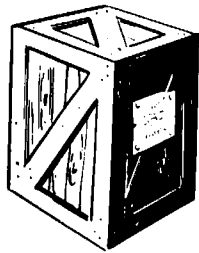


new products



(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.

An electronic color television broadcasting device that corrects color variations has been developed by CBS Laboratories for the CBS Television Network in a joint effort with the network's engineering department. The Color Corrector permits television engineers to adjust color variations in a television program after it has been encoded and at any point during its transmission to the home. In the past, color balance adjustments were made at the camera source, with no practical method of modifying this balance at subsequent program transmission stages. The device also makes it possible to adjust

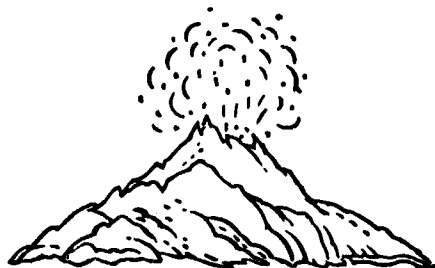
color program balance during a videotape playback. In addition, program segments and television commercials shot at different times under varying light conditions can be previewed with the compact unit and their color tones balanced to match the overall program. The device does not process the encoded signal, but generates a correction signal which is added to the incoming signal to produce balanced color tones. The Color Corrector can also be used to match color produced by TV cameras of different manufacturers.

A new video storage tube using silicon integrated circuit technology has been announced by RCA Corp. The tube's storage device (target) is a coplanar grid of 600,000 silicon dioxide storage elements on a 1-cm-square area of a silicon wafer. Stored information (half-tone pictures and/or alphanumeric data) can be read out at a 30 times/s rate for several minutes before the information on the target must be refreshed. Information is written on the target by a high-velocity scanning electron beam in one TV frame in normal raster fashion. The beam places on each individual silicon dioxide storage element in turn an electron charge proportional to the amplitude of the incoming video signal for each individual point of the stored data. If the beam is turned off after the information is stored, the target will hold the data for as long as 45 days.

To read out the information, a low-velocity scanning electron beam is directed toward the target. At the points where the

stored information is dark the scanning beam is repulsed from the silicon target by the combined charges in adjacent silicon dioxide elements and the beam is attracted to the silicon wafer at points where the picture is bright. The electron beam current landing on the silicon wafer is amplified and then used to modulate the electron beam of a standard display tube at the normal scanning rate of the display tube, although the information might have been stored at a different scanning rate.

High resolution video monitors that provide automatic field rate and line rate sensing have been developed by the Conrac Division of Conrac Corp., 330 Madison Ave., New York, NY 10017. Called the RQA series these monitors are available in 14-, 17- and 21-in kinescope sizes. They automatically search and lock on vertical field frequencies of 15 to 60 fields/s and horizontal rates of 500 to 4,930 lines/frame. Vertical and horizontal hold controls are not required in the RQA, which also operates on interlaced or non-interlaced signal inputs. Additional features include differential input, keyed clamp, dynamic focus and video-polarity-inversion switch. Through the use of a high-resolution kinescope, voltage regulation circuitry, and video bandwidth in excess of 30 MHz, these monitors are compatible with the latest camera equipment. RQA monitors have been designed for such applications as displaying medical X-rays, military data display when various scan-



Special Effects in Motion Pictures

(Some Methods for Producing Mechanical Special Effects)

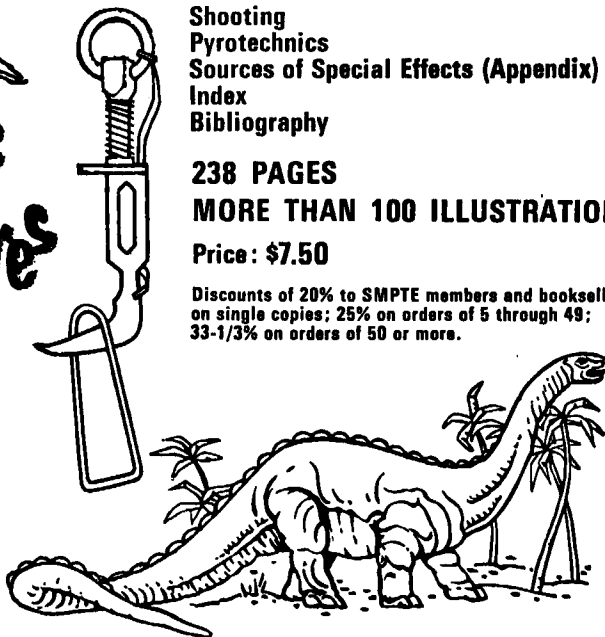
Frank P. Clark

CONTENTS: The Development of Special Effects
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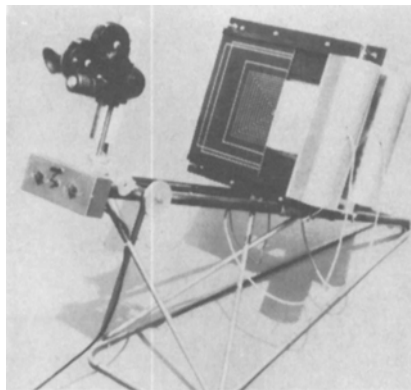
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rate cameras are employed, document viewing and data display terminals. When the monitors are used as a computer output device, the computer's character generator can select any horizontal and/or vertical line rate within the operating parameters of the monitor. This provides the computer with the ability to dictate the line rate required to increase character density, control vertical size or control resolution of graphic presentations. Prices range from \$1,390 to \$1,510.

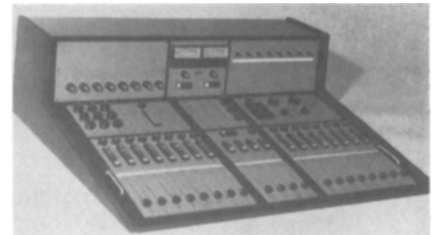
A color TV camera, Model 270, intended for use under normal ambient light conditions has been announced by Commercial Electronics, Inc., 880 Maude Ave., Mountain View, CA 94040. The camera uses three SEC vidicons to allow full color television at $f/8$ under normal lighting and at $f/16$ with typical black-and-white studio lighting. The camera is designed to operate with an $f/16$ lens opening at 100 fc with a color temperature of 2900 K. Its base price is \$28,800.

The ITE P4 Pedestal and the ITE H2 Cam Head, first of a series of television camera support equipment, have been announced by Innovative Television Equipment, 11661 San Vicente Blvd., Los Angeles, CA 90049. The new support gear was designed by ITE to meet the special requirements of lightweight TV cameras. The ITE P4 Pedestal is fully counter-balanced and can accommodate cameras weighing up to 130 lb. The ITE H2 Cam Head has double cam surfaces which create an opposed incline movement. Cameras weighing up to 130 lb can be tilted up or down 45° . Price of the pedestal is \$1,425.00 and the cam head is priced at \$415.



The Polytechnic Camera Stand designed for in-house production of photo-visuals has been announced by Merv's Animation Aids, Encino, CA 91316. The assembly has been designed with the camera reflex viewer at eye-level. The stand can be used with the operator in either a sitting or standing position or it can be made a horizontal assembly by attaching a second set of legs. The artboard cranks to or from the camera as field coverage requires. Vertical or lateral movement or alignment is achieved by the camera compound mount screws with calibrations in 100ths of an inch. An animation-art registration disc with fixed pegs above and below the 12-field window is centered in the artboard. Illumination is provided by two front

lights and two back lights in adjustable mounted reflectors. The stand is priced at \$495.



Model M1600 TV Production Console has been introduced by Visual Electronics Corp., 356 West 40th St., New York, NY 10018. The console is equipped to satisfy basic station necessities. Visual modules may be added as station needs become more complex. Expansion costs are limited to the price of the modules and installation can be accomplished within minutes.

Two new video-tape recorders that permit tape interchange between countries using different recording and playback standards have been placed on the market by International Video Corp., 675 Almanor Ave., Sunnyvale, CA 94086. The IVC-811 video-tape recorder will reproduce 60-Hz, 525-line recordings while operating on 50-Hz line. In addition it records and reproduces 50-Hz 625-line tapes compatible with all VTR's using the IVC format and intended for use on 50-Hz power. The two operating standards are switch-selectable at the control panel. The IVC-810 VTR performs the opposite function, recording and reproducing 60-Hz 525-line tapes, and in addition reproducing 50-Hz 625-line recordings while operating on 60-Hz power. Combination of the two recorders can be used by organizations that communicate with branches or offices in countries on a different standard. Price of each system is \$4,700.



The Video Data Insertion Generator, Model 603, a TV special-effects generator adapted especially for research and industrial use, has been announced by Colorado Video, Inc., P.O. Box 928, Boulder, CO 80302. The device allows insertion of one television signal into another in virtually any oblong format. It also provides a white oblong marking or keying output signal. Model 603 is priced at \$1,250.

The IVC-4008 recycler, an automatic recycling unit, and the IVC-4009 remote control unit, both designed for use on the IVC-800 series helical-scan video-tape recorders, have been announced by International Video Corp., 675 Almanor Ave., Sunnyvale, CA 94086. The recycler enables unattended replaying of recorded video tapes. A tape that has been programmed with a tone on the second audio track will recycle and play back repeatedly. By flicking a switch, the recycler permits one playback only, then rewinds, stops and awaits a command to restart the tape. The remote control unit makes possible remote control of playback, record, stop, rewind

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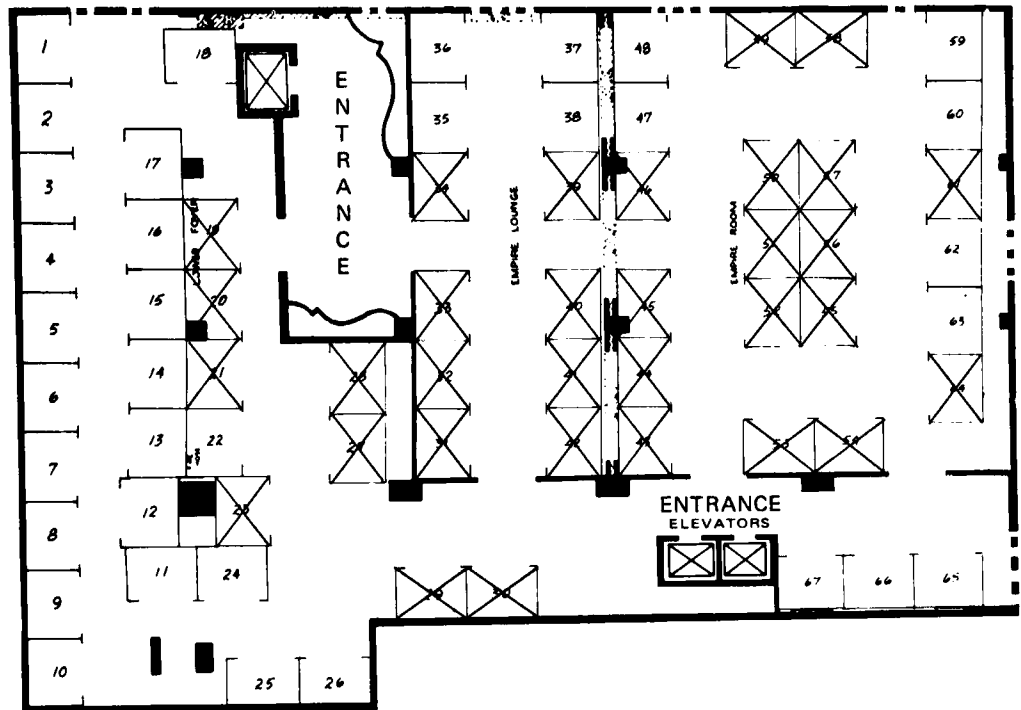
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EXHIBITOR DEMONSTRATIONS

An Equipment Papers and Demonstrations session will be held Wednesday, August 5, 9:00 to 12:00 noon. Booth holders are invited to present brief descriptions or actual demonstrations of new products. Power and projection facilities will be provided. No additional charge is made for time on this session, which is reserved exclusively for exhibitors. Early applica-

tion is desirable. Application forms with instructions will be mailed after space orders have been confirmed.

EXHIBIT AWARD

In recognition of exhibitors' efforts in preparing effective and rewarding displays, the Society will award a plaque to the company selected by the Exhibit Award Committee as having the most imaginative, effective and best-presented exhibit, regardless of size. The presentation will be publicized in the SMPTE Journal.

EXHIBITORS

(Partial List, as of Mar. 20, 1970)

Abtronics, Inc.; Barr & Stroud Ltd.; Burleigh Brooks, Inc.; Cordin Co.; Eastman Kodak Co.; Eclair Corp.; Field Emission Corp.; GAF Corp.; General

Radio Co.; John Hadland (Photographic Instrumentation) Ltd.; Impulsphysik GmbH; L-W Photo, Inc.; LogEtronics, Inc.; D. B. Milliken; National Camera, Inc.; Optical Coating Laboratory; Photosonics, Inc.; Photosystems Corp.; Quick-Set, Inc.; Red Lake Laboratories, Inc.; Technical Operations, Inc.; Traid Corp.

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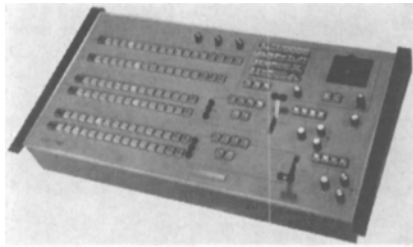


For additional information on the Exhibit, and on the 9th Congress, write:

Society of Motion Picture and Television Engineers

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and fast forward. The IVC-4008 is priced at \$325 and the IVC-4009 is priced at \$150.

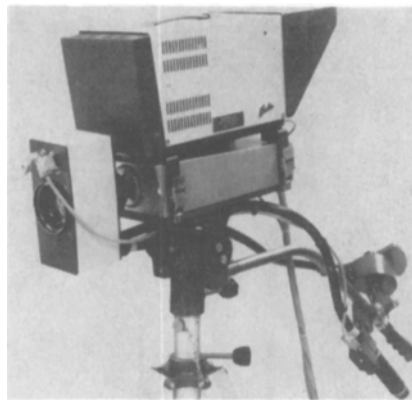


A new series of television production switchers has been introduced by Central Dynamics Ltd., 147 Hymus Blvd., Montreal 730, P.Q., Canada. The series 800 switchers offer 15 inputs, vertical interval switching on all buses, mixing, wiping, keying, mixing to wipes and keys, color mattes, and automatic sync and burst control. Options include chroma keyer and wipe positioner. The VSP 860, one standard system in the series, has facilities that exceed those of many larger double re-entry systems. Price range of the series 800 production switchers is \$18,000 to \$30,000.

A new Video Tape Conditioner (VTC-2) has been announced by Recortec, Inc., 162 So. Whisman Rd., Mountain View, CA 94040. The VTC-2 utilizes a capstanless, vacuum-buffered tape drive that maintains uniform tension and precise winding while operating at extremely high speeds. Vacuum tape cleaning grids remove dirt and loose oxide from both sides of the tape.

An electronic tape timer is supplied as standard equipment. Price is \$5,450.

Vicon Zoom Drives will be distributed by F & B/Ceco, Inc., 315 West 43rd St., New York, NY 10017, according to a recent announcement. The Vicon Zoom Drives feature a silent operation, achieved by eliminating metal-to-metal contact and by introducing sound control techniques which isolate motor and gearhead noises. The Vicon motor has a unique rotor design which assures constant torque for smooth zoom even at low speeds. The Vicon Servo-Zoom Drives and dc Zoom Drives are available for all lenses including Angenieux 12mm-20mm, Angenieux 25mm-250mm and Arriflex 16BL.

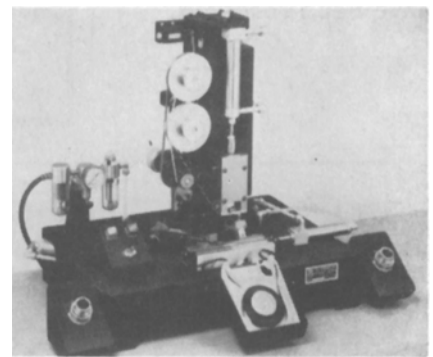


The availability of Monital zoom lenses with Dennard Controls has been an-

nounced by Rank Precision Industries, Inc., 4351 Tujunga Ave., Studio City, CA 91604. The lenses provide manual control for both zoom and focus and a motorized iris which can be controlled by the operator of the camera by means of a pushbutton switch which is an integral part of the focus control. Remote operation of the iris is done via a plug-in unit which involves no additional modification. Designed specifically for self-contained cameras which require an ac power cable and a co-axial cable for video output, these controls are available at a cost of \$516 without a motorized iris and \$645 with a motorized iris.

Century Precision Cine/Optics, 10661 Burbank Blvd., North Hollywood, CA 91601, has announced the new 6.5mm f/1.8 Super Wide Angle Lens for 16mm motion-picture cameras. The lens covers an angle of 90° and a full 16mm frame without vignetting, and is available in 16mm "C" or Bolex RX fixed focus mounts. Objects two feet to infinity are reported to remain in sharp focus with only 8% distortion. The lens is priced at \$349.50.

A slide projection system, designed to project large background images behind television newscasters and sports announcers has been announced by Spindler & Sauppe Inc., 1329 Grand Central Ave., Glendale, CA 91201. Heart of the system is the super-high-gain Ultralight Screen. The Dynamic Dissolve System included in the package enables TV directors to use multispeed dissolves, instantaneous cuts and slow-to-fast fades in their slide presentations. The complete Ultralight System, including both 6 x 8-ft screen and twin projector dissolve system with Selectrolide 3000-lm projectors, is priced at \$3,250.



The Ram Automatic Splicing Machine designed to make a 45° splice on stereo, video and magnetic computer tapes in three to five seconds, has been developed by Ram Tool & Engineering Corp., 13500 E. Nine Mile Rd., Warren, MI 48089. Described as eight times faster than conventional manual splicing methods, the unit has been used in production splicing of tape ends on continuous stereo cartridges and cassettes. Unskilled personnel can operate the splicer by overlapping two tape ends in the dovetailed retaining grooves and pressing the two safety "start" buttons. The splice is made by a specially built programmer. Price of the splicer is \$4,250.

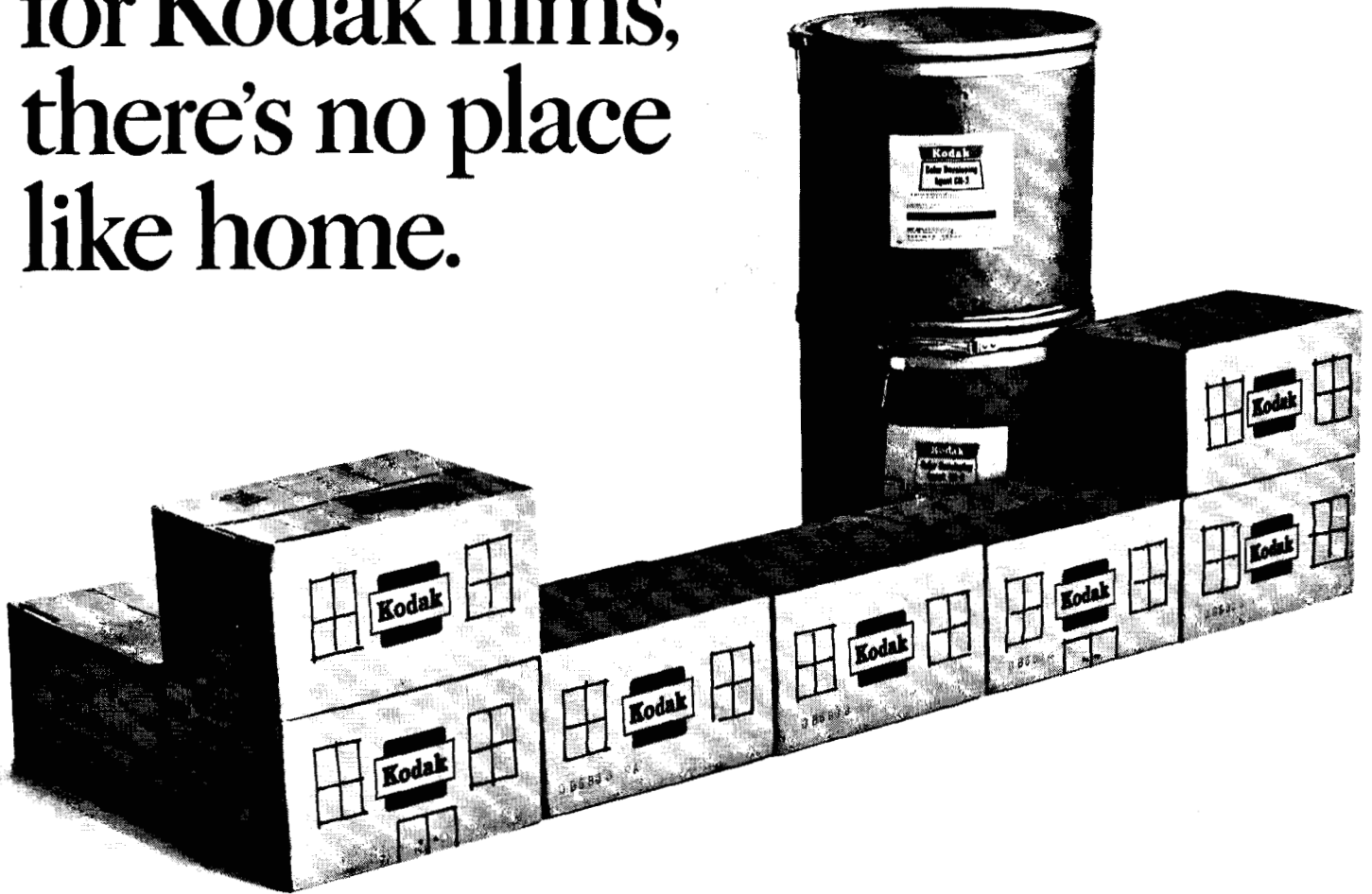
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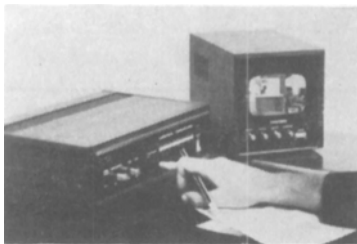
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The Color-Trak, a new BBC-designed illuminant D reference comparator for color kinescopes will be marketed exclusively by Television Equipment Associates, P.O. Box 1391, Bayville, NY 11709. Manufactured by Fisher Controls Ltd., the device consists of specially selected fluorescent tubes operating at 6500 K, with a tolerance of less than one J.M.D., and three specially-selected Kodak filters affixed to the fluorescent tubes so as to simultaneously display four steps of brightness, from white to dark gray. With the source positioned adjacent to a color kinescope displaying a gray-scale or color bar, the monitor's controls are adjusted until the gray-scale on the monitor matches the Color-Trak's gray-scale. The monitor's output can then be calibrated into a Colorgard meter for quick and accurate repeatability. Price is \$65.



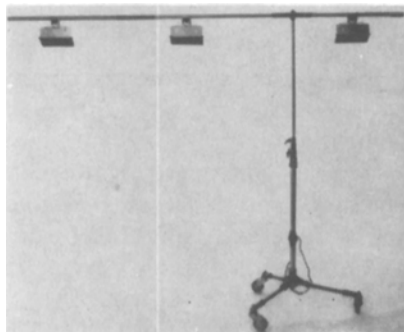
The AVC-10 desk top audio video communicator, a new concept for in-house communication, has been introduced by Concord Communications Systems, a division of Concord Electronics Corp., 1935 Armacost Ave., Los Angeles, CA 90025. The AVC-10 is a flexible management communications device which allows the operator to communicate visually and verbally to as many as five different locations simultaneously. The AVC-10 system employs a newly developed device making it possible to relay visual information without ever having to expose a camera. A major feature allows the operator to select any location in his operation for viewing without leaving his desk. Combined with the visual device is a two-way audio system. An auxiliary input is provided for the addition of an FM tuner or other music source which may operate as a background music system as well as a public address system to all stations. A typical 3-station system will lease for approximately \$60.00 a month. Cost of a 3-station system is approximately \$1,500.

A reel-to-cassette tape duplicator system, Model 235CS, has been announced by Telex Communications Division, 9600 Aldrich Ave. South, Minneapolis, MN 55420. The system consists of an open reel master transport and cassette slave modules. Each slave module contains three cassette transports. Both master and slave transports feature two-speed hysteresis synchronous motor drives with the master operating at 15 and 7.5 in/s, and the cassette slaves at 7.5 and 3.75 in/s. Wide-band, solid-state electronics are of modular plug-in design. The system can be expanded to six or nine slaves without additional electronics by adding modules. The unit comes in a console designed for

table or bench top use, with slanted transport panels. The entire system is solenoid controlled and operated by pushbuttons from the master transport. Photoelectric sensors allow for captive master tape operation so the tape never runs off the reels. The cassette duplicator is available in half-track single, dual channel quarter-track dual channel, and quarter-track four-channel configurations. A half-track two-channel duplicator with three slaves is priced at \$2,070. A six-slave duplicator is priced under \$2,600, and a nine-slave system under \$3,000.

Super RC Duplicators, Models RC-2 and RC-4, which duplicate 7.5 or 3.75 in/s master tapes at a rate of four C-30 cassettes every two minutes, has been announced by Infonics, 1723 Cloverfield Blvd., Santa Monica, CA 90404. The new models supersede the previous models, designated RC and RCD, which have been discontinued. The Super RC tape transport runs at 60 in/s for 7.5 in/s master tapes and at 30 in/s for 3.75 in/s masters. The cassette transports operate at 15 in/s. The Super RC-2 is priced at \$2,995 and the Super RC-4 is priced at \$3,795.

A Tandberg tape recorder, first in a new series, has been announced by Tandberg of America, Inc., P.O. Box 171, 8 Third Ave., Pelham, NY 10803. The recorder has a 3-speed solid-state 6000X stereo deck which offers four mumetal screened heads with the Crossfield (bias) design. Features include: peak reading VU instruments for record and playback levels; automatic overload protection; independent mike/line record level controls for each channel; pushbutton control for electrical functions and channel selection; single lever tape transport control; hysteresis synchronous motor; stereo mixing, cuing, source vs. tape monitor, sound-on-sound, add-a-track and remote control. The recorder is available in quarter-track and half-track models and is priced at \$499.



A new Clipstrip lighting system introduced by Bardwell & McAlister, 6757 Santa Monica Blvd., Hollywood, CA 90038, is designed especially for shooting in confined areas and permits a variety of setups. It can be hung from walls, suspended from ceilings or mounted between two rolling baby keg stands. Because of the modular design of the Clipstrip the kit is easily portable. Each

Clipstrip can accommodate 10 separate lighting units and is available with 500, 750 and 1000 W lamps and a complete line of individually engineered accessories. Price of Model #49177 is \$550. With ten 1000-W Tungsten Halogen lamps, the price is \$699.

New lighting systems designed primarily for television in studio or remote applications have been announced by Berkeley-ColorTran, Inc., 1015 Chestnut St., Burbank, CA 91502. The systems include lighting, distribution and control equipment. Ranging from the Porta Studio System, which provides a simple and flexible remote/studio lighting system to the "2400" designed for sophisticated broadcast production, altogether five systems have been developed. The "300" system has been designed for the requirements of the small cable TV studio and the "600" has been designed for small educational or professional color/monochrome productions. The "1200" is intended to provide maximum lighting flexibility for medium-sized facilities. The price range is from \$4,321 for the "300" system to about \$57,648 for the "2400" system.

The Cine Shutter Tester, Model 10 HFE, designed for rapid calibration of motion-picture cameras and projectors, has been announced by High Frequency Engineering Co., 2626 Frontage Rd., Mountain View, CA 94040. The instrument provides flashing rates of 8, 16, 24 and 32/s derived from the 60-Hz power frequency by multiplication and division with solid-state integrated circuitry. The instrument also has a continuously variable rate generator and a continuously indicating rate meter. It is priced at \$174.

The Dawe Cinestrobe, which provides powerful short-duration light in synchronization with the shutter of the professional motion-picture or television camera, is now available in the United States from Alan Gordon Enterprises Inc., 5362 North Cahuenga Blvd., North Hollywood, CA 91601, on a sale or rental basis. The Cinestrobe is a lightweight, portable strobe light designed exclusively for cine use to provide sufficient light for motion-picture making. Up to ten strobe lamps and two viewing lamps can be connected. Price is \$1600 for the control unit; \$900 for each lamp (takes up to 12 lamps, 10 in phase, 2 out of phase). Accessory four-way barndoors are available at \$35.00 each.

The Industrial Time Motion Study Projector, Model AAP-301, designed especially for industrial use in establishing performance rates, training employees, etc., has been announced by Lafayette Instrument Co., P.O. Box 1279, 52 By-Pass, Lafayette, IN 47902. The unit has solid-state circuit control that provides speeds from 900 to 1500 frames/s in increments of 50 and 100, with settings of 960 and 1440 for silent and sound film. The projector has a five-digit resettable frame

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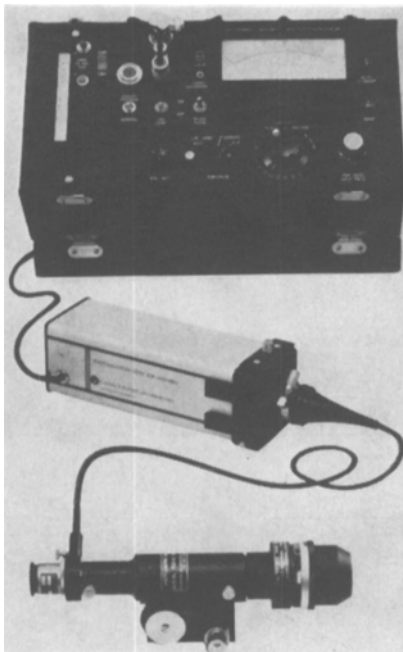
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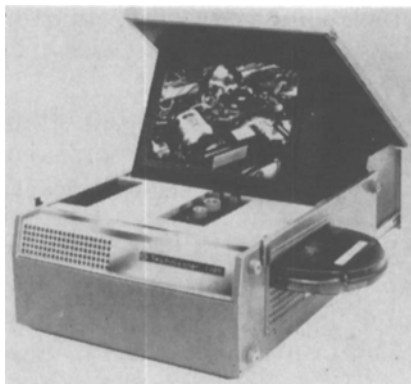
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counter for registering frame rates. Film capacity is 400 ft and the projector weighs 30 lb with carrying case and daylight viewing screen. It is priced at \$760.



Model 2020E Microphotometric System manufactured by Gamma Scientific, Inc., 2165 Kurtz St., San Diego, CA 92110, is designed for optimum measurement of low level luminance from small areas such as cathode-ray tube spots and aerospace instrument panel lighting. The system provides maximum sensitivity of 0.05 fL for a measured spot of 10-mil diameter. It consists of a photometric microscope with variable aperture objective lens and a 10X focusing eyepiece including a pickup probe; an S-11 photosurface photomultiplier detector in a shielded housing with photopic correction; and a photometer for power, control and readout. The design permits interchangeability of a wide assortment of standard objective lenses, pickup apertures, accessories and attachments. The system is priced at \$2,310.



Model 1300, a desk-top, portable movie viewer designed for versatility has been added to the line of super 8 optical sound movie projectors by Technicolor, Inc., Commercial and Educational Division, 1300 Frawley Drive, Costa Mesa, CA 92627. Model 1300 features simplicity, durability and reliability. A daylight-bright picture

on the built-in rear projection screen eliminates the need to dim lights during business presentations or when used in the classroom. The viewer can be converted to a front throw projector for auditorium sized groups and can be connected to speakers or an in-house public address system. List price is \$449.95.

A new service for color measurements which will furnish accurate spectrophotometric data for close color control has been announced by Kollmorgen Color Measurement Service, P.O. Box C, Newburgh, NY 12550. Measurements are supplied in both graph and tabular form and are available over the standard range of wavelengths for color (380 to 700 nm). CIE tristimulus specifications are available with respect to either CIE Source A or Source C. Routine measurements and specifications will be provided for \$4.75 each, with additional charge for samples requiring special treatment or special measurement.

A lightweight batter pack for electrically driven motion-picture cameras has been announced by the Scientific Systems Division, Dynasciences Corp., Township Line Rd., Blue Bell, PA 19422. The portable pack, which weighs 3 1/2 lb, will drive up to six 400-ft 16mm film magazines before the battery needs recharging. The unit features circuitry that prevents overcharging or damage to the camera motor if the charger line cord should be left plugged in while the camera is connected to the battery pack. A built-in undervoltage circuit prolongs battery life by preventing battery discharge below recommended limits. In normal operation the camera power plug connects to jacks on top of the battery pack. After a day's use, the batteries can be recharged overnight. Battery life expectancy under these conditions is two or three years. The pack with an operating temperature range of + 10 to + 120 F, can be used in summer or winter. The unit measures 6 x 3 x 4 in and is priced at \$225.

The Model LS Downflow Clean Booth has been announced by Agnew-Higgins, Inc., 7532 Anthony Ave., Garden Grove, CA 92641. Air flows downward from the blower-filter modules overhead and exhausts below the plastic curtain, rinsing away dust particles formed by the work process. The booth is 6 ft wide, 8 ft long and 8 ft high. The plastic curtain is supplied with zippers at all four corners. It is priced at \$3,450. It was also announced that a 10-ft version has been added to the firm's line of Laminar Downflow Straddle Units. The units are also available in 6-ft and 8-ft lengths and are designed to straddle existing work benches from 30 in to 5 ft in width.

A line of squeegees for lab processors, including Ott, box, vacuum, knife and wiper-squeegees, as well as a new pre-dryer has been announced by Treise Engineering, Inc. 1941 First St., San Fernando, CA 91340. The Ott air squeegee is built to very fine tolerances for use in high-speed operation. At moderate processor speeds either the box or vacuum squeegee is

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suitable. Where noise factor is important the vacuum squeegee is recommended. The knife squeegee may be used in combination with Ott, box or vacuum squeegees before soundtrack application or drybox to increase efficiency. The pre-dryer unit features an enclosed electric heater, together with air flow, to provide impingement-type drying.

A new crystal-controlled ac power supply, Model PPS-1, has been announced by Kamtron Systems Inc., 8331 De Celis Place, Unit "B," Sepulveda, CA 91343. The unit will power any load up to 100 W. It features a crystal-controlled oscillator, integrated circuits, automatic charger, output monitor and an easily replaceable battery pack. The unit weighs 7 lb. It can also be powered from external 12-V dc source or double as a 12-V dc source. The unit is supplied with cables and shoulder strap. Options include 115- and 230-V charge capability, 50 and, or 60-Hz output frequency, sync pulse output, and a panel in Spanish, German and French. The standard PPS is priced at \$792.

Sure-Flash, a contact cleaning tool, is a product of the Eraser Company, Inc., P.O. Box 1342, Oliva Dr., Syracuse, NY 13201. Designed originally to remove oxide from flashguns, it has been found useful in splicing operations. Sure-Flash removes emulsion and provides a rough finish which allows a fine, thin splice comparable to those with heat equipment. It is priced at 98 cents.

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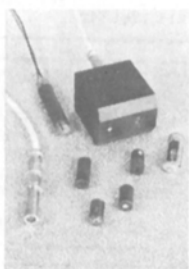
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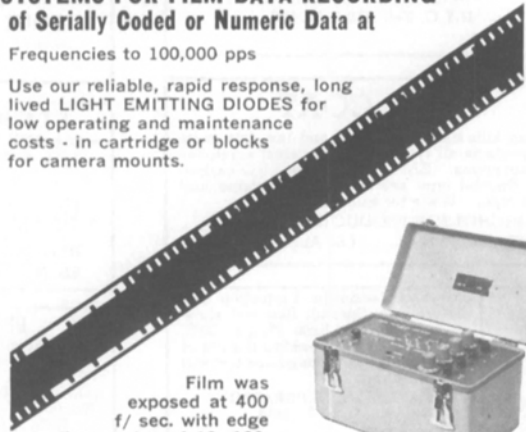
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