

REPORT OF SUBCOMMITTEE B ON 16-MM SOUND*

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At the meeting of the War Committee on Photography and Cinematography-Z52 held on December 15, 1943, Subcommittee B was assigned the task of preparing specifications for 16-mm motion picture sound-test films.

The first meeting of the Subcommittee was held at Nela Park, Cleveland, Ohio, on Thursday, January 13, 1944. This meeting discussed a set of tentative specifications which had previously been drawn up as part of a program initiated by the Board of Governors of the Society of Motion Picture Engineers, at its meeting in the spring of 1943, for the production of a new set of SMPE 16-mm test films. As the result of discussion by the Subcommittee, a new set of draft specifications was prepared for the following films:

(1) A Test Film for Determining Uniformity of Scanning-Beam Illumination (frequently referred to in the industry as a "snake track").

(2) A Multifrequency Test Film for Field Testing 16-Mm Sound Motion Picture Projectors.

(3) A 3000-Cycle Flutter Test Film.

(4) A Buzz-Track Test Film for Adjusting and Checking Scanning-Beam Location in 16-Mm Sound Projectors.

(5) A Sound-Focusing Test Film.

The second meeting of the Subcommittee was held on March 7, 1944, at the Engineering Societies Building in New York City. The draft specifications resulting from the first meeting were reviewed and, after amendment, were referred by vote of the Subcommittee to the parent Committee, Z52, with a recommendation that they be approved as American War Standard Specifications. This meeting also drafted a specification for a sixth test film, a 400-Cycle Signal Level

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Test Film, intended to provide a primary standard of signal level, accurate within approximately $1/2$ db. This specification was also referred to the parent Committee, Z52, for approval as an American War Standard.

At its meeting in Cleveland on January 11 and 12 Subcommittee *D* on 16-Mm Projection had referred to Subcommittee *B* the problem of standardization of the dimensions of 16-mm sound records and scanning area. The March 7th meeting of Subcommittee *B* reviewed the work on these standards which had been done previously by the Standards Committee of the Society of Motion Picture Engineers, and approved a drawing embodying the result of this work with the addition of a specification for the dimensions of the printed area.

The third meeting of the Subcommittee was held at the Engineering Societies Building in New York City on April 20. At this meeting the Subcommittee discussed the objections to the proposed specifications which had been brought up in the letter ballot by Committee Z52, and recommended a number of changes. The specifications in their resulting, and probably final, form were referred back to Committee Z52 at its meeting on April 22.

Subcommittee *B*, therefore, has completed its initially assigned tasks. However, at the meeting of Subcommittee *C* on 16-Mm Laboratory Practice on April 21, this committee referred the problem of sound-qualification tests to Subcommittee *B*. Your Chairman has appointed a subgroup under the Chairmanship of Mr. Clyde R. Keith to prepare recommendations to meet the needs of Subcommittee *C*. This group will study the problems of cross-modulation, intermodulation, frequency response, and flutter testing for the control of 16-mm sound-track processing, and is expected to draw up specifications for the production and use of a special test leader to be made in both 35-mm and 16-mm. The sound-test material contained in this leader, after reproduction by whatever sequence of processes is used in arriving at the 16-mm release print, should furnish a basis for accurate evaluation of the quality of the sound track on the final print. It is believed that this test leader will prove an extremely useful tool for all laboratories doing 16-mm work, as well as meeting the present need of the armed services.