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Electronic Method of Dropout Detection and Counting



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1 Scope

This practice specifies the method of electronic dropout detection and counting for 2-in quadruplex video magnetic tape recordings made in accordance with practice HB of SMPTE RP 6.

2 Dropout definition

A momentary random reduction of the recovered frequency modulated (rf) playback signal that is sufficient to cause a substantial impairment in the video output signal of a quadruplex video tape recorder.

3 Specifications

The dropout to be detected shall have an rf signal reduction of 16 dB or more for 5 μ s or longer.

4 Detection

4.1 Recorder alignment

4.1.1 The tip penetration shall be 2 mils for record and playback. (This penetration may not correspond to that specified in SMPTE RP 11, and adjustment of vacuum guide position may be necessary.)

4.1.2 The tip projection shall be between 1.5 mils and 2.5 mils (see annex A.1).

4.1.3 Equalization shall be in accord with practice HB of SMPTE RP 6, producing a flat input-to-output response.

4.1.4 The recovered playback signal prior to limiting shall not vary more than 2 dB over four head passes, including amplitude variations due to geometrical error.

4.2 Test signal

Any test signal may be used; color bars or sync and set up are preferred (see annex A.2).

4.3 Electronic dropout counter

The dropout counter shall be capable of utilizing the above-mentioned signals and specifications.

4.4 Operation

The dropout counter shall be interfaced into the playback system of the video recorder so that a standard amplitude of the unlimited rf signal can be applied to the level detector of the dropout counter. This point is usually the video head switcher output.