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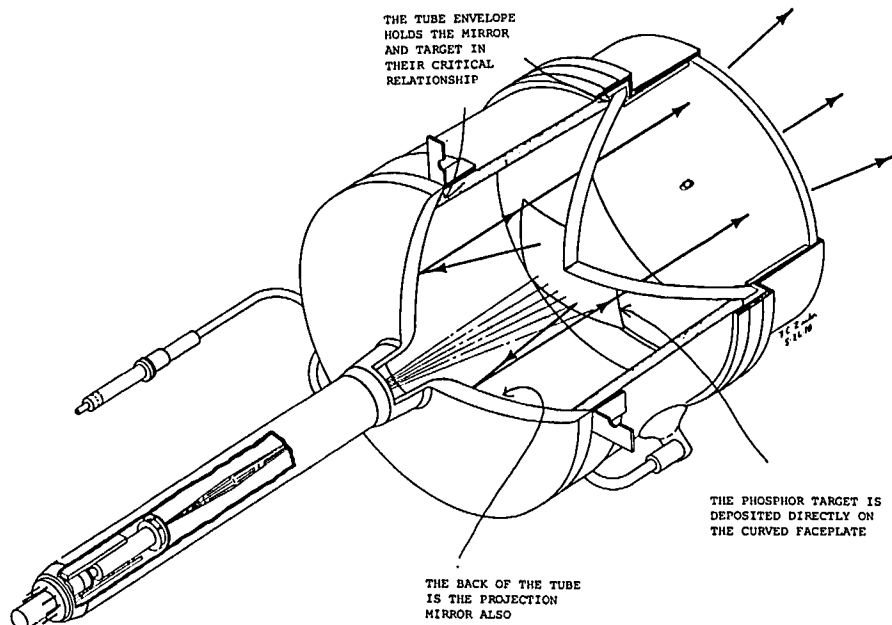
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Memo to Members: Have You Signed Up A New Member Lately?



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New Products & Developments



THE TUBE ENVELOPE HOLDS THE MIRROR AND TARGET IN THEIR CRITICAL RELATIONSHIP

THE PHOSPHOR TARGET IS DEPOSITED DIRECTLY ON THE CURVED FACEPLATE

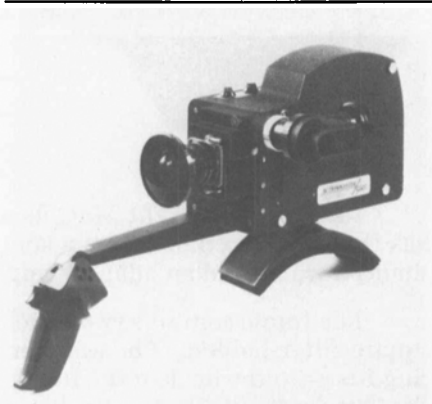
THE BACK OF THE TUBE IS THE PROJECTION MIRROR ALSO

A large screen projection color television set, the Novabeam™ Model One, was announced by Kloss Video Corporation, 145 Sidney St., Cambridge, MA 02139. It is a two-piece system consisting of a compact receiver/projector console and a separate free-standing 6.5-ft diagonal-measure screen onto which a 4- x 5.5-ft picture is projected.

Features include a comb filter for high resolution and random access electronic tuning with full-function wireless remote control.

The Novabeam system is based on the Novatron projection tube which employs inter-

nal reflective optics for optimum performance. Instead of a separate glass envelope enclosing a complex optical system/phosphor target assembly, the major elements of the Novatron tube's envelope are in and of themselves the major picture-producing and projecting elements. For example, the back of the tube's envelope is also the projection mirror; the phosphor target is deposited directly on the curved faceplate of the tube; these two elements being held in their critical relationship to each other by the tube envelope itself. The Novabeam system is priced at about \$2500.



The 6mm f/1.5 super wide angle Arri bayonet mount lens has been announced by Instrumentation Marketing Corp., 820 S. Mariposa St., Burbank, CA 91506, as the first wide angle lens available for use on the Photo-Sonics 16mm high speed Actionmaster/500 camera. It can also be used on other 16mm cameras using the Arri S/B mount. The lens is said to have excellent color correction, high resolving power, and moderate distortion. It is normally set for an 8-ft

focal distance with acceptable sharpness from 4-ft to infinity at maximum aperture; other focal distances are available. The diagonal field of view is 95°, distortion is less than 30%, and resolution is 200 lines/mm. The unit weighs 1 1/2 oz. The price is \$1900.



A wide angle Schneider aspheric lens for quick conversion of most ENG lenses to 69° wide angle lenses has been announced by TeleCine Inc., 5434 Merrick Rd., Massapequa, NY 11758. The front-mounting super wide lens attachment can instantly convert the zoom lens to a super wide angle lens (6.4 mm). It can, within

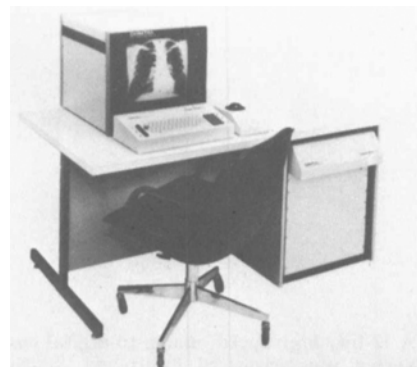
seconds, be converted back to its normal focal length. The lens attachment is compatible with most $\frac{2}{3}$ -in ENG lenses, including Schneider 10 \times , Canon 10 \times , Fujinon 12 \times , Fujinon 14 \times , and Angenieux 15 \times . It can be fitted to other lenses upon request. The lens attachment is priced at \$495.



A full immersion wet continuous contact color additive panel printer was announced by Peterson Enterprises Inc., 1840 Pickwick Ave., Glenview, IL 60025. The printer is designed for the reduction or elimination of existing base scratches, abrasions, or cinch marks on negatives and reduces "white spots" that are caused by negative dust or dirt. Both the picture negative and the rawstock are fully immersed in the picturehead tank while traveling in contact over the aperture assembly. The soundtrack is printed dry, prior to the picturehead, and consequently the soundtrack negative is never exposed to the wetting agent used in the printing of the picture negative.

The wetting solution used is a vapor degreasing grade of Perchloroethylene which is contained in two stainless steel tanks: one reservoir tank and a fill tank. Float level switches in the reservoir tank activate a light on the front panel indicating the solution level. The fill tank is a gravity feed tank which assists the pump in filling the picturehead tank. Time elapsed in filling the picturehead tank when preparing for printing is one min. The same time is required for draining at the end of a shift or when otherwise necessary.

This printer is of the modular concept and many of the accessories, such as soundhead, fader, frame count or RF cuing, and automatic light valve systems can be readily added. The price range of the color additive panel printer is \$44,245 - \$65,000 plus accessories.



Vision One/20, a stand-alone digital image processing station, has been announced by Comtal Corp., P.O. Box 5087, Pasadena, CA 91107. Vision One/20 affords multiple user access to a common expandable data base (4096 \times 4096 \times 8 bit pixel memory images are available) with

dynamic partitioning to afford many different applications. Real time roaming with window sizes of 512 \times 512 or 1024 \times 1024 pixels through the data base is possible with zooming and 3 \times 3 convolution all implementable in $\frac{1}{30}$ s. Refresh memory rates are 10 Mpixel/s for the 512 system and multiplexing to 40 Mpixels/s for the 1024 window.

Graphics overlay memories make annotation, labeling, outlining, and arbitrarily shaped multiple small area monochrome or color correction and modification possible. Because of the dynamic allocation of the data base memory, digital loop movies in real time are possible as is left-right, right-left, up-down, or down-up scrolling of new imagery into the refresh memory and viewing window. Using pipeline processing to recompute all picture elements in the monochrome or true color viewing window in $\frac{1}{30}$ s, Vision One/20 permits partitioned or shared use of as much as 134 Mbits of semiconductor RAM. It uses an LSI-11 microcomputer to handle high resolution graphic arts images, manage memory, and control the overall system in response to operator commands via keyboards, trackballs, and digital tablets with programmable (shape and color) targets on the monitors. The system includes over 100 high level language graphics and image manipulation instructions burned in firmware. Instruction programming, linking (macros), and execution in software are all keyboard implementable.

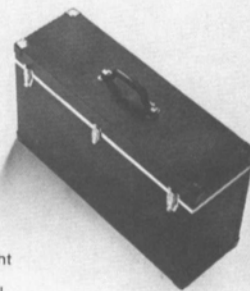
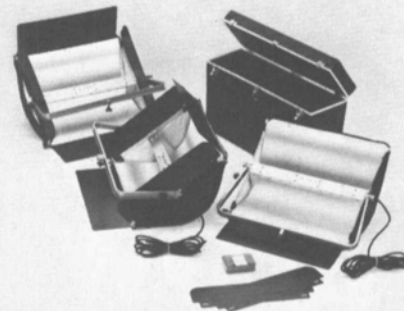
Internal processing speeds allow over 70 Mega operations per second (an operation being a multiplication and addition) for real time convolution and zooming. Freeze frame feedback allows user programmed iteration for more powerful spatial filtering as well as large zooming. Dual porting of the memory allows image loading and display on a noninterfering basis.

Although the monitor display can present only a 512 \times 512 or 1024 \times 1024 portion of the full image in memory, the system's roam and zoom features permit the operator to magnify or shrink any portion and thus deal with a whole image as large as 4096 \times 4096 pixels. Capable of interactive stand-alone operation, the Vision One/20 can be interconnected to a host computer. By itself it supports up to four simultaneous users, each with one color monitor, keyboard, trackball, and data tablet. Other options include television frame grabber input, magnetic tape, a number of host interfaces. Price of the fully extended Vision One/20 is about \$700,000. A minimum system is around \$35,000 and each image adds about \$10,000. Extra functions or memory increments can be added at any time.



A random access controller capable of controlling 600 electronic slides and capable of combining still frames with full "Instant-Replay" slow motion has been announced by Eigen Video, P.O. Box 1027, Grass Valley, CA 95945. A keyboard control addresses any loca-

An open and shut case



Lowel Softlight 3 Kit, empty and full

Performance is crucial. But well designed location equipment must also take portability into account. Example: a softlight, by its very nature, must be large. The bigger the source, the softer the light...and generally, the bigger the problem transporting it.

Our softlight is large. Yet our softlight is easily transported. It's designed to fold in half; almost flat. It weighs far less than ordinary units, yet has a higher foot-candle-to-watt ratio. And three units fit in one case.

Another example of truly functional design is the big Lowel sun reflector—Variflector II. It has flood control, a washable surface, and rolls up to a fraction of its in use size.

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tion within the 600 capacity disk chassis. Once an address is located, typically within a second, a sequence can be played as single steps, animation crawl, or at speeds up to full motion in either direction. Each new image is a vertical interval switch giving a clean transition in either direction. The single images can be displayed either as fields or frames, although for sports and news slides fields are generally preferable due to the "interfield jitter" caused by subject motion. Sources for slides can be live camera, film chain, or pulled from ENG tapes. A single switch can convert the slide unit to a full slow motion "Instant-Replay" disk. The recorder/TBC combination is 14 in high and weighs 100 lb. Price of the random access controller is \$27,500. Existing Eigen disk recorders can be upgraded to the random access controller.



The 2525 Video Signal Synchronizer for complete signal processing of any video source has been announced by Microtime, 1280 Blue Hills Ave., Bloomfield, CT 06002. The 2525 includes line error detection and a new RS-170A sync generator for improved lockup and easy interfacing with any switcher. It is said to be able to correct VTR video signals from no-lock or V/H lock, nonsynchronous or synchronous, direct or heterodyne 1/2-in helical through 2-in quad. Other features include Field 1, Field 2, or frame freeze for digital video effects applications. The 2525 also features Retrocolor™ processing to provide optimum performance for color under signals and H phasing for output timing control. It also provides a low error rate computer memory, selectable auto freeze or black, output H sync, and burst level control. The 2525 passes VITS with the same processing as active video and can be remotely controlled. The price is \$24,995.



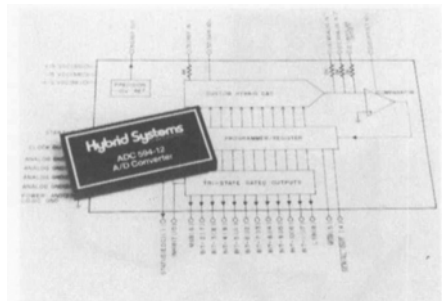
Digital framestore synchronizers that incorporate time base correction, effects generation, and digital video interfacing have been announced by Consolidated Video Systems, 1255 E. Arques Ave., Sunnyvale, CA 94086. Called the CVS 630 series, the new synchronizers are built around a "universal" memory architecture that is compatible with NTSC, PAL, PAL-M, and SECAM standards. This design, made possible by processing the video signal in component rather than composite form, is said to permit a high degree of signal processing versatility without trading off output quality. For

example, CVS 630 synchronizers can maintain color sequences even under noisy conditions without "cycle jump" or horizontal picture shift. The synchronizers have a DMA (direct memory access) I/O interface that opens up such applications as digital still store and image processing. The CVS 630 series synchronizers are 10 1/2 in high, 19 in wide, 22 in deep and weigh 50 lb. The price is \$24,990 each (in NTSC). Certain options are available, including digital noise reduction as a plug-in option, fixed picture compression, horizontal and vertical positioning, and joystick control.

The Sync Source 1304, a dual scan rate television sync generator, was announced by Visual Information Institute Inc., Box 33, Xenia, OH 45385. The 1304 sync generator offers simultaneous outputs of horizontal and vertical drives, as well as blanking and sync pulses. Scan rates, provided as specified by internal programming, are independent of each other and can be at different pulse formats. Each scan rate is crystal controlled for greater stability. The size of the Sync Source 1304 is 17 x 16 x 3.5 in (height); the weight is 7 lb. The price of the sync generator is \$1500.



An 18-bit hybrid digital-to-analog converter (DAC) has been announced by Hybrid Systems Corp., Crosby Dr., Bedford Research Park, Bedford, MA 01730. The converter, designated the DAC374-18, provides 18 bits of resolution, ±0.0008% linearity, and for a 10-V change settles in 50 μs. Encased in a 32-pin hermetically sealed metal package, the converter offers 3-pin selectable output ranges — 0 to +10 V, ±5 V, and ±10 V. It is complete with internal reference, thin film ladder network, switches, and output amplifier. The DAC374-18 is compatible to both TTL/DTL and 5-V CMOS logic, and coding is binary or offset binary for unipolar or bipolar operation. The price is \$520.



A 12-bit, high speed analog-to-digital converter was announced by Hybrid Systems Corp., Crosby Drive, Bedford Research Park, Bedford, MA 01730. Model ADC594-12 converts to 12-bit resolution in 1.8 μs typical and 2.0 μs maximum. Three-pin selectable input ranges of 0 to -10 V, ±5 V, and ±10 V are available with parallel or serial outputs. The

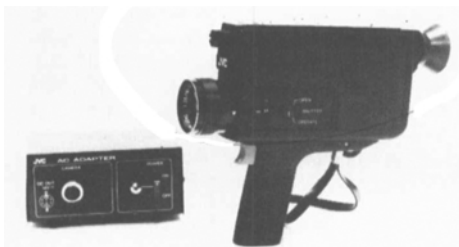
ADC594-12 features an internal clock, precision voltage reference, and proprietary thin-film hybrid digital-to-analog converter. Tri-state output buffers simplify data bus interface. They isolate idle data lines from undesirable feedback, preventing noise and unwanted crosstalk from compromising the accuracy of the unit.

The ADC594-12 requires $\pm 15\text{-V}$ and $+5\text{-V}$ supplies and can be used with an optional external -10-V reference. Unipolar coding for serial output data is binary, most significant bit first; bipolar coding is either two's complement or offset binary. The ADC is a 2-in \times 4-in \times 0.4-in module, and consumes 1750 mW of system power. The price is \$299.



A new television tuner/timer, the TU-41AU, was announced by US JVC Corp., 58-75 Queens Midtown Expwy., Maspeth, NY 11378. It offers the capability of recording television programming at any predesignated time within an eight day period. The TU-41AU has a built-in electronic digital timer for precise scheduling, a channel lock button to prevent accidental channel change during recording, and a 12-button electronic tuner. It can receive channels 2 - 12 on VHF and 14 - 83 on UHF.

Other features include a clock timer with 24-h LED digital indication, a coaxial antenna cable, a twin antenna cable, and a matching transformer. The TU-41 AU is 8 1/4 in wide \times 5 1/4 in high \times 13 in deep. It weighs 10 lb. The unit is priced at \$399.50.



A compact and lightweight monochromatic videocassette recorder was announced by US JVC Corp., 58-75 Queens Midtown Expwy., Maspeth, NY 11378. Called the Vidstar GS-1000, the recorder features full interlaced scanning by a built-in crystal sync generator, a 2:1 zoom lens, through the lens viewfinder, as well as high quality audio recording by means of a built-in electret microphone.

The video camera is composed of a camera head, ac power adaptor, and other accessories. It can be powered by battery or ac current. It comes with an adaptor specifically suited to the Vidstar HR-4100 VCR unit and can be connected to the Vidstar HR-3600 VCR through a standard adaptor. The price of the GS-1000 is \$375.

An expanded line of five SelectaVision videocassette recorders was announced by RCA Consumer Electronics. Model VDT201, a mechanically tuned 4-h VCR with built-in digital

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clock/timer that allows preset recording up to 24 hours in advance is priced at \$1150. Model VDT350 can also record up to four hours and be preset 24 hours in advance. A further feature includes electronic touch-button tuning. The price of the model is \$1200. Model VCT400X is an improved version of a programmable model that can be preset to record up to four different shows on as many as four channels up to seven days in advance. The VCT400X has an open list price. Model VDT600 is also a 7-day programmable unit that can store four different programs. With the addition of a Super Long Play Speed, this varactor-tuned model gives the user up to six hours of recording on a single cassette.

A portable VCR system, available in the fall, consists of three elements: a portable deck, the VDP150, measuring 11 $\frac{1}{4}$ in deep by 10 $\frac{1}{16}$ in wide and weighing 14.3 lb including the battery; a tuner/timer module, the TPD1000, which features electronic tuning and 4-h off-air recording capability when connected to the matching VDP150 portable; and an auxiliary ac power supply and battery-charger combination, the PDP500, measuring 11 $\frac{1}{4}$ in deep by 4 $\frac{3}{4}$ in wide. This compact system is to be priced in the \$1500 range.

A $\frac{1}{2}$ -in videocassette player, Vidstar Model HP-4000AU, was announced by US JVC Corp., 58-75 Queens Midtown Expwy., Maspeth, NY 11378. Designed specifically for the functional and technological needs of the industrial user, the unit can be used with an ac power source or the JVC PBP-1 optional rechargeable battery pack.

The built-in RF converter enables the HP-4000AU to reproduce prerecorded cassette



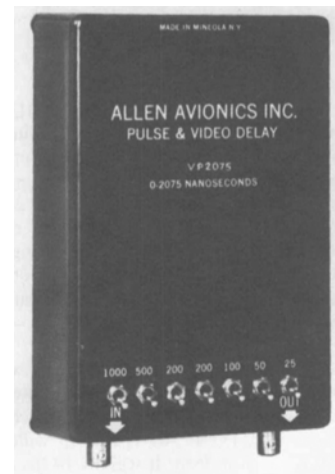
tapes through a conventional color television receiver. Other features include industrial 8-pin and BNC connector configurations, simple still frame playback, a dew sensor light indicator, and rewind tape counter search. Low power consumption permits up to three hours continuous dc operation with a fully charged rechargeable battery.

The HP-4000AU weighs 15.4 lb or 18.25 lb with ac pack and RF converter. It is 13 $\frac{3}{16}$ in wide \times 5 $\frac{3}{8}$ in high \times 6 $\frac{7}{16}$ in deep. The price is \$925.

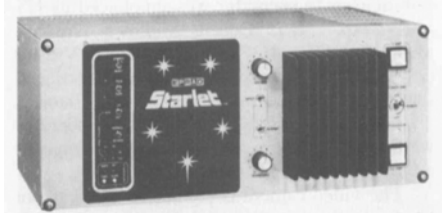
The Audio-Video Modulator, Model RFM-34, has been announced by Crest Electronics, Inc., 4921 Exposition Blvd., Los Angeles, CA 90016. It is designed for use in closed circuit video and aural security or surveillance systems, educational RF distribution networks, master antenna TV video, and audio distribution and videotape playback. The RFM-34 accepts line level or low level audio together with black-and-white or color video signals. The unit's BNC connector or standard 8-pin VTR receptacle accept video input. The same receptacle also accepts line level audio. Two additional audio input jacks are provided for either low level or line level input. A low level microphone can be plugged directly into the RFM-34 and all audio

signals are pre-emphasized for clean, crisp sound at the television receiver (channels 3 and 4 standard, channels 2 through 6 optional). The RF output from the unit is provided by a type "F" connector. The RFM-34 is priced at \$200.

A new 2-channel audio noise reduction unit for videotape recorders, the NRU-10, has been announced by Dolby Laboratories Inc., 731 Sansome St., San Francisco, CA 94111. The unit provides 10 dB of noise reduction from 20 Hz upwards, rising to 15 dB at 9 kHz and above. It is designed to connect to recorders that have built-in audio gain controls and meters regularly used for level setting. The device has its own record and playback level controls as well as large illuminated VU meters that take over from those on the recorder. The NRU-10 may also be used with any 2-channel audio recorder and can be used in recording situations where console gain controls are not required or easily available. The NRU-10 is priced at about \$3000.



A variable delay line, Model VP2075, using a series of toggle switches for delay selection, and designed primarily for the video industry, has been announced by Allen Avionics, Inc., 224 E. 2nd St., Mineola, NY 11501. The unit offers any delay from 0 to 2075 ns in 25 ns increments. It has a built-in flat loss of 3 dB and is said to not vary in amplitude by more than ± 0.2 dB at any delay setting. At maximum delay the unit exhibits a rise time of 40 ns. Its amplitude flatness from 100 kHz to 5.5 MHz is said to be within 0.5 dB. The price range is between \$55 and \$475.



The Starlet theater sound system, designed specifically for small auditoriums, particularly in multiplex situations, has been announced by Eprad, 123 W. Woodruff, P.O. Box 4712, Toledo, OH 43620. The unit combines a sound processor and two power amplifiers in one cabinet. It provides two channels of sound, one front channel and a surround channel, that can drive any reasonable number of surround speakers. The two self-contained amplifiers are rated at 67.5 W at 8 Ω , or 100 W of power at 4 Ω . Price of the basic system is \$3325. The Starlet can be

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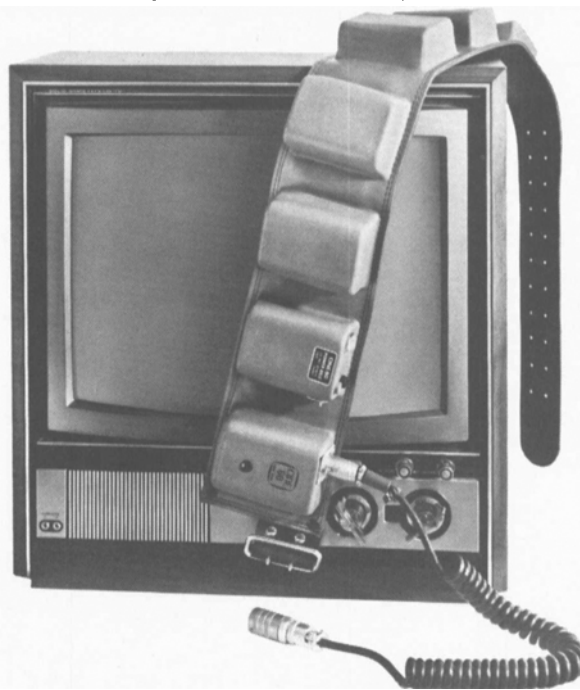
A new professional condenser microphone, Model SM81, a cardioid condenser unit designed for mechanical and environmental ruggedness and reliability, has been announced by Shure Brothers Inc., 222 Hartrey Ave., Evanston, IL 60204. It is said to be capable of withstanding extensive use and abuse while maintaining high quality performance. Features include a three-position, low frequency response switch, located on the microphone's case, that can provide a flat response, a low frequency rolloff of 6 dB per octave below 100 Hz, or a low frequency cutoff of 18 dB per octave below 80 Hz. The switch can also be used to compensate for proximity effect. A switchable 10 dB attenuator is built into the head of the microphone to prevent high sound pressure levels from overloading the microphone's internal electronics. The SM81 operates over a wide range of simplex (phantom) powering voltages and impedances, including the DIN 45 596 standard voltages of 12 and 48 V. The microphone weighs 8 oz and is about 8 3/4 in long. The price is \$225.



The Super Punch® microphone, Model 526T Series II, has been announced by Shure Brothers Inc., 222 Hartrey Ave., Evanston, IL 60204. The new microphone can be connected to a wide assortment of transceivers with input impedances of 500Ω or higher. A new six-wire coiled cord and triple-pole double-throw switch are arranged for universal compatibility with most transceivers. The new microphone can be used to replace original equipment microphones, either ceramic or dynamic, low or high impedance. Features include a dynamic element and a transistorized preamplifier said to be capable of operating for hundreds of hours on a standard 9-V battery. Volume control allows adjustment for optimum transmitter modulation and maximum

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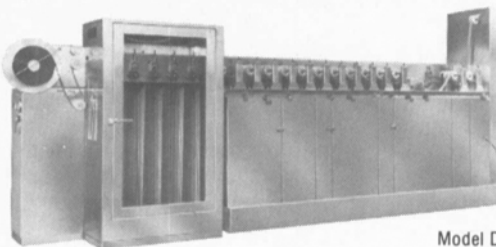
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intelligibility. Price of the 526T Series II Super Punch microphone is \$58.32.



A shock-mounted super-cardioid microphone, the RE18, has been announced by Electro-Voice, Inc., 600 Cecil St., Buchanan, MI 49107. Although primarily intended for hand-held broadcast applications, the microphone can be used in any situation where ambient noise rejection and isolation from handling noise is a consideration. The Variable-D[®] design of the RE18 makes it possible to maintain frequency response, regardless of mike-to-talent working distance. Frequency response can also be maintained if the talent happens to get a little off-axis, the announcement stated. Price of the RE18 is \$226.

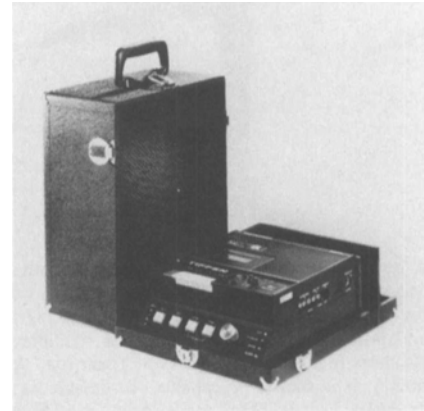
The Navilux Executive, a dual-purpose projection screen, has been announced by D.O. Industries, 317 East Chestnut St., East Rochester, NY 14445. The patented silver screen is curved

to project images brightly and sharply over a 160° viewing angle even in a lighted room. It is specially embossed to prevent screen damage. The reverse side of the screen is a plastic-coated whiteboard on which felt-tipped pens or oil-base markers can be used and easily erased. The Navilux Executive is mounted on a rolling stand and the screen can be flipped over to the whiteboard or locked at any angle. The screen is available in a 40- × 40-in size priced at \$395. Two other sizes are also available.



New 35mm front-screen sound and silent slide projectors, the Caramate 3200 and 3100, have been announced by Singer Education Systems, 3750 Monroe Ave., Rochester, NY 14603. The Caramate 3200 incorporates a built-in audio cassette sound system in a self-contained, compact (5.6 × 13.3 × 12.8 in), and lightweight (18 lb) design. Features common to both projectors include auto focus, full remote operation, and a special electronics optical design to ensure high intensity screen brightness. The Caramate 3200 is priced at

\$529.50 with a 5-in lens or at \$509.50 without the lens. The (silent) Caramate 3100 is priced at \$329.50 with a 5-in lens or at \$309.50 without the lens. Both projectors provide full interchangeability of Ektagraphic and Carousel lenses, trays, and most accessories, including dissolve-programmer units.



The SD-70S Sync Dissolve Programmer for audiovisual applications has been announced by Tiffen Manufacturing Co., 90 Oser Ave., Hauppauge, NY 11787. The device combines dissolve and recorder functions plus stereo sound in one compact unit. Pushbutton dissolve controls offer four dissolve functions or four alternate functions. The SD-70S can record and play back the soundtrack while the dissolve functions can be programmed on a separate track. The built-in cassette recorder records, plays back, and is compatible with prerecorded stereo cassettes. The price is \$575.

ELECTRONIC ENGINEER (Design)

The Lister Hill National Center for Biomedical Communications has a career Civil Service position in their Communications Engineering Branch for a Design Engineer at the GS-13 level. Salary ranges from \$27,453 to \$35,688 per annum.

Background required in the design and development of video storage, retrieval and display systems. Candidates should have experience in the design of analog and digital communications systems for audio, video and data.

Send resume or SF-171 by August 20, 1979 to Personnel Officer.

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