Industry News & Educational Activities

A Request from Chairman Michael Strong of the SMPTE Committee on Audio Recording and Reproduction Technology

Because of the technology explosion, it is impossible for any individual to be fully informed of every advancement in every field of science, but it is the aim of the SMPTE Engineering Committees to keep the members of the SMPTE fully informed of the Committees' activities.

The SMPTE Committee on Audio Recording and Reproduction now recognizes a special responsibility based on the fact that motion picture sound technology has not advanced as fast as other technologies. We are becoming more and more aware of the shortcomings of motion picture sound as we evolve new methods of measuring sound quality and sound distortion as heard in a motion picture theater and at home through the television receiver.

The Society is deeply concerned with the advancement of audio technology, but to be truly effective in this area it must have all available information on the new technology. To this end, our Committee has been serving in an advisory capacity to the Motion Picture Association of America (see *Journal*, p. 536, July) which is conducting a special study — an audio technology survey — through a large and prominent research institute. The purpose of this study is that of bringing together the available experience and ideas of sound specialists, engineers, and technicians around the world.

Recognizing the significance of this study and the importance of information to be supplied by us, the Committee on Audio Recording and Reproduction Technology is seeking from the membership descriptions of and information on any method being considered for use in or improvement of motion picture sound that may incorporate laser technology, digital technology, or any other special or conventional approach.

Members who have any knowledge of such concepts, prototypes, or systems are requested to communicate with the Chairman of the SMPTE Committee on Audio Recording and Reproduction Technology, Michael J. Strong, World Wide Pictures, 2520 W. Olive Ave., Burbank, CA 91505; or the Manager of Engineering Services, Alex E. Alden, at SMPTE Headquarters.

Montreux International Audiovisual Symposium

The first Montreux Audiovisual Symposium, patterned after the Montreux International Television Symposium, held every other year, was attended by audiovisual professionals from 17 different countries. Some impressions noted by observers included the seriousness of the content, the smoothness of the organization in three languages (English, French, and German), and the usefulness of the exchange of views among participants, speakers, exhibitors, and producers. Present plans call for the AV Symposium to be held every other year on the even numbered years and the Television Symposium to be held on the odd numbered years.

The keynote speaker was General Secretary of the Paris-based International Chamber of Commerce, Carl-Henrik Wingwist. He cautioned audiovisual manufacturers, producers, and users about losing sight of the purposes of audiovisual media. "We can become so dazzled by sheer inventiveness," he said, "that we can overlook the principles upon which that inventiveness must be founded." A number of varying views were expressed by the other 47 speakers during the event. Among the statements — "Optical fiber is about to become a widely used means of communication, and so is digital recording"; "Videodisk has now passed the point of no return and is becoming a major product for the mass market."

Among the speakers from the United States were Eugene Demick of Bergen Expo Systems; Rupert L. Stow, Director of Production Systems Analysis for CBS Television Network; Richard G. Schiavo of Eastman Kodak; and Thomas W. Hope, President of Hope Reports, Inc., in Rochester. Hope was Chairman of the Day for the Monday session and was also Panel Moderator for the closing session (20 June) on the theme of "Focus on the '80s." The purpose of the panel was "to raise questions to which the manufacturers will want to respond: namely, how do they see the future in terms of technological developments, trends, and evolution in reference to motivation?"

Hope's closing remarks summed up the various — and frequently conflicting — ideas presented during the Symposium. Excerpts from his remarks are given below:

"You have heard some thoughtful responses to a variety of provocative questions. In general the panelists were in agreement about the future, but there were differences of opinion to be sure. Certainly we shall be using products in years to come which will be smaller and lighter, for example, a newly developed CCD television camera. The film and video technologies will continue to move closer together. Greater concern will be directed toward cost effectiveness.

"There is no clearcut picture of the future for videodisk. It appears that there will be a major commercial/marketing battle among at least three divergent technologies. I personally am aware of the imaginative efforts being made by the group of former IBM specialists who have teamed up with MCA in Disco Vision. They are coming up with concepts that are truly creative. We cannot discount the marketing brawn of RCA, a giant in the United States in the visual communication industry. Their new videodisk is due on the market next spring. And then it appears that the Japanese electronic firms are getting behind the grooveless capacitance system developed by Matsushita.

"Also, as we have seen this week, the use of the slide medium can almost be characterized as the surprise of the past few years. Without much fanfare, this basic photooptical system has developed into the largest AV medium in terms of total dollars spent in the United States last year, accounting for $1.6 billion. Film had a total of about $1.5 billion and video reached the billion dollar level. A whole raft of new products, many involving computer technology, are springing up around the slide. Sales of all AV products in the United States (including slides, film, video, etc.) came to a total of a little more than $3 billion with another $3 billion estimated for the cost of administration, salaries, etc. Actually, that is a small industry although it is considerably larger than the feature entertainment film which totaled $2.8 billion last year in the United States.

The role of audiovisual media in education cannot be overestimated. For example, for Third World nations the job of education is a real challenge, and in this effort audiovisual systems will play a pivotal role."

(Hope Reports, established ten years ago by Thomas Hope, is considered to be the most important market research firm of the visual communication industries in the United States and throughout the world.)

The Society for Information Display (SID) will hold its annual International Symposium 27 April-1 May 1981 at the Grand Hyatt Hotel in New York City. The program will include original papers on such topics as display devices, flat panel displays, CRT displays, videodisk and tape, standards and measurements, information systems, image processing and analysis, and other areas of interest.

The SID has issued a call for papers, noting a deadline of 8 December for submission. Further information is available from Lewis Winner, Symposium Consultant, 301 Almeria, Box 343788, Coral Gales, FL 33134; or Philip M. Heyman, Symposium Chairman, RCA Laboratories, Princeton, NJ 08540; or Andras I. Lakatos, Program Chairman, Xerox Webster Research Center, 800 Phillips Road, Webster, NY 14580. Authors should send an abstract, statement (describing objectives of the project, pertinent references, etc.), and summary to Leonard Klein, Palisades Institute, 201 Varick St., New York, NY 10014.

RCA expects to reach an annual production capacity of more than 500,000 videodisk players by the end of 1981 along with a growing capacity for manufacturing preprogrammed disks, according to Roy H. Pollack, RCA Executive Vice-President, who noted that RCA's SelectaVision Videodisk player will be introduced nationally in the first quarter of 1981. At the same time, he said, the company's videodisk system has been designated the CED (capacitance electronic disk) system.

The CED designation is expected to be used for information identification on all players and disks compatible with the RCA capacitance system.

RCA's first SelectaVision videodisk player, Model SFT100, is 17 in wide, 15.6 in deep, 5.8 in high, weighs about 20 lb, uses 35 W, and is said to be compatible with any brand of television receiver used in the United States. The videodisk player features Visual Search which allows both forward and reverse scanning of a program at many times normal speed while continuously displaying a picture on the television screen. The player also has Rapid Access, a high speed feature that can locate any desired segment on the disk by using a digital time indicator. The RCA videodisk is a capacitance system employing a grooved disk that is played with a diamond stylus.

A CCD (charge coupled device) color television camera under development by RCA Electro-Optics and Devices, was demonstrated at the National Association of Broadcasters convention held in Las Vegas in April. The camera is designed for educational and training uses but not for broadcast, the announcement stated. It was said that the camera is an indication of possible future camera technology for broadcasters and teleproducers.

"CCD image sensors as successors to tubes will play a major role in future all-solid-state television cameras," according to Stanley E. Basara, Division Vice-President, RCA Broadcast Systems, Camden, N.J.

RCA currently markets a black-and-white CCD camera for industrial users. A camera similar to that shown at the NAB convention was supplied to the National Geographic Society for use in a special marine biology research expedition to the Galapagos Rift in the Pacific Ocean. At depths approaching 9000 ft the camera produced pictures of marine life forms never before known to exist. The expedition formed the basis for a National Geographic Society special called *Dive to the Edge of Creation* which was broadcast on Public Television in January.

A CCD image sensor is a solid state pickup device that performs the functions of a vidicon. The sensor is an integrated circuit made from a silicon wafer in essentially the same fashion as other standard integrated circuits.

RCA's image sensor, of which there are three in the color camera, comprises a matrix of 512 × 320 elements. The silicon chip therefore contains more than 163,840 elements. In contrast, the most advanced integrated circuits generally available today contain fewer than 50,000 elements. RCA's image sensor has 12.2-mm image diagonal that is slightly greater in image format than a $^2/_3$-in vidicon. When an image is focused on the CCD by the camera lens the sensor's electronic elements transform the image into thousands of individual electrical charges. The charges are then read out very rapidly by charge transfer techniques. Integrated circuits process the signals, combine them, and feed them to a television monitor for display. The resulting image is reported to be fully compatible with standard 525-line video displays.

A dire warning related to the eruption of Mt. St. Helens has been issued by officials of Verbatim Corp., 323 Soquel Way, Sunnyvale, CA 94086, to users of floppy disks and other computer peripheral media. According to the Verbatim spokesman, the volcanic ash now spreading across the nation will leave behind a trail of floppy disks with inaccurate memories. The volcanic ash is almost 100 percent pumice-like abrasive material that can completely polish away the magnetic coating on data media, according to Bill Clanagan, Verbatim's technical service manager. If the damage has already started it is irreversible, Verbatim warned but suggested three defensive measures that should be taken by users of any magnetic media: (1) to back up all valuable data, (2) keep disks or other media in boxes with covers or lids, and (3) keep disks (most susceptible to damage) in their protective sleeves and stored upright.

Image Devices Inc., 1825 N.E. 149 St., P.O. Box 61-0606, Miami, FL 33181, has acquired the Universal Camera Crane (shown above) which was built by the late Art Brooker, according to a recent announcement. It is an 18-ft motion picture/video camera crane with a lens height of 18 ft (up to 21 ft with extra risers). Automatic hydraulic leveling can be achieved in 10 s and hydraulic friction locks for pan and tilt are incorporated. A 4-wheel drive gear box helps move the crane over rough terrain and an extra high gear selector gets the unit anywhere under any conditions, the announcement noted. The crane can pan 360° and has a side reach of over 12 ft. For operator convenience there are three remote control solenoid panels — one in the driver's compartment, one on the front of the crane arm, and a third on the back of the arm. The Universal Camera Crane is available in Image Devices Miami and Atlanta Rental departments.

Deluxe General, Inc., a 20th Century-Fox Corp. subsidiary, has embarked on a multimillion-dollar program designed to improve and expand its film processing operations, it was announced by Burton Stone, Deluxe President. Stone said that the program will provide needed facilities for expanded film processing operations, computer operations, and plant security and will also allow Deluxe to enter new areas of business. The initial phase of the expansion program is the construction of a new headquarters building adjacent to the company's production facilities in Hollywood. Slated to open later this year, the two-story, 17,000 ft² complex will house all of Deluxe's administrative, marketing, engineering, and accounting personnel now located at 1546 N. Argyle Ave., Hollywood.

Christie Electric Corp. has moved to an ultra-modern 100,000 ft² facility located at 20665 Manhattan Pl., Torrance, CA 90501, it was recently announced. The new building offers Christie the convenience and efficiency of combining manufacturing, engineering, marketing, warehousing, and administration under one roof. Now in its 51st year of operation, Christie manufactures theater projection and film handling equipment.

Pioneer Marketing Corp., 1021 N. Lake St., Burbank, CA 91502, has announced the formation of two new divisions, Pioneer Cine and Pioneer Video. Pioneer Cine will manufacture and market professional motion picture equipment including optical printers, animation stands, additive lamphouses, liquid gates, photometers, densitometers, cameras, film processors, color analyzers, projectors, etc. Pioneer Video will manufacture and market video cameras, telecine projectors, VCRs, editing equipment, broadcast monitors, videotape equipment, and video animation and special effects equipment.

EPRAD, Inc., founded in 1945, has revised its corporate logo. The new logo shows the name EPRAD in bold type surrounded by a rectangular box rounded at either end. The logo appears in bright orange — a color long associated with the company. EPRAD is an acronym for Electronic Products, Research and Development. It manufactures such products as stereo and optical sound systems and automation control devices, xenon lamp-

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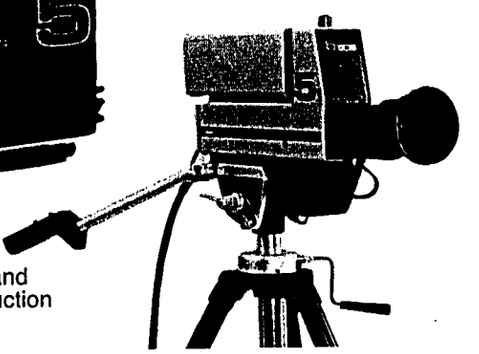

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LDK-25B
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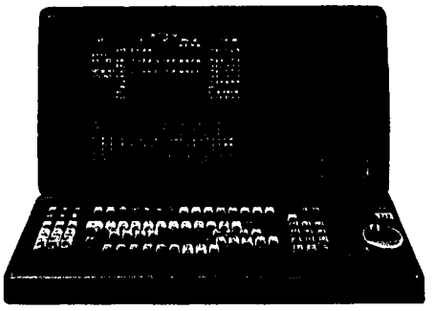
If you think you own a CMX look and 34X edit

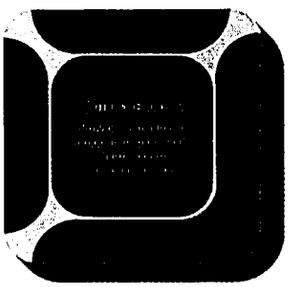
"Some day I hope to own a CMX." Occasionally we'll hear someone voice this wish. It's time for another look. With the design improvements and cost advantages we've built into today's 340X and 34X we think you'll want to include CMX in your future.

We have completed some advanced engineering and added new features to these computer-assisted editing systems, and we're delivering a brand new model, THE EDGE™. We've also come up with an impressive new way to generate CMX Edit Decision Lists using lower cost pulse count controllers. That's our EDL Logger.

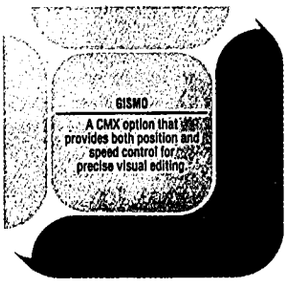


CMX 340X—Real Editing Power
There are lots of reasons why the CMX 340X is the preferred video tape editing system. Check the features we've illustrated on these pages—Motion Memory, Gismo, List Management and Auto Assembly. Add to this a software enhancement package that includes Editing on The Fly (Sync Roll), Master/Slave, Jam Sync and Second Audio. Also control of a production switcher, either directly or through its intelligence option is standard.

And with our distributed processing you own the ultimate in expandability. A central processor, or "supervisor", communicates with the operator and our Intelligent Interfaces™ (I^2's), or "specialists" in control of any one of many post-production VTR's, switchers and other devices. When you expand you simply add an I^2 for each device. Built-in expandability means long-term protection for your investment from the moment we install your CMX.

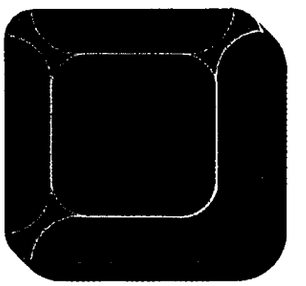


But the 340X is more than a combination of smartly-engineered electronic components. Installed and ready to use it is a complete system, a partnership that keeps you in post production. We think of it as our "total" commitment to you.



Today's 340X is a complete on-line/off-line system that includes a dual 8" disk drive for list input/output/copy, a printer, and a central processor designed to give you the option of MOS memory or core. All this editing power plus the widest variety of machine and switcher interfaces available.

So look again. Here's the real thing. A 340X in a three-machine configuration that's priced under $55,000 in the U.S.

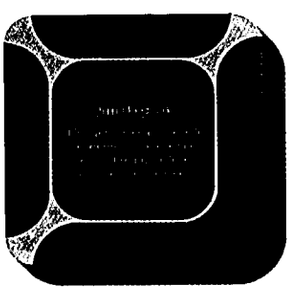


CMX 34X—Easy to Own
The CMX 34X is everything the 340X is, does everything the 340X does except control a production switcher and include the software enhancement package. If you want the long-range advantage of expanding to a full 340X system, start with the off-line capabilities of the 34X.

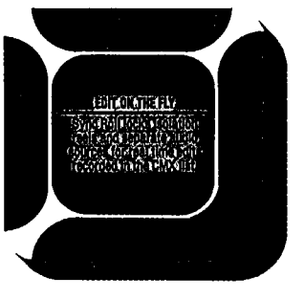
You can put the most complex transition in the Edit Decision List. By adding CMX's General Purpose Interface option you can control switchers and effects systems.

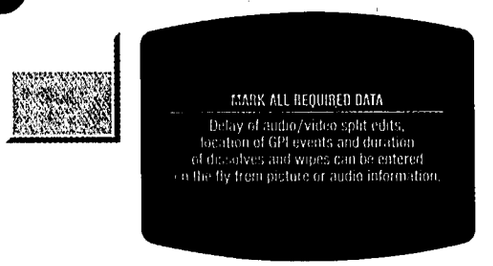
A 34X, with three I^2's, an 8" dual disk drive for input/output/copy, a printer, a 5 × 1 cuts and preview switcher, and full CMX list generation and list management is $34,500 in the U.S.

For less than the price of a 1" VTR you can own the system everyone prefers to work with.



can't afford to at today's 340X ing systems.

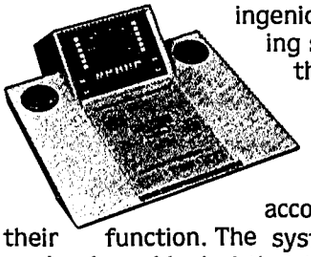




THE EDGE™

Innovation in Editing

The newest technological advance from CMX is SMART KEYS™. They are the heart of THE EDGE, an ingenious editing system that uses a CRT display to label 12 keys according to their function. The system is so simple and logical that the next step appears on the screen.



THE EDGE is a two-source, one-record system that can do dissolves, produce a CMX-standard Edit Decision List with wipes and keys (in/out) and delayed transition events. It auto assembles or list processes with new record start and re-edit or ripple times. It includes two General Purpose Interfaces (GPI's) to control auto-transition switchers, digital video effects, character generators, etc. These GPI events, as well as splits (audio or video displays) and dissolve/wipe durations, can be entered on the fly (MARKED). And locating any point in a scene is as smooth and easy as turning THE EDGE's Reel Motion Controls.

THE EDGE permits mixing of SMPTE time code and control track (pulse count) and works with 1", 3/4" and 1/2" formats.

Simplicity, flexibility, and versatility are hallmarks of THE EDGE. And its priced from $17,000 in the U.S.

THE EDL LOGGER

The EDL Logger generates CMX Edit Decision Lists from a two-machine controller for 1/2 and 3/4" VTR's. This list can be either on paper tape, hard copy or both for use on a CMX. Wipes, dissolves and reel numbers can be included. It's priced at $10,000.

THE PARTNERSHIP

It's all part of CMX's considered approach to editing—an approach that comes from perspective. We created the first practical video editing systems over 11 years ago and have consistently set new standards in the state of the art, year after year.

We've made sure that every one of the over 300 CMX video tape editing systems ever installed throughout the world is still operating today.

And it's this kind of commitment, not only to service and training, but to technological leadership that reflects the continuity of management at CMX/Orrox.

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houses, rectifiers, and film transport equipment.

Orrox Corp., 3303 Scott Blvd., Santa Clara, CA 95050, plans a manufacturing and marketing development program on antenna systems for use in satellite-to-ground communications, it was announced by William H. Orr, Chairman of the Board and Chief Executive Officer for Orrox. He said the program will be known as Sat Com/Orrox and that the company has prototype satellite-to-ground television signal converters in the 12- to 14-GHz bandwidth for demonstration of the technology in North America and other countries with the exception of Japan, France, and the United Kingdom. The company has obtained a patent license from NHK Television Laboratories in Tokyo for the manufacture and sale of products using this technology.

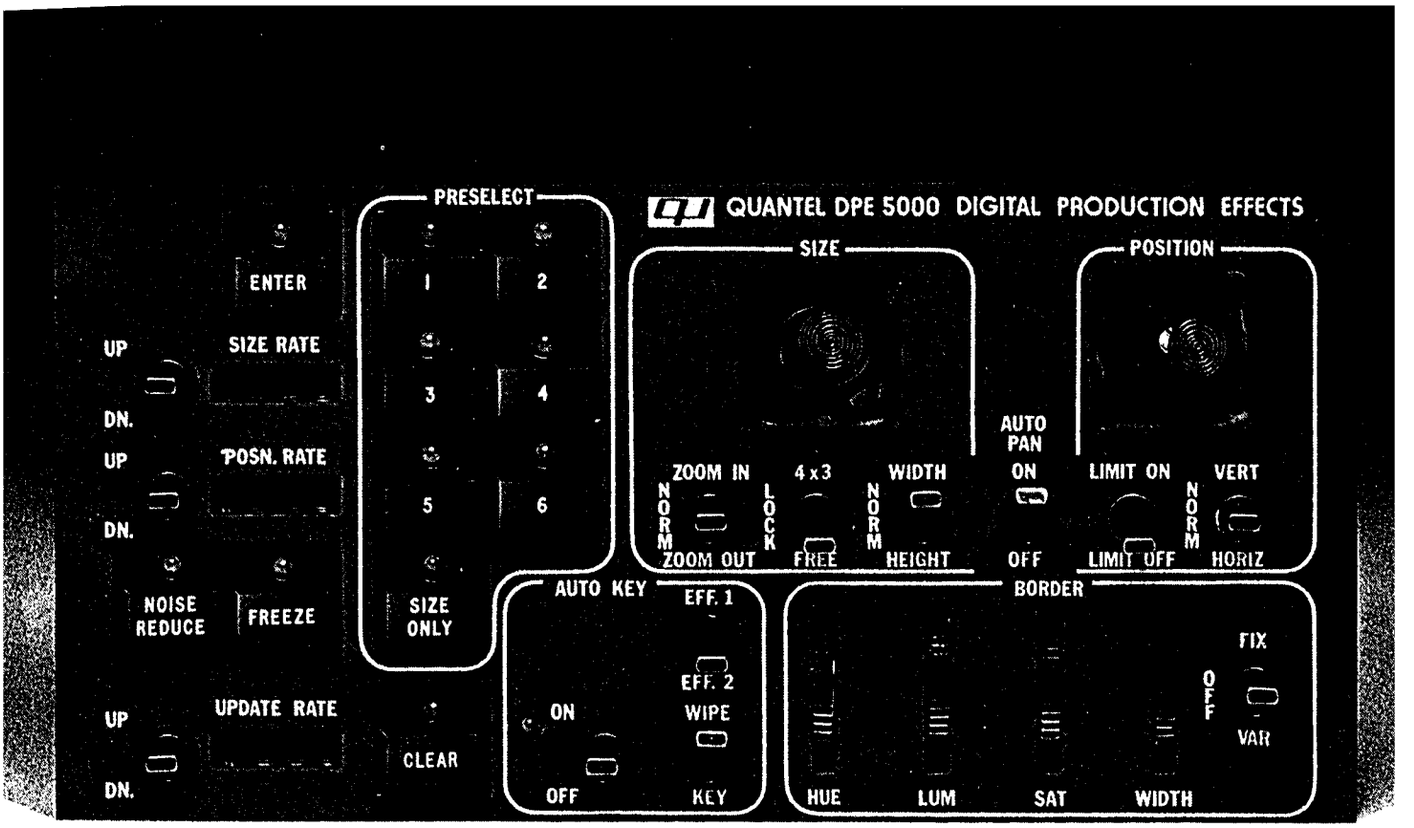
Three engineers at Ampex Corp. have won the 1980 Alexander M. Poniatoff awards, the highest honor for technical achievements given to Ampex employees. Larry Evans, a staff engineer in the Audio-Video Systems Division, was cited for his contributions in the field of computer interactive graphics that led to the development of the AVA system, a system that allows the television graphic artist to create and store his work in the video medium. The artist can create original art or modify existing pictures, charts, or diagrams on AVA with a broad selection of colors, hues, saturation, line weights, shapes, and intensities. All of this is accomplished with an electronic stylus and tablet that direct the system's computer.

Ray Ravizza, Senior Staff Engineer AVSD, was cited for his work in the development of the reverse slow motion capability for the VPR series of helical scan videotape recorders. This capability has been incorporated into the VPR-2B videotape recorder.

John Corcoran, Manager, Special Projects Development Section, Data Systems Division, was cited for his contribution to advancements in high density digital recording.

Laurence J. Thorpe, an engineer with RCA Broadcast Systems in Camden, N.J., and three engineers with RCA Laboratories in Princeton, N.J., have won the 1980 David Sarnoff Awards for Outstanding Technical Achievement, the company's highest technical honor. The awards, presented by RCA Chairman Edgar H. Griffiths at ceremonies in New York, were in recognition of "the conception, development, and design of a microprocessor controlled automatic studio camera system." The TK-47 color television studio and field camera was introduced in 1978 (see *Journal*, p. 656, Sept. 1978). The camera features a microprocessor-controlled system which automatically performs normally complicated and time consuming camera set-up procedures. Sharing in the team award with Thorpe were Robert A. Dischert, Robert E. Flory, and Charles B. Oakley of the RCA Laboratories. The David Sarnoff Awards were established by RCA in 1956 to commemorate the 50th anniversary in electronics of the late General David Sarnoff. The awards to individuals have been made annually since then to scientists and engineers within the corporation.

Dr. H. C. Ludwig Bertele, a pioneer in the field of photographic optics, has been



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With the DPE 5000, you can actually expand the power of your switcher. (It can be easily interfaced to *any* switcher.) You can preselect effects—shapes, sizes, positions, even transition rates from one effect to the next.

Using optional NO-BLANK noise reduction/blanking correction feature, you can salvage tapes that don't meet FCC blanking requirements.

The net effect of Quantel digital effects is a better, more exciting picture on the air—and a better, more rewarding bottom line.

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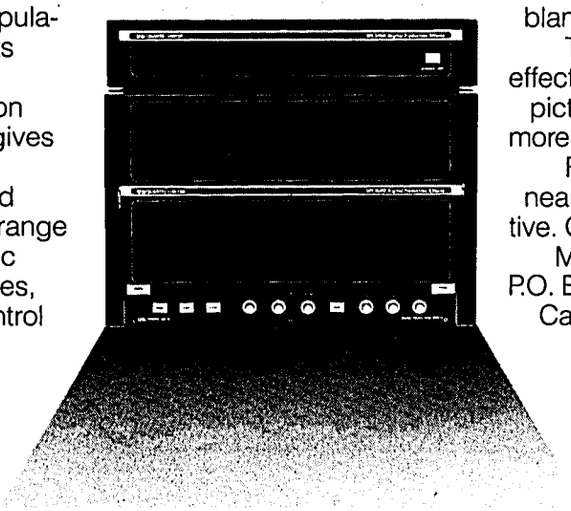

awarded the cultural prize of the DGPh — Deutsche Gesellschaft fur Photographie (German Photographic Society). The presentation was made on 10 September — two days before the opening of the Photokina in Cologne. Dr. Bertele, who resides in Wildhaus, Switzerland, is 80 years old. Among other honors, in 1958 he was awarded an honorary degree by the ETH Zurich for his services in "developing photographic, particularly photogrammatic, lenses."

Howard Lilley has been appointed National Sales Manager for Ampex Corp.'s Audio-Video Systems Division. He was previously product manager for the Ampex VPR-2 helical scan videotape recorder. In his new post he will direct sales activities in the United States for the division's full line of professional audio and videotape recorders, broadcast cameras, switching systems, and computerized editing and video storage systems.

Larry Kirkman has been appointed Director for the newly created Television and Video Services program of the American Film Institute in Washington, D.C., it was announced by AFI Director Jean Firstenberg. Kirkman was one of the founders of the Public Interest Video Network and for four years was a professor in the School of Communication at the American University. Since 1975 he has been editor of *Television Magazine*, a quarterly journal dedicated to alternative television, independent producers, and television/video criticism in the context of legislative, technical, and economic developments.

AKG Acoustics, Inc., is the new name for the firm formerly known as the AKG Division of Philips Audio Systems Corp. The firm has moved from Mahwah, N.J., to new quarters at 77 Selleck St., Stamford, CT 06902. All AKG operations will be together at the new location.

Books, Booklets, Brochures

Aäton cameras are described in a 32-page illustrated brochure available upon request from Aäton Cameras Inc., 1697 Broadway, New York, NY 10019. The brochure notes that "the Aäton 7 16-mm camera has come of age; well over 500 cameras delivered, mostly in western Europe . . ." The content of the brochure is above average in interest for both technical and nontechnical readers. For example, "If the choice is for 16-mm film then it is essential to extract from this medium everything it has to offer; otherwise video is sufficient. If film is to remain viable (in terms of shooting, leaving aside editing), film cameras have progress to make compared to video cameras: the noise level has to go down; image definition must be incomparably superior to video; the camera must be totally reliable; and the cameraman's freedom of movement must in no way be hindered."

The photographs in the brochure are also unusual and of intrinsic interest.

The 1980-81 Video Supply Catalog is available from Comprehensive Video Supply Corp. at a price of $5.00. The 212-page illustrated catalog lists hundreds of items ranging from ac adapter plugs to zoom lenses. Each item is illustrated and specifications are given. Included is an extremely wide range of products. Such items as breakaway bottles