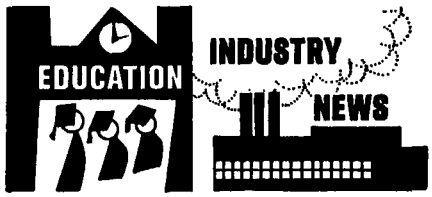
Registration Chairman Jack Jiruska and his wife Regis at the Registration Desk.

Responsible for arranging and conducting the Goddard Trip was James R. Burton, NASA.

Acknowledgments

The Society wishes to pay special thanks to the following: Eastman Kodak Co. for providing the sound and film raw stocks; Eastman Kodak Co., The Kalart Co., Inc., Victor Animatograph Corp., the Fairchild Industrial Products Div. of Fairchild Camera and Instrument Corp. and the Vacuumate Corp., which provided the SMPTE Test Film Booth equipment.

In addition, special thanks are due to William Youngs who arranged for the special pre-release film shown Sunday evening, and to the Philip A. Hunt Chemical Corp., which sponsored the Coffee Club.



Toward A Merged Society

The governing boards of both the SMPTE and the SPSE approved, at their meetings in May, the consolidation proposals so long under development. The presentation of these proposals to the memberships of the two Societies for consideration and decision is planned for completion prior to September 1.

During this same period, opinions of the Internal Revenue Service will be sought which are expected to give formal approval to the present opinion that these merger steps should not affect adversely the class of tax exemption of the two Societies.

This timing is in accord with the outline given in the letter of March 22 to the members of each Society.

The Eastman Kodak Gold Medal Award is a newly established SMPTE award to be administered by the Society on an annual basis. Purpose of the new award is to recognize outstanding contributions made by an individual in the field of engineering development which lead to the introduction of new and unique educational techniques or programs utilizing motion pictures, television, high-speed photography and instrumentation and/or photographic science. The emphasis in the selection of recipients of the award will be on the direct advancement of education rather than on developments and techniques in some other field than education which later were found useful for educational purposes. Announcement of the award was made by President Ethan M. Stifle. D. Max Beard is Chairman of the newly formed Eastman Kodak Gold Medal Award Committee. Committee members are: William G. Hyzer, Richard J. Goldberg, J. S. Courtney-Pratt and Richard S. O'Brien. It is possible that the first presentation of the new award can be made at the Society's 100th Technical Conference in Los Angeles (October 2–6), the announcement stated.

The 2d annual Theatre, Television and Film Lighting Symposium sponsored by the Illuminating Engineering Society, 345 E. 47 St., New York, N.Y. 10017, was held May 9–10 in Chicago. The first session, which was on State of the Art, included a panel discussion following presentation of papers by panel members. Panel members included Charles Clark, General Electric; David Frick, Canadian Broadcasting Co.; Gene Ibsen, Stagecraft Industries; Herbert More, Kliegl Bros.; Frederick Bentham, Strand Electric of England; Richard Glickman, ColorTran Industries; Rollo G. Williams, Century Lighting; Edward Bertero, National Broadcasting Co.; Kenneth Palius, American Broadcasting Companies; Imero Fiorentino, Fiorentino Associates; and the Moderator, Charles Neenan,

Developer action is switched off in seconds with Hunt ***FLASH-O-GRAPH® FIXER,*** *the fastest and most flexible fixer in use today. Fast because it fixes 3 to 4 times more rapidly than conventional formulas; flexible because it is ideal for manual processing and for automatic processing. This is how fast Flash-O-Graph Fixer really is:*

• clears photomechanical films in less than 20 seconds • clears commercial pan film in less than 60 seconds • clears photographic papers in less than 45 seconds. Flash-O-Graph Fixer is especially suited for use in the processing of all photomechanical film in the printing industry, in commercial photography, in motion picture and television film processing, in industrial photocopy departments, and in the photofinishing industry. Flash-O-Graph Fixer is available in cartons of 4x1-gallon poly bottles, 5-gallon Cubitainers, and 50-gallon drums.

USE HUNT SAFETY STOP, *the ideal companion short stop. It is an all-liquid indicating acid stop bath designed to extend the capacity of the fixing bath while preventing stains and uneven development. Safety Stop works effectively on both paper and film. It is available in cartons of 12x1-qt. poly bottles.*

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Columbia Broadcasting System. Highlights of the Symposium included a demonstration of lighting a set for the various media and a Progress Show of new equipment.

The Society of Photographic Scientists and Engineers (SPSE) presented its 1966 Honors Awards and the P S & E Journal awards during its annual conference held in San Francisco in May. Recipients of SPSE Fellow Awards are John H. Jacobs, Bell & Howell Research Center, and Howard G. Rogers, Polaroid Corp. Recipients of Senior Member Awards are Howard J. Hall, Itek Corp.; and Arthur W. Hansen, Richard W. Swenson, and Deane R. White, all with E. I. du Pont de Nemours and Co. The P S & E Journal Award for the best paper in photographic science appearing in Vol. 9–1965, was presented to R. K. Blake, E. I. du Pont de Nemours and Co. for "Photosolubilization of Silver Halides: I. The Phenomenon." A paper by H. J. Zweig, IBM Corp., on "The Behavior of Nonamplifying Photographic Detectors" received Honorable Mention. The Charles E. Ives Journal Award for the best paper in photographic engineering was presented jointly to R. L. Lamberts, C. M. Straub and W. F. Garbe, Eastman Kodak Co., for their series of three papers on "Equipment for Routine Evaluation of Modulation Transfer Functions of Photographic Emulsions." A paper on "Water Quality Criteria" by L. E. West of Eastman Kodak Co. was accorded Honorable Mention.

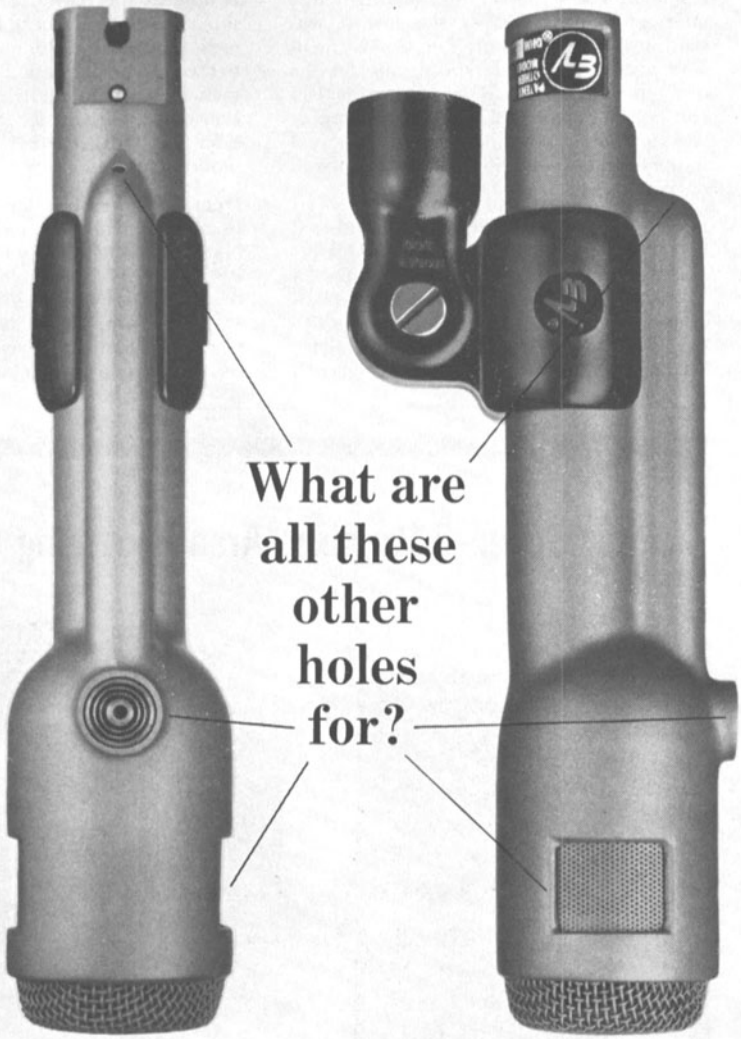
Headquarters of SPSE is at 1330 Massachusetts Ave. N.W., Washington, D.C. 20005.

The National Selection Panel for Overseas Film Festivals has been recently established in Great Britain to act as the national selection body for the festivals in Cannes, Berlin, Venice, Cork, Moscow and Mar del Plata. It is an independent body appointed by the Minister of State, Foreign Office. The Panel has the responsibility of (1) selecting the best British short films from any source for entry in leading international film festivals; (2) encouraging the submission of high-quality films for this purpose; and (3) publicizing ways and means of stimulating British participation in international festivals. Panel Chairman is Prof. Asa Briggs, Pro-Vice-Chancellor of the University of Sussex. Vice-Chairman is James Quinn, formerly Director of the British Film Institute. Further information is available from: The Secretary, National Selection Panel for Overseas Film Festivals, P.O. Box 76, Hercules Rd., Westminster Bridge Rd., London, S.E.1.

Animation Goes to School, a film produced at Horace Mann School, Bronx, N.Y., has been awarded a Cine Golden Eagle. George H. Bouwman, Director of the Project in Film, acted as writer, producer and director. Students and former students served as camera and sound crews. The film shows how students at the Horace Mann School make simple animated films for instructional use within the classroom and shows examples of student-made animation.

MVR Corporation of Palo Alto, Calif., is the recipient of an Emmy Award from the Academy of Television Arts and

If the Electro-Voice Model 666 picks up sound here...



The holes in the top, sides and rear of the Electro-Voice Model 666 make it the finest dynamic cardioid microphone you can buy. These holes reduce sound pickup at the sides, and practically cancel sound arriving from the rear. Only an Electro-Voice Variable-D® microphone has them.

Behind the slots on each side is a tiny acoustic "window" that leads directly to the back of the 666 Acoustalloy® diaphragm. The route is short, small, and designed to let only highs get through. The path is so arranged that when highs from the back of the 666 arrive, they are cut in loudness by almost 20 db. Highs arriving from the front aren't affected. Why two "windows"? So that sound rejection is uniform and symmetrical regardless of microphone placement.

The hole on top is for the mid-range. It works the same, but with a longer path and added filters to affect only the mid-frequencies. And near the rear is another hole for the lows, with an even longer path and more filtering that delays only the bass sounds, again providing almost 20 db of cancellation of sounds arriving from the rear. This "three-way" system of ports insures that the cancellation of sound from the back is just as uniform as the pickup of sound from the front—without any loss of sensitivity. The result is uniform cardioid effectiveness at every frequency for outstanding noise and feedback control.

Most other cardioid-type microphones have a single cancellation port for all frequencies. At best, this is a compromise, and indeed, many of these "single-hole" cardioids are actually omnidirectional at one frequency or another!

In addition to high sensitivity to shock and wind noises, single-port cardioid microphones also suffer from proximity effect. As you get ultra-close, bass response rises. There's nothing you can do about this varying bass response — except use a Variable-D microphone with multi-port design* that eliminates this problem completely.

Because it works better, the E-V 666 Dynamic Cardioid is one of the most popular directional microphones on the market. Internal taps offer 50, 150, or 250 ohm impedance output. Frequency range is peak-free from 30 to 16,000 Hz (cps). Output is—58db.

To learn more about Variable-D microphones, write for our free booklet, "The Directional Microphone Story." Then see and try the E-V 666 at your nearby Electro-Voice professional microphone headquarters. Just $255.00 in non-reflecting gray, complete with clamp-on stand mount. Or try the similar Model 665. Response from 50 to 14,000 Hz (cps), $150.00 (list prices less normal trade discounts).

*Pat. No. 3,115,207

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661 Cecil Street, Buchanan, Michigan 49107

Electro-Voice
SETTING NEW STANDARDS IN SOUND

Sciences for "individual achievement in engineering development," according to the citation. Presentation of the award was made to MVR President, Kurt R. Machein. The award was made specifically for the development of the MVR Videodisc Recorder. The recorder has instant replay and stop action capability. It has been used in the NASA Apollo Space Program as well as in the recording of sports events.

Homage to Muybridge, a film produced by Dave Hanson, a student in the University of Southern California, has received a 1966 CINE Golden Eagle award, as well as other honors including the Calvin Workshop Award and the Wellesley College Student Film Award. Mr. Hanson earned his Master's degree at USC this year and is now in the Army. Produced under the supervision of Herbert Kosower, the film uses animation techniques to give motion to the extraordinary photographic studies of men and animals in motion made by Eadweard Muybridge whom some consider the real "father" of present day motion pictures.

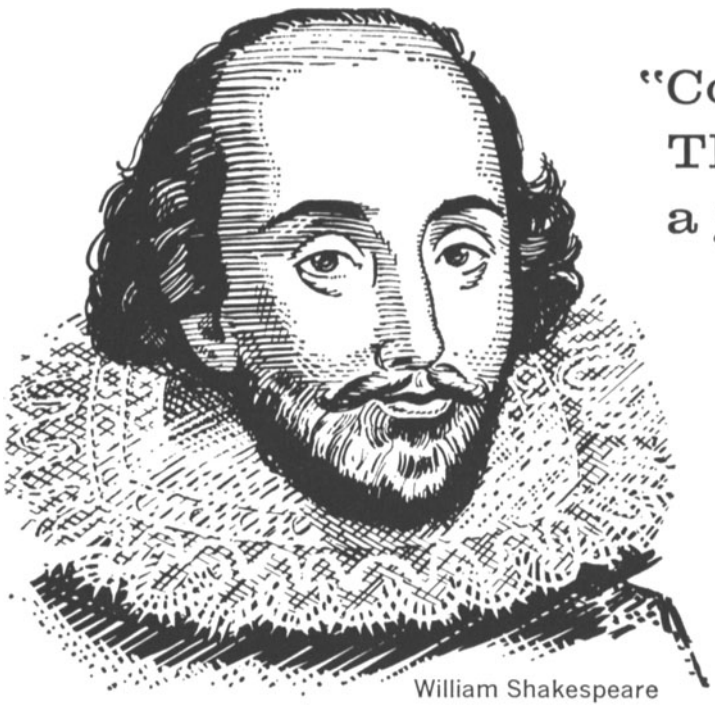
Demonstration kits for utilizing instructional television are available from the National Association of Educational Broadcasters (NAEB) Teaching Materials Library, c/o KFME-TV/Channel 13, Highway 81 South, Fargo, N.D. The kits have been designed to provide a coordinated series of demonstration kits to assist teachers and broadcasters in developing effective patterns of instructional television utilization in elementary and secondary classrooms. The kits are intended for use in teacher's meetings, workshops, seminars and university education classes. Each kit contains a film and a teacher's manual. Although planned to be used in sequence, the kits can be used individually.

Presently available are kits 5 and 3. Kit 5, "A Case Study in the Elementary School," shows a sixth-grade teacher using a television lesson on oceanography to reinforce important science concepts. Kit 3, "Preparing the Television Lesson," traces the preparation of an instructional television science lesson. There is a $5.00 service charge for five day's use of each kit.

The 1966 Western Electronic Show and Convention (WESCON) will be held August 23–26 in Los Angeles. There will be 27 technical sessions including four special, invited sessions. About 110 papers will be presented. The four special sessions are designed to present an "overview" of subjects of special interest. Topics are Information Management, On-Line Computing, Electrical Power Systems, and Engineering Education. Chairman of the technical program is Samuel Sensiper. WESCON headquarters are located at 3600 Wilshire Blvd., Los Angeles, Calif. 90005.

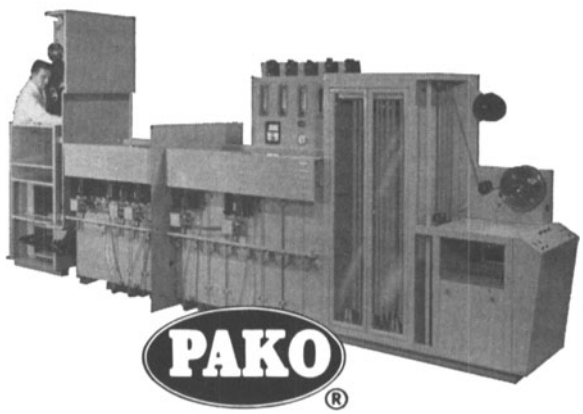
Holotron Corp., a new corporation to develop basic inventions in the field of holography, has been formed by Scientific Advances, Inc. (SAI) and E. I. du Pont de Nemours and Co. The new firm will hold exclusive rights to inventions growing out of research on holography at the University of Michigan and at the Columbus and Pacific northwest laboratories of Battelle Memorial Institute, parent corporation of SAI. Patent protection is expected for the inventions that form the basis for most off-axis holography. Rights in the early inventions were acquired by Battelle Development Corp., a subsidiary of Battelle Memorial Institute, through an invention development arrangement with the University of Michigan where much of the early work was done. The inventions have been turned over to the new company for further research and development. Holography involves the use of a laser beam to record on photographic film patterns that subsequently can be reconstructed as a three-dimensional image. Early work indicates that holograms in color are practicable; holograms in moving picture form may eventually be developed. (See "Bibliography on Holograms," by R. P. Chambers and J. S. Courtney-Pratt, *Journal*, pp. 373–435, Apr. 1966.)

Establishment of Canon U.S.A., Inc., a wholly owned subsidiary of Canon Camera Co., Inc., Tokyo, Japan, has been announced. The new firm is located at 554 Fifth Ave., New York, N.Y. 10036. President of the new firm is Dr. Matao Mitsui. Other officers are: Vice-President, George Kyotow; Secretary, Robert Delson; Assistant Treasurer, Shigeru Kurihara; Dr. Takashi Mitarai, President of Canon in Tokyo, is Chairman of the Board. Yoshiyuki Hayashi and Tomomasa Matsui, members of the



William Shakespeare

"Consistency: Thou art a jewel!"



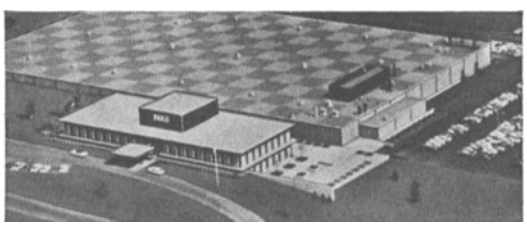
Pako Ciné Processing Systems Produce Consistent Quality Results

William Shakespeare admired consistency. His personal output was consistent—and of high quality. If he personally were committing his own works to film today, we are confident he would use a Pako Ciné/Strip Processor—as television stations and motion picture processors are already doing.

Continous Processing-Drying Systems

Pako Ciné/Strip Systems offer advantages not found in other processing systems. Solutions are replenished automatically. Tempering, circulation and filtering systems are included. Programmed turbulation in developers, together with precise metering of replenishers and exacting temperature control, produces unusually consistent sensitometric results. Bottom gear drive protects film by maintaining uniform—extremely light—tension.

Experience • Service



Pako Corporation is the world's most experienced manufacturer of film processing systems . . . over 54 years. A Pako system is not just equipment. Pako will work with you from the planning stage right on through the in-and-operating stages. Pako products are backed by Pako Distributors who maintain parts inventories and factory trained men. Also, Pako provides user factory training programs in equipment operation and maintainance. Financing available to qualified buyers.

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Manufacturer of Processing Equipment for the Photographic, Medical and Industrial X-Ray, Graphic Arts and Motion Picture Industries

Non-Obsolescent Modular Design

Tank sections are constructed in modules. First benefit is fast installation (3 weeks compared with months for other large systems). Longer range, they prevent obsolescence. When processes change, Pako Processors may be modified too.

"Light-Side" Main Controls

Flowmeters, temperature controls—chemical meters and pressure checks—are on one panel in the lighted area. Darkroom is for film loading only.

Pako Ciné Processing Systems

Film Type	Model	Process	Maximum Film Width (mm)
Kodachrome	10/40 K-12	K-12	Two strand: 16 & 35
	75 K-12	K-12	16
	80 K-12	K-12	8
Ektachrome	56EK	ME-4	16
	75EK	ME-4 & ECO-2	16
	40EK	ME-4 & ECO-2	35
Anscochrome	48AN	AR-2	16
	52AN	AR-2	35
	40AN	AR-1	35
	10AN	AR-1	70
Eastman Color	78ECP	ECP	16
	26ECN	ECN	16
Kodacolor	7KO	C-22	70
	13KO	C-22	35
Black & White	95 B/W-R	Reversal	16
	48 B/W-R	Reversal	16
	75 B/W	Neg. or Pos.	16
	40 B/W	Neg. or Pos.	35
	27 B/W	Neg.	70

Or other types of Film

SEND TO PAKO CORPORATION
6300 OLSON MEMORIAL HIGHWAY
MINNEAPOLIS, MINNESOTA 55440
Please send information on Pako Ciné/Strip Processing Systems for: ☐ Color ☐ B/W
Type of film(s) to be processed: _____

NAME _____

TITLE _____

ADDRESS _____

CITY _____ STATE _____ ZIP _____

board of the Japanese firm are also directors of the new American company. The new firm will handle the import and marketing of Canon products including television zoom lenses, x-ray cameras, microfilming equipment, the CanonKalvar system for audio-visual and industrial use, and 16mm equipment. Canon 35mm still cameras and 8mm movie cameras will continue to be distributed by Bell & Howell.

The Vidtronics Division has been recently established by Technicolor Corp., 6311 Romaine St., Hollywood, Calif. 90038, to engage in research and development of improved techniques to transfer color video tape to film. The firm previously developed a system to produce black-and-white motion-picture film prints from material photographed on video tape. The new division will concentrate on the transfer of color video tape to 35mm, 16mm, 8mm and Super 8 film. Joseph E. Bluth has been appointed Vice-President and General Manager of the new division.

Convention and Exposition Services, Inc., 4116 Meridian Ave., Miami Beach, is a newly formed organization that will specialize in complete production and staging services for motion pictures and television as well as for meetings, conventions and theatrical requirements. The new firm is affiliated with Miami Beach Electrical Exhibition Services. Vice-President and General Manager of the new firm is George Gill who was formerly Eastern Manager and Manager of Motion Picture and TV Applications of ColorTran, a division of Berkey Photo and Technical Corp. Mr. Gill's extensive experience in specialized light systems resulted in his establishing George Gill Associates, consultants in production facilities, in 1955 in Miami. A year later this firm became the Southern Branch of Century Lighting Co. As Southern Area Manager of Century Lighting in Miami, Mr. Gill was associated in the design of specialized lighting systems for many large hotels, auditoriums and theaters. In 1962 he was transferred to New York to develop specialized lighting systems at the New York World's Fair.

A new film services and processing laboratory is being constructed in Miami by Reela Films, Inc., a division of Wometco Enterprises, 306 N. Miami Ave., Miami, Fla. 33128. According to the announcement, the laboratory, which will be completed in September, will be equipped to process 300,000 ft of film daily and will be able to handle everything from 10-second TV commercials to full-length feature films. The facilities will include six editing rooms; four up-to-date music libraries, two 500 ft^2 screening and recording rooms and a fully-equipped laboratory for still photography. The film processing equipment will be the latest high-speed spray units for 16mm and 35mm black-and-white and 16mm color film. Equipment will be installed for videotape transfer, sound recording, animation and titling.

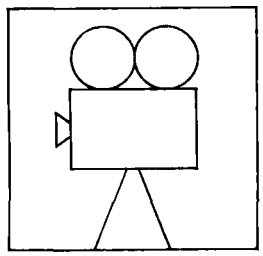
Groundbreaking ceremonies were held April 25. A small charge of explosives was used to break the ground, symbolizing the expected explosive growth of the motion-picture industry in Florida, the announcement stated. Business, civic and government leaders attended the ceremonies as well as a number of motion-picture personalities.

In 1964 a Reela-produced film, *To Catch a Porpoise*, was awarded a CINE Golden Eagle and was subsequently entered in various international film festivals.

Photovolt Corp., located at 1115 Broadway, New York, N.Y. 10010, has been acquired by Bio-Science Laboratories of Van Nuys, Calif. The firm designs and manufactures electronic pH meters, colorimeters, densitometers and other instruments used in industrial, biochemical, chemical and clinical analyses. No changes are contemplated in management or policy, the announcement stated.

Photo-Electro Instrumentation Co., 116-55 Queens Blvd., Forest Hills, N.Y., a sales organization headed by Donald Bass, has been appointed sales representative for the Flight Research Div. of Giannini Scientific Corp., Richmond, Va., in nine States in the Northeast. Photo-Electro Instrumentation specializes in photographic and optical components and systems. It will handle Giannini Flight Research cameras in all of the New England States, New Jersey, eastern New York and eastern

Now you don't have to make haze while the sun shines. All about new EASTMAN XT Panchromatic Negative Film.



It's rated at E.I. 25. It appears during an era of emphasis on perfecting films of higher and higher speed ratings. Is a film that's slow . . . slow . . . slow . . . worth shooting about?

We think so. We think that EASTMAN XT Panchromatic Negative Film fills an important slot—last—in a very fast league. It lets you shoot in sunlight at the optimum lens setting—f4 or f5.6. Gives you the sharpest image Eastman and you have ever put onto film. Fights flare (and headaches) two ways: first, by adding an antihalation undercoat, and second, by eliminating the need for a neutral density filter in front of the lens.

XT Pan—Type 5220 (35mm) and 7220 (16mm)—is slower than the film it replaces—EASTMAN Background-X Negative, which carried a rating of E.I. 32. XT Pan is much finer grained than Background-X. Ultra-fine grain. Extra sharpness, too. We've seen to it by reducing the emulsion thickness, thereby cutting down on light scatter. Sharpness is what lets you distinguish one blade—razor or grass—from another. XT Pan has it.

What's an optimum lens setting, anyway? Well, it's the one you like to use indoors, so why not outdoors? It gives you the best resolution your lens can deliver. It gives you good separation between foreground—or main subject—and background. Allows selective focus. Curtails the extra depth of field that might tell the audience in the second balcony that the West left off "right there"—there where the painted backdrop began.

Shot on Background-X

Shot on XT Pan

Of course, you can get your optimum lens opening by using a faster film and neutral density filters. But many a creative cameraman has been an occasional filter-forgetter. And any surface between subject and film is a haven for dust, an invitation to flare. Even though a faster film will adapt to sunlight shooting, doesn't it make sense to use the best material that's available to you for the situation? Keep in mind that XT Pan intercuts nicely with any of our other films.

We diagrammed our new antihalation undercoat and considered the whole subject of flare at great length in an earlier "Film Talk" on KODAK TRI-X Reversal Film. Sunlight can give you the same flare problems that pop up (and into the image) with spotlights. So, we've added a "U-coat" to XT Pan. Situated right behind the emulsion, it absorbs unwanted light, keeps it from bouncing and scattering on its way to and from the film base. Not only does it fight glaring hot spots, it also eliminates the more subtle halation which degrades light areas in the normal brightness range. The result, as in TRI-X Reversal Film, is improved *acutance, or image sharpness.*

EASTMAN XT Panchromatic Negative Film is ideally suited for making prints for background projection. All you want of a background is maximum detail, minimum grain. That's what you get with XT Pan. And use it, too, for optical work where these *qualities are of great importance.*

Would you like to see the three charts and four curves we left out of this ad because girls are prettier, if less informative? We'd be happy to send them to you. Write Eastman Kodak Company, Rochester, N. Y. 14650, and ask for Eastman Technical Bulletin S3-22. Take that, James Bond!

EASTMAN KODAK COMPANY
Rochester, N. Y.

ATLANTA: 5315 Peachtree Industrial Blvd., Chamblee, Ga. 30005, 404—GL 7-5211; CHICAGO: 130 E. Randolph Dr., 60601, 312—236-7234; DALLAS: 6300 Cedar Springs Rd., 75235, 214—FL 1-3221; HOLLYWOOD: 6677 Santa Monica Blvd., 90038, 213—464-6131; NEW YORK: 200 Park Avenue, 10017, 212—MU 7-7080

Pennsylvania. The firm was set up by Mr. Bass who was previously Sales Manager, Instrumentation Div. of Giannini Scientific Corp.

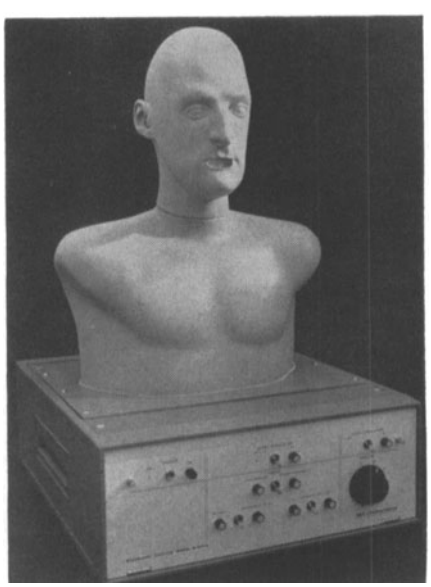
The Educational Research Information Center (ERIC) was established as a unit in the Div. of Research, Training and Dissemination, Bureau of Research, Office of Education, Department of Health, Education and Welfare, Washington, D.C. It was set up in 1964 for the purpose of transmitting new information to educators and administrators. To this end it has created a nationwide network of information clearinghouses or research documentation centers. The responsibility of ERIC is the "acquiring, abstracting, indexing, storing, retrieving and disseminating nationally the most significant research and research-related documents." Professional staffs at the various centers select significant documents which are abstracted and indexed according to classification principles developed under the direction of the central ERIC staff.

The University of Southern California has been commissioned to make a 20-min motion picture in color and sound for NASA on the research which the University of Hawaii is doing on the phenomenon of airglow bands in the atmosphere. Producer of the film is Herbert E. Farmer, Director of Services of the USC Department of Cinema. Mr. Farmer is also co-director with David W. Johnson of Los Angeles, who is also production coordinator. The five-man production crew, consisting of members of the teaching staff of the USC Department of Cinema are presently on location in Hawaii to photograph facilities and research activities at the Institute of Geophysics on the Manoa campus and at Haleakala Observatory in Maui.

The "story" of the film centers around the activities of three physicists at the University of Hawaii, Walter Steiger, Kenichi Watanabe and William R. Simmons and the film is intended to interpret the role of research as an activity of a college or university. Scenes will include Dr. Steiger's solar research at Haleakala; Dr. Watanabe's efforts to simulate atmosphere in a laboratory; and Dr. Simmons' work on building equipment for a future orbiting laboratory. The script was written by Wilbur T. Blume, a former member of staff of the Department of Cinema who is now with the U.S. Air Force as a writer-director at the USAF Lookout Mountain facility.

The film, which will be shown to high-school students throughout the nation will include clips from films made of the briefings and debriefings of U.S. astronauts as well as films which the astronauts made of the airglow bands surrounding the earth. Segments of the film will be presented in animation prepared by Herb Kosower of Los Angeles, head the USC Animation Division.

The Hawaiian film is one of ten which will be made by university film crews for NASA. Negotiations for the series were carried on by the University Film Foundation.



An electronic acoustical testing dummy that "talks" and "listens" has been developed by CBS Laboratories for the National Aeronautics and Space Administration's Manned Spacecraft Center at Houston. The acoustical dummy, representing every human contour of the average astronaut's upper torso and head to within $\frac{1}{10}$ in., will be used to test and evaluate personal communication systems, such as space helmets, earphones and microphones. This unusual testing device is re-

quired because the contours and size of the head and body, the texture of skin, and clothes all have a bearing on sound quality. The testing dummy even has a skin made of special plastic compound that has the same absorption effect on sound waves as "human" skin. The dummy also has an artificial ear that is the exact replica of the human's outer ear. Special electronics provide the dummy with a sense of hearing and simulate the changing frequency response of the ear at various loudness levels over a 100-dB range. The dummy is also provided electronically with a voice in excess of 100-dB sound pressure level — the equivalent of very loud speech.

The first two cameras used in the production of Technicolor motion pictures have been presented to the Smithsonian Institution by Technicolor Corp. of America, according to a recent announcement. The cameras represent one of the earliest stages in the development of color motion pictures. Historical documents related to the cameras and early Technicolor processes were provided by Technicolor Corp. and Comstock and Wescott, Inc. The firm of Kalmus, Comstock and Wescott began research on motion-picture color systems in 1914 and with the formation of Technicolor Corp. in 1916 they were given a contract to perfect a practical method of color cinematography. Herbert T. Kalmus served as President of both firms until 1925 when he resigned from the research organization to devote his full time to Technicolor Corp.

The first of the two historic cameras employed an additive color system. The second camera was developed for use with the subtractive system which uses dyed-film images rather than projection filters.

Development of a practical technology for use of gallium arsenide and its alloys in electrical communication and information processing devices has been announced by Radio Corp. of America. The technique is described as "vapor phase growth," which makes possible the synthesis of complete devices in crystals of gallium arsenide and its alloys by the introduction of impurities in a single continuous operation that is part of the crystal-making process itself. The vapor phase growth resembles the natural process that produces frost on a windowpane. All of the materials to be used in building a device are prepared separately in gaseous form. The gases are then mixed in varying proportions that are easily regulated, and allowed to flow over a solid crystal of gallium arsenide or one of its alloys. Since the crystal is kept slightly cooler than the gas mixture, the gases begin to condense on its surface in such a way that their atoms form an extension of the crystal structure itself, like bricks added to an unfinished wall. In this way, an electronic device is "grown" on the foundation crystal and is identical to it in every respect except for the impurity atoms it incorporates.

Experimental devices based on the new technique include a semiconductor laser that generates visible light at room temperature; a microwave source; an extremely bright electroluminescent (cold light) diode for use in alpha-numeric displays and in illuminating instrument panels.

An expanded line of RCA Full-Function Instructional Television equipment for 1967 has been announced by the RCA Service Co., Instructional TV Sales Dept. 1614, Bldg. 203-3, Camden, N.J. 08101. The new television equipment for schools includes three black-and-white "Lyceum" ITV sets designed expressly for classroom use, color receiver, heavy duty stands, mounts, brackets and special ITV accessories, such as auxiliary speakers and remote control units. Other educational television equipments include equipments for both black-and-white and color television.

A 44,000-lb Ampex-equipped teleproduction cruiser will be used by KRLD-TV, Dallas, for color television broadcasts of football games and other types of local and network programming. The cruiser, scheduled for delivery by September will replace two units now being used by KRLD-TV for black-and-white remote production. The van will contain two Ampex high-band color videotape recorders, six color cameras, switching and other accessory equipment, audio recording consoles and other production aids.

Deane R. White has been appointed Vice-Chairman of the Photographic Standards Board of American Standards Association

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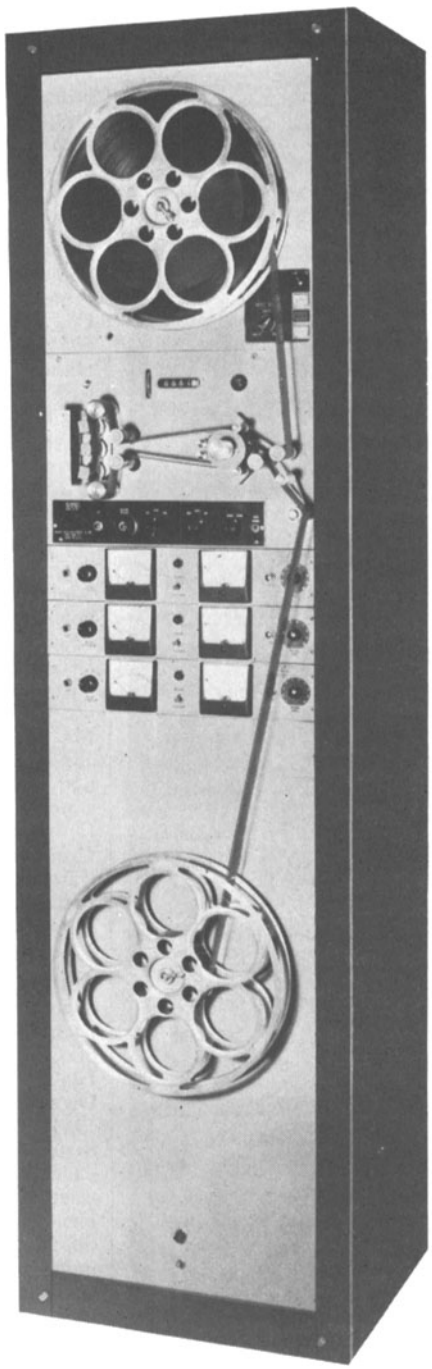

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(ASA). Dr. White, who is Associate Director of the Research Division, Photo Products Dept., E. I. du Pont de Nemours & Co., is also a member of the ASA Standards Council, Board of Review, and Acoustical Standards Board. He is also a member of the U.S. Advisory Committee for Technical Committee 36, Cinematography, of the International Organization for Standardization. He has served as leader of the U.S. delegation to five meetings of the ISO/TC 36 and Chairman of four meetings of the ISO/TC 42, Photography.

Hans Christoph Wohlrab has been appointed Director of Product Planning, Professional Equipment, Bell & Howell Co., 7100 McCormick Rd., Chicago, Ill. 60645. In this post he will be responsible for planning equipment for the field of professional motion pictures. Dr. Wohlrab has been with Bell & Howell for the last 10 years. As Director of Engineering, Professional Equipment, he was instrumental in the development of the Bell & Howell Additive Color Printer.

Stan Wilson has been appointed resident Partner-in-Charge of the South East Asian office of N.J. Pappas and Associates, 5253 Decarie Blvd., Montreal, Can. Formerly Vice-President in charge of Operations for the CTV television network in Toronto, Mr. Wilson will travel to Malaysia via Japan and Hong Kong where he will visit both active and prospective Pappas Organization clientele. He will reside in Kuala Lumpur, Malaysia, where the Pappas Organization is in charge of the design and construction of the $M33,000,000 National Broadcasting Centre.

Anthony F. DiPentima has been appointed Vice-President, Intelligence Systems Department, CBS Laboratories, A Division of Columbia Broadcasting System, Inc., High Ridge Rd., Stamford, Conn. Mr. DiPentima joined CBS Laboratories in 1964 as General Manager of the Intelligence Systems Department. He was formerly Chief of the Reconnaissance Data Extraction Branch, Rome, N.Y., Air Development Center. In that post he directed development of projects in the areas of mapping and charting, as well as reconnaissance and intelligence data interpretation.

R. G. Buckley has been appointed Assistant Plant Manager of Technicolor Corp.'s color motion-picture manufacturing plant in Hollywood. A chemical engineer, Mr. Buckley was formerly day plant superintendent of the manufacturing plant. He has been with Technicolor since 1936.

J. W. Servies has been elected President of National Theatre Supply Co., a subsidiary of General Precision Equipment Corp., 411 Sette Dr., Paramus, N.J. 07652. Mr. Servies has been with the firm since 1928 and has served as Executive Vice-President for the past year. He had been a Vice-President in charge of central branch operations for 26 years. He succeeds W. J. Turnbull who retired after 33 years with the firm. Mr. Turnbull was elected a Vice-President in 1952 and became Executive Vice-President in 1957. He was elected President in 1958 and continued in that post until his retirement. He will continue to serve as a consultant to the firm.

John Nieto has been appointed Art Director for Keitz & Herndon, Inc., of Dallas. In his new post his activities will be mainly in the area of design and in original ideas for motion-picture and television production. The firm specializes in the production of television commercials and films for business, industry and education.

Obituary

J. N. A. Hawkins

J. N. A. Hawkins died at his home in Pacific Palisades, Calif., April 20, 1966, at the age of 58, after a prolonged illness caused by injuries sustained while serving with the U.S. Navy during World War II.

He received his education in electrical engineering at Stanford University and was Reg. EE, State of California. During his early years, he was a HAM, with the call 6AAR. He authored numerous articles which appeared in *Radio* during the early thirties.

He was Chief Engineer of Fantasound for the Walt Disney Production *Fantasia* and shared a Distinctive Achievement Award with Walt Disney and Wm. E. Garity presented by the Academy of Motion Picture Arts and Sciences, at their annual awards event in 1942. While exploring stereophonic reproduction, he discovered what became known as The Hawkins Effect.

With the onset of World War II, he joined a technical group, working for the Defense Department at Point Loma, Calif. Later he joined the Navy, as Commander, working on secret underwater devices, and while off the coast of China, his ship took a torpedo -- he was one of a very few that survived.

After his release from the hospital, he moved to New York and took a position with Sylvania Electric Products, Inc., in their special devices department. At the end of the war, he returned to Hollywood, to become head of the Sound Department of the Eagle-Lion Motion Picture Studio in Hollywood.

Later he joined Borg-Warner and Consolidated Engineering, as a development engineer. His later working years were with Systems Development Corp., of Santa Monica, where he worked as a Senior Physicist until 1964 when he retired because of illness.

Although plagued by great physical disabilities, he had a keen mind and was an inspiration to all who knew him.—*H. M. Tremaine.*