

new products (and developments)

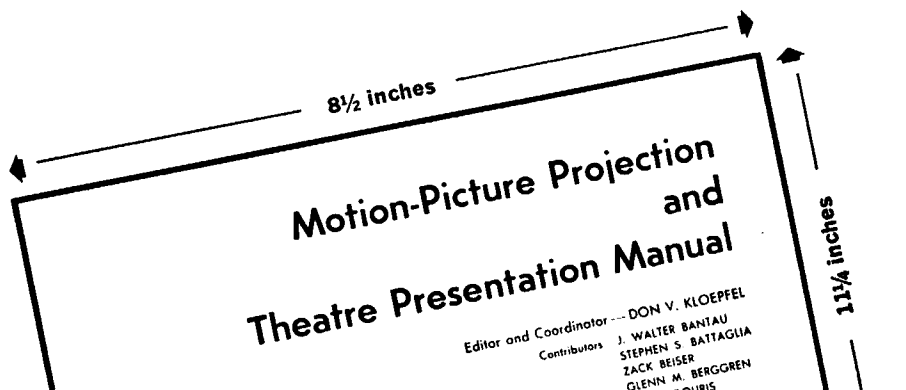
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Further information about these items can be obtained direct from the addresses given. As in the case of technical papers, the Society is not responsible for manufacturers' statements, and publication of these items does not constitute endorsement of the products or services.



A Norelco 3-Plumbicon color TV camera, designated LDH-1 and designed especially for applications in the fields of education, medicine and CATV, has been introduced by Philips Broadcast Equipment Corp., One Philips Parkway, Montvale, NJ 07645. The camera is based on the same design concept as that of the Norelco PC-70 but it has been adapted to meet the needs of nontheatrical broadcasters, including budgetary requirements. It is priced at \$21,425. The LDH accepts either Plumbicon image pickup tubes or (in a lower-priced version) 1-in vidicons. Switchable circuitry is designed into the system to complement the response characteristics of both sensors. Without any wiring modification, different modules can be plugged into the rear of the camera to obtain two basic camera versions. Without wiring modifications different modules can be plugged into the rear of the camera to obtain either RGB or NTSC encoded operation in accordance with the EIA scanning system. The LDH-1 will also be available in the PAL version.

The LDH-1 can be supplied with or without its 7-in viewfinder. The live camera version (with viewfinder) also includes an additional video switching and audio unit which is mounted beneath the viewfinder. Program sound is FM-modulated on a carrier wave and is available at a VHF socket.

The camera uses the Philips prismatic beamsplitting system. To ensure permanent alignment, the assembly comprising the beamsplitter, pickup tubes with their associated deflection coil assemblies and FET preamplifiers is integrated into a single aluminum-alloy cast block and fixed into position. Camera electronics include



Motion-Picture Projection and Theatre Presentation Manual

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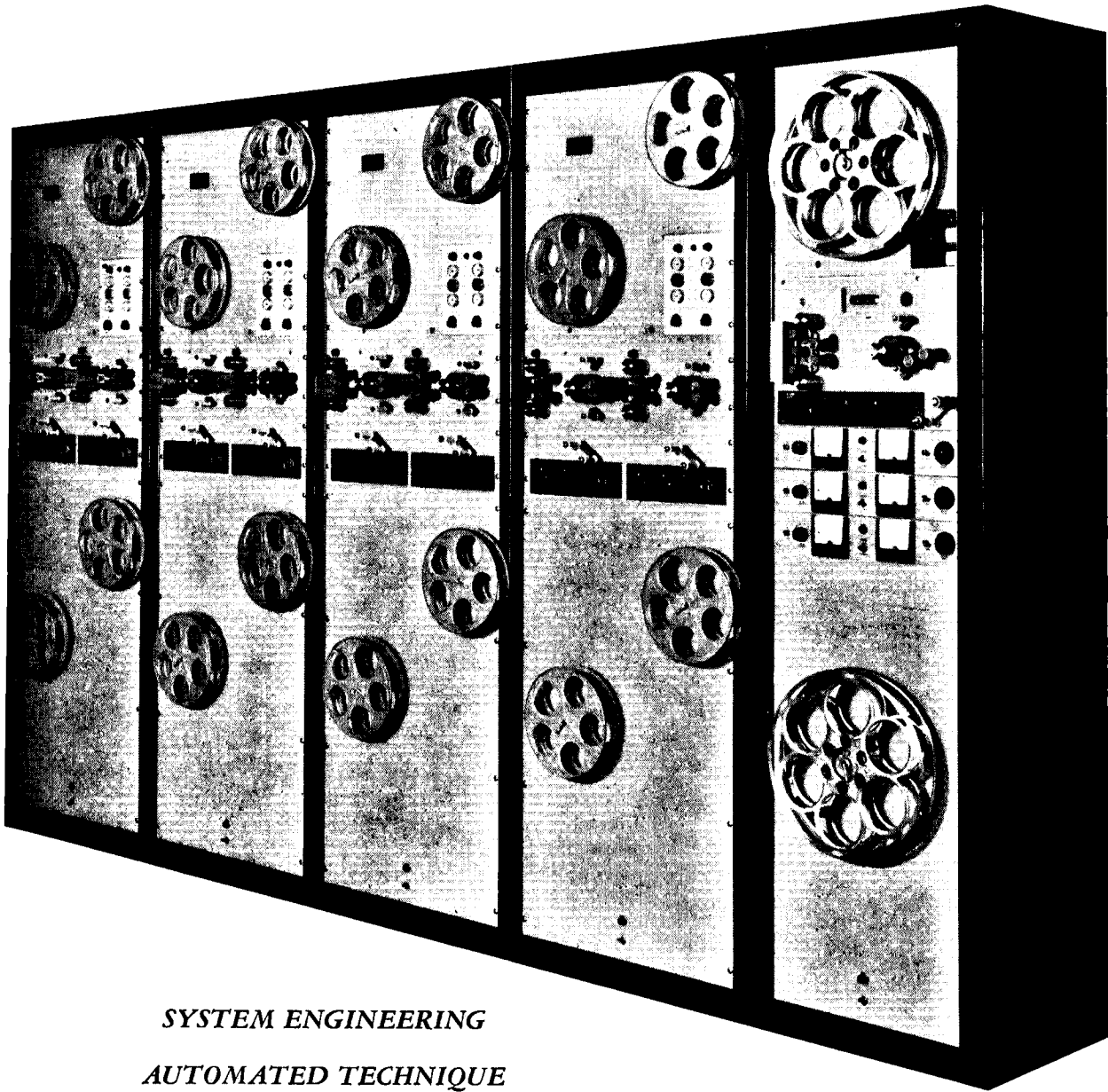


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signal processing, time-base and power supply circuit boards. Camera controls are concentrated on one module which can be taken from the camera and linked to it by an interconnecting cable so that the gain of the green channel, black level, color balance and lens iris can be remotely controlled if desired. A horizontal control correction signal is derived from the linear green signal and added to the three color signals or the luminance signal after gamma correction.

A compact, 24-ft color TV mobile unit designed especially for educational broadcasters has been announced by RCA Corp. The unit contains the RCA TK-44A color camera, camera controls, picture monitor, a high-band video-tape recorder and audio facilities. Microwave equipment can be added to relay live programs back to the home studio. The tape recorder in the mobile unit is the RCA TR-60 color TV tape recorder intended to capture on tape the maximum amount color picture quality provided by the camera. The unit is air-conditioned and makes use of a heavy-duty Dodge chassis and a body custom designed for TV equipment installation and operations.

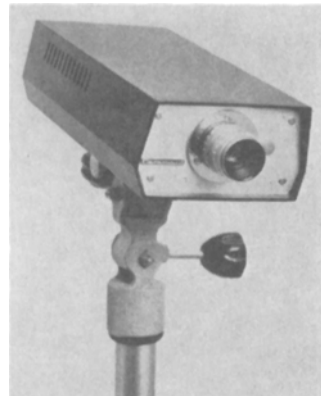
The IVC-90, a 3-vidicon color TV camera with a built-in viewfinder, has been announced by International Video Corp., 675 Almanor Ave., Sunnyvale, CA 94086. The camera is self-contained and utilizes solid-state circuitry for compactness and portability. Features include a permanently

aligned optical system. A built-in integrated sync generator and encoder provides encoded outputs from a single coaxial connector. The camera can also be used with an external sync generator and encoder. The control panel is located below the viewfinder and permits the operator to adjust camera master gain and pedestal and individual R, G and B target and pedestal. The basic camera is supplied with three separate mesh vidicon tubes, 6:1 zoom lens, a mechanical extension of focus, zoom and iris; 50-pin Cannon connector with 25 ft of video cable; and ac power cord. It is priced at \$7,500. The IVC-90 is also available as a film chain camera at a price of \$7,200.

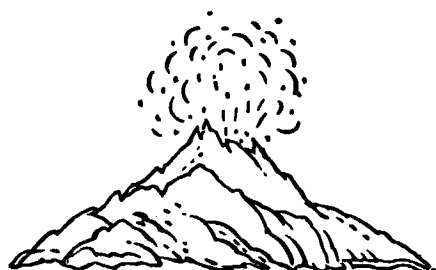
An improved version of the Norelco PC-70 color TV camera, designated the PC-70S, has been announced by Philips Broadcast Equipment Corp., One Philips Parkway, Montvale, NJ 07645. The up-dated camera has new 48 dB SNR FET preamplifiers used to produce noise-free pictures beyond the earlier PC-70 performance in the low light areas. Other improvements include an electronic edge enhancement system which uses a new dynamic-image correlation filter technique to provide sharper pictures with less contributed noise even in the saturated red and blue areas.

A new broadcast TV camera, a monochrome version of the Ampex BC-210, has been announced by Ampex Corp., 401 Broadway, Redwood City, CA 94063. The monochrome camera, Model BC-210M, has

a single Plumbicon tube. It can be converted to meet future color requirements for nontheatrical use. It weighs 35 lb and uses lightweight camera cable less than 2 oz/ft and 0.47 in in diameter. The BC-210M is 8½ in wide, 13½ in high and 20½ in long with viewfinder. It is priced at \$20,000. It can be converted to color for an additional \$35,000. After color conversion the camera has the same dimensions as for monochrome but it weighs 50 lb.



A closed-circuit TV camera, Model ITV-15, has been announced by Advanced Technology and Systems Corp., 1143 Post Rd., Riverside, CT 06878. The camera is designed for continuous duty in closed-circuit applications, such as security-surveillance systems. Features include a C-mount 25mm f/1.9 lens, a 1-in vidicon, interchangeable with an IR-sensitive vidicon,



Special Effects in Motion Pictures

(Some Methods for
Producing Mechanical
Special Effects)

Frank P. Clark

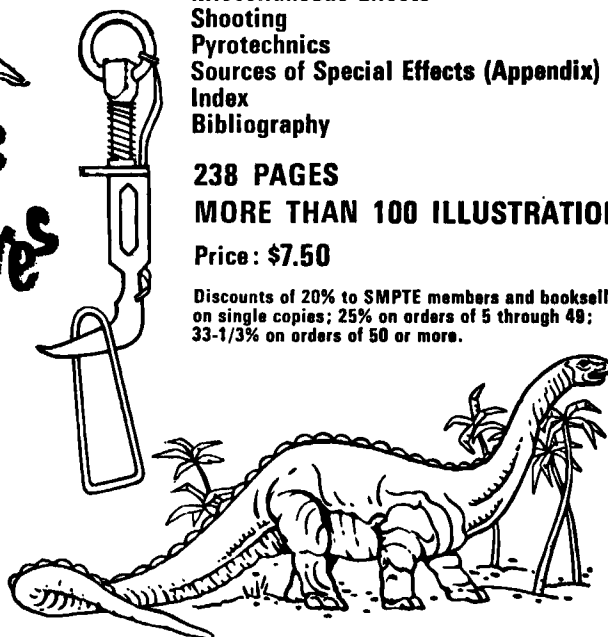
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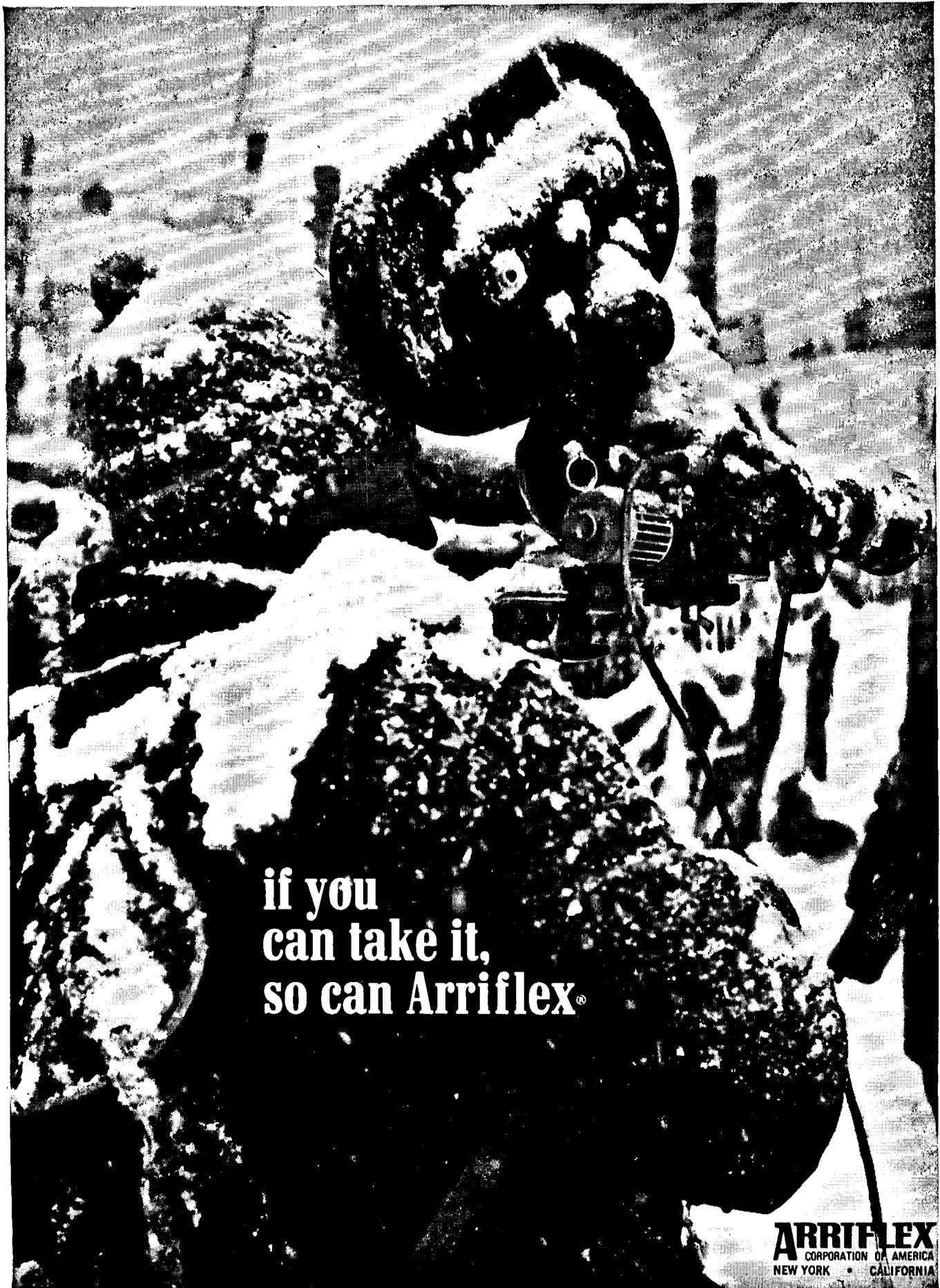
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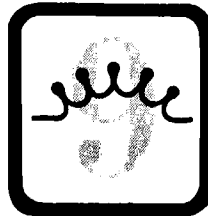
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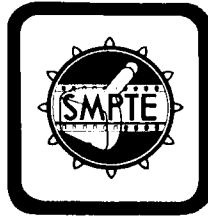
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525-line scan, 500-line resolution, RF and video outputs and switchable positive/negative image reversal. The camera weighs 8 lb and is 5.4 in wide by 12.6 in long by 3.1 in high. It is priced at \$425.

The Amphicolor 1000, an all-solid-state full color TV projector and the Amphicon 270 monochrome projector have been announced by Amphicon Systems, Inc., One Graphic Place, Moonachie, NJ 07074. The Amphicon 1000 has three 6-in cathode-ray tubes and the 270 has one 6-in cathode-ray tube. Both the color and the monochrome projectors are designed for large-screen projection giving 8- to 20-ft-wide pictures. Both projectors are compatible with all EIA video sources. All controls have been designed to operate at unlimited remote distance. Electronics and optical systems are contained in one unit. The Amphicon 1000 is priced at about \$28,500. The 270 is priced at \$7,500.

A new broadcast color monitor utilizing the new 12-in Sony Trinitron one-gun color kinescope has been announced jointly by Television Equipment Associates, Box 1391 Bayville, NY 11709, and World Video, Inc., Box 149, Laurel, MD 20910. The monitor is designed to maintain convergence, even when moved, and to permit simple setup and color matching to other monitors. The monitor weighs 42 lb, has a 12-in diameter faceplate and occupies 12¼ in of rack space.

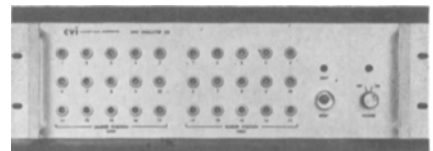
A package of Tone-Control equipment,

especially designed for closed-circuit TV operations, has been introduced by Television Equipment Associates, P.O. Box 1391, Bayville, NY 11709. Use of the equipment permits pan, tilt, zoom, focus and iris controls of a closed-circuit TV camera to be actuated over one twisted pair of wires over a voice telephone. The tone transmitters and receivers can accommodate up to 40 channels over one voice-grade telephone line. The equipment for remote control operation, available separately, include an FSK transmitter and receiver. The transmitter is priced at \$150 and the receiver is priced at \$245. A power supply, required at each transmission and reception point, is priced at \$115. A mounting frame at each transmission and reception point is priced at \$25.

The Model VS600 switcher, a new video switcher system using digital control logic, has been announced by Ampex Corp., 401 Broadway, Redwood City, CA 94063. The switcher uses computer language communication in the form of serially coded digital logic between control panel and electronic rack matrix to reduce interconnecting wires and increase reliability and performance. The VS600 has a building-block design in the matrix and logic which enables utilization of any combination of signal inputs and outputs. Features include an automatic transition dissolve system which provides the operator with push-button control of the mode as well as the speed of program and scene transition. A rack-frame switching matrix employs solid

state circuits and diode transistor logic components which encode and decode the analog signals from control panel switches into the binary format. The rack assembly is wired with printed wire interlocking connectors. Each crosspoint can be inserted in plug-in fashion to permit simplified assembly and modular expansion on a one by one basis. The rack-mounted matrix frames also include control logic, amplifiers, tally control and power supply. The basic VS600, including the remote control panel and matrix rack frames, is about \$30,000.

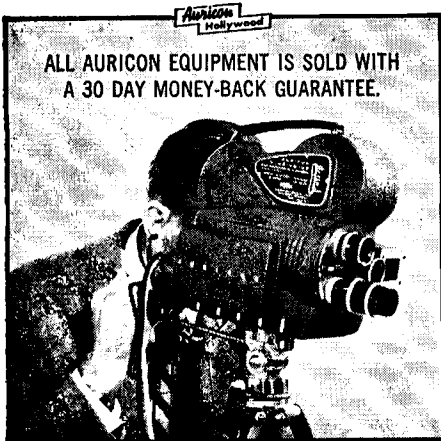
The DR-10, a television disc recording system for immediate and repeated analysis of recorded monochrome pictures, has been announced by Ampex Corp., 401 Broadway, Redwood City, CA 94063. Information recorded on the DR-10 can be erased when analysis is complete or the pictures can be transferred to video tape for permanent storage. The machine continuously records information from a TV camera with the last 7.5 to 80 seconds (depending on disc and head size) always available for replay. Pictures are viewed on a television receiver. As new information is recorded on the disc, old information is erased. The new systems range in price from \$8,000 to \$50,000 and are available in either portable or rack-mounted version. They can be equipped with 12-in diameter discs for up to 60 seconds of continuous recording capacity or 14-in discs for a maximum of 80-second capacity. The portable recorders are 18¼ in wide, 24 in deep and 13 in high and weigh from 80 to 113 lb. The rack-mounted recorders are 19 in wide, 16 in high and 24 in deep. They weigh from 80 to 213 lb.



The CVI Model 122 Video Limit Indicator has been announced by Colorado Video, Inc., P.O. Box 928, Boulder, CO 80302. The instrument is intended to be used with the Model 120 Bar Graph Generator to provide an automatic warning signal whenever any bar tip exceeds pre-established programable high and low limits. The instrument is intended for use on closed-circuit TV systems. The video output signal as viewed on a TV monitor consists of 30 fine vertical lines running the full height of the TV raster. Each of the lines is manually positionable with 15 lines representing negative input signal excursion limits and the other 15 indicating positive input signal excursion limits. Although all lines appear continuously on the TV screen, actual alarm limits are selected by means of external contact closures which may be programed to activate any combination of alarm limits. Active alarm limits are also indicated by a change in character of the vertical marker lines displayed on the TV screen. Model 122 is priced at \$3,500.

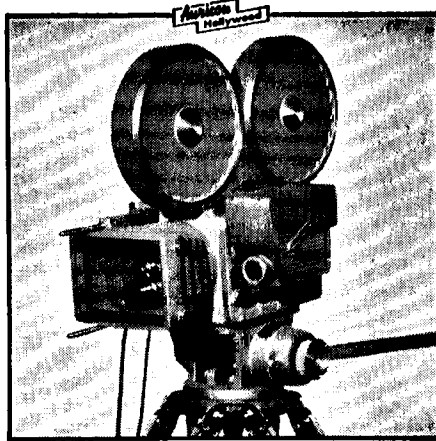
The Hewlett-Packard Model 11138A Impedance Adapter for use with the 675A/676A Network Analyzer has been an-

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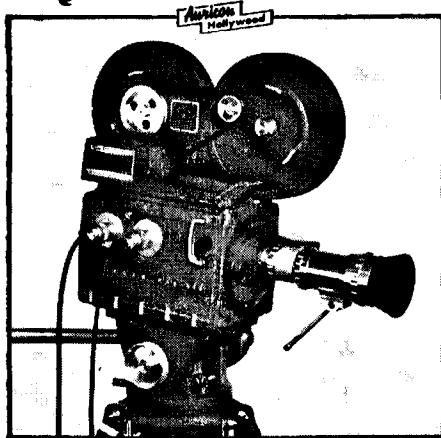
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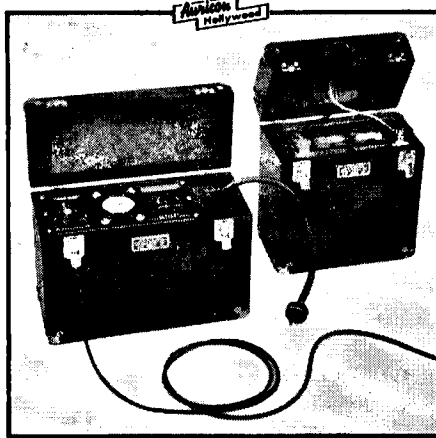
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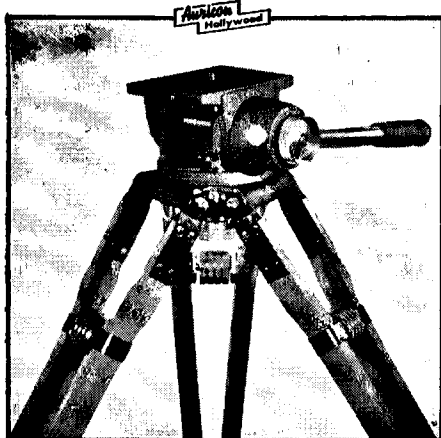
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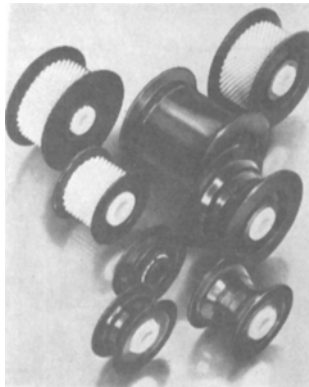
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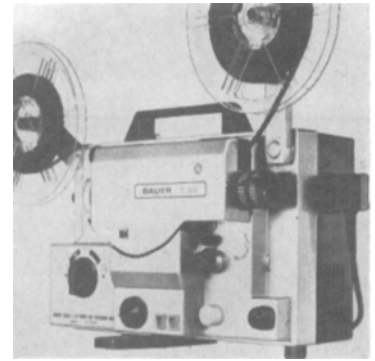
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nounced by Hewlett-Packard, 1501 Page Mill Rd., Palo Alto, CA 94304. The instrument is designed to determine, on a swept-frequency basis, the complex impedance (magnitude and phase) of antennas and cable networks, filter and amplifier inputs and outputs, or any two-terminal device, in a range between 10 kHz and 32 MHz. Measurement results are displayed as plots of impedance magnitude and phase vs frequency on an oscilloscope or x-y recorder. The device to be measured is connected to the Impedance Adapter, which is connected, through attached cables, to the input and output connectors of the Model 676A Tracking Detector. The measurement range of the Impedance Adapter is from 0.3Ω to 3Ω . Impedance magnitude is displayed on a logarithmic scale in units of dB, enabling the user to observe a 10,000:1 impedance variation on one scale with a simultaneous display of phase over a $\pm 90^\circ$ range. Model 11138A Impedance Adapter is priced at \$175.

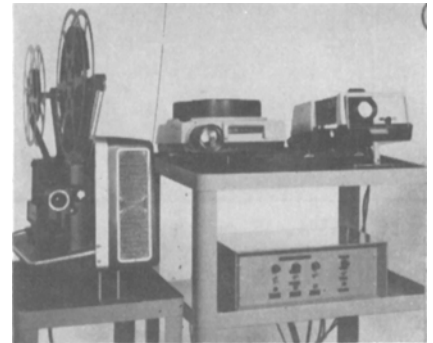


Treise film rollers for laboratory processors have been announced by Treise Engineering, Inc., 1941 First St., San Fernando, CA 91340. The rollers are of ball-bearing design to ensure minimum film pull and to provide smooth processor performance. They are molded of plastic, including the core. The lands in the rollers are angled so that the film "rides" with only the outside edges touching so that the film image does not come in contact with the roller. In addition to standard rollers, "Soft-Touch" rollers with tires made of tiny silicon or rubber knobs are available. The tires are designed to grip the film firmly and move it along smoothly so that it does not receive any abrasion even at high speeds. The rollers are available in sizes ranging from $2\frac{1}{2}$ - to $7\frac{3}{8}$ -in outside diameter, in 8/16mm, 16/35mm and 70mm, and for shaft diameters of $\frac{1}{2}$ in or $\frac{3}{8}$ in.

The O/G Chroma Professional System, a continuous tone electrophotographic system, has been announced by Opto/Graphics, Inc., 1520 Skokie Blvd., Northbrook, IL 60062. The system is designed to produce nonsilver continuous tone prints from any size color or black-and-white transparency without a negative in less than two minutes. The process does not require water, temperature control or corrosive liquids. O/G Chroma paper is panchromatic and can be handled in room light until electrostatically charged. The system is priced at \$385.



The Bauer T22, a single-system sound projector, providing sound projection and semi-automatic threading for all three 8mm formats, has been announced by Allied Impex Corp., a division of AIC Photo, Inc., 168 Glen Cove Rd., Carle Place, NY 11514. The projector is supplied with a Vario Kliptagon f/1.4 zoom lens ranging from 18 to 30mm and a 12-V, 100-W quartz iodine projection lamp. Continuously variable speeds range from 18 to 24 frames/s, forward or reverse, with or without light. There are two inputs, one for microphone and the other for an additional sound source, such as radio or tape recorder. Mixing is automatic when both inputs are used simultaneously. When the microphone is activated, the musical background is automatically reduced to background level. The projector is 12 in long, $18\frac{1}{4}$ in high, $5\frac{3}{4}$ in wide and weighs 23 lb. It is priced at \$379.95.



Media III, a portable multi-media projection system, has been announced by Graflex Division, The Singer Co., 3750 Monroe Ave., Rochester, NY 14603. The system is designed for one-man presentation of film and sound programs in three formats, 16mm, filmstrip and slide. The projector can be controlled remotely from a distance of up to 50 ft. The system includes the Graflex 900 16mm sound motion-picture projector, the Graflex SM-1000 filmstrip projector and Kodak Ektagraphic AV 300 2 by 2 slide projector. The projector control relay unit operates on 24-V dc and contains circuitry and electromechanical relays with master switches to control equipment from the panel display at a remote location or in the projection area. The relay unit contains projector input-output receptacles and fail-safe network with indicator lights to designate what operational mode the projection equipment is in. Media III is priced at \$2,312.50. A console model of Media III is also available at a price of \$3,600.

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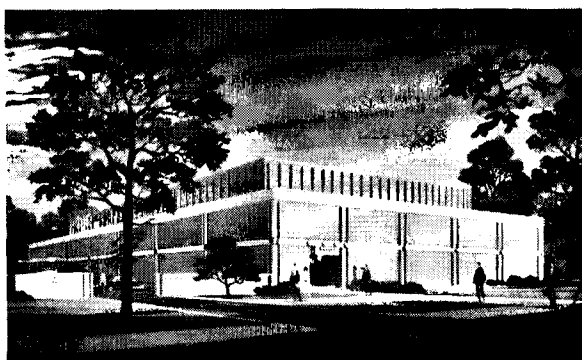
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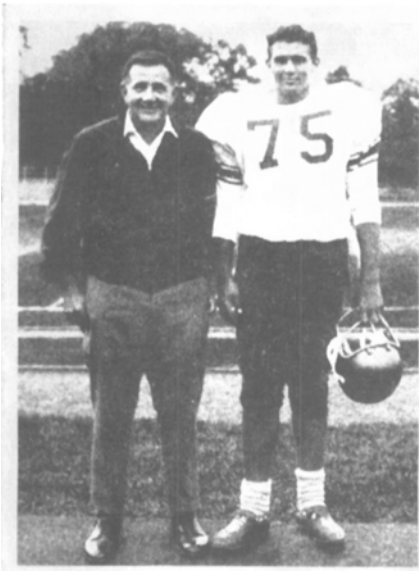
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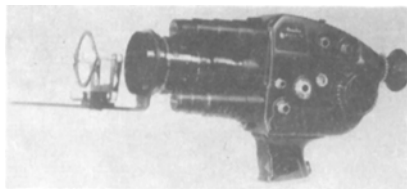
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tape equipment has been announced by Telcel Communications Div., 9600 Aldrich Ave. South, Minneapolis, MN 55420. The new models are available in two basic versions, play only, and record and play, each with or without amplifiers. Model 230-QQ is a tape transport without amplifiers for playback only of in-line 4-channel and standard stereo tapes. It is priced at \$550. With 4-channel play-back preamplifiers, Model 230-QQ is priced at \$670. Model 230-QQRM is a record and playback transport without amplifiers for in-line 4-channel and standard stereo tapes. It is priced at \$626. With 4-channel record and play-back preamplifier the price is \$1,544.

Two new Selectroslide Projectors, Models SLR-1200A and SLD-1200A, each using a 1200-W tungsten-halogen lamp, have been announced by Spindler & Sauppe Inc., 1329 Grand Central Ave., Glendale, CA 91201. Both models are available either with or without the S&S Model 766 Ultra-bright 3,000-lm High Light Output System. Both models accept the S7S Dynamic Dissolve Control System without requiring special modification. Other features include an electrically operated built-in barndoor shutter and a redesigned centralized control cluster. The reduced dimensions of the tungsten-halogen lamp allow more space between the lamp and the optics with increased cooling to the aspheric condenser lens. The new slide projectors have newly engineered circuitry controlling the slide advance mechanism to filter out accidental short-pulse and double-pulse signals from a projectionist. Model SLR-1200A has a 48-slide capacity. It is priced at \$675. Model SLD-1200A is a dual-drum model with a 96-slide capacity. It is priced at \$924.



The Slide/Title Holder, a new "macro-stage" assembly for the Beaulieu 4008ZM super 8 camera (*Journal*, p. 920, Oct. 1969), has been announced by Cinema Beaulieu, Div. of Herculite Corp., 14225 Ventura Blvd., Sherman Oaks, CA 91403. The Slide/Title Holder assembly is attached to the sun-shade filter holder on front of the 4008ZM Angenieux zoom lens. The entire assembly can be rotated 360° around the lens for certain special effects. It accepts regular slides as well as title cards and other types of opaque or translucent art materials. The Slide/Title Holder is supplied with a special plastic box which allows the user to place live insects and other small objects in front of the lens where they remain within the field of view and in focus. Insects, such as an ant, a fly or a bee can move freely within the plastic box. The Slide/Title Holder is priced at \$45.

The Mitee Grip, a device designed to support many types of lighting instruments and accessories as well as cameras, has been announced by Berkey-ColorTran,

Inc., 1015 Chestnut St., Burbank, CA 91502. The Mitee Grip is designed to grip any surface securely. It is easy to adjust and incorporates quick-locking devices. Features include a 4-way bracket consisting of three male studs for the mounting of lighting fixtures and a 1/4-in 20 threaded male stud for camera mounting. The price is \$18.



The 1540 Strobolume electronic stroboscope has been announced by General Radio Co., 300 Baker Ave., West Concord, MA 01781. The unit produces high-intensity, short-duration flashes of light. A wide-beam angle makes possible stroboscopic viewing and speed measurement of large equipments. The beam pattern of the Strobolume at 10 ft is a 7- by 13-ft rectangle. The lamp assembly can be adjusted to produce a narrow 3- by 13-ft strip of light. Construction of the Strobolume is modular. The power supply, control unit and lamp assembly are separated and cable-connected for applications requiring remote operation. Prices for the Strobolume begin at \$775.

A new battery-operated transient amplitude detector capable of reproducing a 30-ns width pulse to 90% amplitude accuracy has been announced by Electro-Metrics Corp., a subsidiary of Fairchild Camera and Instrument Corp., 88 Church St., Amsterdam, NY 12011. The unit, designated Model TAD-66, makes use of a high-impedance differential probe for handling input signals from 0.001 V to 25 V. Four peak detectors, operating in parallel, sample and hold the input signal after amplification. Two operate on the normal input and on the input inverted to assure fully redundant peak detection. The outputs of each pair of peak detectors are fed to amplitude comparators. Each comparator sees only the highest signal level that was fed to the detectors. A timing and sampling system built into the instrument alternately samples the outputs of the comparators to provide a pulse train, each pulse representing the highest transient seen during the sample time of the peak detectors. The detectors are automatically dumped upon being sampled. The instrument is priced at \$5,000.