 07506. Model F-12-77 is interchangeable with Ikegami battery packs. Nickel-cadmium bat-

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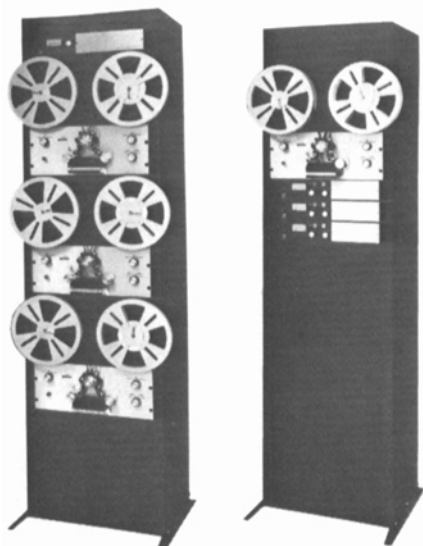


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teries provide $\pm V$ dc with a capacity of 6 Ah. Cabling, both ribbon and braided, is used throughout. The electronics compartment and the battery compartments are made of non-crackable epoxy-coated aluminum, and each is secured by six removable mounting bolts to a leather belt $\frac{1}{8}$ -in thick and 4-in wide. Features include an internal 12-h trickle charger that operates from 115 V, 50/60 Hz. The price is \$440. Various options are available. Model F-12-77 can be recharged in one hour or less by connecting it to the Frezzi Model BC-77 Rapid Charger, a transformer-type unit with line-isolated output. The BC-77 is priced at \$395.



A mobile studio boom offering 350° microphone-follower as well as horizontal and vertical guidance control by a single flexible drive has been announced by Atlas Sound, Div. of American Trading and Production Corp., 10 Pomeroy Rd., Parsippany, NJ 07054. Designated Model SB-100W, it features continuously variable 350° radius, microphone-follower and direction rotation provided by a flexible drive controlled by a single knob at the operator's end of the boom arm. A 9-ft long horizontal boom arm terminates in a gyromatic swivel that can be used for U.S.-standard microphone holders with $\frac{5}{8}$ -27 thread. Upright height of the standard boom is adjustable from 5 ft to 7.5 ft. The telescoping vertical is secured by a large retention-type locking assembly with a safety collar. Price of the Model SB-100W boom is \$487.50.



An insert recorder/reproducer specifically designed for re-entry type recording and a reproducer which provides total dubbing capability in 16mm, 17.5mm and 35mm formats have been announced by Magnasync/Moviola Corp., 5539 Riverton Ave., P.O. Box 707, North Hollywood,

CA 91603. Designated Series 3000, both systems feature constant time-delay corrected electronics for transparent reproduction; low-noise, low-distortion electronics; extended frequency response; sliding head covers for instant cueing access; switchable A/B wind modes; and pushbutton reset footage counters. Options include 24/25 frames/s speed ratios; inching knobs; and a universal tachometer kit for slaving Magnasync/Moviola flatbed editors, recorders, and reproducers.

The insert recorder/reproducer is designed to eliminate noise at initial recording and post recording by deriving the erase and bias signals from a crystal-controlled perfect square wave. The use of a precision ramp start control for bias and erase signals, coupled with the ability to set the precise in/out times for inserts and deletions, results in undetectable insertions and deletions of recorded speech effects and music.

The reproducer utilizes the same transport mechanism and playback electronics as the insert recorder/reproducer, thus allowing for full system performance compatibility. A modular building block design enables expansion of the system from one channel to four by means of plug-in modules. Type 22 (dual transport) and Type 33 (three transport) models include interlock motors and relays with interlock accessories available as an option on the single transport unit. Prices vary with options and accessories. Prices for the Series 3000 insert recorder/reproducer range from \$3800 for 16mm single track to \$9000 for a 35mm three-track with accessories. Prices for the Series 3000 reproducer range from \$3200 for a 16mm reproducer to \$9300 for a 35mm triple reproducer with accessories.

The Tweed 12-channel, 2- or 4-group audio mixing console, designed as a compact and rugged portable, has been developed by Tweed Audio, Pinnaclehill Industrial Estate, Kelso, Roxburghshire, Scotland. It is available in the United States from Barry T. Smedley, 1640 Fifth St., Santa Monica, CA 90401, at a price of \$8982 for the 12/2 model and \$9987 for the 12/4 model. The versatile console can be used for outside broadcast work or concert hall live recording, as well as for local radio installations and recording studios. The modular features of the larger Tweed consoles are retained together with comprehensive equalization and facilities.



A microprocessor-controlled remote control card for use with the Eventide 1745M digital audio delay line to permit computer automation control and to provide new effects has been announced by Eventide Clockworks, Inc., 265 W. 54 St., New York, NY 10019. The remote control card, a modular PC card, can be plugged into an unused connector in the delay line. It allows delay setting and control of the repeat and double modes of operation. Signal doubling, achieved by inserting 12 to 40 ms of delay, makes one voice or instrument sound like two or

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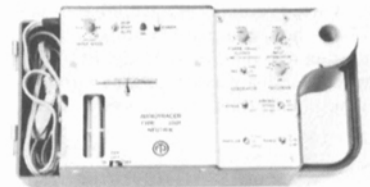
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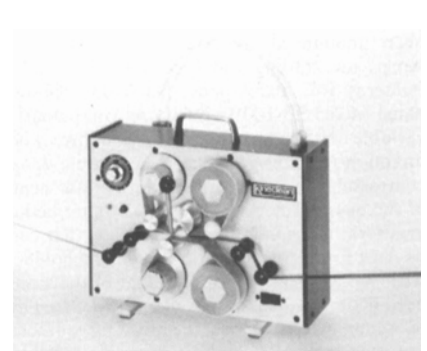
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more. Insertion of longer delays creates realistic echo effects. The remote control card is priced at \$550. Also available is a pitch change module which allows wide-range pitch and tempo variation and musical harmonizing. It is priced at \$850.



The Audiotracer, Model 3201, a device having self-contained facilities for measuring and making permanent "hard-copy" recordings of the level response of any audio device or system, either electronic or electro-acoustic, has been announced by Philips Audio Video Systems Corp., 91 McKee Dr., Mahwah, NJ 07430. The instrument measures and thermographically records audio-frequency or time phenomena vs linear or log (dB) amplitude. Features include switchable writing speed, electronically controlled paper-drive mechanism with continuously adjustable paper speed and a ceramic-tipped dc-heated writing pen. The price is \$1695.



A liquid application film cleaning machine designated the LC-500 has been announced by Kintronics Corp., 42 Sherwood Terrace, Lake Bluff, IL 60044. The machine is portable and can accept 8mm, super-8, 16mm and 35mm without modification or attachments. The automatic application of regulated amounts of cleaning solvent is used to dissolve greasy dirt and fingerprints for easy removal by the moving tapes. The machine is priced at \$950.



A new series of products for monochrome and color television test applications has been announced by Visual Information Institute Inc., Box 33, Xenia, OH 45385. The new instruments use digital technology to provide a wide variety of test functions for both monochrome and RGB color television at various scan rates. Performance evaluation is possible to 1000 TV line resolution at up to the 1225-line scan rate. Signal rise and fall times are typically 10 ns for resolution analysis of television displays. All circuits are on plug-in printed circuit cards and inte-

grated circuits are socket-mounted for ease of maintenance. Signal Sources 1203 (monochrome) and 1204 (RGB color) have built-in precalibration of pattern content for up to four scan rates. The scan rate change is instantaneous by front panel selector switch without having to recalibrate. Signal Sources 1203 and 1204 are priced at \$5000 and \$6000 respectively. Sync Source 1302, a multi-rate sync generator accessory, can be built into the pattern generator to provide a completely self-sufficient source of television test signals and patterns. It is priced at \$900.



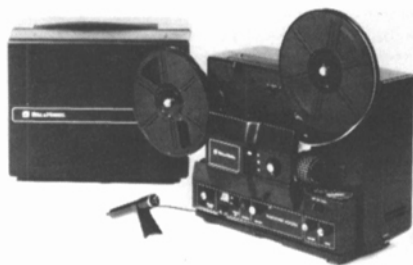
A new electronic counter incorporating a microprocessor which does away with the need for conversion tables has been announced by KLM Associates, Inc., 11810 Charen Lane, Potomac, MD 20854. Although the counter was designed for the Oldelft Cinemonta, a product of the Holland-based firm De Oude Delft, it can fit any other film-handling equipment. A simple switchover during operation sets the counter at the required information data. Any of the following settings can be chosen — frames, frames/s, frames/s/min, frames/ft, and frames/decimeters/m. The counter is provided with pushbuttons for start/stop, reset, 24/25 frames/s, super-8, 16mm and 35mm. A special provision prevents unintentional erasure of displayed figures, regardless of the table being switched off. If the display capacity is exceeded the counter starts again, adding an overflow sign to the figure. The maximum counting speed is 250 frames/s. The operating temperature is +10 to +55°C. Power supply is 21 V ac, 50/60 Hz. The price is approximately \$1350.



The Model SD70 Sync Dissolve Programmer combining audio-visual dissolve, recording and playback functions has been announced by Tiffen Manufacturing Co., 71 Jane St., Roslyn Heights, NY 11577. Features include push-button dissolve controls. The machine can record and play back while the operator is programming the dissolves on a separate track. The built-in cassette recorder can record and play back. It is compatible with pre-recorded cassettes and has a 5-W rms amplifier. The price is \$575.



A shot-gun microphone, Model SGM-2, designed expressly for use with handheld video cameras in situations where conventional or miniature mikes are impractical, has been announced by Comprehensive Video Supply Corp., 148 Veteran Dr., Northvale, NJ 07647. The new microphone makes voice recordings possible up to 25 ft away. Features include a super-cardioid electret generating element and SNR greater than 45 dB. The microphone weighs 5½ oz. The price of \$69.95 includes a windscreen for outdoor use and an AA alkaline battery.



Four new Filmosonic™ super-8 magnetic sound projectors which accept 600-ft reels of film, providing 40 min of running time in comparison to 27 min provided by 400-ft film reels, have been announced by Bell & Howell•Mamiya Co., 7100 McCormick Rd., Chicago, IL 60645. Features include a lock/load capability to provide fast, fingertip film loading using the projector's automatic reel-to-reel film threading system. Model 600ZR (shown above) is equipped with a 5-W amplifier. Other features include playback, record and sound-on-sound recording capabilities, volume control, automatic level control (ALC), an ALC defeat switch, a record level or mixing control, a positive record interlock, and a VU meter. The projector contains a built-in speaker and a jack for use with an external speaker. An auxiliary input jack is provided for direct tape recording or to transmit camera-recorded sound through an amplifier or home stereo system. Reverse, forward, and still projection capabilities are provided. The projector can operate at either 18 or 24 frames/s in both sound and silent modes.

Model 600ZR has the same basic sound recording capabilities and other features as Model 600ZR except that it has a 3-W amplifier and is not equipped with tone control, VU meter, ALC switch, or auxiliary output jack.

Models 600Z and 600 have playback capabilities only. Equipped with 3-W amplifiers, the 600Z has an *f*/1.5 20–32 mm zoom lens while the 600 has an *f*/1.6 25 mm lens. Prices range from \$269.95 for Model 600 to \$399.95 for Model 600ZR.

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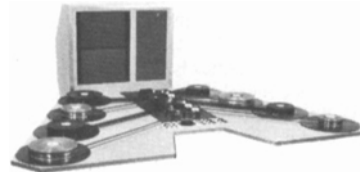
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