



The SMPTE Scholarship Committee will study applications for four grants to be made to students judged the most worthy of receiving the scholarships. Two grants for graduate students are sponsored by the Academy of Motion Picture Arts and Sciences and will be administered by the Society. Two grants for undergraduate students will be sponsored by and administered by the Society. Administration of the Scholarships will be under the direction of the Vice-President for Educational Affairs, Herbert E. Farmer. The Scholarship Program was set up in 1971 (*Journal*, p. 45, January 1971, and p. 121, February 1971). The 1971 recipients of the two graduate and two undergraduate scholarships were unanimously selected by the Committee (*Journal*, p. 657, August 1971).

The applicants' fields of study must be in the sciences and technologies related to the motion-picture industry, including (but not limited to) the sciences of optics, acoustics, electronics and chemistry. Business, management and standardization relating to technologies and applications of motion pictures, television, photo-instrumentation and photo-science may also be included in an applicant's academic program.



The 10th International Congress on High-Speed Photography will be held September 25-30 in Nice, France. Brochures describing the Congress have been received at SMPTE Headquarters (9 E. 41 St., New York, NY 10017) and are available, upon request, to persons interested in attending the Congress as authors, exhibitors or participants.

Plans are now being made for a group flight at reduced fares for persons attending the 10th Congress and also for those attending the Photokina which will be held at Cologne, Germany, at the same time. Full information on the group flight will appear in subsequent issues of the *Journal*.

Motion Pictures and Video Cassettes 1971 is the third of the Hope Reports in book form reporting on the audiovisual field in 1971. The other two books are *AV-USA 1971*, an 80-page volume covering 95 products in seven markets, and *AV in Education 1971*, which treats in depth the media used in the education markets. Information about all three volumes is available from Hope Reports, 58 Carverdale Dr., Rochester, NY 14618.

Annual Awards

At the November meeting of the Hollywood Section two awards were presented by President Wilton R. Holm to two members of SMPTE who could not be present at the Society's Fall Conference in Montreal. One was Linwood G. Dunn, who received the Herbert T. Kalmus Gold Medal Award for his outstanding work in the creation of special optical effects for many notable feature films. The other recipient was



Linwood G. Dunn (r.) with President Holm

James P. Corcoran, who was honored with the Samuel L. Warner Memorial Award in recognition of contributions to four-track stereo sound for CinemaScope release. More details about the achievements of these two distinguished members of SMPTE can be found in the Report on the 110th Technical Conference Montreal in the December 1971 issue of the *Journal*, pages 996 and 998.



James P. Corcoran (r.) with President Holm

Of the business, school and university institutions surveyed for *Motion Pictures and Video Cassettes 1971*, 85% have no plans for buying any video cassette system in the near future. Of the 15% which may buy, most of the purchases will be on an experimental, test basis for the first year or more. Hope Reports analyzed more than two dozen reports, speeches and major feature articles on the subject of video cassettes; 26 reviews are included in the book. It was found that experts leaned toward the magnetic tape systems.

The Hope survey showed that 67% of the institutions have not formed an opinion, 23% desire a recording capability and 10% require playback only. The high cost of both equipment and software and the lack of compatibility among systems were the major reasons given for dissatisfaction and buyer apathy.

In the motion-picture section of the book it was reported that entertainment feature film production for the entire world was off 2% in 1970. Total number of films released world-wide was 3,943.

An analysis of network and local station TV programming showed that 42% of the program time originated on film and 43% on videotape.

Other topics covered in the 56-page book include nontheatrical film expenditures and producer income, nontheatrical film circulation and distribution, educational film sales for 1971 and forecast for 1972, television commercial production, film processing survey, changes in production techniques, a surprising change expected from pollution efforts and other topics of interest.

The Society of Photographic Scientists and Engineers will hold its 25th Annual Conference May 7-12 in San Francisco. The first two days will be devoted to a repeat of the Tutorial Seminar on Novel

Audiovisual Imaging Systems given in September 1971 in New York. Beginning May 9, original papers will be presented in three general areas: Photographic Processes, including applications; Silver Halide and Unconventional Technology and Photographic Engineering, including taking and readout systems and processing hardware. Other sessions will cover information storage and retrieval; toxicology, pollution and ecology relating to photography; environmental and earth resources and microfilm technology. Vernon Stroupe is General Chairman of the Conference and William Nam is Papers Chairman. Additional information is available from SPSE, 1330 Massachusetts Ave., N.W., Washington, DC 20005.

Temple University will offer a graduate film seminar June 26-July 28 in London, England, for the third consecutive year, it was announced by Kenneth Harwood, Dean of the University's School of Communications and Theater. As in past years, the seminar will be conducted by Raymond Fielding, Professor of Communications. Dr. Fielding is an internationally known film educator and former filmmaker. His colleague will be Kenneth Adam, former head of BBC television who holds the special rank of Overseas Visitor of Temple University. The seminar is conducted in association with the British Film Institute and will cover all aspects of the contemporary British film in detail, including writing, directing, performance, censorship, economics, technology, criticism and research.

Daily lectures will be given by leading British directors, actors, writers, critics, government and labor leaders and educators. Day-long field trips have been scheduled to major film studios to sit in on dubbing sessions of films and visit the special effects and other technical areas. Other trips will be to archives, museums and

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The motor is electronically controlled for accurate, steady running at speeds of 10 to 50 frames per second, and 24 and 25 fps for synch sound. An easily attachable 400' film magazine is also available.

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Accessories for the EBM include a small, lightweight synch pulse generator that rides in a pocket. And a pocket-sized crystal control unit for wireless synch sound filming.

The Bolex EBM has everything a professional could wish for in an electric 16. At a price that sounds like wishful thinking.

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This ultra-compact/lightweight 16mm camera is unequalled for handling ease and versatility. Ready-to-film, it weighs just over 8 lbs. with 100 ft. daylight spool, 3 lenses, motor and matte box! Famed throughout the world for its professional capabilities—hand-held, on tripod, in the studio and on location.

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One camera, choice of three Quick-change (200-400-1200 ft.) magazines, makes the 16M/B ideal for the tough, long run jobs, the hand-held grab shots and anything in-between. Standard equipment includes a 60-cycle signal generator and automatic claspstick for location sound filming. Its broad capabilities are practically unlimited.

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A proven location sound camera—quiet, compact and lightweight—supremely capable in every area of professional sound filming. Operates DOUBLE SYSTEM and/or SINGLE SYSTEM—convertible by means of the ARRI Recording Module, without the use of special tools. The 16BL is also available with APEC—the truly professional built-in, thru-the-lens Arri Precision Exposure Control system.

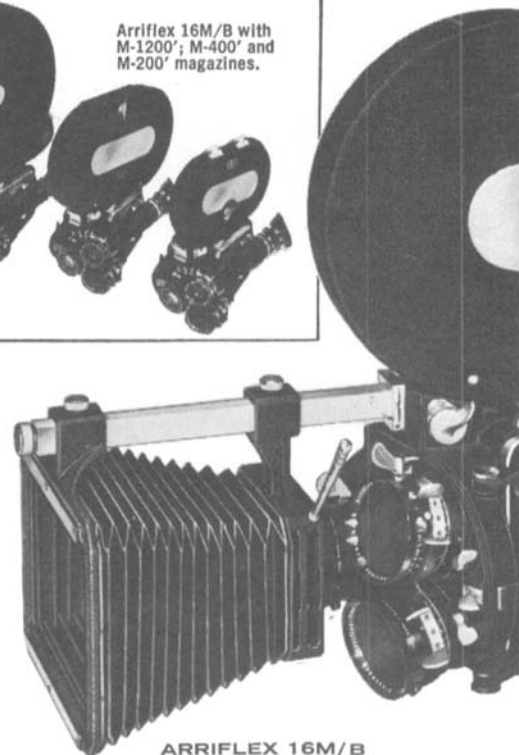
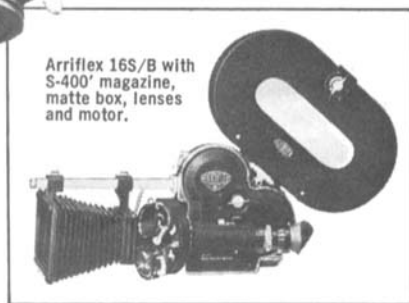
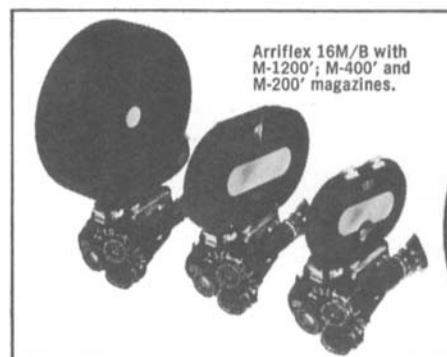
ARRIFLEX 35 2C/B

Filmmakers depend upon the Arriflex 35 2C/B series to deliver theatre-quality footage reliably and economically—on location or sound stage. Arriflex 35 cameras are first choice of professionals wherever motion pictures are used to teach, document, influence, entertain or sell.

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Which camera is best for the assignment? Arriflex's renowned line of 16's and 35's makes the choice easy. Because there's an ideally suited model for every kind of job—to do it better, faster and at less cost.

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ARRIFLEX 35BL

This new, SILENT, hand-held light-weight 35mm represent a major technological achievement in motion picture camera design. As an all-purpose production camera, the 35BL provides the filmmaker with new efficiency, mobility and creative freedom. It is destined to be the leading 35mm production camera of the 1970's. Orders accepted now for 1972 delivery.

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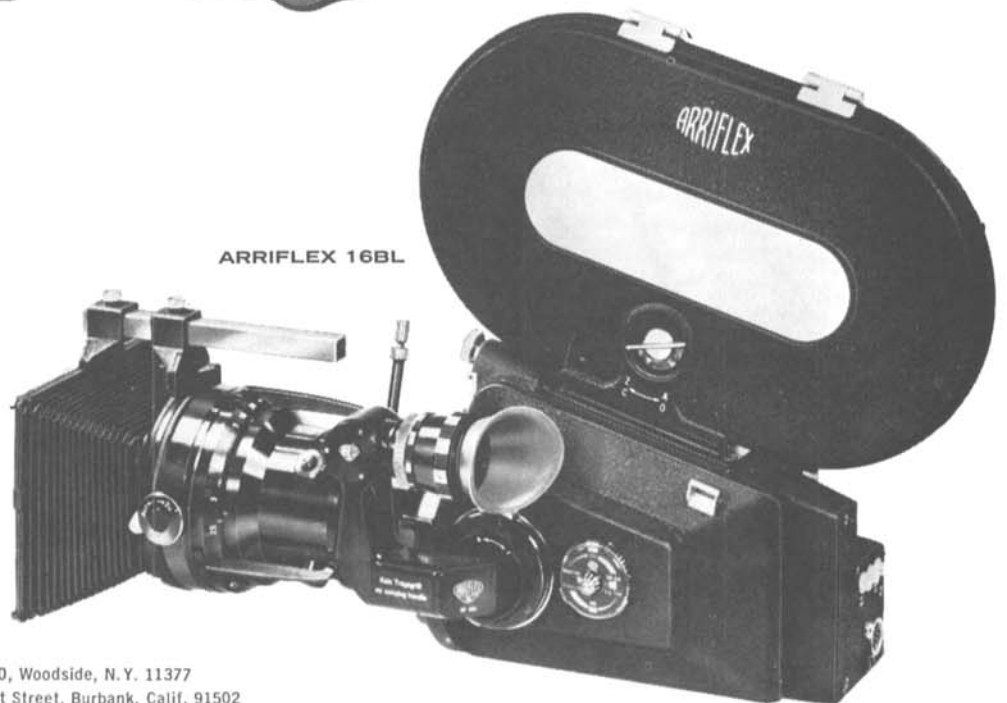
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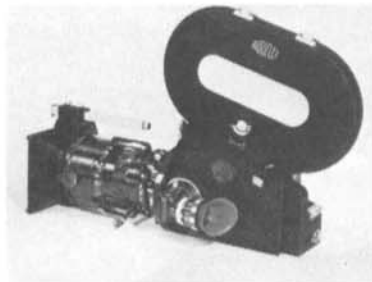


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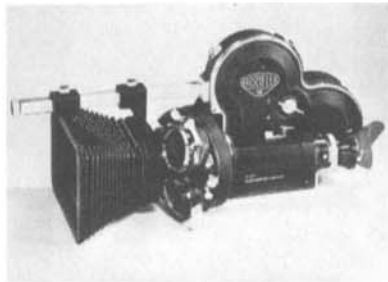
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Rugged, reliable, versatile, self-blimped sound camera. The professional's camera for quality location sync sound filming. Compact, lightweight. Tachometer, frame/footage counter. Simplified film path, gear-driven sprocketed magazine system. Camera built around famed mirror-shutter reflex system and registration pin movement. Also available with single system magnetic sound.



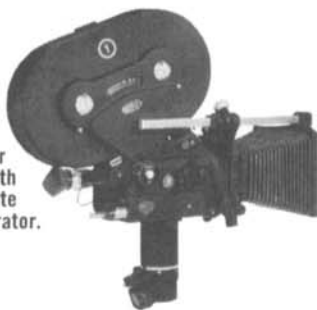
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Model S Camera. Use with 100' spools or 400' magazines. Simplified film path lets you change magazines in seconds. Rock-steady registration pin movement. Mirror-shutter reflex system, also available with built-in slate and sync generator.

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Model 11-C incorporates the latest improvements in 35mm reflex cameras.

Quick change magazines, mirror reflex shutter. Also available with variable shutter, built-in electric slate and sync generator.



SONOREX INTERLOCK PROJECTOR

The Sonorex is a single system optical/magnetic sound projector — with a built-in 16mm interlock magnetic deck, that is ideal for double system sync previews, original recordings, sound transfers, and many other practical and creative sound film jobs. Sonorex is outstanding for its mechanical, optical and audio quality, and is the answer to a wide variety of daily production problems.

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governmental offices as well as to the National Film Theater where students will see special screenings of historically important films. The seminar is limited to 18 students. Additional information is available from Dr. Raymond Fielding, School of Communications and Theater, Temple University, Philadelphia, PA 19122.

Other summer seminars offered by the School of Communications include one on The Mass Media in Mexico in Mexico City from July 3 to August 11 and one on British Broadcasting in Transition in London from July 17 to August 18.

Rensselaer Polytechnic Institute's 1972 summer program in color technology will include three intensive courses offered by the Color Measurement Laboratory. Principles of Color Technology will be held July 10-14, Color Technology for Management, July 20-21, and Advances in Color Technology, July 24-28. The courses are under the direction of Fred W. Billmeyer, Professor of Analytical Chemistry. He will be assisted by Max Saltzman, Manager of Color Technology, Allied Chemical Corp. and Adjunct Professor of Chemistry at Rensselaer. Both men have published widely in the field of color science and their jointly-authored book, *Principles of Color Technology*, will be used as the textbook in the courses.

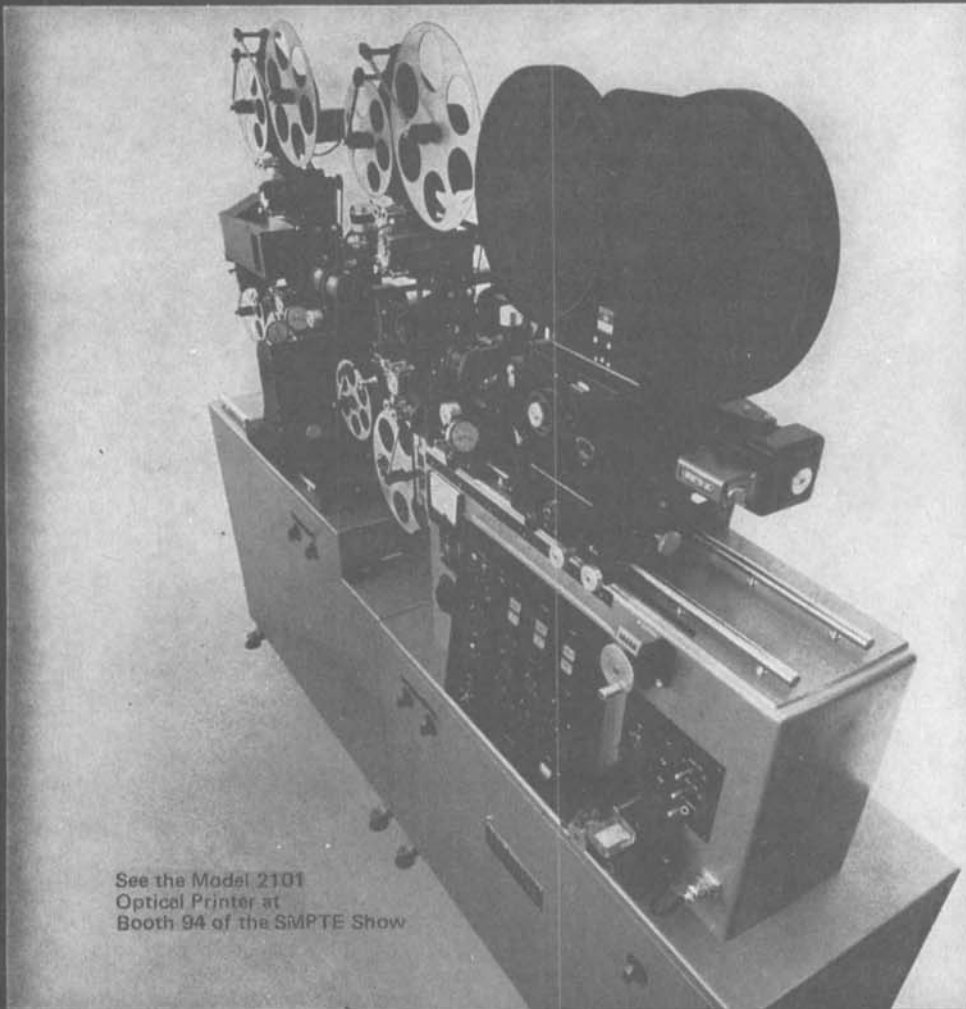
The course on Principles of Color Technology is intended to provide both theory and practice in the description, specification and measurement of color. Color Technology for Management is a two-day course designed to aid executives responsible for research, production or sales of colored products. Advances in Color Technology is a new course consisting of five intensive one-day seminars on the state-of-the-art in five major areas of color technology. Topics covered in the seminars will include instrumentation for color measurement, data reduction and colorimetric calculations, color difference calculation and color spaces, turbid-medium theory and color matching and geometric aspects of color measurement. Further information is available from the Office of Continuing Studies, Color Technology Program, Rensselaer Polytechnic Institute, Troy, NY 12181.

The Institute of Optics, University of Rochester, Rochester, NY 14627, has announced two summer courses. Contemporary Optics will be held July 17-28 and Optical System Design will be held July 31-August 3. Contemporary Optics is a non-credit course designed as a refresher course for professional men and women whose optical training must keep pace with recent developments. It is intended also as an intensive course for managerial personnel and others who may lack extensive optical training but who need to be able to interact with and communicate with optical scientists and engineers. Classes will be held on Fourier Optics, Lasers and Electrooptics, Image-Forming Optics and Physical Optics.

The course in Optical System Design is intended mainly for engineers and physi-

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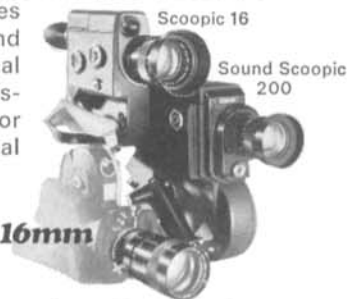


One-man 16mm Action Pack: Sound Scoopic 200

Turns a lone wolf into a production team. 200 feet of continuous filming plus simultaneous sound recording. Its lightweight, compact 16mm portability is complemented by quick-shot EE aperture with manual override, TTL system, rechargeable battery pack. And that's just a part of the big Canon 16mm news:

When the going's rough, switch to the compact **Scoopic 16**. Its automatic Exposure Control tracks the action in any light, and years of world-wide testing have shown that the specially designed SLR viewfinder, semi-automatic loading and rechargeable battery pack work just as well at 68°F below zero!

We've got lots happening in lenses, too. The versatile **Canon Macro Zoom Lens C10 x 12 Fluorite** almost makes chromatic aberration a thing of the past, features macrophotography (down to 1mm) and multipoint focusing (lets you match focal point to focal length for exciting new possibilities). Comes with Arriflex mount (for 16ST, 16M, etc.) or optional universal C-mount.



Canon: big news in 16mm

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Canon Macro Zoom Lens
C10 x 12 Fluorite

cists who may have to plan an optical system to achieve some particular purpose. The course will be given by Professor Rudolf Kingslake of the Institute of Optics where he teaches geometrical optics and lens design. He has previously taught numerous short courses on lens design and related subjects. He is the author of *Lenses in Photography* and of numerous scientific papers. Dr. Kingslake is head of the Optical Design Dept. of Eastman Kodak Co.

The National Industrial Television Assn. (NITA) will hold its 1972 National Conference April 12-14 in Chicago immediately following the National Assn. of Broadcasters Convention. Following registration on April 12 the day will be available for visiting the NAB equipment exhibit. Special presentations on the use of videotape in industrial and business applications will be given April 13 and 14. Workshops will be devoted to developing solutions to typical industrial television problems. During the evening of April 13 selected industrial communications and training videotapes will be run and evaluated by a panel of experts. Further information is available from NITA, P.O. Box 262, Maplewood, NJ 07040.

The Videofilm Seminar, a five-day seminar developed by Eastman Kodak Co.'s Motion Picture and Education Markets Div., will be held March 20-24 and April 17-21 at the Eastman Kodak Marketing Education Center in Rochester. The seminar is intended for television management, cameramen and anyone who works with film for television. In addition to classroom instruction, the course provides "hands-on" experience in the proper exposure of film for television, operating color film chain, adjusting color picture monitors, comparing direct projection of film with reproduction over a film chain and the effects on picture quality of manual and automatic signal-level operations.

Rodger J. Ross is instructor for the program. Mr. Ross describes the Videofilm Seminar's broad goal as the improvement in the quality of film production to meet technical broadcast requirements. "In this age of highly complex, largely automated technology," he said, the need has never been greater for television personnel at all levels to be thoroughly familiar with the relationship between film and electronics necessary for the high quality demanded by today's sophisticated television audience." Mr. Ross, who retired July 1971, as Supervisor of Technical Film Operations for Canadian Broadcasting Corp., has served as a technical consultant to Kodak since 1968. He is the author of two books on television and of a number of articles and technical papers.

Two seminars have been held, one in January and one in February.

The Biological Photographic Assn., in cooperation with the Rochester Institute of Technology's School of Photographic Arts and Sciences, will hold a third annual five-day workshop course in Bio-Medical Photography June 19-23 on the RIT campus in Rochester, N.Y. Lectures, demonstra-

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Most moviemakers will agree that the difference between good footage and *great* footage goes beyond talent and luck—it's the little things that often make the difference. Little things like extra mobility, to follow fast-moving action. Or a few extra dB of silence on the set. Little things . . . like the fleeting moment of news, captured because of a minute saved in set-up time. Or an unusual camera-mount that produces the "different" point of view you need.

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Wherever you go, whatever the shooting situation, Cine 60's exclusive power belt* gives you the power to run every professional camera on the market. Plus the all-important mobility to go where the action is. Available in voltages from 6 to 30V (and up to 7 ampere-hours), it features rechargeable nickel-cadmium cells, sealed design and an automatic overload safety switch. With built-in charger and plug-in coiled power cable, it is one of the most widely-used power sources available today.



Instant Quiet

Silence is golden, yet relatively inexpensive with the Cine 60 battery-powered fiberglass Blimp for Arriflex 35 cameras. Only 19 pounds, the Blimp permits shooting in even the most restricted spaces—with all standard lenses (even 18mm, without vignetting!). Inside, the camera is securely mounted, yet isolated acoustically from its surroundings. On the outside, a new, gear-driven mechanism permits smooth, accurate follow-focus via large, easy-to-use knob. All other controls and connections are conveniently placed on a rear control panel.



Instant Camera Pod

Our single universal shoulder pod ("unipod") is a lightweight shoulder mount that accepts all cameras. Easily removable between takes, it keeps the camera in the ideal shooting position while offering the maneuverability of single-shoulder construction. Used with the Uni-Eclair Mount (detailed later), this is the only practical pod for the Eclair NPR-16. (By the way, we also have an excellent double-shoulder pod as well.)



Instant Camera Platform

Wherever and whenever you need a stable camera platform, chances are our Vacu-Platform can provide it. This rugged suction-actuated device can be positively fastened to any smooth surface (car-tops, floors, etc.) without marring. A flick of a lever on its extra-large suction mounts does the job. Especially useful for low-angle work, it mates with standard tripod heads.



Instant Camera Mount

If you've ever watched a good shot pass you by while trying to thread a camera onto a tripod or shoulder pod, the Cine 60 Snaplok is your answer. Combining rapid, fail-safe operation with the ruggedness and precision alignment needed for day-in, day-out use, the Snaplok features light weight and high rigidity. One section mounts on the camera; the other on tripod or shoulder pod. A single pushbutton instantly separates the two. The base unit of the Snaplok is compatible with standard 1/4" and 3/8" sockets.



Instant NPR

Our Uni-Eclair Mount is just what the name implies—a universal mount for the Eclair NPR camera. Rugged, yet surprisingly light, it may be left on the camera at all times, ready for hand-held operation or shooting with a tripod or shoulder pod. And, it makes a handy camera rest between takes.



Instant Zoom

If you own one of the fine Angenieux zoom lenses, you can have smoother, more consistent zooming with one of our electric zoom drives. Available in four sizes (for the 9-95mm, 12-120mm, 12-240mm and 25-250mm), these units feature a precision gear assembly which mounts securely and directly to the lens barrels. The gear assembly, in turn, is rigidly coupled to a high-quality DC motor via a flexible shaft. The motor is powered by a transistor-regulated nicad battery pack featuring directional push-buttons and a smooth, variable speed control—all contained in a convenient, palm-sized case—with built-in recharger. (We also make an instant-mounting, collapsible rubber lens hood for the Angenieux 25-250mm zoom.)

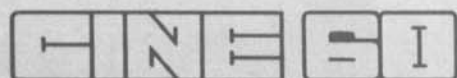


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tions and workshops will be conducted in the school's new studios, darkrooms and classrooms. The faculty will consist of RIT professors and biomedical photographers. The program includes all essential subject material in biomedical photography and is directed to photographers entering the field and to biophotographers who desire a refresher course. Subjects will include basic principles, color, patient photography, photomicrography, motion-picture technique and closed-circuit television. The course is part of the program of the Professional Education Committee of the BPA Board of Registry to promote the highest standards in biomedical photography. Further information is available from John P. Vetter, R.P.B., Chief of Medical Photography, The Western Pennsylvania Hospital, 4800 Friendship Ave., Pittsburgh, PA 15224.

Courses in nontheatrical film production and processing to be held during the year have been announced by Eastman Kodak Co.'s Marketing Education Center in Rochester, N.Y. Courses, workshops and seminars scheduled for 1972 include the Basic Newsfilm Workshop, the Videofilm Seminar, two summer workshops in film production, Advanced Film Production Workshop. ME-4/ECO-3 Basic Process and Control Seminar and Double Application Sound Workshop. Courses will be held at the Kodak Marketing Education Center in Rochester and at Regional Marketing Education Centers at San Francisco, Dallas, Atlanta and Oak Brook, Ill. Additional information on courses being offered and a copy of the 1972 program schedule are available from Eastman Kodak Co. Marketing Education Center, 343 State St., Rochester, NY 14650.

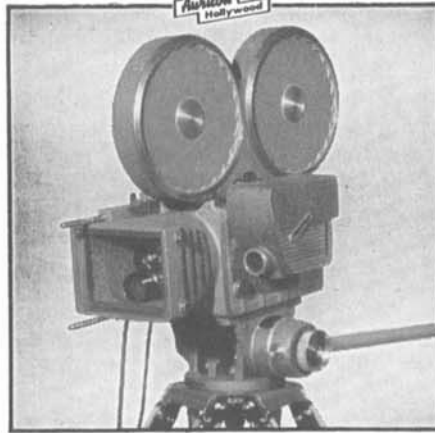
The Norman Topping Instructional Television Center on the University of Southern California campus, in University Park, Los Angeles, was opened January 26 with dedication ceremonies participated in by USC Chancellor Norman Topping (for whom the Center was named) and Charles Horn of Minneapolis, President of the Olin Foundation, donor of the facility. The Center and its network will televise courses, while they are being held on campus, to remote classrooms in companies, municipal offices and educational institutions throughout the greater Los Angeles area. Off-campus students will be able to communicate with instructors through special FM radio links. The Center houses four studio classrooms, an auditorium, control rooms, a master control studio, satellite monitor rooms, offices and equipment maintenance facilities. Operating on four channels in the 2500- to 2690-MHz Instructional Television Fixed Service (ITFS) band, the network will be able to transmit four different courses or seminars simultaneously each hour.

The 8th Annual Refocus Festival will be held April 14-22 at the Iowa Memorial Union at the University of Iowa, Iowa City, IA 52240. Theme of Refocus '72 will be New Directions in American Imagery. Films to be screened include "New Wave" films from New Line

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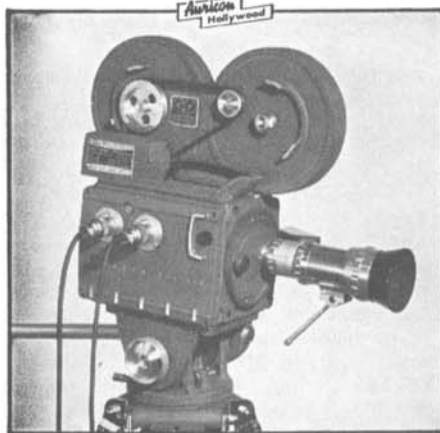
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"SUPER 1200" 16mm Optical Sound-On-Film Camera.
 ★ 1200 ft. film capacity for 33 minutes of recording. ★ \$6425.00 (and up) complete for "High-Fidelity" Talking Pictures.



"PRO-600 SPECIAL" 16mm Light-Weight Camera.
 ★ 400 ft. film capacity for 11 minutes of recording. ★ \$1620.00 (and up).



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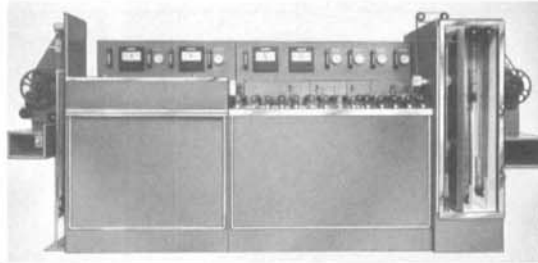


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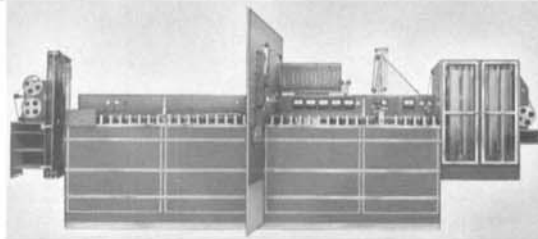
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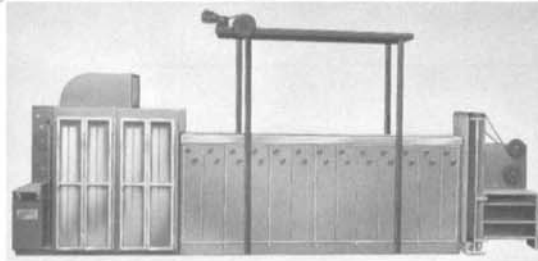
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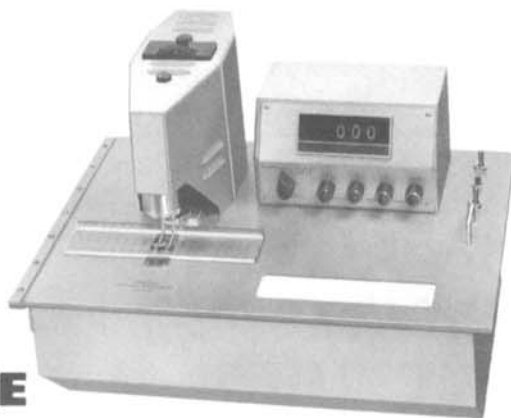
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The Westrex RA-1100-J is a direct reading densitometer that incorporates its own integral power supply, regulated to assure a constant, reliable light source. Its digital meter minimizes operator error and eliminates read-out ambiguities. Binary coded decimal (BCD) output is available for driving external equipment such as printers and recorders. Though it is designed for 35mm, the RA-1100-J can be used on any width film. Write for detailed information.



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Cinema, Genesis IV and the works of several leading independent filmmakers. Refocus '72 will also include other media, such as videotape, intermedia, 8mm and super-8 film, art and theater. The event will also include well-known speakers. The Festival will be open to the public.

The Ford Foundation has granted \$2.5 million to the Urban Institute to establish and operate a Cable TV (CATV) information service during the next four years. The grant was announced in the *Ford Foundation Letter* which noted that, "Between the promise of cable and its realization lies a plethora of legal, political, economic and technical problems of extraordinary complexity." The new information service will supply city, state and government officials with technical assistance and nonpartisan analyses of cable issues, with information by technical, legal and economic experts, and with explanations of the franchising process. The Cable Information Service will also draw up model franchise agreements, report on the cable experiences of various cities and provide detailed technical and economic studies to cities requesting them.

Advanced Communications Techniques Seminars, Inc. (ACTS), 122 E. 42 St., New York, NY 10017, has announced four "Hands On" seminars to be held March 20-23, May 1-4 and July 24-27 in New York and June 19-22 in Washington, D.C. Topics covered in the seminars include Applications, Basic Television Theory, pre-Production, Directing, Editing, Lighting, Audio and Color. At least 12 hours of each seminar is devoted to workshops where small groups of 8 to 10 participants work in various typical studios and actually produce complete TV programs. A number of well known manufacturers will provide equipment and materials for the seminars.

Hugh S. Mateo, President of Filmica la Trinitaria C por A, Calle 3ra., Esq. El Condado, Ensanche El Portal, Santo Domingo, Dominican Republic, has extended an invitation to qualified lecturers who are active members of the Society to give "four or five" lectures on motion-picture subjects in Santo Domingo. Expenses, including transportation, would be paid. Queries should be addressed to President Mateo who will make the arrangements. An applicant should enclose four photographs of himself and should apply at least one month in advance of the date when he would be able to give the lectures.

A selection of CINE Golden Eagle Award winning films will be shown daily at Eastman Kodak Co.'s Gallery and Photo Information Center, 1133 Ave. of the Americas, New York, until March 14. Continuous showings of 10 films will be projected each day. Films shown will include *Turned On* (Pyramid Films); *The First Americans and Their Gods* (International Film Foundation); *At Your Fingertips-Boxes* (ACI, Inc.) and *People* (Lou Lilly - Films/West, Inc.). CINE (Council on International Nontheatrical Events), 1201

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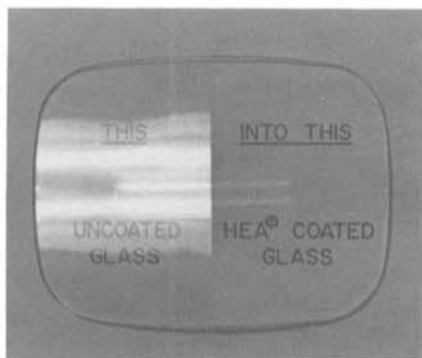
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Sixteenth St., N.W., Washington, DC 20036, coordinates the selection of United States nontheatrical, short subject and television documentary motion pictures for submission to overseas film festivals. Films selected are awarded the Golden Eagle Award or the Eagle Award, the former to professional nontheatrical films and the latter to amateur films.

The United States Institute for Theatre Technology (USITT) will hold a conference March 26-29 at the Mark Hopkins Hotel in San Francisco, Calif. The conference will be sponsored by the Northern California Section of USITT. Theme of the conference will be The Designer: Artist and Technician. In addition to sessions related to the conference theme, events will include The Theatre Forum, which will be an open discussion of topics of concern to designers from all fields, and Theatre Clinics aimed at solving design and execution problems for designers and technicians.

Basic Production Techniques for Motion Pictures is a new Eastman Kodak publication (Kodak Audiovisual Data Book P-18) intended for persons involved in production of nontheatrical motion pictures, including business and industry, government, medicine, education and television. The book contains 64 pages and provides basic information on all phases of film production from the planning stages to the projection of the end product. Illustrations include photographs, drawings and charts. Sections are included on preliminary planning, writing the script, equipment and procedures for shooting, films, lighting, editing, titling, sound on film, storage and care of films, laboratory services, special applications, the language of filmmaking and a glossary of technical terms. Copies are available at a price of \$2.00 from Eastman Kodak Co., Dept. 454, Rochester, NY 14650.

Videocassette Industry Guide, a worldwide trade directory published by Synthedync, Videocassette Industry Information Service, P.O. Box 1988, Studio City, CA 91607, lists companies involved in videocassette hardware and software throughout the world, including videotape, super-8 film and video disc systems. The directory provides a central reference source for information on manufacturers, production companies, distribution firms and related facilities and services within the videocassette industry. Updated editions will be issued semiannually in March and September. Subscription rate in the United States is \$15.95 per year and includes both semiannual issues. Airmail subscriptions outside the United States are available for \$23.95 per year.

Captioned (subtitled) TV was demonstrated at the first National Conference on Television for the Hearing Impaired held in December at the University of Tennessee, Knoxville, Tenn. The subtitled TV programs were broadcast from the network studios of ABC-TV in New York. The programs for viewers with impaired hearing will be made possible by means of a device developed by the National Bureau of

Standards Time and Frequency Division at Boulder, Colo., to distribute time and frequency signals via TV broadcasts. Viewers of the captioned TV programs can switch off the subtitles if desired. The NBS caption display module is expected to be available in 1973. A viewer desiring captions can install a small circuit module in his TV receiver to receive the captions being broadcast. Captioned TV will, obviously, be of benefit to persons with impaired hearing as well as to the totally deaf.

The "W.B." process, a new process for cutting down the silver content in photographic materials, has been developed by Dr. Edith Weyde, a well known chemical research worker. Dr. Weyde retired more than six years ago from Agfa-Gevaert after some 40 years with the firm. She began her career at the original Agfa AG research laboratories. The "W.B." process was developed after she retired. In this process, the original silver image, which is only weakly rendered, is intensified under the influence of tiny air bubbles which are gradually formed on the image. The small amount of silver haloids which is still incorporated into the photosensitive layer is, in principle, meant only for information registration and building up the primary image which is then intensified through the tiny bubbles. The process is fast, has an extremely high sensitivity and enables the silver content of the photographic material to be substantially reduced. Dr. Weyde holds more than 100 patents. Among other innovations she invented the emulsion stabilizers which enabled photographic paper to be rendered "tropics proof" some 40 years ago.

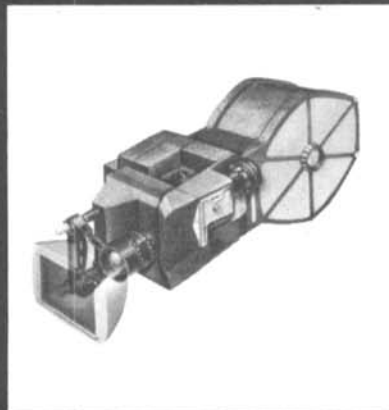
PLATO (Programed Logic for Automatic Teaching Operations) was developed at the Coordinated Science Laboratory, University of Illinois, Urbana, Ill., to explore the possibilities of automation in individual instruction. Between 1960, when the development was initiated, and 1967, about 300 programs, using about 60 logics and including 181 lessons, were written for the system. In 1967, the Computer-Based Educational Research Laboratory was organized by the University to work on the PLATO system. By June 1971, about 1300 programs had been written for PLATO since 1960, of which 1100 are lessons. Some 800 lessons are presently available in 35 subject areas.

In use, consoles are installed in schools, and the consoles are connected by telephone lines to a central computer. The consoles include two devices invented at the University. Each console has an 8-in square plasma display panel on which words, sentences, mathematics or diagrams appear under computer control. Although the panel appears much like a television screen, its electronic operation is quite different. The other device enables the computer to select any one of 256 color images on a small slide placed in the console and to project it on the panel together with any other information the panel is presenting. The consoles have connections for another invention — a sound device under computer control which can select and play any one of more than 2,000 mes-

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sages, such as foreign words or sentences, music or other audible material. An electric keyboard is used by the student to communicate with the computer in requesting lessons and information, answering problems and getting special help when needed.

A Lockheed communications satellite, a non-flight functional prototype of the proposed Intelsat V, has been licensed by the Federal Communications Commission. The experimental satellite is intended to prove out the operating principles of a large-capacity communications satellite that Lockheed Missiles & Space Col., of Sunnyvale, Calif., and an international con-

sortium of companies hope to build and launch in the mid-70s. Mounted on an air bearing to simulate as closely as possible orbital space conditions, the satellite will transmit in the manner of the eventual orbiting satellite. Test transmissions are being conducted from a specially constructed laboratory at the Lockheed plant in Sunnyvale. The effective radiated power of the prototype payload will be reduced from that which will be employed by the three-axis stabilized, solar-powered communications satellite on synchronous orbit at 22,300 mi above the earth. The experimental satellite employs solar arrays like a satellite in space where large solar arrays convert the sun's energy into electrical power. High-efficiency batteries are used to

provide power during a solar eclipse.

Development and testing is expected to continue through May when the capabilities of the experimental communications satellite will be demonstrated to officials of International Telecommunications Satellite Consortium (Intelsat) and others.

A new helium-cadmium laser (He-Cd) one-fourth the size of conventional metal-vapor lasers has been developed at Bell Telephone Laboratories. A mixture of helium and cadmium vapor provides a source of blue and ultraviolet coherent light. The new laser is about 15 in long with an output power of 12 mW in the blue region of the visible spectrum and 2½ mW in the ultraviolet range. The larger He-Cd lasers use a separate heater to vaporize the cadmium metal and use a control circuit to provide optimum vapor pressure for laser activity. The new lasers have eliminated the heater coil and control circuit and use a single electrical connection to provide current to the laser and to heat the cadmium for vaporization. Other new design features include the use of several tiny segments or reservoirs within the glass bore of the laser structure, each containing a few grams of cadmium. It is reported that several segments result in a more stable and uniform discharge of laser light.

CBS is phasing out its EVR cassette processing operations and will redirect its video cassette role primarily to that of software producer and licensor of the EVR system, it was announced by Ralph O. Briscoe, President of the CBS/Comtec Group. The CBS processing plant in Rockleigh, N.J., will cease operations within the next few months. The EVR Partnership has been granted North American distribution rights for the EVR system and cassette processing will be consolidated in England. The Partnership is also negotiating with Japanese interests to form a similar organization, based in Japan, for world-wide marketing of EVR. CBS will continue to hold the basic EVR patents and will make licensing arrangements.

A major reorganization of management structure has been announced by Geo. W. Colburn Laboratory, Inc., 164 N. Wacker Dr., Chicago, IL 60606. Geo. W. Colburn, founder and President of the company since 1935, has been elected to the newly created position of Chairman of the Board. Succeeding him as President and Chief Executive officer is Robert A. Colburn who had served as Executive Vice-President since 1963.

Rene Mathieu, formerly Vice-President, has been elected Senior Vice-President of Laboratory Operations. Clyde R. Rupert, formerly Director of Producer Services and Advertising Manager, has been elected Vice-President of General Administration and Sales and a member of the Board of Directors. Allen Hilliard, formerly Technical Information and Public Relations Director, has been elected Vice-President of Technical Information and Customer Relations.

Additional changes include the appointment of Raymond Czarnik, Manager of

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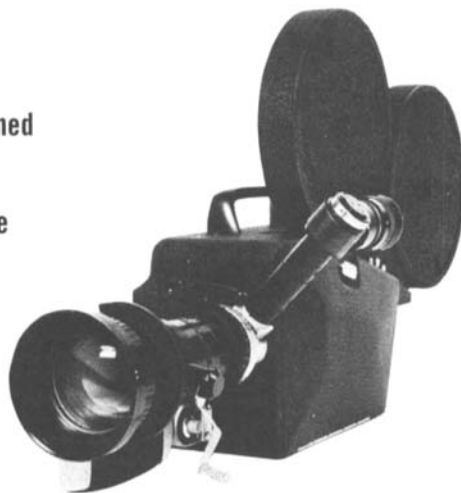
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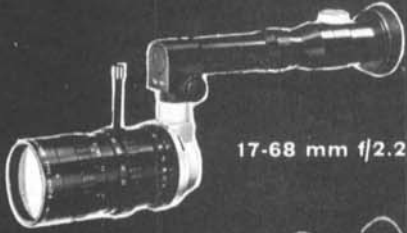
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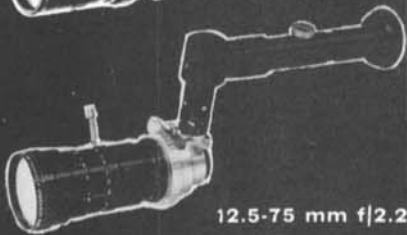
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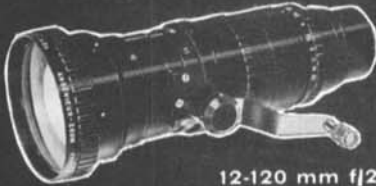
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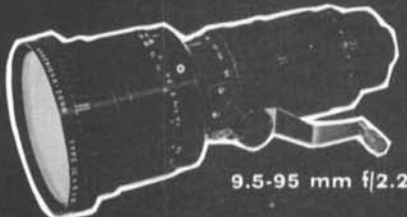
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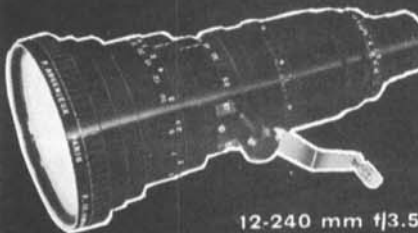
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Order Control, as Assistant to the President. Henry Zenner, Film Strip Director, was given added responsibilities as Laboratory Safety Director. Francis W. Colburn was re-elected Secretary-Treasurer of the company. A Management Committee, formed to help chart the future course of laboratory operations, consists of the Chairman Clyde R. Ruppert with members Raymond Czarnik, Matt Herman, Allen Hilliard and Henry Zenner.

Peter Scheiber of Audiodata Co. has been issued U.S. Patent 3,632,886 covering encoding and decoding matrix techniques for 4-channel recording and broadcasting, according to a joint announcement by Mr. Scheiber and Electro-Voice Inc., Buchanan, MI 49107. Mr. Scheiber and Electro-Voice have agreed to pool the efforts in the protection of patents, licensing and manufacture of equipment, using developments from both firms. The Electro-Voice Stereo-4 system developed earlier in collaboration with Leonard Feldman and Jon Fixler's Industrial Patent Development Corp. was announced as "the first production matrix technique on the market." The firm's association with Feldman and Fixler continues. The equipment developed by Mr. Scheiber was announced as "equipment capable of completely compatible decoding using any type encoded material."

Dolby Laboratories has licensed Matsushita Electric Co. of Japan and its associate companies to manufacture consumer audio equipment incorporating the Dolby B-System of noise reduction, according to an announcement made in London by Adrian Horne, Licensing Manager of Dolby Laboratories, Inc. The firm's New York address is 333 Ave. of the Americas, New York, NY 10014. Brand names of the Matsushita group include Panasonic, National, Technics, Victor Company of Japan, Nivico and JVC.

Videofilm Notes is a new series of technical publications available from Motion Picture and Education Markets Div., Eastman Kodak Co., Rochester, NY 14650. The first two of the series are: *Color Slides for Television* (H-40-1) and *Film Systems for Color Television* (H-40-2). Six more *Videofilm Notes* are planned for publication during 1972. They are 8½ by 11-in and each of the two now available contains 12 pages.

A package of computer programs written for the professional motion-picture trade has been made available through the program library of the Digital Equipment Computer Users Society (DECUS), 146 Main St., Maynard, MA 01754. Written in FOCAL programming language the programs can be run on small- and medium-scale computers manufactured by Digital Equipment Corp. Each program is written so that the user has only to answer questions asked by the computer to obtain his answers. The computer types out the questions on the teletypewriter in ordinary English statements, permitting use by those who have virtually no programming experience.

There are five programs in the package. The first is to determine the depth-of-field of a motion-picture camera lens of any focal length and *f*-stop setting. Two programs are concerned with footage-to-time and time-to-footage conversions for 65/70 mm, 35 mm and 16 mm film. Two programs are concerned with motion-picture theaters, one for the selection of the optimum lens for a 35 mm or 70 mm projector and the other with the optimizing parameters for constructing a 16 mm theater.

The name of Kodak Ektachrome EF Film (Tungsten) SO-105 has been changed to Kodak Ektachrome EF Film 7242 (Tungsten). The exposure index of this film is 125 tungsten, 80 daylight; however, it can accommodate automatic camera exposure at 160 tungsten and 100 daylight. The super-8 cartridges for this film have been redesigned for complete compatibility when used with the Kodak Ektagraphic, Instamatic and XL super-8 movie cameras, as well as super-8 cameras of other manufacturers designed to handle exposure indexes from 40 to 160.

Viewlex, Inc., Holbrook, N.Y., has announced formation of the new Industrial Sales Div. to integrate and coordinate activities of its 15 subsidiaries. The new division will handle the complete line of sound and sight Superviewers for filmstrip, film loop and slides; the Super 1600 automatic threading 16mm projector; the AVS-10 system, a learning laboratory containing programed instruction, and the Mark I cassette duplicator.

Feedforward correction, a new circuit design technique, has been developed at Bell Telephone Laboratories. The technique may be useful for reducing distortion and, as a consequence, it may substantially increase the message carrying capacity of future microwave radio relay and coaxial cable communications systems. The amplifier correcting technique uses much less bandwidth than currently accepted methods and it permits the use of signal amplifiers at nearly theoretical capacity. Thus it more efficiently eliminates the signal noise and distortion produced when an electrical signal is amplified.

Signal processing errors generated by amplification are detected, using the feedforward approach, by comparing the amplified signal with a delayed sample of the signal as it was prior to amplification. The errors in the signal are then reamplified and injected into the main signal wave stream at the proper time to cancel out the noise and distortion that were previously introduced. The technique permits engineers to design amplifiers in which the output signal and a sample of the input signal can be compared and corrected repeatedly to any desired degree of accuracy. Feedforward differs from the more conventional feedback technique in that an amplifier is not required to reprocess or recirculate a signal once it has passed through the system.

The feedforward technique uses two parallel wavepaths. One path, for the main signal, includes one or more signal amplifiers and operates in the normal manner. The second, called the error signal path, accumulates the error components (noise

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The AMI mixer, which handles both stereo and mono, has five mike/line inputs complete with pads, filters, equalizers, and pan pots. Its mike input is switchable for dynamic or internal powering for condenser microphones.

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and distortion) that develop in the signal traveling along the main path. The errors carried on the second path, synchronous with the first, can be injected into the main signal to cancel the error components in the main signal.

A new RCA low-light-level TV camera that can detect from an aircraft the dim glow of sea plankton being disturbed by fish is being used for night-time ocean surveys. The camera, which employs an imaging tube similar to the one used in Apollo moon cameras, is flown at altitudes up to 6,000 ft by the U.S. National Marine Fisheries Service in a new approach to the detection and assessment of ocean fish. Besides detecting fish from the plankton glow,

the camera can record the outline of the school and by analyzing the size and shape of the outline, scientists can determine the species of the school. In recent field tests over California coastal waters and in the Gulf of Mexico, fish concentrations including, anchovies, menhaden, mullet and saury were recorded with the RCA camera. Heart of the camera is an RCA 40-mm silicon intensifier target (SIT) camera tube. An additional 40-mm image intensifier section coupled to the SIT camera tube provides extremely high sensitivity to low light levels.

A 12-ft long film dubbing console individually designed by Rupert Neve & Company Ltd. at Melbourn, Cambridge, En-

gland, has been installed at the EMI/MGM Elstree Studios. The console has 36 input channels and is operated by a team of three. Eight of the input channels may also be selected for use as subgroups so that the console may be operated either as 36-input or 28-input with 8 subgroups or with intermediate combinations. Each channel has comprehensive equalization facilities, Solo and Channel-Cut keys and horizontal-slide faders. Other features include four main output groups; four independent echo facilities, selectable channel; six filter units and four background suppressors which can be inserted via the integral patch panel; six peak program meters and eight limiter compressors. The three members of the operating team have extensive monitoring facilities including a built-in console loud-speaker, further facilities for talk-back, update and selsyn and three sliding script panels.

Ed Marzola & Associates have moved to new offices at 8831 Sunset Blvd., Suite 408, Hollywood, CA 90069. The firm offers Spanish copywriting, translation, dubbing for TV and motion pictures and/or voice-over narration as well as marketing consultation for Latin America and Spain. The firm has a staff of copywriters to handle both consumer and technical accounts. In addition they offer a variety of accents for dubbing purposes, including various Latin American countries, Spain and Mexico.

Technology, Inc., Dayton, Ohio, has relocated the New York and Los Angeles operations of FR Corp. to Blue Ash, Ohio, located between Dayton and Cincinnati. Inquiries may be directed to Technology, Inc., FR Div., 6171 Interstate Circle, Cincinnati, OH 45242. The organization, now the FR Div. of Technology, Inc., manufactures photographic chemicals and darkroom equipment.

A new motion-picture group consisting of three organizations to provide production, distribution and financing for the making of full-length motion pictures has been created. The three organizations are Entervolve, Inc., 330 Dartmouth St., Boston, MA 02116, which will be concerned with film production; Photoplay Finance Co., of Memphis, Tenn., which will finance the films, and Cinepak, Inc., of Boston, which will distribute the films produced by Entervolve. All of the films will emanate from Hollywood where new offices have been set up at General Service Studios, headed by George M. Cahan, Vice-President in charge of Production. Production schedules for the first year call for Entervolve to produce no less than six feature-length films. Nine pictures are planned for 1973 and 12 films are planned for 1974.

SECAM/60 closed-circuit TV has been installed at the race track in Santa Anita Park in California as the result of a cooperative effort involving Criterion Films, Tri-Tronics, Inc., Conrac Corp. and Telegen. Announcement was made by Telegen, 4015 Fabian Way, Palo Alto, CA 94303. SECAM/60 is a color television system that uses black-and-white recording and distribution equipment to produce a color

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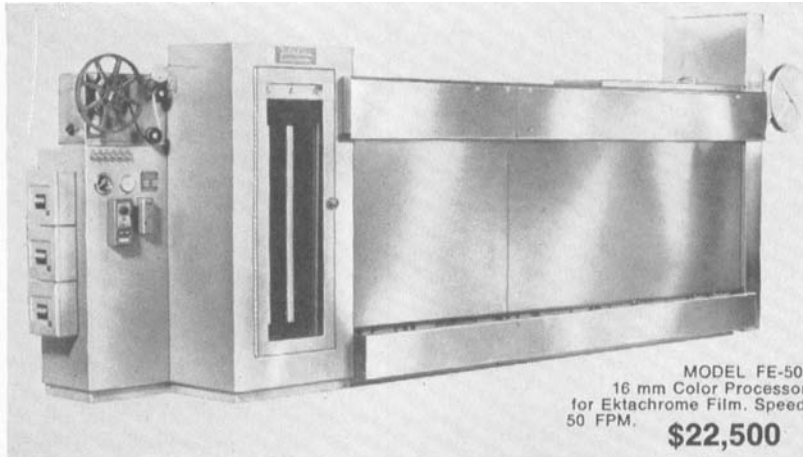
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Partial listing of Filmline Color Installations: — NBC- New York, NBC- Washington, NBC- Cleveland, NBC- Chicago, CBS & ABC Networks, Eastman Kodak, Rochester.

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

TV Stations: WAPI-TV, WHP-TV, WMAL-TV, WXYZ-TV, WWL-TV, WMAR-TV, WJXT-TV, KETV-TV, WTOP-TV, WEAT-TV, WCKT-TV, WAVE-TV, WAVY-TV, KTVI-TV, WCPQ-TV, KJAR-TV, WSYR-TV.



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signal. Eighty Conrac 25-in monitors are located throughout the track. They are fed by a Norelco color camera and several "colorized" black-and-white cameras.

The Portuguese subsidiary of the Agfa-Gevaert Group has opened new buildings at Linda-A-Velha near Lisbon. Dedication ceremonies were held in December. The subsidiary has some 100 employees.

The Motion Picture Lab Div. of Bebell, Inc., 416 W. 45 St., New York, NY 10036, now develops and prints super-16 film. Company technicians designed and custom-modified one of the laboratory's printers to take super-16 as well as 16mm. The laboratory now offers super-16 dailies on Ektachrome Commercial 7252 and High-Speed Ektachrome 7241-42 and on black-and-white reversal. Fast printing service in super 16 is on Ektachrome 7389 Print Stock.

Vacuamate Corp. has moved to expanded facilities at 207 W. 25 St., New York, NY 10001. The firm handles film protective treatments, such as NO-EN and Vacuamate. It also cartridges 8mm and 16mm continuous loop film and packages TV commercials.

Sony Corp. of America, 47-47 Van Dam St., Long Island City, NY 11101, has announced a dealer franchising program for the U-Matic Color Videocassette System. It is expected that by the end of the year several hundred dealers will have been franchised. All will be responsible for sale of the U-Matic System. The U-Matic Videocassette player utilizes an erasable magnetic 3/4-in tape. Present marketing plans call for concentration of sales in the business, medical and educational areas, the announcement stated.

Permafilm Inc. has moved its International Offices to 305 E. 46 St., New York, NY 10017. The company is the worldwide licensor of Perma Film Protection and Perma New Rejuvenation Processes. It also acts as Overseas Sales Coordinator for the MPO Videotronic Super-8 Repeater Sound Projector, the Plastic Reel Corp., of Carlstadt, N.J., and the A-V Tape Sales Corp. of Fort Lee, N.J.

Jean L. Vivié is recipient of the insignia of Officer in the French National Order of Merit. Presentation ceremonies took place May 6, 1971. Mr. Vivié, Founder-Secretary of the Association Française des Ingénieurs et Techniciens du Cinéma, is presently Permanent Secretary. He has been recognized for many contributions to the motion-picture art, including contributions in the field of standardization, covering picture and sound quality and methods of measurement.

Peter C. Goldmark, who retired December 31 as President and Director of Research at CBS at the age of 64, is now head of Goldmark Communications Corp., a subsidiary of Kinney Services, Inc., Norwalk, Conn., and he is also Consultant and Technical Advisor to the London-based

EVR Partnership. Dr. Goldmark, who was head of CBS Laboratories for 35 years, developed Electronic Video Recording (EVR). Earlier developments include the long playing record and the field sequential color television system which made possible color television coverage from the moon. As head of the new company, his plans include development of techniques and systems for cable television, use of satellite communications, electronic publishing and educational materials for home use. The new firm will be engaged, initially, with a Government pilot project to study the use of communications techniques in rural areas with the aim of providing people in rural areas with educational opportunities based on technical advances.

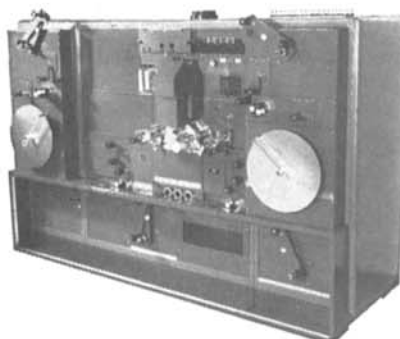
Peter Boyko has been elected President of Capital Film Laboratories, 470 E St., S.W., Washington, DC 20024, a post left vacant by the death of Alfred E. Bruch. Mr. Boyko has been with the firm since 1966 and had been Executive Vice-President since 1969. He served with the U.S. Air Force from which he retired as a colonel in 1966. His last post was that of Commander of the 1350th Motion Picture Squadron at Wright-Patterson AFB, Ohio, where he was responsible for a motion-picture processing laboratory and other services.

Lauritz Jessen, who is well known for his designing of film laboratories in the United States and abroad, has joined Capital Film Laboratories, 470 E St., S.W., Washington, DC 20024, as Technical Director, it was announced by CFL President Peter Boyko. He was formerly with Radiant Laboratories, Inc., of New York, where he was responsible for design and equipment specification, procurement and contracting for the new laboratory. He performed similar design and equipment services as Chief Engineer for Berkey Technical Laboratories and Manchester Laboratories, both of New York. He received a special commendation from the Indonesian government for his seven years work in that country as consultant, designer and builder of a complete film laboratory in Djakarta for the Government Film Service.

Two new appointments have been announced by Edwin R. Levine, Manager of Product Service, Philips Broadcast Equipment Corp., One Philips Parkway, Montvale, NJ 07645. Michael J. Mackin has been appointed Field Engineering Supervisor and Robert A. Bass has been appointed Training Supervisor. Mr. Mackin has been with the firm since 1965. Prior to his present appointment he was Manufacturing Test Foreman. In his new post he will be responsible for field engineering activities and personnel as well as for customer liaison.

Mr. Bass has been with Philips since 1967. He was formerly Supervisor of Logistics and Service Projects. In his new post he will head customer and dealer training programs on the operation and maintenance of the firm's Norelco color TV cameras.

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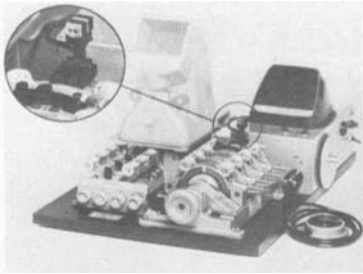
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George A. Howard has been appointed Executive Vice-President of Edutronics Systems International, Inc., 3345 Wilshire Blvd., Los Angeles, CA 90010. He was formerly Vice-President in charge of the Educational Design Group and he served also as Group Vice-President in charge of Product Development and Production. Before joining Edutronics he was General Manager of the Film Loop Div. of Ealing Corp. in Cambridge, Mass. Edutronics is an audiovisual publisher of instructional systems. It has offices throughout the United States and in London and Paris.

Elmer Smalling, III, has joined Rosner Television Systems, Inc., 29 South Mall, Plainview, NY 11803, as Director of Engineering. He was formerly Director of Engineering for Columbia Pictures-Pictures in New York. In his new post he will be based in Philadelphia and will operate in the Washington, D.C., and New York City areas.

John R. Dawson has been appointed Manager of Applications Engineering at Philips Broadcast Equipment Corp., One Philips Parkway, Montvale, NJ 07645, it was announced by James L. Wilson, Vice-President of Marketing. Mr. Dawson joined the company in 1971 as Special Projects Engineer. He was formerly Manager of Engineering with Electronic Mobile Units where he was in charge of building mobile color-TV vans.

Eugene R. Trelewicz has been appointed Director of Engineering for Philips Broadcast Equipment Corp., it was announced by John S. Auld, President. He has been with the firm since 1968 as a technical specialist for television transmitters and more recently as Director of Business Planning. In his new post he will be responsible for the operations of both commercial and government engineering groups.

Frank D'Ascenzo has joined Datavision, Inc., 2351 Shady Grove Rd., Rockville, MD 20850, as Marketing Manager. The firm manufactures television character generators. Mr. D'Ascenzo was formerly Marketing Manager of Chiron Telesystems Corp. and he has also been National Service Manager for the Videograph Div. of A. B. Dick Co. and Product Manager for Display Systems for Visual Electronics.

Melvin Wode has been appointed Vice-President and Director of Engineering and Robert H. Hansen has been appointed Vice-President of Marketing for International Nuclear Corp. of Nashville, Tenn. Mr. Wode has been with the firm since 1970 as Manager of Engineering. Mr. Hansen joined the firm in 1969 as National Sales Manager.

Eugene J. Moscarel has been appointed Group Vice-President of Bell & Howell's Industrial and Training Equipment Group. He will continue to serve as President of the Avicom Div., Pasadena, Calif. Mr. Moscarel has been with Bell & Howell since 1952.

Carl Gibson has joined Academy Lighting Consultants at their West Coast Office, 6777 Hollywood Blvd., Hollywood, CA 90028. Mr. Gibson, who was formerly with NBC, will serve as a lighting consultant on studio installations and television specials.

Raymond E. Johns has been appointed Project Manager for Philips Broadcast Equipment Corp., One Philips Parkway, Montvale, NJ 07645. He has been with the firm since 1969 as Field Engineering Supervisor. In his new post he will be responsible for activities relating to the videotape hardware and reproduced software for Videorecord Corp. of America.

Frank P. Clark, Manager of Development Engineering for the Research Center of the Association of Motion Picture and Television Producers, presented the AMPTP Explosives Safety System for approval on December 1 at the laboratory of the Bureau of Explosives in Edison, N.J. The safety system, developed by Research Center Chief Scientist Petro Vlahos (*Journal*, p. 136, Feb. 1970), protects explosive charges from premature or accidental detonation. The system permits detonation by a specific electrical charge but rejects other voltages that might be caused by static discharges, radio transmitting equipment, set lighting systems or low voltage leakage on wet locations.

Leslie J. Wheeler has been appointed London Manager of a new branch of Fuji Photo Film (Europe) GmbH created especially for sales in the United Kingdom of the complete range of Fuji motion-picture products. Products include 35mm and 16mm color positive materials, 16mm color negative and reversal materials and double 8mm and super-8 color positive materials. Mr. Wheeler is presently at No. 43, Friars Place Lane, London, W.3 7AQ, England. A permanent address for the London Branch will be announced later.

Charles R. Buzzard has been appointed Sales Engineer for the Midwest Region for Philips Broadcast Equipment Corp., One Philips Parkway, Montvale, NJ 07645, it was announced by James L. Wilson, Vice-President of Marketing. Mr. Buzzard was formerly Sales Engineer in the midwestern United States for Central Dynamics Ltd. of Montreal, Canada. The area in his new post encompasses the states of Wisconsin, Minnesota, North Dakota, South Dakota, Nebraska, Iowa and Missouri.

Robert M. Campbell has been appointed Manager of Industrial Sales of Bell & Howell's Audio-Visual Products Div. He was formerly Sales Manager of the Sale-Mate Div. of Charles Beseler Co. in East Orange, N.J. He was also been an independent film producer. In his new post he will be responsible for sales of Bell & Howell audio-visual products to producers of business and industrial information and training films throughout the country. He will also be involved in the development of new techniques of film production and presentation.