Society of Motion Picture and Television Engineers

The Fontainebleau from the garden

85th Semiannual Convention and International Equipment Exhibit

Exhibit Directory and Advance Papers Program

Hotel Fontainebleau

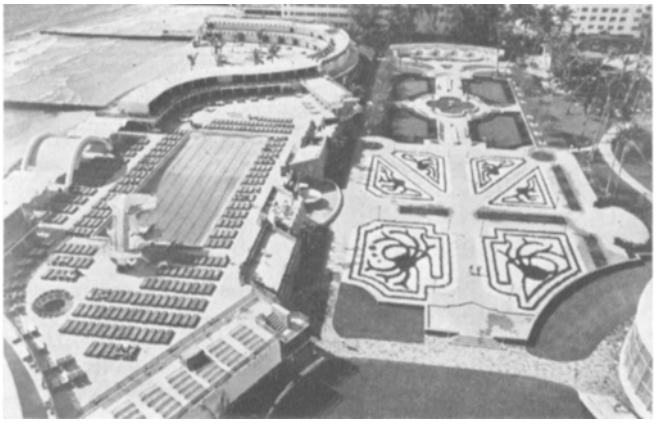
May 3-8, 1959

Miami Beach, Florida

Also, with TV, Havana, May 8

MIAMI is more than just a vacationland. Besides the attractions of beach and pool, SMPTE members will find much to interest them. The sunny climate makes this a fine location for photographing; the nearby University of Miami at Coral Gables has an energetic and enthusiastic film department — and an SMPTE Student Chapter; there are seven TV stations in town or nearby; and the numerous missile and rocket installations within the state offer plenty of activity for the data recording and instrumentation enthusiasts.

Garden and pool area



Outline of Program

Sunday

10:00–5:00 Registration

Monday

9:00 Registration
10:00 High-Speed Photography and Instrumentation
12:15 Get-Together Luncheon—Guest Speaker: Mitchell Wolfson
2:00 Laboratory Practices
7:45 Address by Major General John B. Medaris
8:30 High-Speed Photography and Instrumentation

Tuesday

9:00 CONCURRENT SESSIONS
Audio-Visual Communications
High-Speed Photography and Instrumentation
1:30 Equipment Papers and Demonstrations
7:30 Projection and Cinematography

Wednesday

9:00 CONCURRENT SESSIONS
Sound
Studio Lighting and Practices
1:30 Committee Meetings
6:45 Cocktail Party, Banquet, Dance

Thursday

9:30 Multilingual Films
1:30 Television Film Techniques

Friday

9:00 Television Facilities
1:30 Television Recording

Saturday

Special Trip to Patrick AFB and Cape Canaveral

Exhibit Directory

Animation Equipment Corp. Booth **22**
38 Hudson St., New Rochelle, N.Y.

Exhibiting: OXBERRY UNISTAND—for animation, titles, filmstrips, enlarging and copying in 3-to-24-field range. Single-column construction with traveling table or compound and camera carriage. Available either with vertical (8-ft ceiling) or horizontal mount; accommodates 16 & 35mm cameras. Full line of accessories.

Personnel: Ed Willette, Bob Tracy.

Bell & Howell Company Booths **28, 29**
7100 McCormick Rd., Chicago 45, Ill.

Exhibiting: Specialized cameras and related instrumentation equipment designed for missile-scoring programs; cameras for industrial applications; time and motion projectors.

Personnel: Chuck Musson, Carl Stauff.

Equipment Papers and Demonstrations

Tuesday afternoon, May 5, from 1:30 to 5:00, exhibitors will present the following equipment papers and demonstrations. Additional papers and demonstrations scheduled after this list is published may be given at another time, to be announced at the Convention.

Animation Equipment Corp: The New Oxberry Unistand.

Camera Equipment Co.: CECO Blimp for Maurer Camera.

Eclair: Perfectone Model EP6A Magnetic Tape Recorder.

Electronic Applications, Inc.: Model 140 (West German) Reverberation Unit; Nagra (Swiss) Recorder; 0815 Monitor Speaker.

Flight Research, Inc.: AUTEX, Automatic Exposure Control for Instrumentation Cameras.

Florman & Babb, Inc.: Portman, Animation Stand; New F & B Effects Stand.

Kling Photo Corp.: New Arriflex 16; New Arriflex 35; New Anamorphic Lenses.

Magnasync Mfg. Co. Ltd.: New Studio Mixing Consolette.

Paromel Electronics Corp.: Stop-Motion Projector.

RCA Film Recording: Lightweight Portable Magnetic Recording System.

S.O.S. Cinema Supply Corp.: Tel-Amatic 16/35mm Negative/Positive Film Cleaning Machine.

Vicom, Inc.: Self-Contained 16mm Magnetic Re-recording Machine.

Wollensak Optical Co.: WF4S 16mm 4000-ft Stop-Start Fastax Camera.

Benson-Lehner Corp. Booth **38**
11930 W. Olympic Blvd., Los Angeles 64

Exhibiting: Benson-Lehner HS-16B High Speed Camera; Vinten HS300 High Speed Camera; Vinten Pan and Tilt Head, Type III, and Tripod; Vinten Television Pedestal; Vinten HS-16 High Speed Camera; Dekko Type N Instrumentation Camera.

Personnel: Donald B. Prell, Guy H. Hearon, Howard (Bud) S. Weisbrod.

Birns & Sawyer Cine Equipment, Inc. Booth **27**
8910 Santa Monica Blvd., Los Angeles 46

Exhibiting: New underwater equipment; gyropod gimbal tripod; stop-motion 35mm projector; barneys for Arriflex cameras, etc.

Personnel: Jack Birns, Jack Pill.

Camera Equipment Company Booths **20, 21**
315 West 43 St., New York 36

Exhibiting: New CECO blimp for Maurer Camera; CECO programming device for time-lapse photography; stop-motion motors; CECO fluid-head tripod; vidicon tripod and dolly; CECO 16 & 35mm professional film viewers; variable-speed camera motors; indoor remote pan-and-tilt head.

Personnel: Burton H. Zucker, Clifford Van Praag.

Century Lighting, Inc. Booth **34**
1477 N.E. 129 St., North Miami 61, Fla.
521 West 43 St., New York 36

Exhibiting: New C-Core (Silicon Controlled Rectifier) Dimmer; light-weight photographic and studio Fresnelites, Pattern Lekolites and accessories; data on studio lighting systems.

Personnel: Edward F. Kook, George Gill, Rollo G. Williams, Bert Berend, Wib Newman, Gregory Salisbury, Gus Hogshead, Miguel Moenck, Jr., John K. Hughes.

Société de Gérance des Etablissements Cinématographiques Eclair Booth **19**

12 rue Gaillon, Paris 2°, France.
U. S. Rep.: Benjamin Berg Co.,
1410 Van Ness Ave., Hollywood 28

Exhibiting: New synchronous recording equipment, consisting of Perfectone Model EP6A $^1/_4$-in. Magnetic Tape Recorder, coupled with a blimped Camerette with Pan-Cinor zoom lens.

Personnel: Benjamin Berg.

Electronic Applications, Inc. Booths **32, 33**
194 Richmond Hill Ave., Stamford, Conn.

Exhibiting: Nagra IIIB, 3-speed, transistorized portable, direct-driven, film-synchronized tape recorder (Switzerland); Studer "30" mains-operated, constant tape tension and direct-drive tape recorder (Switzerland); Model 140 Reverberation Unit (West Germany); Model 24B and Model 28 Studio Microphones; Model 0815 Monitor Loudspeaker; Model 418 Wow and Flutter Test Set.

Personnel: Messrs. Hoisl, Kudelski, W. Turner, H. Sampson, Jr., and V. J. Skee.

Flight Research, Inc. Booth **39**
P. O. Box 1-F, Richmond 1, Va.

Exhibiting: Photo instrumentation equipment, including 16, 35 and 70mm synchronized multidata cameras and accessories; 35mm AUTOMAX Data Recorder; new transistorized intervalometer; AUTEX Automatic Exposure Control for instrumentation and documentary cameras.

Personnel: Wm. T. Curdts, III, C. A. Gregory, Jr., John C. Pennock, Donald Bass.

Florman & Babb, Inc. Booths **46, 47**
68 West 45th St., New York 36

Exhibiting: Portman Animation Stand and complete line of accessories; Triplex Triple-Duty Animation, Title Stand and Product Stage; Ampex Recorder; miscellaneous F & B products.

Personnel: Warren Portman, Arthur Florman, Len Hollander.

Hollywood Film Co. Booth **4**
956 N. Seward St., Hollywood 38, Calif.
524 West 43 St., New York 36

Exhibiting: Heavy-duty Power Rewind; Hand Rewind with Video Tape Adapter; Negative Rewind Break-down Unit; Table Model Hot Splicer for 35, 65 and 70mm film; FSC-1 Table Model Combination Hot Splicer for 16, 17½, 35-32, CinemaScope and 35mm film; Elbow Type Combination 16 and 35mm Tightwind, TWC-2; 16mm Edge Numbering Machine.

Personnel: Ben and Harry Teitelbaum, Sheldon Kaplan.

Houston Fearless Corp. Booths **30, 31**
11801 W. Olympic Blvd., Los Angeles 64

Exhibiting: 16mm Color Labmaster for processing Ektachrome and Anscochrome, with accessories; complete line of new plastic valves, plastic pump and other plastic fittings.

Personnel: A. J. Kjontvedt, Paul Sparre, Lou Girola, Jack Jiruska.

Kling Photo Corp. Booths **40, 41**
257 Fourth Ave., New York 10
7303 Melrose Ave., Los Angeles 46

Exhibiting: Arriflex 16, with automatic buckle switch, sprocket roller guides and motor cable lock; Arriflex 35, Model II BV, with variable shutter; Taylor Hobson Cooke Lenses for Arriflex Cameras; Macro-Kilar F 2.8 Lens in Arriflex mount; Gossen Sixticolor Color Temperature Meter; Arri and Arriflex accessories.

Personnel: Dr. Robert Richter, Paul Klingenstein, Victor James, George Lissauer.

Lipsner-Smith Corp. Booth **36**
100 Van Winkle Dr., Falls Church, Va.

Exhibiting: Model CF-2 Ultrasonic Film Cleaning Machine—cleaning film by means of ultrasonic cavitation in a bath of safety solvent, with rapid drying device, 3000-ft capacity.

Personnel: LeRoy Bartels, J. S. Lipsner, M. A. Lipsner, D. Pearl, Ely Smith, E. Werner.

Magnasync Manufacturing Co. Ltd. Booths **42, 43**
5546 Satsuma Ave., North Hollywood, Calif.

Exhibiting: Consoles; dubbing and recording equipment; electrical interlock; equalizers in a typical system plan for sound stage; mobile "Safari" sound truck system; new semi-professional recorder.

Personnel: D. J. White, W. H. Stutz, Howard Auchstetter.

D. B. Milliken Co. Booth **37**
131 N. Fifth Ave., Arcadia, Calif.

Exhibiting: 16mm High-Speed Cameras, speeds from pulse to 400 pictures per second; intermittent movement with registration pin: DBM 3—100 ft, DBM 4—200 ft, DBM 5—400 ft, DBM 6—Scoring Camera, N-11—Underwater Bell.

Personnel: T. H. Truesdell, R. S. Guild.

Moviola Manufacturing Co. Booth **8**
1451 Gordon St., Hollywood 28, Calif.

Exhibiting: Moviola Crab Dolly; 16mm Sound and Picture Editing Machine; Rewinders; Sound Readers; Synchronizers.

Personnel: Mark Serrurier, Mrs. Mark Serrurier.

Paromel Electronics Corp. Booth **18**
3956 W. Belmont Ave., Chicago 18, Ill.

Exhibiting: 35mm Stop-Motion Projector; Special Studio Model 35mm Projector.

Personnel: M. D. Shoberg, M. R. Shoberg, H. M. Fisher.

Precision Laboratories Booth **25**
1037 Utica Ave., Brooklyn 3, N. Y.

Exhibiting: Precision Sound Readers for editing optical or magnetic soundtracks; synchronizers; magnetic attachments for synchronizers; film slitters; editing devices for picture and sound.

Personnel: Irwin R. Sheldon.

RCA Film Recording Booth **6**
411 Fifth Ave., New York 16
1016 N. Sycamore Ave., Hollywood 38

Exhibiting: New MI 10004 Dialog Microphone; new lightweight portable magnetic recording system; dual magnetic dubbing unit; magnetic bulk eraser.

Personnel: Everett Miller, Jack Leahy.

Ro-Nan Plastic & Manufacturing Co. Booths **1, 2**
6161 Cedros Ave., Van Nuys, Calif.

Exhibiting: 16mm Continuous Color Developing Machine for Ektachrome (7255), Anscochrome and Eastman color films; soundtrack applicator; silver recovery units; 8/16mm slitter; Ott Levitt type squeegee.

Personnel: Cec L. Sly, J. Carl Treise, Sidney Walker.

S.O.S. Cinema Supply Corp. Booth **26**
602 West 52 St., New York 19
6331 Hollywood Blvd., Hollywood 28

Exhibiting: Tel-Amatic 16/35mm Negative/Positive Film Cleaning Machine; Tel-Anima Soundstriper Magnetic Striping Machine for 8/16mm Film; Tel-Animastand with Electronic Zoom; S.O.S. Junior Tripod; Tel-Animaprint Hot Press; Auricon Cameras; Forney Cinetron Power-Packaged Lighting Systems; Moy Film Edge Numbering Machines, etc.

Personnel: Dominick J. Capano, Jerome P. Schlesinger.

Studio Supply Co. Booth **35**
711 S. Victory Blvd., Burbank, Calif.

Exhibiting: Hallen transistorized portable magnetic film recorder; Sony and Neumann/Telefunken microphones; UltrAudio CustoMixer portable mixer amplifiers; StudioSound equalizers and filters, pads and networks; knobs, patch cords, jacks, connectors, switches, etc.

Personnel: Oliver Berliner, Kitty Kennedy.

Time Automated Mfg. Co., Inc. Booth **44**
1760 Winfield St., Rahway, N. J.

Exhibiting: Semi-portable, clutch-driven, 800-lb, 16mm black-and-white and color processor, for Anscochrome, Ektachrome, Kodachrome or Kodacolor.

Personnel: George Vaughn, Nick Djadjich.

Unicorn Engineering Corp. Booth **3**
1040 N. McCadden Place, Hollywood 38

Exhibiting: High-speed solvent film cleaning and rewinding machine; powered film rewind; "Robot" automatic light changer; film tape splicer; high-speed air-vacuum film cleaning and rewinding machine.

Personnel: Louis Behrmann, Carl Hunt, Ben Teitelbaum, Harry Teitelbaum, Sheldon Kaplan.

Vicom, Inc. Booth **14**
70 Aberthaw Rd., Rochester 10, N. Y.

Exhibiting: Self-contained 16mm magnetic recording machine; high-speed television lenses; photographic resolution test reticles.

Personnel: Fred E. Aufhauser, John P. Seabourne.

Wollensak Optical Co. Booth **45**
850 Hudson Ave., Rochester 21, N. Y.

Exhibiting: Fastax-Fastair High-Speed Cameras and professional lenses, including the new WF-4S and WF-3T Fastax Cameras; 70mm Pro-70 Lenses; new WF-8A 35mm full frame Fastax Camera.

Personnel: Fred M. Emens, Richard R. Youso, Norman Kuegler.

Zoomar, Inc. Booth **13**
Glen Cove, Long Island, N. Y.
1586 Crossroads of the World on Sunset Blvd., Hollywood 28

Exhibiting: Automatic exposure control for long-range telephoto lenses, also adaptable to tracking instruments and phototheodolites; optics for television, for use with image orthicon or vidicon; industrial television lenses, remote control.

Personnel: Walter Steuer.

Advance Program

This program is as complete and accurate as possible at press time—but there may be errors and there probably will be some changes for the Final Program. If attendance at a session is now being planned for only a specific paper or two, members are advised to inquire during the week before the Convention by telephoning to SMPTE Headquarters in New York (LOngacre 5-0172) or to Gar Misener, Program Chairman, c/o Capital Film Laboratories, Washington, D.C. (LAwrence 6-4634), or to Herbert Farmer, Regional Papers Chairman, Los Angeles (RIchmond 8-2311, Exts. 328, 269, 200).

SUNDAY—MAY 3

10:00–5:00 Registration in the Fontainebleau, Miami Beach

MONDAY—MAY 4

9:00 Registration

10:00 HIGH-SPEED PHOTOGRAPHY and INSTRUMENTATION

Photographic Instrumentation in the Avro CF-105 Arrow

LOU T. WISE, *Avro Aircraft Ltd., Toronto, Canada*

The Avro CF-105 Arrow represents an advanced concept in high-speed, long-range, two-man interceptors. Photographic instrumentation required for recording technical data related to missile launching and tracking, as well as general aerodynamic and functional investigation, is quite extensive and must function under extreme environmental conditions. Aerodynamic considerations at 1.5 times the speed of sound, availability of space, frame rates, g loads, angular coverage of lenses and lens- periscope systems, and stop-start ability of cameras were among the problems involved.

New, Compact Light Sources for High-Speed Photography

WILLETT R. WILSON, *Lamp Div., Westinghouse Electric Corp., Bloomfield, N. J.*

Small and especially compact incandescent light sources are frequently needed when recording high-speed phenomena in crowded spaces. Self-contained reflector lamps have been designed considerably smaller than previous types and with an improved beam pattern. They require no auxiliary equipment and types are available for use on aircraft voltages.

A New Technique in Digital Film Data Recording

I. A. SONDERBY and R. G. McPHERSON, *Magnavox Research Laboratories, Los Angeles*

Film data recording provides a means of obtaining permanent records of equipment in operation, together with instantaneous recording of pertinent test information. The use of a newly developed Digital Recording Head suggests a number of possible applications in photographic reconnaissance, flight tests, engineering tests, etc. Additional data, such as time, flight number, temperature, and shaft position, may be necessary for optimum use of the pictorial record.

12:15 Get-Together Luncheon
Guest Speaker: Mitchell Wolfson, President, Wometco Theatres, Inc., Miami, Fla.

MONDAY AFTERNOON

2:00 LABORATORY PRACTICES

Setting Up a Cinematographic Department and Color Laboratory in Cuba

PABLO EPSTEIN, *Telecolor, S. A., Havana, Cuba*

When Channel 12 was set up in Havana as a color TV station depending exclusively on film for its programming, Telecolor was set up as its cinematographic branch. This paper describes personnel training methods and discusses operation and control problems and their solutions. The use of Anscochrome and single-system sound procedures for newsreels are evaluated.

Practical Application of Control Methods in Small Laboratory Operation

F. J. QUINN, *Trans-World Film Laboratories Ltd., Montreal, Que., Can.*

Many small laboratories have been built, particularly in Canada, as a result of the establishment of local TV stations. These laboratories are generally staffed by one or two experienced people and a number of inexperienced people. There are many useful, practical aids to establishing and maintaining control methods at low cost.

Como Establecer y Mantener el Balance de Luz de Copia, Usando un Sistema de Azar Controlado, al Hacer Copias Aditivas en Color—(Establishing and Maintaining Printer Light Balance in Additive Color Printing by a System of Controlled Chance)

PABLO TABERNERO, *Laboratorios Alex, Buenos Aires, Argentina*

The problem treated in this paper does not refer to the process of timing color negatives, but to the necessity of maintaining uniform color quality from print to print. A definite color balance for a given set of printing conditions must be established. This balance will often depend on unknown quantities such as shifts in relative color sensitivity of print materials from coating to coating. General stability conditions of an additive printing process are mentioned. A system of controlled chance is defined. Essentials of the system proposed are enumerated and described. Some mathematical reasons for the selection of an adequate number and sequence of possible printer-light trial combinations are discussed. Economic considerations are discussed briefly.

Full Automatic Loop Printing System

MARIO CALZINI, *Tecnostampa Labs, Rome, Italy*

A fully automatic loop printing system, arranged to print reel by reel of 35mm color and black-and-white sound films at a rate of about 113 ft/min has been developed. When a predetermined number of prints has been made from a given negative reel, the next reel is brought automatically into place. Printing is resumed after no more than the 60 seconds required for the automatic splicing of the two reels. Loading elevators containing picture negative and sound negative are automatically adjusted according to the length of the negative entering during both the printing and the replacing.

Atlantic Missile Range Cine Processing Laboratory

WALLACE F. BISCHOF, *Patrick Air Force Base, Fla.*

The laboratory has been designed and is operated to give commercial quality cine processing at the world's largest missile testing center. Films processed include Anscochrome 16mm, 35mm and 70mm; Eastman Color Negative; and all commonly used black-and-white films. Many innovations in processing systems and equipment have been made for economy's sake, without compromising quality; and unusual features have been designed for the local environment.

Motion-Picture Processing Equipment for Guided Missile Research

JOHN P. DELANGRE, *Houston Fearless Corp., Los Angeles*

Certain design features of eleven film processors and auxiliary equipment recently installed at the Patrick Air Force Base Motion Picture Laboratory are discussed. The processors are of modular construction. Major changes in the processing schedule can be made by rearrangement of the modular tank units. The film-drive system, type of construction and materials selected for various components are described. The overall system includes a simplified liquid-level control system with a siphon break and chemical system, located on a separate floor, for preparation and handling of processing solutions.

An Automatic Hot Splicer

JOHN NEWELL, *Western Cine Service Inc., Denver, Colo.*

A motion-picture film splicer, incorporating a power-driven rotary knife to accomplish film scraping has been developed. The motor and heating element have the same 115-v source. Construction of the device and its applications are described.

MONDAY EVENING

7:45 Address by Major General John B. Medaris, Commanding General, U. S. Army Ordnance Missile Command, Huntsville, Ala.

8:30 HIGH-SPEED PHOTOGRAPHY and INSTRUMENTATION

Photography of Simulated Atmospheric Re-entry Tests of Missile Nose Cones

B. H. MOLLBERG, *Missile Div., Chrysler Corp., Detroit*

The re-entry problem encountered by a ballistic missile nose cone is introduced. The test facility and procedures used to design, develop and qualify the tactical body of the Redstone Missile are described. Full-size missile structures are tested at ambient and elevated temperatures. Photographic procedures are discussed, with emphasis on such problems as photographing subjects of comparable brightness to that of the sun, controlling batteries of 15 to 25 motion-picture and rapid-sequence cameras, mounting them in a limited space and protecting them from extremely high temperatures. Included in the presentation is a film showing re-entry runs and slides illustrating the test specimen, furnace and camera-mounting techniques.

A Photogrammetric Triangulation System

ALFRED K. SCHIEFNER, *Instrument Corp. of Florida, Melbourne Fla.*

A brief description of a photogrammetric triangulation system is presented, with emphasis on the philosophy of application. The problem of maintaining accurate trajectory surveys while expanding the system for global use and, in addition, increasing the system's flexibility and mobility, is set forth, along with the solution thereof. Global "shutter sychronization" is described in terms of accuracy, reliability and economy.

New Observations of Explosive Phenomena by Submicrosecond Color Photography

MORTON SULTANOFF, *Ballistic Research Labs., Aberdeen Proving Ground, Md.*

The use of color photography at submicrosecond exposure times has been accomplished by use of recently developed cameras, emulsions and lighting techniques. The study of explosives has been extended to include heretofore unobserved phenomena by use of the Beckman & Whitley 25-frame re-imaging camera operating at exposure times of 0.12 μsec. Super Anscochrome film, force-developed for both maximum exposure index and restoration of color balance, exposed to the direct light of the explosion and the reflected light of argon-filled explosive flashlamps, produced unexpected fidelity of color, and revealed events not previously recorded with black-and-white films. An animation, produced and played back as a moving-picture sequence which will be shown as part of this paper, reveals and clarifies the motion of these newly recorded phenomena.

TUESDAY MORNING—MAY 5
CONCURRENT SESSIONS

9:00 AUDIO-VISUAL COMMUNICATIONS

A Comparison of Learning Resulting from Motion-Picture Projector and from Closed-Circuit TV Presentations

J. F. McGRANE, *American Machine and Fdry. Co., Alexandria, Va.;* and MORTON L. BARON, *Signal Equipment Support Agency, Fort Monmouth, N.J.*

In an attempt to standardize Military Service requirements for motion-picture projector noise levels, training films at various projector noise levels were shown to students. The same films were also shown over a closed-circuit TV system to equivalent groups. A comparison of the results obtained with respect to "learning" is presented. Tests were made before and after each presentation. It is shown that the projector is the superior training device, provided low noise levels are maintained.

Closed-Circuit Television in School and Community: The Chelsea Experiment

LAWRENCE CRESHKOFF, *Chelsea Closed-Circuit Television Project, New York*

Industrial vidicon cameras, master antenna distribution system and standard home receivers are used in a community TV station which links an elementary school, settlement house, city health center and public housing project in New York City. The instructional programs are handled by two men: the technician, who presets cameras and lights and controls video-audio; and the teacher, who operates four cameras and has charge of his own props during telecast.

Implications of the Continental Classroom for Open-Circuit Television Teaching

EDWIN P. ADKINS, *AACTE National Coordinator, % National Broadcasting Corp., New York*

Audio-Visual Communications in Missile Training

COL. H. S. NEWHALL, *Commandant U. S. Army Ordnance Advance Guided Missile School, Redstone Arsenal, Ala.*

Professional Motion-Picture Training, Liberal Education and the Communication Arts Curriculum

A. NICHOLAS VARDAC, *College of Communication Arts, Michigan State Univ., East Lansing, Mich.*

For at least half a century educators have been plagued by the dilemma of undergraduate choice between liberal education and professional training. A clear-cut discussion differentiating the aims of scholarship and of practical training has been needed as well as a concept that would identify common values and merge certain areas of both kinds of education. This paper examines motion-picture training and its potential for meeting both liberal arts and the professional training objectives of the university.

CONCURRENT SESSION

9:00 HIGH-SPEED PHOTOGRAPHY and INSTRUMENTATION

A Silent 16mm Projector for Military Use

A. E. NUPNAU and EDWIN L. SMITH, *Bell & Howell Co., Chicago*

A silent 16mm motion-picture projector has been developed for the Air Force in accordance with Military Specification MIL-P-4523. The projector is used for viewing and assessing film exposed in 16mm gun cameras. Features include local and remote control of 360° rotation of projected image, focusing, framing, forward and reverse, and single-frame projection. Film speeds are variable from 14 to 32 frames/sec.

Automatically Synchronized Pulse and Cine Instrumentation Cameras

C. A. GREGORY, Jr., *Flight Research, Inc., Richmond, Va.*

Accurate sychronization of time of exposure among a group of cameras can often greatly simplify the reduction of data. Described are two methods of achieving sychronization: one is accurate to one millisecond and available for both pulse and cine operation in 16mm and 35mm cameras; the other, accurate to about 100 microseconds and available for high-speed cine operation in a full-frame 70mm camera and adaptable to other camera systems.

Automatic Real Time Flight Determination

EARLE B. BROWN, *Farrand Optical Co., New York*

Methods currently used for the reduction of tracking data are extremely costly. Recent developments attack parts of this problem. An automatic real time theodolite can be built at the present state of the art, with three specific techniques: electronic angular measurement, analog-to-digital conversion, and measurement of focal-plane tracking error. The methods have been developed to permit building a "Super-Theodolite" to provide automatic real-time data at accuracies as high, or higher, than can now be achieved. For short ranges, ranging capability can be added to obtain complete trajectory data from a single station. The techniques available for this application are described and illustrated.

Production Planning for Contractual Film Progress Reports

WILLIAM F. ROMEIKE, *Martin-Baltimore, Baltimore, Md.*

Filmed classified progress reports have become increasingly important as a medium of information and communication. The purpose of these reports differs from that of the usual nontheatrical production but the production of films for natural defense projects has often been approached in a conventional manner. Unconventional but practical solutions are suggested for the daily problems in scheduling, personnel assignment, budgeting and coordination with the military at test centers.

TUESDAY AFTERNOON

1:30 EQUIPMENT PAPERS and DEMONSTRATIONS

(See the Directory of Equipment Exhibits on earlier pages.)

TUESDAY EVENING

7:30 PROJECTION

Horizon Sag Compensation for Projection on Wide Screens

JOHN D. HAYES, *Bausch & Lomb Optical Co., Rochester, N.Y.*

The combination of the curved screen used by several motion-picture processes, the high angle of projection of many theaters and the low angle of view from the auditorium of these theaters to the screen causes a phenomenon termed "horizon sag." This paper describes an optical projection system designed to eliminate, or significantly reduce, the horizon sag as observed on the screen from the auditorium of the theater.

Optical Characteristics of Rear Projection

JOHN F. DREYER, *Polacoat Inc., Blue Ash, Ohio*

Rear-projection screens of low reflection reduce the effects of light on the screen and allow increase in the ambient light. Goniophotometric curves and setup of screen are given. Distribution, gain, reflection and resolution are discussed as factors. The physiological effects of increased ambient light are considered. The brightness of the picture should at least equal the level of the surrounding light to which the eye is adapted.

The Standardized 16mm JAN Projector

GEORGE W. REUTELL, *Bell & Howell Co., Chicago*

The 16mm Sound Projector was established by the Projection Equipment Committee under Standardization Working Group 402-40E of F.S.C. Group 67. The transition from three different projectors used by the Army, Navy and Air Force to a single projector was accompanied by design improvements for the new projector.

CINEMATOGRAPHY

A High-Speed Color Negative Film

MERLE L. DUNDON, *Film Emulsion and Plate Mfg., Eastman Kodak Co., Rochester, N.Y.*

The new 35mm camera film, Eastman Color Negative Film, Type 5250, has been designed to replace Type 5248. The new film has a similar structure, but is twice as fast as the older film. This permits exposures under more difficult lighting conditions, or with greater depth of field or more economy in set lighting. Processing and printing procedures are similar to those for Type 5248. Minor differences in characteristics of the two films are discussed.

Photography of Atlantic's Farthest Shores

NEWMAN BUMSTEAD, *National Geographic Society, Washington, D.C.*

A talk-film.

Are ASA Speed Numbers Accurate?

JOHN ARVONIO, *Photo-Magnetic Sound Studios Inc., New York*

The history of the sensitometry underlying the various film speed systems of the past and also the present ASA Speed Criteria are reviewed briefly as an introduction to a discussion of the exposure-time problem and its relationship to the two competing film systems, Weston and ASA. The mathematical treatment of this problem tends toward oversimplification, making it possible for important complex variables to be overlooked. This accounts for the readiness with which many investigators have pictured an ideal concept of the exposure problem and for the assumptions which have been made which, in essence, have created a false picture of the problem. After examination of the significant variables to be considered in an exact determination of photographic exposure, concrete proposals are offered for a modification of ASA Speed Criteria to reflect more fully the exposure-time problem.

WEDNESDAY MORNING—MAY 6

CONCURRENT SESSIONS

9:00 SOUND

A New Approach to Location Recording Techniques

JACK J. CLINK, *Byron Motion Pictures Inc., Washington, D.C.*

A new approach to location recording techniques which has special interest for the independent producer who prefers to do his original recording utilizes the many advantages offered in presently available magnetic recording channels. As a result, the sound service studio will receive better and more consistent material for a final re-record or transfer.

Magnetic-Recording Amplitude Uniformity Measurements

WALTER L. ANDERSON, *General Kinetics, Inc., Arlington, Va.*

Experiments involving new measuring and calibrating methods were set up to obtain quantitative information on dropouts in magnetic tape recordings. Measurements of reproduced signals

were made on various types of tapes and tape brands; and parameters such as mean peak amplitude and relative standard deviation were computed. The latter expression defining signal uniformity relates to signal-to-noise ratio for analog recording and to error rates for digital recording. Results of the experiments indicate that amplitude uniformity is degraded by tape use, storage and ordinary winding practice.

Magnetic-Tape Damage from Causes Other Than Wear

ROBERT P. GUTTERMAN, *General Kinetics, Inc., Arlington, Va.*

Tape damage in storage and shipment, deriving from inappropriate reel design and winding practice is predicted theoretically and confirmed experimentally. Results apply to motion-picture films as well. Damage also occurs during transient tensile overload. Transient tensions measured in actual recorders are compared with tape-tensile curves obtained at corresponding rapid strain rates.

Planning an Integrated Sound System for the 16mm Studio

D. J. WHITE, *Magnasync Manufacturing Co., Ltd., North Hollywood*

Selecting equipment for a small facility requires as much consideration as for laying out a major studio. Integrated systems have important values; and pitfalls can be avoided by careful planning, especially with complete understanding between engineer and manufacturer. Emphasis is given foreign dealings where the language barrier inhibits communication.

Single-Double System Recording Facilities for the Amateur and Semiprofessional

W. H. STUTZ, *Magnasync Manufacturing Co., Ltd., North Hollywood*

A new concept for the recording of "lip-sync" sound by the amateur and semiprofessional is applied with the camera mounted on the miniature transistorized recorder and driven by the synchronous recorder motor. One channel on the split 16mm film is used for lip-sync and the other is used to dub in music and sound effects.

A Battery/Sine Wave Power Supply Using Solid State Techniques

D. P. GREGG, *Westrex Corp., Hollywood*

A portable solid state power inverter has been designed to drive one or more cameras and an associated sound recording system. Operating silently and with high efficiency from automobile-type batteries, it provides up to 200 w sine wave at 50 or 60 cycles with adequate margin for motor starting. New approaches have been made to the problems of voltage regulation and frequency stabilization, and new circuit protection features are incorporated.

A Low-Cost Transistorized Re-recording Mixer

G. A. BROOKES and G. W. READ, *Westrex Corp., Hollywood*

A compact table-mounted, six- or eight-input, single-channel, re-recording mixer has been designed for small studio applications. Transistorized modular subassemblies provide each mixer circuit with gain control, program and midrange equalizers; an additional transistorized subassembly includes an overall gain control and test oscillator. Complete mixer console facilities have been incorporated. Highly reliable operation and performance requirements comparable to those of major studios have been achieved.

A Versatile Multiple-Unit Re-recorder

H. A. MANLEY, *Westrex Corp., Hollywood*

A re-recorder has been designed for small studio use, incorporating in one cabinet up to four magnetic reproduce units driven by a common motor. The units may be any combination for either 35, 17½, 16mm or ¼-in. perforated film, one of which may be equipped for magnetic recording, and a second for optical reproduction. Newly designed transistorized amplifiers have been incorporated.

Dual Dubber

C. E. HITTLE, *Radio Corp. of America, Hollywood*

A unique arrangement of the essential components for a new dual magnetic reproducer is described. Such a combination leads to a 2 to 1 reduction of plant floor space as compared to earlier equipment of similar design. Construction features of a new dual film-drive mechanism used in this dual reproducer are also described.

CONCURRENT SESSION
9:00 STUDIO LIGHTING and PRACTICES

Rigging for Television Studios

RALPH H. SCHNEELOCH, JR., *Inter American Equipment Co. Inc., Miami, Fla.*

Rigging is used to handle lighting equipment, scenery, curtains, props, etc. This paper discusses equipment suspended overhead or from the walls, including dead-hung systems grids, tracks, battens and rigging for flying. Architectural design, as it affects rigging, is discussed.

Significant Developments in Studio Lighting Layouts

ROLLO GILLESPIE WILLIAMS, *Century Lighting, Inc., New York*

Important developments in preset memory systems, cross connecting of control circuitry, and remote-controlled lighting units are effecting significant changes in electrical and lighting studio layouts. Variable color lighting for Chroma-Key and other studio purposes is considered together with the effects of dimming on the spectral quality of light from different sources. Required brightness levels for monochrome and color work are reviewed, together with the latest lighting methods. The control of light from xenon and other types of discharge lamps is discussed.

A Multi-PAR Lamp Luminaire for Light Projection for Stage Lighting

F. E. CARLSON, *Large Lamp Dept., General Electric Co., Nela Park, Cleveland, Ohio*

The properties of the sealed-beam types of tungsten filament lamp are utilized in a luminaire, the characteristics of which include: substantially higher peak beam candlepower at narrower beam spreads than have been reported for tungsten filament spotlights of comparable wattage; oval or approximately rectangular beam patterns of rather precise angular dimensions by the use of refractive plates on or in front of the lamps; a step type of dimming control that does not alter the color temperature of the composite beam. These features and the methods of obtaining them are discussed.

The Silicon-Controlled Rectifier Dimmer

HERBERT R. MORE, *Kliegl Bros. Universal Electric Stage Lighting Co., New York;* and ALBERT W. MALANG, *American Broadcasting Co., New York*

Development of this semiconductor device as a portable plug-in module has brought new concepts to lighting, with greatly reduced volume, weight and heat generated per kilowatt and without sacrifice of electrical characteristics. Advantages compared with current methods are demonstrated and these advantages are related to a new systems concept. The application in a new broadcasting center is described.

New Horizons

PAUL F. WITTLIG, *CBS Television Network, New York*

New staging devices have been designed and techniques developed to overcome limitations on creative efforts, imposed by the physical boundaries of studio walls and grids. Among these, VideoScene, an electronic camera system designed to blend live action with miniature settings, is described. A film produced by the author illustrates the use of the new equipment and techniques.

WEDNESDAY AFTERNOON
1:30 COMMITTEE MEETINGS

WEDNESDAY EVENING
6:45 COCKTAIL PARTY, BANQUET, DANCE

THURSDAY MORNING—MAY 7
9:30 MULTILINGUAL FILMS

Chemical Subtitling of Positive Films

DAVID OPOCHINSKY, *Titra Film Labs Inc., New York*

From among the various systems of subtitling, chemical subtitling has been universally adopted for color film. Subtitling films for television is discussed. The Titra system consists of: preparatory work, galleys and stencils; protective paraffin coating; stamping; bleaching; and removal of the paraffin coating.

A Multilingual Audio-Visual System

HOWARD M. TREMAINE, *Lookout Mt. Air Force Station, Hollywood;* JAMES W. GREEN, *Magnasync Mfg. Co., Ltd., Hollywood;* and GLENN R. OSBORN, *Lookout Mt. Air Force Station, Hollywood*

An audio-visual system has been designed with a 16mm rear-projection system, electrically interlocked with a 16mm magnetic film reproducer which carries a four-language soundtrack. A selector switch and headphones at each seat in the auditorium permit each auditor to select the desired language.

Simultaneous Theater Reproduction of Four Languages

LORIS M. GARDNER, *Edgerton, Germeshausen & Grier Inc., Las Vegas, Nev.*

Presentation of the scientific films which were prepared for the Atoms for Peace Conference at Geneva required multilingual sound. In order to provide a sophisticated performance, a four-theater complex was planned to present each film with simultaneous sound in the four official languages. Planning which led to the selection of the method is discussed. The parameters which controlled the selection of the gear are defined and the operation of the theaters during the conference is described.

International Use of Educational Films

MIGUEL PEREYRA, *Telesistema Mexicano S.A., Mexico City*

Certain questions are considered in an attempt to establish technical criteria for the production of educational films for international use. Among them: Is there a relationship between a thought and its image? Why do people like motion-pictures and television? The concept of "The Camera Setup: An Adjective for the Images" is examined. Practical suggestions for television programming and film production are given. The attitude of Spanish-speaking countries toward these problems is explained.

THURSDAY AFTERNOON

1:30 TELEVISION FILM TECHNIQUES

Standardized Gray-Scale Characteristic for Vidicon Telecine

L. J. MURCH, *Canadian Broadcasting Corp., Toronto, Ont., Can.*

The need for standardizing the gray-scale characteristic of a telecine chain is discussed. Factors which influence this characteristic are investigated and a standard characteristic is chosen. Finally, suitable test material is developed to set up and maintain the standard characteristic which is subsequently used for evaluating the suitability of films and slides for television reproduction.

Density and Exposure Control for Television Films

HAROLD WRIGHT, *Canadian Broadcasting Corp., Toronto, Ont., Can.*

A system for making 16mm film for television broadcasting is described. Two main objectives are achieved: (1) predictable vidicon telecine output transmission signals from visual material; (2) tone-scale matching of TV live studio and film materials for smooth integration of the two. The system is based on the establishment and maintenance of standardized characteristics for the telecine reproducer, the negative film process, the printing operation and the positive film process. ASA film ratings are not used. Instead scene element luminances are measured by an electronic spot photometer and related to *f*-stop settings and telecine output voltages by simple calculator wheels. All printing is done at the same printer light setting. The system permits accurate control of tonal scales, lighting key and mood.

Constant-Density Laboratory Process for Television Film

RODGER J. ROSS, *Canadian Broadcasting Corp., Toronto, Ont., Can.*

Requirements are outlined for a negative-positive laboratory process to obtain predictable waveforms at the output of a cali-

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brated telecine camera chain for measured luminance of scene elements. By taking advantage of the inherent reproducibility of the photographic process, a constant density and density difference system may be established using conventional processing and printing equipment and materials. Techniques are described for controlling the output of processing machines (of the Houston Fearless type), which are particularly applicable to smaller laboratories associated with TV broadcasting agencies. Statistical analysis of sensitometric control strips is employed to evaluate processing reproducibility; and chemical analysis of bromide content provides sufficient information to maintain image-forming conditions, when the replenishers for negative and positive developers have the same composition as the starting solutions, and are added directly to processing machine tanks. Tolerances that may be achieved in the practical operation of a system of this type are given.

MPO Infrared Matte Process

ZOLI VIDOR, *MPO Television Films, Inc., New York*

Technique of the Visual Squeeze

ROBERT BERGMANN, *Transfilm, Inc., New York*

The various elements that compose the "squeeze" commercial are described and also: how they are assembled, as compared with present procedures in standard live action and animation departments; personnel; and differences in approach, cost and completion time from standard film commercials. Elements of audio track which are considered include music, effects, voices and style of copy. Picture elements include number of scenes, animation effects, cutting and transitions.

Production Techniques of an Effective Television Newsfilm Public Relations Program

HOWARD BACK, *Chrysler Corp., Detroit*

Aspects of production of public relations newsfilm are considered: coverage problems, kinds of laboratory service, editing and script techniques, and distribution methods. Chrysler Corporation's experience in this work is reviewed and general principles applicable to any similar operation are set fourth. Examples of recent public relations newsfilm material will be screened.

FRIDAY MORNING—MAY 8

CONFLUENT, from Havana and Miami: at press time, advice from Goar Mestre, President of CMQ Radio-Central, Havana, and Norman Bean of WTVJ, Miami, is that at least part of today's sessions will be jointly staged by connecting television.

9:00 TELEVISION FACILITIES

A Program-by-Program Billing System for Pay TV

K. A. SIMONS, *Jerrold Electronics Corp., Philadelphia*

Among the proposed methods for providing pay television, distribution by cable has several advantages. It does not come into conflict with licensed TV broadcasting and it does provide an additional service with its own channel space. It also provides the possibility of a return circuit between the consumer and the program originator. A system is described for using this return circuit to provide billing information. The system records during each program the identity of each receiver accepting it.

The Performance of Television Camera Lenses

GORDON HENRY COOK, *Taylor, Taylor & Hobson, Leicester, England*

It is well-known that optical aberrations are unavoidable in lens systems and that the suitability of a lens for a particular application is dependent on the extent of these aberrations and the manner in which they are balanced. The optical requirements for television can be well defined and it is worthwhile to design lenses specifically for television purposes. The advantages so obtained can only be expressed qualitatively by test methods which are based on these special requirements.

Gamma-Radiation-Insensitive Television Camera Lenses

JOHN D. HAYES, *Bausch & Lomb Optical Co., Rochester, N. Y.*

Vidicon and image-orthicon TV camera lenses have been designed to utilize only those "non-browning" optical glasses especially developed to maintain their transparency in gamma-radiation fields. These lenses have focal lengths ranging from 18mm to 152mm. Optical and mechanical characteristics and performance test data are discussed.

A New Approach to Balanced Audio Levels in Television

ROBERT B. MONROE, *CBS Television Network, New York*

For some time, television viewers have registered complaints that portions of TV programs are sometimes unpleasantly loud. In an effort to present TV programs to the public in the most pleasing manner possible, the CBS Television Network recently completed a new study of audio volume levels. This new study was for the express purpose of fully exploring the reason for these complaints. Findings of the study are presented and a new approach to the problem of achieving balanced audio levels is discussed.

Improving the Performance of Television Intercommunication Systems

A. PIERCE EVANS, JR., *CBS Television Network, New York*

Television studio and field cameras and associated equipment usually include telephone-type communication stations. These stations provide satisfactory communication between two points but have substantial shortcomings in output level and sidetone characteristics when integrated into the type of multi-station conference system commonly used in television studios. A transistorized device has been developed to replace the anti-sidetone transformer in existing interphone stations. Features include amplified receiver level and a sidetone compensation characteristic designed specifically for multi-station television interphone systems. Adequate output level is provided to permit operation under conditions of severe ambient noise.

CBS Self-Normalling Video Jack

CHARLES J. NEENAN, *CBS Television Network, New York*

A self-normalling video jack which replaces the plug-normalling jacks currently employed in video systems has been developed by CBS Television Network Engineering. The jack, now in full-scale operation, makes normalling plugs and terminating plugs unnecessary, as self-contained switching contacts and terminating resistors perform these functions. The self-normalling jack and its application are discussed.

Russian TV Today — Color and Monochrome

J. R. POPKIN-CLURMAN, *Telechrome Mfg. Corp., Amityville, N.Y.*

FRIDAY AFTERNOON
1:30 TELEVISION RECORDING

A Progress Report on Video-Tape Standardization

A. H. LIND, *Radio Corp. of America, Camden, N.J.*

The SMPTE Video-Tape Recording Committee has been working since its initial meeting in June 1958 on items requiring industry standardization in order to insure interchangeability of recorded video tapes. A list of pertinent items was prepared and tasks assigned by the Chairman. The list includes tape dimensions, tape reels, tape track dimensions; audio, control and cue track standards; monochrome and color signal characteristics; tape leaders; standard tapes; and tape splicing. This report covers the current status of the Committee's work.

Transient Response Considerations in Videotape Recording

ROGER HIBBARD and HAROLD WALSH, *Professional Products Div., Ampex Corp., Redwood City, Calif.*

Signal-handling techniques currently used in Videotape recording are considered, both theoretically and experimentally, as transmission elements in a TV system. The factors which determine the response characteristics, such as amplitude response, phase response, overshoot, and signal-to-noise ratio, are discussed. Experimental data leading to a more rigorous analysis of the signal system than has previously been possible are presented.

Extension of Bandwidth in Videotape Recording

CHARLES P. GINSBURG, *Video Engineering Dept., Ampex Corp., Redwood City, Calif.*

The efficiency of magnetic tape as a picture storage medium is a direct function of the information packing density and the frequency response of the recording system. Improvements in heads, tape and the signal system have made it possible to achieve a bandwidth considerably greater than that needed for monochrome and color television. The techniques used and the results obtained are described.

Tentative Schedule of Committee Meetings

Tuesday, May 5

12:15 P.M. Luncheon Meeting — Study of Bylaws Revisions
12:30 P.M. Dutch Treat Luncheon Meeting—Public Relations Advisory Committee
2:30 P.M. Section and Student Chapter Officers
4:30 P.M. Association of Cinema Laboratories, followed by dinner, the Rosewood Room

Wednesday, May 6

10:30 A.M. Publications Advisory Committee
12:15 P.M. Editorial Luncheon
1:30 P.M. Papers Committee
2:30 P.M. Board of Editors

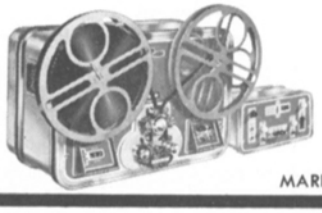
The following Engineering Committees will meet during the week:

Film-Projection Practice
Instrumentation and High-Speed Photography
Laboratory Practice
Screen Brightness
16 & 8 mm
Sound

The schedule will be listed in the Convention Program; and meeting notices will be mailed to Committee members at the first of April.

*How to select a recorder to start your MAGNASYNC-MAGNAPHONIC SOUND SYSTEM

Sound Equipment Checklist

		LIGHTWEIGHT	MEDIUM WEIGHT	16 MM FILM	17½ MM FILM	35 MM FILM	REWIND	FOOTAGE COUNTER	POWER AMPLIFIER	MONITOR SPEAKER	TORQUE MOTORS	PLUG-IN AUDIO	PUSH BUTTON CONTROL	REMOTE CONTROL	SLIDE-WIRE POTS	FILM MONITOR	SYNKINETIC MOTION	PLUG-IN HEADS
 X-400	When lightweight portability is a **must** the 27 lb. X-400 Type 1 is the answer! Another reason so many producers choose this machine is that it is genuinely professional, and yet, surprisingly economical! From $985.	X		X			X	OPTIONAL	OPTIONAL	OPTIONAL						X	X	OPTIONAL
 TYPE 1	The Type 1 is a miniaturized version of the Type 5. Low power consumption and extreme portability has made this 39 lb. unit a popular selection for remote location production by leading professional motion picture studios. From $1360.	X		X	X		X	X	X	OPTIONAL		X				X	X	OPTIONAL
 TYPE 15	The X-400 Type 15 is designed for the man who wants everything in one case . . . playback amplifier, monitor speaker, footage counter and torque motors. You can be proud to have this machine represent you on any sound stage! From $1385.		X	X			X	X	X	X	X					X	X	OPTIONAL
 TYPE 5	The most popular magnetic film recorder in the world is the Type 5! With this unit and all its operational conveniences, you are definitely in the "major league." The Type 5 owner always starts his pictures with a special feeling of confidence in the realization that he has allowed no compromise in the selection of equipment. From $1570.		X	X	X	X	X	X	X	X	X	X				X	X	OPTIONAL
 MARK 1X	There is nothing on the market that compares with the remarkable Mark 1X. This unit is in a class by itself . . . with push-button remote controlled relay functions, plug-in audio elements and all the "extras" that make for flawless recording under the most adverse conditions. From $2145.		X	X	X	X	X	X	X	OPTIONAL	X	X	X	X	OPTIONAL	X	X	X

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The Mixed Blessings of the Video-Tape Recorder

SIDNEY V. STADIG, *Westinghouse Broadcasting Co., Cleveland, Ohio*

The video-tape recorder, acquired by Station KYW-TV in April 1958, brought with it a whole new set of problems and opportunities, not only in Production and Engineering, but also in the Sales Department. Disadvantages include maintenance, length of rehearsal and tape time, cost accounting, pricing, bookkeeping necessary to keep track of commercial takes, and the problem of small reels. Advantages include greater productivity and efficient use of studio crews, two-camera commercials and programs during time periods that would not otherwise be available because of lack of space, equipment or personnel, and better client and agency relations.

Methods of Recording Color Television on Magnetic Tape

CHARLES E. ANDERSON, *Ampex Corp., Redwood City, Calif.*

Recording of color television on magnetic tape has been accomplished. The system used was designed to accommodate commercially available recorders. If both color system and magnetic recorder could be designed together, or if the recorder could be matched to the color system, many possibilities for improvement present themselves. Methods that have been tried and others that have been suggested are described.

Operational Conveniences in the RCA TRT-1A Television Tape Recorder

A. H. LIND, *Broadcast and Television Equipment Div., Radio Corp. of America, Camden, N.J.*

The new production-model RCA Television Tape Recorder features advances in operational facilities and performance capabilities, including: built-in instrumentation for monitoring and maintenance functions; an added independent audio track for cuing, control or allied purposes; provision for master erasing of tape on a selective basis; and a new adjustment for video head quadrature. A general description of the recorder is given.

New Horizons for Television Tape

ROSS H. SNYDER, *Professional Products Div., Ampex Corp., Redwood City, Calif.*

The initial applications of television tape to network delay and TV commercial inserts fired the imagination of TV producers with the idea of tape syndication as a supplement and perhaps as an eventual replacement for photographic film used in production and for TV release. Prospects for this development depend upon technical and economic considerations. Present technical capabilities and limitations are discussed and future possibilities suggested. Non-television applications within the capabilities of the TV tape recorder are mentioned.

A Mobile Videotape* Recording System

J. BYRNE HULL and H. G. HUMMEL, *Professional Products Div., Ampex Corp., Redwood City, Calif.*

The system design and constructional layout problems of a special bus containing a Videotape Recorder, two camera chains, signal generating equipment, director's console, monitoring facilities and self-contained power supply are described. System performance and accessory requirements are considered in detail. Various concepts in the use of the Videotape Cruiser are discussed, especially with regard to the advertising and motion-picture industries. (*TM Ampex Corp.)

SATURDAY—MAY 9

SPECIAL POST-CONVENTION TOURS

10:00 A.M. Tour of Patrick AFB Motion Picture Laboratory

1:30 P.M. Tour of Cape Canaveral

(See Final Program for further details.)

Ladies Program at Miami Beach

A Cruise in Quiet Waters

An enchanting and dreamlike cruise through quiet waters is on the agenda for the lucky ladies of the 85th. Beginning after breakfast on May 5, when a luxurious cruise ship leaves from a nearby dock, the world of science will seem remote and unreal as the "yacht-type" cruiser steams among the residential islands, where the lush tropic vegetation has been tamed by architects and gardeners.

At noon the boat docks at the Ocean Ranch Restaurant for a luncheon appropriate to the enchanting setting. In the afternoon the cruiser will arrive at Vizcaya, a magnificent Italian-type palace surrounded by impressive gardens. All this magnificence was once the James Deering estate and is now the Dade County Museum. The cruise ends before 5 o'clock. The entire trip including luncheon will cost $5.00.

Besides the Society's Get-Together Luncheon on Monday, other "funtype" things to do include the traditional Wednesday evening cocktail party, banquet and dance. To some, the best part of the Convention will be the long hours spent enjoying the sea, the sun and the sand, with their enjoyment enhanced, perhaps, by wearing becoming swim suits and getting a long look at what others are wearing.