

## Education, Industry News

**A training program for Bell System engineers to prepare them for the era of satellite communications is a project of Bell Telephone Company.** There are four schools presently participating in the one-year program: Illinois Institute of Technology; Rensselaer Polytechnic Institute, Troy, N.Y.; University of Colorado; and Washington University, St. Louis. At IIT two groups of 25 engineers will study on a four-weeks on, four-weeks off basis for 48 weeks. Studies include electronics, circuit theory, wire transmission, communications switching, and sounds. The program is designed mainly so that engineers who have been out of school for several years will be prepared for keeping pace with the rapid advances in communications.

**The 1963 Photokina** will be held March 16-24, 1963, in Cologne, Germany. More than 550 firms will be represented at the international exhibit of photographic equipment. The display area occupies 96,000 square yards. Featured at the Photokina will be a display of photographs in conjunction with Unesco on the theme of Teaching, Learning, Understanding, Enlightening.

**Optical masers** will be the subject of the 13th annual Polytechnic International Symposium to be held in New York, April 16-18, 1963. The Symposium is organized by the Microwave Research Institute of the Polytechnic Institute of Brooklyn, 55 Johnson St., Brooklyn 1, N.Y., in cooperation with the IRE, the AIEE and the OSA. It is co-sponsored by the Air Force Office of Scientific Research, the Office of Naval Research and the Army Research Office. The Symposium will attempt a comprehensive integration of the physics and technology bearing directly on the discovery, theory and application of maser phenomena at optical and infrared frequencies.

**Two 16mm films about American Indians** produced by the Motion Picture Production Department of the University of California Extension have been awarded Diplomas of Participation by the Festival dei Popoli, the 1962 International Festival for Ethnographic and Sociological Films held in Florence, Italy. The two films, *Buckeyes: A Food of the California Indians* and *The Sinew-Backed Bow and Its Arrows*, are part of a series on Indian tribes of Western America, planned and supervised by S. A. Barrett, Department of Anthropology, University of California, Berkeley, with financial support from the National Science Foundation. These two films were the only United States entries selected for the Festival.

**Europa**, an animated color film commissioned by the European Economic Community and produced by Pelican Films, Inc., presents in allegorical style the formation of the European Common Market. In 10 minutes running time the strife and struggle of 2500 years is suggested and the events culminating in the creation of the European Common Market are outlined.

The film "story" shows Zeus, god of ancient Greece, and Europa as parents of six squabbling sons representing Germany, Italy, France, the Netherlands, Luxembourg and Belgium. The story concludes with the reconciliation of the six sons.

Using classical art as background for the animation, the sacking of cities, toppling of castles and churches, and the annexing of lands are shown to illustrate the economic and political rivalry resulting from geographic and nationalistic barriers. Special techniques enable use of woodcuts, engravings and paintings. The film shows how the Marshall plan brought about recognition of the potential benefits of modified sovereignty and federation. Formation of the European Coal and Steel Community in 1950 is shown as a positive step toward the European Common Market.

*Europa* is distributed by Association Films, Inc., 347 Madison Ave., New York 17. It is available to theaters without charge.

**Eruption of Kilauea**, produced by the Motion-Picture Service of the U.S. Department of Agriculture, has been awarded First Prize in the Geographical-Ethnographical-Folklore category at the 13th Annual Film Festival in Venice, Italy. The film was photographed by scientists of the Geological Survey's Hawaiian Volcano Observatory and the rangers and naturalists at Hawaii National Park. Music and film editing were accomplished by Don Drucker. Films from 28 countries were entered in the competition.

**A remarkable short film, *At Home With Jazz***, has been made by Amin Chaudhri, Director of the Film Production Department of the Jazz Arts Society. The film, while by no means "avant garde" in terms of content or expression, nevertheless has something new to say and says it most effectively. According to the youthful director (Mr. Chaudhri is 23 years of age), "Our effort in this small picture is first of all to capture jazz in the making. By doing that, incidental to the aim, the film could help to change the image of the jazz musician." The film is based on a single number during a rehearsal in a home. According to Mr. Chaudhri, "We begin in close — a mere profile of Mercer Ellington. Then we pull back very slowly to encompass the entire group, and then the walls and the living room. Always the sound of music. . . . Its a film that goes directly to the sound and the making of the sound and to nothing else."

Mr. Chaudhri is the son of the Director of British Information and Broadcasting Services in India. After traveling in Europe he came to the United States where he has worked as film editor, actor and producer. An innovation in triple screen technique was coordinated by Mr. Chaudhri and Francis Thompson for the motion picture *Buckminster Fuller*.

**Ralph M. Evans**, Director of the Color Technology Division, Eastman Kodak Co., gave an invited demonstration of apparent fluorescence of colors at the convention of the Optical Society of America in Rochester, N.Y., on October 3. Special projection equipment was used to show that fluores-

cence is a visual phenomenon and does not depend on the physical means by which a color is produced. During the demonstration one projector produced a surround of white light on a screen, and left unlighted a square center portion. This square was then filled with light from another projector until square and surround were matched in brightness.

Filters in the second projector were then used to produce, in the center of the screen, colors whose purity and luminance could be varied. Apparent fluorescence was shown to be the greatest when color is pure and brightness of the colored square is the same as that of the surround. It was demonstrated that fluorescence decreases when color brightness is greater or less than screen brightness and also when the purity of the color is diminished.

Nearly half of all possible colors appear fluorescent at some point in the range as purity decreases from maximum and color brightness decreases from that of the surround. The greatest percentage of fluorescent colors are shades of blue. Very few hues of yellow appear fluorescent.

With the equipment Mr. Evans showed that even the familiar fluorescent color of "fire orange" can be produced without physical fluorescence.

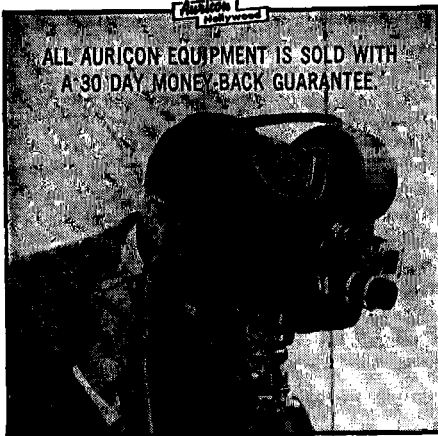
**Marvin A. Gilman, Ira Krupen and Morris Kolnicker** have joined the Systems Engineering Dept., Government Products Division, Adler Electronics, Inc., One Lefevre Lane, New Rochelle, N.Y. Mr. Gilman was formerly with General Precision, Inc.; Mr. Krupen, with Hazeltine Electronics; and Mr. Kolnicker, with International Telephone and Telegraph Co. The appointments were made as part of an expansion program, the announcement stated.

**John Spence** has been appointed assistant head of the emulsion research division at Kodak Research Laboratories, Rochester, N.Y. Dr. Spence has been with Kodak Research Laboratories since 1934. As a physical chemist he engaged in research on the optical properties of high molecular weight compounds. In 1938 he became supervisor of the chemistry department and in 1940 he transferred to the emulsion research department for work on sensitizing photographic emulsions. He was named a senior research associate in 1960.

**John D. McCall** has resigned from the Executive Vice-Presidency of Mitchell Camera Corp. He will continue with the firm in an active capacity as consultant and member of the Executive Operating Committee. In announcing his resignation he stated that reasons of health prompted his resignation from the more arduous responsibilities of the Vice-Presidency. Mr. McCall has been associated with the firm in an executive capacity since 1929. He attended Northwestern University and from 1926 until 1929 he was associated with National Theatre Supply Co. He has been a member of the Society since 1949.

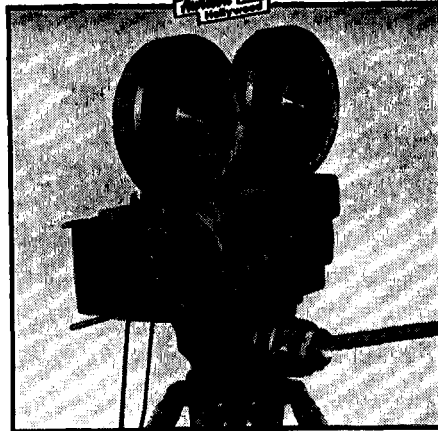
**Thomas T. Hill** has joined the Photo products Division of Di-Noc Chemical Arts, Inc., East Lake Rd., Honeoye, N.Y., as process engineer. The firm is a recently acquired subsidiary of Minnesota Mining

# AURICON 16mm Sound-On-Film for Professional Results!



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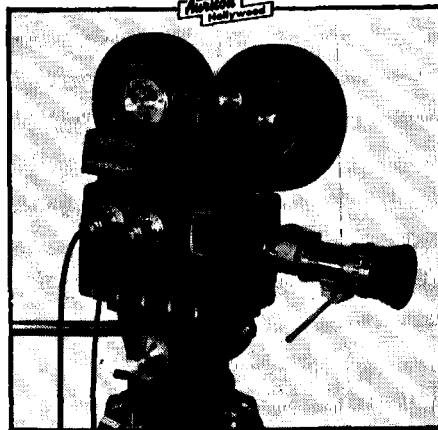
"CINE-VOICE II" 16mm Optical Sound-On-Film Camera.  
 ★ 100 ft. film capacity for 2¾ minutes of recording; 6-Volt DC Converter or 115-Volt AC operation. ★ \$967.00 (and up).



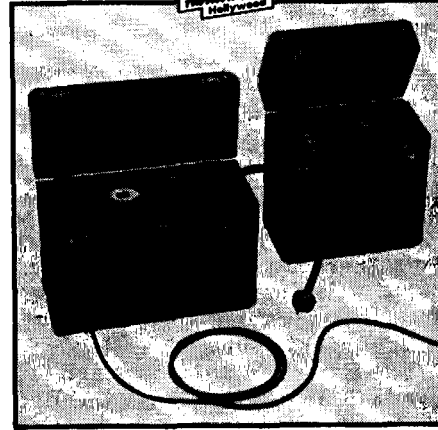
"AURICON PRO-600" 16mm Optical Sound-On-Film Camera.  
 ★ 600 ft. film capacity for 16½ minutes of recording. ★ \$1871.00 (and up) with 30 day money-back guarantee.



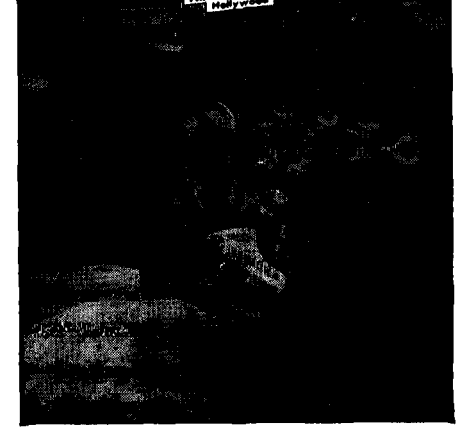
"SUPER 1200" 16mm Optical Sound-On-Film Camera.  
 ★ 1200 ft. film capacity for 33 minutes of recording. ★ \$5667.00 (and up) complete for "High-Fidelity" Talking Pictures.



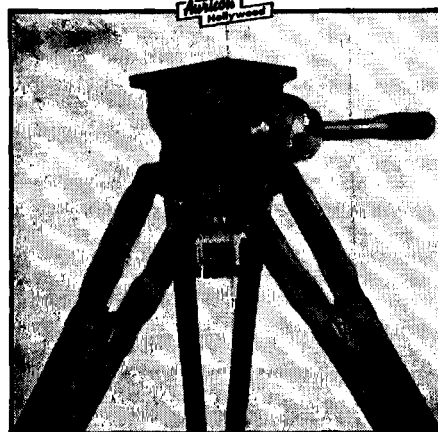
"PRO-600 SPECIAL" 16mm Light-Weight Camera.  
 ★ 400 ft. film capacity for 11 minutes of recording. ★ \$1,295.00 (and up).



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Puts 100 Complex Audio Control  
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Components in a  
space 28" x 30"

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- Model 663 — A no distortion compressor
- Model 661 — An automatic attenuator (AUTO-TEN)
- Model 662 — A 50 db high output, low distortion transistorized preamplifier
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# FAIRCHILD

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and Mfg. Co. Mr. Hill was formerly with the Atlantic Gelatin Co. in Woburn, Mass.

Charles B. Fair and Sol Green have recently been appointed to managerial posts on the sales staff of Bebell & Bebell Color Laboratories, Inc., 108 W. 24 St., New York 11, according to an announcement by Norman Bebell, President of the Laboratories. Mr. Fair will have charge of filmstrips and slides sales and services and Mr. Green will service advertising agencies and architectural and design firms in the New York-New Jersey-Connecticut area.

Fordyce E. Tuttle of Eastman Kodak Co, has received the Navy's highest civilian honor, a Distinguished Public Service Award for outstanding contributions in the field of antisubmarine warfare technology. The award was presented in Washington, D.C., by Secretary of the Navy, Fred B. Korth. Mr. Tuttle acts as scientific advisor to Eastman Kodak management and is concerned with the investigation of commercial and military projects related to the company's Apparatus and Optical Division. For the past four years he has headed the National Security Industrial Association's advisory committee on anti-submarine warfare.

John Gelb has joined the Minicom Division of Minnesota Mining and Manufacturing Co., Los Angeles, in a research capacity, it was recently announced. Dr. Gelb's activities will include development work in data storage and retrieval systems. He has previously been associated with Fairchild Stratos, Magnavox Research Laboratories, Electro-Optical Systems, Hughes Aircraft and Bell Aircraft.

The Altec Service Company, a division of Altec Companies, Inc. marked its 25th anniversary, which occurred in September, with a Management Conference which explored requirements for modern-day theatrical service. It was pointed out that new technology and changing exhibitor requirements had brought about new and different service-maintenance problems. The need for technical training was stressed. The company became an independent organization in 1937, specializing in installation and maintenance of motion-picture sound-reproducing equipment.

Behrend Cine Corp., Chicago, has opened a new office in Detroit, specializing in the rental of motion-picture equipment, including cameras, lights and editing equipment. Head of the Detroit office, located at 9930 Greenfield Rd., is William Smith. The office will also handle rental of business meeting equipment, projectors, speaker systems, recorders, etc. Plans for addition of a complete sound equipment department have been announced.

Formation of an independent organization offering field maintenance services for manufacturers and users of complex electronic data systems has been announced by Walt Brown, a former Vice-President of Benson-Lehner Corp. The new firm, called Techniserv Corporation, has established headquarters at 8921 Sepulveda



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Blvd. Service centers will be maintained in key cities throughout the United States, including Washington, D.C.; Boston; St. Louis; Denver; and Albuquerque.

The firm of Adox Fotowerke Dr. C. Schleussner GmbH of Frankfurt, Germany, has been acquired by E. I. du Pont de Nemours and Co. of Wilmington, Del. Under the terms of the agreement, Du Pont acquired 100% ownership of the German firm, its operating subsidiaries and related companies and will continue the company's activities in the manufacturing, research and sales of photographic films and equipment. Carlfried Schleussner and Hans Schleussner, great-grandsons of the founder, will remain with the company as managing directors of Adox. A third managing director will be J. Roy Kelly, who has been Financial Control Manager of Du Pont's Photo Products Dept. in Wilmington.

International Marketing Associates is a new enterprise organized by Michael D. Altfillisch to provide world wide services for overseas product sales representation and distributorships, licensing arrangements, marketing research and the display of products at foreign trade fairs. IMA plans to handle products in the fields of process and analytical instruments, control components, transducers, precision mechanical and optical equipment, test instruments, research apparatus, electronics, communications, lasers-masers, radiation instru-

ments, oceanographic equipment and photographic instrumentation. The foreign trade fair service of IMA made its debut at the 6th International Congress on High-Speed Photography which took place at the Hague, Holland, in September; IMA represented several U.S. companies at the Hague.

Until recently, Michael D. Altfillisch was Senior Scientific Executive and Director of Marketing for Edgerton, Germeshausen & Grier, Inc., Boston. He can now be reached at International Marketing Associates, P.O. Box 246, Canton, Mass.

A television program automation system called the Visual 6000 System will be supplied by Visual Electronics Corp., 356 W. 40 St., New York, for installation at WTEV, Channel 6, the new TV station serving the Providence-Fall River-New Bedford area in New England. The system will operate with IBM punched cards. Other Visual 600 Systems have been installed in TV studios in New Orleans, Cleveland, New York and Los Angeles. These installations all operate with punched paper tape.

An RCA broadcast antenna system said to be capable of radiating 5 million watts of effective power has been delivered to WSBT-TV, South Bend, Ind., where it will be placed in service on Channel 22. Designed for uhf broadcasting, the antenna is capable of boosting the rated input power of 110 kw by 46 times to produce the max-

imum 5 megawatts of effective radiated power permitted uhf stations by the FCC. The antenna has 232 slots that are fed varying amounts of power to shape the TV signal into the pattern prescribed for the station's coverage area. This technique is used to increase signal strength at distant points without sacrificing a high-level signal over the close-in area. The antenna also uses an "electrical beam tilt" to depress the main signal beam so that it strikes the Earth at a point near the horizon, thus keeping maximum energy in the usable areas.

A new TV station in Sao Paulo, Brazil, will operate in Band III, Channel 13, to FCC 525-line standards. The signals will be horizontally polarized. Equipment will be supplied by Marconi's Wireless Telegraph Company, Chelmsford, Essex, England, under a contract with Radio Bandeirantes S.A. of Brazil. The studios will be located in the Jardim Leonor district of Sao Paulo, while the transmitting station will be 12 km from the city's center. Six portable microwave links will be provided, one to carry the signals between the studio and transmitting station and the others for use with mobile units.

A Marconi/RCA closed-circuit TV system providing extensive facilities for auditioning, previewing commercials, and for general experimental work has been installed in the new Fetter Lane offices of the British

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Combination  
16mm-35mm  
Model

**\$1495**

This splicer is constructed, as is usual with ACMADE products, of the finest materials and workmanship. All castings are of the best quality and the top body and cutter arms are seasoned to prevent distortion after machining. The machining is carried out to limits of  $\pm .0005''$  in order that the cutter blades shall close in a dead parallel manner. The cutter blades are made from stainless steel with Tungsten Carbide inserts, and afterwards ground lapped and polished to a limit of  $\pm .0002''$  thickness and the cutting edges relieved by  $1^\circ$ . The Tungsten Carbide inserts will have indefinite life and will not require sharpening as with other types. A heater unit is installed in the top body of the machine. The top light in a well glass fitting is attached to the body of the machine and also an inspection light in the waste bin together with cement bottle and brush. A scraper block is supplied and also a scraper block setting jib and support shelf rubber-covered. The whole machine is finished in first quality grey hammer and all metal parts other than cutter blades are hard flash chromed.

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The cutting arm, shown in operating position, is used by pressing the chrome button for cutting both sides of the film simultaneously. The film, has been registered on pins in the horizontal channel. The cutting blade is easily replaced.



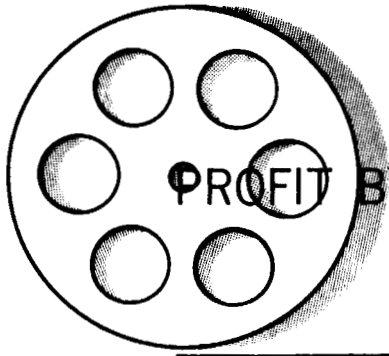
The splicing tape is registered on precision pins and held in place until automatically applied to the film by swinging the arm over and pressing the chrome button, cutting the adhesive and applying it — in perfect register to the film.

Model 35 for 35mm. Model 16 for 16mm—\$295

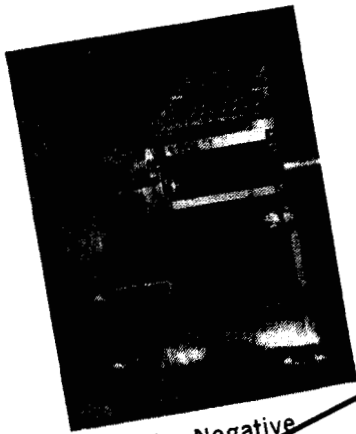
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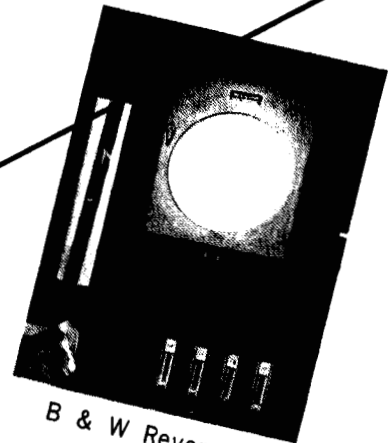
PROFIT BY PROVEN PERFORMANCE



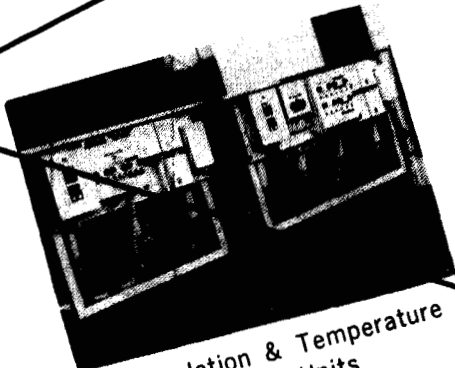
Color Negative



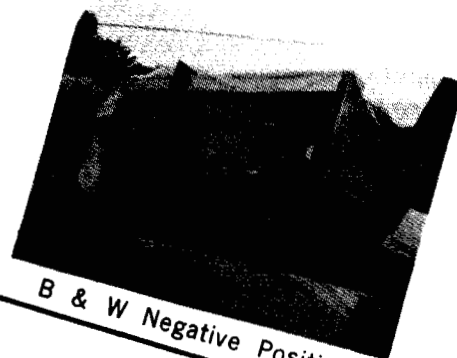
Color Reversal Combination  
ME 2 A & ECO-1



B & W Reversal



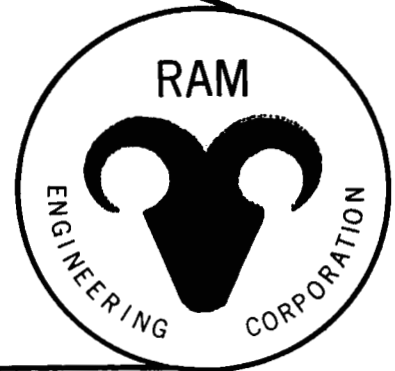
Recirculation & Temperature  
Control Units



B & W Negative Positive

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advertising agency, Lintas Ltd. The installation centers around a control room which houses two telecine channels. Control facilities are similar to those of a broadcasting studio. Each telecine channel consists of a Mark IV vidicon camera channel type BD896 with optical multiplexer which enables up to four projectors to be mounted around the camera ready for immediate use. The first camera is coupled to a 35mm projector, a 16mm projector and a slide projector. The second camera has a 35mm and a 16mm projector. Both 35mm projectors have "preview" attachments for double head running. The two 16 mm projectors are coupled electrically to a 16mm RCA sound reproducer so that the reproducer can be locked and run in synchronism with either projector. A selector system permits either or both projectors to operate independently with their own soundheads.

The outputs from the two telecine channels and from the studio camera are fed to the control console which contains monitors for each program source and a picture and waveform monitor which can be switched to any channel. The console also houses two sound tape recorders and a disc reproducer, together with mixing controls and patching panels for both sound and vision. The selected sound and vision signals are fed from this console to any or all of a group of five modulators which operate on standard TV frequencies not normally used in the London area. These modulated signals, together with signals from normal TV aerials are then multi-

plexed and distributed by coaxial cable to standard TV receivers in offices throughout the building. The required program may then be selected by operation of the channel switch on each receiver. Both of the telecine channels are capable of operation on either 405 or 625 lines. Provision has been made on one of these for a switch changeover of line standards.

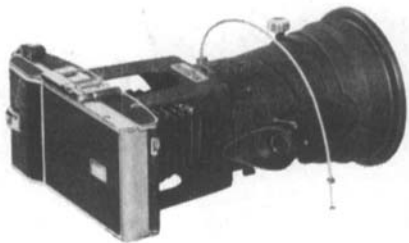
**The Cambridge Electron Accelerator**, designed by scientists of Harvard University and Massachusetts Institute of Technology, and sponsored by the Atomic Energy Commission, produces an energy level of 6 billion volts. The accelerator, which is larger than a football field, produces electrons and protons of much higher energy than ever before available in large quantity. In addition, the accelerator is expected to create virtually all known types of strange particles and anti-particles and perhaps others, undetected as yet.

One of the components in the mammoth accelerator is a water-cooled ceramic-metal tube, weighing about 200 lb. The tube, designated RCA-4612, was designed by the RCA Electron Tube Division for use in the accelerator. The tube has a symmetrical double-ended terminal configuration for symmetrical circuitry which places the electrical center of a half-wavelength portion of a resonant cavity in the active region of the tube electrodes. To simplify the mechanical portion of the double-ended structure, an unusual cork seal design is used. For example, the ce-

ramic rings "plug" into either end to insulate the coaxial contact terminals; plate from grid and grid from cathode. This method provides extremely short distances to the active region of the tube. As a result, broad band circuitry may be effectively employed.

**An intercity microwave system** built by Radio Corp. of America uses a different frequency for each of its three hops over a 137-mile path from KRCA, Los Angeles, to KOGO-TV, San Diego. Outbound from Los Angeles, the TV signal is beamed at 13 kmc for a distance of 17 miles to Mt. Wilson in the first leg of the relay. The 13 kmc band was selected to avoid congestion at 7 kmc in the Los Angeles area. Near the summit of the 5,600-ft mountain, a repeater station relays the signal on its longest hop of 108 miles, of which 40 miles is over the Pacific ocean. The second leg uses a 2 kmc frequency to overcome signal propagation characteristics created by the distance spanned and by surface reflections from the water. At Mt. Soledad, 12 miles from the San Diego studio, the incoming signal is further reinforced through the use of space diversity, a method of employing two receiving antennas and switching their output. The final leg in the system takes the signal at 7 kmc to the studio.

**Twenty-three feature films** from 18 countries and 50 short films from 16 countries, including 14 entries from the United States, were shown at the San



# FAIRCHILD

F289 and F296

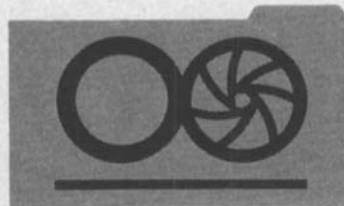
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OSCILLOSCOPE  
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Industry for  
over 45 years...

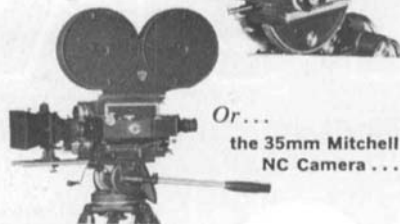
## MITCHELL

Mitchell motion picture equipment is designed for virtually every film making requirement. 16mm, 35mm, 65mm and 70mm Standard and High-speed Mitchell cameras are available to meet your needs.



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the 16mm Mitchell  
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And...  
the 35mm Mitchell  
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Francisco International Film Festival held October 31–November 13.

A feature-length 16mm entry from Thailand, *Embrace of Fate*, attracted considerable interest because of its extraordinary method of presentation. The film is silent but is accompanied by live actors who sit in the theater, following the movie visually and providing all the necessary voices, sound effects and music. So talented and versatile are the narrators that they produce all the necessary dialogue and sounds the first time they see the movie. The voices of *Embrace of Fate* are those of Rujira and Marasri Israngura, the most famous team of narrators in Thailand. At the Festival, a special booth was constructed in the theater where the narrators performed in full view of the audience. Known as the "Narrator of Seven Voices," Rujira Israngura impersonates both men and women, young and old. He and his wife have "spoken" more than 300 American, French, Italian and English films, as well as 350 Chinese and Japanese pictures during the 10 years they have been narrating. Prior to the Film Festival presentation this combination of live actors and silent film had not been shown outside of Thailand.

The United States feature-length entry, *David and Lisa*, had previously received the Venice Film Festival's award for the best film by a new director. The film was directed by Frank Perry and produced by Paul Heller. An entry from Russia, *Ivan's Childhood*, has been awarded the Grand Prix at the Venice Festival.

A number of noteworthy short films were shown at San Francisco, among them, *The Earth Shook, the Sky Burned*, a documentary on the 1906 San Francisco earthquake (United States); *Nahanni*, a story of an old prospector's search for a lost gold mine (Canada); *Birth of a Fairy Tale*, a documentary about a puppet theater (Poland); *Love and Film*, a cartoon parody (Zagreb Film of Yugoslavia); *Attention, Fresh Paint*, a satire on modern art (Hungary); and *The Pelicans*, a nature film on the pelicans that nest on the Danube delta (Rumania).

The fifth annual American Film Festival will be held May 1–4, at the Hotel Biltmore in New York. The event is sponsored by the Educational Film Library Association, 250 W. 57 St., New York 19. Blue ribbon juries of film experts will select 16mm films and 35mm filmstrips for competition. The entries will be grouped in 33 subject-area competition categories under the general headings of Art and Culture; Business, Industry and Public Relations; Education and Information; Health Safety and Medicine; and Religion and Ethics.

A film festival called Independent Film-Makers' Festival will be held May 10–12, under the auspices of Foothill College Public Events Board, Los Altos Hills, Calif., and Contemporary Cinema of Palo Alto Inc. Purpose of the festival is to give public recognition to individual points of view expressed through the medium of the motion picture. Cash prizes will be awarded. Additional information is available from Mrs. Max Bakalinsky,

## Biographical Note



### Sam Breitenstein

Sam Breitenstein, a 32-year member of the Society, has recently accepted the post of Motion Picture Production Specialist with the U.S. Army Pictorial Center, following his resignation from Mecca Film Laboratory Corp. of New York where, for 25 years, he had held the post of Laboratory Superintendent. A 50-year veteran of the motion-picture industry, Mr. Breitenstein, who is also a member of Motion Picture Pioneers, began his career in 1912 with the Commercial Motion Picture Laboratory. In 1918 he joined the Navy as official photographer for the Bureau of Navigation. In 1922 he joined the Tremont Film Laboratory, working both in New York and California, where he remained until 1929 when he joined Consolidated Film Laboratory as Superintendent. In 1936 he joined Mecca Film Laboratory. With his entire career having been devoted to the motion-picture industry, Mr. Breitenstein has participated actively in that particular segment of the industry's progress.

Independent Film-Makers Festival, 3765 Wright Place, Palo Alto, Calif.

**Television in Education** is a 28-minute color film which gives an on-the-scene report of various types of educational TV, including open circuit, closed circuit and airborne. The film emphasizes the use of television as an aid to classroom learning. Intended to give a comprehensive view of the growing impact of television on education, the viewer is shown various school systems throughout the country where TV is an accepted part of the educational process. Educators who helped pioneer the use of TV in these communities report on their experiences with this new educational tool and show "team teaching" techniques in action. The film is being made available to educators and the general public by the Bell system and on or after December 15 prints will be obtainable from any Bell Telephone business office.

A series of lectures on electrical testing instruments emphasizing new developments and techniques has been arranged by the British firm of Evershed and Vignoles Ltd., Acton Lane, London W4. The lectures, instituted in response to a request by the ASEE, will be held at various locations and will continue through

May, 1963. Ten of the lectures have been delivered and about 18 more are planned. General subjects to be covered include Earth Loop Testing; Testing Instruments Generally; Planned Maintenance of Electrical Equipment; and Dielectric Absorption and Step-Voltage Insulation.

**Alfred N. Goldsmith** has been elected a Benjamin Franklin Fellow of the Royal Society of Arts, of England, in recognition of his contributions to the advancement of broadcast radio and television. The Royal Society of Arts, founded in 1754, is the third oldest learned society in England. The Benjamin Franklin Fellowship, extended to a limited number of Americans, commemorates the fact that Benjamin Franklin was one of its most active early members. Dr. Goldsmith, who is an Honorary Member of the Society and recipient of the 1956 Progress Medal, was recently made Honorary Vice-President of the Radio Corporation of America.

**Eric C. Johnson** of Eastman Kodak Company has been appointed product manager for professional magnetic products, according to a recent announcement. He will supervise sale of Kodak magnetic tapes and films for professional use, including Eastman Magnetic Tape introduced in 1961. Mr. Johnson has been with the company since 1954, first as a member of the manufacturing experiments division and, since 1958, of the motion-picture film department.

**Election of four vice-presidents of Philip A. Hunt Company**, Palisades Park, N.J., has been announced by J. S. Coles, President. The newly elected officials are: John R. Bonniwell, Sales; Donald B. Alnutt, Research; Charles F. Belmont, Product Development; Charles E. Utz, Finance. Mr. Bonniwell has been with the firm since 1939; Mr. Alnutt since 1954; Mr. Belmont since 1947; and Mr. Utz since 1946.

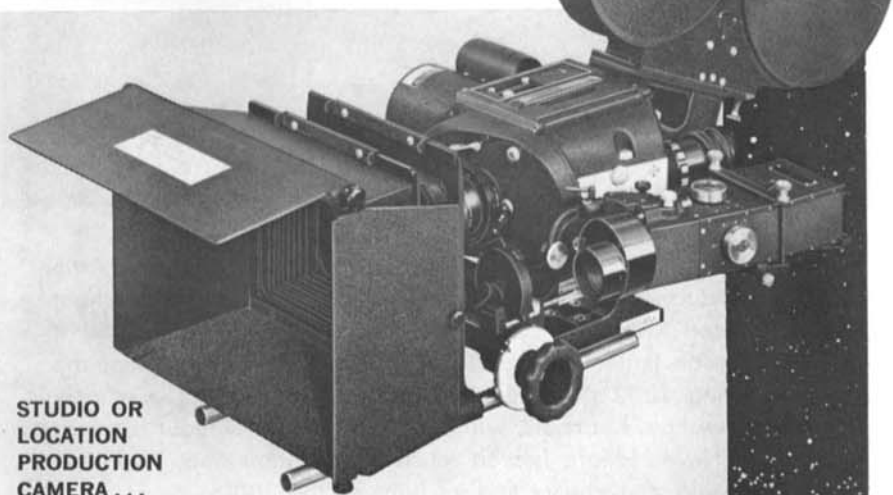
**Charles Lipow** has been appointed General Manager of Camera Mart, Inc., 1845 Broadway, New York 23. His extensive background in the professional motion-picture equipment field includes various posts with De Luxe Laboratories; Du Art-Tri-Art Laboratories; and Florman & Babb, Inc., according to the announcement by Samuel Hyman, President of Camera Mart. The firm has recently been reorganized and expansion plans have been announced. Prior to his present appointment, Mr. Lipow was account executive with Related Arts Counsellors, a firm specializing in public relations for cultural organizations.

**Research Products, Inc.** is a newly formed firm, an affiliate of Cinema Research Corp., Hollywood, Calif. The new firm will engage in the development of motion-picture techniques and processes and associated equipment. Announcement was made by Harold A. Scheib, President of Cinema Research.

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