

## Books, Booklets, Brochures

**Laser Beam Information Systems**, Ed. William C. House, summarizing the current state of laser applications to input-output, central processing, memory and display units for computer systems, is available from McGraw-Hill Book Co., 1221 Ave. of the Americas, New York, NY 10020, at a price of \$15. Some of the topics investigated in depth in the 192-page book are optical data storage, communications on a beam of light or by optical fiber, mass memories for future computers, holographic optical memories for bulk data storage, optoelectronic memories, alternative component technologies for advanced memory systems, and computer applications of lasers.

**The Public Broadcasting Report**, a new biweekly newsletter devoted to public television, radio and related fields, is published by Television Digest, Inc., 1836 Jefferson Pl., N.W., Washington, DC 20036. The subscription rate is \$127 a year. Among other informative items, the newsletter examines, in depth, controversial bills before Congress that could adversely affect public broadcasting as well as other communications fields.

**Pre-recorded videocassettes of almost 600 American and foreign feature films** available for purchase or exchange are listed in a 34-page catalog from the Video Cassette Exchange Division of Discotronics Inc., 50 No. Main St., Cranbury, NJ 08512. The films, many of which have never been shown on television, can be obtained in either BETA or VHS half-inch formats. The trade-in program operates similarly to a rental library, and the organization guarantees the quality of its preowned videocassettes. Two new services announced in the catalog are a toll-free phone number for placing orders and a nationwide home pick-up service for trade-ins available for a small service charge.

**Booklets available upon request from Cohu, Inc.**, Box 623, San Diego, CA 92112, include: (1) The revised 1978 edition of the short form catalog describing the current line of broadcast television products. The catalog includes photographs and descriptions of the equipment. (2) A booklet entitled *Cohu Reference Data—High Sensitivity Television Cameras in Low-Light Applications*. The illustrated booklet defines the parameters of high-sensitivity closed circuit television surveillance systems and provides specific data to assist users in selecting a system to meet their need. (3) A brochure illustrated in color describing Cohu's medical television camera systems. (4) A brochure describing closed circuit cameras suitable for monitoring, surveillance and laboratory work. Low-light-level cameras, environmental cameras and high-resolution television cameras are also described.

**Test and measuring instruments** are listed and described in a 12-page short form illustrated catalog available upon request from Leader Instruments Corp., 151 Dupont St., Plainview, NY 11803. In addition to oscilloscopes, the catalog lists eight professional audio instruments including two audio system analyzers; four multimeters including digital and analog versions; frequency counters; color bar generators; and FM multiplex generator and other instruments and accessories.

Also available from Leader Instruments is a 16-page catalog listing eight dual and single trace oscilloscopes. Each instrument is described in detail and full specifications are given.

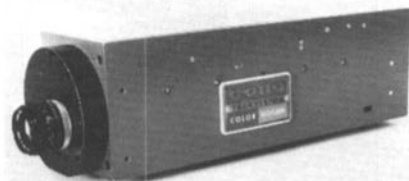
# New Products & Developments

*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.*



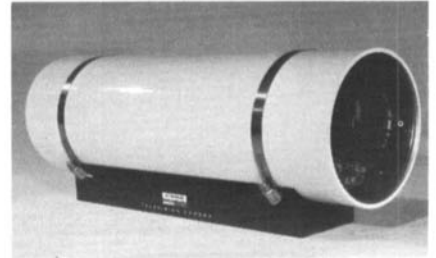
The **TKP-46 portable production camera** has been announced by RCA Broadcast Systems, Front and Cooper Streets, Camden, NJ 08102. The camera can be used either as a portable field camera or as a studio camera. For field use the camera fits on the cameraman's shoulder and the viewfinder can be continuously adjusted. The lens is mounted to the camera head with a quick-release bayonet feature. For studio use the camera is mounted in a "Minimax" adaptor with a large viewfinder. The TKP-46, developed from the TKP-45 electronic field production camera (*Journal*, p. 332, April 1974), includes such features as a built-in microphone input at the camera head, small-diameter lightweight camera cable, shock-mounted optical system, wide range of lens options, choice of mounting equipment, and a full range of operational automatic features including iris control, white balance, black balance and pulse advance.

The TKP-46 is available in two different systems. System I includes the TK-46 studio camera control unit and is priced at \$56,800. System II includes the portable Minipak CCU and is priced at \$50,970.

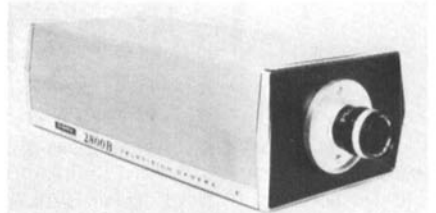


A **low-light, single-tube color Isocon television camera system** has been announced by Cohu, Inc., Electronics Div., Box 623, San Diego, CA 92112. Designed for color applications at extremely low light levels, the camera system, designated Model 7400, features high sensitivity and NTSC color output. The system consists of a camera, a camera control, and a color control. The camera head can be located up to 1000 ft from the control units. Typical applications include specialized medical research where the

camera is interfaced with a high-power microscope and videotaping live theatrical productions utilizing the available light in the theater. Prices begin at \$35,136.



An **environmental single-tube color television camera system**, model 1420, been announced by Cohu, Inc., Electronics Division, Box 623, San Diego, CA 92112. The new camera uses the 1490 color control unit. In its cylindrical-shaped, environment-resistant housing, model 1420 can operate in temperature extremes from  $-20^{\circ}\text{C}$  to  $55^{\circ}\text{C}$ . The camera has a 6-in diameter. The length depends upon the lens selected. With the  $1/2$ -in  $f/1.4$  lens, the length is 14.2 in and the weight is 15 lb. Applications include observation of flue gasses, stack gasses, jet exhausts and other applications requiring color pictures under harsh conditions. Prices begin at \$6300.



A **new television camera**, Model 2810 B, designed for long-term unattended operation, has been announced by Cohu, Inc., Electronics Div., Box 623, San Diego, CA 92112. Features include 900 lines horizontal center resolution, 40,000-to-1 automatic light range, 10-shade gray-scale resolution with  $0.5 \text{ lm}^2/\text{ft}^2$  of high-light illumination on the image tube faceplate, and modular etched glass epoxy circuit boards with all solid-state construction. Manual operating controls are provided on the camera's rear panel. The camera can also be remotely controlled by means of a Cohu 2380 series remote control. The 2810 B contains an internal EIA RS-170 sync generator. A CCIR sync generator and a genlock are available as options. With a video cable and a television monitor, the 2810 B provides a CCTV system. Among other applications, the 2810 B can be used for security surveillance of parking lots, corridors, restricted areas and the like. The price of the 2810 B camera system is \$1825.

A **new black-and-white Vidicon**, designated the WV-1000A, and the Newvicon CCTV camera series have been announced by Panasonic. One



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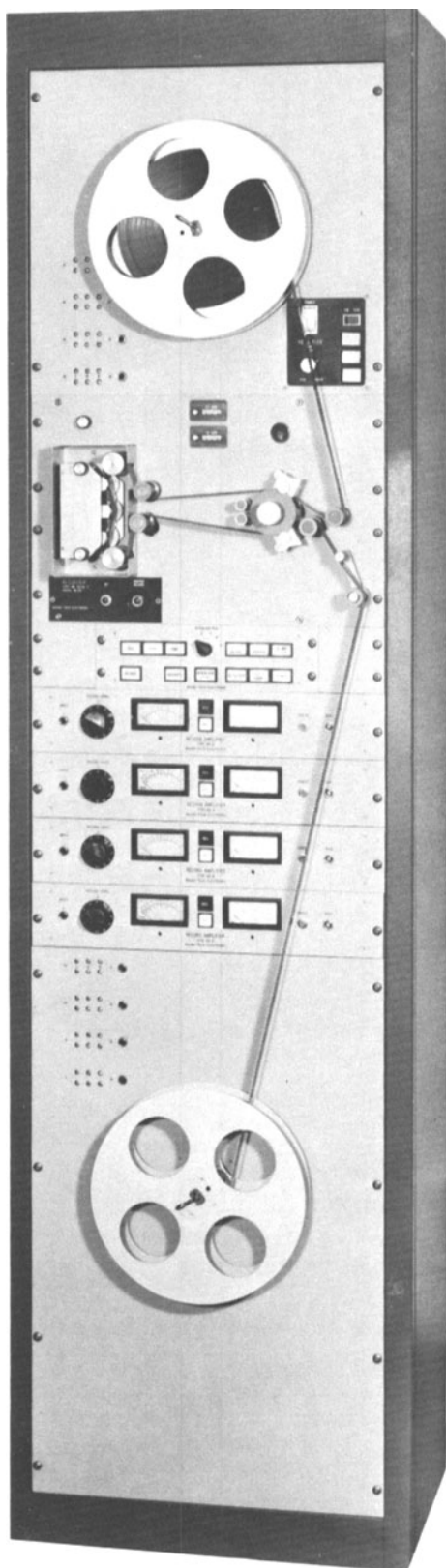
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# We gave you one-inch.

In the last few months, you've had a chance to do some serious thinking about all the new products displayed at this year's NAB Show. Sony Broadcast products. And products by other manufacturers, too.

You've read about them. You've talked about them. You may even have seen some of them in action.

And by now, one fact should be obvious.

There's a new dimension in broadcast equipment. One-inch. It's here, and it's here to stay. The SMPTE Type C Standard proves it.

## **The width of things to come.**

Sony Broadcast BVH Series 1" recorders, as we've been saying for some time, are part of a change that will affect every aspect of video production and broadcasting.

But it's one thing to say it. And it's another thing to see it happen.

Because broadcasters and production facilities have taken our one-inch equipment, and run with it.

From coast to coast, Sony Broadcast BVH-1000 recorders are lending their unique advantages to more and more



professional video applications.

Advantages like BIDIREX. That gives you full bi-directional search capability in both forward and reverse, with recognizable picture – even at more than 30 times normal speed. And also lets you position the tape reels as if by hand, for the "film" feeling top creative editors demand.

Advantages like single-camera technique. Because you've got 100% post-production creative freedom, you can use the one camera/one recorder setup once possible only with film. No more dependence on "on the fly," editing using

production switchers. Yet you still retain all the economic advantages of video.

And other economic advantages, too.

The BVH-1000 costs less to acquire. Takes up less space, so you save room in the studio. Cuts down on maintenance costs. And gives you the dramatic savings of 1" videotape, that costs only about half as much as 2" tape.

**With a system this good, we predict you'll go far.**

And the advantages of one-inch recording don't end in the studio.

Now there's a fully porta-



# Now take it a mile.

ble 1" recorder from Sony Broadcast. The BVH-500.

The BVH-500 weighs just 43 pounds, including tape and battery. Operates for 90 minutes on a single rechargeable Ni-Cd battery. And delivers more than an hour of non-stop recording time from each reel of 1" videotape.

To give you continuous usable video for the full length of that tape, the BVH-500 features auto back-space assemble editing. Which achieves scene-to-scene transitions without picture breakup.

And naturally, there's more. Full monitoring capability. A unique video confidence head, to tell you your RF signal is on the tape. Digital servo system, to minimize gyroscopic error. Built-in SMPTE

time code generator. And rugged housing, that stands up to extreme field conditions.

But here's the best part. Our BVH-500 is fully compatible with our BVH-1000.

That means you can record in the field, on 1" tape. Then bring it home and edit or broadcast without converting to another format.

## **To wrap things up, we've got the best tape.**

We gave you a 1" recorder that's revolutionizing studio and field production techniques. The BVH-1000.

We gave you the 1" portable recorder to go with it. The BVH-500.

And in case you hadn't heard, we'll let you in on the best 1" tape to use with your Sony Broadcast 1" equipment.



That's right. Sony 1" tape.

We make all of our V-16 Series 1" High-Band Master Videotape ourselves. That makes us different from just about any other manufacturer of video recorders.

Since we make both recorders and tape ourselves, we know how to produce a tape that gets the most from our equipment. After all, we want our tape to make our recorders look good. And vice-versa.

So for wide frequency range, high signal-to-noise ratio, minimum dropouts, and precision winding, always choose Sony V-16 Series videotape for your Sony Broadcast BVH Series equipment.

That's our story.

Now it's your turn. Write Sony Broadcast, 9 West 57th Street, New York, N.Y. 10019. Or call us direct. In New York, our number is (212) 371-5800. In Chicago, we're at (312) 792-3600. And in Los Angeles, at (213) 537-4300.

We've given you one-inch.

Now, give us a chance to prove how far it can take you.



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## **SONY BROADCAST**



Panasonic Way, Secaucus, NJ 07094. The WV-1000A camera (shown above) incorporates special  $\frac{2}{3}$ -in separate mesh Vidicons to provide low lag, high sensitivity and sharp, detailed pictures. Equipped with solid-state circuitry and a die-cast chassis, the WV-1000A cameras can be mounted from ceiling or stand. They are equipped with C-mount 16mm  $f/1.6$  lenses.

Features include internal random interlace synchronization, 550-line horizontal resolution, SNR of 42 dB, and 1-fc sensitivity. The cameras operate on a 120-V ac power source. The price is \$285.

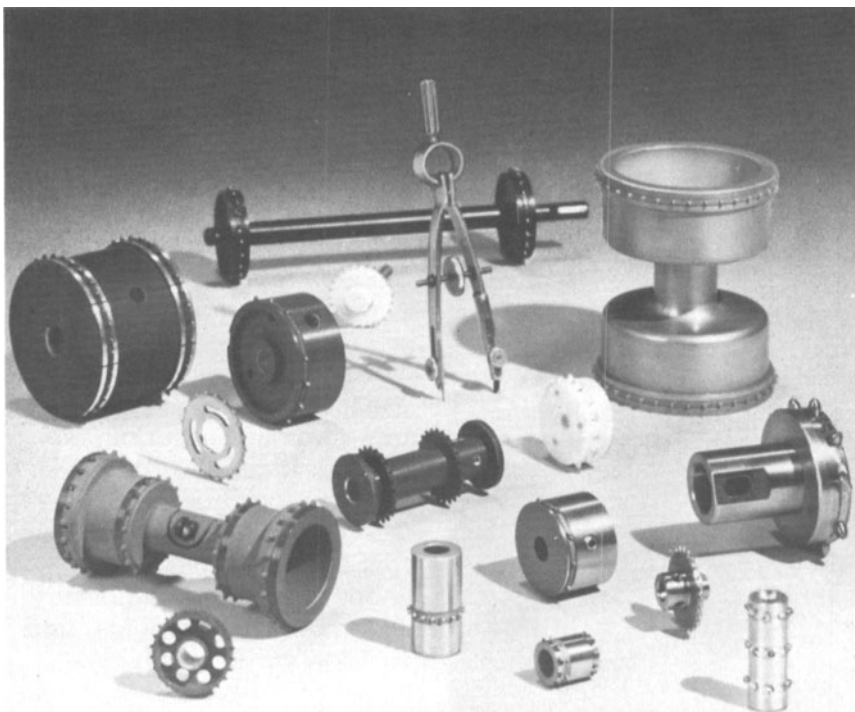
There are six new cameras in the Newicon series. They are sensitive to a broad spectrum of light, including invisible light in the near infrared range and feature a very low dark current and realistic rendition of scene brightness gradations. The cameras are intended mainly for surveillance applications, operating at very low light levels and can also be used for training purposes and other applications. Prices (for camera body only without the lens) range from \$735 to \$950.

**An expanded line of SelectaVision products**, including color television cameras for home use, has been announced by RCA Consumer Electronics. Two models of the color cameras are available. Model CC001, used to make television

shows at home in color, has a built-in microphone that records sound simultaneously with the picture. With a side-mounted optical viewfinder, the camera has an  $f/1.9$  25 mm lens with a 1-in striped color vidicon. A built-in light meter indicates correct exposure control for recording. Model CC001 is priced at \$850.

Model CC002 has an  $f/2.0$  Canon 6:1 zoom lens with an attached electronic viewfinder, a built-in microphone, and a light level meter. The electronic viewfinder is actually a small black-and-white television monitor built into the viewfinder. The camera has a VCR pause control and the power supply unit has an ac outlet for VCR hook-up. Model CC002 is priced at about \$1275.

The announcement also noted that the continued appreciation of the yen against the U.S. dollar has necessitated a price increase on some products. The VCR player, SelectaVision 400, has now an optional retail price of \$1275 rather than the \$1200 indicated when it was announced in June. The SelectaVision 400 can be pre-programmed to record up to four television programs on different channels during a seven-day period. It has varactor tuning and electronic program indexing to allow fast access to each program recorded on either two- or four-hour cassettes.



## LA VEZZI SPROCKETS FIT THE SHAPE OF YOUR DRIVE IDEAS

When a requirement calls for moving perforated film, tape or charts, La Vezzi sprockets are specified where precise control of media movement is important.

There are good reasons for it! La Vezzi sprockets are designed for accurate and dependable operation. For example: Minute details are strictly observed in tooth-to-tooth accuracy. Each sprocket tooth is precision formed, exactly

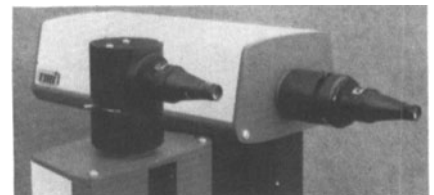
sized and freed of all burrs to maintain media integrity. The diameter is cylindrically ground for good concentricity, and abrasion-free contact with the perforated media.

Compare the reliability and accuracy of La Vezzi sprockets. They give drive designs an extra measure of confidence.

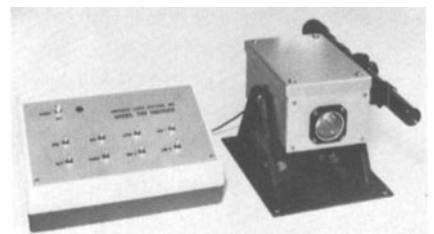
Our catalog tells all. Ask for it, or send us your specifications.

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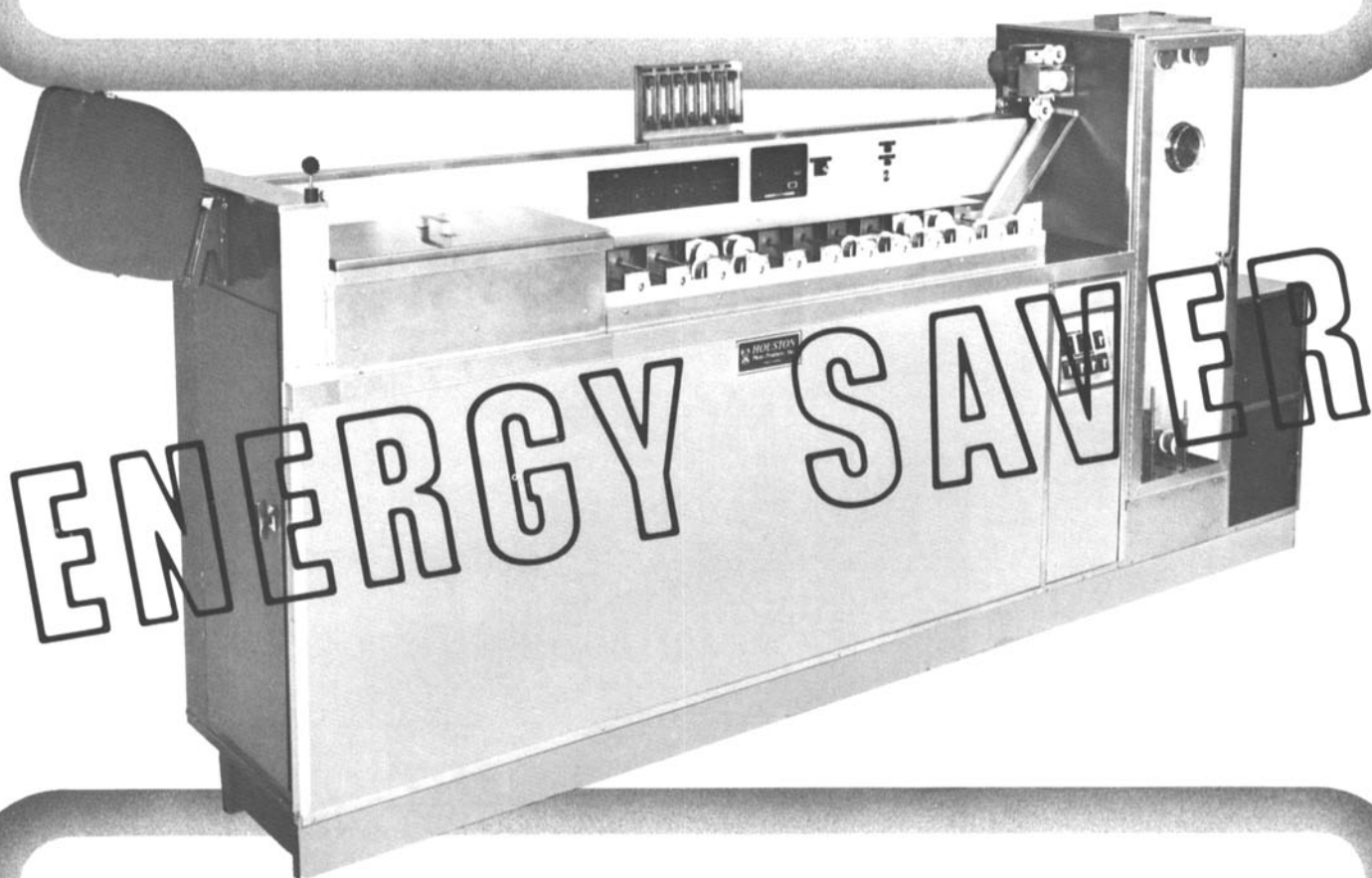


**A right-angle pinhole lens** enabling the user to install a  $\frac{2}{3}$ -in Vidicon camera into a wall, drop ceiling or other concealed locations for surveillance applications has been announced by Visual Methods, Inc., Westwood, NJ 07675. Designated the WSL 1125, the lens is rotatable 360° so the camera can "look" to either side, up or down, front or back. The WSL 1125 has a 52° field of view and extends 3 in from the center of the lens mount in any direction. The price is \$599.



**The model 748 remote control system**, announced by American Laser Systems, Inc., 106 James Fowler Rd., Santa Barbara Airport, Goleta, CA 93017, can control up to 16 distinct functions from a distance of up to 2000 ft without the need for intervening cables or wires. The signals are transmitted over an invisible infrared light beam. Although there is a wide range of applications for such a system, model 748 is usually used in conjunction with the ALS model 747/761 television transmission system to control the pan, tilt, zoom, iris focus, etc., of the television camera. In this application the television signal from the camera is fed into the 747/761 television transmitter which feeds the signal back to the monitor location, allowing the operator to see the camera's field of view. The control panel is on the operator's desk. Associ-

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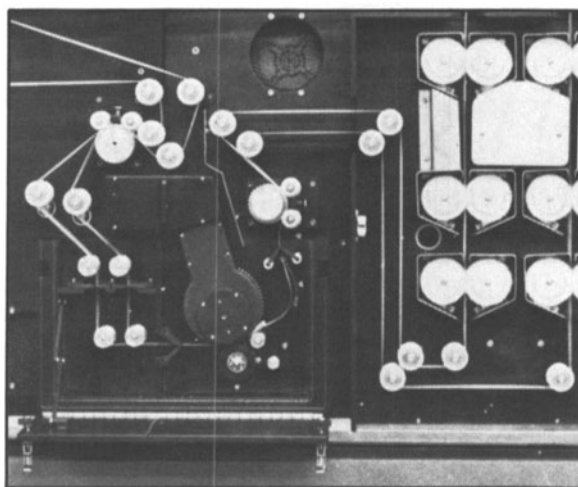
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CINE-CRAFT LABORATORIES, INC., 3611 San Fernando Boulevard North, Burbank, California 91505, (213) 843-7036.

ated with each control function is a center off toggle switch. In order to pan the camera to the left, the operator holds the pan switch in the left position. This generates a digital code which is transmitted to the camera's location over the invisible light beam. At the camera site the signal is decoded and the single-pole, single-throw relay contact in series with the pan left motor is closed and the camera pans left. The 16 different functions that can be controlled by the 748 can be paired to produce eight double sides functions, such as pan left, pan right. The base price of the 748 is \$3900. Options are available.



**New videocassette recorders in the Omnivision II line** have been announced by Panasonic, One Panasonic Way, Secaucus, NJ 07094. Included are Models NV-8400, NV-8310, and NV-8160.

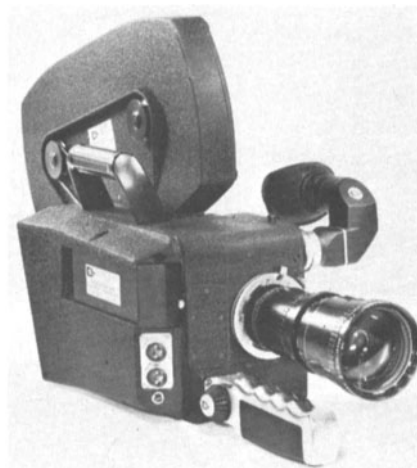
Model NV-8400 (shown above) offers two hours of recording and playback. Features include a direct-drive video head assembly and servo-controlled capstan for high stability in

both recording and playback modes. Used in combination with a portable video camera, the NV-8400 can be used as a portable unit for outdoor recording. Features include a newly developed circuitry design reducing power consumption to 9.5 W, a 3-power source system, audio dubbing, a built-in memory feature, and auto stop. With the internal RF modulator, the NV-8400 can be played back through any conventional television set on channels 3 or 4. The price is \$1250.

The NV-8310 and NV-8160 VSD Omnivision II VHS™ 1/2-in videocassette recorders have been designed for industrial and institutional use. The 8310 recorder has a VHF/UHF tuner, and the 8160 is a player model. Each of the recorders weighs 36 lb. Both units are equipped with still framing and adjustable speed settings. Both models have a 45-dB SNR and a horizontal resolution of 300 lines black-and-white and 240 lines color. The NV 8310 is equipped with a built-in antenna splitter to send signals to both the 8310 and the home television receiver, making it possible for one program to be watched while another is being recorded. The NV 8310 is priced at \$1275, and the NV 8160 is priced at \$925.

**The FS-15 FE**, a device designed to eliminate the common, ENG-related occurrence of expanded blanking, has been announced by NEC America, Broadcast Equipment Div., 130 Martin Lane, Elk Grove Village, IL 60007. The FS-15 FE automatically expands the incoming signal both vertically and horizontally as it is digitized. Frame synchronization also takes place at the same time. Expansion increments of 1 to 7% may be selected for accurate video vs blanking

adjustment. The FS-15 FE includes all of the features of the standard FS-15 synchronizer plus fixed-expansion capability. The FE option may be added to all existing FS-15 frame synchronizers. Price of the FS-15 is \$33,000. The DFE-15 Adaptor is priced at \$28,000. The total FS-15 FE price is \$61,000.



**A new generation of CP-16R and CP-16R/A 16mm reflex cameras** incorporating several changes designed to improve CP-16R performance in extreme low-light conditions has been announced by Cinema Products Corp., 2037 Granville Ave., Los Angeles, CA 90025. The new generation cameras feature a newly designed belt-driven, focal-plane-type 170° shutter which provides approximately 10% more light to the film plane. Also, the elimination of one

## RCA's PM-86SL: a sprocketed recorder/ reproducer with new features to keep you ahead.

Our new PM-86SL series multi-track magnetic systems are better than ever—as they need to be. The post-production needs of teleproduction and motion picture operations have changed, and so has the PM-86SL.

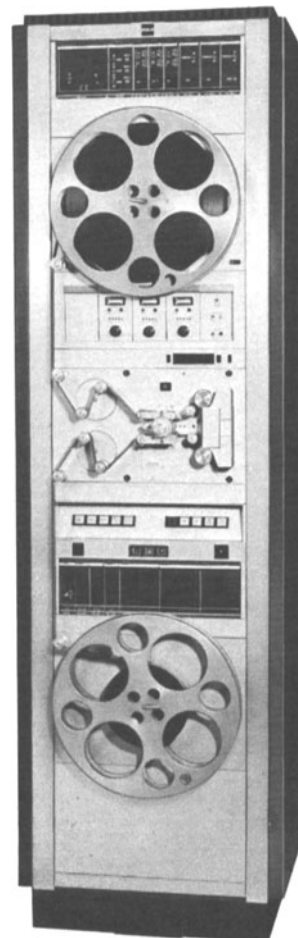
The servo-controlled PM-86SL is the perfect companion for film and tape machines that need to operate synchronously. Here's why:

- Servo-driven interchangeable sprockets for 16 and 35mm film
- Smooth continuous drive motion applied to the sprocket
- Built-in Electronic Interlock facility
- Storage of position error with automatic correction
- Control and drive logic uses C-mos circuitry for maximum reliability
- Stand-alone operation at cine speeds and up to 10X cine speeds
- Selectable 24/25 fps operation

The PM-86SL is from RCA Photophone—the people with the broadest line of sound-on-film and sound-for-tape systems.

For information on the PM-86SL or the total RCA Photophone Systems product line, write RCA, 2700 W. Olive Avenue, Burbank, CA. 91505, U.S.A.

**RCA Photophone Systems**



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**5243**

Color Intermediate II Film.

The award to Eastman Kodak Company from the Academy of Motion Picture Arts and Sciences is particularly gratifying to us, because Eastman 5243 film is the film "almost no one ever sees." As an intermediate film intended for making color master positives and color duplicating negatives, it is an *essential* element in getting the final picture on the screen.

Kodak now makes more than thirty professional motion picture

films. Our search for improved motion picture technology is part of our commitment to the industry.

We set out to give filmmakers a way to produce color duplicate negatives with improved quality. This recognition by the Academy, as well as the satisfaction of our customers, is indeed rewarding.

We thought you'd like to read the opinion of some others in our industry.



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**Frank Van der Veer, A.S.C.**

*President, Van der Veer Photo Effects.*

"It's very annoying to send a lemon commercial to the lab and get it back looking like oranges. What makes Eastman 5243 film so helpful to all of us in the photo effects business is that it is about as true to color as you can get. You don't have to keep fiddling around to try and get face tones and objects looking right without sacrificing one or the other. The color you have in the original negative is the color you have in the duplicating negative.

"The grain is almost non-existent, and that is important because often we have to blow up the original.

"I like the definition, the crispness and mainly the dependability. We try hard to arrange it so as to wind up with as few generations as possible but sometimes a number of them is unavoidable. If there were any problem areas they would multiply, and it would be most noticeable in going from original negative to dupe.

"Eastman 5243 film doesn't surprise you in the viewing room. It does its job quietly and very efficiently."

**Linwood G. Dunn, A.S.C., Ph.D.**

*Founder and President of Film Effects of Hollywood, and President of the American Society of Cinematographers.*

"Kodak color intermediate II film 5243 is the film we now use to make duplicate color negatives... which are almost never noticed. Because of this achievement, I call 5243 intermediate the 'unsung hero' of film stocks, as it really helps us to realistically put our magic into movies. We can now retain in our special effects the color fidelity, sharpness and overall quality of the original photography through the duplication process without the risk of excessive handling of the original negative. We intercut 5243 optical effects next to the original negative, and you don't notice a change in screen quality. Without such a tool, the illusion we are trying to create could easily be destroyed.

"Two more important points: First, you can make a 5243 protection master of the entire production to store in a vault, thus substantially reducing insurance costs. Second, because of its increased film speed, the 5243 intermediate film is much more suitable for emulsion-to-emulsion contact printing, thus dramatically reducing transfer of any surface abrasions and imperfections from the original negatives that would be visible through the optical printing step required for the color reversal duplication system.

"As a member of the Scientific and Technical Awards Committee of the Motion Picture Academy, I strongly supported the award given Eastman Kodak Company for scientific achievement in its development of the 5243 intermediate. 'The magic film that nobody sees.'"

**Robert Blalack**

*President, Motion Pictures, Inc. Oscar Award-Winner for Visual Effects on "Star Wars."*

"When you want top screen quality in optical effects, you tackle all the components involved in the optical process—illumination, lenses, color separations and matte stocks. And then all your efforts end up on the dupe negative stock.

"Kodak asked me to test this stock just as *Star Wars* was getting under way. The results were impressive. Our travelling matte opticals became extremely sharp, and that added a new realism.

"The minimal grain and clear colors give you the feeling you are right there. Eastman 5243 film made a definite contribution to winning the Oscar.

"Eastman 5243 film is one full stop faster than its predecessor. That's an added plus, particularly when you are compositing from color separations, as I did in *Star Wars*.

"We had some scenes in *Star Wars* that were made up of 72 pieces of film—mattes, separations and intermediates. Every one of them was made on one of the vast selection of Kodak film stocks. But the stock that had to finally carry the ball was 5243.

"At Motion Pictures, Incorporated, we are committed to no-compromise, top-quality visual effects. And one key decision we have made—from experience—is to use the diverse and useful family of films from Kodak, of which Eastman 5243 film is a welcome newcomer."

*If you would like to know more about Eastman color intermediate II film 5243, ask your Kodak sales and engineering representative at one of the offices listed below.*



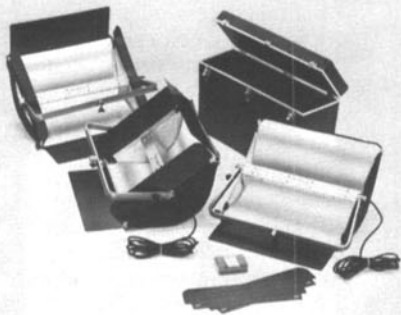
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*Kodak... Official motion picture consultant to the 1980 Olympic Winter Games.*

## 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.

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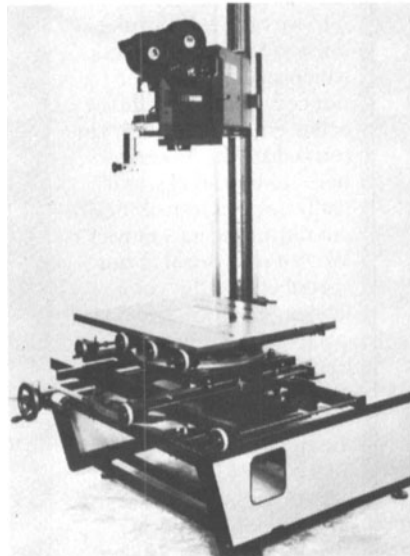
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gear pass makes the improved CP-16R even more silent in operation. The new CP-16R standard viewfinder has positive click-stop 90° rotation and provides 12X magnification and a brighter image. Prices for the new generation CP-16R cameras start at \$8100.



A fixed-register, dual-gauge animation camera which accepts bipack film has been announced by Neilson-Hordell Ltd., Central Trading Estate, Staines, Middlesex TW18 4UU, England. The camera can run at live-action speeds of up to 25 frames/s and can make fades or dissolves from four to 999 frames. It accepts 35mm and/or 16mm film. Two versions are available — the 83.00 for animation stand use, and the 84.00 for optical printer or live-action use. The camera is fitted with a four-pin claw mechanism below the gate in place of intermittent motion transport pins. The shuttle accepts single and double film strands; two-chamber outside magazines or four-chamber bipack magazines may be used. Features include a multi-speed, printed circuit motor with electronic control that can run at one, two, four, eight, 12 and 25 frames/s; it can be used for single-frame stop motion up to 8 frames/s and can run forward or reverse.

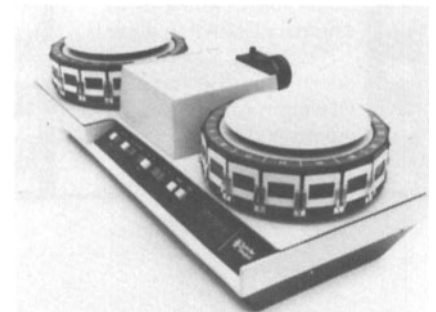
The 170° fading shutter has an electronic control with a fade curve and three dissolve curves, which can be helpful when the camera is used on an optical printer or an underneath-aerial image animation stand. It has a manual override.

A three-position switch controls the view-finding system. The first renders the viewfinder inoperative for clear-path shooting; the second allows viewing while the camera is not running; and the third — used during live-action shooting — enables viewing while the camera is running. The viewfinder can be swung into any position and still retain an erect image. Provision is made for a built-in television viewfinder. A mechanical four-digit frame counter is incorporated in the camera body. Each digit may be set by any number individually.

A rotoscope may be fitted to the camera for use on an animation stand or for special effects for frame-by-frame projection of a developed film. When the rotoscope is projecting, the camera can be stopped with the shutter open. The rotoscope also may be fitted to the viewfinder to project the reticle. The camera body with one set of components — 35mm or 16mm — is priced at about £8000. An additional set of components is about £2000.



The fluid head Standard 7 + 7, successor to the four-speed model, has been announced by Sachtler GmbH, Osterwaldstrasse 10, 8000 Munchen 40, Federal Republic of Germany. The Standard 7 + 7 is designed for 35mm cameras, such as the Arriflex 35. It has a seven-step on-off high-capacity pan and tilt drag. An integrated counterbalance spring can be adjusted for no-hands balance in any desired position, even with a displaced center of gravity, for any camera/lens combination. The cartridge of the spring balance is changeable in case a stronger or softer spring is desired. The Standard 7 + 7 weighs 5.8 kg. The price is 3640 DM.



The Spectrum 32 Selectroslide color television 2 x 2 slide projector has been completely redesigned, according to an announcement from Spindler and Sauppe, 13034 Saticoy St., North Hollywood, CA 91605. The housing has been changed to a modular package allowing mechanical, optical and electronic sub-assemblies to be removed for servicing without disturbing the film chain alignment. Engineered especially for color film chains, the Spectrum 32 can also be used for black-and-white television systems. Color, intensity and polarization are balanced between the two channels of the projector. Each channel uses a 16-slide, quick-change magazine for a total capacity of 32 slides. Both magazines may be rotated by hand for quick cueing.

The heart of the optical system is a sliding front-surface mirror which moves in a single plane to switch from one projection channel to the other. The angle of the mirror remains constant throughout its movement. Each projection channel involves only a single mirror surface. Polarization is less than 1%. Slide change time is 1/10 s. Slides may be sequentially advanced as fast as one per second. A focus mount incorporating a focus lock permits a wide selection of slides, including 7 1/2-in and 9-in for multiplexing and inverted 3-in and 5-in lenses for uniplexing.



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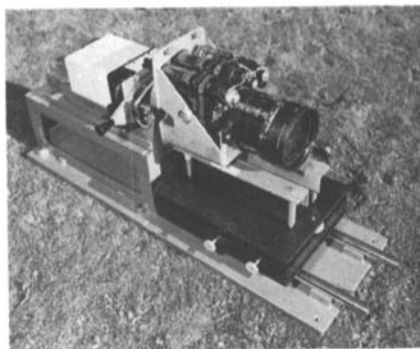
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All projection lenses are color-corrected, coated and have a diaphragm and holder for neutral-density or color-correcting filters. The Spectrum 32 Selectroslide projector (model 4342) with mounting plate (model 226) is priced at \$5400.



A television and lens testing system designed to check the performance of television camera lenses, film camera lenses and cine lenses has been developed by Sira Institute Ltd., South Hill, Chislehurst, Kent BR7 5EH, England. The system is distributed in the United States by Boston Electronics Corp., 68 Harvard St., Brookline, MA 02146. The equipment consists of three modules—object generator, image analyzer and electronic unit. The modulation transfer function gives an indication of the amount of aberration present in the lens, and also the quality of manufacture, through measurement of the image contrast. Thus, by regular checking a lens can be taken out of service before the picture quality becomes noticeably bad. Other parameters checked include the level of glare (unwanted light in the image plane due to scatter or multiple reflections) and the transmission, which tends to reduce as dirt and grease build up on lens surfaces. The relative field illumination (uniformity of brightness over the picture format), distortion, transverse chromatic aberration and back focal length can also be checked.

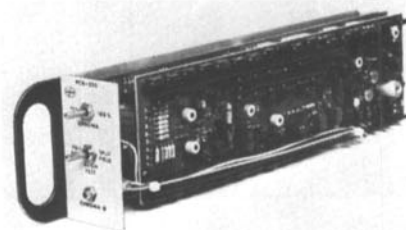
The instrument is suitable for lenses having focal lengths in a range of 8 mm to 1000 mm. Special lens mounting adaptors or a universal lens adaptor for large television broadcast lenses can be supplied.



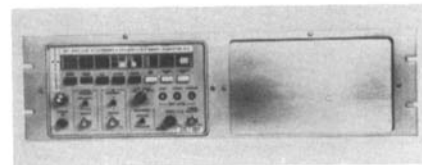
A color television pattern generator offering more than 20 different black-and-white and color test pattern combinations has been announced by N.V. Philips Gloeilampenfabrieken, P.O. Box 523, 5600 AM, Eindhoven, Netherlands. Designated the PM 5519, the instrument produces signals for testing color and monochrome televisions, videocassette players and videodisk systems to CCIR or RETMA standards. The range of test patterns is based on five color and five monochrome signals and includes special modulation patterns to check amplifier bandwidth, color demodulators and videocas-

sette recorders. A circle can be added to all monochrome and color patterns without exceeding the standard IV peak-to-peak video output. Patterns are modulated on an RF carrier which can be tuned electronically to the IF and almost any VHF or UHF channel.

Up to six frequencies can be preset separately for touch-button selection. Each button has electronic tuning and indicators to show the range—VHF bands I or III or UHF bands IV or V. Maximum RF output of the generator is 10 mV. The video and sound carriers can be modulated externally by any source including cameras and tape recorders. A 12.5-dB sound-to-vision spacing and line and frame synchronization to CCIR standards allow the generator to be used for checking any equipment to PAL G, I, M and N color standards. A simple change of internal solder links and replacement of the plug-in subcarrier frequency crystal makes it possible to alter the generator to the RETMA NTSC color system. The instrument is 140 mm high, 305 mm wide and 300 mm deep. The price is 2750 Gld.



A color bar generator which includes the SMPTE alignment color bar test signal with chroma and black set signals has been announced by Lenco, Inc., Electronics Div., 300 N. Maryland St., Jackson, MO 63755. Designated the model PCB-320 encoded color bar generator, the instrument is engineered to conform to EIA-RS-189-A and NTSC specifications. The alignment color bar test signal (reverse bars) provides a method for the adjustment of chroma gain and phase and brightness of color monitors. A full-field bar signal which includes a white bar as well as a black bar is provided along with the split-field signal. The luminance component of the signal is a gray scale display for setting the color balance and tracking on color monitors. Other features include a composite video delay circuit which allows system timing of test signals up to 1.5 μs; luminance-to-chrominance timing; black level between the I, White and Q signals for sharp, clear viewing; and a fixed relationship of burst phase and amplitude to chroma. The PCB-320 is 2 7/8 in high, 1 1/2 in wide and 11 7/8 in deep. It weighs 19.5 oz. The price is \$750.



A crystal-controlled NTSC sync generator for the small studio has been announced by Ultra Audio Pixtec, Box 921, Beverly Hills, CA 90213. Designated the SCG396, the unit includes built-in distribution amplifiers to feed all six drives to as many as four cameras. Two black-burst outputs and 1-kHz audio test tone are also built in. The unit, which mounts in half-rack space 5 1/4 in high, also includes a test-signal generator with various patterns, NTSC and

# The First Name in Film Editing Brings You The Last Word in Console Editors



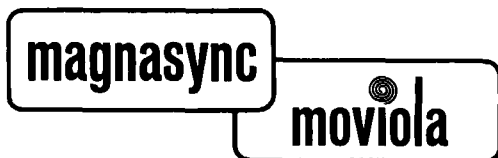
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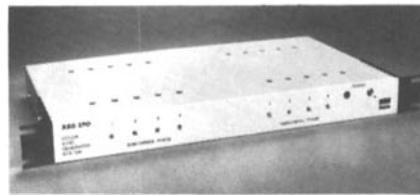
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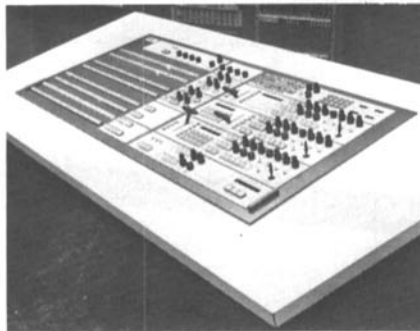
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A sync generator system (XSG-370) capable of driving five independent cameras has been announced by Sharp Electronics Corp., 10 Keystone Pl., Paramus, NJ 07652. The new sync generator system has four subcarrier and four horizontal outputs which are independently adjustable from the front panel. The horizontal outputs may be either sync or horizontal drive. The system is said to be capable of handling all kinds of cameras, or any combination of them, with external drive capability. A 14.3-MHz crystal-controlled oscillator determines the frequency of the system. Subcarrier frequency is 3.579545 MHz. The XSG-370 is 1 3/4 in high with the standard 19-in rack width. The depth is 10 in and the weight is 5 lb. The price is about \$775.



A PAL version of the Duca-Richardson model 4000-E-1 production switcher has been announced by Ampex Corp., 401 Broadway, Redwood City, CA 94063. Features include 16 active inputs plus color black and color background. The main operating controls of the model 4000-E-1 are located on a specially designed subpanel called the Function Module that puts each control within easy reach of the operator. One Function Module serves the two switching busses with controls for the mix/effects and other systems grouped in clusters for efficient operation. Wipe patterns and key sources can be preselected from a 15-button keyboard. Pattern choices are illustrated in a decal on the control console.

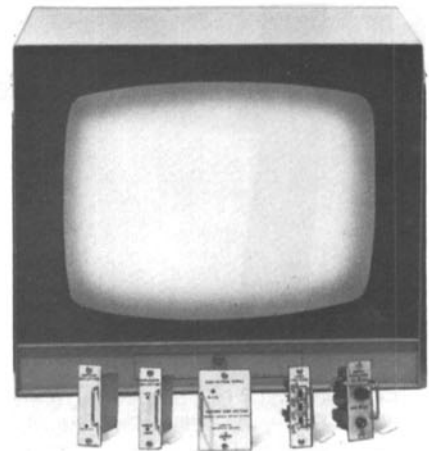
Automatic transition intervals range from 0.1 s to 9.9 s in 0.1 s increments, and key selections include six RGB chroma keys, the preview bus, the B bus and two external sources. Keys can be inserted in the mix-effects system; all key sources are accessible through keyboard selectors. Normal key is either a luminance key or RGB chroma key, and a dual function mode is provided in which keying is combined with transitions. Each mix/effects system processes five levels of video simultaneously, including key and insert video from the key source selected. Chroma-key switching is built in.

Features include a camera tally system, color-black generator and color-background generator, a nonsync inhibit system and indicators, and automatic transition for mix/effects. The base price is \$19,900. A number of options are available.

The CVS 310 Image Enhancer/Noise Reducer, a video processor that combines image enhancement and electronic noise reduction in one unit 3 1/2 in high and weighing 20 lb, has been announced by Consolidated Video Systems, 1255 E. Arques Ave., Sunnyvale, CA 94086. It is designed for stand-alone use with any analog or digital TBC, or other video sources. The 310 has separate enhancer and reducer modes allowing use of each mode independently when required. The unit is automatically bypassed in case of power failure, and a front-panel bypass switch is also provided. Features include combed detail signal to eliminate hue shifts and noise coring of detail signal to remove low-amplitude noise throughout the video range. Price of the 310 is \$5990.



The YFI Record Booster, produced by Yves Faroudja Inc., 199 First Street, Los Altos, CA 94022, has been announced by Telegen, 800 Welch Rd., Suite 354, Palo Alto, CA 94022. The device is designed to improve image detail on color under videotape recorders such as the U-Matic, Betamax or VHS formats. Inserted in the signal path prior to recording, the Record Booster processes the signal so as to reduce image flatness and retain fine detail without accentuating main outlines (cartoon effect). It is priced at \$1500 (NTSC version).



A line of professional monochrome video monitors featuring 900-line resolution and modular construction has been announced by Lenco, Inc., Electronics Div., 300 North Maryland St., Jackson, MO 63755. Designated the PMM-900 series, features include the use of a warm, white phosphor to produce a sharp, bright picture with 900-line center resolution. A completely modular chassis consists of five individually shielded circuit modules that plug directly into the rear of the chassis, thus simplifying servicing. Other features include a regulated low- and high-voltage power supply which maintains constant picture size and brightness with line voltages between 105 and 130 V ac, or 210 and 260 V ac; optional front-switchable underscan to show all four sides and corners; switchable dc restoration; and optional pulse cross delay. Cabinet models are available in 9-, 12-, 15-, 19-, and 23-in sizes. Dual 9-, 15-, and 19-in rack-mounted configurations are also available. Prices range from \$675 for the 9-in monitor to \$860 for the 23-in monitor. The optional underscan and pulse cross delay are priced at \$75 each.

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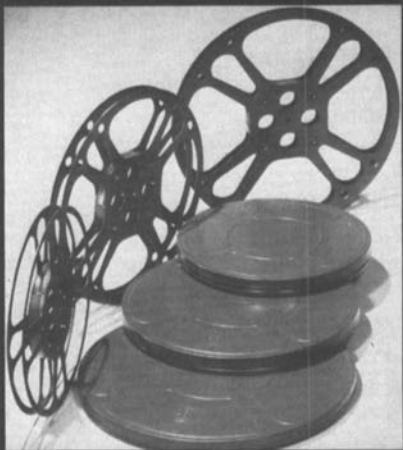
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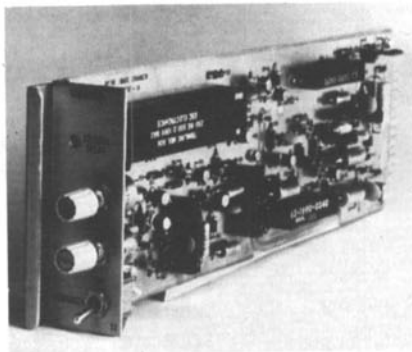
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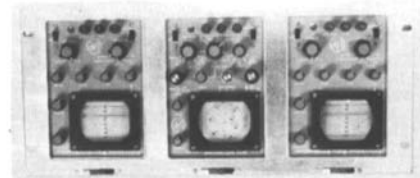


A **horizontal enhancement module** for use with 3M's P-100 and DP-100 processing amplifiers has been announced by 3M Company, Minicom Division, P.O. Box 33600, St. Paul, MN 55133. The unit provides for adjustable horizontal enhancement, a noise coring control to effectively reduce visual noise and adjustable chromo/luminance delay for reducing the "comic book" effects in some recorded videotapes. The module is priced at \$895.

A new **Direct-Read-After-Write (DRAW)** laser-recording material for videodisks and digital data storage has been developed by Drexler Technology Corp., 3960 Fabian Way, Palo Alto, CA 94303. The material, designated Drexon™, is a reflective, plastic/metallic composite coating which records instantly without processing of any kind. About 20 companies throughout the world have been recording digital and video data on thin metal films which are coated on rotating disks or on non-rotating plates requiring relatively high laser power. Drexon is said to require lower power than the thin metal films, offer lower costs and ensure lower data-error rates.

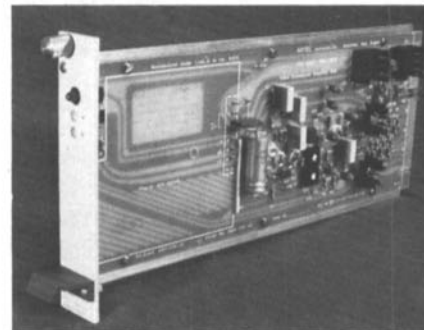
Samples of the material have been subjected to extensive testing, one series of tests demonstrating that recording can be accomplished with a green argon laser with only 5-mW, 100-ns pulses to record good-contrast spots 0.8 μm in diameter. The cost of Drexon materials in volume production is estimated at 10 cents per megabyte compared to \$3.00 per megabyte for magnetic disks and 40 cents per megabyte for magnetic tape cartridges. One 4-in Drexon disk can store more than 100 megabytes — the amount normally stored on ten 14-in magnetic disks.

In optical disk memory systems, this read-only-memory material can be used to store both digital alphanumeric data plus video picture images.



A **television waveform monitor** (5th generation) designated WM310, designed for use in ENG and U-Matic tape editing and dubbing applications, has been announced by Ultra Audio Pixtec, Box 921, Beverly Hills, CA 90213. As many as three units may be rack-mounted side-by-side or mixed with the firm's NTSC vectorscope. Individual 4-source input selection for each of the three units is available. Television lines or fields are displayed at full bandwidth, luminance only or chroma only. An unclamped

display position allows checking the clamping of incoming video. Vertical synchronizing pulses are also displayed, and the WM310 decodes VITs for exhibition on an external oscilloscope. Price is \$750.



**The Video Distribution Amplifier, Avitel VDA 3027**, has been introduced by Avitel Electronics Ltd., 10 Shaftesbury Rd., Beckenham, Kent BR3 3PW, England, as part of a series of video distribution amplifiers and cable equalizers produced under a manufacturing license agreement with British Broadcasting Corp. Each system in the DA series comprises a single common amplifier and a number of optional equalizers, delays, differential input and other amplifiers which may be plugged into the basic amplifier. The basic Video Distribution Amplifier is priced at £82. Equalizers are priced at £18 each. A typical installed cost of Video Distribution Amplifiers including frame, power supply, connector units and 13 VDAs (one frame full) is £120 per VDA.

**An L-C delay line, model VP2075**, has been announced by Allen Avionics, Inc., 224 E. 2nd St., Mineola, NY 11501, as an addition to its passive L-C delay lines in 75 Ω, designed specifically for the video industry. Model VP2075 has a longer delay with a flat loss of 3 dB for any delay setting. The delay range is from 0 to 2075 ns in 25-ns steps. The price is \$475.



A **handheld digital logic probe, model LP-1**, an addition to the Logical Force™ line of digital test instruments, has been announced by Continental Specialties Corp., 70 Fulton Terrace, New Haven, CT 06509. The LP-1 derives its power from the circuit under test. Its 0.1-MΩ input impedance minimizes circuit loading. An on-probe switch selects either TTL/DTL or HTL/CMOS family logic levels. Separate on-probe LEDs light to indicate high and low logic states. A built-in pulse stretcher briefly flashes a third pulse LED on the positive- or negative-going leading edge of a single pulse as short as 50 ns. The pulse LED flashes for pulse trains up to 10 MHz. The relative brightness of the high and low LEDs can be used to estimate pulse duty

cycle. A built-in switch-selected pulse memory latches the pulse LED on whenever a pulse is intercepted, thus aiding the probe's versatility in trouble-shooting intermittent glitches. Price of the LP-1 is \$44.95. A number of accessories are available.

Also announced by Continental Specialties is the 500-MHz Prescaler designed to extend the performance of almost any frequency counter up to at least 500 MHz. Features include a BNC input connector, diode-protected 50 Ω input and 250-mV sensitivity from 50 to 500 MHz. Its output is a minimum 400-mV (peak-to-peak) capacitively coupled signal, available at a phono jack connector. The price is \$59.95.



A line of video cabling accessories called the Problem Solvers has been announced by Comprehensive Video Supply Corp., 148 Veterans Dr., Northvale, NJ 07647. The line includes the model PS-1 video cable tester for testing BNC-to-BNC, UHF-to-UHF, or BNC-to-UHF cables for shorts, broken conductors and continuity, and the model PS-3 junction box which has two 20-pin blue jacks wired together for joining extension cables of remote controls of the Sony 2000 series U-Matic and industrial Beta-max recorders and players. Also available is an assortment of break-out boxes for making video equipment with EIAJ 8-pin and 10-pin connectors fully compatible with standard connectors. Model PS-1 is priced at \$59.95. Model PS-3 is priced at \$39.95.

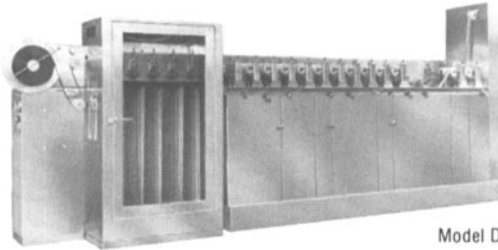


A counter-timer using a specially designed "counter on a chip" and a microprocessor has been announced by Hewlett-Packard, 1501 Page Mill Rd., Palo Alto, CA 94304. Designated model 5315A, the counter measures frequency to 100 MHz and time intervals to 100 ns. It has a full range of period, frequency ratio, time interval averaging and totalizing capability. It uses the reciprocal taking technique for high resolution and accuracy at low frequencies. The 5310 has a seven-digit, easy-to-read amber display, trigger levels for both channels and a variable sensitivity control. The price is \$800.

The *f/3.5 Navitar*, a new zoom lens with a 6- to 9-in range, designed to fit all Kodak Ektagraphic and Carousel slide projectors, has been announced by D.O. Industries, Inc., 317 East

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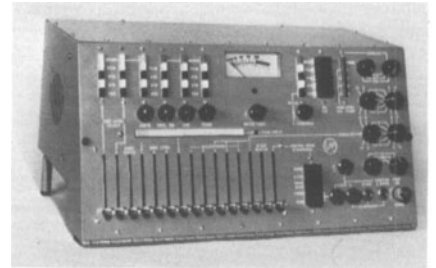
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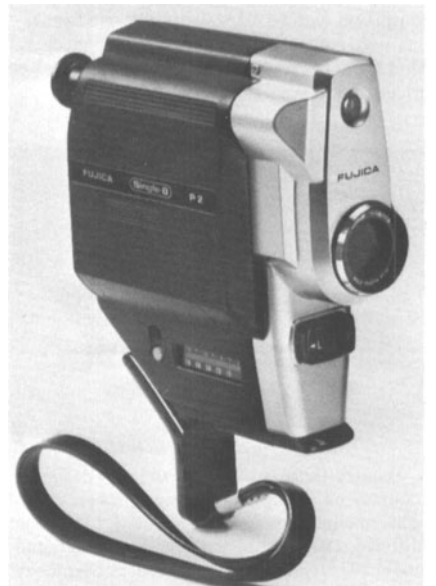
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Chestnut St., East Rochester, NY 14445. It can be used with both super-slides and 35mm slides mounted in glass, plastic or cardboard. For S-AV projectors made in West Germany, an interchangeable mount is available that can be switched in the field without special tools. A built-in locking-set screw can maintain the lens at any focal length once the proper screen size has been obtained. A large knurled ring control provides easy zooming. The lens is priced at \$330.



An audio console designed especially for small television studios has been announced by Ultra Audio Products, Box 921, Beverly Hills, CA 90213. Designated the MS-105 MixMaster, it is also usable in mobile applications. Contained in a small cabinet, it is mountable in a vertical rack, on a table, or in a horizontal desk arm. It requires only 7 in of rack space. Features include seven microphone inputs, voice-over including "ducking" of music to background, phono input, audio oscillator, slating tone, and auditioning of all sources without interfering with program material. Headphone monitoring of mixer output and/or audition and a compressor are included. The price is \$1795.



The Fujica P-2, an 8mm movie camera, has been announced by Fuji Photo Flim U.S.A., Inc., 350 Fifth Ave., New York, NY 10001. The camera, measuring 2 in deep, 5 in high and 5 in wide, and weighing 11 oz with batteries, offers drop-in loading, automatic exposure and available-light filming. The camera has a 220° shutter and an 11.5mm f/1.8 lens set for universal focus. Features include an electric-eye CdS cell. An underexposure warning signal is visible in the viewfinder. Power is supplied by two penlight cells sufficient for at least 10 cartridges. The price is about \$99.95.

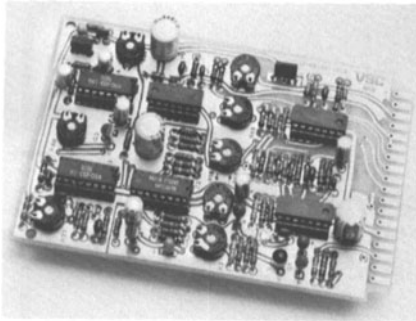


**The Duet**, a packaged memory lighting control system, designed primarily for small television studios and small theaters, has been announced by Rank Strand Electric, P.O. Box 70, Great West Rd., Brentford, Middlesex TW8 9HR, England. The Duet system has a portable table-top console with a complete self-contained memory lighting control providing fundamental facilities from comparatively few pushbuttons and faders. Up to 120 channels, built up in multiples of 12 from a minimum of 48, can be controlled with up to 199 fast-access memories. A number of options are available. Rank Strand Electric is represented in the United States by Strand Century Inc., 20 Bushes Lane, Elmwood Park, NJ 07407.

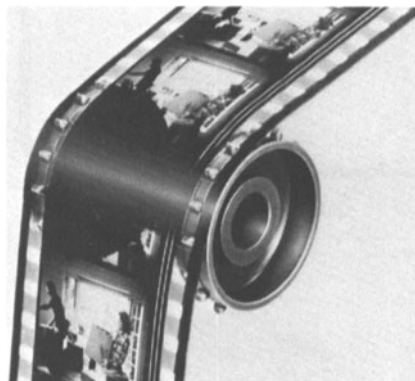


**The Sound XL 800S**, a new super-8 movie camera, has been announced by Sankyo Seiko (America) Inc., 149 Fifth Ave., New York, NY 10010. Features include an 8X zoom range and the ability to switch from zoom to macro at any focal length between 25 mm and 60 mm. Filming speeds are 18 frames/s and 24 frames/s. The camera has an  $f/1.8$  lens and a  $220^\circ$  shutter, making possible filming in existing light. Other features include an auto-fader button for fading picture and sound simultaneously, automatically and smoothly. Releasing the button automatically fades picture and sound back in again. Exposure is controlled by automatic through-the-lens CdS metering with manual override. Other features include backlight control, a built-in Type-A filter, the ability to monitor sound before shooting, a footage counter which automatically resets, automatic gain control, and a pistol grip which houses the six alkaline penlight "AA" batteries used for powering the camera. The price is about \$485.

**A printed circuit board module for speech compression or pitch correction**, Model M-8, has been announced by The Variable Speech Control Co., 185 Berry St., San Francisco, CA 94107. One version of the M-8 includes a motor speed control circuit for use in small audio tape recorder applications, making it possible for a single control potentiometer to control both the



speed of the tape transport and the amount of pitch correction. In another version the servo can be modified to produce a dc drive control voltage for larger tape transports. The module is available as a 3.3- X 5-in printer wiring assembly designed to mate with a standard 18-pin (0.156-in spacing) PCB edge connector for adaptation to existing products. SNR is 46 dB based on 0-dBm output over a bandwidth from 350 Hz to 5 kHz. Numerous applications include radio and television broadcasting to compress commercials to fit time slots, film and video editing for intelligible audio during high-speed scanning, and in recording studios for sound effects and fast review of tapes. The price of Model M-8 is about \$100.



**The VKF (Very Kind to Film) sprockets**, designed to reduce the chance of torn motion-picture film caused by abnormal contact between the film and the sprocket, have been introduced by La Vezzi Machine Works, Inc., 900 North Larch Ave., Elmhurst, IL 60126. The new sprockets differ from current sprockets by the profile of the sprocket teeth. They are machined with the widest possible teeth compatible with the narrow CS CinemaScope film perforations as well as the standard KS wide-perforation film. The VKF design presents an 80% increase in the width of each tooth over current sprockets providing protection and improved control of film through a projector.

Each tooth on the sprocket is profiled with rounded edges to eliminate any contact with the corners of the perforation where film tears often start. The redesigned tooth form with its rounded edges reduces the possibility of cutting, tearing or abrading the film, even under heavy tension, uneven film travel or other abnormal conditions existing in the film path. Dimensions of the VKF sprockets are critically controlled. Spacing between the rows of teeth and between individual teeth, alignment of teeth, and the width and surface of each tooth are held to close tolerances to accommodate changes in film perforation specifications due to manufacturing, shrinking and aging.

The VKF sprockets are expected to eliminate a substantial percentage of film repairs performed in the projection booth and also to min-

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imize projector maintenance because the wide sprocket teeth reduce film dust caused by film abrasion or "shaving." (Film dust contributes to the rapid wear of expensive projector components.) The VKF sprockets are manufactured primarily for use in 35mm motion-picture projectors and are directly interchangeable with currently used intermittent, feed, take-up and sound sprockets. The VKF design can be used to transport any 35mm tape or other media. The VKF sprocket price range is \$22.50 through \$33.

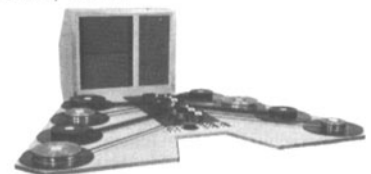


A new 4000-W Softlite designed for use as a fill light in motion-picture and television studios has been announced by Berkey Colortran, Inc., 1015 Chestnut St., Burbank, CA 91502. Called the 1kW/4kW Softlite, it is designed for use with four 1000-W FCM lamps. Each lamp is individually switched so that the unit may be energized in 1000-W increments up to its full rated capacity. The new Softlite is 10 in deep, 24 in wide and 22 in high. It weighs 19.25 lb. It provides a lighting intensity of 200 fc at 15 ft from the unit with a beam diameter of 16 ft and is available in a variety of power input versions. The price is \$425. An 800-W, 240-V lamp is available for overseas applications.

New Fresnels (shown above) designed for use in the studio and on location for key, back and kicker lighting applications were also announced by Berkey Colortran. Called the 1kW, 2kW and 5kW Fresnels, the units employ a new double wall of steel and aluminum construction to provide maximum cooling and a reduction in weight. The Fresnels incorporate new high transmission lenses. The 1kW Fresnel accepts 750- and 1000-W lamps. The 2kW units accept 1kW, 1.5kW and 2kW lamps. The 5kW unit accepts a 5000-W, 3200-K, 500-h DPY lamp. The units are available in both stand-mounted and hanging versions.

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