

HIGHLIGHTS OF THE FALL CONVENTION

HOLLYWOOD-ROOSEVELT HOTEL, HOLLYWOOD, CALIF.
OCTOBER 21-25, 1940

A number of outstanding features marked the 1940 Fall Convention of the Society at Hollywood, including visits to three of the large studios. The attendance at all the sessions, except some of the morning sessions, was large, and at the Friday evening television session the number of members and guests was in excess of 400.

On the morning of Monday, October 21st, the Forty-seventh Annual Convention of the Society opened at the Hollywood-Roosevelt Hotel. The first part of the first session was given over to reports of the Convention Arrangements Committee, the Financial Vice-President, the Engineering Vice-President, and the Editorial Vice-President, followed by a brief address of welcome by President Williford. Of special interest in this session was a paper by J. W. McNair of the American Standards Association, discussing the question of "American Standards and Their Place in the Motion Picture Industry." Following this Mr. R. G. Linderman, member of the British Kinematograph Society, recently returned from England, read a report of the BKS describing their activities in the motion picture field under the exigencies of the present war. Messrs. H. J. Chanon and F. M. Falge of the General Electric Company described the technic and applications of "Black Light for Theater Auditoriums." Demonstrations were given of the various forms of light-sources and filters used, as well as the various kinds of fluorescent materials applied to the surfaces or fabrics to be illuminated.

At noon, the usual informal get-together luncheon was held in the Florentine Room of the hotel, Mr. Williford presiding. A brief address of welcome to the members and guests of the Society was made by the Hon. Fletcher Bowron, Mayor of the City of Los Angeles, followed by an address by Mr. Frank Capra, Vice-President of the Academy of Motion Picture Arts and Sciences. Mr. Capra's speech was devoted to the relation between the activities of the engineering branch of the motion picture industry and the branches represented by the producers, directors, and writers, emphasizing the fact that the achievements possible in the production of motion pictures is very dependent upon the means supplied to the producers, directors, and others by the engineers. The luncheon ended with a number of songs by Miss Mary Martin, courtesy of Paramount Pictures, Inc.

On the afternoon of Monday, October 21st, a session on acoustics was held in the Blossom Room of the hotel under the chairmanship of Mr. D. E. Hyndman. Notable among the presentations at this session was a demonstration of make-up technic by Mr. Jack Dawn of Metro-Goldwyn-Mayer Studios. Mr. Dawn went through the process of applying make-up to his own face, demonstrating the use

of plastic materials for molding or "sculpturing" the facial expressions and contours required in character make-up.

The remainder of the session included a report of the SMPE Standards Committee by Mr. D. B. Joy, Chairman, and a symposium of three papers dealing with the acoustics of theaters and review rooms. The "Recommendations on Theater Acoustics from the Research Council Theater Standardization Committee" by J. K. Hilliard, Chairman, and "An Outline of the Work of the Academy Research Council Sub-Committee on Acoustical Characteristics" by Jack Durst, Chairman, constituted two contributions to the program by the technical committees of the Research Council. A paper by Mr. D. P. Loye of Electrical Research Products, Inc., dealt with the acoustical design features of studio sound-stages, monitor rooms, and review rooms, discussing in considerable detail the desirable acoustics for recording in such sound-stages and rooms.

The evening of the first day was devoted to a sound session under the chairmanship of Mr. L. L. Ryder, Chairman of the Pacific Coast Section of the Society. A paper by Messrs. S. Read, Jr., and E. W. Kellogg of the RCA Manufacturing Company, discussed the question of "Stability of Synchronous Motors," pointing out that the various types of motors used differ widely in their ability to resist load irregularities and in their tendency to oscillate when a disturbance occurs. The characteristics of the various types of motors were discussed. Mr. E. W. Kellogg also presented a paper on the subject of "Ground-Noise-Reduction Systems," the purpose of which was to formulate a statement of the desired characteristics of ground-noise-reduction systems in terms of such factors as promptness of opening, peak reading, and filtering. A number of circuits were described that had been proposed for improving the filtering without sacrificing the rapidity of opening or closing.

Messrs. I. J. Wilkinson and W. Hamilton, of RKO Radio Pictures, Inc., presented a paper entitled "Editing a Motion Picture" in which were described some of the mechanical and artistic elements involved in the process of editing. Since so little material has been published on this phase of motion picture production, the paper is intended to serve as a preliminary to a study on a larger scale. A demonstration film was projected to illustrate various editing technics and to show the possibility of their use as a means of drastically altering the original story and dramatic conception.

The morning of Tuesday, October 22nd, was devoted to a session on sound under the chairmanship of Mr. H. G. Tasker. The first two papers were devoted to studies and descriptions of the line microphone, which was described by Mr. H. F. Olson of the RCA Manufacturing Company as a microphone consisting of a large number of small tubes with open ends, as pick-up points, equally spaced along a line, and the other ends connected by means of a common junction to a transducer element for converting the sound vibrations converging upon the junction into corresponding electrical variations. Several types of line microphones with the useful directivity along the line axis were described.

Following Mr. Olson's presentation, Mr. L. J. Anderson of the RCA Manufacturing Company, in a paper entitled "A Line Type of Microphone for Speech Pick-Up," discussed the development of a line microphone having directional characteristics that are relatively independent of frequency and of such size as to be readily portable.

Messrs. F. L. Hopper of Electrical Research Products, Inc., and F. F. Romanow of the Bell Telephone Laboratories discussed "Methods of Calibrating Microphones," *i. e.*, of determining the performance characteristics of microphones by acoustical measurements. The accuracy of the methods was discussed as well as the correlation of a microphone's performance as determined by acoustical measurement and by listening tests.

The meeting closed with a report of the Museum Committee, H. T. Cowling, Chairman, in which was described briefly the equipment in the motion picture exhibit at the Smithsonian Institution at Washington. A plea was made for the assistance of the membership of the Society in acquiring additional exhibits for the Museum.

Shortly after noon the members of the Society and their guests were tendered a luncheon by the Twentieth Century-Fox Film Corporation at their Cafe de Paris on the Studio lot. The luncheon and visit to the studios were made possible through the courtesy of Mr. Darryl Zanuck, President of the Twentieth Century-Fox Film Corporation. The committee in charge of the visit consisted of Mr. Harry Brand, Director of Publicity, Mr. E. H. Hansen, Director of Recording, and Mr. Raymond Dannenbaum of the Publicity Department.

The trip through the studio included an inspection of the recording rooms, a demonstration of mixing in a scene from the forthcoming *Mark of Zorro*, and a demonstration of colored background projection by a new triple-head projector. The new silent "Twentieth Century Camera," described in a technical paper in a subsequent session of the convention, was viewed in action on one of the sets in work.

The visit to the studio closed with a tour of the portions of the lot where are located the sets used in producing many outstanding feature pictures.

In the evening a sound-recording session was held under the chairmanship of Major Nathan Levinson. The session opened with a description of a new mirror light-modulator by W. R. Goehner of the Bell Telephone Laboratories, followed by a companion paper by R. W. Benfer and G. T. Lorange of Electrical Research Products, Inc., describing in detail a 200-mil variable-area modulator. The system is applied particularly to recording, with noise-reduction Class A push-pull track comprising two standard bilateral tracks, one of which is located in accordance with the dimensional standards for single track. While this has been its principal use to date, it is readily adaptable to recording other types of track.

The paper by Messrs. D. MacKenzie and W. J. Albersheim of Electrical Research Products, Inc., comprised an "Analysis of Sound-Film Drives," and Messrs. W. K. Greenwood and O. Sandvik of the Eastman Kodak Company described "An Investigation of Some Factors Influencing Volume Range in Photographic Sound Recording." The latter was an extension of an earlier investigation of background noise, and dealt more specifically with the relation between volume range, the type of photographic materials used, and the sensitometric conditions under which they were used. A brief study of the effect of the spectral quality of the radiation used in recording and printing was also included.

The session closed with a description by C. Flannagan of Electrical Research Products, Inc., of the stereophonic recording and reproducing system demonstrated several months ago at Carnegie Hall at New York and also at the Pantages Theater at Hollywood.

At the meeting of the Board of Governors held on October 20th the name of Dr. Lee de Forest was proposed by the Historical Committee and approved by the Board of Governors as an Honorary Member of the Society. At this session of the Convention, therefore, a quorum being present, a ratifying vote of the Society was taken, with unanimous approval.

The Wednesday morning session was devoted to studio subjects, under the chairmanship of Mr. J. I. Crabtree. The meeting opened with the Report of the Studio Lighting Committee, E. C. Richardson, Chairman, which reported a number of changes of technic during the past year in the use of studio lighting equipment. Dr. C. R. Daily described a dolly-mounted, high-quality, two-way horn system for play-back and announcing service on production recording stages, and Mr. J. Arnold gave an account of a new "M-G-M Mobile Camera Crane."

Producing *March of Time* pictures requires equipment of great portability and simplicity of operation, while yet retaining good quality. Mr. D. Y. Bradshaw of March of Time, Inc., described the equipment used for this purpose and discussed the means adopted for overcoming various handicaps in the system. Mr. R. Van Slyker next gave a description of Hollywood's low-temperature sound-stage, one of the ice-storage buildings of the California Consumers Corp., which has been adapted for the production of pictures requiring realistic snow and ice scenes. The problem of heat from the lighting equipment, particularly with respect to Technicolor productions, and the effect of this heat upon the refrigeration requirements, were discussed in some detail. The morning session closed with the Report of the Committee on Preservation of Film, J. G. Bradley, Chairman, which contained reports of several sub-committees on the handling and winding of film, its safe and economical storage, the size of vent required per unit weight of film, microfilm testing methods, and printers for old and shrunken film.

The afternoon of Wednesday was left open.

The 47th Semi-Annual Banquet of the Society was held in the Blossom Room of the Hotel in the evening (October 23rd), about 400 persons attending. A detailed description of the proceedings of the banquet is given elsewhere in this issue of the JOURNAL. After introducing the officers and governors present, President Williford officiated at the presentations of the Progress Medal and Journal Award to Mr. Walt Disney and Dr. Robert R. McMath, respectively, and introduced Dr. Lee de Forest, who had been elected an Honorary Member of the Society on the preceding day. A half hour of entertainment was provided by Rudy Valee and others.

The morning session of Thursday, October 24th, was devoted to projection matters under the chairmanship of Mr. Herbert Griffin. In addition to an extensive report by the Theater Engineering Committee, papers were presented by Messrs. J. E. McAuley and R. O. Walker on a new type of high-intensity projector lamp and a molded plastic screen. This screen is molded of a flexible plastic material, without seams, up to 30 feet wide.

A visit was made in the afternoon to the studios of RKO Radio Pictures, Inc., by courtesy of Mr. J. R. McDonough, Vice-President. The visit was under the direction of Messrs. J. O. Aalberg, Vern Walker, and Van Nest Polglase, and opened with a brief showing on one of the stages of pictures employing interesting process shots, after which the group was escorted through the Process Department and shown a number of the methods used in producing various trick effects.

A demonstration was given of the method of photographing the occupants inside an automobile so as to show the receding scenery behind the back window of the car.

The Thursday evening session was held at the Walt Disney Studio Theater under the chairmanship of Mr. Emery Huse. Prior to the meeting, members and guests of the Society had dinner in the new Disney Cafe on the lot.

The meeting opened with a description of "The New Walt Disney Studio," by Messrs. W. G. Garity and J. L. Ledeen. This beautiful lot and group of buildings have been built during the past year or so and represent the most up-to-date advances in studio design. The paper described the layout of the lot with particular respect to cartoon production and also gave an account of the various departments required for the production of cartoons. Some mention was made also of the new Disney feature production, *Fantasia*. The current practice in producing motion pictures is to supply a musical accompaniment to the picture. *Fantasia* reverses the process: a visual accompaniment is provided for the music, which in this case consisted of a group of classical orchestral pieces. Both cartoon and live photography are employed.

Next followed a very interesting presentation by Messrs. D. B. Clark and G. Laube of the new Twentieth Century-Fox camera; a new slating and cueing device; and a new photoelectric method of rating the speed of lenses. The presentation had previously been recorded on film, both photographically and with sound, and instead of making the presentation orally, the authors allowed the film to make it for them. The new camera is designed primarily to reduce noise, and embodies many conveniences and devices assisting in the reduction of time and cost in production. The system of rating the speed of lenses is based upon the actual light transmitted through the lens, referred to a standard calibration against which all lenses are compared. The session closed with a description by R. H. Talbot of a new method of preventing film abrasion and oil mottle, which consisted in the application to either or both sides of 16 or 35-mm films of a lacquer, the function of which is to absorb all the ordinary cinch marks and other abrasions commonly found on films in service. When the lacquer has been removed and replaced by a fresh coat, the film is found to be in essentially as good condition as when new. In addition, the lacquer, because of its glossy surface, eliminates the mottle or flicker upon the screen due to oil on the film.

The Friday morning session was devoted to laboratory problems, under the chairmanship of Mr. A. C. Downes. It opened with a Report of the Committee on Non-Theatrical Equipment and a discussion of "Some Laboratory Problems in Processing 16-Mm Black-and-White and Color-Films," by W. H. Offenhauser.

One of the contributing factors to sound-track degradation is sprocket-hole modulation, which results from non-uniform action of developer around the perforation holes during processing. Messrs. M. Leshing, T. Ingman, and K. Pier discussed the problem and pointed out that the chief remedy lies in adequate turbulation. Data showing the decrease of this distortion with increased turbulation, and photographs showing various types of sprocket-hole modulation, were presented. A complete description of the turbulation methods employed at the Twentieth Century-Fox laboratory was disclosed.

Mr. C. R. Sawyer officiated as Chairman of the laboratory session held on Friday afternoon, which included papers on "Effects of Developer Agitation"

and "The Elimination of Hypo from Film," respectively, by Messrs. C. E. Ives and C. W. Jensen, and Messrs. J. I. Crabtree, G. T. Eaton, and L. E. Muehler. The measurement of photographic printing density was discussed by J. G. Frayne, who pointed out that when the spectral sensitivity of positive film is simulated by a suitable combination of phototube and optical filter in the integrating sphere densitometer, the printing density of any type of negative, irrespective of grain size, with any type of base may be accurately determined.

The afternoon closed with a paper on "Remote Control Incandescent Television Lighting" by W. C. Eddy, a further discussion of the material presented by Mr. Eddy at the Atlantic City Convention last Spring.

The evening session was devoted to television, under the chairmanship of President Williford. An outstanding feature of the Convention was a description during this session by Dr. V. K. Zworykin of "The RCA Electron Microscope." Dr. Zworykin described the elementary principles of electron optics and their application to the electron microscope, showed views of the electron microscope, now in use at several research laboratories, and also exhibited on the screen a number of enlarged photographs of microbes and non-filterable viruses. It was said that the magnification achieved by the electron microscope may run as high as 40,000, achieving resolution of particles as small as 50 Ångstrom units.

During the convention, an exhibit of newly developed equipment was held on the mezzanine of the hotel. Companies represented in the exhibit were:

Electrical Research Products, Inc.	RCA Manufacturing Co.
Holmes Projector Co.	Eastman Kodak Co.
National Theater Supply	Mole-Richardson Co.
Moviola Company	Lansing Mfg. Co.
Norman B. Neely	

ACKNOWLEDGMENTS

The Society wishes to acknowledge its gratitude to the large number of persons and companies who collaborated in providing the various facilities for the Convention.

Acknowledgment is due also to the Fox West Coast Theater Corp., Warner Brothers Theaters, Inc., and Rodney Pantages, Inc., for passes issued to the Convention delegates to Grauman's *Chinese* and *Egyptian Theaters*, Warner's *Hollywood Theater*, and Pantages' *Hollywood Theater*.