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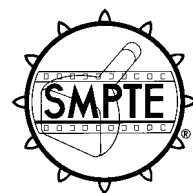
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SMPTE RECOMMENDED PRACTICE

RP 11-1994

Revision of RP 11-1984

Tape Vacuum Guide Configuration and Position for Quadruplex Video Magnetic Tape Recording



Page 1 of 2 pages

1 Scope

This practice specifies the tape vacuum guide configuration and position for quadruplex video recordings on 2-in magnetic tape, and the test conditions for verifying these parameters.

2 Mechanical dimensions

2.1 The radius of the tape vacuum guide (dimension R_1) shall be 1.0334 in + 0.0000 in – 0.0004 in (26.248 mm + 0.000 mm – 0.010 mm).

2.2 The radius of the entrance contour (dimension R_2) shall be 0.156 in + 0.000 in – 0.005 in (3.96 mm + 0.00 mm – 0.13 mm).

2.3 The arc of the vacuum guide (dimension A) shall be 1.940 in $\pm$ 0.005 in (49.28 mm $\pm$ 0.13 mm).

3 Guide position for recordings

The center of curvature of the vacuum guide shall lie between the axis of rotation of the video pole tips and the vacuum guide (see figure 1). The extension of a line joining the center of curvature of the vacuum guide and the axis of rotation of the heads shall intersect the tape at the midpoint of its width. The distance (eccentricity) between the center of curvature of the vacuum guide and the axis of rotation of the heads shall be zero when the radius R_1 has its maximum permitted value (see 2.1) and shall increase by the same amount by which the radius R_1 decreases from its maximum permitted value. Table 1 shows an example of such dimensional dependence. The dimensions are based on a nominal tape thickness of 0.0014 in (0.036 mm) and a radius of rotation of the magnetic head pole tips of 1.0329 in minimum to 1.0352 in maximum (26.236 mm minimum to 26.294 mm maximum).

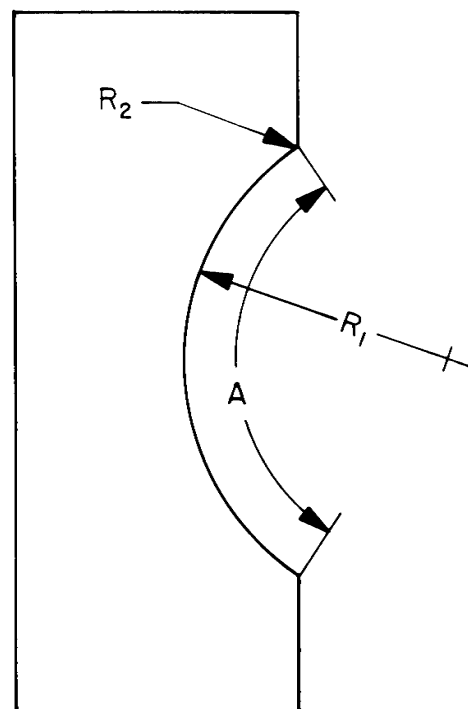


Figure 1 – Tape vacuum guide configuration

Table 1 – Specifications

Vacuum guide radius		Eccentricity	
Inches	Millimeters	Inches	Millimeters
1.0334	26.248	0.0000	0.000
1.0333	26.246	0.0001	0.003
1.0332	26.243	0.0002	0.005
1.0331	26.241	0.0003	0.008
1.0330	26.238	0.0004	0.010