though a glossary in the back of the book does list American equivalents for most terms, the text may prove unnecessarily cumbersome to some American readers. The book's value and appeal might have been enhanced if the American equivalents had appeared in the text (possibly in parentheses); in view of the rather stiff retail price, such an accommodation to the American market might be considered reasonable. In at least one instance, British practice, as described in the book, differs sharply from American usage: re-recording (mixing) footages in this country start their count at the start mark (ih the leader) rather than the first frame of picture.

The book is well organized and maintains an informal tone. Especially noteworthy is the author's skill in explaining complicated processes in simple language. Frequently, personal observations out of the author's experience clarify a point or provide a bit of useful knowledge which no bare listing of facts alone could have achieved. (One example out of many: the suggestion that skillful use of sound can help to smooth out poor picture continuity.) A further aid to the reader is the wealth of excellent diagrams and sketches interspersed throughout the text: they are clear and simple, with genuinely informative captions.—*Frank Lewin*, Filmsounds, Inc., 128 E. 41 St., New York, N. Y. 10017.

Eleven Years of Photographic Science and Engineering

Ed. Richard W. Henn. Published (1968) by the Society of Photographic Scientists and Engineers, 1330 Massachusetts Ave., N.W., Washington, D. C. 20005. 136 pp. 8 by 10½ in. Price $15.00 (discounts to SPSE members).

This book contains more than 550 abstracts of papers that have appeared in *Photographic Science & Engineering* from Volume 1 1957 through Volume 11 1967. More than 600 authors are listed and the company affiliation of each author at the time the paper was published is given. Abstracts are grouped under four major headings: Photographic Materials (275 abstracts); Image Properties (130 abstracts); Applied Photography (115 abstracts) and Apparatus (36 abstracts). References to book reviews and biographies are included. The book is dedicated to T. Howard James who was Editor of *Photographic Science & Engineering* for ten years. An appendix lists published books and papers written by Dr. James, including seven books and well over a hundred articles which have appeared in various scientific journals.

The indexes and references are arranged for the greatest possible convenience of reader and researcher. An extensive Descriptor and Subject Index indexes each article by several descriptors. In the Introduction, the Editor (Richard W. Henn) states as his belief that "the user will most often benefit from browsing among the abstracts for material related to his problem." A particular abstract may be located by referring to the Author Index or to the Descriptor and Subject Index which contains key words and phrases.

This is a book which will be of real value to scholars and students in this field.—*Edit*

OHIO, Sept. 25 — The fourth formal meeting of the **Ohio Section** was held at Battelle Memorial Institute in Columbus on September 25. William R. Buccalo opened the meeting at 8:00 p.m.

The program consisted of two papers. The first was read by Dr. George Tressell, Supervisor of the Visual Communication Research Group, Battelle Memorial Institute. Dr. Tressell introduced his talk with a brief discussion of the role of animation of the scientific and educational film. He then showed several examples of the animation done by an automated animation stand and a film describing the stand's mode of operation. A question and answer period followed Dr. Tressell's presentation.

Mr. Richard Sherman, Cinematographer, Department of Photography and Cinema, Ohio State University, presented a paper describing a combination of techniques for filming actual elementary school classes using a cinema-verite style. His talk was illustrated by slides showing the lighting techniques used and film samples from the production were projected to demonstrate their effectiveness.

Both papers were well received as evidenced by the discussion periods following each talk.

Post-meeting was a tour of the unit facilities at Battelle Memorial Institute.—Robert W. Wagner, *Secretary-Treasurer*, Engineering Experiment Station, Ohio State University, Columbus, Ohio.

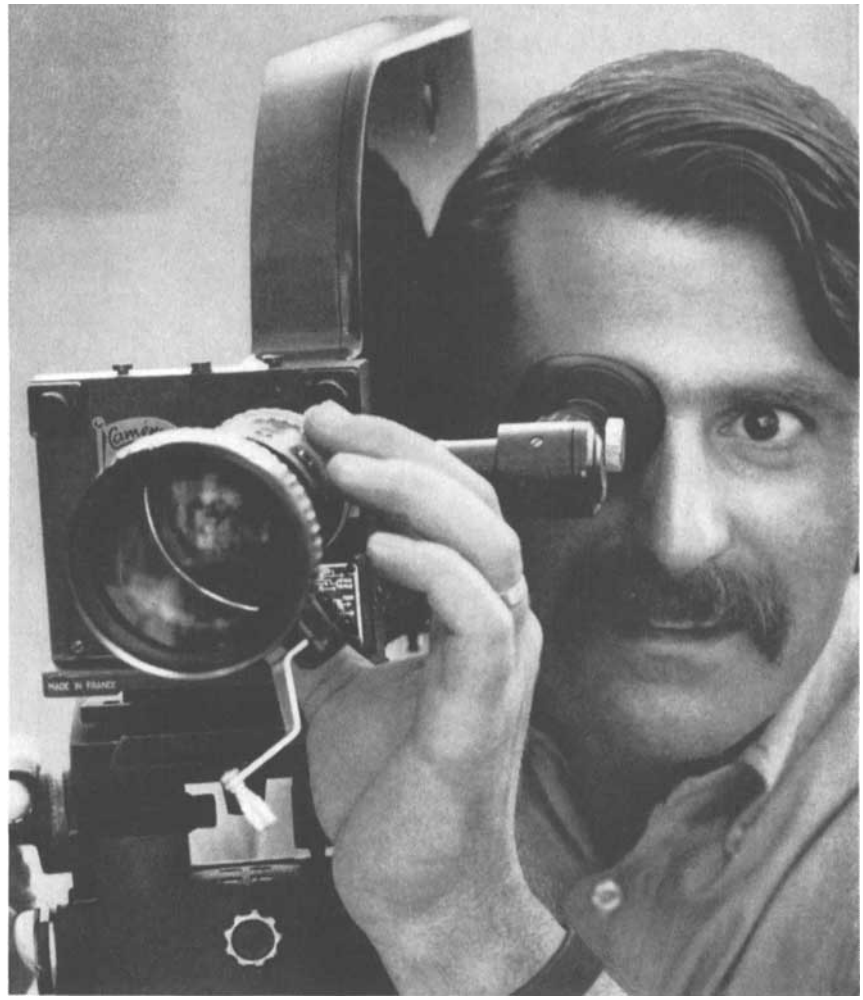
CAPE KENNEDY, Sept. 28 — A paper was read by Frank J. Eberhardt on "Preparation of duplicate negatives using Eastman's Reversal Intermediate Film." The paper was well received and a lively question and answer period ensued concerning processing chemistry, machine design, and dry box effects. A film entitled, "The Paris Air Show" was shown and this was also enjoyed by the members present. Following the meeting, a cocktail hour and dinner was attended by fifteen members and guests. —Harold P. Bolton, *Chairman*, 400 Ocean Beach Blvd., Cocoa Beach, Fla.

A 400 ft. magazine and an Angenieux 12-120 zoom lens are mounted on the GV16 here.

ECLAIR'S GV16: HIGH-SPEED AND PORTABLE

Most high-speed cameras are big and heavy bench instruments. Changing their magazines takes two minutes, sometimes more.

But this one is the Eclair GV16.



The GV16's body weighs 3 lbs., measures 4¼ x 4¼ x 2 inches. Magazine changes take 5 seconds. Loads from 100 to 400 ft. 0 to 250 frames per second. Any lens you want. Very handy.

Very versatile, too. The GV16 comes with an Eclair mount or a C mount, whichever you prefer. And since all GV16 magazines can be removed literally in one second, (even in mid-roll), you can bore sight through the aperture, which is right before your eyes when the magazine snaps off. Or, of course, you can mount a lens with a reflex finder and view as you shoot.

The magazines themselves are versatile. When you run out of film, you simply snap off the old magazine and snap on a new one. No film to thread; no loop to form. That's all done inside the magazine when you load it, before shooting starts. Reloading the magazine is fast and easy, too; and you can do it in daylight if you want to. Both the 400 foot and the 100 foot magazines accept core wound film and daylight loading spools. They both use 16mm film, of course.

The 400 foot magazine measures 17 x 8 x 1½ inches, and weighs 5 pounds. It mounts on the *back* of the GV16's body, which balances the camera and gives it a low profile. The super-compact camera body, (without motor or lens), weighs only 3 pounds and measures 4¼ x 4¼ x 2 inches. The motor weighs another 3 pounds. Stop motion to 250 frames per second with the same gears. 27 volt DC battery operation.

Film movement is rock steady. A double claw engages two perforations at once; an adjustable registration-pin engages the perforation below that. Spring-mounted side pressure-plates guide the film, as well as the one in rear. What else? Pulsing and marking are built in. Numbering is available; and it can be controlled by events, time base or contacting. Tachometer. Heating. Variable shutter. Versatility. GV16.

For more GV16 information, contact Eclair at 7262 Melrose Avenue, Los Angeles, Calif. 90046. No obligation.

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SAN FRANCISCO, October 8—An unusual and interesting meeting at the newly dedicated Lawrence Hall of Science, University of California, Berkeley, had an attendance of 50. Dr. Harvey E. White, Director, Lawrence Hall of Science, described the purposes of the institution and Mr. Kenneth Jackman demonstrated some of the ways chemistry can be presented to young people. Mr. David W. Ridgway, SMPTE and Staff Member of the Lawrence Hall of Science, was chairman of the meeting.

The tour of the facilities was particularly interesting because in all teaching facilities wide use of closed circuit color television and other audio-visual devices are used. —John Corso, Jr., *Secretary-Treasurer*, San Francisco.

OHIO, October 29—The October meeting of the **Ohio Section** of the SMPTE was held in the well designed facilities of the General Electric Lighting Institute, Nela Park, Cleveland, Ohio, with thirty-eight members in attendance. The topic of discussion was "The Latest in Lighting for TV and Photography," the program varied from a brief history and latest developments in flash bulbs and flash cubes by G.E. Product Planner Thomas Neubecker, to problems and progress in the field of tungsten halogen lamps by Charles Clark and Joseph Sbrocco, also of G.E. Product Planning. The plush demonstration-projection room in which the meeting was held in the G.E. Lighting Institute made it possible to use a variety of effective visuals including illumination effects of different intensities and color balance built into the room and controllable from the booth.

Discussion followed each demonstration and continued into the post-session coffee hour. The Board of Managers and Officers met for dinner and business prior to the program. A short business meeting was held following the formal presentation at which Chairman George Golden announced the election of **Ohio Section** Officers: *Chairman*, George Golden; *Secretary-Treasurer*, Robert W. Wagner; and new *Managers:* C. N. Clark, General Electric, Cleveland; Matt Bracic, N.B.C., Cleveland; and George Helberg, Eastman Kodak, Findlay, Ohio. The membership was reminded of the next section meeting in Columbus. Plans are being made to hold a joint meeting with the Detroit Section in January.—Robert W. Wagner, *Secretary-Treasurer*, Columbus, Ohio.

CAPE KENNEDY, November 2—The **Cape Kennedy Section** had a very informative meeting at EFX Productions in Fort Lauderdale. T. Richard Cole, President of EFX welcomed the group and showed a demonstration reel of kaleidoscopic color set to music. Captain Al Starts, owner of EFX, then welcomed the guests and introduced Herb Shriner who made further welcoming remarks, some serious but mostly Hoosier Humor.

Following this interesting and somewhat unexpected introduction, the Chairman introduced the principle speaker, Joseph E. Bluth, Vice President of Technicolor, Inc. and General Manager of the Vidtronics Division. Mr. Bluth gave an interesting presentation on the three color separation system for transfer of color video tape to film. Samples were shown of 35mm, 16mm and Super 8 at screen magnifications which demonstrated the sharpness and complete absence of lines as is usual with video recording. Following this well received program, the Chairman, Harold P. Bolton, announced the election results for the 1969 officers with Jim Anthony and Jim Caron, both of Capitol Film Labs, Miami, being elected *Chairman* and *Secretary-Treasurer*, respectively. The managers elected were Clarence Ellis, General Electric, Cocoa Beach, Dick Hortel, Technicolor, Kennedy Space Center, and Clay Kelty, Patrick Air Force Base.

Following the meeting there was a private cocktail party at the Baha Mar Motel and most of the participants adjourned to the Round Table for dinner. —Harold P. Bolton, *Chairman*, Cocoa Beach Fla.

MONTREAL, November 8—The **Montreal Section** opened its fall season with a meeting at the International Broadcasting Centre of the Canadian Broadcasting Corporation at which there were 80 persons present.

The subject of the meeting was, "An Engineering Approach to Color Telecine," in three parts. (1) Film Review Rooms, by S. F. Quinn; (2) Improvements in Color Rendition, by D. H. McRae; and (3) Test Objects, by D. Corley.

Important and original work has been done to improve the appearance of color film in television and the speakers discussed the various aspects of this controversial subject.

Refreshments were served and a lively discussion period followed.—Lloyd C. Harrop, *Program Chairman*, Canadian Broadcasting Corp., Montreal.

DENVER, December 3—The **Denver Section** Meeting was held at the National Bureau of Standards, Boulder, Colorado. Hosts for the evening were L. Kenneth Armstrong of the Bureau of Standards and C. M. Benedict of the Environmental Science Service Administration. Mr. Armstrong gave a talk on the various functions of the Bureau of Standards and later a tour of certain facilities including the time and frequency standards. Mr. Benedict discussed the functions of ESSA and presented examples of advanced technology in the field of high-speed photography. He also conducted a tour of certain facilities. The meeting ended with a brief social period.—R. S. Wise, *Secretary-Treasurer*, Denver.

OHIO, December 4—Prof. Paul Pimsleur, Director, Dial-Access Systems Center, Ohio State Univ. and William Biemesderfer, Technical Asst., Educational Services, presented a short theoretical discussion of the function and structure of the dial-access system first installed at Ohio State in 1965, making it the first such system in a large university. This system, which grew out of a somewhat conventional listening laboratory which had been established in 1961, was installed by North Electric of Galion, Ohio. There are now 390 carrels on campus, in dormitories, library, student center, and in some fraternities and sororities from which students may dial a three-

digit number to call up 94 different programs in language, music, and other subjects originating on quarter inch tape played back from banks of Modified #1022 Magnecords, operating 15 hours a day, 7 days a week. In 1967 the installation of VTR channels began using Ampex 660-B equipment. Only two channels are presently operative. The matrix control is an IBM #360 Digital Computer. Individual student call-ins on this system now average 35,000 to 40,000 per week. The average booth gets an average of 1000 uses per quarter (10 weeks).

Interest was high, and another meeting was suggested with the same theme, and with more advance publicity. This topic is a possible national SMPTE Conference paper.—Robert W. Wagner, *Secretary-Treasurer*, Columbus.

DETROIT, Nov. 26 — The November meeting of the **Detroit Section** was held at the studios of WXYZ-TV, Detroit. John Rishel and Richard Jorgenson of the Ampex Corp. described the VR-3000 back-pack recorder-camera system and the HS-200 slow motion video disc equipment. Video tapes made using both of these systems were then presented to the audience and questions were answered. The demonstration tapes indicated the high degree of sophistication now achieved in modern video tape recording equipment, and the audience response indicated the interest that such equipment has generated within the television industry. The meeting was followed by a social period provided by WXYZ-TV.—F. M. Remley, *Secretary-Treasurer,* Ann Arbor, Mich.

ROCHESTER, Dec. 5 — Earl Kage and Daan Zwick, Research Laboratories, Eastman Kodak Co., Rochester, presented an excellent visual demonstration using a splitframe technique to show the effect of various illuminants on Kodak Ektachrome EF Film, Type B. The color correction possible by the use of color filters over the camera lens was illustrated. The optimum choice of color balancing filters could be determined from this demonstration.

L. E. DeMarsh and M. M. Liberman, Research Laboratories, Eastman Kodak Co., Rochester, presented an excellent comparison of the differences in the visual appraisal of prints prepared for tungsten balance projection, compared to those prepared for arc projection. They reported on the results of a panel comparing these two conditions as well as a series of color transparencies prepared with a wide variety of color balances. The panel viewed these films with and without an illuminated surround background and by television display. The major result of these experiments is that the acceptance of near optimum quality is dependent on the viewing condition.—Roland J. Zavada, *Secretary-Treasurer,* Pittsford, N.Y.

1. Joe Potts at controls of Pako Model 28EK Processor. 2. WAGA-TV office and studio building, Atlanta. 3. Bill Buckler (left) chief photographer, and Jim Shirley, Treck PhotoGraphic of Atlanta.

Pako helps cut film processing costs in half

The population of Atlanta has grown dramatically in the past 10 years—and WAGA-TV has grown right along with it. Virtually all their shows, news and promos are telecast in color, making WAGA-TV the leading color station in the Greater Atlanta market.

When WAGA-TV decided to go into automated film processing, it was only natural that they wanted the finest equipment available.

"We looked at a lot of brands and models of processors and talked to a lot of people," said Bill Buckler, chief news photographer, "and we chose the Pako 28EK Cine Processor. It's got quite a reputation in our business—and now we know why.

"We used to pay 6¢ a foot for outside processing," Bill continued, "and we provided our own pick-up and delivery. But in the first 12 weeks with our 28EK, we processed nearly 177,000 feet of film at about half the outside cost—including overhead." Bill mentioned that the 28EK would pay for itself in a very short time, even though it is in operation only 2 to 3 hours a day.

Joe Potts, the operator, was trained at the Pako Training Center in all the necessary operating procedures. "It works like a charm," Joe said. "Even when we force-process, it performs beautifully."

"Everything our Pako Distributor, Treck PhotoGraphic of Atlanta, said it would do, it does," Bill added. "—and it does it very well. It's fast, dependable and the quality is excellent . . . all the time.

"When we consider the time, cost and quality," said Bill, "we know we made the right choice by automating with Pako."

If your film department is thinking of installing automatic processing equipment, contact your Pako Distributor or write to Pako Corporation, 6300 Olson Memorial Highway, Minneapolis, Minnesota 55440.

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