SMPTE STANDARD

for Television Digital Component Recording — 19-mm Type D-1 — Time and Control Code and Cue Records

1 Scope

This standard specifies the content, format, and modulation method of the longitudinal records contained in the cue track and the time-code track in 19-mm type D-1 television digital component recording. Track dimensions and locations are specified in ANSI/SMPTE 224M. The document applies to recorders operating in the 525-line television system with a frame frequency of 29.97 Hz.

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this standard. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this standard are encouraged to investigate the possibility of applying the most recent edition of the standards indicated below.

ANSI/SMPTE 125M-1995, Television — Component Video Signal 4:2:2 — Bit-Parallel Digital Interface

ANSI/SMPTE 224M-1996, Television Digital Component Recording — 19-mm Type D-1 — Tape Record

3 Cue record

3.1 Method of recording

The signals shall be recorded using the anhysteresis (AC bias) method.

3.2 Flux level

The recorded standard operating audio level shall correspond to an rms magnetic short-circuit flux level of 70 nWb/m ± 10 nWb/m of track width at 1000 Hz.

3.3 Recorded flux characteristics

When a tape record is recorded from a constant voltage level applied to the input terminals of the recording system, the short-circuit tape flux level on the record versus frequency shall remain constant.

3.4 Relative timing

Cue information shall be recorded on the tape at a point referenced to the associated video information as defined by dimension P of ANSI/SMPTE 224M (cue audio may be up to 100 TV lines early).

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595 W. Hartsdale Ave., White Plains, NY 10607
(914) 761-1100

American National Standard

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4 Time and control code record

4.1 Code

The longitudinal time and control code specified in ANSI/SMPTE 12M shall be used.

4.2 Method of recording

The signals shall be recorded using the anhysteresis (AC bias) recording method.

4.3 Flux level

The recorded peak flux shall correspond to an rms magnetic short-circuit flux level of 185 nWb/m ± 20 nWb/m of track width.

4.4 Channel code

Time and control code data shall employ bi-phase mark coding.

4.5 Bit zero

The location of bit zero of the time code on tape shall be a distance, P (see ANSI/SMPTE 224M), ahead of the upper video sector of field 1 of the associated video data, as defined in ANSI/SMPTE 125M.

Annex A (informative)
Bibliography

ANSI/SMPTE 12M-1995, Television, Audio and Film — Time and Control Code

ANSI/SMPTE 225M-1996 Television Digital Component Recording — 19-mm Type D-1 — Magnetic Tape

SMPTE 226M, Television Digital Recording — 19-mm Tape Cassettes

ANSI/SMPTE 227M-1996, Television Digital Component Recording — 19-mm Type D-1 — Helical Data and Control Records

SMPTE EG 10, Tape Transport Geometry Parameters for 19-mm Type D-1 Television Digital Component Recording

SMPTE EG 21-1993, Nomenclature for Television Digital Recording of 19-mm Type D-1 Component and Type D-2 Composite Formats