

# WHY WESTERN CINE?

**because...**

Western Cine's capabilities in processing and printing are limitless because we are continually researching new and better techniques for serving you. That's one reason why we've grown big.

But we are also staffed with people... good people who know and understand your needs... people whose skills and desires are bent on delivering quality work, excellent service and a full measure of value. Try us and see!

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with COLOR CORRECTION
- EASTMAN  
COLOR POSITIVE  
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- COMPUTERIZED  
PRINTING

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— VIDEO TIMING  
"FRONT-END SERVICE"

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MIXING

EQUIPMENT RENTAL & SALES

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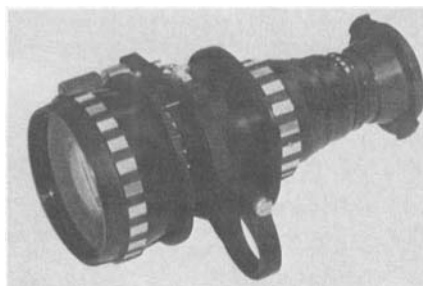
Cine Craft

8764 Beverly Blvd. - Hollywood, Calif. 90048

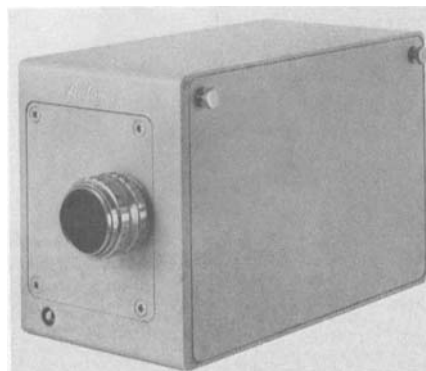
## new products

(and developments)

.....  
Further information about these items can be obtained direct 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.

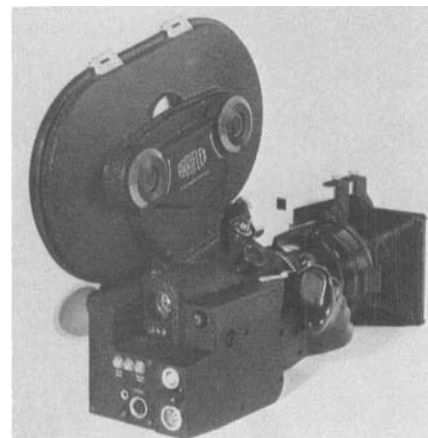


The Cine-Pro T9 24-480 zoom lens has been announced by Cinema Products Corp., 2037 Granville Ave., Los Angeles, CA 90025. Designed for professional 35mm motion-picture photography, the lens has a BNCR-type mount and is supplied with follow-focus and zoom gears. The zoom gear already on the lens is for use with the J-4 Motorized Zoom Control. The lens weighs 5 lb 9 oz. The price is \$7500.

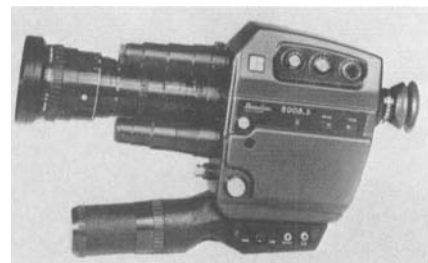


The Automax 16mm Cine Pulse Camera designed for applications calling for medium speed and rugged construction has been announced by L-W Photo, Inc., 15451 Cabrito Rd., Van Nuys, CA 91406. The pulse rate is up to 12 pulses/s triggered from 5 V through a 28-V dc signal. Cine frame rates are 16 and 24 frames/s switch-controlled. The variable shutter is adjustable from 0° to 160°. The camera has a fixed register pin with single claw pulldown. The film capacity is 200 ft on daylight-loading stacked spools. The camera accepts 0.2994 or 0.3000 in pitch, single or double row perforation film without modification. The camera uses "C" mount lens as well as the Apex-B automatic exposure control (available as an option). The camera is less

than 6 in high and less than 9 in long. It is 4½ in wide and weighs 8 lb 14 oz without lens or film. The power requirement is 24 to 34 V dc. The camera is priced at \$2,350 without lens or film. A high-speed version of the Automax providing 10 to 128 frames/s is also available.



A new combination Crystal-Regulated Motor and Viewfinder Control for 16BL cameras has been announced by Arriflex Co. of America, 25-20 Brooklyn-Queens Expwy. West, Woodside, NY 11377. The motor, viewfinder control and all electronics are contained in a single subassembly which becomes an integral part of the camera when it is installed. Drive features include a special all-purpose motor, permanently built in, together with the essential electronics. Sync speed and regulation is reported within ±½ frame per 400 ft (16,000 frames) in temperatures ranging from -13 to +130 F. Framing rates 6 to 48 frames/s may be selected and a separate switch allows the cameraman to change instantly from 24 frames/s to another preselected nonsync speed. An auxiliary outlet provides for external sync signals and remote control or bench testing of key circuits without disassembling the camera or motor. If required, the electronic circuitry can be bypassed and the camera motor powered directly from the battery. The combination Crystal-Regulated and Viewfinder Control can be installed optionally on new or presently owned cameras. The price is about \$2570.



The Beaulieu 5008S, a single system and double system sound super-8 camera has been announced by Heric Corp., 14225 Ventura Blvd., Sherman Oaks, CA 91403. It accepts both the new Ektasound super-8 sound cartridge and the silent super-8 cartridge. The camera has existing light filming capability and is equipped with a new Angenieux 6-80mm f/1.2 zoom lens with a 13.3:1 ratio. The lens has a special locking device to limit zooming from 6 to 40mm. Features include a built-in sound amplifier, unlimited lens interchangeability and automatic exposure control with manual override. The new Beaulieu Reflexmatic Motor governs exposure accuracy.

# THE END OF HALF OF YOUR CAMERA PROBLEMS

No two motion picture assignments are exactly alike. So it follows that no one camera or lens is right for every assignment. Which in part explains the enormous proliferation of cameras and lenses that has taken place over the last several years. Well, whatever the format,

whatever the camera, whatever the lens, whatever the accessory, you can be sure of one thing—Camera Mart's got it. In stock and in depth. And whether you buy it from us or rent it from us, chances are it'll cost you a lot less than you thought.



## THE END OF THE OTHER HALF.

But getting the right gear is only half the answer. The other half is *where* you get it. In effect, the *people* you get it from. Does the place maintain a full staff of factory-trained technicians? Are they fanatic about checking and re-checking every piece of gear—however small—before it leaves the premises? Are they familiar enough with motion picture problems to suggest another, even more suitable piece of equipment than

you originally specified? And, if by some remote possibility the equipment should fail, do they stand ready to rush out, day or night, rain or shine, with a replacement? If you're dealing with Camera Mart, the answer to all the above is an emphatic yes. But why take our word for it? Everybody's making claims these days. Check for yourself. Just ask someone—anyone—who's ever dealt with us.

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Other features include variable speed control on the power zoom, a mirrored shutter system, a large reflex viewing screen and sync speeds of 18 frames/s or 24 frames/s. The camera also has macrocinematography capability. The price is \$1448.



The Canon Model PV 10X15 B2 wide-field 10X zoom lens designed for use with 1-in Plumbicon cameras has been announced by Canon Broadcast Optics, 10 Nevada Dr., Lake Success, NY 11040. The lens has a zoom range of 15 to 150mm, f/2 and a reported efficiency of over 80%. Features include adjustable back focus, bayonet mount, range extenders and close focusing operation to 3½ ft.



A new Kodak Ektasound 160 camera using super-8 sound or silent film has been announced by Eastman Kodak Co., It has power and manual 9-21mm zoom lens and a coupled rangefinder. The power zoom control is used to compose scenes while filming and the manual control is used to compose when the camera is not running. The coupled superimposed rangefinder allows accurate focusing. The lens barrel is calibrated in feet and meters and zone-focusing symbols to aid rapid focus determination. Features include a built-in amplifier with automatic gain control to allow the camera to adjust for existing sound. The camera with microphone and batteries weighs 3 lb, 14 oz and measures 3½ by 7½ by 8¼ in. The price, which includes a 12-ft omnidirectional microphone with 12-ft cord and stand, is \$398.50.

The Beale Stereo Video Microscope developed for use in microsurgery to enable the surgeon to see a magnified three-dimensional television image of the patient has been announced by Stereotronics Television Co., 13720 Riverside Dr., Sherman Oaks, CA 91403. The instrument consists of an optical stereo microscope with a stereo television camera attached so that the doctor can look either through the optical microscope's eyepiece in the conven-

pre-owned equipment sale

**Compuq**<sup>®</sup>

<b>16MM CAMERA OUTFITS</b>	
Arri BL 10-100 Zeiss, APEC.....	\$9,450.
Arri BL 12-120 Angenieux.....	6,900.
Arri S/GS, 12-120 Angenieux.....	3,250.
Arri S, 35-140 Angenieux.....	3,900.
Auricon Super 1200, opt. sound.....	1,895.
Auricon 600, 12-120, mag sound.....	2,650.
Auricon 200, optical sound.....	695.
Auricon 200, takes 400' mags.....	595.
Auricon Cvsn, 12-120 Angenieux.....	2,995.
Auricon Cvsn, complete body.....	795.
Auricon Cvsn. shell no guts.....	249.
Auricon Cine Voice, opt. sound.....	895.
Beaulieu R168, 12-120 Angenieux.....	1,795.
Beaulieu R168, 17-68 Angenieux.....	1,395.
Beaulieu R168, 20-80 Angenieux.....	1,195.
B&H 70DR, 17-68 Angenieux.....	895.
B&H 70 Hispeed, 128 fps motor.....	349.
B&H 70 Hispeed w/o motor.....	249.
Bolex SBM, 16-100 PDE zoom.....	1,549.
Bolex EBM 400' outfit w/o lens.....	1,295.
Bolex Rex 5 body..... Brand new	769.
Bolex Rex 4, 17-85 Pan Cinor.....	795.
Bolex Rex 4 with 3 Switars.....	775.
Bolex H-16 Reflex, turret mdl.....	295.
Bolex non reflex, turret mdl.....	189.
Bolex non reflex, sgl-lens mdl.....	229.
CP 16 outfit, 8 months old.....	4,900.
CP 16 body, 400' mag, battery.....	3,150.
Eclair NPR, 12-120 Angenieux.....	5,450.
Eclair NPR outfit w/o motor.....	5,150.
Eclair CM3, 16/35mm outfit.....	2,250.
Cine Special II, 100' mag.....	295.
Cine Special I, 25mm lens.....	249.
Cine Kodak B, 16 fps 100' cap.....	49.
Kodak AC Hispeed, 1000 fps.....	195.
Reverse, 50' mag load, 5 speeds.....	35.
GSAP, 50' mag load, 24v motor.....	35.
Miniature GSAP for experiments.....	19.
<b>16MM CAMERA ACCESSORIES</b>	
<b>ZOOM LENSES</b>	
12-120mm Angen. C mt. 10" finder..	1,150.
12-120mm Angen. C mt. 7" finder....	1,150.
12-120mm Angen. Rx mt. no finder..	895.
12-120mm Angen. Arri mount.....	795.
12-120mm Angen. Eclair mount.....	749.
20-80mm Angen. C mt. no finder.....	249.
17-68mm Angen. C mt. 7" finder.....	495.
25-100mm Cinor S mt. 7" finder.....	295.
17-85mm Cinor C mt. 7" finder.....	395.
20-80mm Cinor C mt. 3" finder.....	149.
8-26mm Zeissal f/1.6 C mt..... New	549.
12.5-75mm Monist, Arri mount.....	349.
<b>ARRI FIXED LENSES</b>	
12.5mm T/2 Cooke Kinetel.....	329.
11.5mm f/1.9 Schneider.....	329.
16mm f/1.9 Schneider.....	149.
25mm f/1.5 Schneider.....	149.
50mm f/2.0 Schneider.....	149.
<b>C MOUNT FIXED LENSES</b>	
10mm f/1.6 Rx Switar.....	149.
10mm f/1.6 Switar.....	139.
10mm f/1.8 Soligor.....	69.
16mm f/1.8 Rx Switar.....	129.
25mm f/1.95 Angenieux.....	225.
75mm f/1.9 Switar.....	169.
150mm f/3.3 Switar.....	169.
300mm f/4.5 Century.....	169.
Anamorphic camera-projector lens..	95.
Many more lens bargains in stock....	Ask
<b>MAGAZINES</b>	
Arri BL 1200 ft. magazine.....	795.
Eclair NPR 400'.....	650.
Mitchell 1200' to NPR adapter.....	1,450.
Eclair 400' for CM3 cameras.....	250.
Mitchell 1200'..... Like new	250.
Mitchell 400' for conversions.....	125.
<b>OTHER 16MM ACCESSORIES</b>	
Arri BL 110v sync motor w/gear.....	350.
Arri BL heater Barney, repairs.....	75.
Arri 18S offset finder.....	375.
Bolex MST motor, used \$200...New	259.
Bolex 12v rechargeable battery.....	189.
Bolex 110v sync motor, fwd-rev.....	125.
Bolex 400' mag, used \$165.....New	195.
Bolex takeup motor \$95.....New	129.
Bolex crystal sync unit.....New	239.
Cine Special animation motor.....	250.
Cine Special time-lapse control.....	175.
Pathé 16 accessories..... Like new	Ask

<b>35MM CAMERA OUTFITS</b>	
Arri IIC/T custom blimped outfit.....	\$7,950.
Arri IIC blimped zoom outfit.....	8,750.
B&H 2709 w/2 movements, access...	1,900.
Eclair CM3 Aquaflex outfit.....	3,750.
Eclair CM3 16/35mm outfit.....	2,250.
Eclair CM3 35mm body, motor.....	1,150.
Eclair CM3 Cinemascope outfit.....	3,650.
Spider Eyemo complete outfit.....	575.
Turret Eyemo late mdl. w/2" lens....	375.
Sgl-lens Eyemo w/magazine back.....	125.
Wall 35, modified for filmstrip.....	1,200.
Acme 35 animation camera w/motor...	1,900.
<b>35MM CAMERA ACCESSORIES</b>	
35-140mm Angen. Arri mt., motor...	1,500.
50mm f/2 Kinoptic lens, Arri mt. ...	125.
Super Baltars in R35 mounts.....each	350.
B&H 1000' Bipack magazine.....	375.
Eclair 400' Aquaflex magazine.....	500.
Arri 16v governor motor.....	350.
Arri bellows matte box.....	250.
Eyemo 110v or 12v motors..... each	90.
Sync 110v motor for Eclair CM3.....	275.
Wild 110v motor for Eclair CM3.....	175.
Slow speed 110v motor for CM3.....	375.
B&H 2709 animation motor.....	475.
<b>TRIPODS, MOUNTING EQUIPMENT</b>	
Cartoni hvy. duty Gyro tripod.....	350.
Ceco hvy. duty geared tripod.....	450.
Ceco Pro Jr. friction tripod.....	125.
Miller fluid tripod w/case.....	375.
Mitchell geared tripod.....	225.
O'Connor hvy. duty friction tripod...	650.
RCA all metal friction tripod.....	250.
<b>POWER SUPPLY EQUIPMENT</b>	
Arri 8-16v battery w/charger.....	200.
Cine-60 8-12-16v power belt.....	225.
Frezzi 1000DX crystal inverter.....	475.
Frezzi 1000 AC inverter, rebuilt.....	350.
Frezzi 1000 inverter w/o battery.....	75.
FMC inverter in shoulder case.....	75.
Magna Tech 16v to 110v inverter....	325.
<b>LIGHTING EQUIPMENT</b>	
Frezzi 1/2 Hr. portable light.....	295.
Frezzi 1/2 Hr. light pack, rebuilt....	250.
1000w Sun Gun head w/lamp.....	40.
1000w handheld Sun Gun w/lamp....	50.
Assorted cables, spiders, boxes.....	Ask
<b>SOUND EQUIPMENT</b>	
Magnasync-602 16mm recorder.....	1,600.
Magnasync-15 16mm recorder.....	1,200.
Magnasync-X400 16mm recorder.....	750.
2 16mm Magnasync dubbers w/rack...	1,950.
3 35mm Magnasync dubbers w/rack...	2,950.
Magnasync 4 channel mic mixer.....	250.
Ampex 351 1/2" recorder in rack.....	990.
Stancil Hofman 16mm recorder.....	2,300.
Magnecord 1/4" stereo recorder.....	375.
Minifon 1/2" cassette recorder.....	50.
EOI 1/4" reel-reel pocket recorder...	50.
Nagra III with crystal and case.....	1,600.
<b>SOUND ACCESSORIES</b>	
Auricon 16mm optical recorder.....	395.
Auricon Modulite S galvo.....	275.
Auricon T70 variable area galvo.....	50.
Auricon NR25 recording amplifier...	195.
Auricon RA31 recording amplifier...	50.
3-input Xtr. amplif. for Auricon.....	275.
16mm x 1200' recording tape...New	15.
35mm x 1000' recording tape...New	15.
E-V 660 mic, stand, cable.....New	75.
E-V 654 handheld dynamic mic.....	35.
E-V 630 Auricon E6 microphone....	35.
Western Electric 639A microphone...	100.
Sennheiser wireless mic system.....	350.
RCA KV3A boom microphone.....	250.
Major Mood library on 220 discs.....	300.
<b>PRODUCTION ACCESSORIES</b>	
COMQUIP Animation Compound...New Item	
Features: 13x15x5" size, full 12	
fields, N-S E-W movement, 1/20"	
scales, 2 peg bars, glass platen	
and backing, all metal. New price:	895.
Bolex deluxe tide stand, case.....	285.
Honeywell spot meter w/case.....	125.
Luna Six light meter w/case.....	45.
Spectra Combi 600 meter w/case....	75.
Photospot attachment for Combi....	75.
34x44" double lined changing bag....	15.
11x14" claspstick slate.....New	12.

<b>EDITING EQUIPMENT</b>	
Moviola 35/35mm upright editor.....	\$2,450.
Moviola 16/16mm upright editor.....	2,250.
B&H 16mm viewer, old but good.....	65.
Bial 16mm viewer, old, works.....	25.
Camart 16mm opt. reader w/amp.....	150.
Precision 16mm opt. reader-amp.....	100.
Moviola 1-input squawk box.....	45.
Precision 1-input squawk box.....	45.
Synchronizers: 1/16mm w/counter...	75.
3/35mm \$110. 4/35mm.....	130.
1/16mm plus 3/35mm.....	195.
Guillotine 35mm splicer.....	150.
Guillotine 16mm splicer.....New	185.
Hollywood 35mm tape splicer.....	90.
Rivas 16mm tape splicer.....	100.
Hahnel dual 8mm motor splicer.....	45.
Griswold 35mm reel splicer.....	50.
Presto 35mm butt weld splicer.....	250.
Presto 16mm butt weld splicer.....	490.
2 Moviola differential rewinds.....	100.
2 35mm 1-reel rewinds.....	40.
2 16mm 4-reel rewinds comol...New	85.
Formica edit bench, no light box....	79.
Adjustable edit bench light.....	30.
Split reels: 16mm x 1200'..... each	10.
Steel reels & cans, all sizes.....	Ask
<b>PROJECTORS</b>	
Century 35mm interlock projector....	2,450.
Simplex E7 35mm intlk. projector....	2,450.
Siemens 16/16mm intlk. w/sync.....	1,850.
Sonorex 16/16mm intlk. w/sync.New	2,950.
L&W Analyst 16mm w/still frame....	450.
B&H 302 16mm magnetic-optical....	575.
B&H 1552 16mm opt. autoload.....	495.
B&H 399 16mm optical Specialist....	325.
B&H 385 16mm optical, 1-case.....	295.
B&H 285 16mm optical, 2-case.....	275.
B&H 185 16mm optical, 1-case.....	195.
B&H 25 watt amplifier-speaker.....	95.
Bauer Super-8 magnetic.....New	229.
B&H reg. 8mm autoload w/case.....	49.
Ektagraphics B2 slide projector.....	139.
Pair Kodak Carousels, as is.....	75.
<b>VIDEO EQUIPMENT</b>	
Ampex 5100 blk-wht. recorder, mint	950.
Pix monitors: 25" \$195.....27"	295.
Packard Bell CCTV camera w/lens...	250.
IBC viewfinder camera w/lens.....	350.
3 on 1 CCTV system w/switcher....	300.
1 on 1 CCTV system w/intercom....	250.
Hitachi camera and 9" monitor.....	275.
Dry switcher, 5 video-audio inputs...	150.
6x8" video screen, frame, case.....	125.
Empty 1 Hr. 2" video tape reels....	5.
<b>STILL CAMERA EQUIPMENT</b>	
Nikon Photomic w/4 lenses, motor...	975.
Hasselblads & access., new & used...	Ask
Super 4x5 Graphic, many access.....	500-
Crown 4x5 Graphic w/accessories....	280.
New Telesar SLR lenses.....	Ask
<b>TOO LATE TO CLASSIFY</b>	
Arri BL 10-100 Zeiss, APEC, mint ...	8,900.
B&H 70 DR, 3-lenses, finders, case ...	495.
Beaulieu 4008ZM2 Super-8 camera ...	575.
Wall 35mm sound camera outfit.....	1,195.
Fastax 8mm Hispeed camera.....	75.
Bolex Pro cameras and accessories ...	Ask
1000' studio blimp for CM3 camera ...	3,600.
400' Aquaflex hsg. for CM3 camera ...	895.
25-250 Angenieux zoom, Arri mount ...	3,750.
12.5mm Kinetel lens, Arri mt.....New	349.
Lens Collimator, handheld.....New	495.
Nagra IVL sync recorder, loaded.....	2,295.
Nagra III sync recorder, loaded.....	1,650.
Tandberg sync recorder & resolver ...	850.
Tandberg sync recorder with case ...	595.
Magnetic module w/amp for Arri BL ...	2,150.
2 University 150w sound columns ...	250.
Entire contents of a sound studio ...	Ask
Crystal motor for ACL camera, Demo	1,095.
400' 16mm motion picture printer ...	150.
Kodak 16mm sound projector...Mint	275.
Realist 2 1/2" slide projector.....	85.
Magnasync 35mm recorder, rack mt...	1,800.
<b>RENTALS</b>	
We also rent equipment. Ask for price list.	
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Wanted, all kinds of good equipment.	
We pay top dealer prices, top trade in values.	

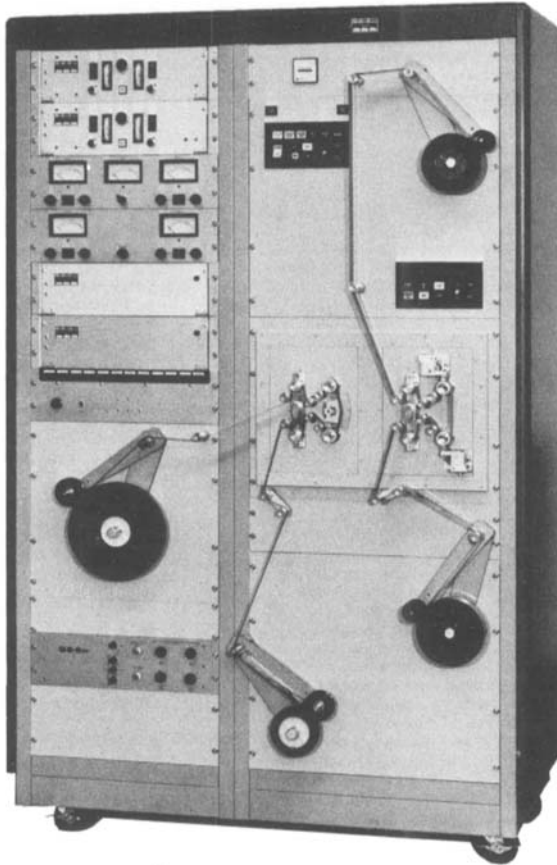
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additional . . . Prices subject to change without notice . . . BankAmericard and Master Charge honored . . . Open Saturdays

*You get high performance sound quality faster  
... that's just one profit-producing reason why*

# W.R.E. SUPER-8 TRANSFER SYSTEMS ARE PREFERRED

More have been sold. More are in service in leading labs throughout the United States. The reasons why are many.



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Reliability has been proved on the job in leading U.S. film labs and abroad. To take full advantage of profit opportunities offered by Super-8 sound in the 70's, write or phone for full information.

Patent No. 3,748,406



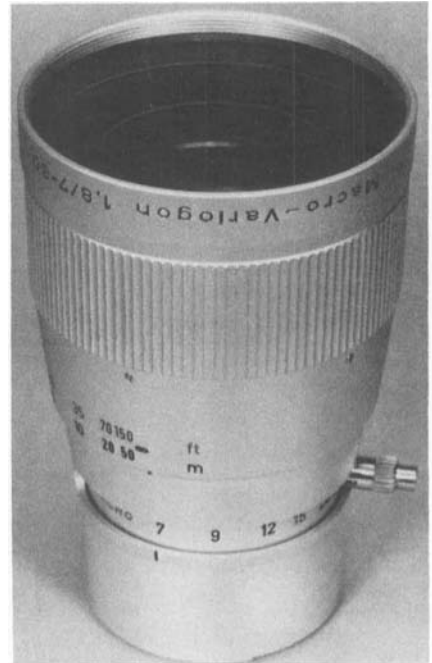
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tional manner or at a display on a stereo television monitor. He is free to move his head to look at other instruments or his assistants without losing the three-dimensional picture. No special glasses are required. The picture can be zoomed in magnification from 6X to 16X. A miniature color television camera is used to pick up the picture. The picture is recorded on a conventional videotape recorder and played back in 3D for instant replay during the operation or for later use for educational purposes. A large operating room monitor provides the assistants and nurses with a color picture so that they can follow each step of the operation as it takes place. The Video Microscope is available in three models — Model 1000 which includes a stereo beam-splitter attached to a Zeiss or Moeller operating microscope, black-and-white stereo TV camera and stereo TV monitor at a price of \$25,000; Model 2000 with a high-resolution black-and-white TV, stereo camera and stereo TV monitor at a price of \$45,000; and Model 3000 with a miniature NTSC color stereo TV camera and stereo TV monitor including an image enhancer at a price of \$85,000.



A new Schneider Variogon  $f/1.8$  7-80mm zoom lens for super-8 cameras has been announced by Schneider Corp. of America, 154 Lodi St., Hackensack, NJ 07601. A macro-focus feature permits continuous focusing from infinity down to 1 mm in front of the lens without any supplementary optics. The macro-focus knob is engaged either manually or through a camera-mounted motor drive when the focal length setting of the zoom lens is at its smallest value (7 mm) allowing the lens to be moved in on an object, filling the film format at close distances. A  $28 \times 39$ mm object can be focused to fill the super-8 format at the 1mm closest focusing distance. The lens (16 element, 14 group) has been multi-coated to reduce internal reflection losses, increasing light transmission and image contrast and reducing flare and stray light effects.

The DAC-100 Digital Automatic Program Controller has been announced by Dynasciences Video Products, a subsidiary of Whittaker

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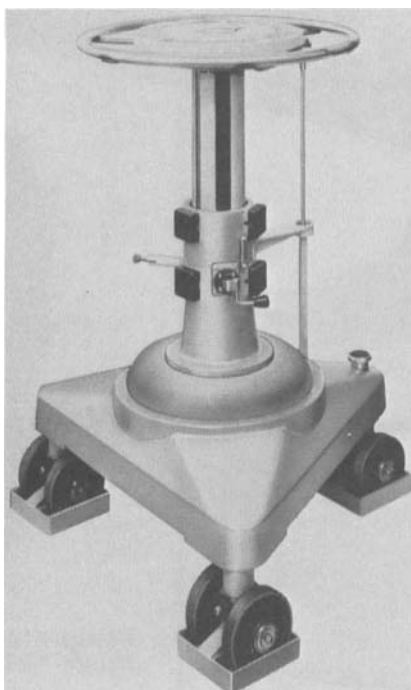
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Corp., Township Line Rd., Blue Bell, PA 19422. The DAC-100 can control up to 10 hours programming for as many as six videotape sources. It permits a user to set up a 10-step sequence consisting of tapes, live video, network feeds and commercials for a day's programming including start and stop times. Features include inaudible start and stop tones recorded on either of the audio tracks between each segment to allow dual audio channels of a 3/4-in video cassette to be used for program content. A digital clock allows the user to set the time desired to start and stop operation. Applications include CATV program origination, educational TV and various types of closed-circuit television. Price of the DAC-100 is \$3100. Modules (no more than six) are priced at \$210 each.

A variable video delay unit, Type UN3/9, produced by Matthey Printed Products Ltd., William Clowes St., Burslem, Stoke-on-Trent ST6 3AT, England, has been announced by Television Equipment Associates, Box 1391, Bayville, NY 11709. The unit can be inserted into 75  $\Omega$  cable runs via BNC connectors. A turn of the screw can increase the delay from 3 ns to 9 ns — the equivalent of 2 to 6 ft (about 0.6 to 1.80 m) of coaxial cable. The UN3/9 unit eliminates the need for cutting back coaxial cable in short steps to achieve the exact length required for a particular delay, permitting the required delay to be made more accurately and in less time. The unit can correct the timing in case a delay change should result from a variation in cable temperature due to ice or the proximity of a

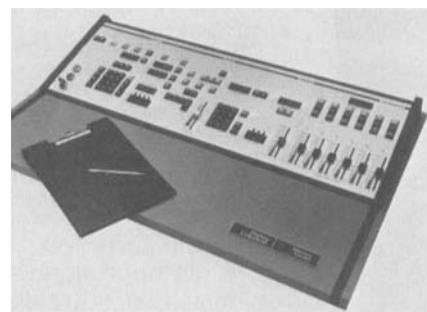
central heating duct. The UN3/9 is priced at \$44.



The Tern pneumatic pedestal, type 741, has been announced by W. Vinten Ltd., Western Way, Bury St. Edmunds, Suffolk, England, and by the United States representative, Listec TV Corp., 35 Cain Dr., Plainview, NY

11803. The Tern pedestal, designed to support compact color broadcast cameras is an easy-to-handle unit weighing 113 kg (250 lb) able to support a camera of the same weight. Designed for stability and maneuverability it has a raised base, making it useful for some outside broadcast applications. The supporting column for the camera is a single-stage ram and tube assembly. A nitrogen storage chamber forms an integral part of the triangular base support providing a low-pressure counterbalance for the elevation assembly. The supporting column has a height range of between 0.81 m (32 in) and 1.34 m (53 in). It is fitted with a brake. Balance is achieved by charging to about 200 lbf/in<sup>2</sup> for maximum lifting capacity. A set of graded trim weights are provided for use when the charged pedestal requires minor rebalancing to compensate for changes in studio temperature. Other features include center ring steering and elevation control, crab or tricycle steering with foot pushbutton changeover, and paired-wheel units with adjustable cable guard. The price is \$2800.

The Petrel pan and tilt head, type 745, has been announced by W. Vinten Ltd., Western Way, Bury St. Edmunds, Suffolk, England, and by the United States representative, Listec TV Corp., 35 Cain Dr., Plainview, NY 11803. Designed for all forms of closed-circuit and educational TV where cameras of up to 100 lb weight are in use, the Petrel design departs from established pan and tilt movements. The tilt movement operates on similar lines to a pantograph, one pivot moving in parallel with another. The angle of tilt is 40° either way from the horizontal. There are no cams or springs. The Petrel employs a standard 3/8-in camera screw or a 1/4-in screw can be supplied if desired. Combined brake and friction adjustments are fitted to both the pan and tilt actions. A knurled adjustment screw is at the rear of the head to enable the operator to balance the camera by a fore and aft adjustment of 101 mm (4 in). An adjustment screw for vertical center of gravity is at the front of the head just below the camera platform so that cameras with a vertical center of gravity between 50 mm and 127 mm (2 in and 5 in) can be correctly balanced. The Petrel is priced at \$575.



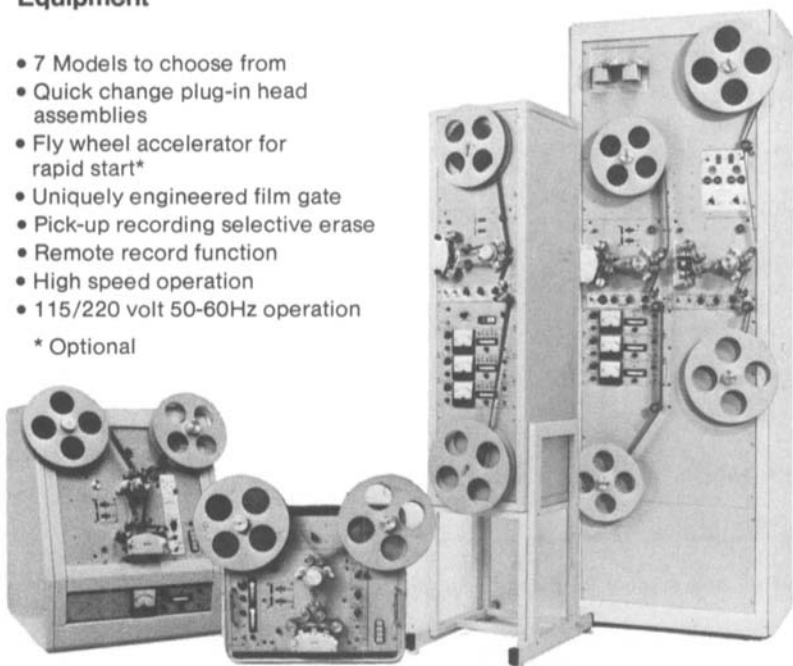
The Colortran Memory Center, a lighting control system incorporating a computer memory, has been announced by Berkey Colortran, Inc., 1015 Chestnut St., Burbank, CA 91502. The system is designed to control over 500 dimmers and 1000 scenes, up to eight simultaneous crossfades and up to 18 submasters in groups of six. Instantaneous manual override of all functions is provided, eliminating the need for matching. The system can store fade times, eliminating setting during playback. Up to six Alpha scenes may be inserted be-

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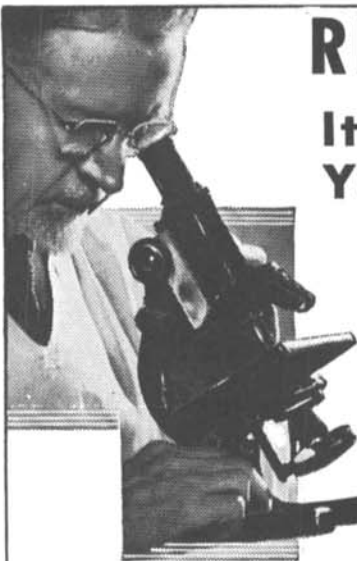
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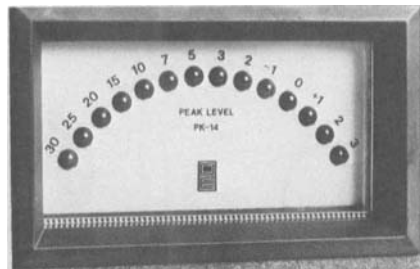
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tween each existing scene. The Memory Center also allows for automatic sequencing of randomly numbered scenes. The system is modular in design. Basic units are scene, fade, dimmer and submaster modules, and status displays. The "brain" is the system control unit (SCU), a modular, microprogrammable controller designed and manufactured for Berkey Colortran by Xerox Data Systems. The SCU features a 3-buss system providing operational response in 350 ns. The SCU can respond to over 2.8 million commands per second. It self-checks to ensure operational integrity of working programs. The Memory Center is designed to interface with any existing make of electronic lighting control system. The Memory Center is priced at about \$50,000. Available optional devices include a digital tape cassette recorder, "floppy disc" recorder, teletype terminal, color television monitor and special scene status displays.

The Gelatran color media line has had added nine new colors, it was announced by Berkey Colortran, 1015 Chestnut St., Burbank, CA 91502. The colors are: flesh pink, french rose, magenta, fire, rosy amber, congo blue, dark blue, alice blue and aqua blue. The addition of the colors brings the Gelatran line to a total of 31 colors available in sheets and rolls. A new booklet of the 31 colors is available upon request from Berkey Colortran. The sheets (20 by 24 in) are priced at \$3.75. Rolls (24 in by 50 ft) are priced at \$100 each.

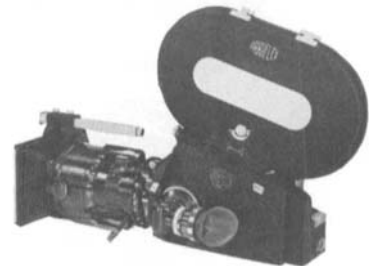


The PK14 and PK16 Peak Program Meters have been announced by Quad/Eight Electronics, 11929 Vose St., North Hollywood, CA 91605. Both PPMs provide visual level indication by means of sequentially lighted LED readouts of true signal level. Depending on the user's preference, a 14 or 16 green and red segmented readout is used to monitor standard VU or peak level program content. The alternate mode operation can be selected by means of a front panel control setting. Features include LED brightness control (light intensity), integration and decay time (fall-back) adjustment, input level scaling, constant current consumption and simple power supply requirements. Integration time specifications conform to European DIN 45406 and ANSI C16.5-1954 for VU characteristics. The PK-14 arc-scale meter is designed to retrofit into existing 3 1/2-in meter installations; the vertical-scale PK-16 is designed for use in updated or custom-designed control consoles. Applications include all phases of record recording, disc cutting and broadcast monitoring. The meters allow increases in dynamic range for recording in addition to benefits of human engineering considerations in the design of the LED indicating meters. Price of the PK14 is \$199. The PK16 is priced at \$189.

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has been announced by CBS Laboratories, High Ridge Rd., Stamford, CT 06905. The 4300 supersedes Model 4000; improvements include more precise control of limit points. Negative and positive peaks are accurately controlled to preset valves. Positive peaks are controlled to 100%, 115% and 125% of the negative peak limit point to provide precise supermodulation capability. The new model has better frequency response ( $\pm 0.5$  dB from 50 Hz to 15,000 Hz); coarse and fine output level set controls for better resolution in setting modulation percentage; easier setup and proof-of-performance procedures; and extended control range of over 15 dB. Other features are the same as those of the 4000, including automatic peak phasing; highest average modulation capability resulting from the Volumax technique of dual attack time/fast release time control; and distortionless limiting — over the operating range of 15 dB harmonic distortion is less than 1%. Price of the Volumax 4300 is about \$765.

**The Music Learning System (MLS)**, an electronic device to aid students of music, has been developed by Peter C. Goldmark, President of Goldmark Communications Corp., One Communications Plaza, Stamford, CT 06904. The MLS is a compact portable tape-cassette system that can be used with any musical instrument or for voice practice. An exclusive four-track tape control and specially designed player-recorder make it possible for a student or musician to play along with recorded musical groups with his own instrument substituting for the instrument in the group to which he is listening. For example

MLS makes it possible for a student practicing the trumpet to take the place of the trumpet player in the original arrangement prerecorded on MLS tape cassettes. Accompanying sheet music designed by Warner Bros. Publications is synchronized with electronic voice signals and beat instructions from the MLS system. (Warner Bros. Publications and Goldmark Communications Corp. are both subsidiaries of Warner Communications Inc.)

The MLS magnetic tape tracks include (1) an ensemble track prerecorded without the instrument the student is studying; (2) soloist track prerecorded with the instrument and without the rest of the group; (3) Index Voice track containing electronic signals, voice instructions and beats coordinated with the MLS sheet music; and (4) the student track for recording alone to compare with professional artists.

To conduct an MLS practice session the student plays the ensemble and soloist tracks together by pushing the appropriate buttons on the MLS player-recorder and listens to the group playing a selection with a professional playing the student's instrument. The student then plays the soloist track to listen to the professional play his particular instrument without accompaniment. He then turns on the ensemble track and "sits in" with the group, substituting his playing for that of the professional.

In addition to its use as an educational device the MLS can be used to play any standard four-track tape cassette for general listening in monoaural or stereo.

The 8640 AM-FM signal generators are now

optionally available with an internal extension band, 512 to 1024 MHz (with over-range to 1100 MHz), it was announced by Hewlett-Packard, 1501 Page Mill Rd., Palo Alto, CA 94304. The new frequency band has become more important because of the recent FCC decision to open up the 806-947 MHz area for a variety of land mobile services. The wide coverage to 1024 MHz also provides signals for work in UHF-TV. When the high band (512-1024 MHz) is included the generators are designated HP 8640A Option 002 (dial readout of frequency) or HP 8640B Option 002 (digital frequency readout). The digital readout version has a built-in 550 MHz frequency counter plus internal synchronization to phase lock the carrier frequency to a crystal reference. Price of HP 8640A (dial readout) with Option 002 is \$4,950. The 8640B (digital readout) with Option 002 is priced at \$6,450. A field modification kit (11698A) is priced at \$750.

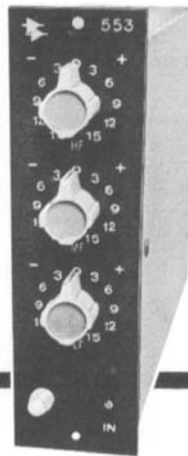


**The Model 9040**, a 1 to 300 MHz spectrum analyzer, has been announced by Kay Elemetrics Corp., 12 Maple Ave., Pine Brook, NJ 07058. The unit has a 72 dB dynamic range. It is available as a self-contained unit with vertical and horizontal outputs for use with any oscilloscope or as a plug-in module for the 9000 series Kay-Scopes. The 1 to 300 MHz tuning range is digitally displayed on the front panel. Continuously variable frequency spans, in eight steps, over its 30 MHz/Div. to 10 KHz/Div. range. Display modes are switchable from 10 dB/Div. to 20 dB/Div. The RF input level is calibrated with the attenuator's 70 dB (in 10 dB steps) of attenuation; inter-medial frequency control is facilitated by 50 dB of variable attenuation. Frequency resolution is switchable through steps of 1 MHz, 60 KHz and 1 KHz. Price of the 9040 is \$2390.

**Gevacolor Negative Film, Type 680**, has been announced by Agfa-Gevaert N.V., Septestraat, B-2510 Mortsel (Antwerp) Belgium (United States representative — Agfa-Gevaert Inc., 275 North St., Teterboro, NJ 07608). A high-speed motion-picture film, Type 680 has automatic color masking balanced for artificial light (3200 K). With other color temperatures an appropriate conversion filter can be used. Processing of Type 680 is identical to that of Eastman Color Negative films Types 5254 and 7254. Exposure Index in artificial light (3200 K) is 100 ASA — 21 DIN; in daylight (6000 K), with CTO 8B or Wratten 85 filters — 64 ASA — 19 DIN.

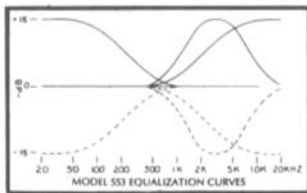
**The Model A61WS series** of six colored windscreens and matching self-adhesive color dots for use with all Shure ball-type microphones has been announced by Shure Brothers Inc., 222 Hartrey Ave., Evanston, IL 60204. The windscreens are color-coded to provide a visual method for individually matching a number of microphones with their related console control knobs. The windscreens are available in blue, red, green, yellow, orange and brown. In use one of six windscreens is placed on a mi-

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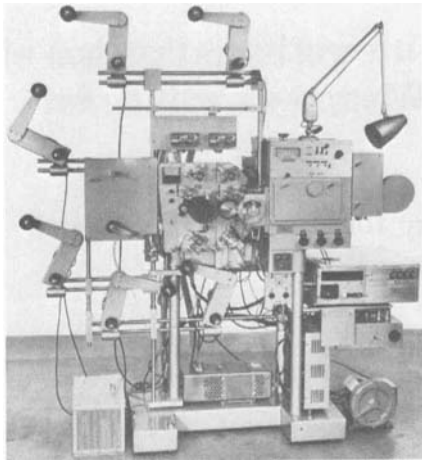
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crophone and a matching color dot is placed on the microphone's input connection or control knob to establish long-distance visual matching between onstage microphone and offstage control. In addition to the color-coding feature the windscreens provide additional breath blast ("pop") and wind noise protection. Price of each windscreen is \$4.95.



The C/Kit designed for use with Bell & Howell Model C Printers for conversion to a high-capacity printer has been announced by the Acme Products Div. of PSC Technology Inc., 1200 Grand Central Ave., Glendale, CA 91201. The kit contains a main drive motor for variable printing speeds and a motor con-

trollor to maintain speeds up to 600 ft/min. A device to provide forward and reverse printing is included in the kit. Other items in the kit include an Addmaster photoelectric reader and a cuing device for either foot and frame counting or frame counting only. Also included is an electronic light valve sensor to stop the machine automatically if the light malfunctions at any point in the printing cycle. Three torque motor assemblies are included to replace flanges. The conversion can be made in four to eight hours. The price is \$15,200.



Two accessories for the 10-speed Mark 610D 8mm projector have been announced by Eumig (U.S.A.) Inc., Lake Success Business Park, 225 Community Dr., Great Neck, NY 11020.

The Daylight Viewer permits film sequences, single frames or an entire reel of movie film to be viewed in full brilliance under bright room light on a 2- by 2½-in groundglass screen placed in front of the projector's lens. The Viewer's housing incorpo-

rates a lens, a reflecting mirror and the groundglass screen. The unit is positioned in front of the projection lens by means of three prongs and a centering pin which fit into the front of the projector's housing. The price is \$13.95.

The Sync Cable for the 610D plugs into a socket on the panel of the projector housing to connect it with the remote control outlet of a tape recorder or tape player. When the selector switch of the projector is moved to the "start" contact position, the tape recorder or player is triggered to start playing the recorded background music or sound accompaniment intended to go with the film screening. When the selector is moved back to the "stop" position, the tape stops playing. The price is \$6.95.

The Mark 610D projector can operate in forward or reverse at 3, 6, 9 and 12 frames/s as well as at the normal 18 frames/s rate and single-frame. It is self-threading and easy to handle.

The V-9 Cinemecanica Projector, designed to supersede the V-4 type, has been announced by Carbons, Inc., Cedar Knolls, NJ 07927. The new projector is available in 6000- and 10,000-ft versions. Features include a closed-oil circulating system, a separate motor with a belt drive, and a simplified design using only seven gears. The V-9 uses the same intermittent as that used in the V-8 projector. A low-speed motor is used for quiet operation.

Carbons, Inc., also announced two new film-handling transports. The dual-type DGB 4 X 4 uses four 13,000-ft reels; the single-type DGB 2 X 4 uses two 13,000-ft reels. In the dual type, one side of the "tower" is utilized for film feeding to the projector while the other side is rewinding. When the film has run through the tower and projector the tower is pivoted 180° so that the rewound film can be threaded for projection.



The Tentrol, an open-loop tape tension-controlling device designed for use for most Ampex professional audio recorders, has been announced by Inovonics, Inc., 1630 Dell Ave., Campbell, CA 95008. The device utilizes a tachometer assembly, attached to the reeling motor, and an electronic assembly to translate reel rotational velocity into a measurement of how much tape is left on the reel. When the tape reel is full and the reel revolving slowly, Tentrol applies an appropriate voltage to the motor for the desired tension in the tape. As the tape is consumed and the supply reel rotates faster the voltage to the reeling motor is reduced so that the same tension can be maintained in the tape. The device is designed so that variations in tension from the beginning to the end of the reel may not exceed  $\pm 1/2$  oz. Tentrol is composed of three items: (1) the electronics assembly; (2) the photoelectric "pickoff" assembly; and (3) the tachometer

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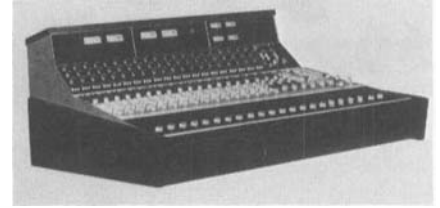
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disc which attaches to the reeling motor. De-  
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Ampex recorders, the price is \$300. For the  
new Ampex AG-440 (*Journal*, p. 548, June  
1974), which is equipped with a tachometer  
assembly for other purposes, the price is \$270.



A new audio control console, designated  
Model 1604, has been announced by Auto-  
mated Processes, Inc., 80 Marcus Dr., Mel-  
ville, NY 11746. The console can accommo-  
date 16 inputs; four echo channels; two fold-  
back circuits; four output channels; four sub-  
masters; four speaker monitoring, slate, tone  
and intercom circuits; and audition and cue  
facilities. For broadcast applications, the 1604  
console has foldback, audition, intercom and  
program interlock features. It may be  
equipped with optional modules offering re-  
mote control of tape machines and turntables  
or remote input pre-selection. All external  
connections are plug-in to permit rapid instal-  
lation. Model 1604 may be tabletop mounted  
or free standing and optional features can be  
added at any time since all are factory pre-  
wired to permit easy field installation. Prices  
begin at \$15,000.

Orrox 1030 DD a new modified gamma ferric  
material for quadruplex videotape and premi-  
um audio tape, first of a series developed for  
specific applications, has been announced by  
Orrox Corp., 2300 Ampex Ave., Opelika, AL  
36801. The new line is the result of a joint re-  
search effort by Orrox and Farbenfabriken  
Bayer AG of West Germany. The develop-  
ment is part of a continuing research and de-  
velopment program of the two companies. The  
Orrox 1030 DD is a fine particle oxide re-  
ported to have a high aspect ratio, ease of dis-  
persion and high deflocculation properties.

The BE460 Dual Cue Controller and the  
BE450 Wide-Range Synchronizer have been  
announced by Electrical Engineering Co. of  
California, Broadcast Products Group, 1441  
E. Chestnut Ave., Sant Ana, CA 92701. Used  
together the two instruments provide auto-  
matic control over two audio or video record-  
ers for fast location of cue points and for auto-  
matic synchronization.

Control is based on edit-code indexing, re-  
corded on one channel of each tape. The edit  
code developed by SMPTE as Draft Ameri-  
can National Standard C98.12, "Time and  
Control Code for Video and Audio Tape for  
525 Line/60 Field Television Systems"  
(*Journal*, p. 125, February 1974) has been  
taken as a basis. (The SMPTE-developed edit  
code is the tape reference indexing used in  
search and synchronization. It is a binary  
electronic signal, recorded on one channel of  
the video or audio tape identifying the hour,  
minute, second and frame number of every  
video frame, in 1/30-s increments of audio tape  
or for NTSC, PAL or SECAM television.)

The BE460 automatically starts two re-  
corders simultaneously or individually in the  
proper directions and stops them at selected

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40 thru 44	26.00	52.00	78.00	5.10	2.30
45 thru 49	40.00	80.00	120.00	7.85	2.30
50 thru 54	61.90	123.80	185.70	12.20	2.30
55 thru 59	101.70	203.40	305.10	18.95	2.30
60 thru 64	150.60	301.20	451.80	27.50	2.30
**65 thru 69	113.65	227.30	340.95	41.65	2.30

\*One rate regardless of number of children. \*\*Member's benefits reduced 50% at age 65.  
The above premiums are based on age at entry and on attained age on renewal.

**eligibility:** All members under age 60 may apply and may enroll spouse and/or children (age 15 days to 23 years). Individual policies will be issued to residents of Maryland; New Jersey, Ohio, Texas, and Wisconsin. Not available to residents of Florida or Canada.

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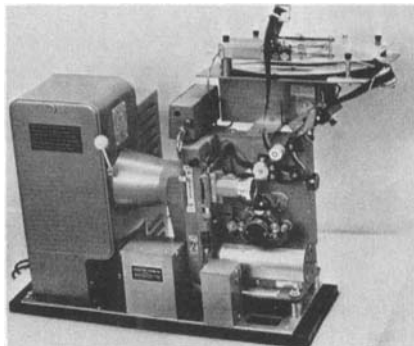
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cue points on their tapes. Panel controls are used to select the desired SMPTE-developed edit code cue points and to start or stop the recorders. Front panel lights indicate when the recorders are in "Cue" mode and a display can show the edit code input from either tape. Price of the BE460 is \$4,850.

The BE450 slaves one magnetic tape to another to bring the slave tape into exact synchronization or precise offset with the master tape. The tapes can be either quad or helical video or multichannel audio. The BE450 compares identical SMPTE-developed edit codes recorded on each of the tapes and adjusts control voltage to the slave VTR or ATR until the tapes are in sync. The BE450 is priced at \$5,500.



**The Pro**, a 16mm projector using xenon lamps has been announced by Bergen Expo Systems, Inc., 1088 Main Ave., Clifton, NJ 07011. The Pro, using the Bergen Eterna continuous cartridge can be used in museums and for exhibits where the room is not dark. With the Eterna cartridge, the projector can run continuously without a projectionist. It has a self-contained motor, breakage switch and adjustable mounting bracket. Rugged heavy-duty models of the Pro range in weight from 128 to 188 lb and in price from \$3,195 to \$3,895. The lightweight, compact powered models weigh less than 95 lb. With a ORC X1000 lamp the price is \$3,995. With an ORC X1600 lamp the price is \$4,495. The Eterna continuous film drive with cartridge, available optionally, is priced at \$495.



**The Cinegraphic Animation Compound** designed especially for the low-budget filmmaker in the industrial, business and educational fields has been announced by Cinegraphic Associates, 308 Colfax Ave., Clifton, NJ 07013. The unit is compact and easy to operate by means of precision rack and pinions, and the table-top may be locked in any position during shooting. It is equipped with scales for accurate calibration of all tracking and peg bar movements. The "universal" peg bar is designed to accept both Acme and Oxberry pegs. It is equipped with three round pegs that will accept Oxberry punched cells and paper. Underlighting is an optional feature made possible by removing the center plate from the

table-top and replacing it with a glass plate and adding the accessory light box. The platen has 1/4-in thick optical quality glass; it locks in either an open or closed position leaving both hands free to handle artwork or camera operations. Field coverage is from 12 field (12 in) down to 2 field (2 in). The compound may be used in either a vertical or horizontal position. It is 17 1/2 in long, 14 in deep, 4 in high and weighs 15 lb. The price is \$650. A number of accessories are available.

**Signal Source 216**, an RGB Color TV Test Pattern Generator, has been announced by Visual Information Institute Inc., Box 33, Xenia, Ohio 45385. The instrument has been designed specifically to provide precise test patterns for evaluation of color and monochrome television devices, including displays, amplifiers, recorders and other video processing equipment. Signal Source 216 develops the three primary color video test signals which generate a full color television display in a three-cable RGB television system. A number of reference test signals for complete television alignment are included — Bar, Dot, H Bar and V Bar for scan linearity, adjustments to measure scanning line width and spot size in two fields per frame or one field only; Dot Grating, a combination of bars and dots for color convergence adjustments; Window, to evaluate low-frequency distortion and transient response; Flat Field, to assess uniformity of brightness and color purity; Gray Scale, to check production of shades of gray, ascending or descending as desired; V Stripe, a line rate square wave to check mid-frequency transient response at APL; H Stripe, a field rate square wave to evaluate low frequency response and tilt; Frame, a frame rate square wave to evaluate "worst case" low frequency response and clamp action; Resolution, adjustable to 1000 TV lines plus black and white reference at scan rates from 525-line to 1029-line; Color Bars to check color reproduction and balance; Color Window, to check color tracking and proper color production at all luminance levels; and Color Pattern to test for proper color production with a black and white visual background reference. Price of Signal Source 216 is \$4,400. A number of accessories including built-in sync generators are available.

**Pyralin II**, a new modified polyimide rigid glass fabric reinforced substrate material suitable for use in multilayer structures, and Pyralux WA/FEP, a new Teflon FEP flexible laminate, have been announced by Du Pont Company, Wilmington, DE 19898. Both materials, with applications in the printed circuit industry, are available in copperclad laminate and cover sheet or bond-ply forms.

Pyralin II offers high temperature resistance demonstrated by low Z-axis dimensional change and elimination of smear on drilling. The Z-axis stability minimizes or eliminates cracked plated-through holes in hot oil reflows, repeated soldering or thermal cycling. It also introduces to the Pyralin line of rigid circuit board substrates a compatible bond-ply adhesive.

Pyralux WA/FEP is designed for use by flexible printed circuit manufacturers who require the low moisture absorption and transmission characteristics of the fluorocarbon film. It is available as a B-staged (partly cured) adhesive coated cover sheet and as a