

brochure is illustrated in black-and-white and color and gives a detailed description of the new scope. Designated the Gould DS042000, the instrument is capable of selecting stored waveform portions and expanding them up to X10 vertically and X50 horizontally.

A new magazine, **International Television: The Journal of the International Television Association**, has been announced by ITVA, 136 Sherman Ave., Berkeley Heights, NJ 07922. The magazine will be published by Ziff-Davis Publishing Co. in collaboration with ITVA. The new magazine's editorial

director is Fred Schmidt, and the editor is Dr. Shonan Noronha.

**The International Production Manual**, containing comprehensive sections on film and video production companies, technicians, rental companies, TV stations, etc., is available from Birns & Sawyer, Inc., Dept. PR, 1026 North Highland Ave., Hollywood, CA 90038, at a price of \$30. The manual contains 1475 pages and covers 11 geographic sections. In addition to sections in North America and Europe, it covers Africa, Far East, Australia, New Zealand, South America, Central America, and the Caribbean.

## NEW PRODUCTS

*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.*



Camera, Model WV-3230/12X, Panasonic

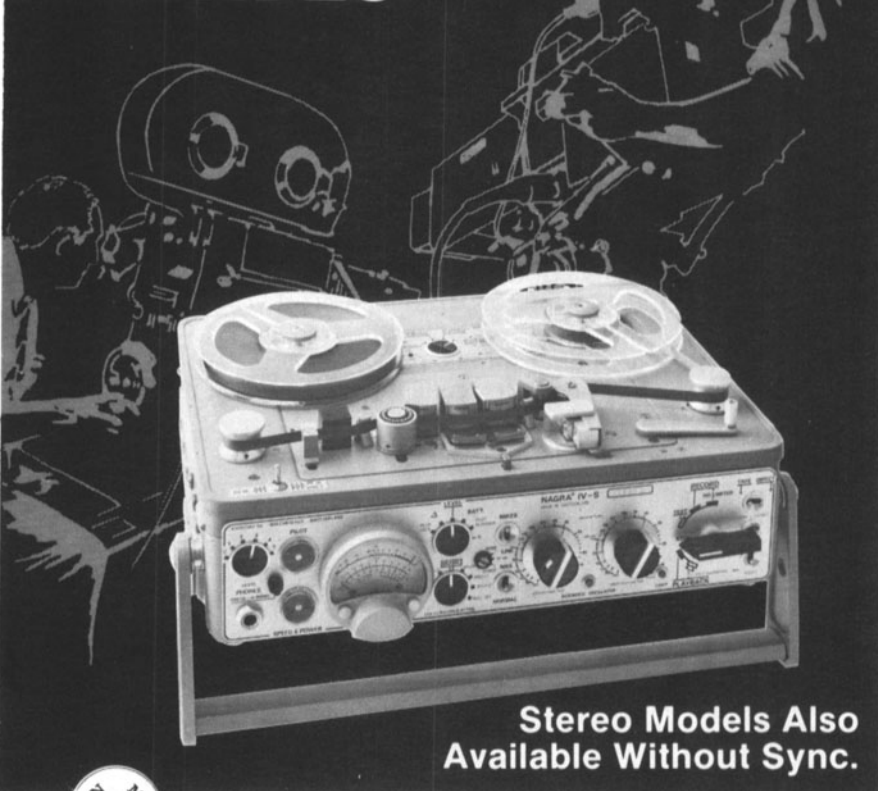
A **high-resolution camera** using a  $\frac{2}{3}$ -in. high-band (5-MHz) Newvicon tube for use under low-light conditions has been announced by Panasonic Industrial Co., One Panasonic Way, Secaucus, NJ 07094. Horizontal resolution is 320 lines. At illumination of 140 fc at  $f/4.0$ , the SNR is 46 dB. At  $f/2.0$  the automatic iris can pick up a picture in as little as 3 fc. The camera, designated Model WV-3230/12X, has a 12:1 (10- to 120-mm) power zoom lens. Control features include automatic fade in/out, auto white balance, or manual red/blue color balance controls. Other features include a built-in title generator that can display seven different colors, and a built-in date and elapsed time generator. The camera weighs 4.8 lb and uses 5.3 W.

A **video camera**, the VC-10A, weighing only 5.5 lb; the VR-20A, a portable VHS videocassette recorder featuring four video heads and stereo sound with Dolby™; the VR-10A; a two-head, mono-sound VCR; the VT-10A tuner/timer; and the VE-10A editor, have been announced by Canon USA, Inc., One Canon Plaza, Lake Success, NY 11042.

The VC-10A video camera has a Canon automatic focusing 11-70-mm  $f/1.4$  variable speed power zoom lens with macro capability. It uses a Saticon. The VR-20A has a four-head configuration controlled by a microcomputer. Separate pairs of heads are used for recording and playback and they are selected automatically for SP and SLP modes. The microcomputer also se-

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Consider that you can specify 30mm or 25mm Plumbicons,\* and for each size select standard, Anti Comet Tail or diode gun operation. The same holds true for cabling. You choose from triax, multicore or, if you'd like, specify an HK-322 version that's compatible with your existing TV 81 cable. You also have a choice of optional camera control configurations.

There are also some unique features such as trim files that compensate for differences between the internal pattern projector and the external scene caused by chromatic aberrations in the lens.

Finally, compare its performance to any other camera. An honest resolution of 800 lines at center, a practically noiseless S/N ratio of up to -58 dB and a virtually unmeasurable .05% registration error over the entire raster.

Best of all, the HK-322 is ready right now to fit into your idea of an ideal studio/field camera. Without compromise, but with plenty of accommodation.

Contact Ikegami. See for yourself.  
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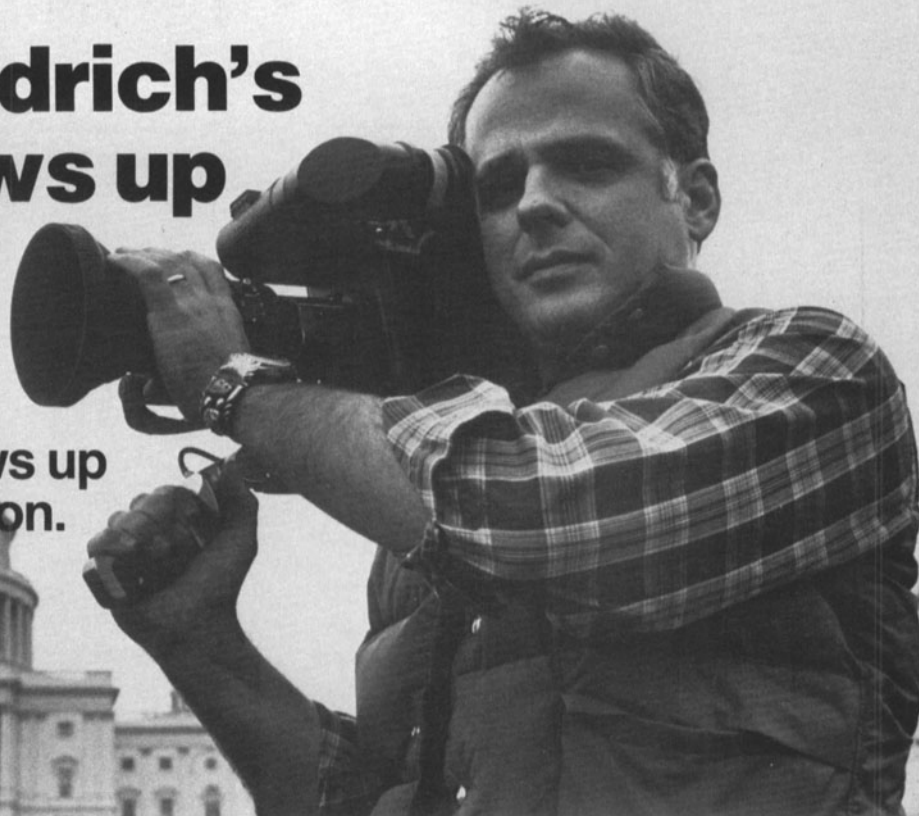
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## Ikegami HK-322



# George Fridrich's name shows up on a lot of awards.

Only one name shows up on his lenses—Fujinon.



Network news cameraman George Fridrich covers the nation's Capital. Assignments also take him across the country. But wherever he goes, his work speaks with authority. The most prestigious awards confirm it.

The White House News Photographers Association named him "newsfilm photographer of the year" for 1982. (They did the same for 1981 and 1979.) And he received first place awards for spot and feature news in 1982 from the National Press Photographers Association.

Obviously, George Fridrich has his choice of lenses. For years, his choice has been Fujinon, exclusively. Here, in his words, are his reasons:

"Fujinon lenses deliver great performance and reliability. I use two of them, I abuse them and they hold up. They get knocked around and still perform often under the worst conditions. The fact is, you just can't go wrong with any Fujinon lens. On top of that, Fujinon's support and service are fantastic."

George's basic lens is a Fujinon 14X zoom with built-in 2X extender. When he can't get in close, the lens will and because its maximum F1.7 aperture stays flatter, farther, George can still get the brighter, higher contrast picture quality he demands. His second lens is Fujinon's exclusive 3.5x6.5 wide angle zoom. With an MOD under one foot, no assignment is ever missed because of tight quarters.

Incidentally, although George didn't receive the White House News Photographers' award for 1980, Pete Hakel (WJLA, Washington) did. He won with Fujinon, too. It's not a coincidence. According to Pete, "90% of the ENG work in D.C. is Fujinon."

**Before you make any ENG/EFP lens decision, see how much more you get with Fujinon.**

Fujinon provides it all—performance, quality, reliability and service. And to make it even better, Fujinon is also the value leader. For all the facts and figures to prove it, talk to your Fujinon representative or contact:

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FUJINON



Video camera, VC-10A, video recorder, VR-20A, Canon USA

lects the appropriate group of heads for still-frame, slow-motion, and visual-search playback. The VR-20A weighs 8.4 lb with a 12-V internal battery pack.

The ac-powered VT-10A tuner/timer has 105-channel capability. It is equipped with a wireless remote control. The VE-10A editor allows the user to insert, assemble, and dub audio.



Everex video camera, Model GP-61A, Hitachi Denshi

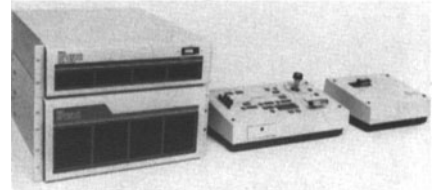
A color video camera with auto-focus, Everex Model GP-61A, has been announced by Hitachi Denshi America Ltd., 175 Crossways Park West, Woodbury, NY 11797. The through-the-lens auto-focus system is said to be virtually close to actual focusing by the human eye. The Everex system uses two image sensors for referencing the subject within the lens mechanism itself. This permits focusing even through glass partitions and for objects smaller than the overall viewing area.

Features include a pin-lead  $\frac{2}{3}$ -in. Saticon which gives improved SNR in low light and also better color fidelity.

The new Optiflex EPR-400 Perspective/Rotation accessory, an option which expands the creative capabilities of the E-Flex DVE® with a wide range of three-dimensional digital video effects, has been announced by NEC America, Inc., Broadcast Equipment Div., 130 Martin Lane, Elk Grove Village, IL 60007. The system has an easy-to-use controller, al-

lowing the operator to add, quickly and easily, an entire new range of three-dimensional effects to E-Flex sequences. The image can be rotated around three axes: horizontal, vertical, and perpendicular. The degree of rotation is easily variable.

Like the basic E-Flex system, the Perspective/Rotation accessory has a full 128-event on-board memory. Basic as well as rotational effects can be programmed in sequence for later playback. An event already programmed can be modified or erased. Any new event can be inserted into a preprogrammed sequence. With the optional Bubble Memory, preprogrammed



Optiflex EPR-400, NEC

rotational effects can be saved on a bubble cartridge for long-term storage. The Optiflex Perspective/Rotation accessory, priced at \$75,000, is designed for use with the basic E-Flex unit, priced at \$68,000. Bubble Memory units are priced at \$4500.

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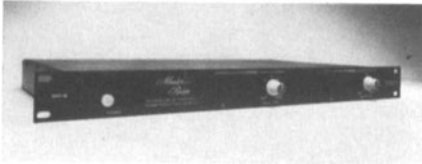
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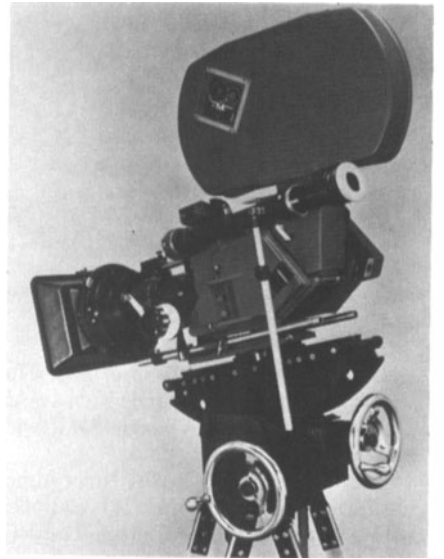


*DC-2 MicMix Audio Products, Inc.*

The DC-2, a device that allows the user to vary the decay time of virtually any type of reverb device, has been announced by MicMix Audio Products, Inc., 2995 Ladybird Lane, Dallas, TX 75220. The unit also provides up to 30-dB noise reduction on a reverb device.

The Mini-Worrall, a rugged, compact, and lightweight precision-gear head, has been announced by Cinema Products Corp., 2037 Granville Ave., Los Angeles, CA 90025. The new head has a low center of gravity to accommodate modern cameras, from an Arri 35BL (fully loaded with a 1000-ft magazine) to an Ikegami EC-35 (with complete accessories). Features include a variable three-speed gearbox which permits sensitive adjustments in the horizontal and vertical axes (pan: 7°, 10°, and 18° per hand-wheel revolution; tilt: 7.5°, 12°, and 20° per hand-wheel revolution).

When used in the pan mode, a precision



*Mini-Worrall head, Cinema Products Corp.*

cable drive permits 370° rotation (185° to either side of the neutral reference point). A detented slip ring permits the operator to establish a new neutral reference point in any position.

The Mini-Worrall's dovetail rails accept the standard CP sliding camera mounting plate which is compatible with most 16-mm, 35-mm, and video cameras. The dovetail rails also accept Arri and Moviemcam sliding camera mounting plates.

The Todd-AO Video lens system has been developed by Cinema Products Corp., 2037 Granville Ave., Los Angeles, CA 90025, for use in such applications as video teleconferencing and closed-circuit projection of video source material in a wide screen format. It is an integrated camera/lens/projector anamorphic video system. The Todd-AO anamorphic elements have been adapted to high-speed Canon fixed focal length lenses (with prism optics compensation) to work with an Ikegami EC-35 video camera. Todd-AO anamorphic techniques have been applied to work with a specially adapted variable focal length lens achieving horizontal viewing angles up to 80°. Starting with a standard 1.33:1 TV aspect ratio and using the normal anamorphic squeeze ratio of 2:1, Todd-AO Video yields a new anamorphic video aspect ratio of 2.66:1.

Todd-AO Video system utilizes a front anamorphizing technique for both prime and zoom lenses. This front anamorphizing technique (as opposed to rear anamorphizing techniques) effectively doubles the horizontal viewing angle of the lens with no loss in aperture. Normal operation of the Todd-AO Video system involves a standard NTSC signal as the camera output where transmission is involved. When not transmitting, however, ultimate quality in picture resolution and freedom from moiré interference can be achieved by using the camera's independent RGB output and, in turn, driving the projector in the RGB mode.



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drift and no tubes to replace. It interfaces with all available color correctors, converts into all international standards and—by its very digital nature—is designed to have an exceptionally long life.

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Pepper series tungsten-halogen lights, LTM Corp. of America

The Pepper series of tungsten-halogen lights has been announced by LTM Corp. of America, 1180 N. Las Palmas Ave., Hollywood, CA 90038. The series consists of seven lights (100 W to 650 W) — three focusing Fresnel units, one open face, one soft light, and two focal spots. Described as a "miniature lighting system," the Peppers are small and light in weight, but are said to provide high-efficiency performance.

Novabeam™ Model Two, a compact portable video projector designed to produce a 5-ft color TV picture directly onto a flat white wall, in a darkened room, without

requiring a special curved projection screen, has been announced by Kloss Video Corp., 145 Sidney St., Cambridge, MA 02139. Controlling ambient room light allows a 5-ft flat image, appearing four ft from the projector, that can be watched at full picture brightness from any point in the room. The Model Two is a video projection monitor with direct video and audio inputs



Novabeam, Model 2, Kloss Video Corp.

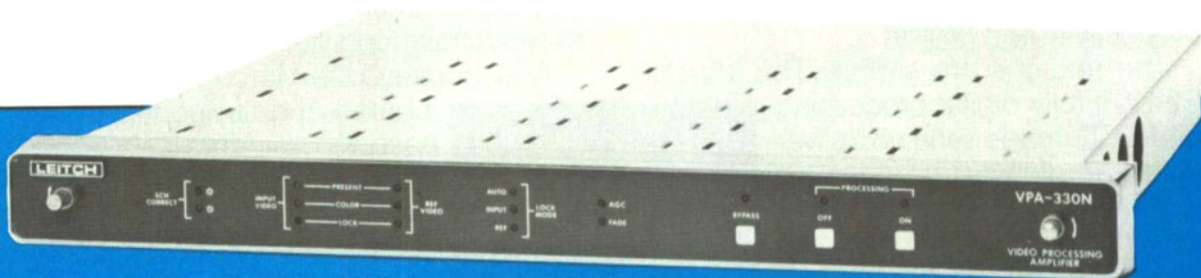
for any program source with video and audio outputs, including videocassette recorders, component TV tuners, and videodisk players. The picture is projected

by means of three Novatron™ projection tubes put out 200 lm. The unit measures 21½-in. high or 30½ in. when opened. It is 24½-in. wide and 12-in. deep. It weighs about 60 lb and can be moved from room to room.

The Optimod-TV, Model 8182A, a second-generation audio processor for television, has been announced by Orban Associates, Inc., 645 Bryant St., San Francisco, CA 94107. The device incorporates a loudness controller licensed from CBS Technology Center, and also includes an improved peak limiting circuit to substantially improve distortion performance on low-quality voice material. The loudness controller is designed to reduce or eliminate viewer complaints of excessive loudness of TV commercials. The unit is fully equipped to drive a TV stereo generator and to interface to a TV stereo compander.



Optimod-TV, Model 8182A, Orban Associates



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- Equalizing (optional).
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As for color imagery, you simply cannot improve on Leddicons. Extended reds have a precisely-engineered response with an infra-red filter providing cut-off exactly where you want it.

Or compare the highlight image performance of Leddicons with other tubes. The difference is that the retention effect is minimised by a unique target manufacturing process — even in the very difficult extended red channel where other tubes are simply unable to cope.

You'll certainly want to avoid blemishes. That's why all Leddicons must satisfy the most exacting manufacturing, testing and quality control standards. And it shows — in the fact

that Leddicons average less spotting than other tubes!

Then there's geometry. The optimised electron optical design of Leddicons ensures the best possible geometry.

Registration too is equally distortion free — we can, in fact, supply



computer-matched sets for all three channels.

And what about microphony? With EEV's unique anti-microphonic mesh assembly, Leddicons provide the cleanest pictures — even from cameras

operating in areas of high ambient acoustic noise.

As for choice, there's simply none better than Leddicons. That's because the range covers fully-interchangeable sizes and types to suit virtually every type of studio, EFP and ENG camera used in the world today.

When you add up all the facts about Leddicons, there is only one conclusion — namely, the definition of the best tubes for your camera.

But don't leave it at that.

Next time specify Leddicons for your new equipment and as replacements and find out what that definition really means in practice.

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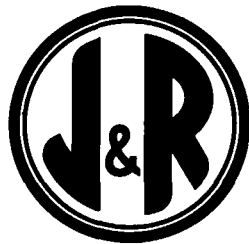


Digital reverb/room simulator, Lexicon, Inc.

A digital reverb/room simulator, Model 200, has been announced by Lexicon, Inc., 60 Turner St., Waltham, MA 02154. Features include continuously variable pre-delay, reverb time from 0.2 sec to 70 sec, and acoustic ambiance controls that

simulate the spatial characteristics of acoustic environments from a phone booth to the Grand Canyon. The system incorporates proven algorithms for natural-sounding reverberation. Preset effects include several plate reverbs, chamber simulations, and concert hall simulations. Nonvolatile memory allows any setup to be stored and recalled on demand, even if the unit has been turned off or power interrupted. Controls adjust reverb frequency contour, high-frequency rolloff, echo density, and early reflections. Model 200 occupies 5 1/4-in. of rack space and weighs 18 lb.

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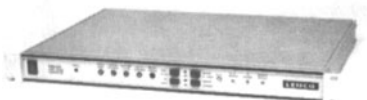
ChemMaster, Houston Fearless 76

The ChemMaster, a 30-gal portable mix and transfer tank, equipped with a run-dry pump, has been announced by Houston Fearless 76, Inc. The all-stainless-steel tank mixes liquid or powdered chemicals. With a simple valve change it transfers the mixed liquid to a processor or storage container. The run-dry feature prevents burn-out if the tank should run dry for an extended period of time.

The Pacex Water Recycling System, a modular closed loop system, has been announced by Pace International Corp., 3727 S. Robertson Blvd., Culver City, CA 90230. Packaged modules can be connected with PVC pipe to provide a closed loop installation for a single processor or for the entire laboratory. The modules are designed with balanced flow rates. They are constructed of materials that are not affected by chemicals in the wash water.

The system is offered in 5, 10, and 15 gal/min models. Larger models handling 30, 45, or 60 gal/min are also available.

A new stand-alone unit, the PSG-412, which combines an RS-170A converter and a genlock master sync generator into one package has been announced by Lenco, Inc., 300 North Maryland St., Jackson, MO 63755. Features include the ability to maintain the RS-170A condition in the genlock mode when locked in a non-"A" signal. In addition to a full set of drive pulse outputs, the PSG-412 has two field reference outputs (line 10, field 1), two black burst outputs, and two CRS timing outputs. A front panel switch allows for fast or slow vertical genlock and video bypass. LEDs on the front panel indicate oven temperature, video presence, system lock, RS-170A conversion, and field error.

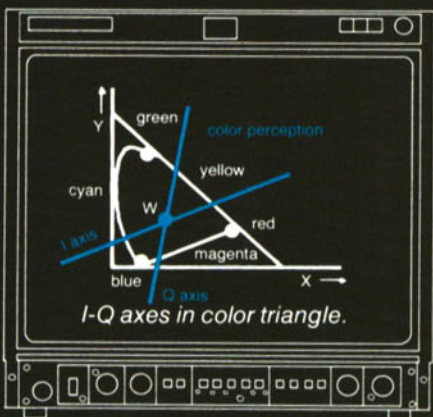


PSG-412 stand-alone unit, Lenco, Inc.



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We cared enough to give you a monitor with the I-Q to reproduce the best possible pictures. We know you're smart enough to buy it.

## SHARP



## COLOR

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- 20" and 14" models available—high resolution delta CRTs.
- I-Q wide band demodulation system.
- Complete board interchangeability between models.
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- OPTIONS... Built-in color bar or cross hatch patterns. Built-in safe title marker generator. Multi-standards. RGB inputs.
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# ASACA

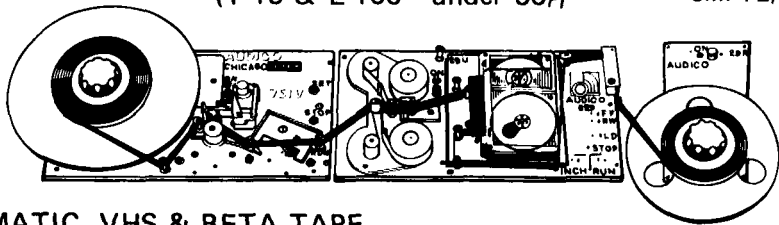
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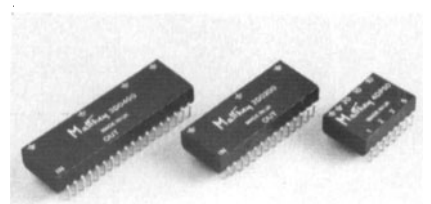
Audico, Inc. 219 Crossen, Elk Grove, IL 60007 Telex: 4992690 AUDICO UI



Satellite earth station, Channel Master Div. of Avnet

An 8-ft satellite earth station has been introduced by Channel Master, Div. of Avnet, Inc., Ellenville, NY 12428. A non-motorized system offers an easily-operated 24-channel receiver with a wide range of features. Pushbutton tuning with automatic polarity switching, and LED channel display are combined with a center/fine tuning meter and signal strength meter for precise reception. Additional features include channel scan for rapid location of active transponders and a built-in modulator. The prime focus feed assembly (LNA, scaler feed and polarizer) and the down-converter are supported above the fiberglass dish by lightweight, high-strength aluminum struts. Once installed and aligned, the polar mount provides full domestic satellite coverage through a manual adjustment. The all-weather system can withstand hurricane-force winds in excess of 100 mi/h.

An optional SatScan™ motorized system featuring Up and Down buttons to aim the antenna, and a continuous three-digit readout which is accurate to 1/3 of a degree are available.



Video delay lines, Television Equipment Associates

A new improved range of Matthey DIP video delay lines has been announced by Television Equipment Associates Inc., Box 393, South Salem, NY 10590. Delay times vary from 1 to 500 nsec. The equalizer networks, built inside, provide broadcast TV quality of  $\pm 0.05$  dB ripple from 15 kHz to 5.5 MHz. The DIP video delays are all 75-ohm and can be connected in series to provide longer delay times.



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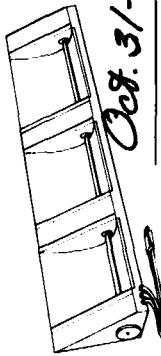
SEE THE NEW WATT-MISER™ QUARTZLINE® LAMPS DEMONSTRATED IN THE GENERAL ELECTRIC BOOTH #306/308 AT SMPTE CONFERENCE, LOS ANGELES, OCT. 31-NOV. 3, 1983

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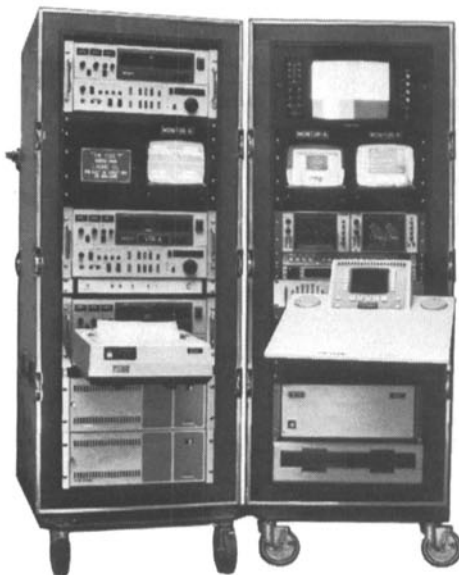
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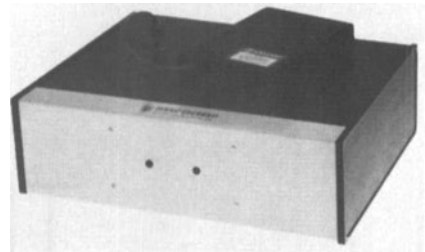
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Battery charger, Alexander Manufacturing Co.

A new charger for any rechargeable ENG or EFP battery in the 12- to 15-V range, with a minimum capacity of 4 Ah, has been announced by Alexander Manufacturing Co., Box 1645, Mason City, IA 50401. The solid state technology of the new charger allows it to sense when the battery is at full charge; at that point it drops down to trickle automatically. The charger can be adapted to accommodate most nickel-cadmium battery packs in its range.

The **Microdoctor**, a trouble shooter for microprocessor systems which provides an integral hard-copy printout, has been announced by Ed Allen & Associates, Inc., 11235A Grissom Lane, P.O. Box 59883, Dallas, TX 75229. The system enables the user to record permanently a complete memory map of a microprocessor-based system speedily and with little prior knowledge or documentation. The Microdoctor has 180 test sequence storage for up to one year.

A new time-code reader, the TCR-3500, has been announced by FOR-A Corp. of America, 49 Lexington St., West Newton, MA 02165. Designed to provide SMPTE and EBU reading functions, it also generates BCD code for h/min/sec/frame number identification. A built-in character display permits automatic superimposition of the time-code readout onto the pictures without requiring the use of a title generator or similar unit. Two time-code memories permit freezing any point in the tape, identified by the BCD code, for pushbutton retrieval; also, tape numbers from 00 to 99 can be superimposed onto the picture.

A count up/down feature with frame and tape number display has up to three start times which can be pre-set and put into memory. A time-freeze and pre-set function is included. Accurate real time is insured, if power outage should occur, by means of a built-in battery.



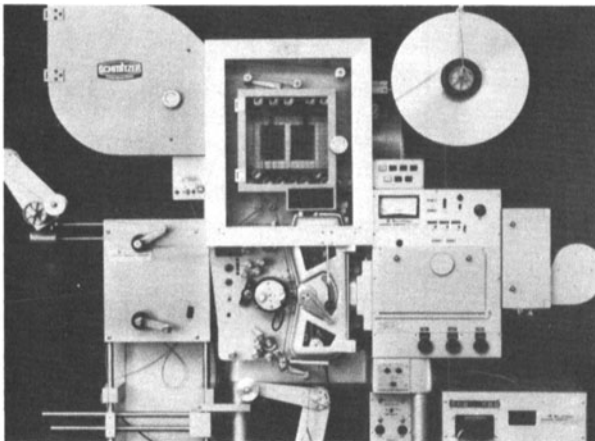
Time-code reader, FOR-A Corp. of America

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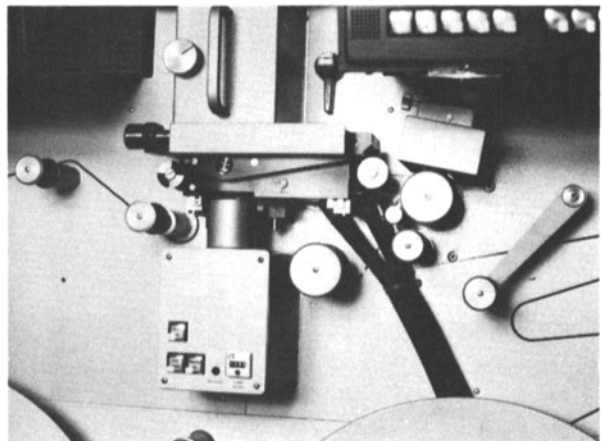
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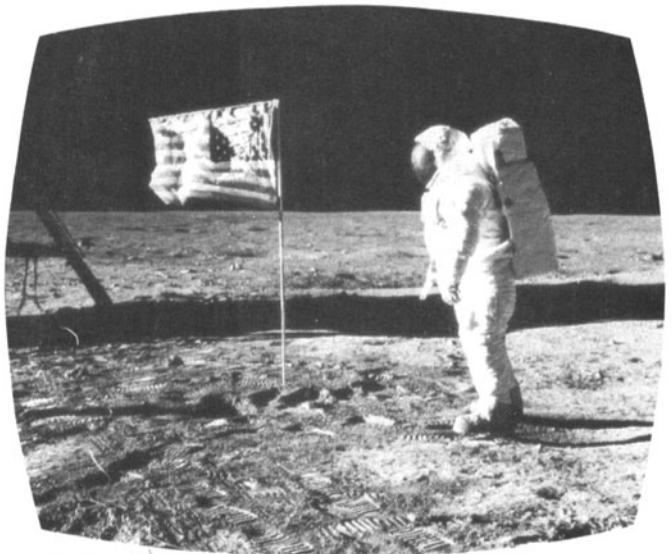
On July 20, 1969 over 600 million people watched as man first set foot on the moon. The lens which brought the excitement back to earth was an ANGENIEUX.

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Or maybe it's our wide selection of lenses that broadcasters and production houses count on for top performance.

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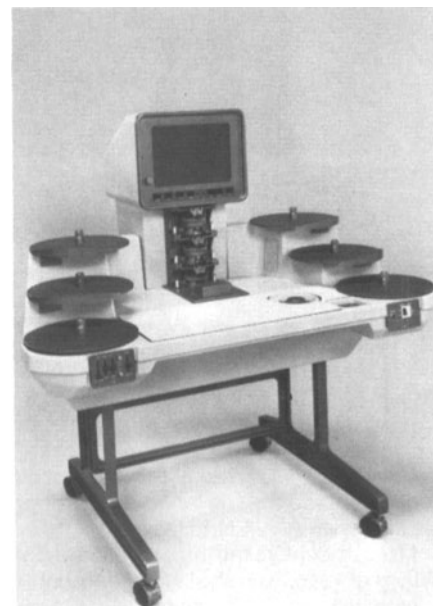
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The new U/F-S16 upright/flatbed super-16 film editing console has been announced by Cinema Products Corp., 2037 Granville Ave., Los Angeles, CA 90025. The optics in the console have been redesigned to permit full frame viewing of the entire picture area of super-16 film as well as that of regular 16-mm film. The new condensing optics also provide a bright, flicker-free image on the viewing screen. Features include six horizontal feed and take-up platters that accept one super-16 picture track and two 16-mm magnetic soundtracks in a terraced arrangement which makes all platters and controls readily accessible to the editor. A simple belt-drive system eliminates the need for torque motors. The U/F-S16 also features crystal-controlled 24/25 frames/sec sync sound with variable speed control from 0.5 to 192 frames/sec forward and reverse. The unit is compact and lightweight and is transportable by car.



*Upright/flatbed super-16 editing console, Cinema Products Corp.*

The LVS-5850 vectorscope, designed to observe and measure relative phase and amplitude of chrominance signal components, has been announced by Leader Instruments Corp., 380 Oser Ave., Hauppauge, NY 11788. Electronically generated targets provide "inner boxes" which represent  $\pm 2.5^\circ$  and  $\pm 2.5$  IRE units. This feature allows targets to be easily viewed from afar or in the dark.

Also announced were the LBO-5860A half-rack waveform monitor and the LCG-400 sync/test generator. The LBO-5860A can be mounted side-by-side with the vectorscope and provides line selection for lines 14 through 21. The LCG-400 sync/test generator has a full range of video signals for test and alignment of monitors, cameras, VTRs, and overall performance of color and black-and-white

# Panasonic invites you to see the next generation of Video Cart Machines at the 1983 SMPTE show.

## Introducing the MVP-100 Multi-Function Video Player.

It's the MVP-100 Multi-Function Video Player and it will revolutionize broadcast automation. The big story behind the MVP-100 is its computer-controlled broadcast programming capability. Commercials, station IDs, and promos can all be programmed with time code accuracy. The MVP-100 is more than a spot sequencer. It can also function as your complete program player. And because it's modular, up to 24 video cassette transports can be loaded in advance. The MVP-100 also features M-format for multi-generation picture quality that goes far beyond 3/4".

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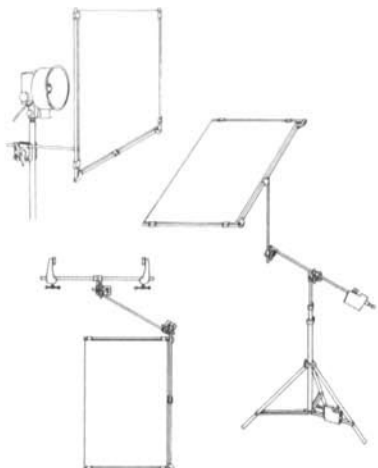


**L**owel's new *Frame-up* unfolds to form a sturdy 34 x 24" flag that can shadow the subject, background and lens. It also diffuses the light, changes its color or reduces its intensity with various clip-on gels.

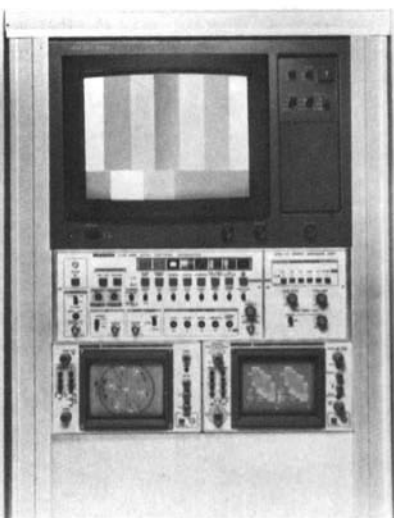
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**lowel** 



With TV monitor, LCG 400 sync-test generator (top), bottom (L) vectorscope, (R) waveform monitor, Leader Instruments Corp.

video systems. Genlock is provided with adjustable horizontal delay and subcarrier phase. This unit is available with multi-burst or sweep-marker features. It can synchronize with all standard-composite video signals, including those from quad-head and helical scan VTRs.

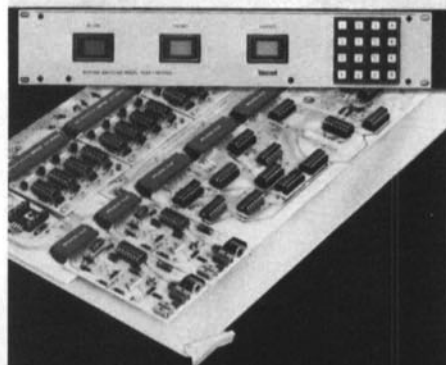
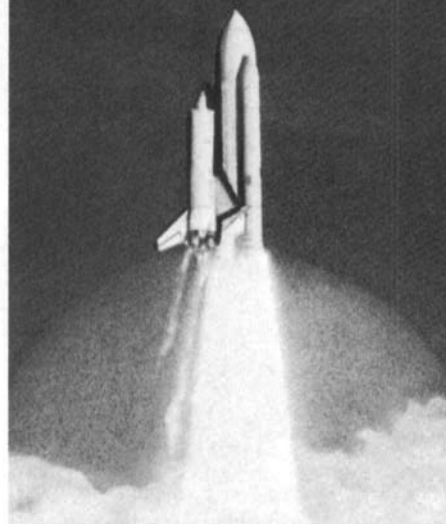


Editing console MC-56E, Winsted Corp.

An editing console, the MC-56E, designed to accommodate a 1/2-in. editing setup, or Sony's front loading 3/4-in. system, has been announced by Winsted Corp., 9801 James Circle, Minneapolis, MN 55431. The console is 56-in. high, 26-in. deep, and 24 1/2-in. wide. The console has two shelves with a full extension of 13 in. for VCRs or storage. To insure better monitor viewing, the monitor bridge tilts 5° and adjusts to three different height positions.

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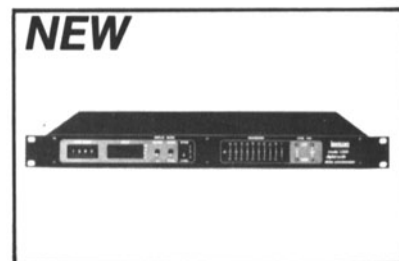
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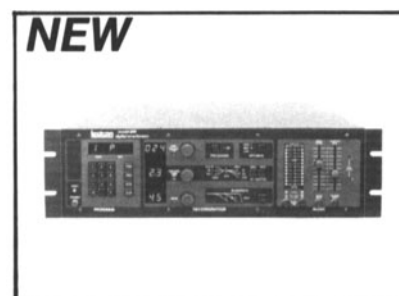
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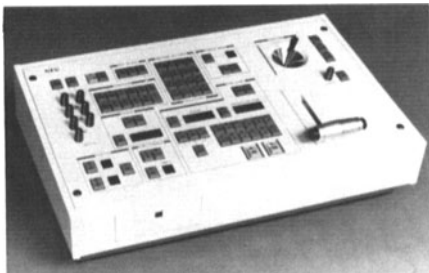
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Three new options for the E-Flex digital video effects system have been announced by NEC America, Inc., 130 Martin Lane, Elk Grove Village, IL 60007.



E-Flex digital video effects controller, NEC America, Inc.

The EPR-400 perspective/rotation accessory provides a wide new range of three-dimensional video effects. An add-on accessory, it is capable of field-retrofit. Features include a controller, allowing the operator to add a new range of three-dimensional effects to E-Flex sequences. The image can be rotated around three axes — horizontal, vertical, and perpendicular. The degree of rotation can be easily varied. Horizontal or vertical rotational effects can be enhanced by adding depth through perspective. Rotation on the perpendicular axis makes the image spin like a top or a propeller. Each axis can be positioned anywhere on the screen as desired, allowing the operator to change the viewpoint. The degree of perspective effect is separately variable. On perpendicular rotations, the point of spin could be in the center, at a corner, on the edge, or anywhere else on the screen. All rotational effects can be combined with each other. The EPR-400 has a full 128-event on-board memory. Basic, as well as rotational effects, can be programmed in sequence for later playback.

The EES-300 E-Flex off-line editing system increases the versatility of the E-Flex system through the use of a personal computer for off-line programming of complex effects sequences. Using a graphic representation of the size, position, and aspect ratio of the image on the computer's CRT, up to ten "points" can be specified in a single programmed sequence. Each point consists of the aspect ratio of the image, its size, and its position on the screen. The programmed sequences may be saved on 5¼-in. floppy disks for later use in the editing system or on bubble memory cartridges for playback through the E-Flex system.

The E-Flex Combiner/Chroma-Keyer combines the outputs of two separate E-Flex systems and also generates a chroma-key signal from the digital video signal of each system. The combiner function combines the E-Flex systems in digital form and produces the output key signals in both analog and digital form. The line chroma-key function provides a key signal from each of the E-Flex systems. A color-cancelling circuit using digital processing is also included in the E-Flex combiner.



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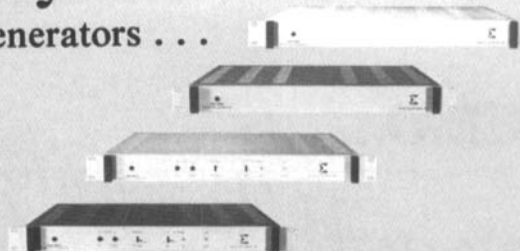
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Videotape recorder, TT-8000, 3M Co.

A fourth-generation videotape recorder, the TT-8000, offering several new features, has been announced by 3M Co., P.O. Box 33600, St. Paul, MN 55133. It is a 1-in. Type-C recorder offering considerably improved signal performance. Features include character generator/insertor, SMPTE time-code generator/reader, program time expansion and contraction, enhanced editing capabilities, color playback without a time-base corrector, matching time-base corrector, and automatic track-following. The TT-8000 fits in standard 19-in. relay racks. A number of options are available, including remote control and slow-motion controller equipment.

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Digital graphic equalizer, NEC America, Inc.

A new digital graphic equalizer, the DG-802X, has been announced by NEC America, Inc., 130 Martin Lane, Elk Grove Village, IL 60007. The device provides independent control of phase and amplitude, octave by octave, with CRT display and provisions for memorizing equalization characteristics. Through a signal-processing integrated circuit recently developed by NEC, the DG-802X can independently control phase and amplitude. A soft-touch keypad electronically controls phase and amplitude independently of one another at ten center frequencies. Used in conjunction with a personal computer, the two-channel system provides a sophisticated graphic display for tracing active sound fields. Both phase and

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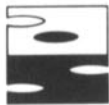
**And every SYSTEM 2600 synchronizing combination gives you:** 1/100-frame offset adjustment • DC and FM capstan control • internal interfacing (no extra boards or hidden costs) • "Smart-Lock" fast re-synchronizing • tach pulse/control track updating • automatic drop-frame offset calculation • "Splice-Trap" • NV data retention through power-down • LTC, VITC or pilot tone • NTSC, PAL and SECAM.

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amplitude at each frequency are graphically displayed. A wave-form memory can store up to nine wave forms. The DG-802X has a dynamic range of more than 90 dB, and separation between the two channels is better than 90 dB.



*Chroma Meter II Incident, Minolta Corp.*

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**The Chroma Meter II Incident** for measuring light-source color has been announced by Minolta Corp., 101 Williams Dr., Ramsey, NJ 07446. Using high-sensitivity silicon photo cells, the meter makes precise readings processed by a built-in microcomputer and displayed on a custom-designed liquid crystal display. It can interface with data processors, and it has a variety of measuring modes for determining chromaticity and deviation from a standard. Applications include color measurements of light sources, such as tungsten or fluorescent lamps; cathode-ray tubes; or color TV picture tubes. The meter's microprocessor controls the measuring time of 100.0 msec and automatically adjusts the reading response for either continuous or flickering light.

**An audio delay synchronizer, Model 13,** designed to allow broadcasters to solve lip-sync problems resulting from the increasing use of digital processors and synchronizers, has been announced by Lexicon, Inc., 60 Turner St., Waltham, MA 02154. The system decodes the hysteresis and frame offset information from any video synchronizer to provide frame-accurate audio synchronization in broadcast or production situations.

Three standard decoding options are supplied — pulse-width decoding, "wild-

# “I’m glad we had Perrott Silver 110s the last time we went to war.”

—Bernie Nudelman  
Video News, Inc.  
Miami, Florida

Video producer Bernie Nudelman and cameraman Steve Born have spent the better part of the last four years covering the battlefields of Latin America—with a camera, a recorder and two Perrott MP-110 batteries.



“Nicaragua. El Salvador. Honduras. Guatemala. They’re all routine assignments to us,” explains Steve. “And when the networks hire us to cover these hot spots, they expect us to come back with the story every time. That’s why we use the MP-110s. They’re the most reliable batteries we’ve ever worked with.”

“And that’s why we took only two MP-110s with us to cover the war in the Falklands,” adds Bernie. “We’d charge them both up overnight on the Perrott PE-100 dual charger, then go out in the field for two days and leave the charger behind. We did this for six weeks straight—all over Chili, Argentina and Uruguay. And the MP-110s came through every time—even in 30° below temperatures off Antarctica. You can’t beat that.”

With that kind of record, it’s no wonder Video News, Inc. has equipped all four of its camera crews with Perrott MP-110 batteries. And no wonder the Perrott MP-110 silver zinc on camera battery is the high performance choice with news teams throughout the country.

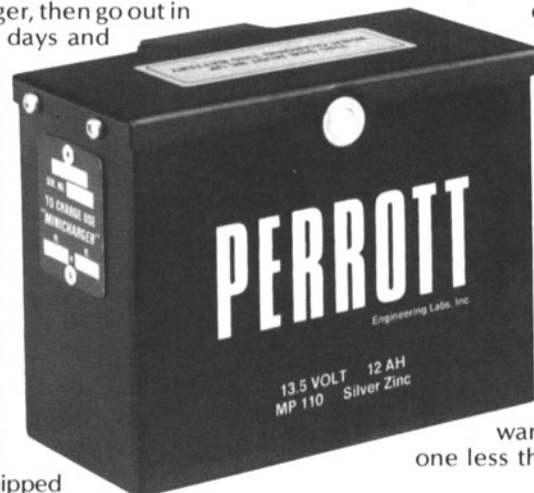
After all, the Perrott MP-110 has the highest capacity of any on camera battery—three times the running time of Ni-cads\*. This top-of-the-line favorite fits in your hand and weighs only 4.5 pounds.

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Which means that the next MP-110 Steve and Bernie take into the field will be as reliable as their last one. And in the middle of a

war, it’s nice to have one less thing to worry about.



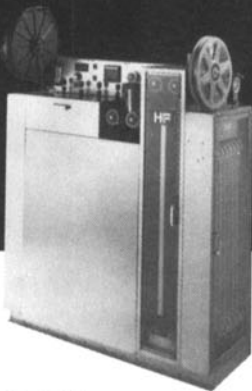
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Audio delay synchronizer, Lexicon, Inc.

feed"/genlock decoding, or serial data decoding, each with its own interface panel and software. A removable delay configuration control module can be designed to conform to any delay/sync decoding scheme presently in use and provides software/hardware flexibility for future configurations.

A Barco 9-in. color television monitor providing high-resolution pictures has been announced by Elector USA, Inc., 5128 Calle de Sol, Santa Clara, CA 95050. Designated the CM 22, the monitor can be used in remote vans, or in tight spaces where the distance between viewer and monitor is limited. The CM 22 is equipped with a fine pitch dot, black matrix, in-line gun tube. The rack-mount version makes it possible to install two 9-in. monitors in a single 19-in. rack. Features include pulse cross; pre-set contrast, hue, saturation, brightness; automatic degaussing; scan format switch; front accessible cut-off; and gain controls. Modular construction allows for quick maintenance.

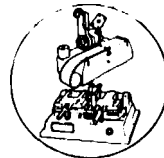
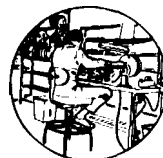


Barco television monitor, Elector USA, Inc.

An information storage system developed by 3M Co., St. Paul, Minn., and NEC Corp., Tokyo, Japan, combines a laser device from NRC with a 3M, 12-in. optical storage disk that can hold the equivalent of four file drawers (20,000 pages) of information. The system consists of NEC's Model N 6329-21 optical disk drive which uses a laser diode to enter and retrieve information from the 3M disk, which is made of plaster and looks like a shiny version of a standard phonograph record. The disk is housed in a protective cartridge called a caddy.

The hardware and software constitute what is known as a read/write information handling system, that is, the laser drive can read information from the disk and write

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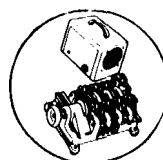


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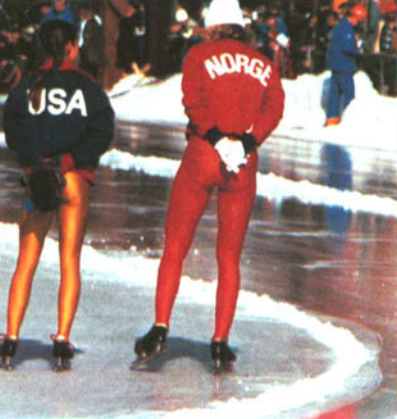
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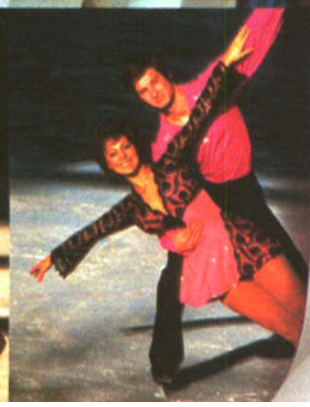
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information onto the disk. Initial applications are in data and document storage, filing and retrieval systems, archival storage of large quantities of digital data, and on-line information storage. The system measures 21 × 32 × 26 in.



*ICM-214 monitor, Lenco, Inc.*

The ICM-214 (14-in.) and ICM-219 (19-in.) monitors have been announced by Lenco, Inc., 300 North Maryland St., Jackson, MO 63755. The ICM-214 uses a 0.62-mm slot mask CRT, and the ICM-219 uses a 0.68-mm slot mask CRT. Each of the monitors has two NTSC differential bridging loop-through inputs selectable from the front panel. External sync input is 4 V peak-to-peak ±6 dB. A rear panel switch selects internal/external sync operation. High-voltage is non-scan derived with regulation within 1%.

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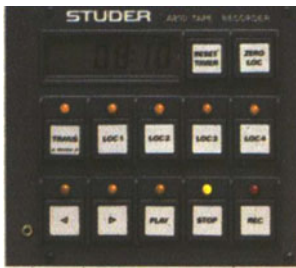


*Sync pulse generator, Lenco, Inc.*

The SPG-412P sync pulse generator for PAL application has been announced by Lenco, Inc., 300 North Maryland St., Jackson, MO 63755. The unit has genlock, a full set of drive outputs, and two black burst outputs. The SPG-412P utilizes the 13.5-MHz world standard digital clock reference signal. Field reference is a front panel switch for the selection of 6.25-Hz white pulse signal in the black burst output. The 6.25-Hz white pulse is inserted on line 7 of Field 1 that conforms to the EBU D25 recommended standard for proper SC/H phase of off-tape signals.

PAL pulse is internally selectable to provide a 180° selection of the square wave to coincide with the first burst in the field. Also, a PAL identification pulse is selectable to be coincident with the leading or trailing edge of PAL pulse. Field reference is 6.25-Hz pulse for identifying the first field of the eight-field sequence. Field blanking is internally selectable between 20 and 25 lines. A remote control feature selects between internal or external genlock.

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With the new A810, Studer makes a quantum leap forward in audio recorder technology. Quite simply, it re-states the art of analog audio recording.

By combining traditional Swiss craftsmanship with the latest microprocessor control systems, Studer has engineered an audio recorder with unprecedented capabilities. All transport functions are totally microprocessor controlled, and all *four* tape speeds (3.75 to 30 ips) are front-panel selectable. The digital readout gives real time indication (+ or - in hrs, min, and sec) at all speeds, including vari-speed. A zero locate and one autolocate position are always at hand.

That's only the beginning. The A810 also provides three "soft keys" which may be user programmed for a variety of operating features. It's your choice. Three more locate positions. Start locate. Pause. Fader start. Tape dump. Remote ready. Time code enable. You can program your A810 for one specialized application, then re-program it later for another use.

There's more. Electronic alignment of audio parameters (bias, level, EQ) is accomplished via digital pad networks. (Trim pots have been eliminated.) After programming alignments into the A810's memory, you simply push a button to re-align when switching tape formulations.

The A810 also introduces a new generation of audio electronics, with your choice of either transformerless or transformer-balanced in/out cards. Both offer advanced phase compensation circuits for unprecedented phase linearity. The new transport control servo system responds quickly, runs cool, and offers four spooling speeds.

Everything so far is standard. As an option, the A810 offers time-coincident SMPTE code on a center track between stereo audio channels. Separate time code heads ensure audio/code crosstalk rejection of better than 90 dB, while an internal digital delay automatically compensates for the time offset at all speeds. Code and audio always come out together, just like on your 4-track. Except you only pay for 1/4" tape.

If you'd like computer control of all these functions, simply order the optional serial interface. It's compatible with RS232, RS422, and RS422-modified busses.

More features, standard and optional, are available. We suggest you contact your Studer representative for details. Granted, we've packed a lot into one small package, but ultimately you'll find that the Studer A810 is the most versatile, most practical, most *useable* audio recorder you can buy.

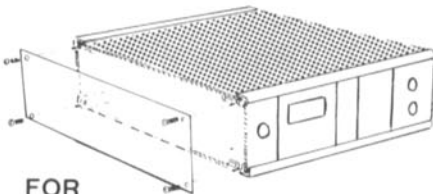
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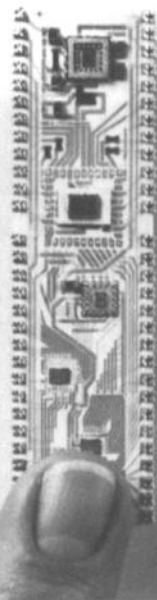
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Hybrid circuits Series H Switcher, 3M Co.

The Series H routing switcher system, designed to provide high-capacity, expandable switching for television systems, including broadcast, cable, and production facilities, has been announced by 3M Co., P.O. Box 33600, St. Paul, MN 55133. Expansion in a single frame from a basic 16 X 16 matrix to a 128 X 32 matrix can be easily accomplished, providing 4096 video and audio crosspoints in 19 1/4 in. of rack space. Expansion to multiple frame networks up to 1024 X 1024 crosspoints is possible.

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The Series H switching systems are controlled by the 3M 6500 microprocessor controller. A wide selection of control panels connect to the 6500 via a single coax cable.



KA-100 adapter, JVC Co. of America

The KA-100 adapter, a device designed to attach the HR-C3U VCR to the KY-1900U color camera, has been announced by JVC Co. of America, 41 Slater Dr., Elmwood Park, NJ 07407. The device fastens the HR-C3U to the side of the camera rather than on the back to provide

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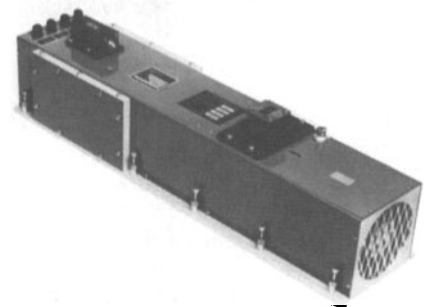
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CDP-5000 disk player, Sony

A professional compact disk player, the CDP-5000, has been announced by Sony Professional Audio Products, Sony Dr., Park Ridge, NJ 07656. With a 4¾-in. diameter, the disk can store more than 60 min of stereo audio on one side. Information on the disk is read by laser-beam pickup. Features include the ability to quickly access information anywhere on the disk. Recording track number, minute, second, and frame information are entered by a Ten Key input device included on the player.



Ku-band traveling-wave-tube amplifier, Varian Associates, Inc.

A new generation of lightweight Ku-band traveling-wave-tube (TWT) medium power amplifiers (MPA) has been announced by Varian Associates, Inc., 611 Hansen Way, Palo Alto, CA 94303. Designated VZU-6993D6, the amplifiers are designed specifically for use in ground transmitters of commercial satellite communications, to provide wideband operation across the entire 500-MHz communications band.

The new amplifiers operate at a frequency from 14.0 to 14.5 GHz, with a typical power output of 300 W (+54 dBm minimum). No tuning or external mechanisms are required to keep the MPA within required operating specifications.