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Two new color TV cameras designed for closed-circuit and CATV use have been announced by Magnavox Video Systems, 2829 Maricopa St., Torrance, CA 90503. Designated Series 200 and Series 300, both cameras are 17½ in long, 6½ in wide, 6½ in high and weigh 20½ lb. Series 200 is a self-contained, single-tube camera and Series 300 is a studio-type driven version with a common EIA sync generator. Both cameras are of single vidicon design and have two operational controls (pedestal and electrical focus). Both cameras have a built-in color bar generator to aid in setting up the color displays and a full EIA synchronizing generator. Series 200 can be operated locally or from an optional control panel up to 1000 ft away. In the Series 300 system the camera control unit contains the common sync generator to drive from one to three cameras. Both cameras are designed so that a variety of "C" mount lenses can be used interchangeably. Prices begin with the Series 200 camera at \$4,500.



A new color camera for closed-circuit TV has been announced by Ampex Corp., 401 Broadway, Redwood City, CA 94063. The camera, called Model CC-500 uses three separate mesh vidicons and a dichroic-mirror optical system. It delivers an NTSC color encoded signal. Features include a 10:1 zoom lens and a camera control unit. It has a 5-in removable viewfinder. The camera is designed for single or multiple camera studio use or it can be used as a color source in mobile applica-



tions. A color bar generator in the camera control unit permits quick adjustment of color monitors. Built-in color temperature compensation filters adjust for variations in color temperature due to changes in lighting conditions. The camera head is 16.9 in high, 7.5 in wide and 13 in deep. It weighs 36.5 lb. The camera control unit is 7.2 by 17.5 by 13 in and weighs 28.6. The viewfinder weighs 7.7 lb. The camera is priced at about \$12,000.

The Minicon Model 201, a new self-contained miniature TV camera, has been announced by Sierra Scientific Corp., 2189 Leghorn St., Mountain View, CA 94040. The camera is 11 in long, 6 in wide, 6½ in high and weighs 12 lb. It offers a wide choice of line rates ranging from 525 to 1023 scan lines, EIA, RS 330 sync. The camera can operate with scene illumination as low as 1 fc. It can use all makes of 1-in vidicons including the silicon diode types. Other features include automatic compensation for vidicon dark current shift and 18-MHz bandwidth with 12-MHz internal filter. It is priced at \$1,875.

The Mark III Automatic Image Enhancer, an electronic device designed to increase automatically the sharpness and detail of color images on home television sets has been announced by CBS Laboratories, High Ridge Rd., Stamford, CT 06905. The device, which incorporates solid-state technology, examines coded color signals as they are transmitted for viewing and automatically adjusts vertical and horizontal picture details to eliminate color softness. Image enhancement is accomplished by taking three successive lines of a TV picture and noting the differences between the middle and the top and bottom lines. The differences are then added to the middle line to provide a higher contrast image on the screen. The new technique can also be used for black-and-white broadcasting. The new Image Enhancer is priced at under \$4,000.

The Video Isolation Choke, Model 160, a device that can be inserted at any point of a transmission line to reduce its susceptibility to hum, crosstalk or other stray pickup, has been announced by Deerfield Laboratory, P.O. Box 1300, Los Altos, CA 94022. Isolation is the ratio of voltage produced at a signal port to that applied from shield to shield. All ports are terminated and the shield-to-shield source is grounded at the load. Both isolation and maximum allowable noise voltage increase linearly with frequency for the choke. The Video Isolation Choke is priced at \$75 with a reduction in quantities of 10 or more.

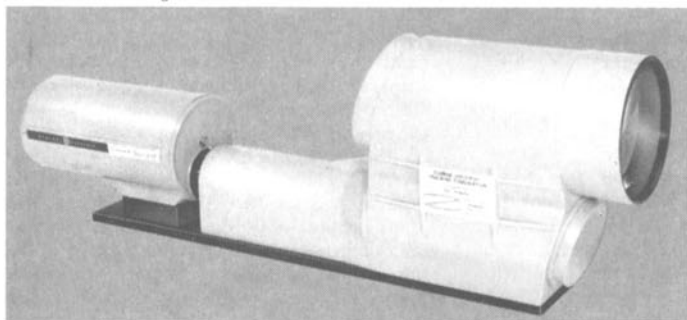


The EIA-J Format videotape recorder, Model 6410, has been announced by Craig Corp., Education and Industrial Div.,

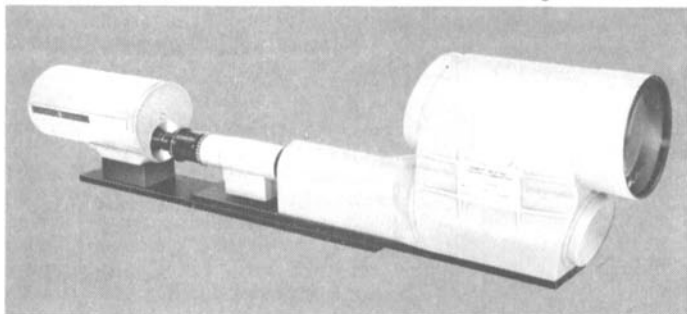
the zoomar universal tracking combination

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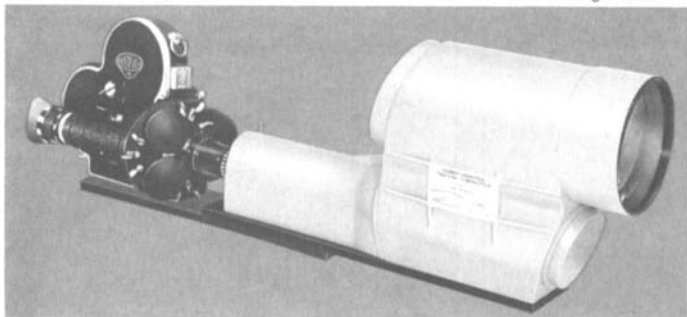
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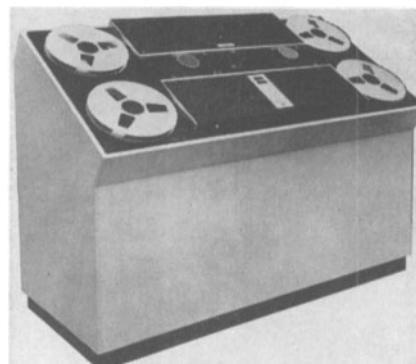
921 West Artesia Blvd., Compton, CA 90220. The recorder incorporates the Craig Rotary Transformer Head Assembly designed to eliminate use of slip rings and brushes as well as other potential noise sources. Features include the ability to record and play back to and from the camera or monitor. The machine has a motor-driven rewind, audio dub, stop action, built-in microphone and ferrite heads. It can operate on batteries or on ac. The recorder provides 30 min of uninterrupted recording time on $\frac{1}{2}$ -in tape. The camera weighs 5 lb and has an $f/1.8$, 12.5 to 50mm zoom lens. The recorder weighs 16.7 lb. It provides instant, built-in replay through the camera with more than 300 horizontal lines of resolution. The price is \$1,495.

The 175 Series Videotape, a 2-in videotape developed for use with high-band color four-head broadcast videotape recorders, has been announced by Ampex Corp., 401 Broadway, Redwood City, CA 94063. A new binder formula incorporating smaller oxide particles than previous tapes and an advanced tape coating process are reported to result in reduced head wear and increased head and tape life. The back coating is a thin layer of carbon black in a binder system which acts as a shield to reduce the electrostatic attraction of dust and particles that otherwise may cause dropouts and picture degradation. The new tape is available in half-hour, hour and $1\frac{1}{2}$ -hour versions. A one-hour reel is priced at \$213.

The Video Processing Amplifier 6000 series designed primarily for color and helical scan systems where distortion is encountered has been announced by Dynasciences Corp., Township Line Rd., Blue Bell, PA 19422. Model 6100 Processing Amplifier contains circuitry which restores the sync pulses on the input video to the correct shape and level. This model can be used as a self-contained unit. Internally generated blanking is also provided and a choice of inserting a new burst or gating through the original burst is available. The Model 6500 sync generator provides the system with new sync pulses, blanking and burst. However the sync pulses, blanking and burst may be regenerated by the Model 6100 Processing Amplifier, since it contains circuitry which restores the sync pulses on the input video to the correct shape and level. The complete system includes the Model 6100 Processing Amplifier, Model 6500 Sync Generator and genlock and power supply units. The system can also be used for monochrome or quadruplex systems. The price range is up to \$2700.

An automatic indoor scanner for closed-circuit TV use in security operations has been announced by Vicon Industries Inc., 130 Central Ave., Farmingdale, NY 11735. The scanner weighs $4\frac{1}{2}$ lb and can support a camera weighing up to 20 lb. It has a drag cup design which maintains a smooth, uninterrupted sweep. The scan-


ner is priced at \$125 and the remote control with automatic and left-right manual control is priced at \$50.



The CVS Videotape Duplicator using high-speed thermal transfer techniques will be commercially available in December, it was announced by Consolidated Video Systems, 3393 De La Cruz Blvd., Santa Clara, CA 95050. The firm was formed in January 1971 to develop this equipment. The duplicator is capable of high-speed transfer of video, audio and control tracks in the same process with little or no loss of signal. High-energy chromium dioxide tape is used for the duplicates. The Curie point properties of the tape make the thermal transfer process possible. Since chromium dioxide has a higher packing density than other tapes, slower record/playback speeds are possible. The thermal contact duplication process was described by William B. Hendershot III in a paper in the March 1971 issue of the *Journal* ("Thermal Contact Duplication of Videotape").

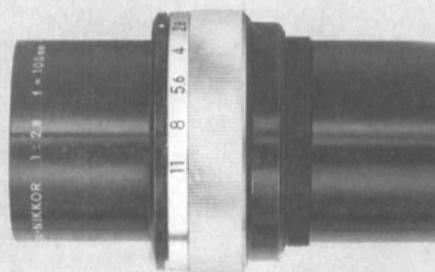
Nikon 100mm f2.8 Repro-Nikkor lens

This special lens was designed primarily for use on animation cameras such as Oxberry and Acme. The 160 lines per millimeter resolution effects a noticeable improvement in image quality.

Adaptation is relatively simple—design work has already been done on an Oxberry adapter. For details, call or write Nikon, Inc./PTP Inc., Garden City, N.Y. 11530. (516) 248-5200. Telex 125855. Subsidiary of Ehrenreich Photo-Optical Industries, Inc. 

Focal length	100mm
Aperture range	f2.8-22
Optimum magnification	1.5:1
Magnification range	2.5x-1x (70mm-35mm 35mm-35mm 35mm-16mm 16mm-16mm)
Overall working distance	Approximately 400mm
Distortion	+0.1% on 50mm
Color correction	Apochromatic
Resolution	160 lines/mm
Price	\$1150

Price subject to change without notice.



Off-the-shelf special optics by Nikon

A new crystal modification for the Auricon camera providing a crystal-controlled motor has been announced by Alan Gordon Enterprises Inc., 1430 N. Cahuenga Blvd., Hollywood, CA 90028. The modification includes a lightweight, rechargeable NiCad battery. It provides for double system filming without sync cables and can run six 400-ft rolls of film on one battery. The modification is reported to reduce the weight of the total camera package by as much as 10 lb. The price is \$1,250.



The Diegel Zoom Lens Motor, an electronically-controlled power zoom capable of actuating an Angenieux 12 to 120mm lens throughout its complete zoom range at a speed ranging from 1 s to 45 s, has been announced by Canyon Films, Inc., 834 N. Seventh Ave., Phoenix, AZ 85007. The zoom range can be preset and low and high speeds can be preselected and repeated by a single operation. It is also designed to

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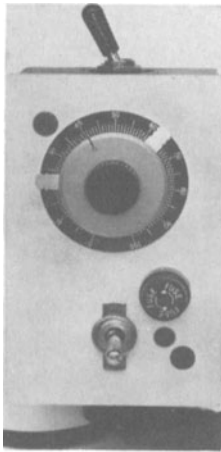


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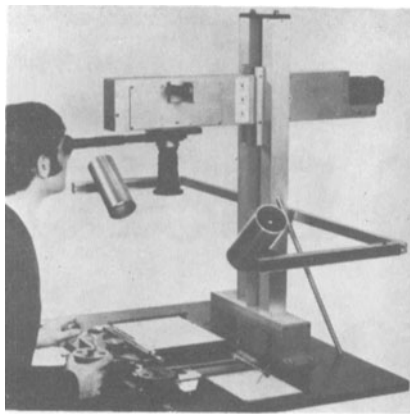
Jack Lemmon
National Christmas Seal Chairman





actuate the zoom from zero to preset maximum speeds in both directions. A servo system which feeds back a signal from a tachometer integral with the motor and integrated circuit amplifier is designed to provide jerk-free zooms. The system can be adapted to various camera or lens systems. The motor was designed for Canyon by Herbert Diegel of ABC Laboratories of Phoenix. The price of \$585 includes a control box, the zoom motor with clamp bracket and a coiled cable.

The Minamation Stand, consisting of the stand proper, a 16mm camera and a compound table-top has been designed by John Oxberry, President of Ox Products, Inc., 180 E. Prospect Ave., Mamaroneck,



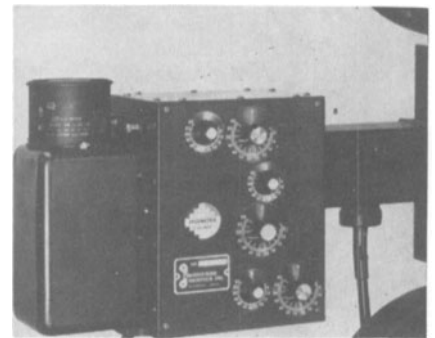
NY 10543. (Ox Products was established after Mr. Oxberry had retired from John Oxberry Corp.) Available in three models, Model A consists of a 16mm camera with viewfinder, drive motor and automatic focus zoom lens; a compound table-top with platen and pantograph; and a baseboard with column and top lighting assemblies. The equipment can be operated on a desk or a table.

The camera contains the film movement with carrier and locating pin for accurate registration, film sprocket, automatic take-ups and frame counter. The drive motor has stop-motion/continuous and forward/reverse exposure controls. Film pressure is kept to a minimum. Horizontal positioning is maintained by a spring-loaded edge guide which matches all 16mm projectors. Flickerless operation at live action speed (1440 frames/min), and easy changing

from continuous to stop-motion is accomplished by a hysteresis-synchronous motor connected through a friction drive to a half-speed stop-motion mechanism.

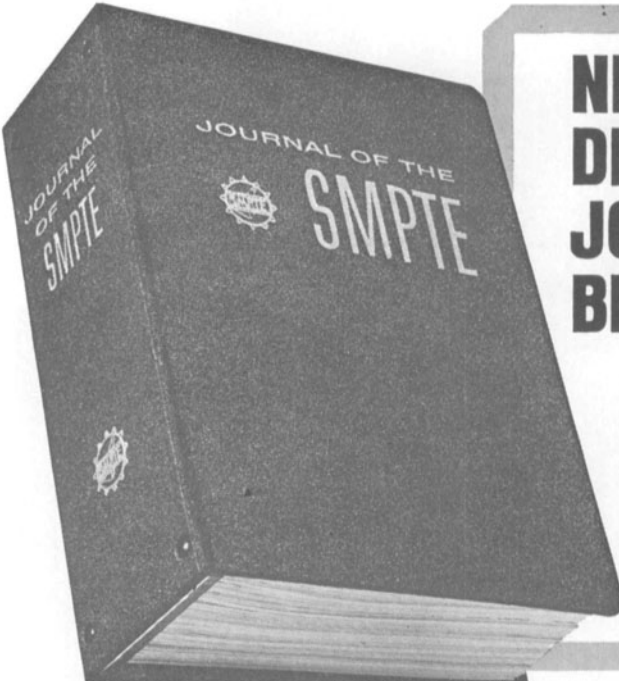
The table-top is 10½ by 8½ in and is provided with two sets of pegs at a 9-in field. Top pegs are fixed while the bottom pegs are movable on a geared track with a maximum travel of 5 in either side of center. The compound movement has two types of control. The first type consists of an adequate set of gears for traditional stop-frame work. The second type of control is accomplished hydraulically by displacement of a viscous fluid for real time, hand-controlled cel displacement. The table can be rotated 360° and locked in any position. It can be positioned 90° for scroll work which can pass underneath the columns. Artwork is held flat by a ¼-in 9-field glass platen which can be removed for larger copy. The column consists of two 2-in-square, ½-in-thick extruded aluminum tubing. The equipment operates at 115 V ac, 5 A:

Model A is priced at \$5,680. Model B has the same features as Model A plus a dissolving mechanism. It is priced at \$5,975; Model C has the features of A and B plus a motorized control for the dissolve and zoom. It is priced at \$6,280.



A manually-operated additive color lamphouse for motion-picture film step printers has been announced by Producers Service Corp., 1200 Grand Central Ave., Glendale, CA 91201. Designated the PSC/Opcornatrix, it is designed for use with Acme printers and can be adapted to other makes. It can be installed on the Acme printer in the laboratory, replacing the subtractive lamphouse. Models for 16mm/35mm are available and models for all other formats in optical printing as well as for continuous printing are available on special order. The unit provides for independent control of the three color primaries. It provides for 120 steps of 0.025 log exposure in each primary with separate control of trims and lights. The light source is a pre-focused 650-W tungsten-halogen lamp. The lamphouse operates normally at 100 V. It is cooled by an axial-flow fan. The price is about \$6,000. The lamphouse is also available on a lease basis.

Insertion type flowmeters designed to give linear accuracy independent of pressure over a wide flow range have been announced by Electronic Flo-Meters, Inc., 12115 Self Plaza, Dallas, TX 75218. Designated the Model V series, the flowmeters have been designed in various sizes and for use in various conditions including high pressure, low pressure and even under



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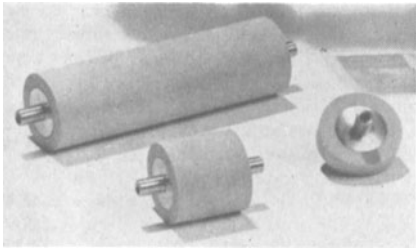
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vacuum conditions. The V series of insertion meters can be used in all pipes three or more inches in diameter. The device can be calibrated to indicate the rate of flow or total flow through the pipes. Price range is from \$400 to \$1,155.



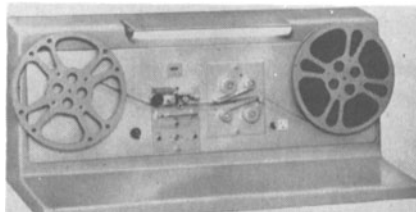
Feed and align rollers consisting of molded forms of conductive elastomer are produced by Tecknit, 129 Dermody St., Cranford, NJ 07016. The material is highly conductive with a volume resistivity below 0.01Ω/cm. The rollers are used on diazo roll film duplicators and similar film copying devices. An electrostatic charge is applied to the conductive rollers which pulls the film together and creates a more intimate contact for distortion-free duplication. The rollers are designed for use with either polyester or acetate base film with thicknesses from 2.0 mil to 7.5 mil and widths from 16mm to 105mm. The rollers provide conductivity at duplication speed from 15 ft/min to 150 ft/min. Prices range from \$30 to \$35 with discounts for large quantities.

The Argenta Five, a system designed to recover silver from small quantities of photographic solution, has been announced by Future Systems, Inc., P.O. Box 1820, Los Gatos, CA 95030. The unit is 11 in wide, 14 in deep and 12 in high and weighs 20 lb. It can recover silver at a rate of 0.6 troy oz per hour. It has four non-corrosive 5-in legs that can be set into a fixer tray or a 5-gal FSI tank. The unit operates from a 110-V ac, 60-Hz, 1-A power source. A reusable cathode can hold up to 75 troy oz of silver. The Argenta Five is priced at \$295.

A high-intensity xenon projection lamp-house designed to increase light output from any 35mm, 16mm or slide projector has been announced by Optical Radiation Corp., 2626 South Peck Rd., Monrovia, CA 91016. The lamp-house, called Model 1000, is intended primarily for use in small theaters with screen sizes up to 28 ft in width. The system operates from a 115 V ac power source and the power supply is integrally contained within the lamp-house. The lamp-house uses a high-intensity, ozone-free xenon lamp for projection. The lamp is shipped in its own shipping/installation tool to conform to the latest safety standards of xenon lamps. The lamp is mounted in front of an aspheric reflector designed to maintain a screen brightness distribution of from 80 to 85% at SMPTE standard screen brightness. A built-in current regulator and filter are incorporated to provide constant screen brightness without flicker. The system has a 9-in optical centerline. Other features include a current adjust control for adjusting light intensity, an ammeter for monitoring the current, an elapsed time indicator, for indicating total

hours of system operation, and a manual light douser for extinguishing the light from the lamphouse to the projector without turning the lamp off. In the 35mm projection version the lamphouse is priced at \$1,820; for 16mm projection the price is \$1,790.

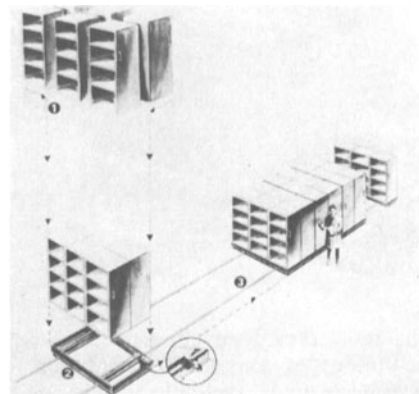
The Agent, Model Seventy-07, a new super-8 sound projector has been announced by the Industrial Products Div. of Fairchild Camera & Instrument Corp., 75 Mall Dr., Commack, NY 11725. The unit, packaged to the size and appearance of an attache case, provides both rear-screen and front projection. The film cartridge is an endless loop model and delivers up to 20 min (400 ft) of super-8 film. The unit weighs 17 lb. It is priced at \$395.



The Retectron Series "E" film inspection machine has been announced by Research Technology Inc., 8260 N. Elmwood Ave., Skokie, IL 60076. The machine inspects at up to 800 ft/min and rewinds at up to 1500 ft/min. It can accommodate up to a 2300-ft reel of 16mm film. The film is cleaned and polished as it is inspected.

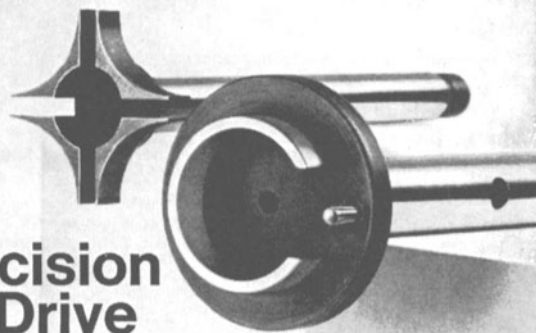
Features include contactless defect detection, plug-in module construction and automatic brake control. It is priced under \$2,500.

The Groupshow Mini, a folding rear-projection screen measuring 8 by 8 in has been announced by Hudson Photographic Industries, Inc., 2 South Buckhout St., Irvington-on-Hudson, NY 10533. It can be opened like a notebook and aligned with any projector on a table or desk. Features include a black HPI screen and a built-in folding hood to eliminate room light wash-out of image quality. A built-in thin, flat mirror is incorporated to correct image reversal. The Groupshow Mini is priced at \$19.



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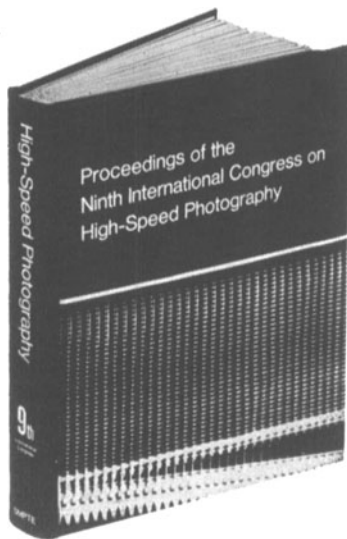
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holography and image-dissection cameras, lasers,

rotating mirrors and streak cameras, light sources and x-rays, and high-speed photographic applications.

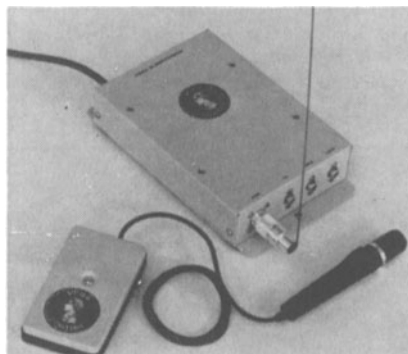
In addition, a Current Bibliography on High-Speed Photography, prepared by the Research staff of Eastman Kodak Company especially for the *Proceedings*, will prove valuable as a research tool. A report on the Congress, a list of delegates, and an index of authors and discussers complete the volume.

The book comprises 605 pages, 8½ x 11 inches, in hardbound edition. The price is \$40.00 each, with discounts to SMPTE members, libraries, and booksellers: 1 to 4 copies 20%; 5 to 49 copies 25%; 50 or more 33⅓%.

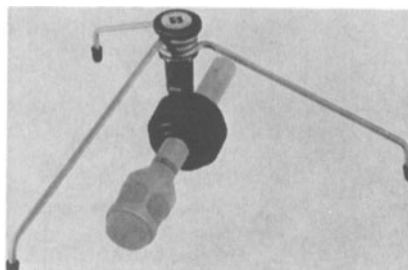
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developed by Dexion Inc., Woodside, NY 11377. The system consists of three basic components — (1) racks, (2) special heavy-duty mobile bases capable of supporting over 8,000 lb of material and (3) one-inch square steel tracks upon which racks and bases glide easily. The racks can glide back and forth allowing a single aisle to appear wherever it is needed, thus eliminating the need for an access aisle after every other rack.

The AV Model 71/72 system which includes a lavalier-type microphone with an attached high-band radio transmitter and an ac-powered receiver has been announced by 3M/Wollensak, St. Paul, MN 55101. The Model 71 transmitter, which is powered by a 9-V transistor battery, can be concealed in a pocket or clipped to the user's clothing. The wire connecting the transmitter and the 200-Ω microphone also serves as the antenna. The book-size Model 72 receiver is equipped with an antenna, a three-wire grounded power cord and standard phone jacks for the outputs to the low- and high-level microphone and line level auxiliary inputs of the public address system, tape recorder or mixer. It can be mounted permanently to connect with a public address system or used portably in different locations. The price is \$695.95.



The Vega Orator, a wireless microphone system, has been announced by Vega Electronics, 3000 West Warner, Santa Anna, CA 92704. It consists of a battery-powered microphone/transmitter and a small receiver. The receiver has three outputs for compatibility with any public address system, tape recorder or microphone mixer. The carrier frequency is in the VHF high-band range (160 MHz) rather than the low band (30 MHz) to prevent unwanted interference and noise. The microphone weighs 3 oz and can be used as a lavalier or hand-carried. The transmitter weighs 8 oz. The system is priced at \$698.50.



The Shure Models S53P and S55P Distant Pickup Microphone Isolation Stands, de-

signed to eliminate the "hollow" sound quality often associated with attempts at distant sound pickup, have been announced by Shure Brothers, Inc., 222 Hartrey Ave., Evanston, IL 60204. The hollow sounds are caused by direct sound waves and reflected sound waves canceling each other. This phenomenon can be counteracted by locating the microphone as close to the floor as possible without touching it. In this way the two paths of direct and reflected waves coincide to deliver the same natural quality of sound associated with close microphone pickup. The two new stands suspend a microphone about ¼ in above floor level. Model S53P is designed for the SM53 microphone and the S55P is designed for Models 545, 548 and SM57. Each stand is priced at \$28.

The RMX 1641 Quadrisound Console designed for quad mixdowns from a 16- or 8-channel source has been announced by Audio Designs and Manufacturing, Inc., 15645 Sturgeon, Roseville (Detroit), MI 48066. The console offers both fixed four-channel positioning of each input and the ability to assign any input or group of inputs to any of four quad pan pots. Four echo channels are provided and these can be assigned fixed positions or fed to the quad pan pots. The console is priced at \$20,000. Also announced was the quad pan pot, Model 440, which offers "joystick" control of an audio input permitting the signal to be placed or moved anywhere within the 360° listening area. It is priced at \$140.

The TBM-2500C series of RF amplifiers designed for off-the-air operation of FM and VHF-TV broadcast monitoring equipment has been announced by McMartin Industries, Inc., 605 N. 13 St., Omaha, NB 68102. Rejection of interfering signals is assured by a passband filter which is 290 kHz wide at the 3 dB points with 60 dB rejection at frequencies 800 kHz removed from the operating frequency. Capabilities include constant output level with input signal variations over a 45 dB range. Output power level is adjustable by a front panel control. The amplifiers are self-contained and occupy 5¼ in of vertical rack space. Three models are available, the TBM-2500C for 88 to 108 MHz operation, priced at \$485; the TBM-2500C-L, for TV channels 2 to 6, priced at \$515, and the TBM-2500C-H for TV channels 7 to 13, priced at \$530.

A new variable low- and high-frequency cutoff filter, designated the LHF-20, has been announced by Quad-Eight Electronics, 11810 Vose St., North Hollywood, CA 91605. New frequencies have been selected to provide an extended range of control. Error factors have been included in the design to compensate for the limited finite value of Q in the inductors and to provide accurate 3-dB points and impedance matching for all frequency selections. Toroidal conductors are used to provide hum rejection. The LHF-20 is priced at \$325.

A new real-time audio spectrum analyzer, Model 8064A, has been announced by Hewlett-Packard, 1501 Page Mill Rd.,

Palo Alto, CA 94304. The instrument, which measures and displays the frequency spectra of sounds or vibrations as they occur, can operate as a stand-alone analyzer or as part of an automatic or semi-automatic data acquisition, data processing or data recording system. Active filters in the analyzer divide the spectrum into 24 third-octave channels in the frequency range 2 Hz to 40 kHz. Measured sound or vibration levels in each channel are displayed on a cathode-ray tube with a logarithmic scale. The dynamic display range is 60 dB, i.e., any 60 dB out of a total range of 140 dB can be displayed. Measured levels are accurate within 1 dB in the upper 55 dB of the selected 60-dB range and within 2 dB in the lower 5 dB. An add-on module, Model 8065A can increase the number of channels from 30 to 36. The 8064A with 24 channels is priced at \$9,900. The 8065A module is priced at \$2,200.

A new line of miniature industrial motors has been announced by Wollensak Inc., 850 Hudson Ave., Rochester, NY 14621. Designated Qualitorque the motors include dc and ac motors, synchros, servo motors, tachometers and synchronous motors with associated gearheads, filters and other modifications. The price range is from \$25 to \$50.

The Exide MG-X Self-Powered Exit Sign, a battery-powered EXIT sign suitable for theaters and other public gathering places, has been announced by Exide Power Systems Div., ESB Inc., Rising Sun and Adams Aves., Philadelphia, PA 19120. The unit can be powered from a 115-V circuit. If a power emergency causes normal lighting to fail, a 12-V lead-acid battery inside the sign automatically powers an EXIT sign lamp and a "down light" lamp illuminating the doorway beneath the sign. The battery provides up to eight hours of emergency light. The unit is priced under \$100.

The Kelm Metric-English Conversion Kit No. MECK4 for converting units of weight and measure from the English to the metric system, has been announced by Kelm Manufacturing Co., Rt. 3, Benton Harbor, MI 49022. The kit consists of a slide chart calculator, a graphic chart folder, a booklet, entitled *Metric Units of Measure* and another booklet entitled *1000 Conversions* including Metric to English and English to Metric for engineers and scientists. The kit is packed in a plastic pouch on which are imprinted the names of the 114 countries which use the metric system and the 16 countries which use the English system (most of these have also legalized the metric system). The kit is priced at \$5.25 or \$4.95 in quantities of five or more.

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