RP 83-1996
Revision of RP 83-1992

SMPTE RECOMMENDED PRACTICE

Specifications of Tracking-Control Record for 1-in Type B Helical-Scan Television Analog Recording

1 Scope

This practice specifies the recorded relationships among the tracking control signal, the edit pulse signal, and the video signal for 1-in type B helical-scan video tape recordings.

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

EIA Industrial Electronics Tentative Standard No. 1, Color Television Studio Picture Line Amplifier Output Drawing

ITU-R BT.470-4, Television Systems

3 Dimensions

3.1 The recorded relationships among the tracking control signal, the edit pulse signal, and the video signal shall be as specified in figure 1.

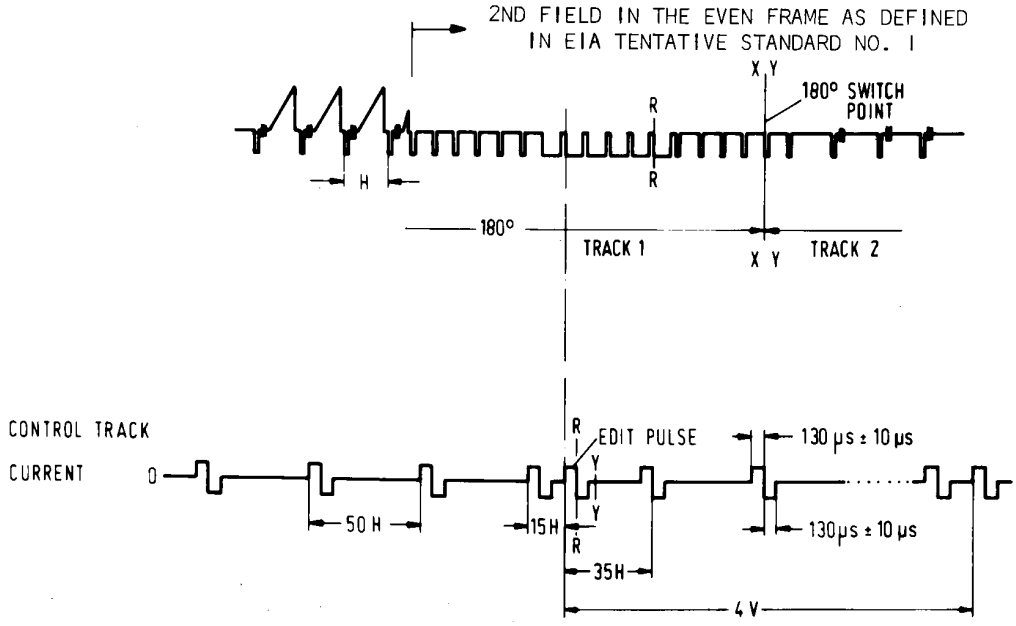

Figure 1 – Position and waveform of control track and edit pulse 525 line–60 field systems (NTSC)

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3.2 The position of the field synchronizing signal on the video tracks shall be as specified in ANSI/SMPTE 16M.

3.3 The signal recorded on the control track shall consist of a series of tracking pulses and additional editing pulses as indicated in figure 1.

3.4 The polarity of the tracking pulses shall be as follows: If the tracking pulses on the tape are regarded as discrete magnets, the leading part of the pulses constitute a magnet whose south-seeking pole points in the direction of tape motion.

3.5 The amplitude of the control signal current flowing through the recording head shall be such that the tape is driven to the verge of saturation.

3.6 The edit pulse shall be coincident with the second field of the even frame, as defined in EIA Industrial Electronics Tentative Standard No. 1.

3.7 The edit and control pulses shall be 130 μs ± 10 μs in width.

3.8 The rise time of the signal shall be no longer than 10 μs.

Annex A (informative)
Bibliography

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