

Bell & Howell's Exhibit Wins 107th Conference Award

Bell & Howell's Professional Equipment Div., Chicago, IL was recently awarded a plaque as recognition for having the Outstanding Exhibit at the 107th Conference of the Society of Motion Picture and Television Engineers, held April 26-May 1 in Chicago.

Presenting the award to Lloyd Shanks, (right center) marketing manager, Bell & Howell Professional Equipment Div. is Denis Howe (lc), Arrangements Chairman for the Conference and Chairman of the Chicago Section of SMPTE. Also responsible for the Bell & Howell exhibit were Milton McDaniel (l) and Charles Zichterman (r), two regional sales managers for the Professional Equipment Division.

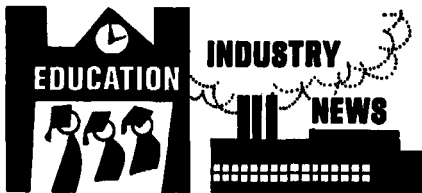
The Outstanding Exhibit award is presented after each semiannual Conference to the exhibitor having the best display based on overall design and arrangement. Bell & Howell's award winning exhibit was a complete array of their professional film processors and printers.

Among the film processing and printing equipment exhibited by Bell &



Howell were the 80 FPM Reversal Original (TV) Processor; 16mm/S8, ME-4/Gevachrome, daylight operation, auto-burette replenishers, and "fail-safe" monitor systems. Also shown at the Bell & Howell exhibit were the Continuous Contact Additive Printer for dual rank super 8 (1-3 and 1-4 format) with light valve monitor; the Bell

& Howell/Depue Step Optical Reduction Printer for 16mm to dual rank (1-3) super 8; Bell & Howell/Research Products 35/16 Combination Optical Step Printer with additive color, automatic skip frame, multiple frame programmer and dual clutch system; in addition to the Bell & Howell/Sargent Welch Densitometer and pH meter.



Academy Awards

Seven technical awards for 1969 were presented by the Academy of Motion Picture Arts and Sciences — most of them, as in years past, to SMPTE members and sustaining member firms. Class II Awards were presented to:

Hazeltine Corp. for the design and development of the Hazeltine color film analyzer;

Fouad Said for the design and introduction of the Cinemobile series of equipment trucks for location motion-picture production; and

Juan de la Cierva and Dynasciences Corp. for the design and development of the Dynalens optical image compensator.

Class III Awards were presented to:

Otto Popelka of Magna-Tech Electronics Co. for the development of an electronically controlled looping system;

Fenton Hamilton of MGM Studios for the concept and engineering of a mobile battery power unit for location lighting;

Panavision, Inc., for the design and development of the Panaspeed motion-picture camera motor; and

Russel Hesty of Universal City Studios for a machine-gun modification for motion-picture photography.

The Hazeltine color film analyzer (Series 200) was substantially reduced in size from earlier models through the use of solid-state circuitry (*Journal*, p. 1034, Nov. 1969). It was introduced at the Society's 106th Technical Conference in Los Angeles. The new color film analyzer incorporates a number of improvements, including a new type of color flying-spot scanner tube. The early Hazeltine color film analyzer was described in the *Journal* (p. 1056, Nov. 1965).

The Cinemobile "rolling studio" designed by Fouad Said (*Journal*, p. 398, May 1969) was first used on foreign locations for filming the *I Spy* television series.

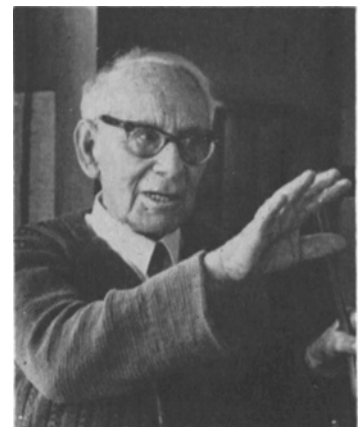
The new Dynalens (an earlier model was described by Benson and Whittaker in the October 1965 issue of the *Journal* ("A Gyro-Stabilized Lens System")), is described as the "civilian version" for industrial use. The device was originally developed for military use. Using small, built-in gyroscopes for reference, it adjusts its optics to stabilize the angle at which light enters the camera. Another version, the S-038, was described in the November 1968 issue of the *Journal* (p. 1269).

The Magna-Tech electronic looping system is described on a later page of this issue of the *Journal* in the New Products and Developments column.

The Panaspeed motor incorporates a sync pulse for sound synchronization but its accuracy is such that it can be used with crystal-controlled sound recorders with no connecting cables. The motor fits all Panavision and Mitchell studio cameras and performs the functions of both a multiduty motor and a wild motor. Early

Panaspeed motors have been used by motion-picture studios throughout the world for more than two years.

Russell Hesty, the gunsmith for Universal City Studios, modified the U.S. Browning 50 Cal. machine gun so that it could be operated through its complete cycle without firing the ammunition, thus enabling the camera to move in for close shots without danger to actors or cinematographers. The firing can be simulated if the muzzle of the gun is not photographed.



SPSE Honors Dr. Emanuel Goldberg

Dr. Emanuel Goldberg, 88, has been made an Honorary Member of the Society of Photographic Scientists and Engineers — the highest honor bestowed by that Society. Now residing in Tel Aviv, Dr. Goldberg studied in his native Moscow, as well as in Leipzig (with Wilhelm Ostwald) and Goettingen (with Walter Nernst). In 1907 he became a professor in the Acad-

emy of Graphic Arts and Bookcraft in Leipzig where he made notable contributions to microfilming and data processing technology far in advance of their time. He served on the Board of Directors of the Ica AG camera works from 1917 to 1926 and in 1926 he was appointed the first Director General of Zeiss Ikon AG in Dresden, which was founded on the consolidation of several German companies including Ica. In 1933 Dr. Goldberg was transferred to Paris as head of the Zeiss and Zeiss Ikon offices to keep him safe from Nazi inquisition.

In 1937 Dr. Goldberg emigrated to Palestine where he founded Goldberg Instruments Ltd., a laboratory for applied optics, in Tel Aviv. In 1965 the firm moved to Rehovoth and is now known as EL-OP (Israel Electro-Optical Industry Ltd.). Dr. Goldberg is noted for a number of inventions and he is the author of two books, *The Fundamentals of Reproduction Technique* (1912) and *The Structure of the Photographic Image* (1922).

Alexander M. Poniatoff
Chairman Emeritus of Ampex Corp.

Alexander M. Poniatoff, the 78-year-old founder of Ampex Corp., will retire as Chairman of the Board of Directors on August 25, but he will remain with Ampex as Chairman Emeritus and will continue to direct the Alexander M. Poniatoff Laboratory while he maintains his regular schedule at his office in Redwood City.

Ampex (A.M.P. (Mr. Poniatoff's initials) plus EX (for excellence)) was founded in 1944 to produce electric motors and generators for World War II radar systems. In 1946, Mr. Poniatoff decided to devote the efforts of the small company to research and development in the (then) highly experimental field of magnetic recording, and a year later the firm introduced a professional quality magnetic audiotape recorder. This pioneering achievement was followed by other successful developments and in 1956 the work of a team of young scientists under Mr. Poniatoff's direction resulted in the introduction of the videotape recorder.

Mr. Poniatoff was born in Russia. He studied mechanical engineering at a technical college in Karlsruhe, Germany. During World War I he was a pilot in the Imperial Russian Navy Air Force. He fought in the White Russian Army during the Russian Revolution and escaped to China. From 1920 to 1927 he was employed by the Shanghai Electric Power Company and in 1927 he came to the United States where he was employed by General Electric Co. in Schenectady, New York.

The University Film Association will hold its 24th Annual Conference August 16-22 at Ohio State University, Columbus, Ohio. The UFA Conference is held annually for university film producers, teachers and students of film and others who have an interest in independent film production and in film within the university setting. Topics to be covered during the conference include production techniques, film instruction, research, distribution, copy-

rights, financing and computer animation. Films produced by UFA members and film production units throughout the country will be shown.

Immediately following the conference, an Animation Workshop, covering the mechanics of film animation, will be conducted from August 24 to September 4. Further information about the conference and the Animation Workshop is available by writing to: University Film Association Conference, c/o Dept. of Photography and Cinema, Ohio State University, 156 West 19th Ave., Columbus, OH 43210.

The New Hampshire Network has been designated by the Corporation for Public Broadcasting (CPB) as the Eastern Center for Creative Cinematography. Purpose of the Center is to attract, assist and encourage both beginning and professional filmmakers of demonstrated talent who lack funds, equipment or expertise to develop their skills. CPB grants in varying amounts will be administered by the Center for the support of film projects to be selected by a panel of judges. While there will be no restrictions as to subject matter or approach, the emphasis will be on innovative, highly imaginative and experimental film forms. The films will be produced in black-and-white or color on 16mm film and may vary in length from one to 30 minutes. Further information is available from L. J. Presti, Director of the Center for Creative Cinematography, New Hampshire Network, Box Z, Durham, NH 03824.

A short course on Image Restoration to be held November 2-6 has been announced by the University of California San Diego, Short Courses & Conferences, P.O. Box 109, La Jolla, CA 92037. The course will include the latest developments and advances in image restoration with primary emphasis on the rapidly changing techniques in digital processing and the extension of these techniques to coherent optical processing. Instructors will be James Harris, Benjamin L. McGlamery and Adolph W. Lohmann.

Chicagoland Magazine, a lively little magazine published monthly at Omnibus, Inc., 360 N. Michigan Ave., Chicago, IL 60601, contains, in the June 1970 issue, an excellent article, "Columbia College: Gem in the Ocean," by John West. Described in the Table of Contents as "A look at the Chicago college which is taking the lead in today's most turned-on art form — movie-making," the article notes, "... with a regime begun by President Mirron Alexandroff in 1962, Columbia College has focused its attention on the more relevant of the communicative arts. . ."

The author describes Robert Edmunds, who is Chairman of the Columbia College Motion Picture Department as "moustached, resembling a kindly Claude Rains," and notes that in six semesters Dr. Edmunds has seen the department grow from 12 film students to 160.

This article is of special as well as general interest, since Dr. Alexandroff was guest speaker at the Get-Together Luncheon at the Society's 107th Conference in Chicago and Dr. Edmunds is Faculty Ad-

visor to the SMPTE Student Chapter at Columbia College.

The college now offers 16 undergraduate courses in the art and science of motion pictures and 25 courses at the graduate level.

Columbia College, Film and TV Arts and Sciences School, Hollywood, has been commended by the Los Angeles City Council by the adoption of a resolution which states, in part, "Whereas Columbia College has taught hundreds upon hundreds of students, many of them from underprivileged areas and underprivileged nations, techniques of motion pictures, television, radio and stage, and whereas Columbia College is supplying film and television studios worldwide with technicians and artists of high professional caliber. . ."

A scroll was presented to Ernest Baumeister, President, and Frank Baxter, a member of the Board of Trustees, during ceremonies at Columbia's new building at 925 North La Brea, Hollywood. Syd Cassyd is Dean of Extended Services at Columbia, Andre F. Stojka is Dean of the Cinema Department and Bruce Shoemaker is Director of Admissions.

Workshops on the techniques of newsfilm photography for television will be held September 13-18 at Atlanta, Ga., October 11-16 at Oak Brook, Ill., and November 15-20 at Rochester, N.Y., under the auspices of the Eastman Kodak Co. Motion-Picture and Education Markets Division. Instruction will be on such techniques of filming as continuity and editing, lighting for TV systems, photography from moving vehicles and adapting to varying film situations. Cameramen will learn how to photograph and edit a complete news story, how to film under varying lighting conditions and what to look for in the viewfinder. Further information is available by writing to Eastman Kodak Co., Marketing Education Center, 343 State St., Rochester NY 14650.

Engineering Index, Inc., is the recipient of a grant of \$85,500 from the National Science Foundation for a project entitled "Operational Support to the Engineering Index Information System." The project, under the direction of Bill M. Woods, Executive Director of Engineering Index, Inc., 345 E. 47 St., New York, NY 10017, was begun in January 1969 and is extended by the grant through 1970. Interdisciplinary services to be provided by the Engineering Index Information System will include indexing and abstracting, indexing vocabulary development and publications and services in a variety of forms and frequencies.

The second Salon Cine-Photo-Optique, Sicofo 70, will be held November 22-29 at the Palazzo Dell'Arte in Milan, Italy. The first such exhibition, held in 1969, attracted so many visitors that it was decided to make it a yearly event. Highlights of the 1970 exposition will include an historical exhibit of early photographs showing styles and techniques used in photography from the beginning of the 20th century.

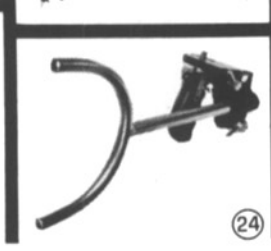
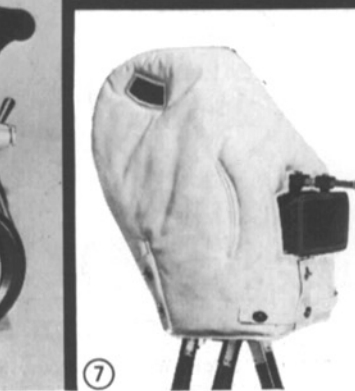
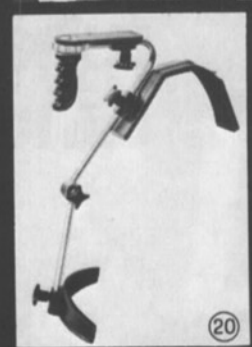
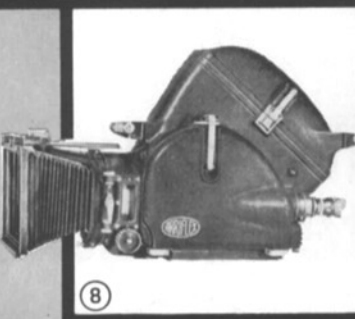
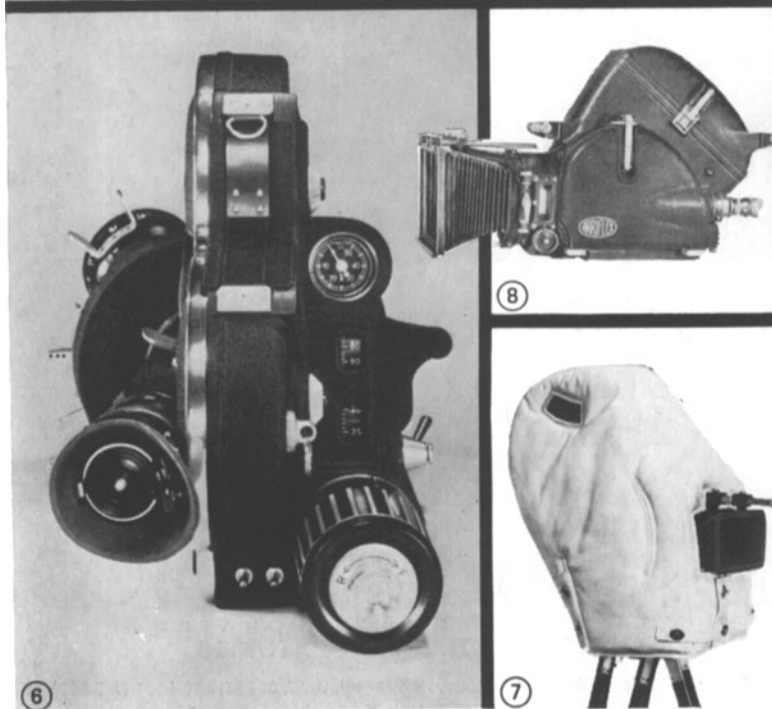
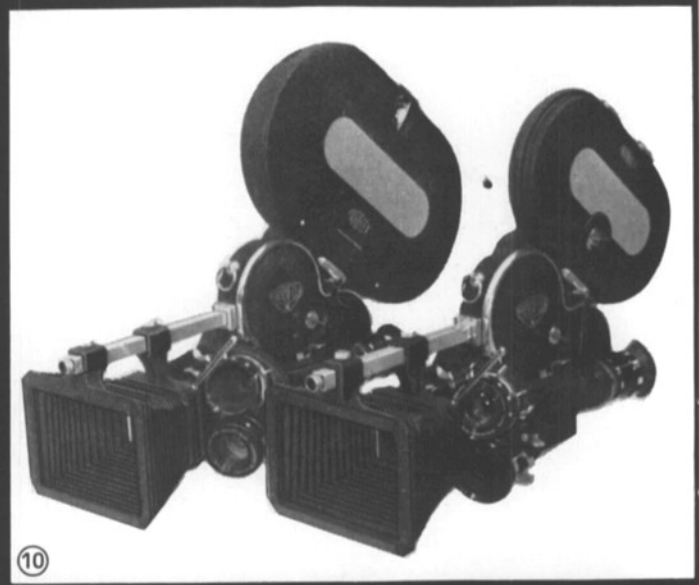
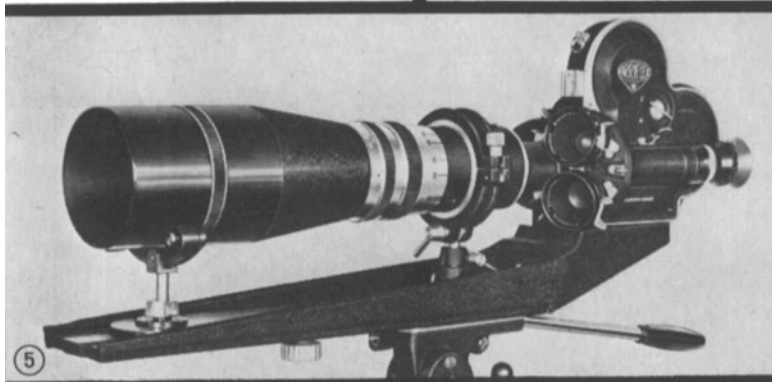
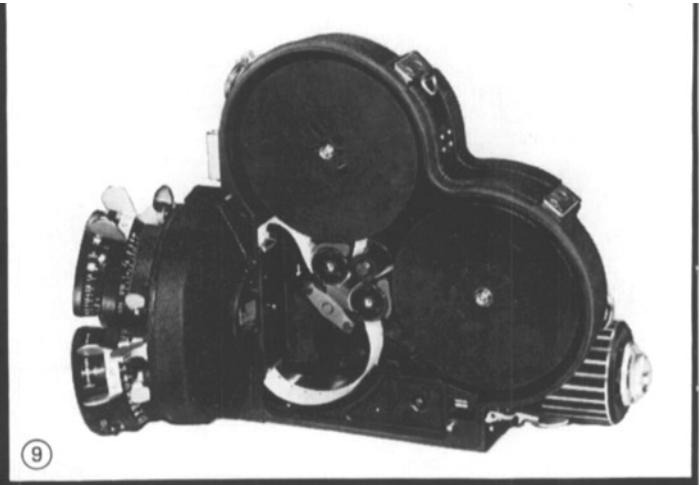


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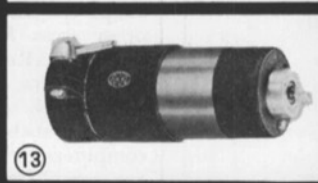




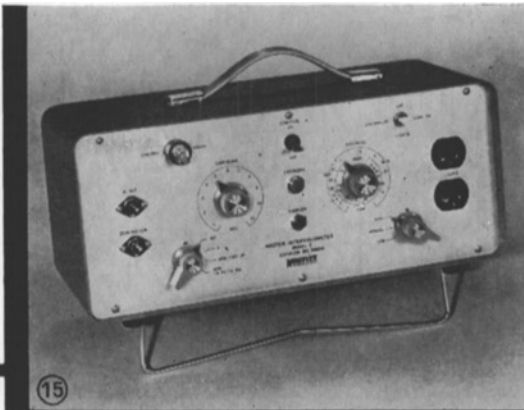
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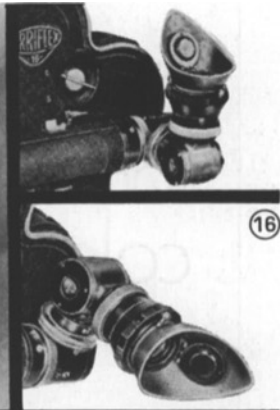
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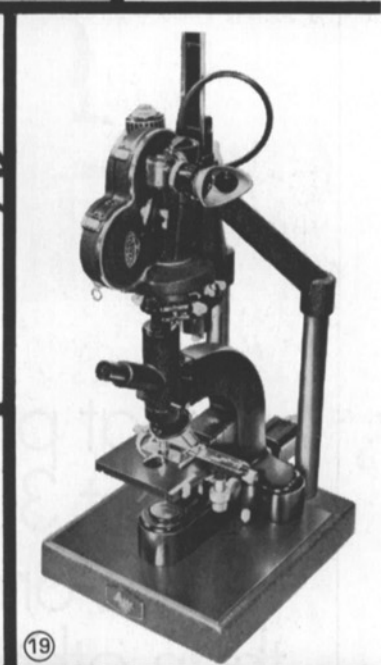
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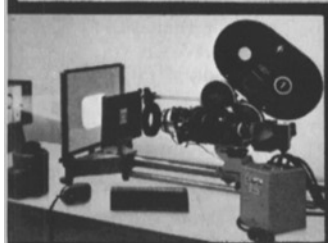
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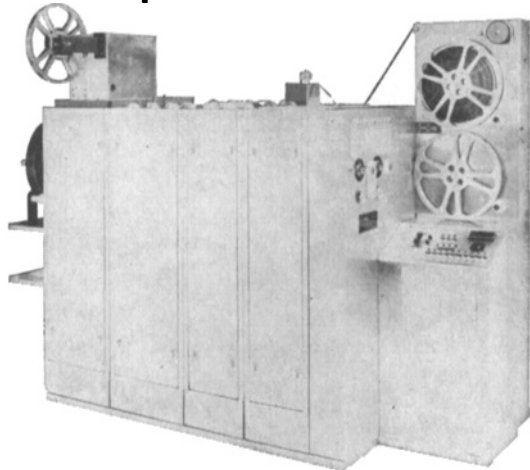
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The emphasis of some of the exhibits will be on documentary styles and "photo-journalism." Other exhibits will illustrate trends in creative photography and its influence on national culture. Further information is available from the Secretary General, 2nd Salon Cine-Photo-Optique, Via Tiziano 19, 20145 Milan, Italy.

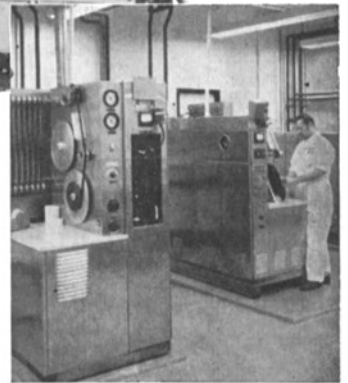
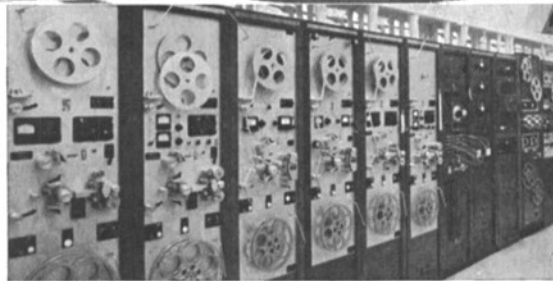
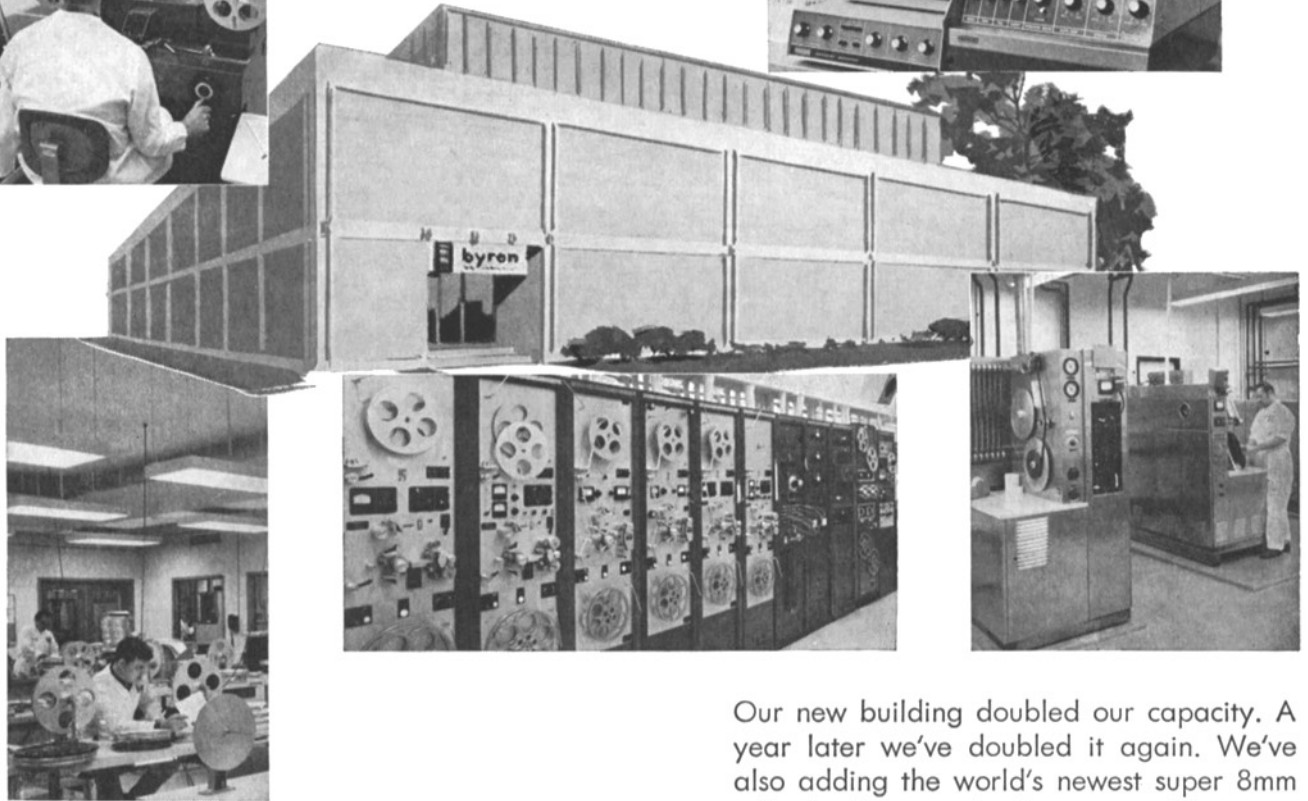
Andrew F. Inglis, Division Vice-President, RCA Commercial Electronics Systems, has warned that broadcasting's technical progress over the next decade may hinge on how effectively its equipment builders adapt the technology being developed in other areas. Speaking before the convention of the Rocky Mountain Association of Broadcasters, Mr. Inglis said that suppliers must search out usable technical developments in such fields as defense, space and computers where research expenditures are several times those in broadcast equipment. He noted that "Major developments not only must be technically feasible but they must be economically sound and in accordance with public policy as defined by Congress and the FCC."

As an example of changes in equipment as a result of technological advances, he compared the first RCA videotape recorder, the TRT-1, with the current TR-70 model. The TRT-1 had 150 electron tubes and required six equipment racks while the TR-70 uses about 1,600 transistors, the equivalent of 4,800 tubes, and its cabinet packaging requires only half the space required by the early model.

The Research Center of the Association of Motion Picture and Television Producers will conduct an intensive study of optical soundtracks, Petro Vlahos, Chief Scientist of the Research Center told the Los Angeles Section of the SMPTE during a speech in which he pointed out that during the last 15 years the emphasis in research has been on magnetic soundtracks. He noted that, despite the attention focused on magnetic soundtracks during that time, about 90% of the soundtracks now in use are optical tracks. He said, "It should be possible with today's technology to produce a low-noise, wide-range, high-fidelity optical stereo track that is relatively immune to laboratory processing variations and to dirt and scratches."

Progress in the U.S. Metric Study (*Journal*, p. 639, July 1970) being conducted by the National Bureau of Standards has been reported by Secretary of Commerce Maurice H. Stans. Director of the U.S. Metric Study is Daniel V. DeSimone of NBS. At present six separate surveys are well underway. (1) A Manufacturing Survey is being conducted in cooperation with the American National Standards Institute and other industry associations. (2) A Nonmanufacturing Survey is aimed at nonmanufacturing industries where the issues of the study are of sufficient concern to warrant inquiry. The survey is being undertaken on the basis of a probability sample and personal interviews. (3) A Defense Study is concerned with the probable effects on national security of alternative courses of action with respect to metrication. (4) A Federal Survey is un-

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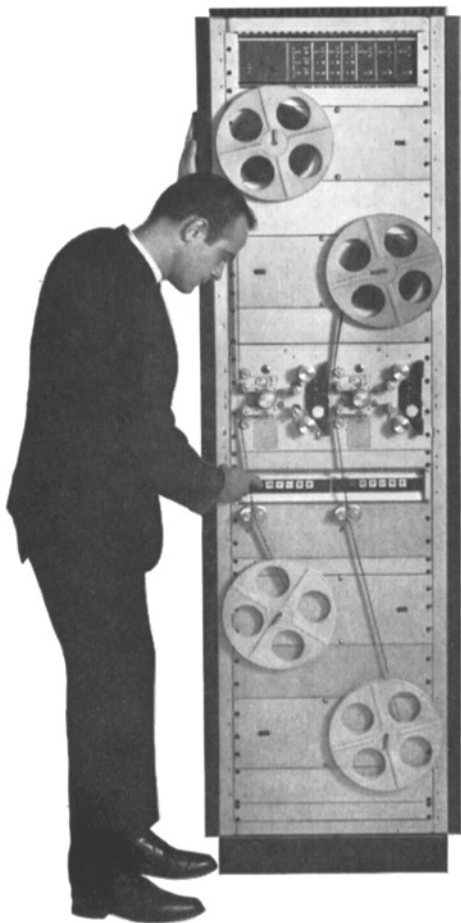
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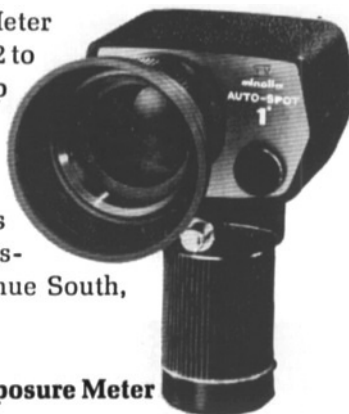
It'll give you quick, precise 1° readings that speak your language. Just aim, squeeze the button and watch the scales turn. With-

out taking your eye off your subject or switching from low to high brightness ranges, you're getting a perfect 1° reading. And the IRE scale makes it easy to keep the right balance between skin tones and the brightest area of your subject. This makes color work a snap.

Your subject is magnified 4x with focusing from 3.3 feet to infinity. And because of the 1° angle of measurement, you can pick out details for tight shots or long telephoto work without leaving your camera position. (This came in handy when the Apollo 8 astronauts took a version of the Auto-Spot 1° along for measuring moon and earth light.)

So thanks to Minolta, TV work will never be the same. After all, just because something never was is no reason to think it can never be.

The Minolta Auto-Spot 1° TV Meter with IRE and foot-lambert scales (.32 to 5000), under \$250 with wrist strap and hard leather, velvet-lined case. (Also available with shutter speed, lens opening, and EV scales for still and cine uses.) For details write Minolta Corporation, Industrial Sales Division, 200 Park Avenue South, New York, N.Y. 10003.



Minolta Auto-Spot 1° TV Exposure Meter

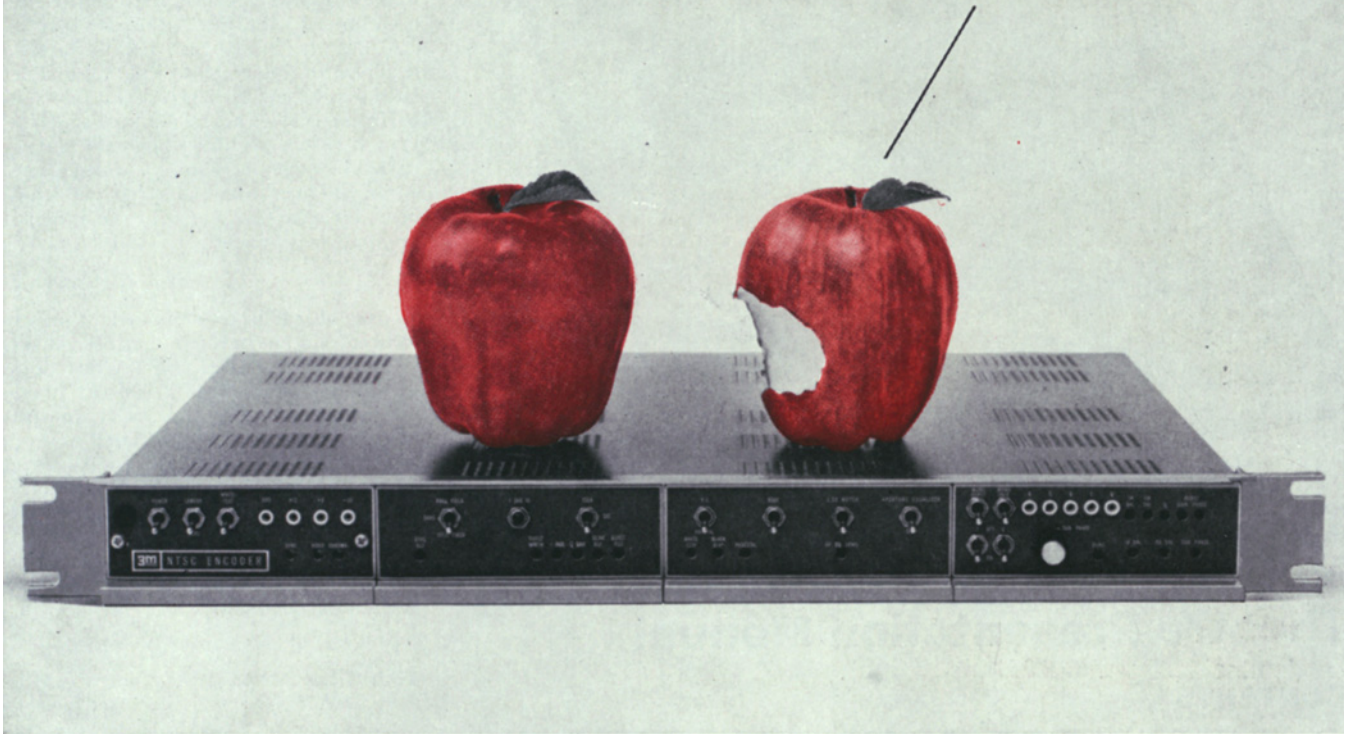
derway to define the probable impact of metrication on government operation. (5) A special investigation of commercial weights and measures because of the substantial impact that metrication would have in this area. (6) A Standards Survey to determine how U.S. engineering standards compare with internationally adopted standards and what effect metrication would have on international standards negotiations.

The ANSI 1970 catalog listing some 4,000 American National Standards and 1,700 international recommendations has been announced by American National Standards Institute, 1430 Broadway, New York, NY 10018. Added to the expanded 128-page edition are American National Standards approved by ANSI through January 15, 1970 and international recommendations received by that date from the International Organization for Standardization, the International Electrotechnical Commission, the International Commission for Rules for the Approval of Electrical Equipment and the Pan American Standards Commission. Standards listed in the catalog include dimensions, ratings, terminology and symbols, test methods and other criteria applicable to the entire industrial economy. Standards for cinematography and photography are listed in the catalog. The catalog is available from ANSI upon request.

A space color television camera, capable of transmitting pictures under all extremes of lighting on the moon, has been demonstrated by RCA Corp. The camera, designed and built for NASA specifically for use on lunar missions, is expected to be immune to damage from sunlight, even when pointed directly at the sun, and to operate effectively across a light range much broader than that possible with previous space color TV systems. The camera uses the new Silicon Intensifier Tube (SIT) which has an imaging surface consisting of some 400,000 individual silicon diodes and is resistant to damage from jolts and vibrations. The SIT enables the camera to provide fine detail on both very dark and very bright objects in the same scene.

The camera will be equipped with a zoom lens that can provide views ranging from wide angle to telephoto. The camera weighs 10 lb and measures 4 by 6.5 by 16.5 in including the lens. Operation is automatic and the camera is designed to withstand temperatures from -250°F to +250°F. On the next lunar mission, the camera may be left on the moon for moon-to-earth transmission of the Lunar Module lift-off and other scenes on the moon while the astronauts are on their way to earth. Transmission will be at the rate of 30 frames/s, 525 lines/frame. Color pictures will be transmitted by means of the technique whereby a series of one-color images (red, blue, green) are created by a revolving color wheel and transmitted in sequence. Ground-based electronic conversion equipment will combine the separate color images into full-color pictures for transmission to home TV sets.

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Another unique fact is that the 3M Color Encoder considers smaller, lower cost cameras as well as the big expensive ones. A method of input clamping is used on video signals that eliminates low frequency hum and noise and other unwanted effects on the matrix. If you have access to an SMPTE color test film (hand test over colored bolts of cloth) you can determine whether your camera needs clamping. If it does, you're in clover with this 3M Encoder.

The 3M Color Encoder is compatible with all 3-tube and 4-tube cameras, meets all applicable FCC and EIA specs. There's also a 2F notch filter in the horizontal aperture equalizer to prevent noise beyond camera frequency response.

Luminance enhancement at the flick of a switch assures a sharp picture even if registration is not perfect. With a 4-tube camera, enhancement is from the luminance tube. The green channel is used for enhancement in 3-tube cameras. Switching is on the front panel, as are all operation and setup controls, including notch filter.

Overall, you'll find that the 3M Brand Color Encoder is equal or superior to anything on the market yet costs somewhat less. Could we send a brochure?

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Movies Move People is a 25-min 16mm sound color film produced by Eastman Kodak Co. to show business and industrial organizations how films can communicate both facts and feelings. Subjects of the individual sections include "selling" ideas, sales motivation, animation, in-plant training, corporate image, conservation and human relations. The film is available as a free loan to qualified audiences. It is distributed through Modern Talking Picture Service, 1212 Ave. Americas, New York, NY 10036.

Bell Laboratories engineers have taught a computer to convert printed English text into synthetic speech. In "teaching" the computer to talk, the researchers gave the computer mathematical approximations to the shapes and motions the human vocal tract assumes when uttering common sounds and sound sequences. They programmed the computer with a basic dictionary of word categories and definitions in digital form. Then they approximated, for computer storage, the complex rules of timing, pitch and stress which people use naturally in everyday conversation. In the experiments, passages are typed and sent to the computer from a teletypewriter. The computer analyzes the sentence, assigns stress and timing to each word and finds a phonetic description of each word from a dictionary stored in the computer's memory. Mathematical descriptions of vocal-tract motions are computed. These

descriptions are used to generate electrical speech signals which may be heard over a loudspeaker or a telephone. The typed sentence also can be stored in the computer for later use.

An oscilloscope connected to the computer produces a line drawing of the model vocal tract and displays the change in position of the throat, jaw, tongue and lips as different sounds are produced. The oscilloscope display is not needed for text-to-speech conversation but it aids researchers in monitoring the performance of the system.

A motion picture giving a microscopic view of the circulation of the blood within a living heart has been produced at the University of Southern California. Dr. Richard J. Bing, an internationally known cardiologist who is Professor of Medicine at USC, and Dr. Harold Wayland, Professor of Engineering Science at Caltech, worked together to develop the technique for use on laboratory animals. Prof. Wayland devised the process of photographing circulation within living tissue and Dr. Bing adapted the process to the coronary circulation by inserting a light rod into the left atrial muscle of a cat's heart, illuminating the heart's interior and showing the vessels. The two professors are working to refine the technique with different optical and electronic methods of following the motion of the living heart. The technique will be used to study directly

the effects of certain drugs on coronary circulation and to study coronary circulation in laboratory animals before, during and after artificially-induced heart attacks, as well as other direct observations of coronary circulation.

Dr. Peter C. Goldmark, President of CBS Laboratories, is the recipient of a Golden Plate Award presented by the American Academy of Achievement (national headquarters, P.O. Box 30126, Dallas, TX 75230). He was cited as the man "who set the wheels in motion of the long-playing record and color television broadcasting." The citation mentioned especially the recent development of Electronic Video Recording and described Dr. Goldmark as "one of the year's 50 giants of accomplishment."

Robert B. Pell has been appointed Vice-President of Reela Sight and Sound, Inc., a New York-based audio-visual equipment distribution and consultation firm. He is also General Sales Manager for Reela Film Laboratories, Inc., in Miami. He will coordinate the activities of both organizations from his headquarters at 65 N.W. Third St., Miami, FL 33128.

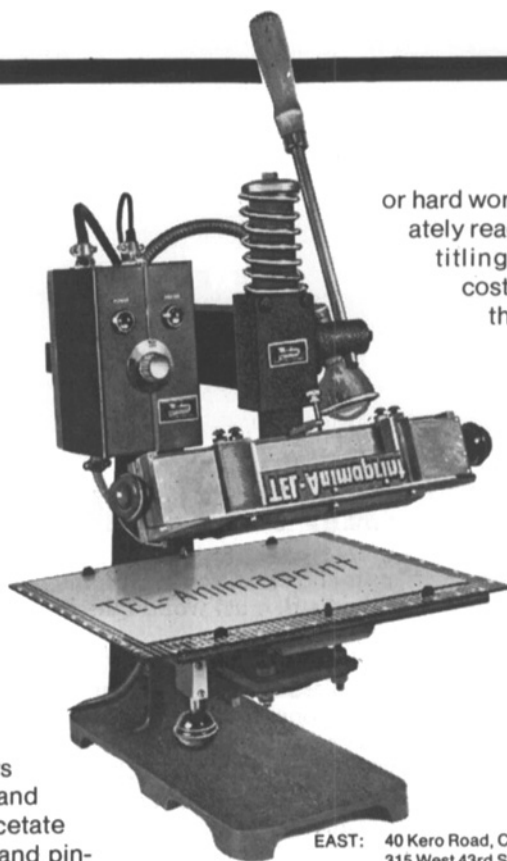
Charles E. Anderson is the recipient of the first Alexander M. Poniatoff Award for Technical Excellence, which will be presented annually to the Ampex scientist or

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engineer who has made a major contribution to the technical excellence of Ampex. Mr. Anderson, who is Video Engineering Section Manager, Ampex Video Products Div., was cited for his technical contributions to the development of the first practical videotape recorder by Ampex and his contributions to subsequent improvements in videotape recording during his 16 years as an engineer with Ampex.

Milton Forman has been appointed a member of the Board of Directors of Cinema Product Development Co., 2044 Cotner Ave., Los Angeles, CA 90025, it was announced by Edmund DiGiulio, President. Mr. Forman will also serve as consultant

in guiding the company's future expansion plans. He was formerly President of Berkey-ColorTran and Executive Director of Berkey International. He was special consultant to the Research Center of the Motion Picture and TV Producers Association and in that capacity he conducted a worldwide studio stage survey.

Ira R. Kohlman has been appointed Vice-President, Graphic Arts Products, for Log-Etronics Inc. He was formerly Director of the Graphic Arts Division and, as Vice-President, he will be responsible for all phases of planning and marketing for LogEflo automatic film processors and other graphic arts products. Prior to join-

ing LogEtronics in 1960, Mr. Kohlman was Plant Manager of Colorfax Laboratories in Silver Spring, Md., and Production Manager of Pavelle Color Laboratories (now Technicolor) in New York.

Sol Tabachnick has joined the staff of mixing engineers of Manhattan Sound Studios, 460 W. 54 St., New York, NY 10019. He was previously a mixer and technician with CBS-TV. He has also been a mixer in the Radio, Television and Recording Divisions of the United Nations.

Robert Herr has been appointed Manager of the 3M Mincom Division at 3M Center, St. Paul, MN 55101. He succeeds R. J. Gavin who will continue as Vice-President of the Division. Mr. Herr joined 3M in 1946 where he first concentrated on the development of magnetic recording tape and later conducted research on electrical insulating materials, including tapes and resins.

J. W. Cosby has been appointed Chemical Products Marketing Manager for the Carbon Products Div. of Union Carbide Corp., 270 Park Ave., New York, NY 10017. He has been with the Carbon Products Division since 1950. In his new post he will be responsible for national marketing activities for both process equipment and activated carbon.

J. Bruce Waddell has been elected President of Altec Service Corp., 1515 South Manchester Ave., Anaheim, CA 92803. He succeeds George L. Carrington who resigned. Mr. Waddell has been with the firm since 1966 as Assistant to the President. He was formerly Marketing Manager of the Communications Dept. of Fairchild Camera and Instrument Corp.

George Swetland has been appointed Program Manager of the Broadcast Products Dept. of Electronic Engineering Company of California, 1601 East Chestnut Ave., Santa Ana, CA 92701. He has been with EECO for 12 years during which time he has been responsible for the design and construction of data processing systems and timing systems. His group recently completed the design of an editing system that uses a computer compatible time code to identify each frame and automatic sequencing controls to simplify and speed up the editing process.

Frank V. Papalia, General Manager of Precision Film Laboratories, Inc., 21 W. 46 St., New York, NY 10036, will spend most of the summer traveling in Italy where he will visit Italian laboratories, including (in Rome) La Microstampe, Technostampa and STAB. S.P.E.C. Mr. Papalia was made a Fellow of SMPTE in 1969.

Theodore W. Batterman has been elected Vice-President, Marketing of Warner Brake & Clutch Co., Beloit, WI 53512. He was formerly Vice-President and General Manager of the company's Motion Control Systems Div. In his new post he will be re-



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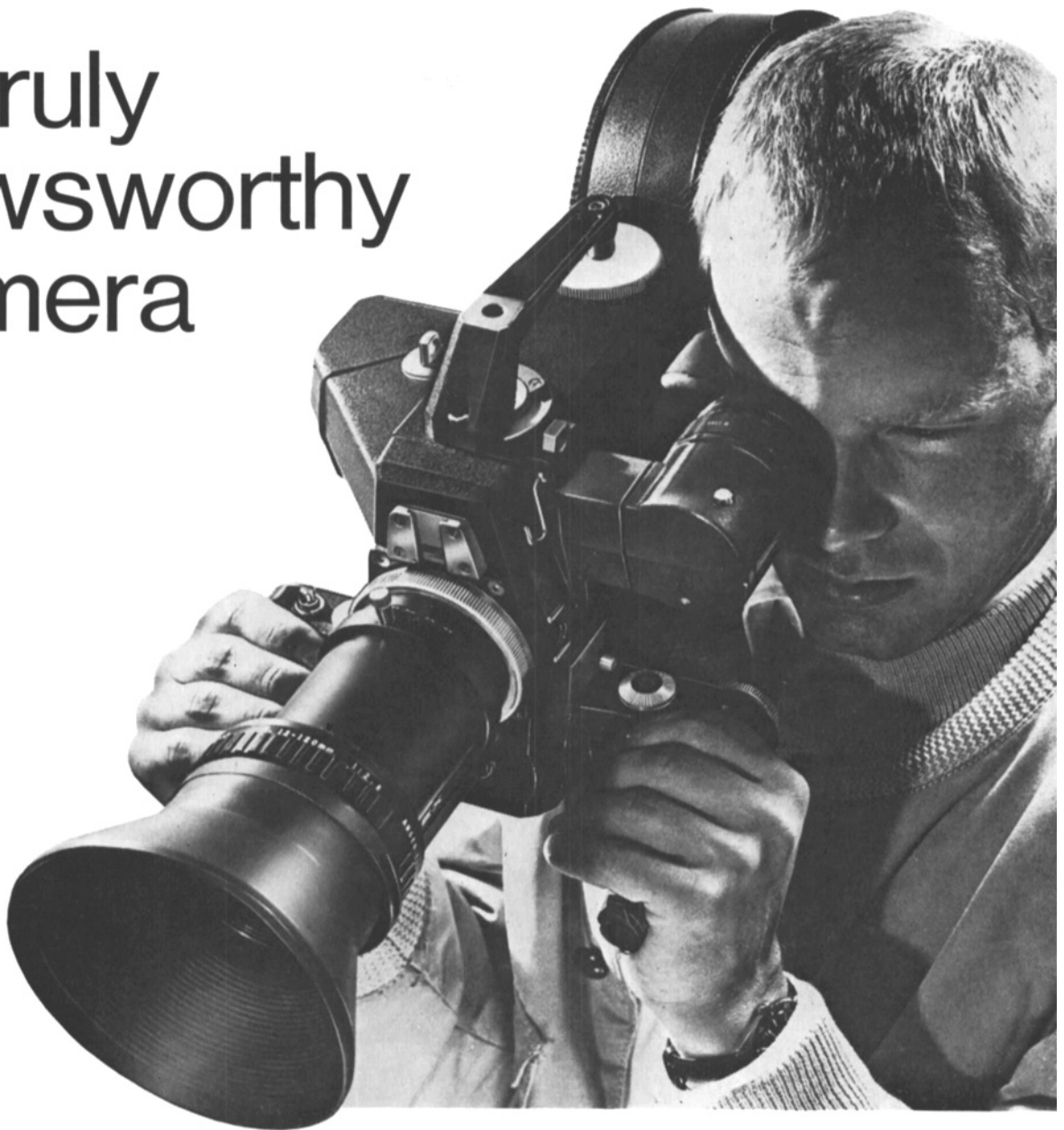
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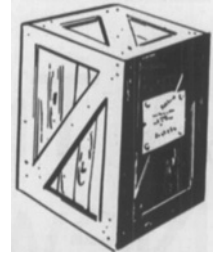
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Ronald T. Groen has been appointed Assistant to the President of SOS Photo-Cine-Optics, 40 Kero Rd., Carlstadt, NJ 07072, it was announced by Dominick Capano, President. Mr. Groen was formerly General Manager of M.P.E. Publications, Inc. He was also Vice-President-Managing Director of Photo Technical Advertising & Publishing Co.

William A. Fink has been appointed Commercial Marketing Manager for Westel Company at the firm's new headquarters at 2555 Charleston Rd., Mountain View, CA 94040. Mr. Fink was previously with International Video Corp. and Ampex Corp. Westel Company manufactures commercial and military videotape recording systems. In his new post Mr. Fink will have responsibility for all field marketing for video products and will maintain contact with networks, group ownerships and teleproduction markets.



new products

(and developments)

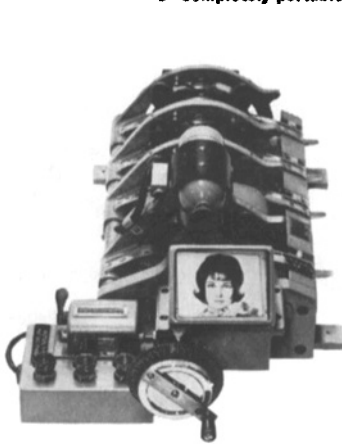
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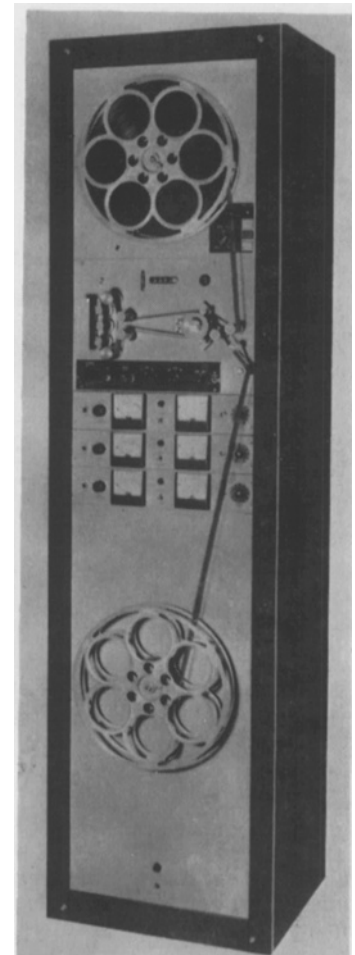
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