

NEW PRODUCTS AND DEVELOPMENTS



A time lapse recorder/player which is able to record up to 240 hours of surveillance on one cassette has been developed by Panasonic Systems Division, One Panasonic Way, Secaucus, NJ 07094. The recorder/player, designated Model NV-8050, designed specifically for time lapse applications employs $\frac{1}{2}$ -in videocassettes and can record in color or black-and-white in six different time lapse modes and real time. Signal-to-noise ratio is 45 dB. Automatic timer recording is achieved either by the use of an external timer/switcher device or Panasonic's Model NV-F85 optional plug-in. Horizontal resolution is 300 lines in black-and-white and 240 lines in color. Model NV-8050 is priced at \$2,795. Model NV-F85 is priced at \$325.



The Sony Type 5 series of U-matic videocassette recorders has been introduced by Sony Video Products Co., 9 W. 57 St., New York, NY 10019. Four machines offer professional users a systems approach to video production, editing, distribution, and duplication. All feature front-loading mechanism, tilt-out control panel, direct drive for both drum and capstan, a switching regulator power supply that provides a wide range of voltage and frequency, random access, and interactive capability.

The VO-5850 U-matic editing recorder facilitates editing with the Bidirex search dial that works in either direction at $\frac{1}{30}$ to five times normal speed. It is fully automatic when used with the Sony RM-440 editor, and editing is accurate to ± 2 frames. It offers U-scan, high-speed picture search at up to 10 times normal speed, and a built-in preroll edit function that enables editing from a camera as well as another tape source.

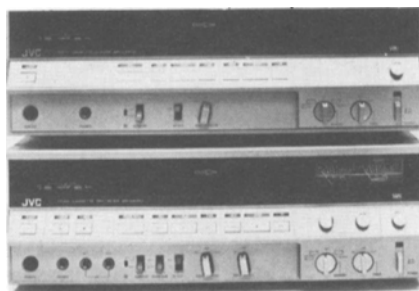
The VO-5800 is a compact recorder/feeder, which offers backspace edit capability, vertical interval switching between two video inputs, Bidirex search, and high-speed picture search. It can be used alone or as part of a rack-mountable automatic editing system.

The VO-5600 recorder/player features forward and reverse picture search at five times normal speed and still picture.

The VP-5000 is an economical player-only machine.

Accessories and peripherals for the series include: RM-500, a single-function remote-control unit; RM-580, a full-function unit; RM-555, a multi-remote controller that offers simultaneous control of up to 20 VCRs; RM-V5, a VCR selector for single or multiple VCR selection; DA-500, a video-audio distributor; and VCS, a video/audio switcher.

A microprocessor-controlled, tuner-equipped portable VHS videocassette recorder designed for commercial and educational applications has been announced by Sharp Electronics Corp., 10 Sharp Plaza, Paramus, NJ 07652. The XA-900 is a one-piece, three-way ac/dc portable model. The all-in-one two-hour unit has a built-in, 10-pin camera connector and programmable 24-hour tuner/timer as well as a self-contained detachable ac power pack which can be interchanged with the VCR's optional rechargeable battery. Other features include a front-loaded, air-damped cassette system; and advanced VHF/UHF 12-position tuner/timer; audio dubbing; battery protection and dew protection systems; three-digit tape counter; and a built-in carrying handle and shoulder belt.



Incorporating 100% direct drive and Dolby® noise reduction, the new BP-5300U videocassette player and BR-6400U recorder announced by US JVC Corp., 41 Slater Dr., Elmwood Park, NJ 07407, are designed to interface with the JVC Tape-handler line. Both professional $\frac{1}{2}$ -in VHS units have motorized automatic front cassette loading, high speed search capability, variable speed playback, and aluminum diecast chassis construction.



The BVU-800, an editor with programmable event sequences that complements the BVU-800 Series U-matic videotape recorders in EFP and ENG applications has been announced by Sony Video Products Co., 9 W. 57 Street, New York, NY 10019. The unit can control up to three machines, and it provides the broadcaster with the capability of storing 128 programmed, frame-accurate events. Dedicated eight-digit displays for each videotape recorder and Bidirex control of all jog and shuttle modes enable fast and precise editing for postproduction applications and more sophisticated ENG use. Options include the BVS-500 video and audio switcher, which is controlled by the editor to provide vertical interval switching and signal selection from up to five sources and can be expanded to nine sources; the BK-806, a plug-in time-code generator/reader; the BK-807, a 9-pin remote interface board; the BK-808 and BK-809, 36-pin parallel remote interface boards for recorder and player interface; and the BK-810, a cue-tone record/playback board.

Model TVS-783, announced by NEC America, Inc., 130 Martin Lane, Elk Grove Village, IL 60007, is a video teleconferencing system for the transmission of slow scan color video pictures over conventional telephone circuits. The system offers the user equal and variable-length coding techniques to sample each picture element in the digital memory to determine the most efficient bit structure for reproducing that picture element. Options include dual memory, permitting the display of one image while a second is being received; a pointer-generator that can be positioned over a transmitted image to accentuate specific portions of the screen; and a high-speed sampling circuit. A desk-top controller has provision for switching up to five video inputs; it controls transmitter and receiver functions, full- or half-screen transmission, monitors preview switching, houses the pointer-generator controls, and can be used to control focal length, aperture, and focus of remote zoom lenses. Price is under \$15,000.

Continued on page 600

SMPTE Journal, June 1982

AFFORDABLE ONE-INCH

Introducing the Ampex VPR-80. Type "C" broadcast quality on a budget.

Excellent picture quality and low cost. That's what you get with the VPR-80, the new professional video recorder from Ampex. Whether you're adding to your present facility, or moving into the professional video market, you'll find the VPR-80 to be a totally new concept. Yet, it incorporates the most demanded features of the world's most popular one-inch Type "C" VTR, the VPR-2, plus several new and advanced capabilities.

The VPR-80 provides the latest in recording technology. You get a transport designed for superior tape handling of all reel sizes from 6½ inch "spots" to 2-hour, 11¼ inch reels. It has dual microprocessors to control all VTR functions and servo systems, a universal power supply, built-in audio monitoring and a power-down feature that remembers the control panel setup even when the power's off. Plus built-in diagnostics to keep operation and maintenance costs to a minimum. But there's more.

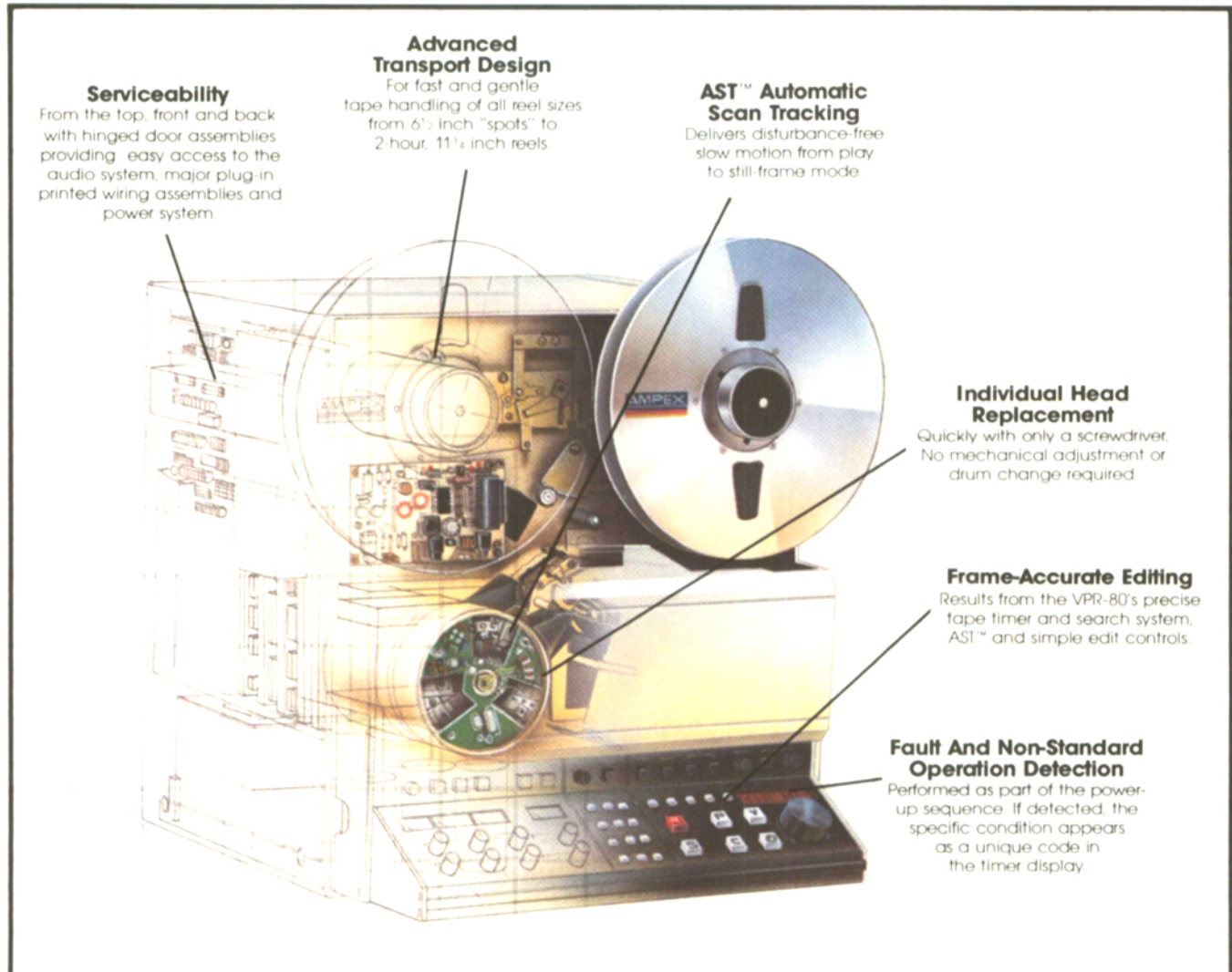
You also get as standard the Ampex exclusive AST™ automatic scan tracking for perfect slow motion and still

frame pictures, plus frame-accurate editing with simple, operator-oriented controls. Not to mention table-top or rack-mount versatility and compatibility with the entire family of Ampex VPR accessories. With the VPR-80, everything from setup to servicing can be accomplished with a minimum of effort and time.

The VPR-80 was truly designed for the operator. And it's backed by the unique worldwide service and support that Ampex is known for. To find out how the VPR-80 fits into your application, contact your Ampex representative or write Ampex Corporation, Audio-Video Systems Division, 401 Broadway, Redwood City, CA 94063 (415) 367-2011.

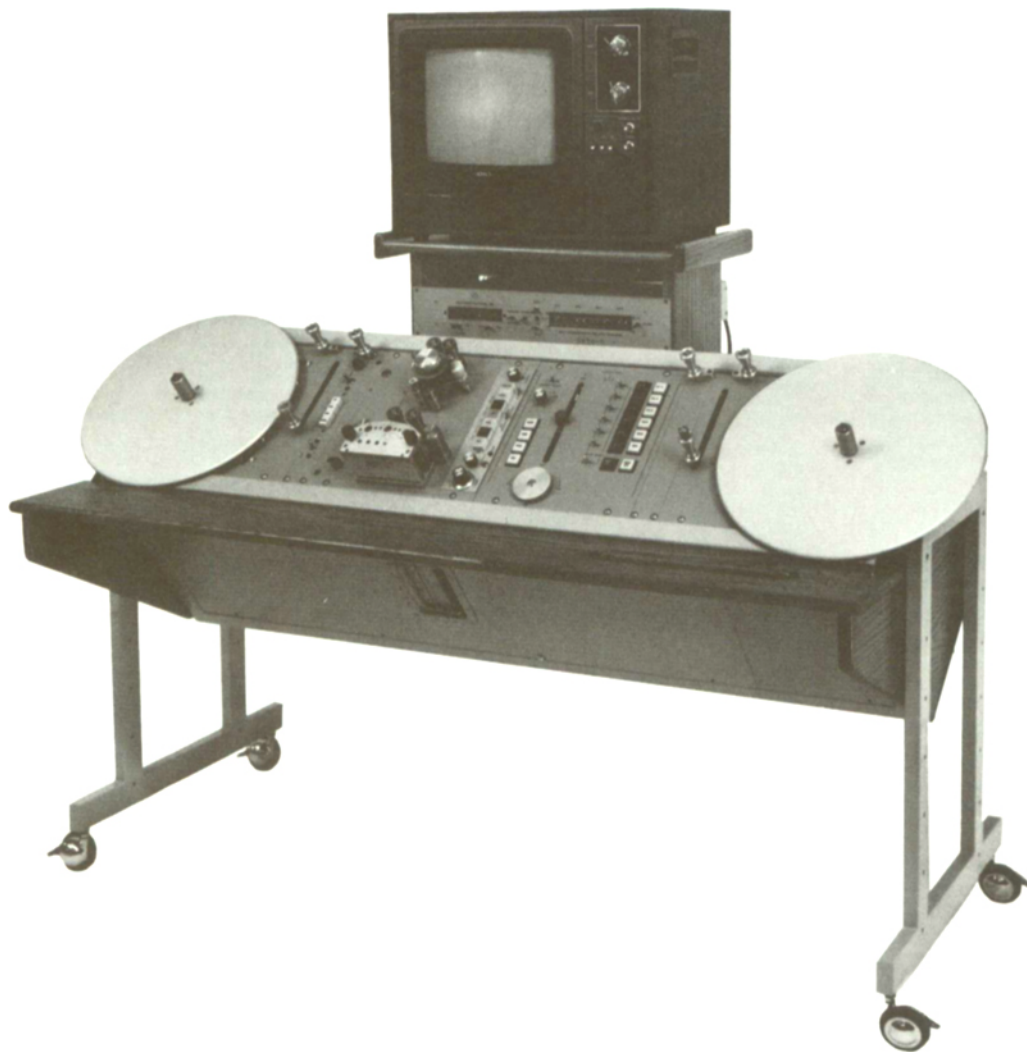
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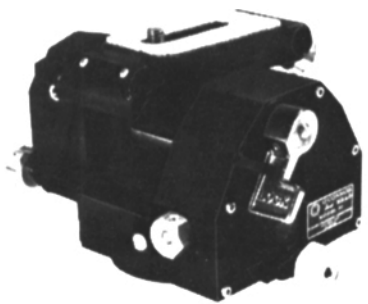


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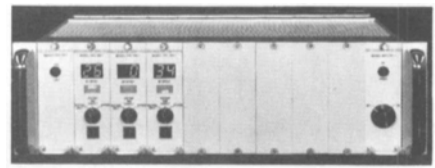


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The Code Phase Corrector 700 Series has been developed by Gray Engineering Laboratories, 504-P West Chapman Ave., Orange, CA 92668, to assist in computer editing. The equipment measures the difference between the actual SMPTE time-code start and the ANSI specification, displays this difference, rephases and retransmits the corrected code to specification and computer acceptance. It also corrects drifting or unlocked time code caused when the video is recorded to a different sync source than the longitudinal code. One of these modules is required for each playback VTR in the edit bay. The code phase corrector front module, CPC-703-1, is \$878; the code input/output rear module, CPC-703-2, is \$117; and the basic equipment rack, which includes the 701-1 power supply and the 702-1 frame pulse generator is \$1,395.

A microprocessor-based videotape editor with joystick control has been announced by US JVC Corp., 41 Slater Dr., Elmwood Park, NJ 07407. The editor, designated the VE-90, operates on control track or SMPTE time code. The VE-90 permits the operator to edit onto a blank videotape (assemble) or onto a prerecorded tape (insert). It also permits one-second fades to and from black and generates NTSC black. Other features include high speed search for finding an exact tape location and cruise, which shuttles the tape at the fastest joystick speed in forward or reverse.



Microgen, a character generator designed for use in CATV, educational and industrial applications, has been announced by System Concepts, Inc., 2440 South Progress Dr., Salt Lake City, UT 84119. Features include program on/off for keyboard preview, genlock, rolls, crawl, flash and full editing functions. Microgen is priced at about \$3,000. A color sync option provides ten selectable character colors in downstream applications plus ten selectable background color by row in upstream uses. The color option is priced at \$550.

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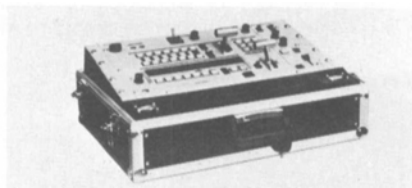
SMPTE Journal, June 1982

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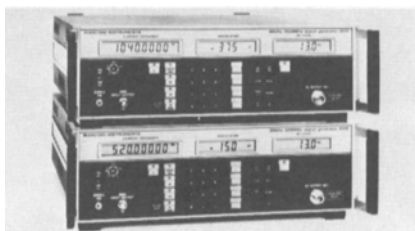




A portable special effects generator that can be used both in the field and in the studio has been announced by Sony Video Communications Division, 9 W. 57 St., New York, NY 10019. Designed especially for field operations, the SEG-2000 color special effects generator operates either on battery or external dc power. On two optional battery packs, the unit can operate for two and a half hours; dc operation ensures its application for electronic field production and for studio use it can operate on ac power. It can be used as a camera/VTR switcher in the field and as an editing or on-line switcher in the studio. Features include a built-in NTSC sync generator with genlock capability, built-in downstream keyer with shadow generator, a background generator for black, white or any color and four black burst outputs.

The generator can perform six wipe patterns with a choice of hard wipe, soft wipe and border wipe plus adjustable softness and border width. It has an auto take switch and PGM/PST MIX lever for cut and dissolve between program and

pre-set pictures. To control color and phase of the connecting cameras, the SEG-2000 has SC and H phase adjustment indicators that eliminate the need for a vector scope and a waveform monitor. The unit weighs 20 lb, 15 oz, is 19-in rack mountable and has an optional portable carrying case.



Two microprocessor-controlled signal generators, models 2018 and 2019, from Marconi Instruments, 100 Stonehurst Court, Northvale, NJ 07647, operate in the 80kHz-520 MHz and 80kHz-1040MHz range. Through remote calibration, service and calibration can be reduced significantly from that of the conventional signal generator. Fault diagnosis from the front panel enables many faults to be localized down to the board level. Liquid crystal displays eliminate fan filter maintenance; the LCDs also provide a digital indication of all major settings and because of their low power consumption, do not necessitate a fan. A non-volatile memory facility pro-

vides storage of 40 carrier frequencies and associated panel settings. Other features include flexible front panel layout for setting and varying initial values, electronic calibration of level and frequency modulation; 10Hz frequency resolution, low carrier phase jitter, SSB phase noise better than -130 dBc per Hz at 20 kHz offset from carrier, integral reverse power protection, and a choice of nine level calibration units. Model 2018 is \$8,650 and Model 2019 is \$9,300.



The MED-1900, a 19-inch color monitor for use in medical environments, had been designed by Sony Video Products Co., 9 W. 57 St., New York, NY 10019. It interfaces with other sony video equipment specifically designed for medical use. The new unit offers Trinitron color with low ac power-line leakage current. It is equipped

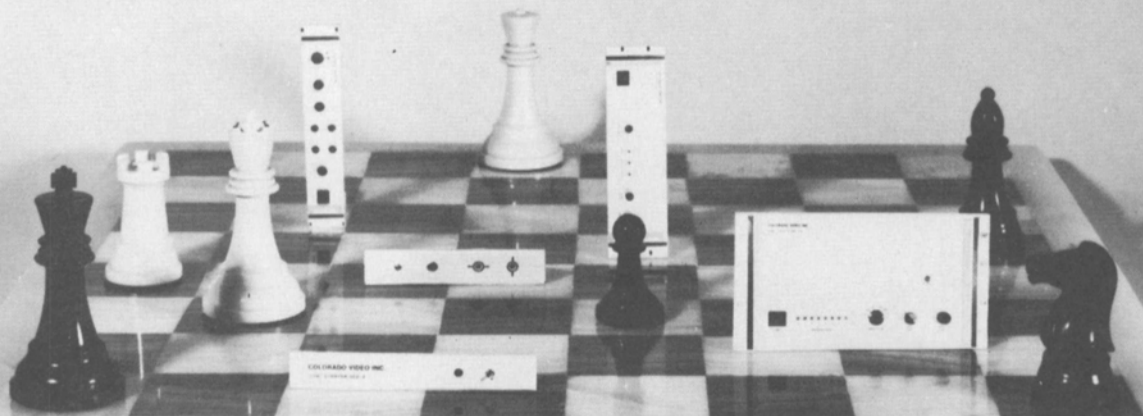
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The Scoopic 16MS is a lightweight, hand-held 16mm workhorse designed to perform reliably and continuously under all conditions. It's easy to use, with a built-in automatic metering system that assures great results when "getting the shot" leaves no time to worry about exposure. Its Canon f/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 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. Best of all, the Canon Scoopic 16MS is affordable. Up to *three times* more affordable than competitive 16mm systems and E.N.G. video cameras. So with the Scoopic system you can either provide better coverage of a single event, or literally be in two or even three places at the same time—for the same money! Impossible? Make us prove it! Send in the coupon below for detailed information about how the Canon Scoopic 16MS can provide better footage at better prices. It just might be the best action you'll ever take.



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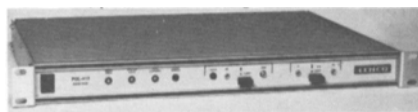
with Line A/Line B/VTR selection. Normal or narrow scanning is selectable, and an external sync can be connected. Loop-through connectors for video, sync, and audio can bridge the MED-1900 to other monitors. Additional features include 8-pin and BNC connectors, and subvolume control for initial sound-level adjustment.

A monochrome video monitor, the Slim Line, 12-in PMM-921, has been announced by Lenco, Inc., 300 North Maryland St., Jackson MO 63755. The monitor has a 900-line center resolution. A modular chassis consists of five individually shielded circuit modules that plug in directly from the rear of the chassis. Optional pulse cross and optional underscan can be selected from the front panel; dc restoration is a standard feature. The PMM-921 is 8.75 in high, 17 in wide and 13.5 in deep. The base price is \$905.

A new 4-in Triniton color video monitor that can be used in various studio and EFP configurations has been announced by Sony Video Communications Division, 9 W. 57 St., New York, NY 10019. Designated the PVM-4000, the monitor is designed to interface with Sony's DXC-1800 series color video cameras as an electronic color viewfinder. It can also function as a color portable video monitors, a rack

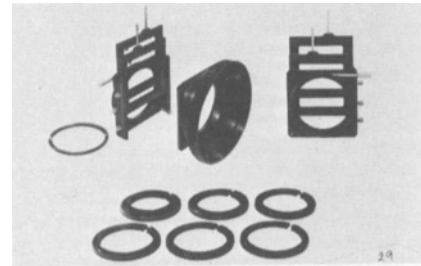


mounted color studio monitor or an ac operated color video monitor. Features of the PVM-4000 include an advanced power-supply switching regulator that permits consistent performance quality with a wide latitude of input voltages from 10 to 18 V; sync signal checking via HV delay (pulse cross) switch; blue-only picture display to facilitate hue adjustment or check VTR playback; and two separate video input connectors, rear panel selectable.



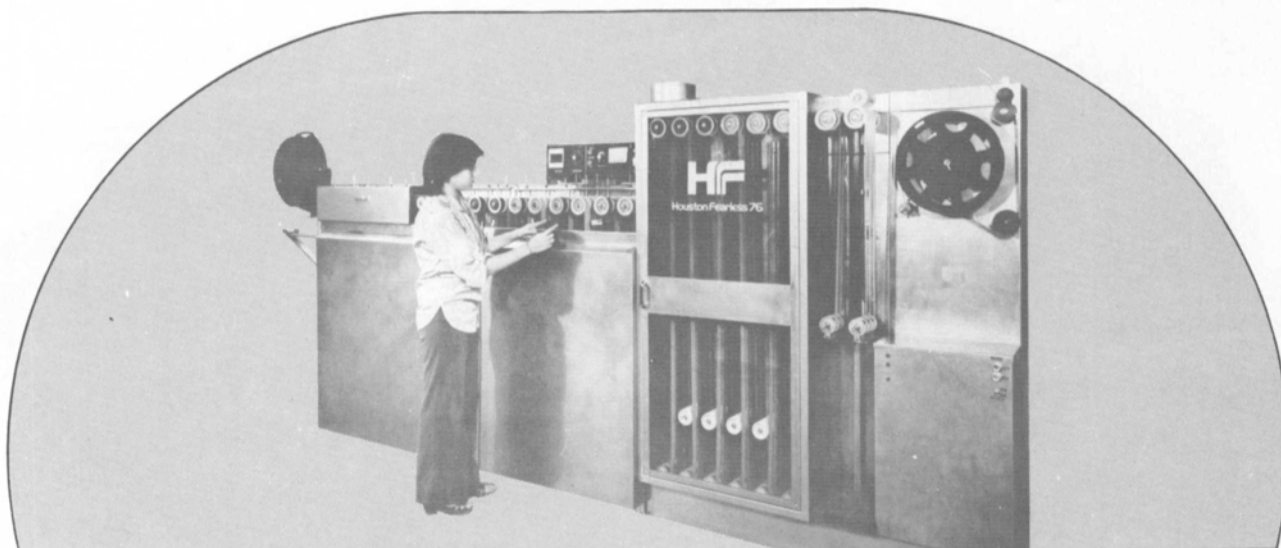
The PGI-413 GenLock unit from Lenco, Inc., Electronics Division, 300 N. Maryland St., Jackson, MO 63755, locks the RS-170A Sync System to any stable composite video signal. It locks the 312 System in less than four seconds. After it has locked, the incoming video sync and burst are replaced within the unit with

SCH phased sync and burst derived from the internal RS-170A Sync Generator. This "converted" video is then available to the system as a conventional gen locked source. LEDs indicate video presence, system lock, "A" conversion, and color field errors. Price is \$2500.



The On-Board ac Adapter, Model RPS1, for power input to ENG/EFP portable video cameras that require up to 40-watts input is available from Frezzolini Electronics Inc., 7 Valley St., Hawthorne, NJ 07506. The adapter is compatible with camera manufacturers' three-keyhole mounting brackets as well as with the Frezzolini Hook-Mount bracket. The adapter input is universal at 117/234 V, 50/60 Hz; output is 13.5 V dc, 3 A, maximum. Circuits are regulated and have automatic overload protection. The unit is 5 X 5-in., weighs 3 lb, and has a 12-ft ac power cord.

Continued on page 608



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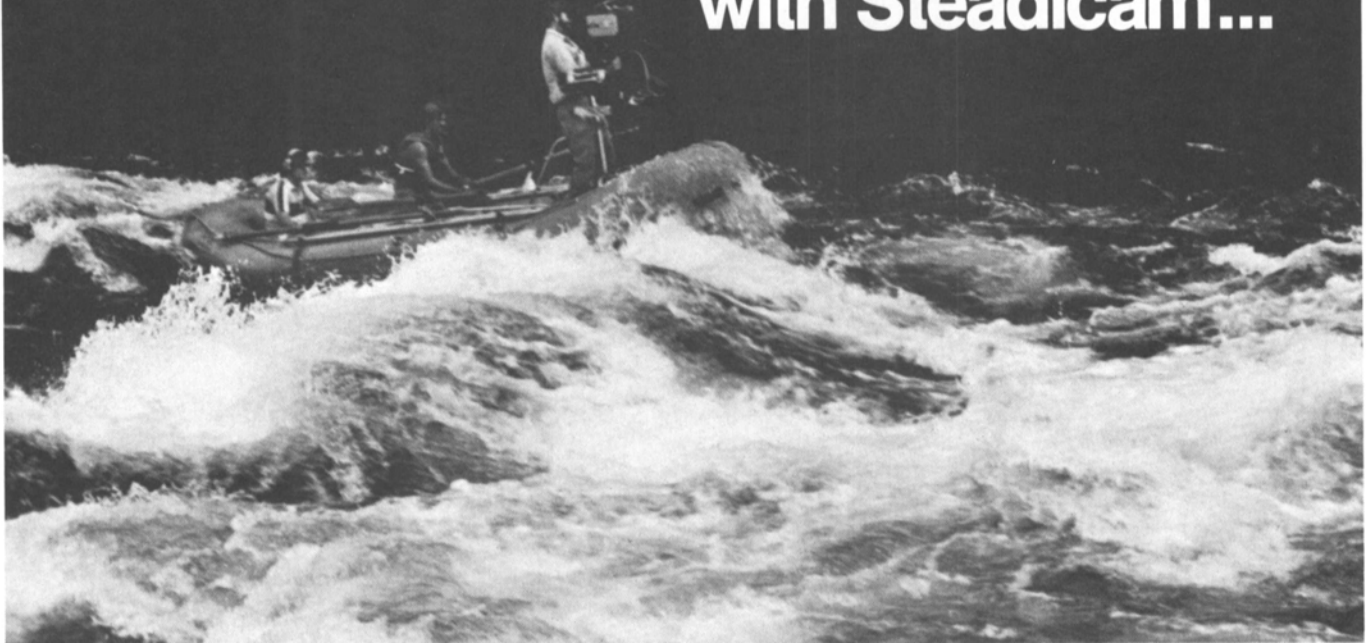
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Shooting the rapids EFP-style with Steadicam...



Planning ahead with Steadicam, Cinema Products' Oscar-winning video/film camera stabilizing system, pays off in spades. Economically as well as artistically. A good example of such planning is a new sports series for cable TV, "Outside The Arena," produced by Westwood Communications, Inc. (Eugene, Oregon).

The premise for the series is to take well-known sports figures out of their commonly-known element, and to feature them as they are engaged in various interesting activities. The pilot program involved videotaping a famous pro football player kyaking down the McKenzie River in Oregon.

To get the best footage from the camera raft (equipped with a Hitachi SK-91 camera and an HR-100 1-inch portable recorder), Steadicam was mounted on a specially built pole which was welded onto the framework of the raft.

"Even though the raft was forever being tossed every which way but the right direction, Steadicam came through with flying colors," says Steadicam operator Stephen W. Allen of Allen Production Services, Ltd. (Portland, Oregon). "In situations where I had to pay more attention to the water in front of the raft than to the monitor, Steadicam practically kept in frame by itself."

"Steadicam was an integral part of the planning for the production of this segment," says producer Bruce O'Neil.



SMPTÉ Journal, June 1982

"Future segments will no doubt place even greater demands on the Steadicam, due to the many and varied locations we plan to use for this series."

The results of the two-day Steadicam shoot on the McKenzie River were spectacular. Says director J. Clayton Lawson: "Steadicam enabled us to capture some of the most exciting moments ever shot on a white water river."

Steadicam, of course, is not restricted to "shooting rapids." On the contrary. It is a most versatile production tool which can be used effectively—even in "normal" shooting circumstances—in a thousand and one dramatic ways.



Steadicam operator Stephen Allen shooting with video camera and Steadicam on the McKenzie River in Oregon.

For further information, please contact:

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two of our camera/recorders rather than one of the heavier, bulkier units around. Then, obviously, you'll be able to cover twice as much news.

The Betacam camera section employs a High-Band SMF Tricon® single-tube pickup system. As a result, it has a dramatically improved picture, with better resolution and more sensitivity than conventional one-tube cameras.

And since it has 60% fewer components than three-tube cameras, the cost of maintaining it is low.



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(Of course, there will always be applications where you prefer a three-tube camera. So you'll be delighted to know that Sony also offers a three-tube Betacam.)

The Betacam recorder also provides superior performance, with better picture clarity and a higher signal-to-noise ratio, even when compared to $\frac{3}{4}$ " machines. It records for 20 minutes on a Beta L-500 cassette, and runs for a full hour on the low-power, rechargeable battery contained in the unit. And both cassettes and batteries are inexpensive and readily available.

A separate playback unit completes the Betacam system. It's the only interface you need for existing post-production equipment. So nothing is made obsolete.

Naturally, there are many other refinements and innovations. So to request more information, call 1-800-526-0890. Or in New Jersey, (201) 256-4512, ext. B1.

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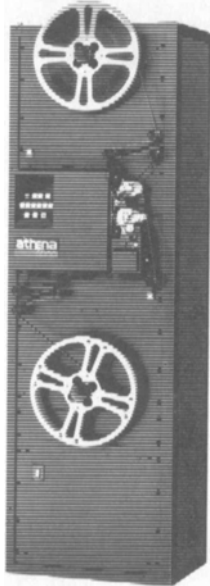
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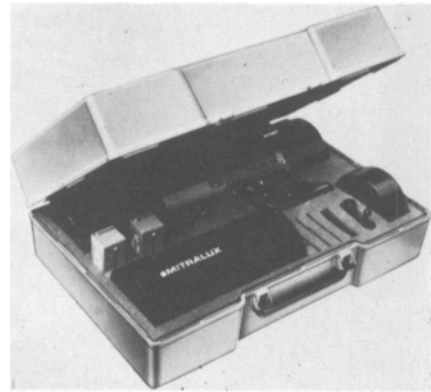
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Memo to Members: Have You Signed Up A New Member Lately?



As one who has chosen to belong to SMPTE, you are aware of the benefits of SMPTE membership. Among these benefits are the prestige of being associated with the world's premier professional organization in the fields of motion pictures and television, the monthly *SMPTE Journal*, the local section meetings, and the annual conferences and equipment exhibits. If you know someone who meets SMPTE's requirements, you can offer to sponsor him or her for membership. This is the best way to help strengthen the Society and point someone toward increased professional growth. Applications are available from SMPTE Membership Dept., 862 Scarsdale Ave., Scarsdale, NY 10583.



The Mitralux L131, a handheld follow spotlight, has been introduced by Bardwell & McAlister, Inc., 7051 Santa Monica Blvd., Hollywood, CA 90038. Manufactured in Switzerland, the L131 weighs less than 12 lb and operates on 110/240 V ac. The kit (shown above) contains wide angle and telephoto lenses along with the standard lens. The kit also contains a tripod adapter, shoulder strap, filters and spare bulbs. The light produces 31,000 lm at 3200°K. The source is a 1000-W projector bulb. With the telephoto lens at 100 ft the Mitralux produces 40 fc; at 15 ft it produces 1440 fc with a maximum spread of 2 ft 6 in or a minimum spread of 9½ in. The wide angle lens at 15 ft produces 300 fc with a maximum spread of 8 ft 6 in.

The Tiffen Universal Rotating Matte Box, from Tiffen Manufacturing Co., 90 Oser Ave., Hauppauge, NY 11788, holds two 3 X 3-in. or 4 X 4-in. filters and a rubber lens shade. It fits onto any 16-mm camera and some 35-mm cameras with a lens adapter or a series 9 adapter ring. A locking screw allows the user to position graduated filters at any position and to rotate the matte box without dropping the filter. The matte box is \$485 and the adapter is \$39.

Frezzolini Battery Packs, Models FBP-90 and FBP-90FC, for providing portable power to Sony BVU-50, BVU-110, and BVH-500 VTRs, have been introduced by Frezzolini Electronics, 7 Valley Street, Hawthorne, NJ 07506. These "in-board" units house nickel-cadmium cells in a heavy-duty plastic case. The output is fuse-protected, and each pack contains a spare fuse. They have a 12 V, 4 Ah output capacity, and weigh 3.5 lb. The battery packs can be recharged individually or in groups. Model FBP-90FC will recharge in one hour or less or overnight.

A new lens from Schneider for ENG/EFP handheld cameras has been announced by Tele-Cine Corp., 400 Crossways Park Dr., Woodbury, NY 11797. When fitted with accessory controls the lens can also be used in the studio. It is a 14X lightweight, wide angle lens. It has the ability to zoom when using the optional aspheric wide angle attachment which delivers a super wide 70° viewing angle (6.3 mm). A built-in 2X extender provide zoom capabilities out to

Continued on page 610

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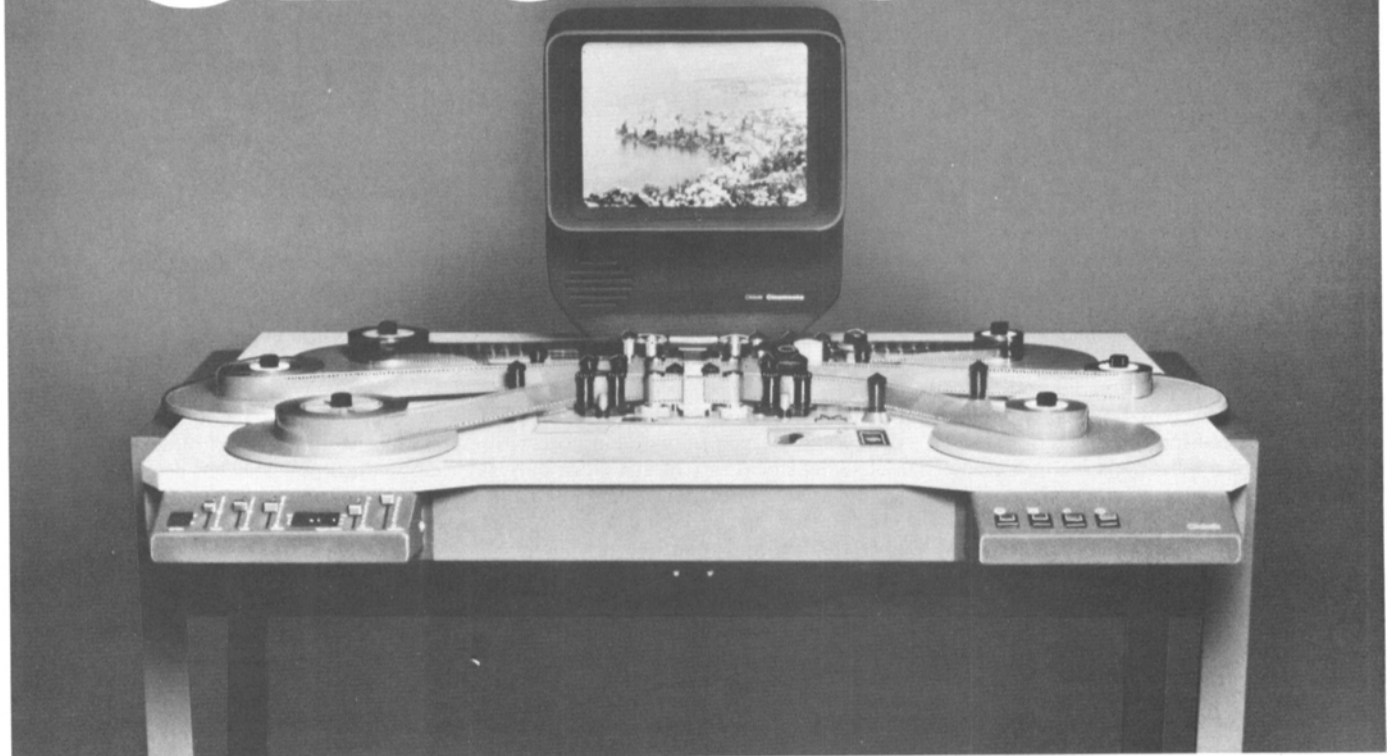
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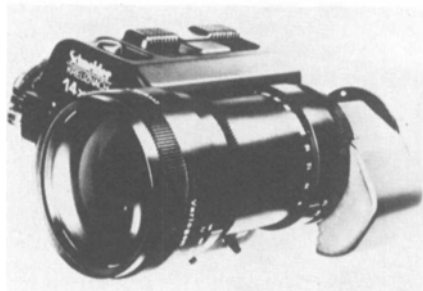
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252 nm. The price for the handheld lens with rocker switch is \$6,285 for most cameras with availability in $\frac{3}{4}$ in and $\frac{1}{4}$ in formats.

A fiber optic system designed for mobile video/audio transmission including ENG, EFP and mobile surveillance has been announced by Artel Communications Corp., P.O. Box 100, West Side Station, Worcester, MA 01602. The EN-1000 transmitter is a small battery-powered unit that transmits video and audio up to two miles over lightweight fiber optic cables without the need for amplifiers or equalizers. Typical applications include minicamera-to-van interconnection in live television (ENG/EFP broadcasting), replacing "window" microwave or coaxial links. The EN-1000 eliminates line-of-sight restrictions and interference potential of microwave. It allows the camera crew to extend much farther from the control center using lighter cable (5 lb per 1000 ft).

The transmitter mounts on the minicamera or the cameraman's belt. Standard connectors are provided for video, audio and 12 V dc battery inputs and for fiber optic cable output. The rack-mounted receiver unit provides automatic gain control, clamping and squelch as well as automatic self-monitoring and self-testing measurement capability.

A digital SECAM to PAL transcoder using the CCIR recommended digital sampling standard of 13.5, 6.75, 6.75 (CCIR Recommendation AA11), has been developed by the British Broadcasting Corporation. The CCIR Recommendation implies a sampling frequency of 13.4 MHz for luminance and 6.75 MHz for each of the two color difference signals.

With the new transcoder the incoming SECAM signal is decoded into the luminance (Y) and two color difference signals (U and V). These are converted to digital signals and placed in a two-field store with a clocking signal rate of 864 clock pulses per line. This operation is locked to the input line frequency. The contents of the store are then read out at the same number of clock pulses per line but with the clocking signal locked to the System I output line frequency. This has the effect of widening or narrowing the time interval between samples in order to produce a correct



output line frequency. The signal components are re-converted to analog signals and coded into a System I PAL signal.

If the SECAM decoder is replaced by a high-quality PAL decoder, the transcoder becomes a synchronizer. As such it has none of the imperfections of the typical composite signal synchronizer. Also, because the input clock has been designed to follow the rapid changes in line length associated with some helical scan video recorders, the transcoder can operate as a time base corrector.

Further information about the new transcoder is available from BBC, Broadcasting House, London W1A 1AA, England.



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