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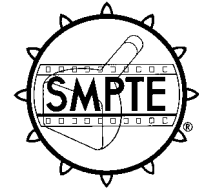
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SMPTE ENGINEERING GUIDELINE

EG 20-1997

Revision of EG 20-1993

Tape Transport Geometry Parameters for 19-mm Type D-2 Composite Format for Television Digital Recording



Page 1 of 5 pages

1 Scope

This guideline describes two feasible examples of mechanical design and test conditions for achieving the record dimensions specified in ANSI/SMPTE 245M. The parameters are for reference purposes only.

2 General specifications

2.1 Dimensions are in the metric system.

2.2 Tests and measurements made on the recorder to check the requirements of this guideline shall be made under the following atmospheric conditions:

Temperature	$20^{\circ}\text{C} \pm 1^{\circ}\text{C}$
Relative humidity	$(50 \pm 2)\%$
Barometric pressure	$96 \text{ kPa} \pm 10 \text{ kPa}$
Conditioning of the recorder before testing	Not less than 24 hours

3 Scanner specifications

3.1 The effective drum diameter, tape tension, helix angle, and tape speed taken together determine the track angle. Different methods of design and/or variations in drum diameter and tape tension can produce equivalent recordings for interchange purposes.

3.2 Two possible design examples are shown in table 1 and table 2, and figure 1 and figure 2.

3.3 The longitudinal head locations and tape wrap for design 1 are shown in figure 3.

3.4 The longitudinal head locations and tape wrap for design 2 are shown in figure 4.