

SMPTE ENGINEERING GUIDELINE

Use of Audio Magnetic Test Films



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Foreword

SMPTE (the Society of Motion Picture and Television Engineers) is an internationally-recognized standards developing organization. Headquartered and incorporated in the United States of America, SMPTE has members in over 80 countries on six continents. SMPTE's Engineering Documents, including Standards, Recommended Practices, and Engineering Guidelines, are prepared by SMPTE's Technology Committees. Participation in these Committees is open to all with a bona fide interest in their work. SMPTE cooperates closely with other standards-developing organizations, including ISO, IEC and ITU.

SMPTE Engineering Documents are drafted in accordance with the rules given in Part XIII of its Administrative Practices.

SMPTE EG 13 was prepared by Technology Committee 20F.

Intellectual Property

At the time of publication no notice had been received by SMPTE claiming patent rights essential to the implementation of this Engineering Guideline. However, attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. SMPTE shall not be held responsible for identifying any or all such patent rights.

1 Scope

This guideline is intended to describe the usage and practical limitations of audio magnetic test films made to SMPTE specifications.

2 Conformance Notation

Normative text is text that describes elements of the design that are indispensable or contains the conformance language keywords: "shall", "should", or "may". Informative text is text that is potentially helpful to the user, but not indispensable, and can be removed, changed, or added editorially without affecting interoperability. Informative text does not contain any conformance keywords.

All text in this document is, by default, normative, except: the Introduction, any section explicitly labeled as "Informative" or individual paragraphs that start with "Note:"

The keywords "shall" and "shall not" indicate requirements strictly to be followed in order to conform to the document and from which no deviation is permitted.

The keywords, "should" and "should not" indicate that, among several possibilities, one is recommended as particularly suitable, without mentioning or excluding others; or that a certain course of action is preferred but not necessarily required; or that (in the negative form) a certain possibility or course of action is deprecated but not prohibited.

The keywords "may" and "need not" indicate courses of action permissible within the limits of the document.

The keyword "reserved" indicates a provision that is not defined at this time, shall not be used, and may be defined in the future. The keyword "forbidden" indicates "reserved" and in addition indicates that the provision will never be defined in the future.

Unless otherwise specified, the order of precedence of the types of normative information in this document shall be as follows. Normative prose shall be the authoritative definition. Tables shall be next, followed by formal languages, then figures, and then any other language forms.

3 Definitions

3.1 flux level: The absolute short-circuit recorded magnetic flux level in nanowebers per meter (nWb/m).

3.2 frequency response: The amplitude vs frequency characteristic of a circuit or flux given as the frequency-by-frequency deviation in decibels from either zero deviation or from a specified response.

3.3 mechanical adjustments:

3.3.1 azimuth: Rotation of the head about a line perpendicular to the reference edge of the film in the plane of the film. For a single-gap head, azimuth aligns the gap perpendicular to the reference edge of the film. For a multiple gap head, azimuth adjustment brings the best fitting line through the centers of the gaps perpendicular to the reference edge of the film.

3.3.2 height: The position of a head or record along the plane of the film with respect to the reference edge of the film. Adjustment aligns the gap(s) to the center of the recorded area for the corresponding record.

3.3.3 rotation: Rotation of a head around a line parallel to the plane of the film (drawn through the centerline of the head) and perpendicular to the reference edge of the film. Adjustment is made in order to bring the gap(s) into best contact with the oxide surface on the film.