

solely over all decisions. Where is technology leading us? In the final analysis, it is the technologists who will decide.

Today man is pushing back a new frontier, the frontier of his technological adventure. I return to what Friedmann said: "We must adopt a loyal attitude towards technological progress, not deny it but criticize it lucidly, weigh its benefits and possible evils if, on a day-to-day basis, we are to succeed in

dominating, mastering and humanizing it." Man must tame science and technology but he cannot do so without the vigilant assistance of technicians and scientists who must get involved in an exercise of daily self-analysis. They do not have the right to be totally overcome by the fascination of their discoveries. . . .

Canada's Secretary of State was much applauded by an impressed audience.

Awards Presentations

The Fall Conference of the Society is when awards and honors are bestowed on distinguished persons for outstanding achievements. President Holm, assisted by Executive Vice-President Byron S. Roudabush, who read the citations, and by Executive Secretary Denis A. Courtney, presented the Award Medals and Certificates.

President Holm called first the name of Dr. Pierre Mertz who was made an Honorary Member of the Society. Great and well-merited applause gave a warm welcome as Dr. Mertz rose. No less an enthusiastic greeting was received by Rodger J. Ross who was next in receiving the Progress Medal. There follows the complete listing of honors and awards.

Honorary Membership

It is the purpose of Honorary Membership in the Society to honor an individual who has performed eminent service in the advancement of engineering in motion pictures, television or in the allied arts and sciences. The citation for Dr. Mertz is:

Honorary Membership in the Society is awarded to Dr. Pierre Mertz in recognition of his lifelong activity and contributions in the field of transmission problems relating to telephotography and television, and especially for his investigations leading to the understanding of visibility of noise in television images.

Dr. Pierre Mertz joined the American Telephone and Telegraph Co. in 1919, shortly after graduating from Cornell. He returned to Cornell for his Ph.D. and subsequently was with the AT&T Research and Development Dept., which later became part of Bell Telephone Laboratories, until 1958.

Dr. Mertz's work at Bell covered telegraph, picture transmission, television and general broad-band transmission and communications. In 1934 he and F. A. Gray published in the *Bell System Technical Journal* a classical paper on "A Theory of Scanning and Its Relation to the Characteristics of the Transmitted Signal in Telephotography and Television" which provided the NTSC with the means of producing compatible color television.

Dr. Mertz is the author of many other important papers. Three that have been published in the *Journal of the SMPTE* are: "Perception of Television Random Noise," "Data on Random-Noise Requirements for Theater Television" and "Influence of Echoes on Television Transmission."

Since his retirement from Bell, Dr. Mertz has been a general consultant and has continued his long service to the Society as Chairman of the Board of Editors. The level of quality maintained by the *Journal*

of the SMPTE has been due in great degree to his technical expertise and wise judgment.

In 1962 Dr. Mertz was awarded the SMPTE David Sarnoff Gold Medal. He is a Fellow of the SMPTE, the IEEE and the OSA, and a member of the American Physical Society and of the Inter-Society Color Council.

Honorary Membership was also announced at Montreal as awarded to George Mitchell, with the formal award to be made later in Hollywood.

George Mitchell, Consulting Engineer for the company he founded, Mitchell Camera Corp., and pioneer designer of professional motion-picture cameras, has about 50 patents on photographic apparatus to his credit. From 1936 to 1940 he worked with the Hale Observatory on Solar Instruments and from 1940 to 1944 for the office of Scientific Research and Development, Mt. Wilson group. Among Mr. Mitchell's other contributions were a method of milling glass with diamonds and the design of a fast shutter for Air Force mapping. He received an Oscar in 1952 and is an Honorary Member of ASC. Mr. Mitchell joined SMPE in 1922 and has been a Life Fellow of the Society since 1964.

The Progress Medal

It is the purpose of this award to do honor to the individual by recognizing outstanding technical contributions to the progress of engineering phases of the motion-picture and/or television industries. The citation for Rodger J. Ross reads:

The Progress Medal, the highest award which the SMPTE can bestow, is intended to honor a person who has made outstanding technical contributions to the progress of engineering phases of the motion-picture or television industries. It is most appropriate, at a time when there is a division and competition between these two media, to honor a man who has devoted his energies to the improvement of films made for television, the adoption of sound engineering practices in the television film operations, and the continuing education of both television and film personnel. The combination of a missionary's zeal with a sound technical approach has enabled Rodger J. Ross to function effectively in the interface between film and television, contributing to the progress of both industries.

(See the Biographical Note for Mr. Ross in the November 1971 *Journal*, pp. 912-913.)

E. I. du Pont Gold Medal Award

It is the purpose of this award to do honor to the recipient by recognizing outstanding contributions in the development of new techniques or equipment which have

contributed to the improvement of the engineering phases of instrumentation and/or high-speed photography. The citation for Mr. Whitley is:

The E. I. du Pont Gold Medal Award for 1971 is presented to Ernest M. Whitley for his pioneering contributions to the development of instrumentation cameras, notably the high-speed rotating-mirror camera designed for the U.S. Navy, which was the forerunner of many other rotating-mirror cameras, the Hycam prism camera, and the Bulova timing camera.

Ernest M. Whitley, Senior Project Engineer and Corporate Secretary of the Redlake Corp., graduated from Benson Polytechnic, Portland, Ore., and has a wide variety of design work and many patents on explosives, optics, cameras and medical equipment to his credit.

During World War II he designed special shipyard machinery for Henry J. Kaiser and spent three years at North American Aviation. During this period he also designed the race timer, basically a streak camera, now used for the Olympics.

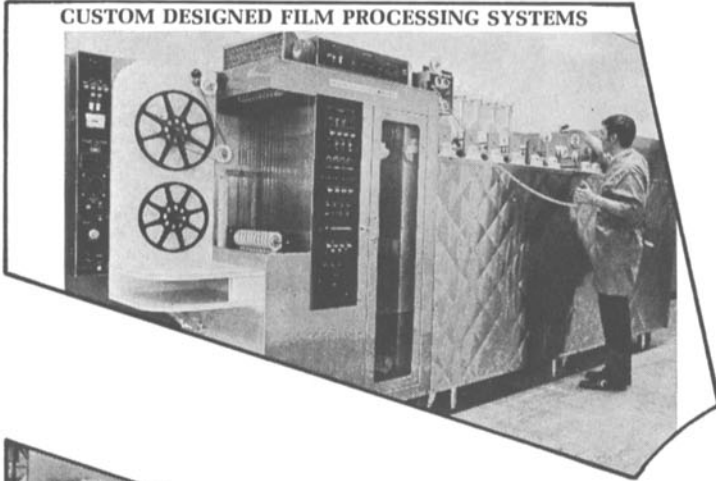
After the war Mr. Whitley, while associated with the firm of Beckman & Whitley, Inc., developed a whole group of ultra high-speed framing and streak cameras, as well as explosive devices for missiles and high-precision meteorological equipment for the Signal Corps. Subsequently his work has included many items of medical equipment including centrifuges, amino acid analyzers, spectrophotometers, aut pipettes, etc.; the designing of automatic equipment for semiconductor production; and, since 1962, the line of 16mm high-speed rotary-prism cameras and 16mm high-speed intermittent cameras marketed by Red Lake Laboratories, now Redlake Corp.

Mr. Whitley received the Karl Fairbanks Award 1968, IR-100 1967, Master Design Award (Product Engineering) 1960, and First Place in the New Product of the Year (Machine Design) 1954.



Rodger J. Ross, who received the Progress Medal of the Society, and Dr. Pierre Mertz, who was made a Honorary Member (l. to r.), celebrating honors received.

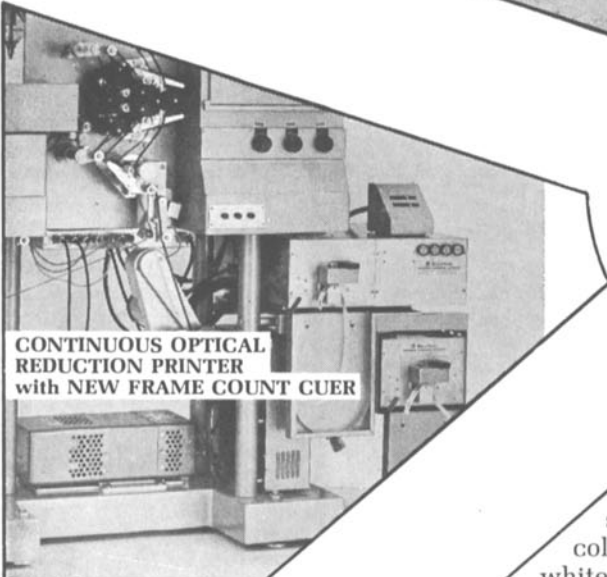
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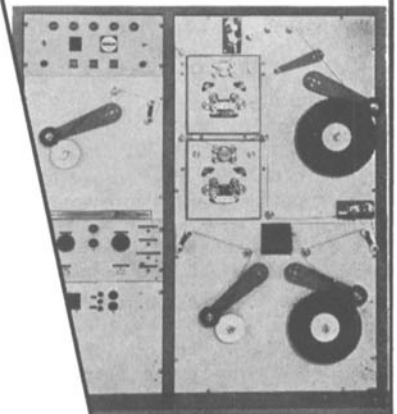
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Award Winners from left to right: Ernest M. Whitley, E. I. du Pont Gold Medal; Dr. Peter C. Goldmark, The Journal Award; Linwood G. Dunn, The Herbert T. Kalmus Gold Medal; Dr. Walter Bruch, The David Sarnoff Gold Medal; James R. Corcoran, The Samuel L. Warner Memorial Award.

The Eastman Kodak Gold Medal Award

It is the purpose of this award to honor the recipient by recognizing outstanding contributions which lead to new or unique educational programs utilizing motion pictures, television, high-speed and instrumentation photography or other photographic sciences. The citation for John A. Maurer is:

The Eastman Kodak Gold Medal Award for 1971 is given to John A. Maurer for his continuing work over forty years in behalf of achieving the highest quality possible in the recording and reproduction of both the visual image and sound record for 16mm and smaller format films. His research and development of technique and his effort to take advantage of the theoretical limits of both materials and equipment as they developed have hastened, particularly in the early days, the acceptance of motion pictures in education and training.

A full Biographical Note about Mr. Maurer is in preparation for later publication in the *Journal*.

The Journal Award

It is the purpose of this award to recognize the outstanding paper originally published in the *Journal* of the Society during the previous calendar year. The citation for Dr. Peter C. Goldmark reads:

The Journal Award is presented to Dr. Peter C. Goldmark for his paper entitled "Color Electronic Video Recording," published in the August 1970 issue of the Journal of the SMPTE.

A current Biographical Note about Dr. Goldmark is in preparation for a subsequent issue of the *Journal*.

Journal Award — Honorable Mention

Journal Award Honorable Mentions went to the following authors of papers published in the *Journal* during 1970:

To R. R. Brooks and W. J. Cosgrove, RCA Corp., Camden, N.J., for their paper entitled "Combed Aperture Equalization for Color Television Cameras" in the January 1970 *Journal*.

To Riley David McCafferty, National Aeronautics and Space Administration, Kennedy Space Center, Fla. and Lawrence W. Lockwood, Consultant, Houston, Tx., for their paper entitled "Apollo Mission Simulation With Visual Presentation" in the February 1970 *Journal*.

To Otto H. Schade, Sr., RCA Corp., Harrison, N.J., for his paper entitled "High Resolution Return-Beam Vidicon Cameras:

A Comparison With High-Resolution Photography" in the August 1970 *Journal*.

To R. L. Eilenberger, F. W. Kammerer and J. F. Muller, Bell Telephone Laboratories, Holmdel, N.J., for their paper entitled "Compact Optical System for Field/Line Sequential Color Videotelephone Camera" in the December 1970 *Journal*.

To Lloyd E. West, Photographic Technology Division, Eastman Kodak Co., Rochester, N.Y., for his paper entitled "Disposal of Waste Effluents from Motion-Picture Film Processing" in the September 1970 *Journal*.

The Herbert T. Kalmus Gold Medal Award

It is the purpose of this award to do honor to the recipient by recognizing outstanding contributions in the development of color films, processing, techniques, or equipment useful in making color motion pictures for theater or television use. The citation for Linwood G. Dunn reads:

The Herbert T. Kalmus Gold Medal is awarded to Linwood G. Dunn for his highly original contributions and innovations in special color film optical printing and the creation of special optical effects for many notable feature films.

Linwood G. Dunn started in motion pictures in 1923 as a cameraman, joined RKO in 1928 and during his 28 years of employment there was a Director of Photography and Head of the Photographic Effects Department at RKO Radio Pictures.

During World War II Mr. Dunn designed, with his associate Cecil Love, the first special-effects printer to be commercially manufactured. This, the Acme-Dunn Optical Printer, was the subject of an Academy Award for technical excellence in 1944.

In 1946 Mr. Dunn founded Film Effects of Hollywood, an independent special-effects laboratory, and in 1957, when RKO Studio production activities ceased, leased the Photographic Effects Department facilities and merged them with his company to provide special photographic effects services.

Mr. Dunn is a Board member of the ASC and author of numerous engineering papers and technical articles. He is a Fellow of the SMPTE and a member of the Academy of Motion Picture Arts and Sciences.

Feature pictures for which Mr. Dunn provided special photographic effects include *West Side Story*; *My Fair Lady*; *It's a Mad, Mad, Mad, Mad World*; *The Great*

Race; *Hawaii*; *The Bible*; *Thoroughly Modern Millie*; *Darling Lili*; *Airport*; *Song of Norway*; and *A Place to Stand* (Expo 67). His work has also been seen in the Astrorama and Washington State pavilions (Expo 70) and in Cousteau's *Phenomena of the Sea*.

The award was accepted in Mr. Dunn's behalf by President Holm.

The David Sarnoff Gold Medal Award

It is the purpose of this award to honor the recipient by recognizing outstanding contributions in the development of new techniques or equipment which have contributed to the improvement of the engineering phases of television, including theater television. The citation for Prof. Dr. Walter Bruch is:

The David Sarnoff Gold Medal for 1971 is awarded to Dr. Walter Bruch for his contribution to the development of the PAL system for color television broadcast transmission, now standardized in many countries, and for his continuing efforts toward the improvement of color television.

Dr. Walter Bruch, one of the pioneers of the television industry in Germany, has been associated for many years with the firm of Telefunken and is presently Director of Product Planning at AEG-Telefunken, Hanover, where he heads a laboratory for advanced developments.

Dr. Bruch's most notable contribution to the art was his disclosure in 1963 of the PAL (Phase Alternation Line) system which reduces the effects of phase distortion and thus tends to eliminate hue changes. He is the author of books and more than 200 articles and other publications in the field of television and color television.

For his outstanding contributions to the advancement of television technology Dr. Bruch has been the recipient of many honors and awards including the Bundesverdienstkreuz mit Stern (Federal Distinguished Service Cross With Star), an honorary Doctorate of Engineering, Honorary Membership of the Royal Television Society, Honorary Membership of the Fotografische Gesellschaft, Goldene Kamera, Golden Ring of Honor of the Gesellschaft für Film- und Fernsehforschung, Vice-President of the Fernsehtechnische Gesellschaft, Hanover Civic Medal, Honorary Membership of the Institution of Electronic and Radio Engineers.

The following letter of appreciation has been received from Dr. Bruch:

"October 8, 1971

"I consider it a great honor to have received the David Sarnoff Gold Medal

7-to-70mm Power Zooming A 10:1 ratio with Rokkor f/1.8, seventeen-element lens.

Variable Shutter Lets you obtain effective shutter speeds between 1/18th and 1/450th of a second.

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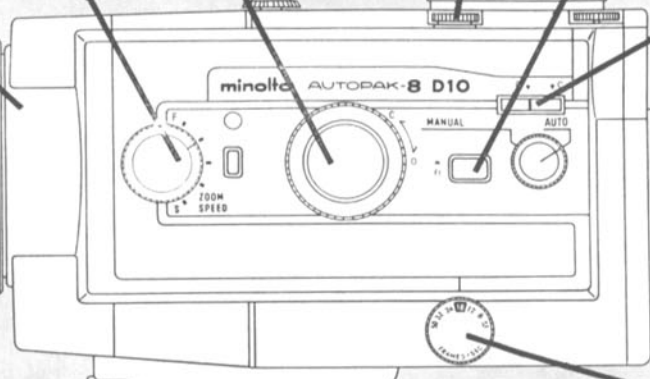
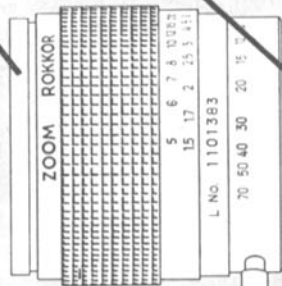
Manual Fading For slower, faster, partial or variable speed fades, just turn the wheel at your own pace.

Viewfinder Curtain Blacks out the finder to eliminate light leak during remote operation.

Footage Counter Re-sets to "start" when the film chamber door is opened.

Automatic Fading A complete fade-in or out at the push of a button, uniformly paced over approximately 54 frames.

Time Lapse, Motion Analysis, Remote Control, Sound Synch and Multiple Camera Operation Just unplug Minolta's exclusive electromagnetic shutter release and plug in one of the optional Autopak-8 system accessories, including your choice of two intervalometers, remote control cords, wireless remote receiver and tape synch cord.



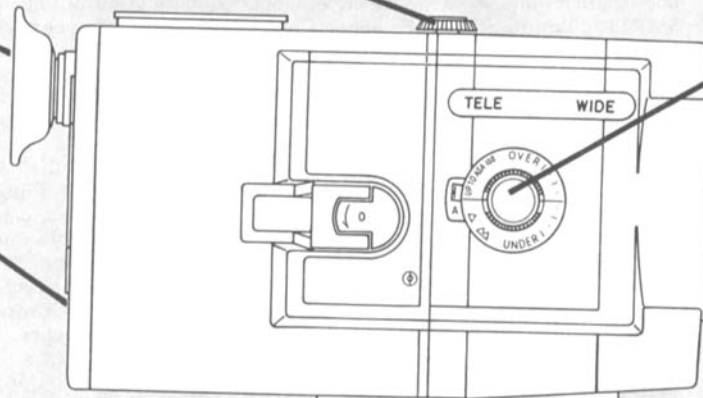
Total Information Viewfinder Besides an extremely bright image, the finder shows aperture, over/under exposure warnings, film transport and the progress and direction of a fade.

Transistorized Micromotor Provides Seven Filming Speeds 8, 12, 18, 24, 32 and 50 frames per second, plus single frame.

Movie Light Outlet Built-in type A filter is positioned automatically.

Focusing Eyepiece Adjusts from +1 to -4 diopter. Can be locked in position.

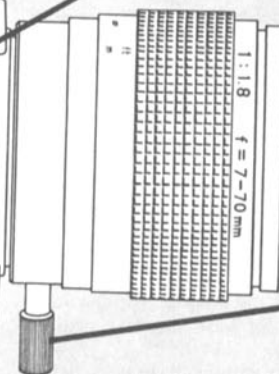
Strobe Light Outlet Fire an electronic flash in perfect synch with single frame exposures.



Semi-Automatic and Completely Manual Exposure Control Meter override by $\pm 2EV$, or meter lock to fix aperture at any opening from f/1.8 to f/45.

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Award from the SMPTE. I have received many honorable distinctions. However, I consider it a particular honor that the distinguished, world-famous SMPTE has observed and appreciated my work which has been performed on a faraway continent. The honor is linked to the name of David Sarnoff whose pioneer efforts as an early promoter of color television are united forever with the evolution of this new technique.

"All I have done in the field of Color Television is based on the American Color Television System, the unique effort of engineers who developed the NTSC System. I studied these developments for a long time until I was encouraged to improve this NTSC System in those properties which seemed to be desirable to me. The Color System improved by a delay line in the receiver I named "PAL, a Modern Variant of the NTSC Color Television System," thus emphasizing the pioneer invention of American engineers.

I want to sincerely thank the Board of the SMPTE for electing me to this honor. I should also like to include my gratitude to the American scientists and engineers, among them, David Sarnoff himself, who inspired my work on color-television.

WALTER BRUCH

The Samuel L. Warner Memorial Award

It is the purpose of this award to do honor to the individual by recognizing outstanding contributions in the design and development of new and improved methods and/or apparatus for sound-on-film motion pictures, including any step in the process. The citation for James P. Corcoran is:

The Samuel L. Warner Memorial Award for 1971 is given to James P. Corcoran in recognition of his contributions to four-track stereo sound for CinemaScope release, both for recording techniques and theater-reproducing equipment.

James P. Corcoran earned the degree of B.S.E.E. from the University of Washington and continued graduate studies at the University of California at Los Angeles. From 1929 to 1938 he was associated with the Engineering Department of Electrical Research Products, Inc., Hollywood.

In 1938 Mr. Corcoran joined 20th Century-Fox as a sound engineer and in 1960 began a distinguished career as Sound Director at the same studio. During his ten years as Director, Fox Sound Department received ten Academy Award Nominations and three Oscars for best sound recording on feature pictures.

Since his retirement from Fox in 1970, Mr. Corcoran has been kept busy doing consulting work for the industry.

Mr. Corcoran is a Fellow of the SMPTE and has been a member of the Society's Sound Committee since 1956. He is also a member of the Audio Engineering Society and the Academy of Motion Picture Arts and Sciences.

The award was accepted in Mr. Corcoran's behalf by President Holm.

New Fellows of the Society

Twenty-one members of the Society were elevated to the grade of Fellow at this time. Admitted to this grade upon recommendation of the Fellow Membership Committee is such an Active Member "who is not less than 30 years old and who has by his proficiency and contributions, attained an

outstanding rank among engineers or executives in the motion-picture, television or related industries." Here is the list of the newly designated Fellows:

Charles Carroll Adams, III, President, C. Carroll Adams Enterprises, Pasadena, earned his BSME from the University of Southern California and an MSME from California Institute of Technology. From 1956 to 1966 he photographed, wrote and produced over 100 surgical training films and developed several major pieces of special equipment to aid surgical photography. Mr. Adams' company was established in 1964 to provide specialized educational material, involving digital logic, miniature electronics and ultra-precision machining. At a number of SMPTE Technical Conferences in Los Angeles Mr. Adams has assisted with the audiovisual facilities. He is a member of the Audio Engineering Society and the National Association of Flight Instructors.

Glenn M. Berggren, Vice-President and General Manager, Wilkin, Inc., Atlanta, earned his B.S. in mechanical engineering at the University of Rochester, followed by graduate studies at the Chrysler Institute of Engineering and the University of Syracuse. Early design experience with the auto industry led to seven years with the General Electric Co., designing audio equipment and especially speakers. In 1962 Mr. Berggren joined Kollmorgen Corp., and soon became Product Line Manager, with emphasis on theatre projection lenses. Since 1968 his work at Wilkin has been directed to expanding the Ultravision program, with compatible picture and sound components. Mr. Berggren has published many technical papers on theater projection matters and is a member of the SMPTE Film Projection Practices Committee.

Joseph L. Boon, Technical Assistant to the General Manager, Kodak Parts Division, Eastman Kodak Co., Rochester, was educated at the Southern Methodist University and the University of Illinois. In his present position, he is technical adviser to management for photographic equipment. Mr. Boon has four patents to his credit. These cover a direct viewfinder, a control device for electric motors, exposure control in color printing and an optic-axis

or light-path adjusting system for slide projectors. Besides the SMPTE, Mr. Boon is a member of the Optical Society of America.

Anthony D. Bruno, Eastman Kodak Company, Hollywood, graduated from the University of Toronto, and has long been active in SMPTE affairs. He has played an active role in the management of the Hollywood Section of the Society, serving this year as Chairman of the Section. As Local Arrangements Chairman, Mr. Bruno had overall responsibility for organizing facilities in Hollywood for the 109th SMPTE Technical Conference, spring 1971.

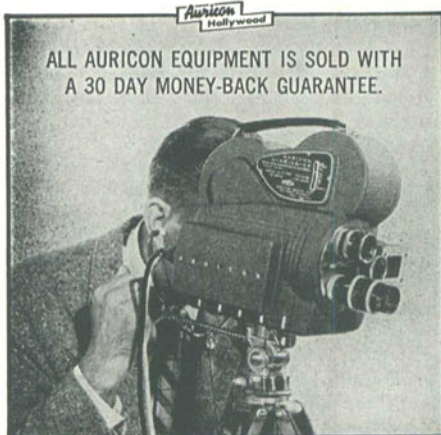
Marvin Camras, Illinois Institute of Technology, Chicago, has a B.S.E.E. from Armour Institute of Technology, M.S.E.E. from IIT, and an Honorary LLD from IIT. He has contributed developments which are used in modern magnetic tape and wire recorders, including high frequency bias, improved recording heads, wire and tape materials, magnetic sound for motion pictures, multitrack tape machines, stereophonic sound reproduction and videotape recording. His present work is in videotape recording and multichannel acoustics. Mr. Camras is a member of the SMPTE, as well as other professional Societies, and has been the recipient of many professional awards.

Ira B. Current, Manager, Reversal Color Products, GAF Corp., Binghamton, N.Y., was educated at the University of Colorado and has been with GAF, then Agfa-Ansco, since 1934 in a number of supervisory positions in the company's photographic laboratories and engineering departments. He has been responsible for the Reversal Color Products Department since 1969. Mr. Current's inventions include a method for sensitizing and processing cards, a copying camera, an apparatus for processing film by means of a folding rack (with L. M. Deering), a method for duplicating index cards for cross filing, an apparatus for duplicating index cards, a process for obtaining cold sepia tones, and a processing device for motion-picture films. Mr. Current is a member of the SMPTE Sound Committee and a member of several other professional societies.



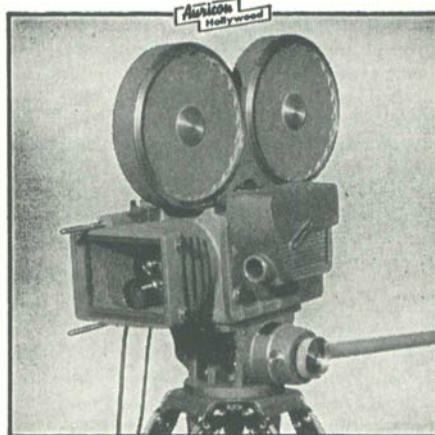
John A. Maurer, who received the Eastman Kodak Gold Medal, Robert Eisuke Saeiki, a Fellow of the Society from Japan, and Sections Vice-President William D. Hedden (l. to r.) in a friendly chat.

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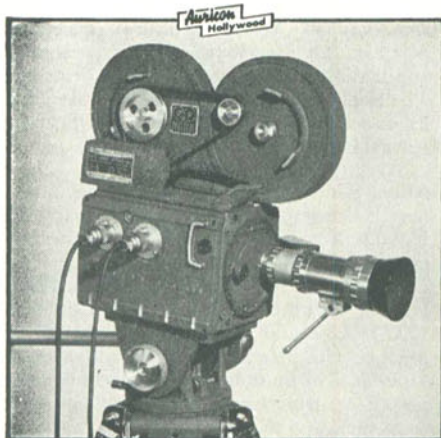
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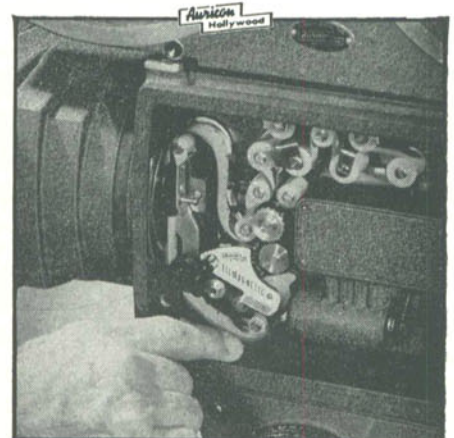
"SUPER 1200" 16mm Optical Sound-On-Film Camera.
 ★ 1200 ft. film capacity for 33 minutes of recording. ★ \$6425.00 (and up) complete for "High-Fidelity" Talking Pictures.



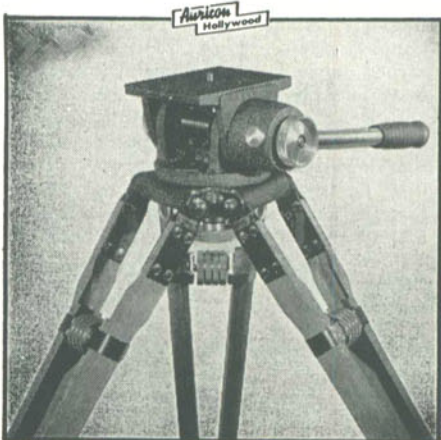
"PRO-600 SPECIAL" 16mm Light-Weight Camera.
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Arthur L. Foster, Chief of Laboratory, Motion Picture Service, U.S. Department of Agriculture, majored in mechanical engineering and worked from 1937 to 1942 for the Owens-Illinois Glass Co., using instrumentation and high-speed photography. From 1942 to 1946 and again in 1950-51, he was active in laboratory and production phases of motion-picture work for the Signal Corps, and was responsible for several equipment innovations to convert U.S. Army training films into Chinese. Mr. Foster has held his present position since 1951, where he manages and formulates policy for the Department's film activities, directs experimental work and defines requirements for the installation, modification and operation of all laboratory equipment. In 1964 he was given the U.S. Department of Agriculture Superior Service Award. Mr. Foster has been long active in the Washington Section and was Program Chairman for the Society's 99th Conference.

Norman R. Grover, Director of Engineering Studio Facilities, Canadian Broadcasting Corp., Montreal, has been with CBC since 1950. His work has included kinerecording, printing and processing, the color conversion of television studio facilities throughout Canada and, since 1967, the overall project management of the CBC Place de Radio-Canada Complex, Montreal, and responsibility for other CBC capital studio projects, both radio and television, throughout Canada. Mr. Grover is a Senior Member of the IEEE and a member of the Engineering Institute of Canada; the Corporation of Engineers, Quebec; and the Association of Professional Engineers, Ontario.

Leslie H. Holmes, Corporate Supervisor of Film Quality Control for the Canadian Broadcasting Corp., Ottawa, graduated from RIT in 1948, and from 1949 to 1962 was chief instructor in photographic arts at Ryerson Institute of Technology, Toronto. Before joining the CBC he was with the National Film Board where he planned and designed automatic processes and equipment for the Government Photo Centre, Ottawa. Mr. Holmes was Program Chairman for the 110th SMPTE Technical Conference, a member of the Society's Color Committee, a member of the British Kinematograph, Sound and Television Society, and Chairman of the Canadian Standards Association's Committee on Motion-Picture Photography.

Ralph L. Hucaby, Vice-President and Director of Engineering, WLAC-TV, Nashville, graduated from the University of Kentucky Engineering School in 1943. Following graduation, he was employed by RCA in the Products Design Engineering Section. Following his World War II service, he rejoined RCA, working on the design of television products equipment, including some of the early developments of color television. Mr. Hucaby went to WLAC-TV in 1953 as Technical Director. He designed the initial studio and transmitter technical facilities and supervised their installation. Recently, he designed a new WLAC-TV studio building and technical facilities in Nashville. Mr. Hucaby is a

member of Tau Beta Pi (Honorary Engineering Society) and Sigma Pi Sigma (Honorary Physics Society).

Harry J. Lehman, retired President of Cine-View, Inc., has an impressive background as journalist and filmmaker. He has at various times been the editor of several trade publications and has produced television film shows as well as documentary films. Mr. Lehman has long been active in the affairs of the SMPTE, serving as Membership Chairman in the Hollywood Section and, on several occasions, as Publicity Chairman for the Society's Technical Conferences.

Alfred W. Lumkin, Technical Director, EMI Elstree Studios, Ltd., Boreham Wood, England, was educated at London Polytechnic and the London School of Economics. As Chief Sound Engineer, he was responsible for sound installations for Associated British Picture Corp., Ltd., at the Elstree Studios from 1948 to 1957. From 1957 to 1969 he was Recording Director and since 1969 he has been in charge of all technical services. Mr. Lumkin is a Fellow of the British Kinematograph, Sound and Television Society and a member of the Film Production Association. He has also been involved in the work of the British Standards Institution, the International Standards Organization and UNIATEC.

Renville H. McMann, Jr., Executive Vice-President, CBS Laboratories, Stamford, is a graduate of Yale University and has been with CBS Laboratories since 1955. He has been connected with many of the developments at the Laboratories, including the CBS Minicam hand-held television camera system, which won an Emmy citation in 1969. Mr. McMann was a member of the team which developed EVR (Electronic Video Recording) and holds several patents on this system. He is a member of the IEEE and the Royal Television Society.

Herbert R. Pilzer, President, Motion Picture Enterprises, Inc., Tarrytown, N.Y., received his education at the Theresianische Akademie, Vienna, and at the Institut Marigny and Sorbonne University, Paris. After coming to the United States he was associated with a number of professional motion-picture activities, principally in the laboratory field, and achieved a reputation for the design and manufacture of professional motion-picture equipment for film laboratories, television and government agencies. Besides his company's distribution of professional equipment and supplies, Mr. Pilzer is the publisher of classified trade directories for the motion-picture, audio-visual and television industries. Mr. Pilzer is a member of the Association of Cinema Laboratories and the British Kinematograph, Sound and Television Society.

Robert Eisuke Saeki, Chairman of the Board of Directors, Yokohama Cinema Laboratories, Inc., Yokohama, Japan, established his company in 1923 and by importing equipment from the U.S. and Europe has been influential in keeping Japan's motion-picture technology abreast of the rest of the world. Beginning his career as a cameraman for Pathé News, Mr. Saeki has received many awards for his educa-

tional films. Since 1959 he has carried out extensive research in 8mm sound, developing an optical recording and printing system and perfecting striping and recording techniques for 8mm magnetic. Mr. Saeki is an Honorary Member of the Motion Picture and Television Engineering Society of Japan and in 1970 he received the National Blue Medal Award from the Japanese Government.

Joseph W. Schmit, Assistant Technical Controls Supervisor, Technicolor, Inc., Hollywood, was educated at Montana State University and California Institute of Technology and has been with Technicolor since 1949. His work there has included the operation of a pilot plant for dye synthesis, operation of an experimental transfer machine and the design of film processing machinery. He has also been concerned with the development of equipment and procedures for wet printing. (A paper on this subject appeared in the August 1960 *Journal*.) Mr. Schmit has been active in the preparation of programs for SMPTE Technical Conferences and has himself presented papers. In 1959 he was the recipient of a Class II Award of the Academy of Motion Picture Arts and Sciences for development and practical application of equipment for wet printing. The Society of Photographic Scientists and Engineers gave Mr. Schmit their Service Award in 1968.

Allen Stimson, Senior Supervising Engineer, Consumer Products Engineering, K.A.D., Eastman Kodak Co., Rochester, graduated with a Masters in Engineering from Rose Polytechnic Institute in 1937. He was with the General Electric Co. from 1931 to 1956 and is the possessor of 59 U.S. patents. His present work at Kodak is as supervisor of photometric development exposure controls for cameras. Mr. Stimson is a member of the SMPTE Projection Practices Committee and a Fellow of many other professional societies. In 1953 he received the Charles E. Coffin Award from General Electric Co.

Willis L. Stockdale, Senior Photographic Engineer, Photographic Technology Division, Eastman Kodak Co., Rochester, earned his B.S. in Chemical Engineering from the University of Florida. He has been author or co-author of five papers published in the *Journal of the SMPTE*, and has several Kodak patents pending. At the present time he is Group Leader in the Photographic Technology Division, working on the development of new photographic systems. Mr. Stockdale is co-founder and current President of the Photographic Historical Society.

M. Warren Strang, Sales Manager, Hollywood Film Co., Hollywood, was educated at Los Angeles City College and the University of California at Berkeley. He has been an active participant in the affairs of the Society for many years, serving as Exhibit Chairman for numerous SMPTE Technical Conferences. Besides the SMPTE, Mr. Strang is a member of the IFPA and SPIE, and was a recipient of a Chairmanship Award from IFPA.

Howard Vogt, Assistant Director, Photographic Technology Division, Eastman

Kodak Co., Rochester, was educated at the University of Rochester. Since joining the Eastman Kodak Co., he has been engaged in development engineering, Kodachrome and Ektachrome Processes and high-temperature color processing. At the present time, he is responsible for color photographic development activities. Mr. Vogt was the recipient of the SMPTE Herbert T. Kalmus Gold Medal Award in 1969. Besides the SMPTE, he is a member of the SPSE, American Chemical Society, American Institute of Chemical Engineers, and the Rochester Engineering Society.

Cornelius L. Zichterman, Director of Marketing, Peterson Enterprises, Glenview, Illinois, was educated at North Park College and Northwestern University. From 1963 to 1967 he was Assistant Director of Engineering in the Professional Equipment Division of the Bell and Howell Co. In 1960 to 1961 he was Chairman of the Bell and Howell Engineers Club. In his present position with Peterson Enterprises, Mr. Zichterman is responsible for all marketing activities of motion-picture film printers and related equipment. Mr. Zichterman has been active in SMPTE affairs for many years and is currently the Chairman of the SMPTE Chicago Section.

The Fellowship Certificate for Mr. Schmit was accepted by Frank P. Brackett, Jr., and the one for Mr. Lumkin by Past-President Robert Pulman of the BKSTS. The certificate for Arthur L. Foster will be presented to him in a special ceremony in Washington, D.C.

Papers Program Highlights

The Papers Program was an especially complete one which we shall attempt to summarize.

The Laboratory Practices Sessions which, as customary, initiated the general program, had large and attentive audiences. A paper which engendered great interest was the one by Andrew Balint, titled "A Frame-Counting Cuer." This device will be of great importance to the laboratory, since it does away with the normally used light-change notches, which always constitute a hazard for the valuable negative of a film. Light change information is punched into a paper tape and a tape reader which reads out the necessary information forms part of the cuing unit. A new printing aperture photometer with a precision of $\pm \frac{1}{3}$ of a printer point (approx. $\pm 0.003 \text{ Log E}$) was described in "Photometric Printing Machine Control" by D. Hardon and W. D. Carter. This lightmeter was originally designed for continuous contact printers, but practical requirements for an optical probe for step printers were also considered. Of no less interest was a paper by William W. Morris on "Design Considerations for a Super-8 Continuous Optical Reduction Printer."

The session on laboratory chemistry was highlighted by a paper by Grant Dearnaley and Daniel Paquin, "Restoration and Reuse of Motion-Picture Effluents," a subject which is at the same time interesting for economical and ecological reasons. The National Film Board's laboratory procedures in this area were described. Of similar

interest was "Recovery and Pollution Control by Reverse Osmosis — a Pilot Installation" by Mel Kay, Murray Marshall, Findlay Quinn and Hugh Meikle, describing basic research on the not widely known phenomenon of reverse osmosis which takes place when pressure is applied on the solution of higher concentration in an osmosis apparatus, where flow then takes place from the higher to the lower concentration through a semi-permeable membrane, in opposition to the normal flow without that pressure. Also receiving deserved applause were: "The Determination of Bromide in Color Developers Containing High Levels of Chloride" by Richard E. Grenier and "A New Look in Electrolytic Silver Recovery" by Robert P. Gyori and Fred J. Scobey. The first offers an elegant solution to a problem all too familiar to the quality control chemist and the second describes an electrical power source designed specifically for the purpose.

For Television Systems, the great number of papers in the four full sessions makes it impossible to do justice to them all. Only a few can be singled out here as attracting a high degree of attention. They are: "A Color TV Receiver for CATV" by A. Muma, a design taking into account the special conditions existing in this field; "Cobalt Modified High-Coercivity Magnetic Tape" by H. Lee Marks and "Cobalt — a New Magnetic Particle" by R. J. Deffeyes and C. E. Johnson, Jr., two papers which open up new perspectives for applications of magnetic tape and a completely new generation of machinery which uses tape, that is recorders of all types, computers and many others; "TV Technical Facilities, Place de Radio-Canada" by Brian D. Baldry, G. A. Byrne and R. Savard, which describes in detail the many technical refinements going into this project and which is one from a triad on the Place de Radio-Canada; and a remarkable paper by W. T. Underhill, titled "The MK VIII Automatic Color Camera" which, to this reporter's knowledge, describes for the first time a color-television camera where "a further facility provides automatic color balance to the scene illuminant to take account of changes in color temperature." A neutral white card is held in front of the camera, a button is pressed, and the relative red-green-blue gain adjusts itself automatically. This constitutes a mechanism parallel, in some ways, to the color adaptation of the human eye and is thus most noteworthy. It may minimize color temperature adjustments. Several other new and largely automated TV cameras were described in a number of other presentations.

"The Design and Performance of a Third Generation Quadruplex Videotape Recorder" was the object of a paper by M. Glen Rose, describing new equipment said to give high-quality reproduction from tapes with some commonly found faults which could not be correctly reproduced with previous types of equipment.

Two important papers in the *Film for Television* session were: "A Cross-Step Gray-Scale Slide for Telecine" by Daan Zwick, describing a long awaited tool for the operational alignment of the telecine apparatus, and "Color Balance and the Density of Films for Tungsten (Theatrical) and Arc (TV Preview) Projection" by



Program Chariman Leslie H. Holmes and George F. Davidson, President of the Canadian Broadcasting Corp. (l. to r.), celebrating the success of the Conference.

Daan Zwick and Daniel Brothers, Jr. This paper brought to light a perhaps unexpected conclusion: "that only one print balance is needed to satisfy both theatrical and television display requirements. That selected under the more rigorous television previewing conditions satisfies both requirements. The reverse is not true..." Color adaptation of the human eye with a dark surround accepts too great a variation in color balance.

A group of three papers dealt with experiences and design features, related to automation in TV broadcast-switching in two new facilities of the Canadian Broadcasting Corp., in Moncton and Vancouver. Of special interest was the use of computers as can be seen from some of the titles: "Computer Broadcast Automation: a Consultant's Viewpoint" by R. J. A. Buhr, "Some Features of Computer-Controlled TV Station Switchers" by Michael Barlow, and "Television Automation — Design Concepts" by R. J. Torpey. Some of these were of a tutorial nature.

A well completed group of papers on satellite use in TV broadcasting rounded out the four sessions on Television Systems.

A very special mention is owed to a film and videotape presentation by R. Theile, H. Fix and K.-E. Gonsden, titled "The Technical Aspects of Television-Program Production on Film or Videotape" and accompanied by elaborate videotape illustrations, shown on a set of monitors. These illustrations were prepared by Professor Theile in Germany, using a rig of seven cameras: one TV camera, one 35 mm film camera, three 16mm cameras and two super-8 cameras, all mounted so that their objective lenses were held within a circle of 30-cm radius. Parallax error was of no significant importance for the direct comparison which could thus be made for the different recording media, all cameras functioning simultaneously, recording the same scenes. Actually, two complete sets of comparison recordings were made, one with a 625-line camera and with European film materials in the motion-picture cameras, and another with a 525-line camera and American film products. The films were then transferred to their corresponding videotapes and line-number, and finally shown on the monitors, approximating what a viewer would see on his home TV set. Paul F. Wittlig of Columbia Broadcasting System did the necessary transfer and editing for the American version which was shown in Montreal. He had previously presented these tapes on Tuesday morning, explaining how they were made, because Professor



A Composite view of the Exhibit.

Theile was unable to arrive in Montreal until the latter part of the week. The complete paper was given by Prof. Theile during the Symposium. Comparison of the diverse recording media was an enlightening experience for all present.

Highlights of the Projection and Theater Design Session were a paper by H. S. Strauss, W. E. Thouret, J. Leyden, H. Kee and T. W. Hunt on "New Xenon Compact Arc Projection Lamps for Horizontal Operation," which is certainly an important contribution to the optically efficient use of such lamps, and a paper by Dr. Victor G. Komar on "Stereoscopic Cinematography."

Photo Instrumentation was represented with ten papers, describing methods and techniques in this specialized field. A special place was taken by a paper by Victor J. Canziani and Charles A. Jantzen describing "A Focal-Plane Exposure Meter for High-Speed Rotating-Prism Cameras." An animated Panel Discussion ended these sessions.

The Symposium on Video Cartridge, Cassette and Disc Player Systems attracted capacity crowds on both days of its sessions. A

Proceedings which will report on this Symposium in detail is now being prepared. Here we shall only mention briefly that two papers under the common title "Super-8 Film — A Universal Input to Video Cassettes and Television Systems," Part I: "Application Concepts" by Eric A. Yavitz; and Part II: "Technical Considerations" by J. L. Boon, drew great attention from the audience. The feasibility of a super-8 film videoplayer which can be hooked up to the antenna terminals of any color TV set was practically demonstrated. A model of such a player had been built and the resulting color image was found to be pleasant and acceptable. These papers generated an animated discussion and were much applauded. They contributed to a brilliant finale of the Conference. Of great, although only theoretical interest since no technical demonstration was given, was the paper on "The Teldec Video Disc System" by Walter Bruch.

In concluding this part of our report we should also mention two Panel Discussions which attracted much attention. One under the title "The Need for On-Air Color Correction of Film — Whose Responsibility?" was held at the end of the *Film for Televi-*

sion session; participants were: Charles Ahto, MPO Videotronics; Roger Beaudry, Bellevue-Pathé Ltd.; Michael T. Fisher, American Broadcasting Corp.; John J. Kowalak, Movielab Inc.; Dan McRae, Canadian Broadcasting Corp.; Alex Quiroga, National Broadcasting Corp; Edward H. Reichard, Consolidated Film Industries; Heinrich L. Zahn, Fernseh; and Daan Zwick, Research Laboratories, Eastman Kodak Co. The other Panel was composed of the participants in the session on Projection and Theater Design.

Equipment Exhibit

The Exhibit Chairman, Jean L. Vandette, assembled a high-quality exhibit, and the traditional Monday afternoon open house drew a large and appreciative crowd. An exhibit in Canada has its own conditions, since transportation of equipment and clearance through customs make the assemblage of machinery to be exhibited a demanding task. Chairman Vandette had things well under control and had everything ready at the scheduled hour. Nothing was left to improvisation.

There were 35 exhibitors showing in 60 booths which attracted about 2,000 visitors. These exhibitors contributed to the success of the exhibit program:

- Amega Corp.
- Ansara Industries
- Atlantic Audio Visual Corp.
- Bell & Howell Co.
- Bellevue-Pathé Systems
- Berkey Colortran Inc.
- Braun Electric Canada Ltd.
- Canon USA, Inc.
- Central Dynamics Ltd.
- Cinema Products
- Cinequip — Division of Robert Lawrence Productions Canada Ltd.
- Cinevision Ltd.
- Alex L. Clark Ltd.
- Danscoll Ltd.
- DuKane Corp.
- Editel Productions Ltd.
- Frezzolini Electronics Inc.
- Garlick Film Ltd.
- General Electric — Lamp Division
- The Harwald Co.
- Hazeltine Corp.
- Hollywood Film Co.
- Kingsway Film Equipment Ltd.
- MacKenzie Equipment Co., Ltd.
- Magnasync/Moviola Corp.
- Memorex Canada Ltd.
- Mitchell Camera Corp.



Fellow Norman R. Grover, Symposium Chairman Stanley F. Quinn and Dr. Walter Bruch (l. to r.); partially hidden Secretary of State Pelletier.



Mole-Richardson Co.
 Naval Ordnance Laboratory
 Optical Radiation Corp.
 Oxberry Div. of Richmark Camera Service Inc.
 Pako Corp.
 Peterson Enterprises, Inc.
 Photographic Analysis Limited
 Richter Cine Equipment
 SOS Photo-Cine-Optics, Inc.
 Technicolor, Inc.

The Equipment Exhibit was complemented by a number of very well received equipment papers and demonstrations which, this time, were given on Tuesday afternoon.

Equipment Exhibit — Technical Highlights

There were quite a number of newly developed machines and apparatus present at the exhibit. An outstanding example of the trend toward ever smaller and lighter equipment was the Nagra SN Professional Miniature Tape Recorder which with its small dimensions of only 5.8 in × 4 in × 1.02 in fits easily in the palm of one's hand, yet — to judge subjectively from the sound played back at the exhibit — delivers an excellent quality. Technical specifications at a tape speed of 3.75 in/s are most impressive, for example: "Record and Playback passband with highpass filter and external playback corrector ± 2dB: 80 to 10,000 Hz" and "Wow and Flutter, peak value weighted according to DIN 45 507: ± 0.1%," as stated in the Kudelski Brochure.

Mole Richardson Co. was present with their new compact lightweight "Quartz" Solarspot line. These are newly designed luminaires around the halogen lamps which are by now almost standard equipment in motion-picture and television production. Also in this field the trend toward lighter equipment is notable. The older type of traditional tungsten globes cannot be used with this equipment. A 10-kW Solarspot of the new type, for instance, has a 14-in lens instead of the 20-in or even 24-in lens of previous fixtures. The weight of the new luminaire is 52 lb, as against 117 lb of the older type. The new Baby Brute arc-light derives its name also from a notable reduction in weight, 126 lb as against 225 lb, with a 14-in lens instead of 24-in lens, the light-output being the same as in the large old models. This arc spot has a newly designed swing-out back which facilitates servicing and carbon change; by unhooking two pins the whole carbonholder unit can be re-

moved from the fixture for bench alignment. Set lighting with these new units should of course be much easier and faster than before for comparative illumination levels.

Bell & Howell had on exhibition, among many other interesting pieces of equipment, their super-8 continuous optical printer with the new frame count cuing system, mentioned earlier in this report. This printer is also noteworthy because it incorporates Bell & Howell's new tungsten-halogen printing lamp, which is claimed to be much more economical in operation than conventional tungsten lamps.

Oxberry had on display their latest Oxberry 5117 4-headed special-effects step printer, with the Oxberry liquid shuttle and support system. This is a bench-type model showing the craftsmanship characteristic for all Oxberry equipment. They also showed the Oxberry Animator 8 (an 8mm animation stand for use by students and for instructional purpose), sold in four versions with a different camera in each, and the Oxberry 5300 filmstrip slide stand.

Mitchell Camera Corporation displayed the new Angenicux 6 × 20 mm (20mm to 120mm) Zoom Lens for 35mm format. At $f/2.6$, a light transmission said to be 74% and with optical characteristics of "very

close to those of the best quality prime lenses," this lens deserves serious consideration. The lens was complemented by the Mitchell ServoZoom lens drive unit which includes preset electrical stops for the wide-angle and telephoto positions plus a focal length meter in the remote control handset. Their new crystal-regulated variable-speed motor for BNCR, BNC and NC cameras was unique in that it contains a mirror positioning circuit that stops the rotary mirror behind the lens in the viewing position when the camera is turned off.

The Professional Equipment Division of Hollywood Film Co. presented their Cross-Mod Tester based on development work done by the Motion Picture Research Center. The prototype shown promises to reduce the evaluation of test soundtracks and of finding the correct soundtrack density to a minimum of time and work. It might in time become standard equipment in all laboratories.

Foba Limited had in their booth an extremely interesting tripod design. This tripod has instant-locking legs which are locked and released by small levers situated directly underneath the tripod head. It is claimed to support up to 250 lb. Legs can be individually adjusted, and there is also a



President Holm, Conference Vice-President Harry Teitelbaum and Exhibit Chairman Jean L. Vandette (l. to r.), inaugurating the Exhibit.



Charles Dell of Oxberry receiving congratulations from President Holm for his company's winning the Exhibit Award.

central locking mechanism which acts on all three legs simultaneously. Setup of this tripod, especially on uneven terrain, is instantaneous, including the necessary overall height adjustments. This tripod will certainly be of great help to news and documentary cameraman.

Cinequip, a Division of Robert Lawrence Productions Canada Ltd., exhibited the prototype of an incident-light exposure meter with digital readout and having a spherical lightcollector. After the customary initial adjustment of ASA value, etc., the correct *f*-stop appears directly in luminous, bold, red numbers when the meter is exposed to the desired illumination level and a switch is depressed. This meter is called the Cinetron. This is a solid-state instrument which is also advertised as shockproof.

As a closing comment to the exhibit highlights section of this report it is interesting to note that several manufacturers of Fresnel-type spotlights are making use of a new ventilation principle that avoids having the Fresnel lens mounted directly into the housing of the luminaire. Instead it is mounted into a support frame in such a way that a circular open airspace surrounds the entire lens laterally and thus permits air to circulate freely through the lamphouse.

Exhibit Award

Oxberry, Division of Richmark Camera, Bronx, N.Y., was judged to have the outstanding display at the Montreal Exhibit.



Treasurer Joseph T. Dougherty and Executive Vice-President Byron S. Roudabush (l. to r.)

The display, which was judged by a special Exhibit Award Committee, was chosen for the award on the basis of its being the most imaginative, effective and best presented.

The award, a handsome specially-engraved plaque, will be presented at a meeting of the New York Section. A story on the presentation will appear in a future issue.

Board and Committee Meetings

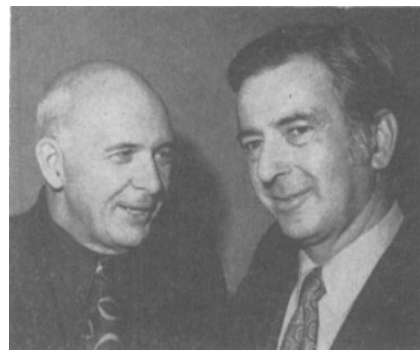
One important aspect of all conferences which is not so obvious to the casual observer, but one which is vital to the Society's progress and achievements, is the many committee meetings which are carried on simultaneously with the sessions program. Business meetings such as those of the Executive Committee and of the Board of Governors provide for the better administration of the Society. The Affairs-Vice-Presidents' meeting ponders and tries to gauge future trends in the motion-picture and television-broadcasting industry. The Financial Advisory, Sustaining Membership, Publications Advisory Committees and the Board of Editors all meet to discuss progress in their respective areas.

During the 110th Conference 10 Engineering Committees had their meetings, making recommendations, preparing specifications, and surveying all engineering phases within the industry. Their assigned fields were: Videotape Recording; Color; Film Dimensions; Sound; 16 & 8mm; Television; Film Projection Practices; Laboratory Practices; Photo-Instrumentation; Standards. Many results of their work will be published in successive issues of the *Journal*.

Short Film Subjects and Projection Arrangements

Gerald G. Graham who was in charge of Short Film Subjects selected an excellent program of short films for initiating the sessions. McLaren's *Synchrony*, *Sounds of Nature* with its outstanding photography of a boy and bird, *Krystallos* showing artificial growing of pure crystals, *Where the North Begins* describing some of Canada's most characteristic aspects were all much praised; but the whole program was commented on for its high quality. Special mention must be made of *Science About Phantoms* an instructive documentary on holography, produced by the Kiev Popular Science Studio, USSR, which was given with a simultaneous translation provided by Michael Wysotsky from Mosfilm Studio, who along with Dr. Victor Komar of NIKFI represented the USSR at the conference.

Another delightful visual event was the presentation by CBS on Thursday afternoon, at the end of the session, of a 17-minute Electronic Video Recording, *The Rise and Fall of the Great Lakes*, produced by the National Film Board of Canada.



Gerald G. Graham (l.), who was Associate Symposium Chairman and also Short Film Subjects Chairman, in conversation with Governor of the Society Roger J. Beaudry.

The Society is grateful to those listed below—the producers, sponsors and owners of short films and documentaries who made this film program possible. Special thanks are also due the National Film Board of Canada from whose film library the great majority of films shown were taken.

- Milne-Pearson Production Ltd., Canada
 - Marcus Cooper, England, for Mullard Ltd.
 - Canadian Broadcasting Corp.
 - The Rank Organisation, England
 - Norman McLaren, National Film Board of Canada
 - Television Bureau of Canada
 - Keg Productions Ltd., Canada, for Audubon Wildlife Theater Series
 - Crawley Films Ltd., Canada, for the Canadian Pacific Railway
 - Owen Murphy Productions, USA, for Bell Telephone Co.
 - C.N.R.S. Scientific Films, France, for the French National Optical & Electronic Research Laboratory
 - Mafilm Studio, Hungary
 - National Film Board
 - Kiev Popular Science Studio, USSR
 - Reason Associates Films Ltd., Canada, for the Province of Ontario
 - Visual Education Center, Canada, for the Encyclopedia Britannica
- Several of these Short Films were lent to the Society by courtesy of the Canadian Film Institute.

Projection Chairman was Chester E. Beachell, who was aptly aided by Lorne Simpson, Jack Burman and Michael Barlow. As mentioned earlier, during this Conference ample use was made of monitors and what could rightly be called electronic audiovisuals. This complicated the Projection Chairman's task enormously. The reader may gain some insight into the difficulties Mr. Beachell had to surmount, when considering that on several occasions three concurrent sessions were in progress with approximately thirty-three different pieces of equipment to be connected, ready or in operation. No trouble was experienced at any moment, and projection was considered as very satisfactory by the members.

The Author's Lounge, by now an estab-

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lished institution, functioned efficiently under the supervision of G. Douglas Murphy, Television Film Director at Canadian Broadcasting Corp., Ottawa. The Author's Lounge certainly contributed much to the smooth flow of presentations and acted as a focal point for all authors' activities.

Social Events

Every SMPTE Conference is accompanied by a series of social events which, of course, have their "raison d'être." New acquaintances are made, professionally and socially, old friendships are refreshed, and a welcome relaxation from daily routine is provided. During the morning hours Monday through Thursday the traditional Coffee Club, courtesy of Philip A. Hunt Chemical Corp., was in operation. Monday's Get-Together Luncheon has been described already. The Monday afternoon Exhibit Open-House Party is always an occasion of mirth and hospitality. A most animated Wine and Cheese Party, with a definitely French-Canadian flavor, invitation of Agfa-Gevaert, Inc., took place Tuesday night at the Cinevision Studios within the Bellevue-Pathé complex, and dancing went on until the late hours. Wednesday evening brought, of course, the traditional Cocktail Party, Banquet and Dance. The cocktail party, this time, was, courtesy of Canadian Kodak Sales Ltd. and the much applauded entertainment during the dinner-dance was provided by



Projection Chairman Chester E. Beachell, Deputy Program Chairman Arnold C. Schieffman and Robert Pulman, Past Chairman of BKSTS, (l. to r.), commenting on the Program Brochure.

the Canadian Broadcasting Corp. It was a happy affair and friendly bonds between Canadian and US members of the Society were evident.

Last not least, we must mention the Ladies' Program, organized under the Chairmanship of A. Dunstan Russell, which was noteworthy and interesting not only for its entertainments, such as luncheons and teas in various elegant restaurants, but also for its several sightseeing tours

through Modern and Old Montreal and a day-long trip to an Early Canadiana Village, called Rawdon, Qué., affording the ladies an acquaintance with the culture, savoir vivre, and history of their Canadian hosts.

Acknowledgments

The Society expresses its thanks to the following companies and organizations for providing necessary services and equipment:

Message Center: Bell Canada

Wine and Cheese Party: Agfa-Gevaert, Inc.

Cocktail Party: Canadian Kodak Sales Ltd.

Banquet Entertainment: Canadian Broadcasting Corp.

Ladies Program: Anglophoto Ltd., Association Canadienne des Distributeurs Independents de Films d'Expression Francaise, Bell & Howell Canada Ltd., Canadian Kodak Sales Ltd., Film Kare Products Co., Ltd., GAF, Canada Ltd., Kingsway Film Equipment Ltd., Minnesota Mining & Manufacturing of Canada Ltd., Photo Importing Agencies Ltd. (Gevaert), Vacuumate Corp.

Hospitality: Canadian Broadcasting Corp., CFTM-TV Channel 10, Quebec Film Labs, Sonolab Inc., Farouq Films, Unifrance Film, National Film Board of Canada, Bell Canada, Air Canada, Laboratoire Mont-Royal Film Corp.

Coffee Club: Philip A. Hunt Chemical Corp.

Projection, Audio-Visual & Video Player Equipment: Ampex of Canada, Anglophoto Ltd., Atlantic Film Ltd., Audio Visual Systems, Inc., Bellevue-Pathé Ltd., Canadian Broadcasting Corp., General Sound and Theatre Equipment Ltd., International Video Corp. Canada, Minnesota Mining and Manufacturing Co., National Film Board of Canada, Sony (Canada) Ltd.

PABLO WEINSCHENK-TABERNERO
Conference Technical Programs Coordinator



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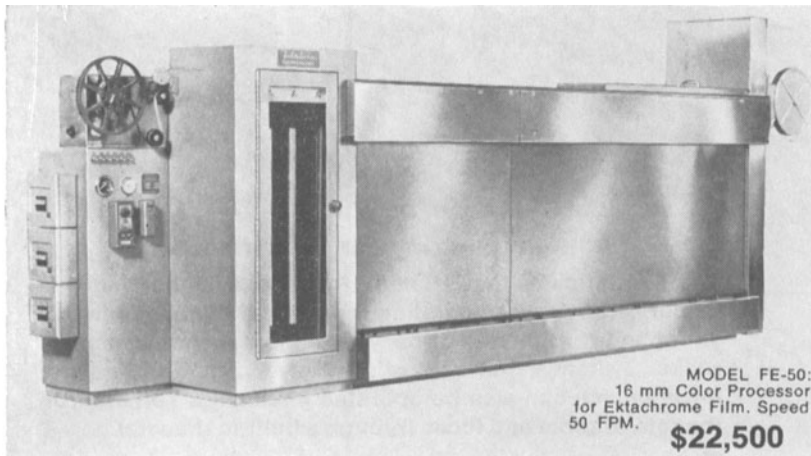
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- **"TEMP-GUARD"** positive temperature control system. Completely transistorized circuitry insures temperature control to well within processing tolerances. Temp-Guard controls temperatures accurately and without the problems of other systems of lesser 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.

Laboratories: De Luxe Labs, General Film Labs (Hollywood), Pathe-Labs, Precision Labs, Mecca Labs, Color Service Co., Capital Film Labs, Byron Film Labs, MGM, Movie Lab, Lab-TV, Technical Film Labs, Telecolor Film Labs, Guffanti Film Labs, A-One Labs, All-service Labs, NASA Cape Kennedy, Ford Motion Picture Labs.

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, WCPQ-TV, KTAR-TV, WSYR-TV.



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Time & Lease Plans Available

What the handgrips can do will give you some idea of what the camera can do.

The idea behind the Bolex 16 Pro was to give the professional a 16mm sound camera that would satisfy him in every way. We started with a clean sheet of paper and a list of the things we felt a professional camera should be able to do. By the time we finished, we had a 16mm camera like no other. Everything about it was different—starting with the handgrips.



EVERYTHING AT YOUR FINGERTIPS.

The handgrips of the Bolex 16 Pro aren't for holding the camera. They're for operating the camera. When you wrap your hands around the grips, your fingers rest on sensitive rocker switches that control the power zoom and power focus (which can also be operated manually). You control the rate of zoom and focus through a built-in rheostat.

The handgrips also house the running speed selector and the fade-in fade-out control.

Extension sockets in the ends of the handgrips let you operate the camera remotely, from as far as twenty feet.

And if you should drop the camera on its handgrips, while on location in Timbuktoo, the grip can be replaced. Because the camera and its power source are modular.

BODY HELD. NOT HAND HELD.

We wanted a camera that would work equally well on or off the tripod. In the studio or on location. So we designed ours to rest comfortably on the shoulder. By using a monopod attachment, the camera becomes entirely body held, leaving your hands free to guide and operate it.

WE BUILT A BETTER MAGAZINE.

We placed our 400' co-axial magazine to the rear, making the camera easy to work with in tight spots, like inside a car. We've minimized loading and handling. The film threads itself automatically, from core to core, in three seconds. Then a signal light tells you the camera is ready for shooting. (This same light also indicates when the film is exhausted.) A built-in cutter makes it easy to remove partially exposed film.

ELECTRONICALLY CONTROLLED MOTOR.

The Bolex 16 Pro has a built-in four-in-one electronically controlled motor that runs at variable speeds of 16 to 50 fps, forward and reverse. (There's also a model with speeds of 16 to 100 fps.) It can also shoot single frames for animation and time lapse studies. The motor operates so quietly that it produces only 32 db's five feet from the lens. So no blimp is needed. And because the motor starts and stops instantly, at all speeds, there are no blank frames between scenes.



The motor drive is crystal controlled, providing an accuracy of plus or minus one frame in 1,000' of film. The camera permits synch sound shooting without direct connection to a tape recorder.

OUR LENSES. AND MORE TO COME.

Presently we have four interchangeable lenses for the Bolex 16 Pro. An Angenieux f/2.2 12 to 120mm zoom. A fast Schneider f/2.0 10 to 100mm zoom. A 20 to 1 Angenieux 12 to 240mm zoom. And an extreme wide angle Zeiss Distagon f/2.8 8mm lens. And it's possible to adapt some of your own lenses for use on the Bolex 16 Pro.

EXPOSURE CONTROL. AUTOMATIC AND NOT.

It's there, even if you choose not to use it. The Bolex 16 Pro has a through-the-lens light metering system and automatic exposure control, for film speeds of 12 to 1600 ASA. The meter is coupled to the camera speed control, and adjusts itself automatically to correspond to any changes you make in the running speed. A manual override control is built right into the handgrip, so you can take over any time you please, without so much as moving your hand.

THE VIEW FROM THE FINDER.

The Bolex 16 Pro is a mirror reflex camera with a 20 X magnification at the viewfinder. The mirror is always in viewing position when the camera stops. The viewfinder converts instantly from ground glass to clear glass, to give a brighter image in dim light or with the lens stopped down. You can rotate the viewfinder 45, 90 and 180 degrees, which makes it possible to film with the camera aiming backwards over your shoulder.

The viewing screen has a TV area marked off, as well as 16mm frame markings. It also tells you what the f-stop is at any given time.



PUT IT ALL TOGETHER.

When you bring the automatic features of the Bolex 16 Pro into play, you can do some very remarkable things. You can follow focus and zoom at the same time, while panning from light to dark areas. (Ordinarily you'd need at least four hands to do that.) You can make automatic time lapse studies in changing light conditions. The Bolex 16 Pro was designed to be the best all-around 16mm sound camera of all time. We invite you to see how successful we were.

BOLEX 16 PRO

If you'd like a demonstration of the Bolex 16 Pro, please write Paillard Incorporated, 1900 Lower Road, Linden, N.J. 07036. We'll notify you when we'll be in your neighborhood.

NAME _____
 AFFILIATION _____
 STREET _____
 CITY _____ STATE _____ ZIP _____

For countries outside the U.S.A., write Bolex International S.A., 1450 Ste. Croix, Switzerland.

