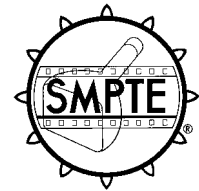


SMPTE RECOMMENDED PRACTICE

RP 121-1997

Revision of RP 121-1993

Tape Dropout Specifications for 1-in Types B and C Video Tape Recorders/Reproducers



Page 1 of 2 pages

1 Scope

1.1 This practice defines the parameters for tape dropouts encountered in the reproduced FM signal of 1-in types B and C video magnetic recorders/reproducers.

1.2 This practice is intended as an aid in the evaluation of dropout characteristics of magnetic tape, not as a specification for recorder/reproducer setup.

2 Basic parameters

Basic parameters of the recorder/reproducer are defined in the following documents:

Type B recorder/reproducer

| | |
|---|----------------|
| Basic parameters: | ANSI/SMPTE 15M |
| Carrier frequencies and preemphasis: | SMPTE RP 84 |
| Audio frequency response and operating level: | ANSI/SMPTE 17M |
| Record dimensions: | ANSI/SMPTE 16M |

Tracking-control record: SMPTE RP 83

Type C recorder/reproducer

| | |
|---|----------------|
| Basic parameters: | ANSI/SMPTE 18M |
| Audio frequency response and operating level: | ANSI/SMPTE 20M |
| Record dimensions: | ANSI/SMPTE 19M |

| | |
|--------------------------|-------------|
| Video record parameters: | SMPTE RP 86 |
| Tracking-control record: | SMPTE RP 85 |

3 Definition

For the purpose of this practice, a dropout is 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 1-in type B or type C tape recorder/reproducer.

4 Specifications

The signal level reduction to be classified as a dropout must be at least 5 μ s in duration and have an rf level reduction of 16 dB or more.

5 Measurement conditions

When dropout measurements are conducted, the pole tip protrusion and tape tension of the video recorder/reproducer shall be as follows:

| | | |
|----------------------|--------|-----------------------------|
| Pole tip protrusion: | Type B | 30 μ m \pm 5 μ m |
| | Type C | 60 μ m \pm 10 μ m |

Tape tension: Tape tension for the recorder/reproducer shall be in accordance with the manufacturer's published specifications.

Annex A (informative)

Bibliography

ANSI/SMPTE 15M-1992, Television Analog Recording — 1-in Type B Helical Scan — Basic System Parameters

ANSI/SMPTE 16M-1992, Television Analog Recording — 1-in Type B Helical Scan — Records

ANSI/SMPTE 17M-1992, Television Analog Recording — 1-in Type B Helical Scan — Frequency Response and Operating Level

ANSI/SMPTE 18M-1996, Television Analog Recording — 1-in Type C — Basic System and Transport Geometry Parameters

ANSI/SMPTE 19M-1996, Television Analog Recording — 1-in Type C — Records

ANSI/SMPTE 20M-1996, Television Analog Recording — 1-in Type C Recorders and Reproducers — Longitudinal Audio Characteristics

SMPTE RP 83-1996, Specifications of Tracking Control Record for 1-in Type B Helical-Scan Television Analog Recording

SMPTE RP 84-1996, Reference Carrier Frequencies and Preemphasis Characteristics for 1-in Type B Helical-Scan Television Analog Recording

SMPTE RP 85-1991 (R1995), Tracking-Control Record for 1-in Type C Helical-Scan Television Tape Recording

SMPTE RP 86-1991 (R1995), Video Record Parameters for 1-in Type C Helical-Scan Television Tape Recording