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out a system to fit the space available and to perform the specified task. No attempt is made to teach lens design. The design is done by specialists after the general layout of the system is complete.

Color Reproduction for Engineers, a three-day seminar, will be conducted 24-26 April at the Graphic Arts Research Center, Rochester Institute of Technology, One Lomb Memorial Dr., Rochester, NY 14623. The seminar is intended to provide a fundamental understanding of color reproduction for engineers involved in the design or improvement of color systems in graphic arts, photography, television or any other electrooptical graphic display field. The seminar will start with an overview of the color reproduction process, followed by detailed study of the elements of such a process and their interactions with one another. Emphasis will be placed on developing the ability to analyze the deficiencies of a reproduction in terms of their causes and acquiring a knowledge of what action is necessary to correct such deficiencies. Further information is available from William Siegfried, Training Director of the Research Center, at the address above.

The NAEB Educational Broadcasting Institute, 1346 Connecticut Ave., N.W., Suite 1101, Washington, DC 20036, has announced specialized courses, seminars and workshops for professionals in telecommunications. Among the courses are Film Production for Television, to be held 10-13 March in Chicago and a workshop in Lighting for Television to be held 24-26 March in the Maryland Center for Public Broadcasting.



TORONTO, 20 Sept.—The meeting was held in the Photographic Arts Building of Ryerson Polytechnical Institute with an attendance of 35 members and guests. The speakers were Alan R. Emery, Associate Curator of the Royal Ontario Museum, and Donal L. Clayton, President of Photographic Analysis Ltd. Dr. Emery, who is a marine biologist, described his part in the production of the motion picture, *The Neptune Factor*. Illustrating his talk with many excellent 35mm color slides, he told how the making of the film entailed much patience and skill in the training and photographing of hundreds of marine creatures in an artificial environment. Three phases were involved in working with the underwater forms of life—first, to determine what forms of marine life could best meet the requirements of the picture and then to obtain members of the requisite species while creating a safe artificial environment for them where they could live

Lighting for Television, an intensive three-day course, will be held 24-26 March at the Maryland Center for Public Broadcasting under the auspices of the Educational Broadcasting Institute of the National Assn. for Educational Broadcasting. The course will be conducted by William M. Klages, television lighting consultant and Vice-President of Imero Fiorentino Associates, Inc., 10 W. 66 St., New York, NY 10023.

The 11th UNIATIC (Union Internationale des Associations Techniques Cinematographiques) will be held 7-11 October in Salerno, Italy, under the Presidency of Honor of M. Guido Polla-Mattiot, President of the Congress will be M. Ameleta Fattori, who is President of ATIC (Associazione Tecnica Italiana per la Cinematografia). The theme of the Congress will be Technique in the Service of Creation, Production, Distribution and Exhibition. Further information is available from ATIC, Viale Regina Margherita 286, Rome, Italy, or from UNIATIC, 92 Champs Elysées, Paris VIII, France.

The Canadian Science Film Assn. and the American Science Film Assn., 7720 Wisconsin Ave., Bethesda, MD 20014, will hold a Symposium on 21-24 May in Rochester, N.Y. The symposium will emphasize the role of the motion media in linking scientists and communicators to further public awareness and understanding of scientific information about space, energy and the environment. Emphasis will also be placed on the camera as a research tool, filming for the recording and reporting of scientific research and the use of films and television in science education.

safely during production of the motion picture; second, to train or manipulate the creatures to do what was required of them in the movie; and third—perhaps the most difficult phase for Dr. Emery—to combine the actors, the technicians and the fish into a safe, practical and harmonious team. Despite all the unusual problems involved, *The Neptune Factor* is an excellent Canadian underwater motion picture.

Mr. Clayton then presented a survey of high-speed photography. He showed some excellent examples of films footage of high-speed action reduced to single-frame viewing for analytical purposes. Various types of equipment for various applications were discussed. G. W. Ballantyne (Chairman), Applied Electronics Ltd, 299 Evans Ave., Toronto, Ont. M8Z 1K2, Can.

MONTREAL/OTTAWA, 25 Sept.—The meeting was held at the National Film

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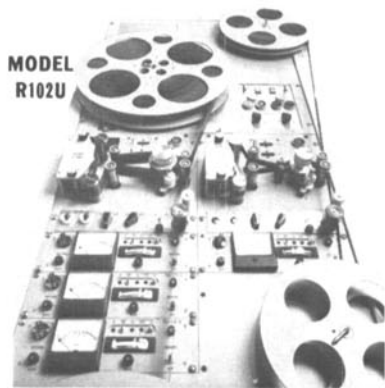


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Board of Canada with an attendance of some 300 members and guests. Title of the program was *In Three Dimensions*. The speakers — all affiliated with the National Film Board — were Gerald G. Graham, Director of Planning and Research; Ralph Curtis, Project Engineer, Technical Research; Peter Bohonis, Project Engineer; Colin Low, Producer/Director; John Spotton, Director/Cameraman; and E. McNabb, Technical Cameraman. The program was divided in three parts: (1) Retrospective of Early 3-D (1950); (2) New 70mm 3-D; and (3) Discussion on technical problems and possible applications. The 70mm presentation was outstanding and was followed by a lively discussion — Jacques Lambert (Secretary-Treasurer), Lambert Lepage Labbé Inc., 3275 Prieur St. E., Montreal 459, Que., Can.

DENVER, 26 Sept. — The meeting was held at Mt. Bell Telephone Communications Center with an attendance of 26 members and guests. Jim Price and Dave Mazone, seminar leaders for Mt. Bell Telephone, presented a program describing various services available from the telephone company, including networks, private line services, telemetry and video transmissions. A demonstration of the Bell System PICTUREPHONE was given. Questions and answers were interspersed throughout the program. Coffee and doughnuts were served following the meeting and an informal tour of the television studio and facilities was conducted by Bob Cook and John Seide. — Leland D. Edelmaier (Secretary-Treasurer), Metropolitan TV Co., 1044 Lincoln St., Denver, CO 80203.

DALLAS/FORT WORTH, 4 Oct. — The meeting was held in the screening room of Bill Stokes Associates in Dallas with an attendance of 58 members and guests. Gary Jones, of WFAA-TV introduced the evening's program which consisted of playbacks of video cassettes of various commercials produced by Dallas TV producers. The purpose was to show a cross section of television commercial work being done in the Dallas/Fort Worth area. Examples shown included film, videotape and various combinations of film and videotape. The showing was followed by a lengthy discussion concerning the techniques, styles and methods used in producing the commercials. After the discussion the video cassettes were replayed so those interested could review the spots again. — William R. Schock (Secretary-Treasurer), KDTV Doubleday Broadcasting Corp., Dallas, TX 75240.

ROCHESTER, 4 Oct. — The meeting was held at the University of Rochester with an attendance of 30 members and guests. Moshe Luben, of the University of Rochester's Laser Fusion Laboratory, described a project undertaken by the Laboratory which involves an attempt to generate electrical energy from a controlled atomic fusion process using a massive laser. As part of the presentation, Dr. Luben exhibited a laser 150 ft in length. — H. R. McNair (Secretary-Treasurer), Motion Picture and Education Markets Div., Eastman Kodak Co., 343 State St., Rochester, NY 14650.

HOLLYWOOD, 9 Oct. — The meeting was held at CBS TV City with an attendance of 250 members and guests. The speakers were Joseph D. Kelly of Glen Glenn Sound Co., and Bud Bennett and Bill Windsor of Quad/Eight Electronics. Mr. Kelly presented a paper on a system of videotape audio post-production which has creative flexibility but which retains the economy and speed typical of videotape production. Mr. Bennett and Mr. Windsor looked into the future of sound interface with picture. They described the impact of the electronic interlock Compumix and other recent developments on editing and dubbing for video and film. — Robert D. Gustafson (Secretary-Treasurer), Consolidated Film Industries, 959 Seward St., Hollywood, CA 90038.

OHIO, 11 Oct. — The meeting was held in the Sheraton-Cleveland Motel with an attendance of 30 members and guests. The speakers were Author E. Florack and Joseph Tripoli, both of Eastman Kodak. The speakers described and demonstrated the Eastman Kodak Videofilm Express Van and its wide array of 16mm and super-8 videofilm production equipment and its many types of cameras including both silent and single-system sound. Other of the van equipments that were demonstrated and discussed included an assortment of lightweight, compact lighting equipment and 16mm and super-8 editing equipment. The processing of both 16mm and super-8 color videofilm and a highly versatile television film chain incorporating both 16mm and super-8 projectors were also demonstrated. — Matthew M. Bracic (Secretary-Treasurer), WKYC-TV NBC, 1403 E. 6 St., Cleveland, OH 44114.

CHICAGO, 16 Oct. — The meeting was held in Studio D of the NBC-TV studios in Merchandise Mart with an attendance of 90 members and guests. William A. Raventos, Marketing Manager, Professional Audio Products for Electro-Voice, Inc., spoke on "Practical Sound Techniques." Slides and tapes were used to illustrate case histories of microphones and speakers in action in a variety of recording situations. This was an outstanding practical how-to-do-it session. The meeting was preceded by a dinner at the Wagon Wheel Restaurant. — Byron L. Friend (Secretary-Treasurer), Telecine Film Studios, Inc., 100 S. Northwest Hwy., Park Ridge, IL 60068.

ATLANTA, 23 Oct. — The meeting was held at the Eastman Kodak facilities with an attendance of 54 members and guests. The speaker was Ervin Melton, of Car-Mel Co./Carolina Cinematographers Assn., who spoke on "Film Production in the Carolinas." Three films dealing with film production were shown—*Special Effects*, *The Electric Flag* and *Six Filmmakers in Search of a Wedding*. Also shown was a film-slide presentation on *Optical Printing*. — Hugo A. Bondy (Secretary-Treasurer), WAGA-TV, P.O. Box 4207, Atlanta, GA 30302.

DETROIT, 24 Oct. — The meeting was held in the auditorium of WWJ-TV with an attendance of 61 members and guests, several of them from Windsor, Ont. The

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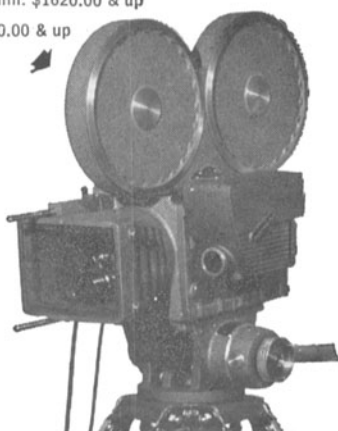


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speaker was John Zeman, of Eastman Kodak Co., who gave an interesting and informative account of Eastman Kodak's new color negative material, ECN II, 52/7247. Samples of the 16mm stock were shown. The program included a demonstration of the Eastman Kodak Videofilm Express and the Eastman Kodak motion-picture-TV interfaces. Also on display were motion-picture and still cameras, projection equipment and a Jamieson Mk IV mobile processor. — Ted Horn (Secretary-Treasurer), Chrysler Corp., 12000 Oakland St., Highland Park, MI 48203.

MONTREAL/OTTAWA, 6 Nov. — The meeting was held at the National Film

Board in Montreal with an attendance of 75 members and guests. The speakers were Clay Ratcliffe, National Marketing Manager for Computer Image Corp.; and J. Kalousek, Research Engineer for Canadian Pacific. The meeting opened with a film produced by the National Film Board showing experimental underwater photography at the Arctic Circle, sponsored by the Canadian government. Mr. Ratcliffe then presented an excellent visual display showing how animation work can be done by the use of computers. Recent work was shown and a lively discussion followed the presentation. A coffee break, by the courtesy of Quebec Film Labs, was followed by a paper presented by Dr. Kalousek on

“Application of Holograms to Visual Display,” in which he discussed the production of holograms by means of lasers. — Jacques Lambert (Secretary-Treasurer), Lambert Lepage Labbé Inc., 3275 Prieur St. E., Montreal 459, Que., Can.

SAN FRANCISCO, 8 Nov. — The meeting was held jointly with a meeting of the IFPA at the facilities of Bechtel Corp. with an attendance of 30 members and guests. The papers and discussions centered around the question of whether super-8 technology would displace 16mm film in many applications, especially in news reporting. The speakers were Tom O'Loughlin, of Eastman Kodak Co., and John Corso and William Palmer, both of Palmer Films. Mr. O'Loughlin spoke on “New Super-8 Equipment.” Mr. Corso reported on significant events at the recent SMPTE Conference in New York, and Mr. Palmer spoke on “The Challenge of Super 8.” Mr. O'Loughlin described new super-8 equipment developed by Eastman Kodak for specialized television applications. Of special interest was the new rapid processor that can be operated by relatively unskilled personnel and can produce a finished, dried super-8 reel ready for projection in 13½ min. The talk was illustrated with slides and a section of newsfilm shot in cooperation with the KQED news crew.

Mr. Palmer showed examples of early 16mm films that he himself had made in the late 20s and early 30s when 16mm began to challenge the 35mm operations in much the same manner in which super 8 is now challenging 16mm. He showed some unique black-and-white films made under unusual circumstances. One of the most interesting was a documentary record of the construction of the San Francisco Bay Bridge which showed the progressive growth of this structure between 1932 and 1938. As one who participated in this historical event, as well as having recorded it, his narrative of this unusual photographic feat was extremely interesting. — Joseph Roizen (Secretary-Treasurer), Telegen Corp., 4015 Fabian Way, Palo Alto, CA 94302.

NEW YORK, 13 Nov. — The meeting was held at the United Engineering Center with an attendance of 140 members and guests. The speakers were Komi Kanama, Chief Engineer of Japan Broadcasting Corp., and Paul Kaufman, President of Du Art Film Laboratories, New York. Mr. Kanama presented a description, illustrated by slides, of the new NHK Hall in Tokyo. It contains what is said to be the world's most elaborate audience studio, with 4500 seats. The lighting is by remote control luminaires and there are audio facilities for 40 channels. In addition, adjustable acoustics provide remarkable flexibility in a spectacular setting.

Charles G. Cyberski, of KDUB-TV, Dubuque, Ia., provided an audio tape and slides which were shown for a report on the use of super-8 film in television broadcasting. (Mr. Cyberski is the author of “The Use of Super 8 in Broadcasting” in the September issue of the *Journal*.) The report covered a six-month test using super 8, single 8 and double super 8 for TV news commercials and recorded programs. During the test over 85,000 ft of film were processed, edited and aired and careful



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records were made of the quality, cost and other relevant matters.

Paul Kaufman discussed flashing of original camera film of Ektachrome type 7241 and 7242. He used demonstration slides and 16mm motion pictures to present examples of the reduction in contrast by pre-flashing. He pointed out that camera-exposed Ektachrome 7241 and 7242, if subjected to a controlled low-intensity exposure in the laboratory prior to development, gives the result of reduced inherent contrast 7241 and 7242, permitting use of these high-speed films with greatly improved quality. The meeting closed with a lively question-and-answer period, with a number of questions on pre- and post-flashing. — William L. Cooper, Jr. (Public-

ity Chairman), WPIX Inc., 11 WPIX Pl., New York, NY 10017.

CHICAGO, 14 Nov. — The meeting was held at McCormick Auditorium, Lake Forest College, with an attendance of 75 members and guests. The speaker was Tung H. Jeong who discussed holography with special reference to the use of the Integram in motion-picture holography. The Integram, shown by Dr. Jeong, is a device that permits motion as well as a 360° view of the photographic subject. — Byron L. Friend (Secretary-Treasurer), Telecine Film Studios, 100 S. Northwest Hwy., Park Ridge, IL 60068.

HOLLYWOOD, 20 Nov. — The meeting

was held at the Academy Award Theatre with an attendance of 250 members and guests. The speakers were Charles Anderson, of Ampex Corp., Jack Chapman, of 3M Company, and Burt H. Dann, of International Video Corp. Mr. Anderson presented an historical survey of videotape from its beginnings to the present and also gave a forecast of future developments and innovations. Mr. Chapman, who described the high-speed duplicator, used slides to show the machine in operation. Mr. Dann discussed the design, timing reference system, operational and economic features of the new IVC 9000 segmented helical scan recorder. The meeting was preceded by a dinner at the Tail O' The Cock Restaurant — Robert Gustafson (Secretary-Treasurer), Consolidated Film Industries, 959 Seward St., Hollywood, CA 90038.

DETROIT, 27 Nov. — The meeting was held in the auditorium of WWJ-TV with an attendance of 21 members and guests. The speaker was Ken McCurdy, Area Manager for Video Logic Corp., who spoke on "VTR for High-Speed Instrumentation." The presentation included a demonstration of the Video Logic Instar system designed to record black-and-white video information at 120 frames/s. Two cameras, a portable 1-in helical scan recorder, a monitor and an effects generator were demonstrated — Ted H. Horn (Secretary-Treasurer), Chrysler Corp., 12000 Oakland St., Highland Park, MI 48203.

OHIO, 29 Nov. — The meeting was held in the studios of WEWS-TV in Cleveland with an attendance of 56 members and guests. The speaker was Robert G. Neuhauser, of RCA Corp., whose presentation on "Understanding the Vistacon" covered the principles of operation of Visticon camera tubes. Using slides to illustrate his talk, Mr. Neuhauser gave a detailed description of the manufacturing process and the numerous testing procedures for the Visticon. He also discussed some of the special features of the tubes, showing how they can be set up in TV cameras for optimum performance. Possible failure modes were described and performance data were evaluated and discussed. A lively question-and-answer session followed the talk. The meeting ended with a brief talk by the host, James E. Bloyd, Chief Engineer of WEWS-TV, who described the recently upgraded TV plant and then provided a conducted tour of the facilities with special attention to the RCA TCR-100 Videotape Cartridge machine — Matthew M. Bracic (Secretary-Treasurer), WKYC-TV NBC, 1403 E. 6 St., Cleveland, OH 44114.

ROCHESTER, 29 Nov. — The meeting was held at the Rochester Memorial Art Gallery with an attendance of 50 members and guests. Reid H. Ray, presently Professor of Filmmaking at the Rochester Institute of Technology, and formerly head of Reid H. Ray Film Industries in St. Paul, Minn., presented film clips from his more than 40 years of filmmaking throughout the world. The title of his presentation was "Athens to Zambungo." The meeting was preceded by a dinner at the Rascal Cafe. — H. R. McNair (Secretary-Treasurer), Eastman Kodak Co., 343 State St., Rochester, NY 14650.

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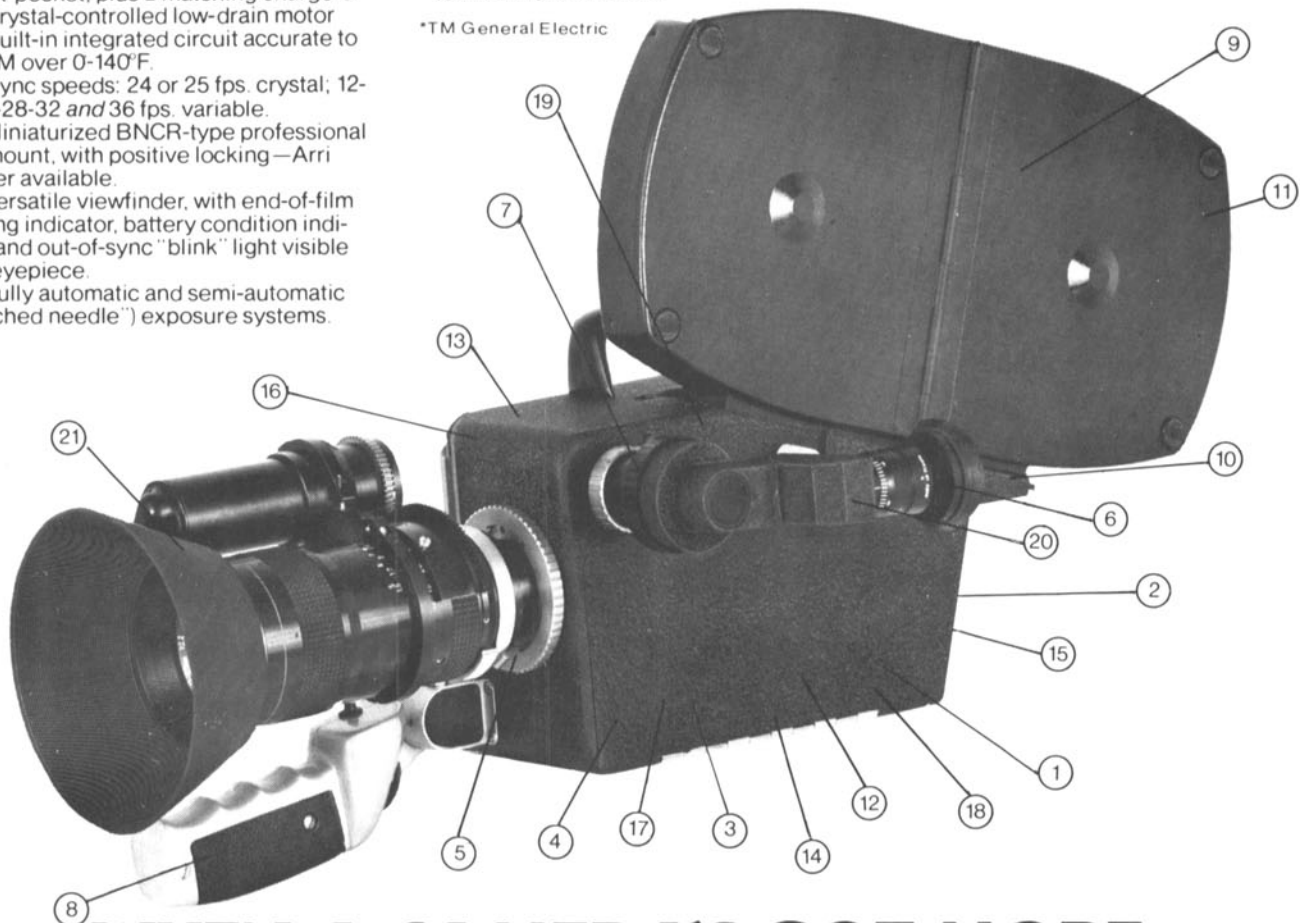
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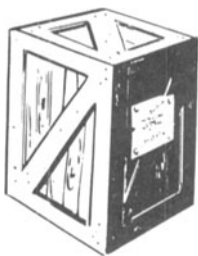
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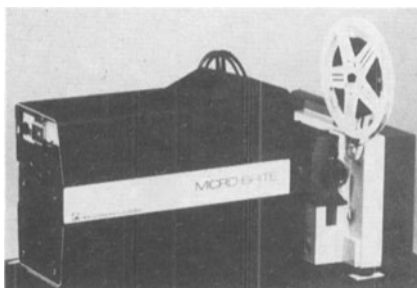
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Further information about these items can be obtained direct from the addresses given. As in the case of technical papers, the Society is not responsible for manufacturers' statements, and publication of these items does not constitute endorsement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



The Micro-Brite super-8 projection system, announced by Optical Radiation Corp., 6352 N. Irwindale Ave., Azusa, CA

91702, is capable of projecting up to 2,000 lm of light output for use in situations, such as small theaters, auditoriums, etc., requiring high-intensity projection. It can also be used under high ambient light conditions. The system consists of a modified Bell & Howell Model 489Z super-8 magnetic sound projector, a Micro-Brite high-intensity lamphouse (xenon light source) and a separate power supply. The lamphouse is mounted perpendicular to the projector on a veneered wooden mounting plate. Visible light from the lamphouse is projected onto a 45° mounted dichroic cold mirror where it is reflected through the projector to the film gate while film-damaging infrared energy is transmitted through the mirror.

The projector has a flexible magnetic sound reproduction system which has manual sound-on-sound recording capabilities as well as normal recording and playback with a single interchangeable sound-head fulfilling all functions. A single knob actuates all running functions of the projector including forward and reverse projection, fast rewinding and automatic film threading onto the take-up reel.

The lamphouse contains a 500-W xenon bulb and an electroformed metal reflector housed in a metal case. A single switch at the rear of the lamphouse turns on the fans in the lamphouse and power supply and energizes the bulb. Power supplies are available with either a fixed current output or a variable output for adjusting the light from 800 to 2,000 lm. Price of the system, including lamphouse, projector and power supply is \$2,250. Xenon bulbs are available at a price of \$245.



The TVision Film System, designed to combine the central control and flexibility of videotape with the quality of film, has been announced by TV Associates Inc., 74 W. 47 St., New York, NY 10036. In operation, as many as six TVision cameras feed video images to separate monitors on a central control console. The director instructs the cameraman by intercom where he wants the particular camera coverage. With override controls, zoom, iris and focus can be controlled from the console. When activated from the console, each camera records on color film the exact picture being shown on its monitor. The picture selected by the director for filming appears on a master monitor and is recorded on 1/2-in videotape together with the digital footage count and shows which cameras are operating. Film runs only in the cameras which are activated from the console.

A 4-track 16mm magnetic sound system records two tracks of program sound, one track of synchronizing signals coded to each camera and one cue track of camera instructions from the intercom. The result is a coded color film from up to six separate camera positions, controlled and selected by the director, plus a rough-cut on videotape coded to a 16mm magnetic soundtrack. Any portion of the rough-cut videotape can be reviewed at any time during filming. The system uses Eclair cameras.

Weighing less than 600 lb, the system can be broken down for portability. The TVision Film System is sold only to government agencies or outside the United States. It can be leased at a rate ranging from \$1500 to \$3000 per day for a full mobile studio.

The RCA Americans, a new line of black-and-white closed-circuit cameras, has been announced by RCA Corp., Closed-Circuit Video Equipment Marketing, New Holland Pike, Lancaster, PA 17604. The cameras have been designed primarily for use in industrial surveillance, audio-visual applications, education, training, security, etc. All of the new cameras have integrated circuit construction, automatic light compensation, 2/3-in RCA vidicon camera tubes and easy-to-use controls. The cameras will be available in March, with the exception of two models, the TC1005 and the TC1010, that will be available about mid-1974. Both cameras have been designed for sophisticated education, training, TV production and other applications requiring greater overall performance.

The TC1000 has been designed for flexibility with all external interfaces—camera mounts, lens, output controls—designed for use with a broad variety of systems. Fea-

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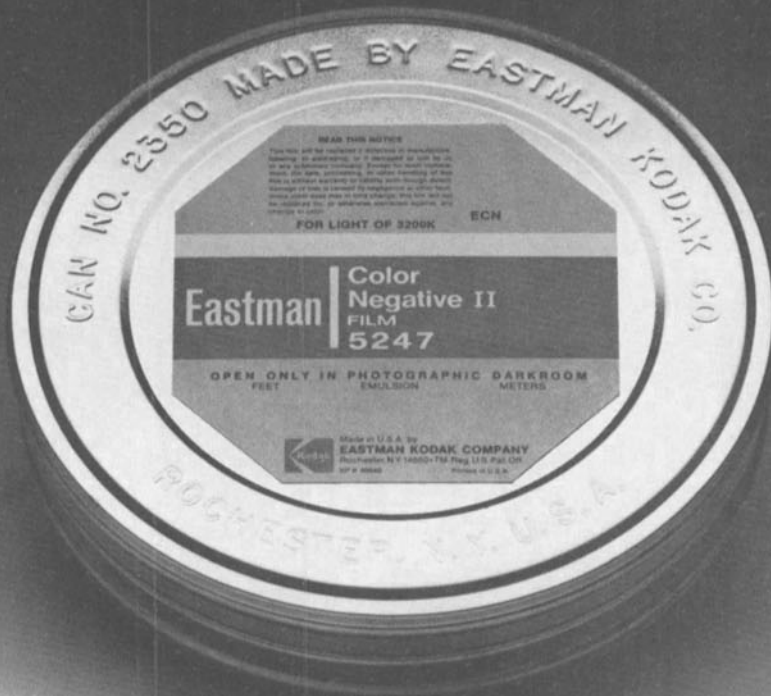
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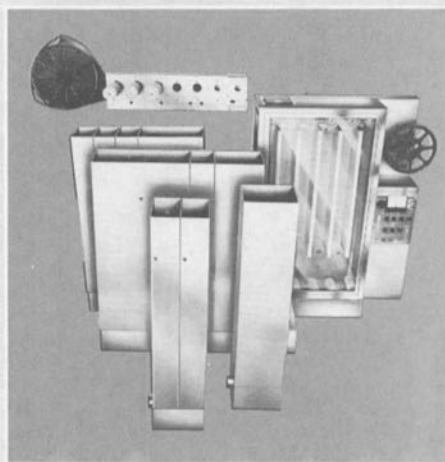
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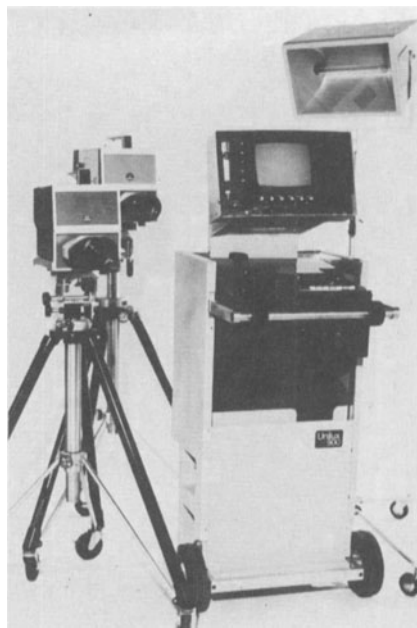


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tures include controlled video response for cutting down smears and confusing white outlines; a 10:1 gray scale permitting identification of faces even against bright backgrounds; 550 line resolution; $f/1.6$ lens; 8,000:1 automatic light compensation and high sensitivity with usable pictures in dim interiors or bright sunlight. The TC1000 is priced at \$260.

The TC1055 and TC1056 cameras were designed for use primarily with small videotape recorders but they can also be used in studio systems. They are priced at \$375 each.

A high-resolution monochrome camera capable of 1280 scan lines per image for nonbroadcast applications where maximum resolution and clarity as well as a very high signal-to-noise ratio are required has been announced by Ampex Corp., 401 Broadway, Redwood City, CA 94063. Called the VFS camera (vidicon, flat-field standard) it can be used for document entry, high-detail surveillance, medical photography, such as fluoroscopy and for radiography, thermography and optical information processing. The video bandwidth is 7.2 MHz and the video signal output is 1 V (at 75Ω) compositive video, black positive, sync negative. The camera records at 15 frames/s, non-interlaced at 1280 lines. The camera is 10 by 10 by 22 in and operates under normal power requirements. The price of \$20,600 includes the camera head, control unit and interconnect cabling.



The Unilux 900-2C, a two-camera, split-screen videotape system for easy, blur-free viewing of machinery operating at full speed, has been announced by Unilux, Inc., 290 Lodi St., Hackensack, NJ 07601. The two cameras and split-screen viewing on one monitor provide simultaneous videotape recordings at two different angles of a machine or manufacturing operation. The videotape (possibly of an overall view and a specific detail, or two separate but

concurrent operations) can be played back immediately on the television monitor in slow or stop motion.

The videotape recording system can be used wherever processes or machines operate at such high speeds that the eye sees only a blur. The blur disappears because the machinery is illuminated by a specially designed high-intensity electronically pulsed light with a pulse duration of $1/100,000$ s, producing sharp pictures that make the machine look motionless. The production cycles can be played back at full speed or in slow motion or one picture at a time. An optional spotlight source enables viewing tunnel or cavity locations.

The two cameras, each equipped with a zoom lens, permit extreme closeups or coverage of large areas. The videotape recorder eliminates the "noise bar" in the picture when playing back the videotape in slow motion. The videotape may be reused many times or stored for future analysis. The audio channel permits the recording of the sounds made by the machinery and the user to describe what is being taped. During replay the user can hear and interpret what is seen on the screen. The system is packaged in a portable unit that can be rolled around a plant or moved from location to location in a station wagon. The price is \$18,900. The system is also available on a lease-purchase plan.

The CVS 504, a single digital time-base corrector for use with $\frac{1}{4}$ -, $\frac{1}{2}$ -, $\frac{3}{4}$ -, 1- and 2-in non-segmented helical videotape recorders, has been announced by Consol-

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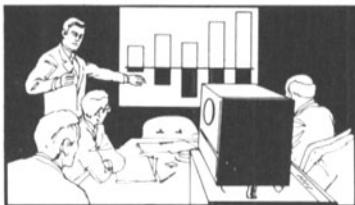
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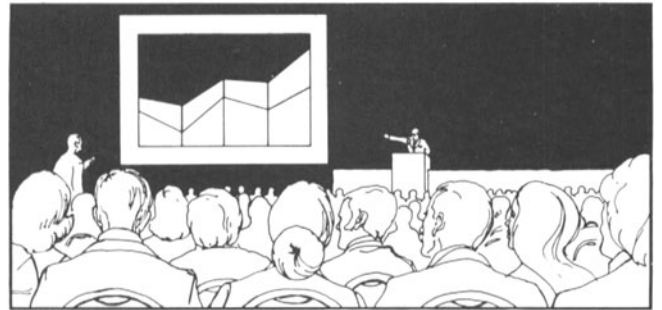
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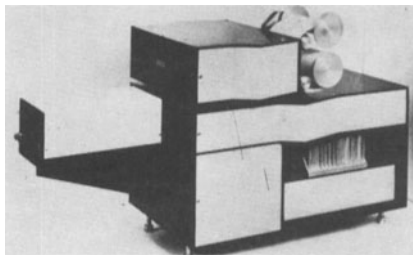
GE large screen television projectors

idated Video Systems, 300 Edward Ave., Santa Clara, CA 95050. The system includes a built-in processing amplifier, an EIA sync generator and velocity compensation. By using the built-in sync generator to drive externally either a camera or a film chain, it is possible to use even a non-capstan, servoed videotape recorder as a camera source. Other features include a color interlacer switch that makes possible phased interlaced color when a recording is played back on a quadruplex recorder. Price of the CVS 504 is \$9,850.

Datametrics Model SP-1000-101, a system combining a time code translator and automatic tape search system in a single chassis has been announced by Datametrics, Inc., 340 Fordham Rd., Wilmington, MA 01887. The instrument reads an IRIG-E time code from magnetic tape, decodes the time of day information and provides control signals to the tape transport and external equipment. The unit includes a wideband AGC amplifier for reading the input code over a frequency range of 100 Hz to 250 KHz and an amplitude range of 100 mV to 10 V. Manual controls and pushbutton switches provide for manual or automatic search in both directions and allow selection of search, single cycle and recycle modes of operation. The instrument is supplied in a 19-in rack and is powered by 115 V ac at 50 to 400 Hz. The price is \$2,745.

A new **EEOCO interface unit** which permits use of the BE430 Edit Programming

Modules with the Ampex 1200/2000 AVR-1 Quadruplex VTR and which also accepts Ampex Editec, has been announced by Electronic Engineering Co. of California, 1441 East Chestnut Ave., Santa Ana, CA 92701. In addition to the interface units certain modifications are required to the videotape recorders, including replacement of the cue playback amplifier with a wideband unit to allow high-speed search, minor changes to the VTR editor to provide edit previews before an edit, modification to the capstan servo to accommodate synchronization capability and modification of the wind motor circuitry for auto search and cue. Price of the BE430 quadruplex interface is \$750.



The Instant Caption Machine ICM 300, a TV captioning system incorporating a Polaroid camera, has been announced by Engineering Designs and Supplies Ltd., Cores End Rd., Bourne End, Bucks SL8 5AY, England. (It is available in the United States from Listec Television Equipment Corp., 35 Cain Dr., Plainview, NY

11803.) Captions reproduced by the camera measure $4\frac{1}{2}$ by $3\frac{3}{4}$ in and are loaded in a twin magazine unit with a capacity of 60 slides. The magazines advance alternately when the machine is on automatic operation, allowing a sequence of credits to be stored; a random access facility allows individual captions to be selected with a maximum change time of about 3 s. The machine is equipped with a 2000-line capacity caption roller which can be used as a prompting source. It has a speed range of 1.5 to 15 s/frame with reverse, plus fast wind and rewind. White or black paper is available allowing the production of either black on white or white on black captions. The control logic of the caption selectors is fully solid state and each function has a separate plug-in board. Illumination throughout the machine is provided by two 50-W 12-V quartz halogen lamps per display. The caption roller and its associated lighting unit is mounted on top of the machine and the optical paths from slide and roller are merged by means of half-silvered mirrors. The machine, with the camera but without the roller, is 24 in long, $15\frac{1}{2}$ in wide and $19\frac{1}{2}$ in high. It weighs about 88 lb. The price is about \$8,750.

A new **silicon cell detector head**, Model 820-11, for measuring the luminance of distant surfaces in terms of footlamberts, has been announced by Gamma Scientific, Inc., 3777 Ruffin Rd., San Diego, CA 92123. $\frac{1}{2}^\circ$, 1° and 2° apertures are available. Universal focus is 10 ft to infinity.



SOCIETY OF PHOTOGRAPHIC SCIENTISTS & ENGINEERS

The Society of Photographic Scientists and Engineers is holding its 27th Annual Conference in Boston, Massachusetts. The week-long conference will be hosted by the Boston chapter and held downtown at the Boston Sheraton from April 28 through May 3.

The conference plans to cover a wide range of subjects of particular relevance to today's photographic scientists and engineers. Technical details of the Polaroid SX-70 are expected; recent advances in the special problems of in-water photography will be presented; the current understanding of photographic pollutants and the present methods of elimination will be discussed. The conference will also be well represented by scientists in the more basic fields of emulsion research, sensitization, processing and image evaluation and by engineers in the mechanics of processing, micro-electronic photofabrication, under-water photography, and chemical recovery systems.

The conference features a two-day, in-depth seminar on Microdensitometry, an aspect of photographic science which has recently been undergoing significant investigation in recent years. The wide range of good speakers, the concentration of technical professionals in the area, and the charm of Boston should combine to make this meeting a resounding success.

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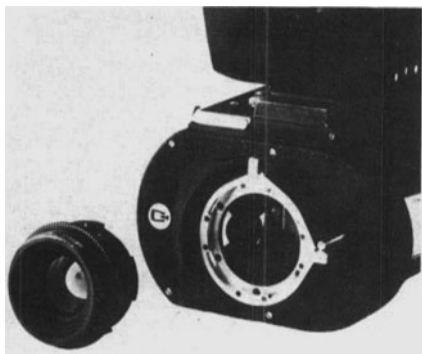
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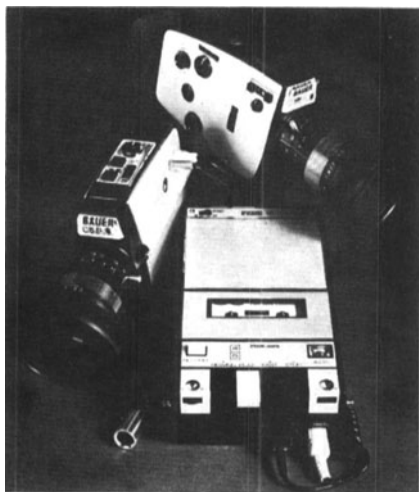
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A new front lens support housing for Mitchell Mark II and S35R cameras which permits them to accept all BNCR-type lenses has been announced by Cinema Products Corp., 2044 Cotner Ave., Los Angeles, CA 90025. The modification consists of an entirely new front casting and lens support system which can be easily interchanged with the existing front casting on the cameras. The new "hard front" conversion for the Mark II and S35R cameras is priced at \$950.

The Universal Crystal Sync Motor Control for Beaulieu super-8 and 16mm cameras has been announced by Communication Arts, Inc. P.O. Box 478, Bernardville, NJ 07924. The device has previously been used with professional 16mm and 35mm cameras without modification. It can be used in teaching film techniques to instruct students in double system sound techniques with 8mm film that can later be used with 16mm or 35mm film. Price of the device is \$650 including a cable.



A special conversion service for Bauer Super 8 Movie Cameras to enable them to accept the Optasound synchronized sound system has been announced by AIC Photo, Inc., 168 Glen Cove Rd., Carle Place, NY 11514. The Optasound system automatically interlocks with the Bauer camera to provide lip synchronization for filming and editing providing an editable film and a choice of speeds at 18 or 24 frames/s. The basis of the Optasound conversion is a perforated cassette tape with the same

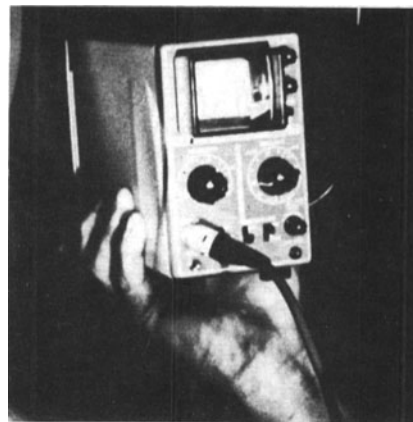
perforation pitch as super-8 film, thereby providing a one-to-one relationship between the film and the sound tape. As the perforated tape passes through the Optasound recorder, the perforations are read electronically by a photo cell creating a pulse which acts as governor on the motor of the camera. The electronic interlock ensures exact lip sync no matter how often filming is stopped or started. The Optasound conversion is priced at about \$29.95.

A new shoulder pod specially designed for use with all CP-16 TV-newsfilm/documentary cameras has been announced by Cinema Products Corp., 2044 Cotner Ave., Los Angeles, CA 90025. Compact and lightweight, the shoulder pod is constructed of molded fiber glass and cushioned with a foam pad. It has a 17° slope designed to accommodate the normal human shoulder slope. The pod is adjustable front-to-back as well as side-to-side. The price is \$60.

A cassette duplicating system capable of producing more than 10,000 C-30 copies in eight hours has been announced by Audio/Tek Inc., P.O. Box 5012, San Jose, CA 95150. Designated Model 1200, of loop-bin design, the master unit can handle up to 12 four-track reel-to-reel or reel-to-cassette slaves. Each slave accommodates a 10½-in reel and runs at 60 in/s to conform with the master's 32:1 speed ratio. At this speed each reel-to-reel slave can produce about 120 C-30 copies per hour. Model 1200 uses a ¼-in master tape. It has automatic load and unload features at cut setup time and it can be run completely unattended. It operates on 117 V ac at 60 Hz. The Model 1200 master unit is priced at \$6,750.

A new limiter for FM, TV audio and mastering applications that require independent control of both high-frequency program energy and broadband program peaks has been announced by Inovonic, Inc., 1630 Dell Ave., Campbell, CA 95008. Designated Model 210, the instrument has a fast peak limiter and a frequency selective limiter in a single rack-mounted unit. The fast peak limiter has separate controls for peak ceiling and attack and release timing as well as ripple-cancelling circuits to assure low distortion even at high frequencies. The frequency selective limiter uses plug-in inserts to complement a wide variety of high-frequency overload characteristics. Model 210 is priced at \$490.

The BCR-200, an automated broadcast cartridge system designed for commercial spot announcements as well as for full-length program recording and playback, has been announced by International Video Corp., 675 Almanor Ave., Sunnyvale, CA 94086. The machine is available in either a 6- or a 12-deck configuration with each deck offering one hour of playing time. All decks are integrated with a simple-to-operate automatic programmer so that spot announcements as brief as 10 s as well as one-hour programs can be randomly or sequentially selected. Tapes recorded on the BCR-200 can be removed from the cartridge and played back on any IVC recorder including the IVC-960 broadcast recorders. The price for the BCR-200 6-deck configuration is \$66,000. For the 12-deck model the price is \$99,000.



An oscilloscope, weighing 4 lb, designed for on-site check-out and servicing of TV, CATV and radio broadcast equipment has been announced by Telonic Industries, Inc., 21282 Laguna Canyon Rd., Box 277, Laguna Beach, CA 92652. The new oscilloscope can be handheld or hung from a neck strap to permit testing the equipment without removing it from service. It is 3.5 in wide, 5 in high and 7.75 in deep. It contains a 1.5-in CRT screen that is enlarged to 2.25 in by a snap-on magnifier. It is powered by an ac line or by a battery pack providing five hours of continuous service before requiring a recharge. It is capable of covering a frequency range from dc to 5 MHz. It has high sensitivity, 10mV per division and a maximum sweep rate of 0.3 μs per division. It is available in two models, Model 9601A, a single trace version, and Model 9602A, a dual trace version. Accessories available include carrying case, ac adaptor and test leads. Battery pack and test probes are optional. Prices start at \$595.

Target System 8, Model 8000, a lightweight super-8 projector with integral rear-screen projection, has been announced by Target Systems Corp., 20731 Prairie St., Chatsworth, CA 91311. Entirely self-contained, it has been designed specifically for audio-visual presentations, point-of-purchase displays, training, education and similar applications. The projector employs a specially-designed endless loop cartridge design which does not require rewinding. The film may be programmed to run continuously, or to stop automatically at the end of each presentation or to stop at pre-selected frames. The unit has a slide-out lamp drawer with a spare lamp compartment for a quick-change lamp replacement. Model 8000 is priced at \$274.50.

A new bulk tape eraser designed for heavy-duty industrial use in sound and video recording studios, broadcast stations and for computer applications has been announced by Microtran Company, Inc., 145 East Mineola Ave., Valley Stream, NY 11582. Designated Model HD-20, it provides bulk erasure of program and residual noise from magnetic tape up to 1 in wide on reels 10½ in diameter and magnetically striped film up to 35mm. It may also be used for video and sound cartridges and cassettes. It provides erasure up to 90 dB below saturation level and reduces tape hiss to the level of new tapes. The price is \$75.