Education, Industry News

Transatlantic television (a one-minute newsfilm transmitted by B.B.C. over telephone cable) highlighted the visit of Queen Elizabeth II to Canada. The transmission of the one-minute newscast required 100 minutes. A total of 1400 pictures were transmitted. The film was developed and then transferred electronically to the telephone cable. The Canadian Broadcasting Corp. took the signals off the cable at Montreal and made a duplicate film which was carried over relay facilities to NBC-TV in New York.

The process, which was developed by the B.B.C. Engineering Division, employs a slow-speed flying-spot film scanner, the video signal from which is used to modulate a carrier for transmission over the cable. At the receiving end the signals are demodulated and used to operate a slow-speed film telerecording equipment.

In designing the equipment it was found that a maximum video frequency of 4.5 kc could be used. Certain economies were effected in the video signal: (1) restriction of the horizontal definition to that corresponding with a bandwidth of 1.75 mc in the 405-line system; (2) a reduction to 200 lines using sequential scanning; and (3) scanning at the transmitting end of only alternate film frames with each frame-scan reproduced on two adjacent film frames at the receiving terminal. These measures result in reducing the 3-mc bandwidth of the British system to approximately 450 kc, the remainder of the bandwidth reduction being obtained by a decrease of the scanning speed until the maximum video frequency corresponds with the available 4.5-kc upper limit. The time required to scan the film is approximately 100 times normal.

The system uses a channel of the type normally used for transmitting music over the cable; such a channel has a nominal bandwidth of 6.4 kc. In order to limit the variation in the group delay-frequency characteristic to a value that can be corrected, it is necessary to restrict the usable video bandwidth to 4.5 kc. Vestigial sideband transmission is used with a special form of negative-going amplitude modulation. The carrier frequency is 5 kc and the whole of the lower sideband is transmitted, the vestige of the upper sideband extending from 5 kc to 5.5 kc.

As in other television systems, a synchronizing signal is transmitted at the beginning of each line-scanning period, in this case, the full amplitude of the video signal being utilized for the triggering edge of the synchronizing signal. The field synchronizing signal consists of four similar pulses and protection as provided against these pulses interfering with the bursts of reference carrier which are used for oscillator locking.

Identical film equipments (16mm) are used at both terminals of the system. At the sending end, the apparatus operates as a flying-spot scanner while at the receiving end it functions as a telerecording channel. The same cathode-ray tube is used for both purposes and is enclosed in a double mu-metal shield to minimize lines frequency interference.

The time required for each field scan is approximately eight seconds. A separate monitor tube with a long persistence phosphor reproduces a recognizable picture. The special film traction mechanism, which is operated by the synchronizing signal pulls down two frames at a time. Twin optical systems are needed to record simultaneously on two adjacent film frames and very small lenses with a focal length of one inch and an aperture of $f/8$ were developed for this purpose.

An Internship Program for graduate students in audio-visual methods and and techniques has been announced by the College of Education and the Bureau of Audio-Visual Instruction of the Extension Division of the University of Colorado. Any Doctoral candidate who has been accepted by the Graduate School is eligible for consideration. Internship training includes course work, work experience, and guided college teaching. The program also extends financial assistance. Work experience will be provided by the Bureau of Audio-Visual Instruction and will include on-the-job training in the problems of Audio-Visual Administration. Interns who satisfactorily complete the training in conjunction with their other academic work may receive either an Ed. D. degree or a Ph.D. degree with a minor in Audio-Visual Education. Additional information is available from Dr. Robert E. de Kieffer, Associate Professor, College of Education, Univ. of Colorado, Boulder, Colo.

The Superintendents Viewpoint on Educational Television is a compilation of reports and opinions presented at a Panel Discussion before the Region I Conference of the National Association of Educational Broadcasters held September 20, 1958, in New York. Published by Thomas Alva Edison Foundation, Inc., 8 W. 40 St., New York 18, the 28-page booklet has also been distributed by the NAEB. Participants in the discussion included William M. Brish, Washington County, Md.; Harold B. Gores, Newton, Mass.; Calvin E. Gross, Pittsburgh; Allen H. Wetter, Philadelphia; and Maurice U. Ames, New York. A typical opinion is expressed by Mr. Wetter who said, "Of course, TV cannot take the place of the teacher. But I believe that in television we have one of the most effective teaching devices developed during my 41 years of service."

The Society of Photographic Scientists and Engineers has announced the appointment of Nelson W. Rodelius as Program Chairman and Charles E. Ives as Papers Chairman for the 1959 National Conference to be held October 26–30, at the Edgewater Beach Hotel in Chicago. Mr. Rodelius is associated with the Armour Research Foundation in Chicago. Mr. Ives is a research associate at Kodak Research Laboratories, Rochester, N.Y. Other Chairmen are: Arthur E. Neumer of Rochester, Exhibits; Joseph Mangiaracina, Little Silver, N.J., Registration. The Treasurer is Walter Rybka of American Speedlight Corp., Middle Village, N.Y. A large foreign delegation is expected at the Conference, including visitors from Germany, France, Australia and Japan. The Exhibit to be held in conjunction with the Conference will feature photographic and electronic equipment.

Central Africa's first industrial film company, Associated Rhodesian Telefilms, P.O. Box 8252 Causeway, Salisbury, Southern Rhodesia, Central Africa, has been organized and is owned by Geoffrey Mangin. Mr. Mangin presented a paper at the Fall 1958 Convention in Detroit. At that time he was associated with the Central African Film Unit. In a letter to the *Journal* announcing the new company, Mr. Mangin reports: "Things have been happening very rapidly (in) Africa . . . details are being finalized to start television in Central Africa next year. The new firm will produce mainly 16mm films for industry. Besides producing films for specialized audiences and local television (beginning next year), the organization will also supply 16mm or 35mm topical film material from any part of Africa south of the equator to overseas producers and television companies."

Peachtree Production Associates, Inc., of Atlanta, Ga., has announced that it has acquired the management and control of Strickland Films, Inc., as part of an expansion program planned eventually to include video-tape production and syndication of several TV film series. The firm has moved its production facilities to Strickland Studios, 220 Pharr Rd., N.E., Atlanta 5.

Motion-picture film which had been soaked in the salty South Atlantic for more than half an hour following the Thor missile flight on May 12 developed successfully into the first movies of one space vehicle taken from another. The pictures were taken from a data capsule in the missile's nose cone which enclosed a tiny camera and 40 ft of Kodak Plus-X Reversal film. Photographed at altitudes approaching 300 miles, the film shows the booster snapping away from the nose cone, then falling away below as the cone continues upward. In the background, the earth and its cloud cover show as a hazy white half-circle outlined against the black void of space. From Cape Canaveral, the nose cone raced 1500 miles in 15 minutes to land in the Atlantic near Antigua. The data capsule, ejected just before impact, emitted signals to guide its recovery. Immediately after its recovery the film was placed in an airtight container to keep fogging of film by salt water to a minimum.

The Commission International de l'Eclairage met in Brussels, June 11 to 24. The Commission is planned to provide an international forum for all matters pertaining to the science and art of illumination, to promote the study of such matters, to provide for interchange of lighting information among countries, and to agree upon and publish international recommendations. Thirty-six countries were represented at the meeting. Among U.S.A. delegates was Karl Freund, President of Photo Research Corp. of Hollywood, who represented motion-picture and television lighting. Dr. Freund is the author of numerous articles in this *Journal*.

Dr. S. K. Guth, also a *Journal* author, from the Lamp Division of General Electric Co., Cleveland, was Chairman of the CIE Committee on Causes of Discomfort in Lighting. Chairman for the CIE Committee on Colorimetry was Dr. Dean B. Judd of the National Bureau of Standards. T. M. Edwards, Grimes Mfg. Co., Urbana, Ohio, was Chairman for Airborne Lighting and Signals, making a total of three U.S.A. chairmanships among the 16 international Technical Committees.

Guild Films Co., 460 Park Ave., New York 22, has moved its sales and administrative offices to 655 Madison Ave., New York City, and 32 Court St., Brooklyn, because of expanding activities due to the increasing video-tape market and the growing international operation of Inter World TV Films, the firm's international distributor, which now reports representatives in major TV markets throughout the world.

Space Recovery Systems, Inc., a new organization formed to provide research, engineering and production for advance recovery systems designed to retrieve equipment and personnel from high altitudes, has established its main offices in El Segundo, Calif. A combined operation of CBS Laboratories and M. Steinthal and Co., the new organization will continue the work of AERCO (Aeronautical Equipment Research Corp.), a Steinthal subsidiary, which it has absorbed.

Nautilus Arctic Passage is a 14½-minute documentary film in sound and color depicting the historic voyage of the nuclear-powered submarine, USS Nautilus, from the Pacific to the Atlantic in mid-1958. The film was produced by the Motion Picture unit of Autonetics, 9150 E. Imperial Hwy., Downey, Calif., in cooperation with the Navy. Highlights of the film include spectacular views of the under side of the Arctic ice pack and voice recordings of Cmdr. William R. Anderson at the moment of crossing the North Pole. The film is available without charge for public, nonprofit, television and theatrical exhibition.

Lift Thine Eyes, a 20-minute motion picture dramatizing the training of a student nurse has been made by advanced students in the Department of Radio, Television and Film, School of Speech, Northwestern University at the request of Evanston Hospital, Evanston, Ill. Production of the film was undertaken for credit as independent study. This film and an earlier one, *A Better Beginning*, on the Premature Babies Milk Bank, are available for loan, without charge, from the University's film library.

An authority on sensitization of film, William West, of Eastman Kodak Co., described the photographic process in a talk on "Photoelectrons and Photographs" given May 2 before a joint meeting of the Chemistry Teacher's Club of New York and the Physics Club of New York. The meeting was held at Fieldston School, New York. In his talk, Dr. West described the process by which light of a certain color sets in motion a chain of events from which the final picture can be derived. He also discussed sub-atomic changes caused by light in film, and spoke of phenomena now under study at Kodak Research Laboratories.

Allan C. Finstad has been appointed Education and Professional Products Manager for Dage Television, a division of Thompson Ramo Wooldridge, Inc. For the past two years, he has been manager of the audio-visual products department of Ozalid division of General Analine & Film Corp., New York. Prior to that he was educational director and audio and visual aids supervisor for the Charles Beseler Co. Mr. Finstad is the author of a *Journal* paper, "Preparation and Presentation of Low-Cost Projectable Materials," pp. 461-464, Aug. 1957.

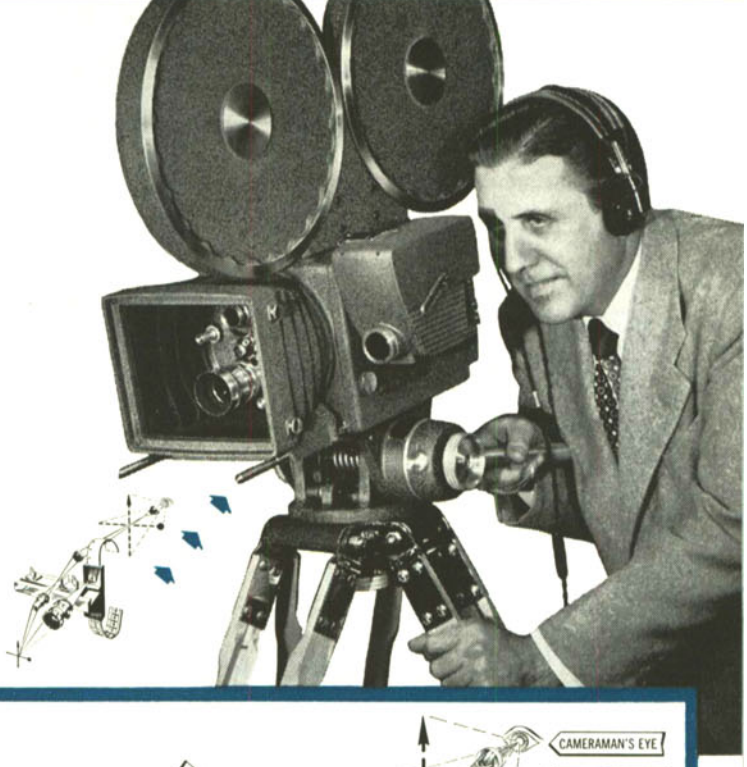
James W. Hulfish, Jr., has been appointed Director of Information for the National Audio-Visual Association, Inc. He succeeds Henry C. Ruark who recently accepted an appointment to the Oregon State Department of Education. In his new post Mr. Hulfish will be responsible for the Association's trade and public relations programs, including press publicity. He will also edit NAVA News. Prior to his present appointment he was Administrative Assistant to the Executive Vice-President of the U.S. Wholesale Grocers' Association, Inc.

George T. Scharffenberger has been appointed a vice-president of Litton Industries, Inc., in which capacity he will serve as President of Westrex Corp., a Litton division. He succeeds Glen McDaniel, vice-president and general counsel of Westrex who becomes Chairman of Westrex. Prior to his present appointment, Mr. Scharffenberger was President of Kellogg Switchboard and Supply Co., a division of International Telephone and Telegraph Corp.

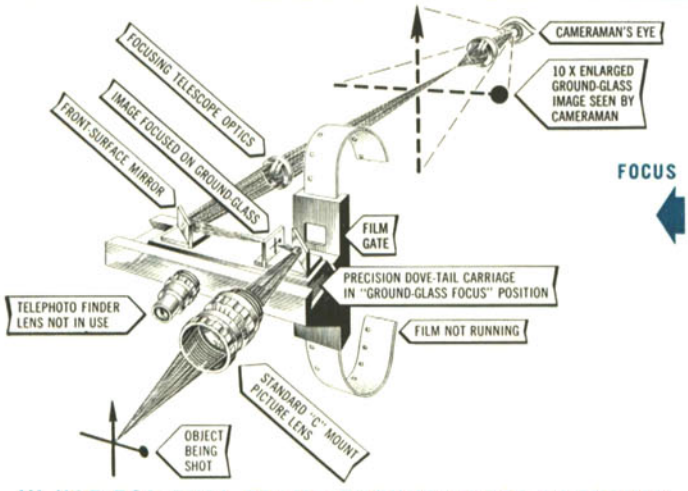
Auricon

"SUPER 1200" CAMERA

with Full-Frame Reflex Ground-Glass FOCUSING OPTICAL SYSTEM



The unique and versatile features built into the 16mm Auricon "SUPER 1200" Sound-On-Film Recording Camera have prompted Producers and Cameramen to name the Super 1200..."Finest 16mm Sound Camera ever built!" This Camera is "Self-Blimped" for whisper-quiet Studio work, has 33 minutes of continuous film capacity, Variable-Shutter or Kinescope "TV-T" Recording Shutter, plus the combined "Rifle-Scope" Telephoto Finder and Reflex-Focusing Optical Systems illustrated below. Its only equal is another Auricon "Super 1200"...

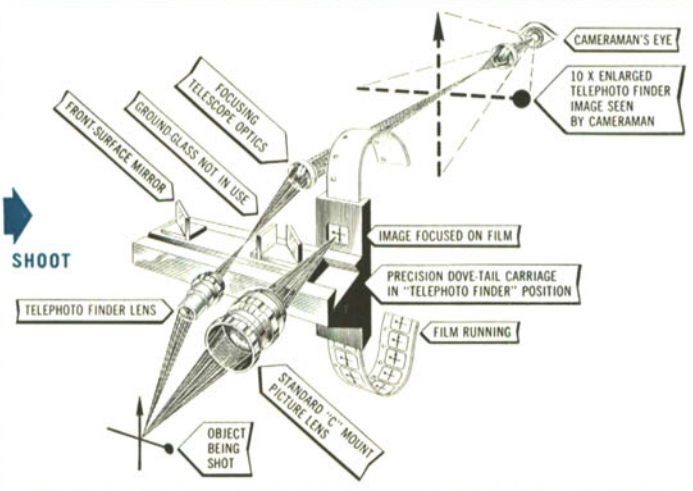


IN USE FOR FULL-FRAME GROUND-GLASS FOCUSING

"Super 1200" Reflex Ground-Glass Focusing-Frame indicates the field covered by any focal-length lens at all distances. A 10X enlarged Ground-Glass image is seen by the Cameraman, for needle-sharp critical focusing.

FOCUS

SHOOT



IN USE AS TELEPHOTO-FINDER DURING FILMING

No Camera-weight shift on tripod legs when moving from focus to film-shooting position with the "Super 1200." Camera-body does not shift to focus, or shoot film, as Optical-System Dove-Tail Carriage is only moving part!

THE CAMERA OF TOMORROW, HERE TODAY! ITS ONLY EQUAL IS ANOTHER AURICON "SUPER 1200"

Model "CM-74C" Features include...

- "Rock-steady" picture and High Fidelity Optical Sound-Track recorded on same film at same time, with "whisper-quiet" Camera & Sound Mechanism synchronously driven by precision-machined Nylon gears.
- "Super 1200" is Self-Blimped for completely quiet Studio use.
- Built-in Electric Camera Heater with automatic Thermostat-Control, provides reliable cold-weather Camera operation.
- Geared Footage & Frame Counter with built-in neon-glow indirect light.
- Two independent Finder systems (in addition to Reflex Ground-Glass Focusing through the Camera lens); a brilliant upright-image Studio Finder, plus the "Rifle-Scope" precision-matched Telephoto-Finder.
- 600 and 1200 ft. film Magazines available. Up to 33 minutes continuous filming.
- During picture exposure, your film runs through the Auricon "Super 1200" Film-Gate with the light-sensitive film emulsion accurately positioned on jewel-hard Sapphire Surfaces, an exclusive Berndt-Bach feature (U.S. Patent No. 2,506,765). This polished Sapphire Film-Gate is guaranteed frictionless and wear-proof for in-focus and scratch-free pictures, regardless of how much film you run through the camera!
- Priced from $5,667.00 complete for sound-on-film; $4,149.00 without sound; choice of "C" Mount lenses and Carrying Cases extra.
- Sold with a 30 day money-back Guarantee and One Year Service Guarantee; you must be satisfied. Write today for your free Auricon Catalog.

Auricon Hollywood

GUARANTEE

All Auricon Equipment is sold with a 30 day money-back guarantee. You must be satisfied!

Auricon

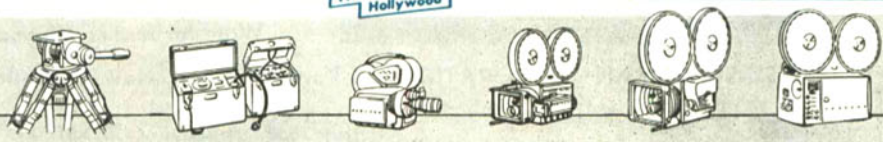
A PRODUCT OF

BERNDT-BACH, INC.

6946 Romaine Street, Hollywood 38, California

MANUFACTURERS OF SOUND-ON-FILM RECORDING EQUIPMENT SINCE 1931

Auricon Hollywood



TRIPOD	PORTABLE POWER UNIT	CINE-VOICE	AURICON PRO-600	SUPER 1200	SOUND RECORDER
$406.25	$269.50	$795.00	$1871.00	$5667.00	$3630.00

Norman E. C. Naill has been appointed Customer Relations Representative for Southwest Film Laboratory, Inc. Prior to this appointment he was Motion Pictu re Production Supervisor for Virginia Polytechnic Institute. A member of the Society, he is also a member of the University Film Producers Assn.

Victor A. Babits, Professor of Electrical Engineering, Rensselaer Polytechnic Institute, Troy, N.Y., has been made a Fellow of the Television Society, London, England, for "contributions to television over the past thirty years or more." The Television Society, founded in 1927, is said to be the first such group organized to further research in television.

section reports

The Hollywood Section met on May 19 at the Walt Disney Studios in Burbank with an attendance of 220. Speakers were: Vaughan C. Shaner and John M. Waner of Eastman Kodak Co., who discussed "High-Speed Eastman Color Negative Film;" and James DuBois of KABC Television, who talked about "Special Lighting Effects Using the Leco Spotlight and a New Cukaloris."

Mr. Shaner spoke on the new Eastman color negative film Type 5250, which was designed to replace Type 5248. He used colored slides to show that 5248 and 5250 are directly comparable as far as spectral sensitivity is concerned, but 5250 has twice the film speed of 5248. In a 35mm print showing identical scenes photographed on 5248 and 5250, the Type 5250, with the increased emulsion speed, permitted exposure at one lens stop less light under the same lighting conditions. The color from the 5250 matched the 5248 very closely, and the effect of stopping down the lens was quite apparent in the increased depth of field. The closing portion of the film showed scenes from the 1959 Ice Follies of Shipstead and Johnson, using lighting conditions exactly as they were for the road show. Following Mr. Shaner's presentation, Mr. Waner discussed some of the technical aspects of printing and processing the new material.

Mr. DuBois outlined the procedure used in preparing masks for use in Leco spotlights to project special background lighting effects as used in TV. He showed, step-by-step, illustrating with colored slides, how the special pattern masks are made from a photographic negative and transferred to a very thin aluminum disc by photoengraving methods. The extremely fine detail of a special mask was shown, and several masks were inserted in the spotlight and the effects displayed on the screen for the audience to see.—Carl W. Hauge, *Secretary-Treasurer*, 959 N. Seward St., Hollywood 38, Calif.

The Hollywood Section met on June 16 at the Department of Cinema, University of Southern California, Los Angeles, with an attendance of 175. Frank P. Clark, chairman of the SMPTE Student Chapter at the University, conducted the meeting and introduced the speakers.

Robert W. Wagner, then Head of the University's Cinema Dept., discussed "USC Cinema and the Next 30 Years." Glenn D. McMurry, Manager of Film Sales, talked about "Automation in Film Cataloging," and John G. Frayne, Westrex Corp., discussed "The Engineer and the Motion-Picture Industry."

In addition to the three papers, various motion pictures made by students from several academic levels in the Cinema Department were presented. The graduate department presented a film made from clippings and behind-the-scene shots from *Bridge on the River Kwai*, which showed how to prepare dramatic shots to greatest advantage to make the experience believable and the characters and their conduct real.

Mr. McMurry described how the IBM card system is used for the rapid up-dating of film catalogs.

Dr. Frayne spoke of the obligation that industry has to support technology development and the technical training programs for up-grading personnel of the motion-picture and TV industries.

The USC Student Chapter is a particularly active group and this program, arranged and presented by them, showed some of their fine work. The facilities of the USC department were open for inspection. —Carl W. Hauge, *Secretary-Treasurer.*