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SMPTE ENGINEERING GUIDELINE

EG 15-2005

Revision of EG 15-1987

Level for Analog Recording of Dialog in Motion-Picture Production



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1 Purpose

This guideline provides specifications for recording dialog under conditions normally encountered in motion-picture production. The use of a typical portable analog 1/4-in tape recorder operating at 7.5 in/s is assumed. Variations on typical uses are described in the annex.

2 Scope

Many factors can limit the performance of production audio recordings; among them are acoustical noise and reverberation on the set; placement, directionality, and frequency response of microphones; microphone preamplifier performance; and many others. The object of this guideline is to outline only those factors which are controlled by the setting of level controls which result in how much flux is recorded on the tape.

A background section enumerates some of the problems resulting from under- and over-recording, with the objective being the best possible level-setting practice.

A specification section gives recommendations for the levels to be used for the peaks of dialog as measured by vu meters or by quasi-peak-responding meters. The specifications were developed from accumulated experience with varying recording conditions, tape types, etc.

The guideline describes two methods for production recording of dialog: (a) when a production mixer is fed to a 1/4-in recorder, or (b) when audio from microphones is fed directly into a 1/4-in production recorder.

3 Background

3.1 This guideline was developed with input from the Subcommittee on Audio Production and Post-Production for Motion-Picture and Television Entertainment Programming. The subcommittee found that tapes made in production were often over recorded, leading to excessive print-through and distortion. Thus, a guideline outlining good practice was desirable. Several reasons may exist for the tendency to over-record, including a low sound pressure level available in headphone monitors which the recordist must use to remain on the set.

3.2 Under-recording causes excessive noise due to tape hiss when the recorded level must subsequently be raised when dubbing to further generations.

3.3 Over-recording may result in:

3.3.1 Audible distortion on peaks of modulation. Such distortion can only become worse in subsequent dubbing because the distortion accumulates from generation to generation.