

New Products & Developments



ICON, a sophisticated system for real time generation of high resolution animated graphics, has been announced by Logica Ltd., 64 Newman St., London W1A 4SE. The ICON is an intelligent graphics generator that synthesizes television images electronically. First used by the BBC to display the British Gen-

eral Election results in 1979, the ICON computer took raw data in the form of election results as they were announced and immediately produced animated diagrams and text ready for transmission. ICON is used by the BBC for many programs including Russian language teaching and current affairs. The artist is the key person in putting ICON to work. He sits at the ICON graphics tablet and draws the original images onto a television screen, selecting from a variety of fonts and utilizing any combination of the 250,000 colors available. He makes the decisions as to which colors to change and which shapes to move. The ICON graphics generator is priced at £90,000 to £140,000 depending on the client's requirements.

Eastman sound recording II film 5373/7373, an orthochromatically sensitized black-and-white film designed for making variable-area sound negatives that yield improved results when printed on any Eastman release print film, has been announced by Eastman Kodak Co., 343 State St., Rochester, NY 14650. The

new film makes it possible to produce motion picture prints with improved sound quality that is crisper and has less soundtrack noise. According to the announcement, the results of both the research and testing showed that 5375/7373 when compared with Eastman fine grain sound recording film 5375/7375 is sharper, has finer grain, higher contrast and is faster. The increased sharpness improves frequency response and printing latitude while reducing the residual midrange distortion. The increased finer grain improves the film's signal-to-noise ratio. The 5375/7373 will require only minor changes to laboratory processor light source filters. It can be processed in Kodak developers D-97 and D-16.



The J55K, a REXIA conversion of the STD-60 high speed camera, has been announced by

PERFECTONE

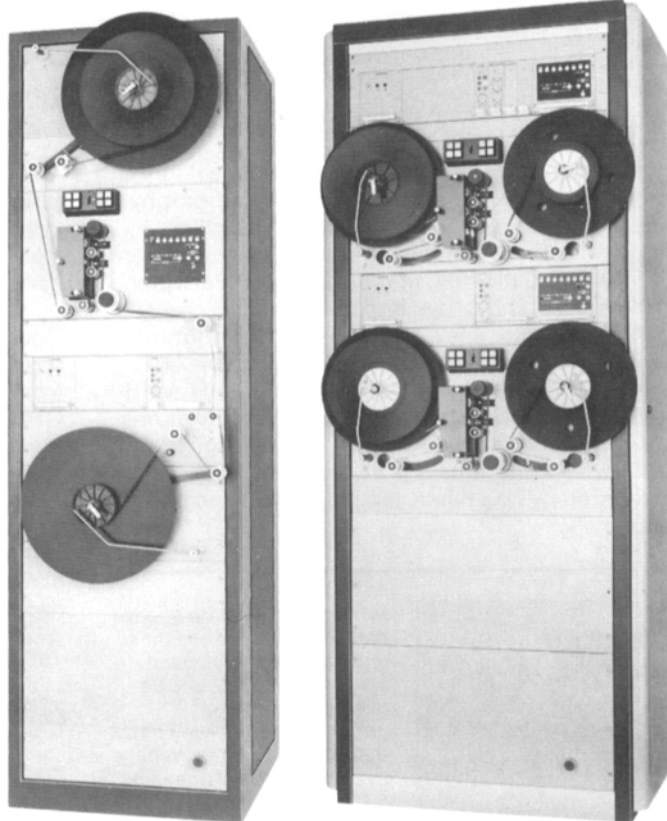
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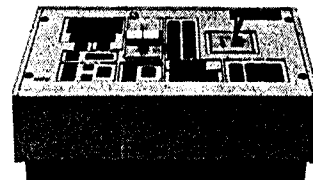
- Automatic pan and tilt functions with selectable limit to prevent pattern transition beyond blanking.
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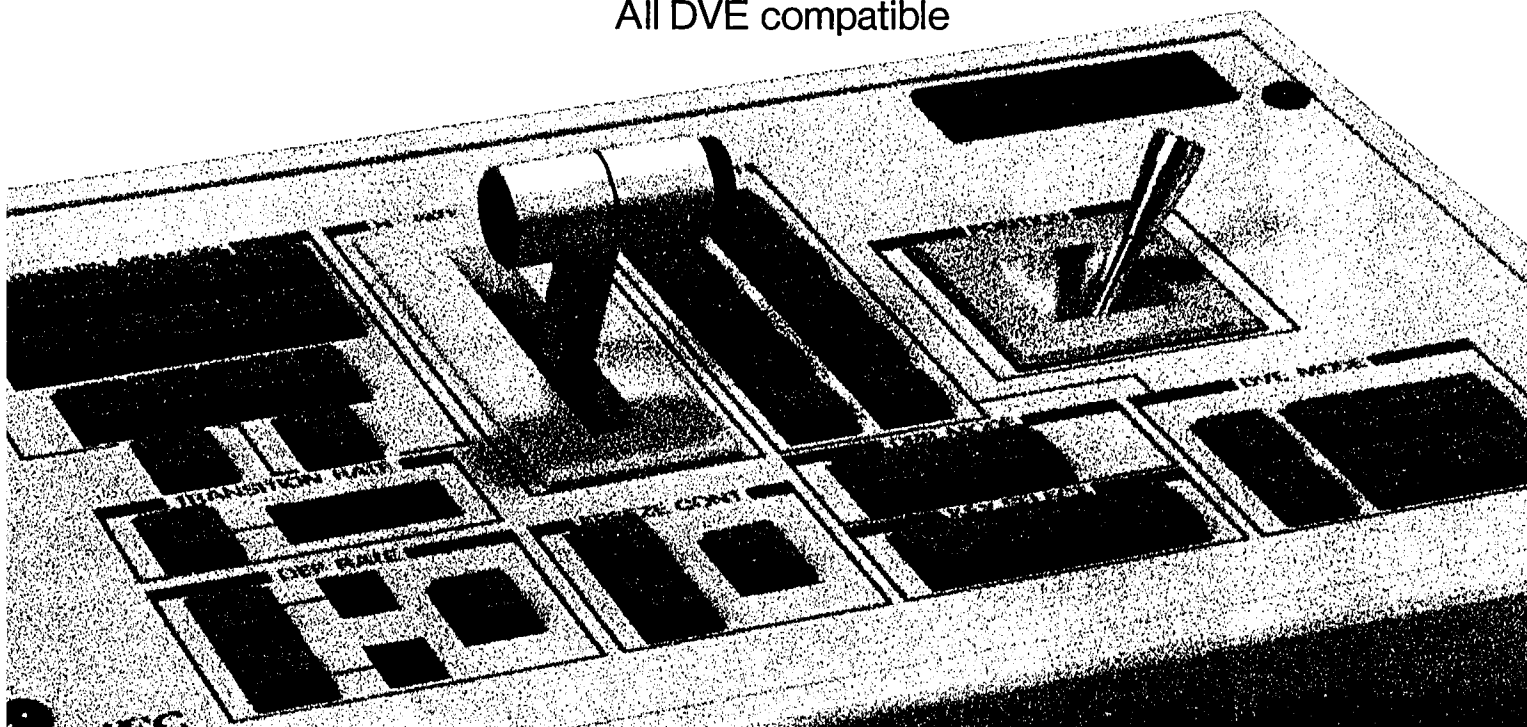
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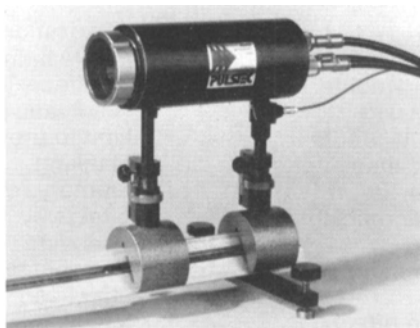
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Fries Engineering, 6350 Santa Monica Blvd., Hollywood, CA 90038. Features include an orientable viewfinder, correctable through 360°, with all new fast optics coated for a brighter image. Film clip register pins located in the viewing area are precision aligned to the camera aperture. The conversion also includes lens mounts that utilize the new fast lenses. The standard conversion has a new positive looking Nikon mount on academy center. Optional mounts include Leica, Canon or BNC-R. All mounts are available on academy or full aperture centers and may be simply interchanged. Price of the reflex conversion is \$4500. A number of accessories are available.



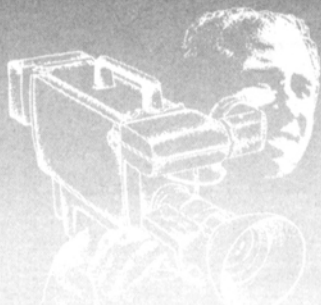
Microlite, a long duration high intensity point light source that makes it possible to study

non-self-luminous phenomena cinematographically, has been announced by Pulstec Instruments GmbH, Steinalde 75, 7800 Freiburg, West Germany. The device permits the use of geometric-optical methods which require a small light spot size over a long time duration making it especially applicable to schlieren, shadowgraph and interferometer photography. The peak light output amounts to 5×10^6 candlepower, the light spot size is 1- or 1.5-mm diameter. The maximum photoduration is 600 μ s. The lightsource can be used with any continuous writing rotating mirror camera where it prevents multiple exposure. The essentially uniform density on film within the visible spectral regime is suitable for color photography. Prices for the light source begin at \$39,000. The price includes the light flash head and a control cabinet containing the high-voltage power supply, a transmission line with ignitron crowbar, and a two-channel time delay generator with control switching devices.

The new 250 P/N (PAL/NTSC), a versatile switcher for use in television studios, production centers, remote control units and other television applications, has been announced by Vital Industries, 3700 N.E., 53rd Ave., Gainesville, FL 32601. It provides switching, automation and preview and it is self-contained. Measurements are $19 \times 12\frac{1}{4} \times 6$ in. Features include 10 inputs, five video levels, three keying levels, automation memory, four transition modes, two chroma keyers, a 32 pattern generator, complete camera tally and non-sync input system, camera monitor output, and others. It is priced at about \$27,500.

SMPTE TIME CODE

by NAGRA



Now, for both video and film application, Nagra introduces fully self-contained, fully portable SMPTE/EBU Time Coding utilizing high reliability, high stability quartz clocks in lieu of conventional pilot circuits.

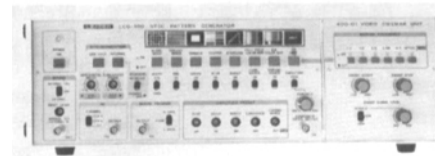
The new advance enables the user to record SMPTE Time Code on one track and audio on the other track when operating the Nagra Model "IS"; or two audio tracks plus one Time Code track when using the Nagra Stereo Model "IV-SL."

With the aid of the Nagra master clock, timing can be set not only for the Nagra recorder but also for

the video recorder and the movie camera generator having EBU/IRT standard. The system also includes a playback decoder for checking generators and a frequency/phase comparator for occasional quartz drift calibration.

Since SMPTE Time Code is synchronous, the portable Nagra Time Coding system translates the 80 bit SMPTE code into the 4 bit EBU code — where perforated magnetic film is designated for 4 bit code recording.

The Nagra SMPTE/EBU Time Code...it's another commanding reason why "Nagra is First with Film and Video Professionals."



Two NTSC Video Sync and Test Signal Generators designed specifically for the non-broadcast video industry have been announced by Leader Instruments Corp., 380 Oser Ave., Hauppauge, L.I., NY 11787. Model LCG-400M (shown above) is a comprehensive sync-test generator providing complete genlock capabilities, eight test patterns, individual color rasters, and a 6-frequency multiburst signal. The test patterns include standard EIA color bars, full field color bars, staircase, white window, crosshatch, and crosshatch-with-circle patterns. The genlock capability can be used to synchronize the generator to other video equipment by applying either a composite video, composite sync, or subcarrier signal. The generator is compatible with videotape recorders including helical scan and quad machines.

Model LCG-400S is similar except that the multiburst capability is replaced by a 7-MHz sweep signal with 6-marker frequencies. Both units provide black burst, subcarrier and RF outputs, and trigger pulses at vertical, horizontal, and frame rates. Each unit is priced at \$1895 including rack mount adapter kits.

Colortrack, a new compact microprocessor-based lighting control system, has been an-

NAGRA MAGNETIC RECORDERS, INC.

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Hollywood, Ca. 90038 (213) 469-6391
In Canada: Arri/Nagra, Inc. Mississauga, Ont. L4V-1J2 (416) 677-4033

The Arriflex Servo Zoom Drive:



The smoothest and most subtle action you can buy, and the widest speed range. You move your thumb to left or right, the way thumbs naturally move. All electronic controls are built into the Grip. You can mount it on its own tripod pan-handle.

The Servo Zoom Drive consists of the Hand Grip, shown here, plus the motor with its lens coupling. All electronic controls are built into the Grip. The motor runs on the camera's 12 volt battery.

The rosette coupling at the top of the Grip fits onto the end of the pan-handle tube that comes with the unit. You can slide that into a tripod head, in place of the regular pan-handle. Or, of course, you can hand-hold the Grip. It weighs 1 lb. 13 oz. The motor and its cable together weigh exactly 2 lb.

Natural sideways thumb movement.

You've grasped the cylindrical Grip, with your fingers wrapped around it. Hold it steady. Now, what's the easiest way to move your thumb? Left and right. That's the way the ARRI Servo Zoom control works, as you can see in the photos below. With this natural sideways movement, it's easy to make smooth and subtle zooms.

The Zoom Drive uses a sophisticated servo loop. Turn the thumb control slightly, it zooms slowly.

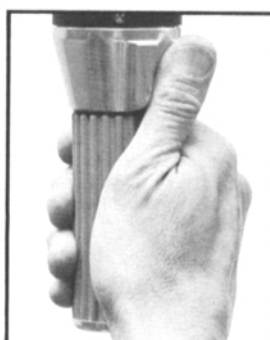
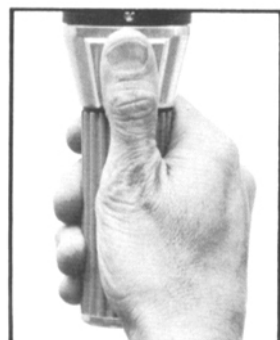
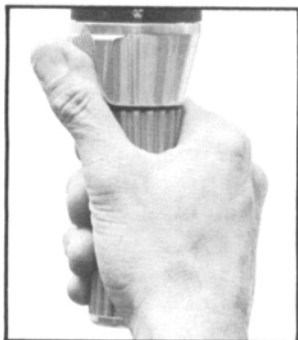
The more you turn, the faster it goes. When you stop *with your thumb in the turned position*, the servo goes to neutral without altering the zoom position of the lens. When you *next* move your thumb, you start at the slowest speed again.

Zoom speeds from one second to eight minutes.

The whole action is mounted on ball bearings, for smoothness. The speed ratio is the greatest on the market—from an imperceptible creep to a whip zoom. You can set the range from creep to medium speed, from medium to high speed, or whatever. You can feather in and out, change speeds in mid-zoom, set it to end before you reach the lens stops—or to end at any other preset focal length. And you can make *manual zooms* with the motor in position on the lens.

Powerful motor.

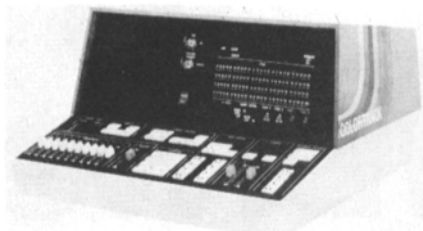
Everything is electronically stabilized—no overshoots. The motor is substantial enough to overcome uneven mechanical points on the lens—no bumps. When you let go of the thumb control, it returns to the center position. And, of course, the Zoom Drive is quiet enough to shoot sync sound with.



ARRI

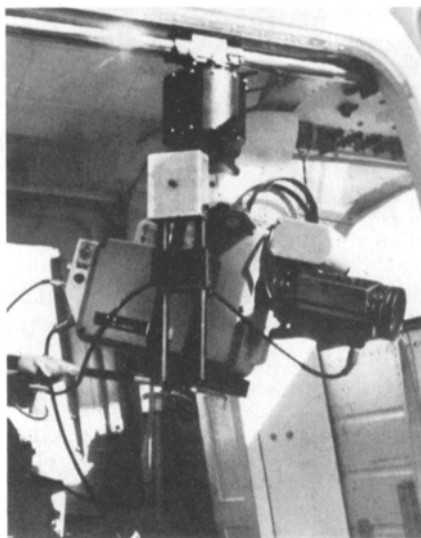
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Burbank, California 91502. (213) 841-7070.
Canada: ARRI/NAGRA Inc., 6467 Northam,
Mississauga, Ont. L4V 1J2. (416) 677-4033.



nounced by Berkey Colortran, 1015 Chestnut St., Burbank, CA 91502. Designed for use in television and theatrical applications, it can control 96 dimmer channels. Features include a color coded CRT display that is color coordinated with the operator's keyboard for ease of operation. The control system permits storage of approximately 1000 memory cues for each of the 96 channels and it incorporates timed, auto, and manually operated faders. Five different data displays are provided for stage, memory, channel track, limit, and sub-master functions. Ten dual purpose submasters are provided for both memory and backup control. Library storage is provided by means of a mini floppy disk. The Colortrack is 19.5 in wide, 21.5 in deep, 11.5 in high, and weighs 46 lb. Prices range from \$12,000 to \$16,000.

Helico I and II Camera Stabilizing Systems for filming or taping from helicopters have been announced by Image Devices Inc., 1825 N.E. 149 St., Miami, FL 33181. They are constructed of aircraft-quality aluminum and can be set up by one person. The IDI Helico sys-



tems are installed utilizing existing holes and screws already part of the helicopter's design. A Helico-suspended camera, weighing from 6 kg to 15 kg (video and/or 16/35-mm film) can be moved in a free or fixed position when mounted in the Bell Jet Ranger, Hughes 369, and most other helicopters. The systems can also be adapted to boats and autos. Helico I (suspension model) is priced at \$8,995. Helico II (upright model) is priced at \$10,995. Counterbalance weights are included in both systems. Additional 1-, 3-, or 8-kg counterbalance kits are available.



The Misar I Automatic Video Teleconference System has been announced by Misar Industries, 1477 East Warner Ave., Santa Ana, CA 92705. It provides automatic unmanned operation making possible the documenting of conferences, meetings and training seminars. The Misar I provides six hours of recording on standard VHS cassettes. All functions, including fast scan and search, can be addressed by wireless remote control. An internal generator logs time and date into the recorded proceedings.

Microprocessor control coordinates voice actuated camera switching. Smooth transitions are accomplished by automatic visual dissolves between cameras. The basic system is equipped with three cameras and programmed for operation in satellite video teleconference applications. The basic package price is \$17,900. Various options are available including a document reader for scanning, recording and transmitting printed materials, and a video scratch pad to be used as a video

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Electro-Voice's Greg Silsby talks about the Sentry 100 studio monitor



Production Studio, WRRR-FM, South Bend, Indiana

Production Studio, WRRR-FM, South Bend, Indiana.

In all the years I spent in broadcast and related studio production work, my greatest frustration was the fact that no manufacturer of loudspeaker systems seemed to know or care enough about the real needs of broadcasters to design a sensible monitor speaker system that was also sensibly priced.

Moving to the other side of the console presented a unique opportunity to change that and E-V was more than willing to listen. When I first described to Electro-Voice engineers what I knew the Sentry 100 had to be, I felt like the proverbial "kid in a candy store." I told them that size was critical. Because working space in the broadcast environment is often limited, the Sentry 100 had to fit in a standard 19" rack, and it had to fit *from the front, not the back*. However, the mounting hardware had to be a separate item so that broadcasters who don't want to rack mount it won't have to pay for the mounting.

The Sentry 100 also had to be very efficient as well as very accurate. It had to be designed so it could be driven to sound pressure levels a rock 'n roll D.J. could be happy with by the low output available from a console's internal monitor amplifier.

In the next breath I told them the Sentry 100 had to have a tweeter that wouldn't go up in smoke the first time someone accidentally shifted into fast forward with the tape heads engaged and the monitor amp on. This meant high-frequency power handling capability on the order of five

times that of conventional high frequency drivers.

Not only did it have to have a 3-dB-down point of 45 Hz, but the Sentry 100's response had to extend to 18,000 Hz with no more than a 3-dB variation.

And, since it's just not practical in the real world for the engineer to be directly on-axis of the tweeter, the Sentry 100 must have a uniform polar response. The engineer has to be able to hear exactly the same sound 30° off-axis as he does directly in front of the system.

Since I still had the floor, I decided to go all out and cover the nuisance items and other minor requirements that, when added together, amounted to a major improvement in functional monitor design. I wanted the Sentry 100 equipped with a high-frequency control that offered boost as well as cut, and it had to be mounted on the front of the loudspeaker where it not only could be seen but was accessible with the grille on or off.

I also didn't feel broadcasters should have to pay for form at the expense of function, so the walnut hi-fi cabinet was out. The Sentry 100 had to be attractive, but another furniture-styled cabinet with a fancy polyester or die-cut foam grille wasn't the answer to the broadcast industry's real needs.

And for a close I told E-V's engineers that a studio had to be able to purchase the Sentry 100 for essentially the same money as the current best-selling monitor system.

That was well over a year ago. Since that time I've spent many months listening critically to a parade of darn good prototypes, shaking my head and watching

some of the world's best speaker engineers disappear back into the lab to tweak and tune. And, I spent a lot of time on airplanes heading for places like Los Angeles, Grand Rapids, Charlotte and New York City with black boxes under my arm testing our designs on the ears of broadcast engineers.

The year was both frustrating yet enjoyable, not just for me but for Ray Newman and the other E-V engineers who were working on this project. At this year's NAB show it all turned out to be worth it. The Sentry 100's official rollout was universally accepted, and the pair of Sentry 100's at the Electro-Voice booth was complemented by another 20 Sentry 100's used by other manufacturers exhibiting their own products at the show.

What it all boiled down to when I first started the project was that I knew that the Sentry 100's most important characteristic had to be *sonic integrity*. I knew that if I wasn't happy, you wouldn't be happy. I'm happy.

Market Development Manager,
Professional Markets



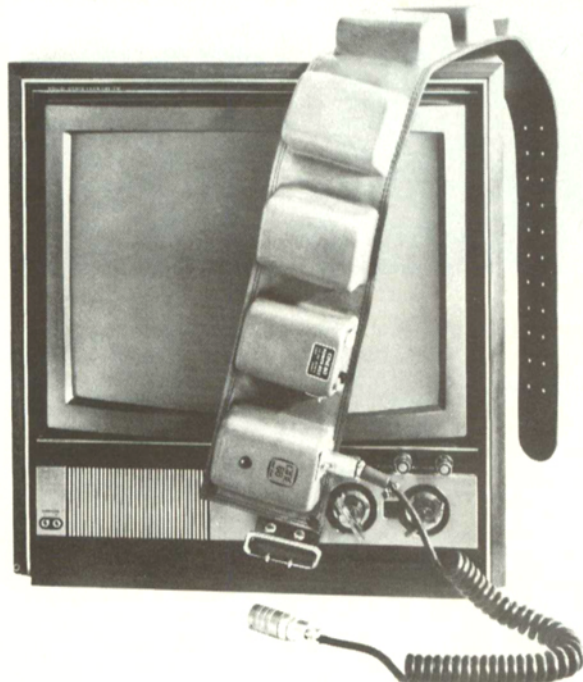
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blackboard to record and transmit spontaneously produced graphics. Two extra cameras can be added to the system for a total of five camera inputs.



An RGB color video display monitor, the PCM-520, designed for a number of applications, has been announced by Lenco, Inc., 300 North Maryland St., Jackson, MO 63755. The monitor has a slotted black shadow mask CRT and a small, compact cabinet (13⁷/₈ × 17¹/₄ × 19 in) houses the 20-in rectangular cathode ray tube designed for color graphics, alphanumeric display or any situation requiring color display of RGB signals. The video amplifier employs a keyed back porch clamp for maintaining true black level when operating either composite or non-composite video. A separate sync input allows the monitor to accept non-composite RGB video. Brightness, contrast and power on/off controls are located on the front bezel. The price is \$3695. A 22-in model, the PCM-523 is also available at a price of \$3895.



The CTVM 3 series of Barco master control color monitors has been announced by Rohde & Schwarz Sales Co., 14 Gloria Lane, Fairfield, NJ 07006. The CTVM 3/37 is a compact 15-in monitor that can be used for VTR applications where space and power are at a premium—for example in OB vans. The CTVM 3/51 monitor offers a 20-in screen, the largest possible tube size that can fit into a 19-in rack in broadcast and teleproduction studios. The user can specify either of two CRTs. The Delta Gun Shadow Mask CRT (D-version) is for accurate professional monitoring at every stage and can be used when exact color reproduction is vital. The chromaticity and coordinates meet EBU specifications to permit correction of signal source color fidelity, allowing all studios to work with the same standard for color reproduction. The Slot Mask CRT (P-version) can be used where color monitors are used for picture identifications and a slightly lower standard of reproduction can be accepted.

Any one of four resolutions is available — picture in line slot mask, standard, medium high and ultra high resolution which offers up to four times as many dots as a conventional CRT.

Specifications include 525 lines per pic-

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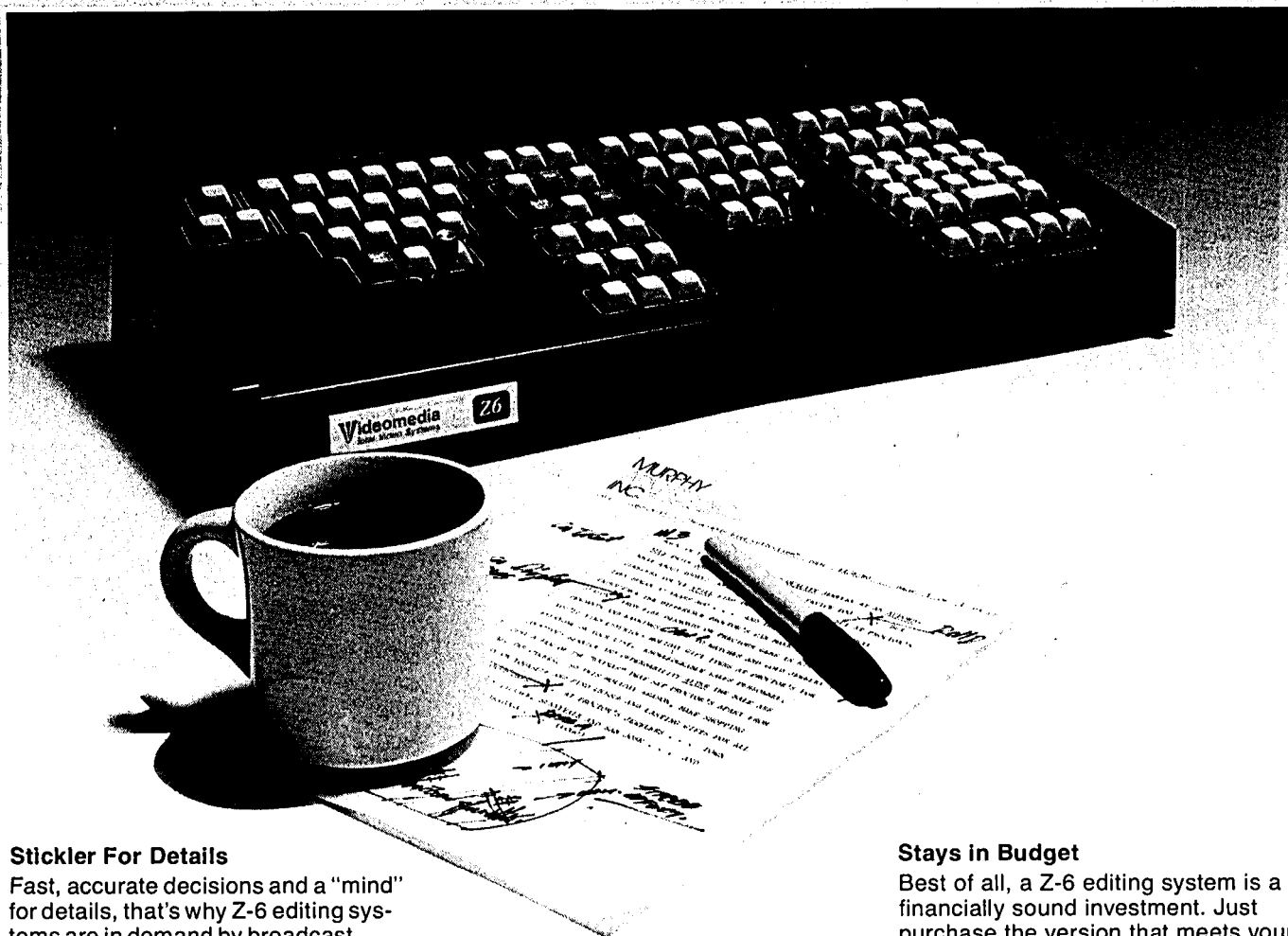
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Best of all, a Z-6 editing system is a financially sound investment. Just purchase the version that meets your *present* requirements.

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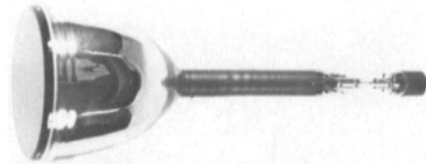
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ture, 60 fields/s interlaced; 625 lines per picture, 50 fields/s interlaced; NTSC, PAL B, PAL M, or SECAM plus RGB plus Sync Power is 100, 120, 220, and 240 V ac (voltage selector) with a built-in filter for RFI protection. The CTVM 3/37 can be fitted with a color decoder for any television standard — NTSC, PAL B, PAL M, SECAM (vertical and horizontal). If required the standard can be changed by simple replacement of the plug-in decoder printer circuit models. Prices range from \$3950 to \$8300. A number of options are available.



Three new scanning tubes designed for use in telecine scanning applications have been announced by Rank Cintel, Div. of Strand-Century Inc., 20 Bushes Lane, Elmwood Park, NJ 07407. The tubes have a flat, neutral density, non-solarizing faceplate to give improved contrast with reduced flare. Designated the C1851-X3, the C1855-X3, and the C1860-X3, the tubes measure 18 cm. A slide (50.8 mm square) scanner is used since the resolution losses on film on this format are negligible. Blemishes are measured on the open gate output waveform and a figure of merit (F.M.) for each blemish is calculated by multiplying the measured height and width of the blemish. The height is expressed as a fraction of 700 mV, i.e. 70 mV = 0.1, and the width in ns measured at 20% of the blemish amplitude from the origin (peak white).

The C1851-X3 is designed for general telecine equipment concerned with positive film scanning. The C1855-X3 is designed for telecine operations where above average screen quality is required. This applies where both positive and negative film scanning is necessary. The C1860-X3 is designed especially for post production houses who are principally involved in negative film scanning. It is suitable for Jumpscan and Digiscan modes of Cintel Mark III operation. Prices start at \$3505.



A microprocessor controlled digital quartz crystal test meter, designated Model 150B, has been announced by Saunders & Associates, Inc., 7440 East Karen Dr., Scottsdale, AZ 85260. The test meter can be used for incoming inspection of quartz crystals and blank sorting, in-process testing, and engineering diagnostics in a quartz crystal production or laboratory environment. In the engineering mode, Model 150B measures and

digitally displays series and load resonant frequencies, crystal resistance, crystal capacitance, crystal Q, crystal inductance, and motional capacitance. The internal microprocessor then can compute deviations in parts per million from a reference frequency, capacity ratio, and trim sensitivity in ppm per pF under key pad control. Various options are available. Prices range from \$2300 to over \$4000.

The Amtron DVA-1 digital video analyzer has been announced by Amtron, Aptos, CA 95003. The DVA-1 can accept up to three synchronous or non-synchronous video signals for simultaneous display on a color video monitor in three distinct colors. Each signal may be independently stored in the memory for later recall, for comparative evaluation, or as a signal source. The reference graticule, which is digitally generated, is automatically matched to each test mode, eliminating the need for calibration. Each of the three channels may be in any of the following modes by pushbutton selection: one horizontal line; vertical interval 1 or 2.25 lines wide; one field; vector display; differential phase and differential gain; VITS/VIRS.

The DVA-1 memory allows spatial and time analysis of video signals. All waveform displays may be shown superimposed on the picture selected as the input source. The device consists of a single electronics unit, a remote control panel which may be portable, or rack or desktop mounted, and a 13-in or 19-in high resolution color video monitor. The price range is \$7000 to \$9000.



An improved version of the Cinemonta film editing table for 16-mm or 35-mm film has been announced by Optische Industrie De Oude Delft, Postbus 72, 2600 MD Delft, Holland. Based on the most advanced ergonomic principles, the new editing table features a large working space, plenty of leg room, extremely low noise level and simpler operation. Of modular construction, the second generation Cinemonta has an audio system of excellent sound quality, an EBU edge/center track combination head, a connection enabling transcription on to a sound recorder, and an electronic-mechanical sound synchronization retarding system. The optical crown system, a feature of Cinemonta editing tables, provides image reproduction said to be equal to that of a good quality projector (more than 60 lines/mm). Other features include an electronic counter that provides a display of all data with respect to film length and time. The table may be optionally equipped with a pitch corrector to enable easier synchronization.

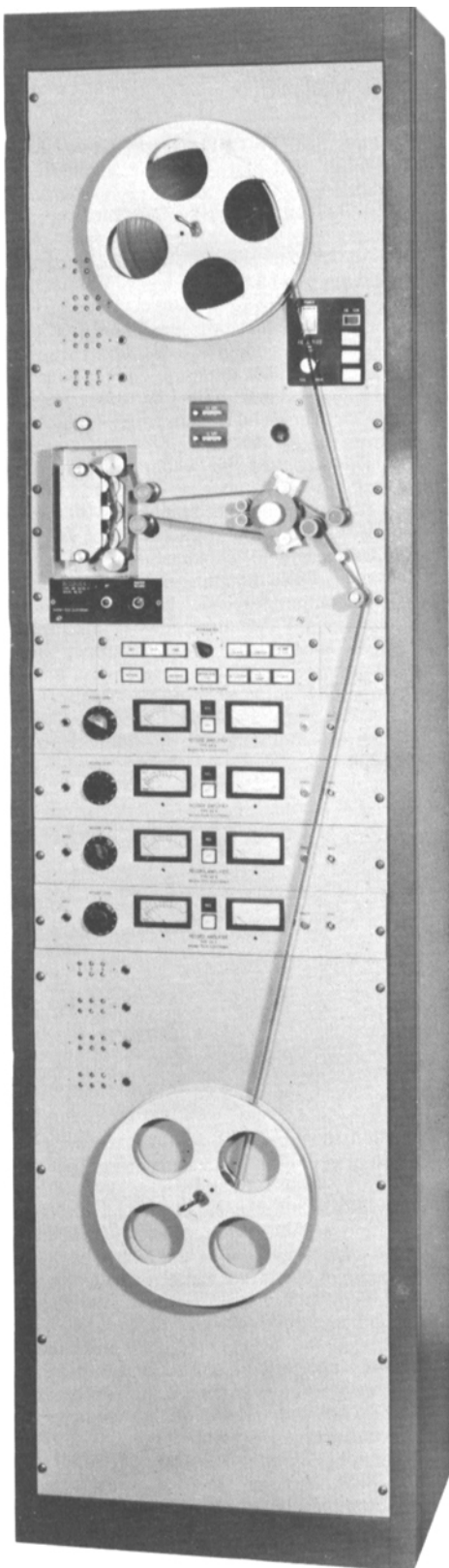
Also announced was the double screen Cinemonta (shown above). It is a lightweight table mounted on castors that can pass through any normal doorway. Features include the optical crown system, an electronic



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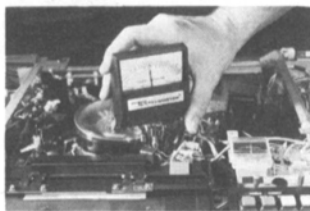
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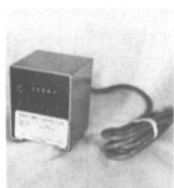
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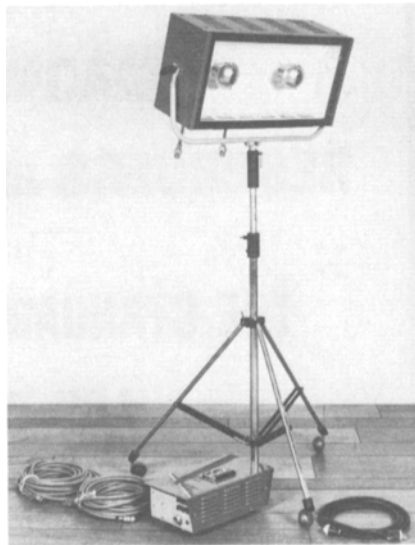
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counter, a double screen plug-in viewer, and a sliding potentiometer. Prices range from about \$9039 for a two-plate 16-mm version to about \$25,000 for the double screen editing table. A six plate 35-mm model with the optical crown system is priced at \$22,934.



The Soft-D, a soft daylight source has been added to the LTM line of HMI-type fixtures, according to an announcement from LTM Corp. of America, 1160 North Las Palmas Ave., Hollywood, CA 90038. Single and double versions are available in 200, 575, and 1200 W sizes. The singles are shadowless fill lights. The doubles allow the cinematographer to control two bulbs separately. Prices range from \$2000 for the 200-W single to \$7500 for the 1200-W double. The 575-W double is priced at \$5000.

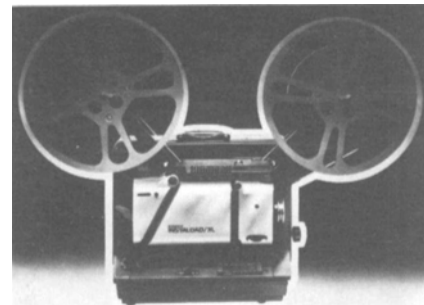


A 30-V battery belt has been announced by PAG Power Ltd., 565 Kingston Rd., London, SW20 8SA, England. The belt is made of rugged molded leather. It is light in weight due to the utilization of a cell specially designed for high capacity at the current rates typically used for lighting purposes, the announcement stated. The new cells make possible the use of 4 Ah (nominal) cells for 250-W lighting. The belts also incorporate a lightweight built-in charger capable of recharging the cells overnight. Price of the new Pagbelt is about \$997.



The SMPTE/EBU Time Code Reader, Model TCR-650, featuring exclusive tach-pulse operation, has been announced by EECO, Inc., 1601 East Chestnut Ave., Santa Ana, CA 92701. The unit reads standard SMPTE/EBU edit code used for electronic indexing of video audio tapes. Within the microprocessor-based system, time code data are verified and processed "on time." Each valid time code frame is updated prior to being outputted to ensure correct output time data associated with the reference frame pulse. Time code input circuits read at rates from 1/16 to 60 times play speeds. If tach pulses are used, the reader automatically can switch to tach mode when code is invalid at both high wind speed and below normal play speed. Code from rates of 24, 25, and 30 frames/s are detected automatically within the reader. Other features include restored serial code output for code dubbing; hexadecimal display for full binary word display; time code and/or tach pulse operation; optional synthesize serial code output when operating from tach pulse mode only.

Price of the TCR-650 is \$2490. The synthesize serial code output option is priced at \$250.



The Insta-Load XL, a 16-mm motion picture projector, has been announced by Singer Education Systems, 3750 Monroe Ave., Rochester, NY 14603. Features include a microphone with a separate level control which enables the user to speak over the film as it is being shown or use it independently as a public address system. The projector can be loaded by hand in a few seconds. High speed in-path forward and reverse modes are protected by a safety interlock system to guard against film damage when rewinding or pre-selecting program segments. The entire system is operated with color-coded pushbuttons. Other features include an energy-saving high-low lamp switch, automatic loop resetting, rack and pinion focusing, volume controls and a built-in footage counter. Nine models are available with prices ranging from \$1099 to \$2250.

A new lighting dimmer, the D2400, manufactured by Teatronics, is distributed by Telaudio Centre, P.O. Box 921, Beverly Hills, CA 90213. It is a lightweight dimmer pack offering eight 2.4-kW channels remote

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The Scoopic 16MS is a lightweight, hand-held 16mm workhorse designed to perform reliably and continuously under all conditions. It's easy to use, with a built-in automatic metering system that assures great results when "getting the shot" leaves no time to worry about exposure. Its Canon f1.8, 12.5-75mm zoom lens is unsurpassed for sharpness, contrast and color fidelity and has a 6X reach that makes it as effective from an airplane or helicopter as it is in on-the-spot interview situations.

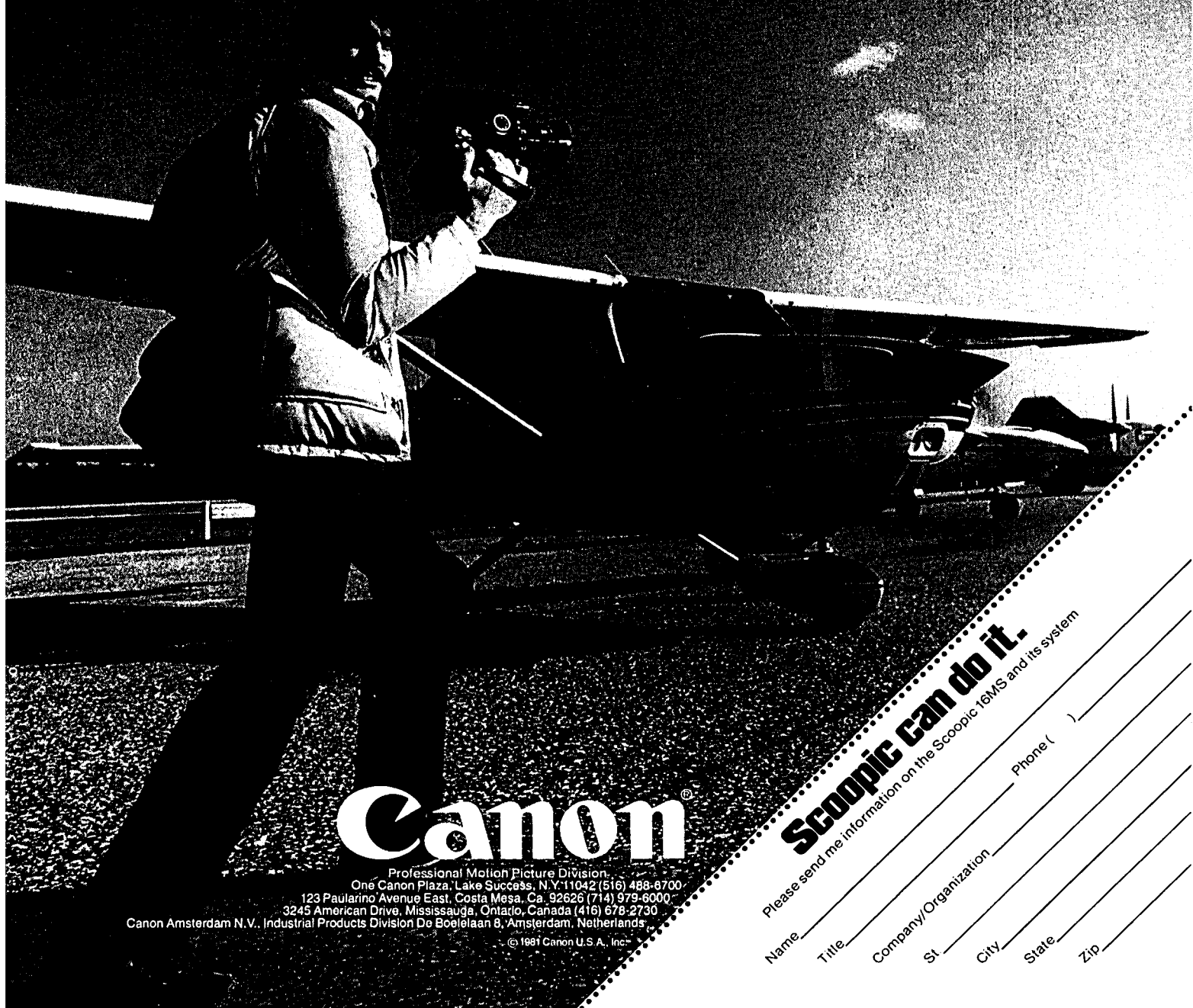
Telephoto and wide-angle lens extenders add to this versatility, as does an optional 400' magazine, and additional 16MS system accessories.



But all these virtues have not only made the Scoopic 16MS a favorite among newsmen. The simplicity of its design and rugged dependability that make it ideal for spot news coverage also make it a first choice for coaches and athletic directors, police departments and government agencies, and documentary filmmakers who need to get their shots on the first take.

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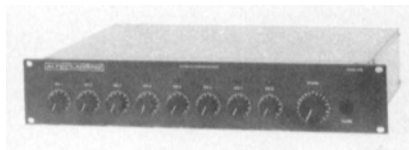
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controllable via Teatronics or other scene lighting controllers. Features include heavy RFI shielding. It can be used in television studios as well as other applications. It is portable and rackmountable and can accept hot patching without damage as well as dimming loads as small as 15 W. The D2400 is priced at \$1995.



Two new automatic microphone mixers, Models 1674 and 1678 have been announced by Altec Lansing, 1515 S. Manchester, Anaheim, CA. The 1674 (4-input) and 1678 (8-input) allow the system to deliver maximum acoustic gain while helping to prevent feedback in multimicrophone operations. The 1674 may be used as an extension of Model 1678 or separately for systems requiring four channels or less. Up to 40 channels of automatic mix may be achieved through appropriate linking of mixers. Model 1674 is priced at about \$1500 and Model 1678 at \$2300. Model 1678 is shown in the illustration above.



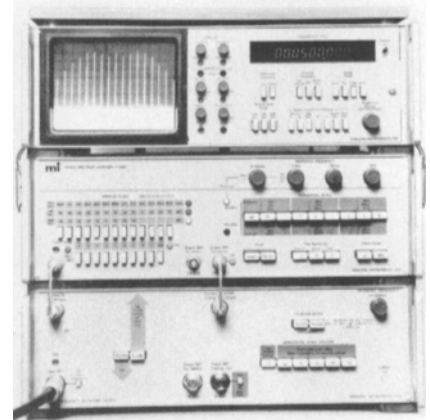
The IDI Micro-Mixer II, a compact microphone mixer, has been announced by Image Devices, Inc., 1825 N.E. 149 St., Miami, FL 33181. The device, designed for on-location use, measures 160 × 80 × 5 mm and weighs 0.852 kg. A new low-noise device is incorporated to reduce extraneous noises, assure a quiet background and sound recording through four microphone inputs. Input 4 and the output are both switchable to microphone or line level. The Micro-Mixer II is self powered with either standard NiCads or

throw-away batteries. The price is \$695 with the NiCad battery pack or \$595 with the disposable battery pack.



A dememorizer used to restore lost capacity to Ni-Cad battery supplies used with ENG cameras and VTRs has been announced by Cine 60, 630 Ninth Ave., New York, NY 10036. The dememorizer serves to recondition and balance the cells in battery supplies that have been subjected to repeated, shallow discharges. When any nickel-cadmium battery supply is operated in this manner, there may be a temporary loss of capacity. In effect the battery "remembers" the repeated low discharges and its capacity is reduced temporarily to match the shallow discharges. The remedy is to subject the battery cells to a controlled discharge and charge regimen. When this is done the "memory" is erased and nearly all the lost discharge energy is regained.

The Cine 60 dememorizer provides the required controlled discharge of the battery supply prior to recharging. The unit can be used with ± 6.0 , ± 7.2 , 12.0, 13.2 and 14.4 V nickel-cadmium battery supplies. A pushbutton switch is used to activate the controlled discharge and a built-in voltmeter is used to monitor the battery voltage. Discharge is continued as shown by an LED indicator until the voltage drops to 1.0 V per cell. This amounts to 6 V for a 7.2-V battery, 10 V for a 12-V battery and 12 V for a 14.4-V battery. Then the battery supply is recharged to restore its full capacity. The dememorizer measures $7\frac{1}{4} \times 5\frac{1}{2} \times 3$ in and weighs 2 lb. The price is about \$195.



The Marconi Frequency Extender, Model 2373, designed to extend the frequency range of the 110 MHz Spectrum Analyzer, Model 2370, to 1.25 GHz, has been announced by Marconi Instruments, 100 Stonehurst Court, Northvale, NJ 07647. The extender provides a range of sweepwidths from 20 Hz per division to the full 50 MHz to 1.25 GHz. All features of the Model 2370 are retained when it is used with the extender, including 5 Hz filter

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ADVANCED TECHNOLOGY

The Norton Series CF Heads and Amplifiers offer a major breakthrough in size, reliability, performance and cost, utilizing a complete head to line amplifier in one package, only 5 cm³ and 8 grams, a hundred times smaller and lighter than ever before. Magnetic sound reproduction has been taken beyond the state of the art with a patented* system which permits the combination of the head and amplifiers in one electrical/mechanical assembly.

The new microamplifier plugs into the head mount creating a closed loop head to line level system delivering more performance than achievable by conventional technology, and providing a simple low cost means of incorporating superior sound into any equipment. They are ideal for new equipment design or may be utilized in updating existing systems. Simple to install, they are supplied complete and ready to operate, requiring only the connection of power supply and output cables. The interface between the amplifier and line is only a blocking capacitor for any DC offset and an optional line transformer of suitable rating.

THE SYSTEM CONCEPT

The CF system recognizes the reproduce head and amplifier as one integral function. By including the head in a closed loop feedback system incorporating magnetomotive force feedback, a new and superior performance is achieved.

AUTOMATIC LEVEL AND EQUALIZATION

The CF System, by following the recorded magnetization level of the sound track rather than the flux, causes the output level to be independent of track width and have no need for 6 db/oct equalization. The output level is insensitive to speed change. Setting the level control means just that. The level will be the same from any track recorded to the same level. An amplifier factory or field calibrated against a standard recording will need no further level adjustment.

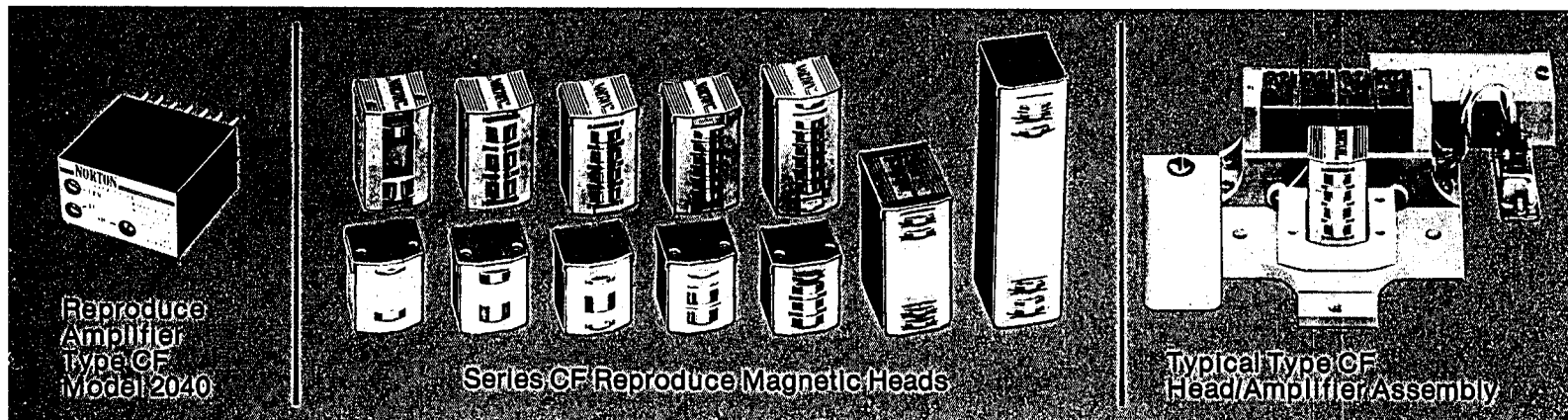
NOISE AND DISTORTION

In the closed loop system the head is an integral part of the amplifier and only total system noise referred to the output is specified. Using Type CF heads, wideband noise is typically 1/2 mv rms (200 mil track).

The head within the loop also creates an extremely linear system with distortion almost nonexistent, well below 0.01%. Further, the use of only a single gain block in the amplifier totally avoids front end overload and distortion.

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MODULAR CONSTRUCTION

Total modular construction is another plus. Servicing is simple and straightforward. The amplifier can be removed from the assembly without opening any equipment panels or disconnecting cables. The procedure is uncomplicated and takes less than one minute. No wiring or soldering is involved.

RELIABILITY

High reliability is achieved by a 75% reduction in the usual component count plus the elimination of electrolytic capacitors and shielded head cables and connectors.

* U.S. Pat. 3828269

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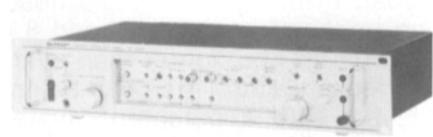
bandwidth, and a built-in frequency counter which can measure spectral components to within 2 Hz. The tracking generator is an integral feature providing a signal locked to within 2 Hz through the entire range to 1.25 Ghz. Price of Model 2373 is \$19,500.



A synthesized signal generator with full HP-IB programmability over a frequency range of 0.1 to 990 MHz with a level accuracy of ± 1.5 dB has been announced by Hewlett Packard, 1501 Page Mill Rd., Palo Alto, CA 94304. Designated Model 8656A, applications include automatic test equipment use. Frequency switches in less than 2 s (within 100 Hz). Frequency, AM or FM, and output level are keyed in directly in desired units such as MHz and dBm. The microprocessor control also handles non-traditional units such as dB referenced to a microvolt, useful in broadcast stereo work. For high impedance loads, the output can be calibrated in EMF.

Intended primarily for in-channel receiver testing, single sideband phase noise is less than -122 dBc/Hz at a 20 kHz offset at 225 MHz. The output exhibits harmonics less than -25 dB and non-harmonic spurious less than -60 dBc. All display values can be incremented with up/down keys and increment sizes are set in the same fashion as function

data from the keyboard. For example, a receive with 25 kHz channel spacing can be tracked by single keystrokes of the up key after keying in 25 kHz increment. Model 8656A is priced at \$6250. An optional time base is available at a price of \$850.



A remote operational panel, Model XC-701RP for use with the XC-700 ENG camera (*SMPTE Journal*, p. 548, July 1980) has been announced by Sharp Electronics Corp., 10 Keystone Place, Paramus, NJ 07652. The panel is said to have the capability of controlling the major functions of the XC-700 from a distance of up to 100 m (330 ft). Features include power on/off switch, master pedestal, auto white balance on/off, manual iris control, R/B gain controls, R/B black level controls, R/B horizontal and vertical centering controls, video RGB registration select, color bar/camera select, horizontal and color subcarrier phase controls and cable length compensation select.

Also provided are intercom private/common select and level, tally and tally indicator and return audio level controls. Intercom and return audio are mixed so both signals can be heard simultaneously. A single cable between the XC-701RP and the XC-700 supplies power and sends the necessary sig-

MOVING?

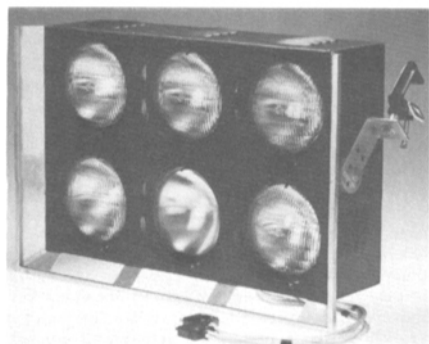
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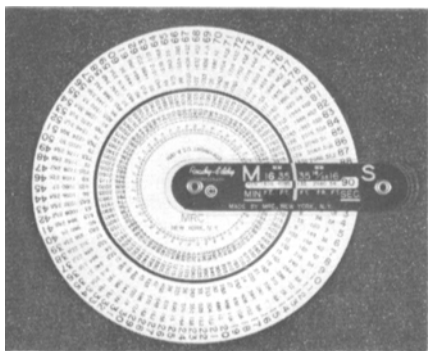
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nals between the camera head and remote operations panel. Maximum camera distance is 50 m (165 ft) which can be boosted to 100 m (330 ft) when a separate camera power line is added. The XC-701RP is designed to fit any EIA standard rack and requires 3 1/2 in of rack height. The price is about \$1800.



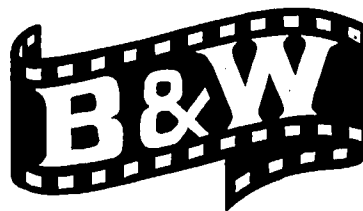
The Cine Par lightweight lighting system (shown above) designed for fill application has been announced by Panoak Lighting Systems & Supply, 6809 E. 40 St., Tulsa, OK 74145. It operates at 120 V, ac/dc, providing high intensity fill for daylight shooting. Each lamp is easily adjustable providing positive control of the beam spread. The lamps are easily accessible for replacement and separate switches for each lamp permit the lamps to be preset. The Cine Par is priced at \$525, the Cine Par Six, \$625; and the Cine Par Nine, \$795. The Par 64 holder is priced at \$110. A number of options are available.

Also announced by Panoak is a lightweight softlight 2000/4000 (portable) for rugged location or studio use. Made of aluminum alloy, its weight including yoke, is 21 lb. Features include a special switch guard to protect the switches during shipping and rough location handling. Available as either a television or motion picture model, each is priced at \$550. A number of accessories are available.



The Ready-Eddy Film Computer, a handy 5-in plastic disk calculator which converts minutes and seconds to frames and feet, is available in both 16-mm and 16/35-mm according to an announcement from MRC Films, 71 W. 23 St., New York, NY 10010. It is designed for use by film editors, animators, directors, producers, lab technicians, or any filmmaker to whom accurate time and footage calculations and conversions are important. The price is \$6.00.

Further information about these items can be obtained 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.



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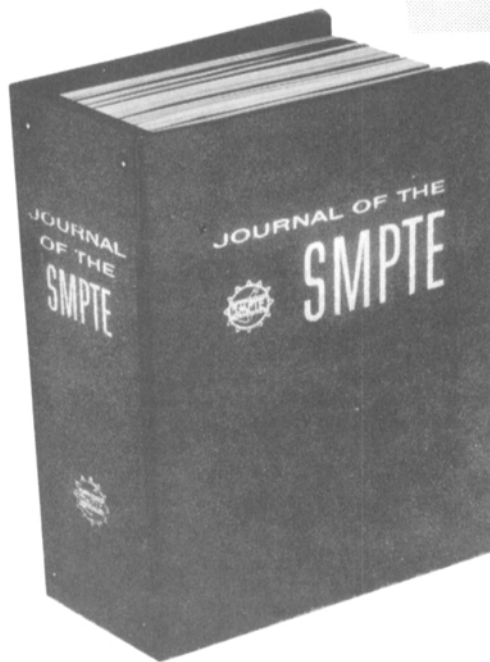
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