3. Reproducing Speed

The recording shall be made so that the sound record will reproduce properly at 24 perforations per second (approximately 20 ft [6.1 m] per minute or 4 in [102 mm] per second). This is equivalent to the projection speed of the picture film of 24 frames per second.

4. Longitudinal Picture-Sound Displacement

The magnetic sound record on the film shall precede the center of the corresponding picture by a distance of 18 frames ± ½ frame.

Appendix

(The Appendix is not a part of this American National Standard, but is included for information purposes only.)

A1. Record Width

The width of the recorded area must be measured with great care as it enters directly into the calculation of flux per unit track width.

When the recording head gap is narrower than the width of the coating or stripe, as is normal for all motion-picture test films, there is a measurement complication involving both the uncertainties in seeing the track and in determining the recording fringing.

If the recording head is available, the track width is best measured indirectly by measuring the gap width and adding to this dimension twice the thickness of the test record's magnetic coating. This correction will usually be 0.0003 to 0.0006 in (8 to 15 μm).

If the recording head is unavailable, the recorded record may be made visible by the use of a carbonyl iron suspension. Care should be taken to apply the minimum quantity that makes the recording visible, so that the developed image is not wider than the actual recorded area.

A2. Reproducing Head Gap Width

Dimension B applies to records produced in equipment using the same head for recording and reproducing. In commercially produced prints intended for use on a variety of reproducers, it is recommended that a recording head be used capable of producing a 0.025-inch (0.64-mm) minimum width record having the same centerline. A recording head gap of this same minimum width must be used to prevent edge effects or fringing.

A3. Erase Heads

Erasing head gaps used to erase the records specified in this standard should be substantially wider than the record specified.

A4. Secondary Sound Recording Speed

The sound speed recommendation of 24 frames per second (Section 3) is primarily intended for professional application of super 8 sound motion-picture photography. It is expected that the nonprofessional, in using single-system sound or in using post-processed magnetically striped film, will record his sound at 18 frames per second, as limited by the speed of his original photography or his desire to conserve film stock.

A5. Reference Standards

Motion-picture prints conforming to this standard are usually made on film made in accordance with American National Standard Dimensions for 8-mm Motion-Picture Film Perforated 8-mm Type S, 1R, ANSI PH22.149-1981; magnetically striped in accordance with American National Standard Dimensions of Magnetic Striping of 8-mm Type S Motion-Picture Film, ANSI PH22.161-1980; and projected in accordance with American National Standard Specifications for Projector Usage of 8-mm Type S (Super 8) Motion-Picture Film, ANSI PH22.155-1976.

SMPTE RECOMMENDED PRACTICE

RP 5–1982

Dimensions of Patch Splices in 2-in Video Magnetic Tape

1. *Scope*

This practice specifies the dimensions and location of patch-type splices in magnetic video tape of 2-in (50.8 mm) width. The recommendations are intended primarily for application in recording and reproducing studio practice.

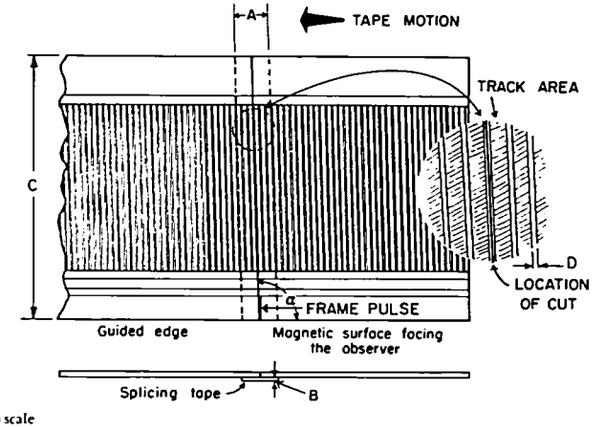
2. *Location of the Splice*

2.1 The angle of the cut with respect to the guided edge of the tape shall be as given in the figure and table.

2.2 The cut shall be centered between two recorded video tracks and so located as to maintain continuity of video synchronizing pulse timing (See Note).

2.3 The separation between the two cut edges after splicing shall not exceed 0.001 in (0.03 mm) at any point along the cut.

2.4 The longitudinal distance between corresponding points on the recorded transverse video tracks immediately preceding and following the splice shall



Drawing not to scale

Dimensions	Rate of Tape Travel: Inches 7.5 in/s	Inches 15 in/s	Millimeters 19.05 cm/s	Millimeters 38.1 cm/s
A Width of splicing tape	0.25 nom	0.25 nom	6.1 nom	6.1 nom
B Thickness of splicing tape	0.0007 max	0.0007 max	0.018 max	0.018 max
C Width of magnetic tape	2.00 ref	2.00 ref	50.8 ref	50.8 ref
D Distance between recorded tracks	0.0028 ref	0.0056 ref	0.071 ref	0.142 ref
α Angle of cut	90° 17′ ± 3′	90° 33′ ± 3′	90° 17′ ± 3′	90° 33′ ± 3′

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not depart from the average distance between successive tracks by more than ± 0.0005 in (0.013 mm). (See Note below and Section 4.1 of American National Standard Dimensions of Video, Audio and Tracking Control Records on 2-in Video Magnetic Tape Quadruplex Recorded at 15 and 7.5 in/s, ANSI V98.6-1981.)

3. *Splicing Tape*

The dimensions of the splicing tape shall be as given in the figure and table.

4. *Characteristics of the Splice*

4.1 The splicing tape on a finished splice shall not extend beyond the edges of the magnetic video tape.

4.2 The guided edge of the magnetic tape on the two sides of the splices shall lie on a common straight line when the tape surface is constrained to lie in a plane.

Note: Sections 2.2 and 2.4 apply only to recorded tapes.

SMPTE RECOMMENDED PRACTICE — RP 21-1982

Dimensions of 35-mm Motion-Picture Rewind Spindles

1. *Scope*

This practice specifies the dimensions of 5/16- and ½-in 35-mm motion-picture rewind spindles.

2. *Dimensions*

The dimensions shall be as given in the figures and table.

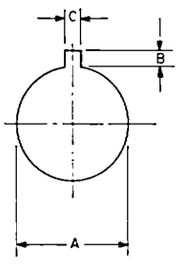

Fig. 1
5/16-in Spindle

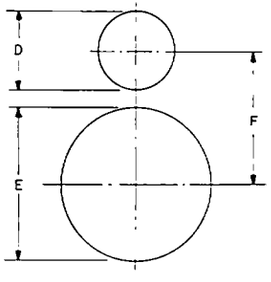

Fig. 2
½-in Spindle

Dimensions	Inches	Millimeters
A	0.315 max	8.00 max
B	0.120 max	3.05 max
C	0.120 max	3.05 max
D	0.250 max	6.35 max
E	0.500 + 0.000 − 0.008	12.70 + 0.00 − 0.20
F	0.782 ± 0.010	19.86 ± 0.25

3. *Related American National Standards*

Dimensions of reels which are likely to be used on the rewinds described in this practice are specified in the following American National Standards:

Projection Reels

Dimensions of Motion-Picture Projection Reels for Combination 70/35-mm Projectors, ANSI PH22.147-1976

Dimensions of 35-mm Motion-Picture Projection Reels, ANSI PH22.4-1976

Dimensions of Large-Capacity Reels for 35-mm Motion-Picture Projection, ANSI PH22.193-1976

Dimensions for 16-mm Motion-Picture Projection Reels (200 to 2300-ft Capacity), ANSI PH22.11-1981

Dimensions for 100-Foot Reels for Processed 16mm and 35mm Microfilm, ANSI PH5.6-1968 (R1974)

Camera Spools

Dimensions for 16mm 100-Foot, 16mm 200-Foot, 35mm 100-Foot, and 70mm 100-Foot Spools for Recording Instruments and for Microfilm and Still-Picture Cameras, ANSI PH1.33-1980

Shipping Reels

Dimensions of Shipping Reels for 35-mm Motion-Picture Prints, ANSI PH22.192-1976

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Approved 9 March 1982