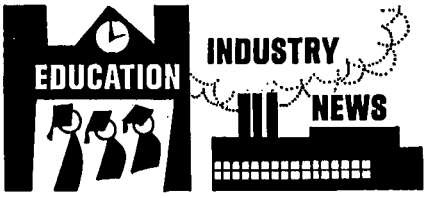


Hope Reports AV-USA 1972 reveals that audio-visual communications spending passed the $1.9 billion mark in 1971, an 8% gain over 1970. (The increase in 1970 was only 3% over 1969.) Audio-visual product sales of equipment and materials were up 8%, amounting to an estimated $1,440 million in 1971. This figure includes domestic sales and sales for export. Sales of audio-visual materials totaled an estimated $793 million, which amounted to a 9% gain over 1970 sales. Equipment sales rose 7%, reaching an estimated $541 million.

Of all media, filmstrips proved to be the "hot" item with sales jumping 17%. Nontheatrical motion pictures, which had dipped 2% in 1970, came back strong with a gain of 8%. Pre-recorded tape cassettes, records, reading materials, slides, multimedia kits, study prints, maps and globes had a good year, with sales rising 10% in 1971. The only soft spot in the materials picture was that of magnetic tape. Several hardware lines had strong sales gains in 1971. Sales of audio-visual program control devices climbed 27% while studio and film production equipment went up 18%.

Presentation equipment, such as magnetic boards and similar units, rear-projection screens and other items came back from a big decline in 1970 by increasing 19%. Audio equipment sales scored a 14% increase.

Motion-picture projector sales were good; 16mm projectors were up almost 7% and super-8 projector sales were up 12%. Dollar volume of both videotape recorders and closed-circuit TV cameras dipped although unit sales were up slightly.

The data reported above are contained in the first volume of the 1972 Hope Reports annual series, published by Hope Reports, 58 Carverdale Dr., Rochester, NY 14618. *AV-USA 1972* is priced at $100 (hard cover) or $95 (soft cover). *AV-USA 1972* will be followed by a detailed study on the educational markets. A third volume on training and the industrial TV market will appear in 1973 during the winter.

A conference on Video and Data Recording will be held July 10–12, 1973, at the University of Birmingham. The conference is being organized by the Institution of Electronic and Radio Engineers, 8-9 Bedford Square, London WCIB 3RG, England, in association with the SMPTE, the Institution of Electrical Engineers, the Royal Television Society and the Institute of Electrical and Electronics Engineers. Chairman of the Organizing Committee is R. Larry of BBC. Papers will be presented on such topics as Theory of Recording Processes; Magnetic Recording Media, Techniques and Hardware; Coding and Modulation; New Application Areas and New Recording Techniques and Media. Under this last general topic will be grouped: Video — mechanical plastic disc, electron beam, holographic; Digital — laser beam (including magnetooptic memories), magnetic bubble devices, and holographic memories. Synopses for papers will be accepted until Nov. 17. The announcement emphasized that the topic headings are intended only as a guide and that papers on related fields will be welcomed.

Plans for a National Metric Planning and Coordination Council were discussed at a meeting held September 7 at American National Standards Institute, Inc., 1430 Broadway, New York, NY 10018. The meeting was attended by representatives of government and industry who reviewed the present situation in the United States in respect to metric usage. A report on the status of pending metric legislation was presented. The proposed new Council will be composed of representatives from industrial, labor, consumer and government organizations. It is expected that the Council will be involved initially in the development, promulgation and implementation of metric standards.

A new program in Biomedical Communications, leading to the Bachelor's degree, has been announced by Rochester Institute of Technology's School of Photographic Arts and Sciences, One Lomb Memorial Dr., Rochester, NY 14623. The program is designed to train communications specialists for work in hospitals, medical research centers, universities and health organizations. The program starts at the third-year level and provides students with knowledge of the uses of such multimedia communications systems as photography, closed-circuit TV, motion pictures, slide and film presentations, graphic arts and tape and cassette sound systems.

A new program in Communications, leading to a B.A. degree, has been announced by Timothy W. Costello, President of Adelphi University, Garden City, NY 11530. The new program will explore fundamental theories, skills and experiences in video production, film, multimedia presentation, art and design, writing, foreign language study, foreign film, photography, dance, music, advertising, journalism, magazine editorial and production techniques, playwriting, screen writing and FM radio broadcasting, as well as providing scientific background in the physics, physiology and psychological effects of light and sound. Related courses are offered in cultural studies, contemporary sociology and public opinion and propaganda.

An Institute of Data Processing by Optical Diffraction Analysis will be held Jan. 15–16 at the University of Wisconsin, 600 West Kilbourn Ave., Milwaukee, WI 53203. The Institute is intended to give the participants an introduction to methods of analysis of a wide variety of spatial data. The specific applications illustrated for the earth sciences apply equally well to other sciences, the announcement stated.

RCA Corp. has endowed two professorships — one at Harvard Business School and one at the Sloan School of Management, Massachusetts Institute of Technology — honoring the memory of David Sarnoff who died in 1971. Grants totaling $2 million will support the program (designated the David Sarnoff Program). It will be conducted jointly by the two schools and will include, besides an endowed chair in each school, a joint seminar open to students of both schools. The first two professors to be appointed to the David Sarnoff Chairs are Richard S. Rosenbloom, of the Harvard Business School; and Donald G. Marquis, of the MIT Sloan School of Management.

The Society for Information Display, 654 N. Sepulveda Blvd., Los Angeles, CA 90049, will hold the 1973 International Symposium May 15–17 in New York. Papers describing significant developments in display hardware and software techniques, devices, systems and applications will be presented. The papers program will include a number of areas of interest, such as human factors and perceptions, laser displays and holography, color displays, 3-D displays, image storage and retrieval and many others. The Program Secretary is H. Joseph Hoehn, Owens-Illinois, LDP 30, 25875, U.S. Rt. 25, Perrysburg, OH 43551.

Birns & Sawyer, Inc., 1026 N. Highland Ave., Los Angeles, CA 90038, has set up a program whereby student filmmakers and other interested persons can participate in equipment seminars designed to familiarize the students with modern motion-picture equipment. Classes from universities, colleges and other groups interested in filmmaking are welcome, the announcement stated. Experts, made available by the company, will conduct the seminars and participate in discussions.

Color and the Behavior of Colorants, a practical training course, will be presented Jan. 22, June 11 and Sept. 17 at the Macbeth Color and Photometry Div., P.O. Box 950, Newburgh, NY 12550, and Feb. 19, May 21 and Nov. 12 at the Kollmorgen Technical Center, Dixie River Rd., Charlotte, NC 28210. The one-week course includes basic information on color theory, color measurement and colorant formulation. Emphasis is placed on applying theory to practical operations in industry. Laboratory exercises provide experience in applying the theories described in the lectures to the solution of typical industrial color problems. Included in the course are discussions of methods for describing and measuring color and of the factors which affect the measurements. The course is conducted by members of the Kollmorgen Corp. professional staff. Registration is limited to a small group of students.

Cinema Perspective, a new publication of Cinema Products Corp., 2044 Cotner Ave., Los Angeles, CA 90025, is available to members of the motion-picture and television industries upon request. The first issue (Fall 1972) — 16 pages and illustrated in color — contains articles on motion-picture production by Herb A. Lightman and Milton Forman. Edmund M. DiGiulio, President of Cinema Products, presents a paper on "Crystal-Controlled Cordless Sync" in question and answer format. An interesting interview with Joe Longo, entitled "FAR in Bangladesh"

(FAR is Foundation for Airborne Relief) contains a number of interesting color photographs illustrating a very "human" informal interview. An article by Ruhama Auerbach, "A Producer's Lens," describes the Canon K-35 25-120mm T/2.8 Macrozoom lens.

Stage 12, the production arm of Grand River Cable TV Ltd., 48 Preston St., Kitchener, Ont., Can., has been redesigned to contain seven shooting areas, including an area for the two men and one woman normally on the anchor squad; a high desk for displays or demonstrations; an interview or discussion section; locations for maps, diagrams or art displays; and positions for soloists, with accompaniment, and choruses of up to 12 members. Programing, which will run each night from 7 to 11 P.M., will contain live segments from Stage 12, videotaped interviews, news reports and features from the Grand River Cable TV viewing area, and both live and telephoned reaction from viewers as the program unfolds each night. The "open concept" programs developed each evening from 7 to 11 P.M. will be rebroadcast the following day from 3:00 to 7 P.M.

Grand River Cable TV operates the fourth largest cable TV system in Canada. It has more than 61,000 subscribers and in the Kitchener area it serves about 90% of the households with television sets.

Kollmorgen Corp., Hartford, Conn., has announced formation of the Macbeth Color and Photometry Div., P.O. Box 950, Newburgh, NY 12550. The new division has been formed by the consolidation of four divisions — Macbeth Div., Munsell Color Div., Color Systems Div. and Macbeth Research Laboratories. The former Macbeth Div. manufactures equipment to measure and evaluate light. Munsell Color Div. markets Munsell color standards. Color Systems Div. produces colorimeters, radiometers and other equipments for color formulation and correction. Macbeth Research Laboratories conducts research in such areas as color perception, color formulation and color measurement. The new division will provide services to manufacturers who are affected in any way by color formulation, measurement or control.

The Norelco brand of professional motion-picture projectors, sound and theater automation equipment is now marketed in North America by a new American firm, Kinotone, Inc., established by Kinoton GmbH of Munich, Germany, according to an announcement made jointly by John S. Auld, President, Philips Broadcast Equipment Corp., and Hans P. Zoller, President, Kinoton GmbH. Norelco equipment was formerly handled in America by the Motion Picture Equipment Dept. of Philips Broadcast Equipment Corp. under the management of Niels Tuxen. The trade name "Kinotone" will replace "Norelco" on all products.

Directors of Kinotone, Inc., are Mr. Zoller, President, James H. Link, Vice-President, and Yolanda R. Virga, Vice-President and Secretary/Treasurer.

Minolta Corp., which supplies cameras, photographic equipments and business machines, has announced construction of a new building in Torrance, Calif., a suburb of Los Angeles. The firm's headquarters are in Ramsey, N.J. The building in Torrance will cover about 30,000 ft² with room on the site for possible expansion. About 100 people will be employed at the new facility.

Westinghouse Electric Corp. has announced expansion of color TV production facilities at its Electronic Tube Div. plant in Elmira, N.Y. The expansion, representing a $3 million investment, is to meet demands by television set manufacturers for color picture tubes, particularly Lustrocolor Mark III tubes, a new high brightness tube introduced by Westinghouse, the announcement stated.

Eastman Kodak Co. has announced plans for expansion of Kodak Apparatus Div.'s Elmgrove Plant in Gates, N.Y. New construction will add about 800,000 ft² to the facility and will include a manufacturing building, warehouse, drainage systems, parking facilities and supporting utilities. Design studies call for a two-story assembly building and an adjacent automated warehouse. The new facility is an expansion of manufacturing capabilities to meet the future growth in demand for Kodak's new pocket Instamatic and other items of photographic equipment.

Laser light can be used to write information (words, numbers or drawings) on a liquid crystal contained in a small glass slide which can be projected onto a large screen or wall by using an ordinary slide projector, it was announced by Bell Telephone Laboratories in describing a recent development. The laser liquid crystal displays are presently being considered for use at Bell Telephone Laboratories in an experimental "remote blackboard" system for transmitting and receiving handwritten information over the Bell System telephone network. A liquid crystal cell could be used at the receiving end of such a system where coded pulses of information could be used to direct a laser beam over a light-sensitive medium. In this system, laser "writing" can be projected on a wall or screen.

For display, a liquid-crystal light valve about the size of a 35mm slide is used. The inner surfaces of the glass plates are coated with a thin film — indium-tin oxide — that absorbs light from a focused infrared laser beam and converts it to heat. The coating also serves as a conducting electrode for the erasing voltage. Information is stored in the light valve by "writing" on it with the focused laser beam. Local heating by the beam temporarily raises the temperature of the liquid crystal in the addressed region of the light valve. An hysteresis effect associated with a "phase transition" takes place, changing the chemical compound's appearance from clear to frosty white.

If the light valve is located in an optical system no more complicated than an ordinary slide projector, while this is happening the pattern being written on the glass plates can be projected on a wall or screen. The projected image will appear as black lines on a white background. The black lines correspond to regions of the light valve where heating has disordered the liquid crystal molecules. The disordered "frosty" regions scatter the projection light and prevent it from reaching the screen. An audio-frequency voltage applied to the plates reorders the disturbed regions and clears the display.

In the Bell Laboratories experiments, about 1/10 g of a mixture of 90% MBBA (p-methoxybenzylidene-p-n-butylanaline) plus 10% cholesteryl nonanoate was used. The cholesteric liquid crystal material was sandwiched as a thin film between two fused silica glass plates (2½ × 2 in) coated with transparent conducting electrodes (indium-tin oxide) and an additional coating of organic material (silane) to orient the liquid crystal molecules. Thermal writing is carried out by deflection of an Nd:YAG laser beam at 1.06 μm wavelength. He-Ne or GaAs lasers could also be used.

Power absorbed from the addressing beam locally heats the liquid crystal above its isotropic-cholesteric phase. Visible light is strongly scattered by the disordered regions. Line widths of 15 μm or more are readily obtained by moving a 5-mW laser beam (absorbed power) at speeds up to 10 cm/s across the liquid crystal cell.

Written images can be viewed for hours, days or weeks with minimum loss in resolution or contrast. Erasure is accomplished by applying a 35-V 1.5-kHz voltage between the transparent electrodes.

A laser image transmission system that can transmit and receive images from a variety of sensing devices as well as original photographic copy has been developed at RCA Corp.'s Government and Commercial Systems, Moorestown, N.J. The system incorporates RCA Corp.'s LR70 and LR71 laser scanner/recorders. Each system terminal has the capability to scan pictures for real-time transmission to remote terminals or to record images received from a remote terminal. The system is capable of transmitting up to 7,500 lines/s, making it possible to transmit a 25,000-line image in less than 4 s. Images may be transmitted one frame at a time or in a continuous strip. Also, operators can adjust the resolution, film size and scan rate of the laser image transmission system to make it compatible with other systems which have narrower bandwidths and slower transmission speeds.

When used as a film scanner, a 4½-μm laser beam spot is mechanically scanned across the film transparency. The beam's intensity is modulated by the variations in the film's gray-shade density. The modulated spot then is imaged on a photomultiplier tube where it is converted into an electrical signal for transmission. At the recording terminal, the electrical signal transmitted from the scanner or sensor is fed into an electrooptic light modulator which regulates the intensity of the laser beam as it is scanned across an unexposed film surface.

Altec Corp. has opened the Altec Service Center at 131 Katella Ave., Anaheim, Calif. The 20,000-ft² building will house the firm's warranty and repair service facilities and overflow warehouse. Equipments produced by Altec include commercial sound and high-fidelity products, in-

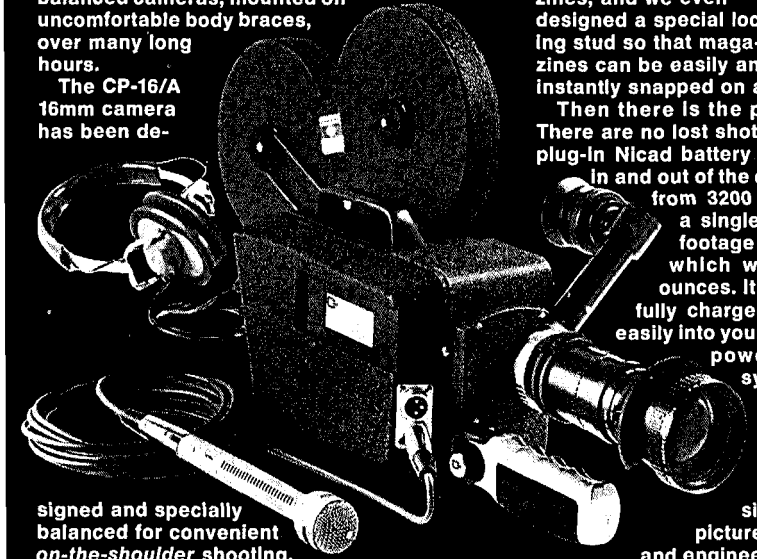
The New CP-16/A (with Crystasound). A Cameraman's Kind of Camera.

Tired of the daily struggle with backbreaking body braces, unwieldy tripods, and heavy, poorly balanced cameras? Tired of dangling power and sound cables? Encumbered by quickly exhausted battery packs? Frustrated by a noisy camera movement? Annoyed with "tack-on" sound equipment? Feeling crushed under the weight of it all?

We, at Cinema Products, believe that we have designed a unified camera and sound system that will solve all of these problems.

Take backaches, for instance. Backaches may sound funny to some people. To a TV-newsfilm cameraman they're no joke. More and more TV-newsfilm cameramen have been reporting severe and crippling backache conditions as a result of carrying heavy and poorly balanced cameras, mounted on uncomfortable body braces, over many long hours.

The CP-16/A 16mm camera has been designed and specially balanced for convenient *on-the-shoulder* shooting.



It weighs a little less than 17 pounds when fully equipped. And "fully equipped" means *fully.* With 400-ft. magazine loaded with 400 feet of film. With a 12-120mm Angenieux zoom lens. With a plug-in Nicad battery pack. With a critically accurate crystal-controlled DC servomotor for single and double system sync sound. Plus the Crystasound recording system with built-in amplifier. That's right. Less than 17 pounds!

As for noisy camera movement problems, you've got to "not hear" the CP-16/A to believe how quietly it runs. Our sound tests show approximately 31 dB at 3 feet. But the real sound test is your professional ear, and the actual quality of the sound recording.

Out-of-sync problems? Our CP-16/A is crystal-controlled to the extremely critical tolerances required by *cordless* double system recording, with a frame rate accuracy of ±15 parts per million over a temperature range of 0-140° F. And if something should go wrong, the easily visible out-of-sync warning lamp, located at the front of the camera, will instantly light up.

As for magazine capacity, the CP-16/A accepts standard 400-ft. and 1200-ft. Mitchell-type magazines, and we even designed a special locking stud so that magazines can be easily and instantly snapped on and off the camera.

Then there is the power supply problem. There are no lost shots with our rechargeable plug-in Nicad battery pack. It snaps instantly in and out of the camera body, and drives from 3200 to 4000 feet of film on a single charge. That's a lot of footage from a little battery pack which weighs a mere sixteen ounces. It is so compact—a spare, fully charged battery pack will slip easily into your shirt pocket. And it also powers the CP-16/A sound system.

Lately, more and more TV-newsfilm and documentary cameramen have had to "go it alone," with the responsibility of capturing *both* picture and sound. Designed and engineered from an overall total systems approach, our CP-16/A with Crystasound makes it seem almost easy.

The Crystasound amplifier is part of the camera, and it is powered from the same battery pack. Switchable, variable compression Automatic Gain Control let's you concentrate on filming the event. The headphone monitoring channel automatically switches from live mike to playback when the camera is turned on. We've even provided a special line feed to a tape recorder for those instances where the cameraman is recording simultaneously for TV and radio. The built-in amplifier has two microphone inputs and one line input, all with independent volume control. Other features include automatic bias level, with no adjustment required, preview switch, VU meter, and low power consumption.

Our Crystasound recording system features a special record and playback head, encapsulated in the same module to guarantee absolute alignment for its entire life.

Should you need an auxiliary mixer, our Crystasound auxiliary mixer features: four channels of mike input, one channel of line input, and one condenser mike channel. It also features individual and master volume controls as well as switchable AGC.

For the TV-newsfilm cameraman, the name of the game is lightweight, extremely mobile and reliable equipment, so that he can capture the spontaneous *live* feel of a news event as it happens. We are confident that the CP-16/A provides just that.

With no backaches.

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tercommunications equipments, telephone products and University Sound products. Ray Tomko is National Service Manager at the new service center and Les Davies is Service Manager.

Peter C. Goldmark, who gave the keynote speech before the Federation of Rocky Mountain States, described innovations of existing science and technology which would make it possible to eradicate a dangerous national living pattern in which more than 184 million people are crowded into less than 10% of the livable land area in the United States. In speaking on "Technology and the Future," Dr. Goldmark described the "new rural society" that could be achieved by using telecommunications techniques to overcome the present imbalance of rural-urban population distribution and to provide persons in rural America with cultural enrichment, improved health care and better educational and employment opportunities.

Dr. Goldmark, President and Director of Research, Goldmark Communications Corp., One Communication Plaza, Stamford, CT 06904, has long been concerned with environmental problems and the alarming concentration of population. He believes that a redistribution of population to create a new rural way of life is possible through use of communication techniques. In "Communications for a New Rural Society" (*Journal,* July 1972, pp. 152–157), he noted that "A long-term solution to this problem (over-population) calls for total change in our population distribution as well as in our life style — and the key to this plan lies in new applications of existing communications technologies."

Josef Svoboda, Chief Designer of the National Theatre in Prague, Czechoslovakia, is visiting in the United States under the direction of the International Liaison Committee of the U.S. Institute for Theatre Technology, Inc., 245 W. 52 St., New York, NY 10019. During his visit he taught a series of "master classes" in scene design at various colleges and universities. The classes consisted of two-day intensive sessions for a limited number of leading student designers. Mr. Svoboda, who is internationally famous as a stage designer and architect, began his career in Prague in 1945. In 1958 he became known internationally for his development of Laterna Magika, a synchronized fusion of live actors and multiple cinematic projections, introduced at the Brussels World Fair. At Expo '67 in Montreal, his work with a variety of projection techniques involving optics and electronics helped make the Czechoslovakian pavilion one of Expo's outstanding attractions. Mr. Svoboda's most recent achievement is his design for *Carmen* which opened the fall season of the Metropolitan Opera in New York.

Robert C. Crone, President of Film House Ltd., Toronto, Ont., Can., has been elected to the Young President's Organization, Inc., (YPO), an educational organization with an international membership of 2,600 young chief executives who have become presidents of sizable companies before the age of 40. YPO was founded in 1950 to help young presidents become better presidents through education and idea ex-

change. At present it has members in 35 countries. Educational activities include seminars at leading graduate business schools and special seminars and conferences throughout the world. A special week-long meeting called the YPO University for Presidents provides discussions in management, finance, business ethics, humanities, fine arts, psychology, education, government and world affairs. Young presidents are retired from YPO at the age of 49.

Milton Forman, consultant to the motion-picture industry, with offices at 708 N. Alpine Dr., Beverly Hills, CA 90210, recently made an extended trip to Japan and Germany. He went first to Japan where he visited with executives of Canon, the manufacturers of the Canon K-35 Macrozoom Lens. He suggested further research leading toward the development of new high-speed lenses for 35mm studio cameras. He then went to Germany, first to East Berlin, where he presented a paper at the UNIATEC 10th international conference, and then to Cologne where he attended Photokina '72. The paper he presented at the UNIATEC conference described a new lightweight, silent 35mm studio-type motion-picture camera developed by Cinema Products Corp.

Norwood L. Simmons, Assistant Vice-President and General Manager of Eastman Kodak Motion Picture and Education Markets Div., has announced plans to retire on January 1, 1973. He has been with Eastman Kodak since 1937 when he engaged in film manufacturing operations at Kodak Park in Rochester, N.Y. In 1941 he moved to Hollywood, Calif., and in 1964 he became General Manager of the West Coast Div. In 1965, he returned to the East Coast as General Manager of the Northeastern Sales Div. and in 1969 he was appointed to his present post and elected Assistant Vice-President.

Dr. Simmons will be succeeded as General Manager of the Motion Picture and Educational Markets Div. by Anthony Frothingham, who is now Assistant General Manager.

Herbert E. Farmer, of the University of Southern California's Div. of Cinema, has been appointed technical advisor to a special committee of the International Technical Commission. The committee is concerned with the creation, promotion and adaption of international standards for educational equipment and systems involving reading, copying and reproduction of audio and visual information in the educational field. The Society's Vice-President for Educational Affairs, Mr. Farmer is a delegate to the Educational Media Council and is responsible for its work in the area of standards for educational equipment and systems.

Adrian L. TerLouw, retired from Eastman Kodak Co. on September 1. A native of Holland, Mich., he joined Kodak in 1932 as a sales demonstrator in the Medical Sales Dept. at Kodak Park. In 1933, he moved to Kodak Office as a laboratory assistant. Thereafter he held increasingly responsible positions. In 1965, he transferred to the Motion Picture and Education Markets Div. as a consultant. In 1966, he was appointed Educational Associate, Market Education Center, and in 1967, he was appointed Manager of Program Development. In 1970, he was appointed Consultant in Communications for Distribution, Marketing and Managing Facilities, the post he held at the time of his retirement.

W. A. Morgan, Jr., has been appointed Head of the recently expanded Motion Picture Equipment Sales and Rental Div. of Motion Picture Laboratories, Inc., 781 S. Main St., Memphis, TN 38101. Announcement was made by Frank M. McGeary, President of MPL.

Richard D. Thompson has been appointed Senior Consultant for George T. Howard and Associates, Suite 711, 7046 Hollywood Blvd., Hollywood, CA 90028, consultants on design and lighting of television and motion-picture studios and theaters. Mr. Thompson was formerly Director of Theater and Television Studio Facilities Planning for Imero Fiorentino Associates, Inc., of New York City.

Wallace Pohring has been appointed Eastern Service Manager for Eclair Corp., 73 S. Central Ave., Valley Stream, NY 11580. He will work with Eric Falkenberg, Technical Executive and will report directly to Leo Lukowsky, Executive Vice-

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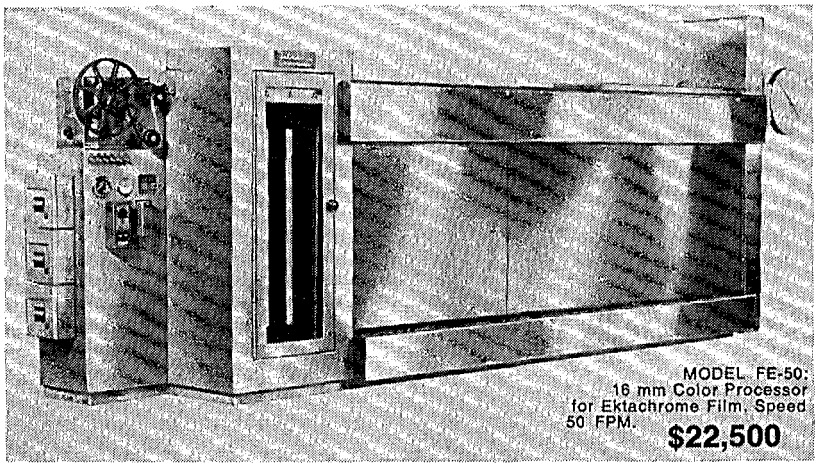

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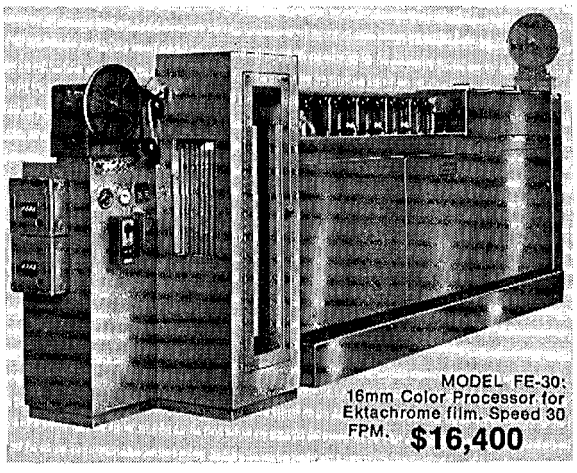

MODEL FE-30: 16mm Color Processor for Ektachrome film. Speed 30 FPM. **$16,400**

- **"FILMLINE OVERDRIVE FILM TRANSPORT SYSTEM"** This marvel of engineering completely eliminates film breakage, pulled perforations, scratches and operator error. The film can be deliberately stalled in the machine without film breakage or significant change of film footage in solutions. The heart of any film processor is the drive system. No other film drive system such as sprocket drive, bottom drive or simple clutch drives with floating lower assemblies can give you the performance capability of the unique Filmline Óverdrive Film Transport System.
- **"TORQUE MOTOR TAKE-UP"** gives you constant film take-up and does not impose any stress or strain on the film itself. Completely independent of the film transport system. This FILMLINE feature is usually found in professional commercial processors but is incorporated on the FE-30 and FE-50 models as standard equipment. Don't settle for less!
- **"TEMP-GUARD"** positive temperature control system. Completely transistorized circuitry insures temperature control to well within processing tolerances. Temp-Guard controls temperatures accurately and without the problems of other systems of lesser sophistication.
- **"TURBO-FLOW"** impingement dryer. Shortens dry-to-dry time, improves film results, and carefully controls humidity content of your valuable (and sometimes rare) originals. Immediate projection capability is assured because the film dries flat without the usual curl associated with other film processors.
- **"ZERO DOWN TIME"** The reputation of any film processor is only as good as its reliability. The combination of the exclusive and special added Filmline features guarantees trouble-free operation with absolute minimum down-time and without continual operator adjustments. Recapture your original investment in 2 years on maintenance savings alone. Filmline's "Push the button and walk-away processing" allows inexperienced operators to turn out highest quality film.
- **"MATERIALS, CONSTRUCTION AND DESIGN"** All Filmline machines are constructed entirely of metal and tanks are type 316 stainless steel, heliarc welded to government specifications. The finest components available are used and rigid quality control standards are maintained.

Compare Filmline features to other processors costing more money. Feature-by-feature, a careful evaluation will convince you that Filmline offers you more for your investment.

Additional Features included in price of machine (Not as extras).

Magazine load, daylight operation ■ Feed-in time delay elevator (completely accessible) ■ Take-up time delay elevator (completely accessible) ■ Red brass bleach tank, shafts, etc. Prehardener solution filter ■ Precision Filmline Venturi air squeegee prior to drybox entry ■ Air vent on prehardener ■ Solid state variable speed D.C. drive main motor ■ Bottom drains and valves on all tanks ■ Extended development time up to two additional camera stops at 50 FPM ■ Pump recirculation of all eight solutions thru spray bars ■ Temperature is sensed in the recirculation line ■ All solutions temperature controlled, no chilled water required ■ Built-in air compressor ■ Captive bottom assemblies assure you constant footage in each solution ■ Change over from standard developing to extended developing can be accomplished in a matter of seconds ■ Impingement dryer allows shorter put through time.

Partial listing of Filmline Color Installations: — NBC- New York, NBC- Washington, NBC- Cleveland, NBC- Chicago, CBS & ABC Networks, Eastman Kodak, Rochester.

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TV Stations: WAPI-TV, WHP-TV, WMAL-TV, WXYZ-TV, WWL-TV, WMAR-TV, WJXT-TV, KETV-TV, WTOP-TV, WEAT-TV, WCKT-TV, WAVE-TV, WAVY-TV, KTVI-TV, WCPO-TV, KTAR-TV, WSYR-TV.

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Proceedings of the Symposium

OCTOBER 7 AND 8, 1971, MONTREAL

Stanley F. Quinn, *Chairman*

From the Foreword: It was the purpose in organizing the Symposium to examine the new technology of videoplayer systems and to consider the likely impact on education, industry and the home. It was hoped to attract not only engineers but also educators and other professionals interested in this new medium of communication. There were four sessions: Perspective Session, in which particular emphasis was placed on the social and economic aspect of the new technology; Utilization Session, in which plans and experience of prospective users were outlined; and two Technical Sessions, which provided a review of the technology of storing audio-video information and new information about videoplayer systems. The matter of the multiplicity of systems standards received particular attention in several of the papers on both days.

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Society of Motion Picture and Television Engineers

9 EAST 41 STREET, NEW YORK, NY 10017

President. Mr. Pohrin was formerly Eastern Service Manager of Cinema Beaulieu.

Harold Sobol has been appointed Head of Communications Technology Research for RCA Corp.'s Communications Research Laboratory in Princeton, N.J. In his new post Dr. Sobol directs a research group concerned with the development of new microwave devices and technology for communication systems. He was formerly Manager, Microwave Microelectronics at the RCA Solid State Div. in Somerville, N.J.

Peter C. Goldmark has been elected to the Board of Directors of Warner Communications Inc., 10 Rockefeller Plaza, New York, NY 10020. Dr. Goldmark is President and Director of Research of Goldmark Communications Corp., Stamford, Conn., which began operations in January 1972 as a WCI subsidiary. Goldmark Communications Corp. is presently concentrating on the development of technology and systems for cable TV, new applications for the advent of domestic satellite communications, electronic publishing, and a method of delivering programed educational material for television use in the home.

Alvin N. Feldzamen has resigned as Audio-Visual Production and Editorial Head at Encyclopaedia Britannica Corp. to enter new media fields, according to a recent announcement. Dr. Feldzamen was formerly with the New York Television Network and he remains a trustee of the Broadcasting Foundation of America. According to Dr. Feldzamen, "Films and television will merge and combine with print materials in the next decade, but the content will always be the important thing. Also, we are going to have to find new ways to market materials."

Ralph Sogge has been elected Executive Vice-President of Ralke Company, Inc., of Los Angeles, an audio-visual engineering firm. Formerly a consultant to the company, he now heads the Operations and Engineering Depts. He was formerly Professor of Communications at Evergreen State College in Olympia, Wash.

Joseph Kalla, of Pittsburgh, Pa., has been promoted from Vice-President of Kollmorgen Corp., Hartford, Conn., to Senior Vice-President, it was announced by Chairman of the Board, Norman Macbeth, and President, Richard Rachals. Presently in charge of the Electro-Optical Systems Group in Pittsburgh, Mr. Kalla will have his principal office at Kollmorgen's headquarters in Hartford. He joined Kollmorgen Corp. in 1969 as a Vice-President. Before then he was President of Goerz Optical Co. until its acquisition by Kollmorgen.

Warren B. Reese has been promoted from Vice-President of Kollmorgen Corp., Hartford, Conn., to Senior Vice-President, it was announced by Chairman of the Board, Norman Macbeth, and President, Richard Rachals. He is presently in charge of the Macbeth Color and Photometry Group. Mr. Reese joined Macbeth Corp. in 1950, working in production and sales management until 1956 when he was elected Vice-

President of the corporation and its subsidiaries in charge of sales, advertising, marketing and product development. In 1961 he was elected to the Board of Directors.

Roger R. Jerry has been appointed Manager of the Montreal Marketing Center for Treck PhotoGraphic Inc., 140 Allens Creek Rd., P.O. Box K, Rochester, NY 14618. He succeeds George K. Alexander who has retired, it was announced by R. P. Bouford, President of Treck PhotoGraphic. Mr. Jerry joined Eastman Photographic Materials Ltd. in Montreal in 1953. He was transferred to Canadian Sales Ltd. in November 1968 and served as Graphic Arts technical representative in the Montreal area. In 1969 he joined Treck in Montreal and he was appointed Sales Manager in 1971.

Mr. Alexander began his career with Eastman Photographic Materials in 1937. He worked in a variety of office positions until 1956 when he was appointed Manager in Calgary. He was made Manager in Montreal in 1958 and when the Treck organization was formed to purchase the assets of Eastman Kodak Stores in the United States and Eastman Photo Materials in Canada in 1968, he remained as Manager with the new organization.

Arnold P. Diamond has been elected President of Movielab-Hollywood, Inc., a subsidiary of Movielab, Inc., of New York. He has been with Movielab since February 1971 when he became Vice-President, Administration and Treasurer.

James R. Irvine has been appointed International Marketing Manager of the Audio-Visual Systems Div. of Technicolor, Inc., 299 Kalmus Dr., Costa Mesa, CA 92626. He was formerly an advertising/marketing assistant for Eastman Kodak's International Marketing Div. In his new post he will be responsible for international sales and marketing of Technicolor super-8 audio-visual equipment, related hardware and services.

Harold P. Bolton has been appointed Vice-President and General Manager of Texas Operations, Technicolor Graphic Services, Inc., Manned Spacecraft Center, P.O. Box 58863, Houston, TX 77058. The firm supplies photographics, laboratory and audio-visual services to NASA. Prior to his present appointment, Mr. Bolton was Assistant Vice-President. He had also been Deputy Project Manager of Technicolor Florida Operations which supplies photographic instrumentation, documentary and laboratory services to the John F. Kennedy Space Center, NASA, and the Air Force Eastern Test Range.

John J. Burlinson, Jr., has been appointed Director of Administration of National Theatre Supply operations in Paramus, N.J. He joined National Screen Service in 1970 as Director of Intercompany Promotions. In his new post he will report directly to Dean Philips, Vice-President in Charge of Sales. His responsibilities will include supervision of all service facilities, warehousing and administration of the NTS manufacturing facility. Mr. Burlinson was Exhibit Chairman of the Society's 111th Conference in New York.

Ronald L. Bailer has been appointed Vice-President of Marketing and Robert N. Stiles has been appointed Vice-President of Sales, Engineering and Service for Allen Products Co., 180 Wampus Lane, Milford, CT 06460. Announcement was made by John Butka, President, who said that the new appointments are in line with the firm's expansion program. Mr. Bailer was formerly with E. I. du Pont de Nemours and Co.

Reela Film Laboratories, Inc., 65 Northwest Third St., Miami, FL 33128, has appointed three executives to new positions. Robert Pell has been appointed Vice-President and General Manager. Robert Miele has been appointed Vice-President in Charge of Operations and Plant Manager and Tom Fischer has been appointed Business Manager. Mr. Pell joined Reela in 1969 as National Sales Manager and was appointed General Sales Manager in 1970. From 1960 to 1969 he was the owner of Sergeant Film Services, Inc., and Registered Film Storage, Inc., in New York City.

Mr. Miele joined Reela in 1970 as Plant Manager. Formerly, he was Technical Director of Movielab in New York City. Mr. Fischer joined Wometco Enterprises in 1964 as Assistant Corporate Controller and Financial Consultant of the Photographic Services Div.