

Standards and Recommended Practices

Approved American National Standards

Three American National Standards were approved by the American National Standards Institute on May 14, 1992: ANSI/SMPTE 161-1992, Motion-Picture Film (8-mm Type S) — Magnetic Striping; ANSI/SMPTE 162-1992, Motion-Picture Film (8-mm Type S) — 16-mm Film Perforated 8-mm Type S, (1-4) — Magnetic Striping; and ANSI/SMPTE 163-1992, Motion-Picture Film (8-mm Type S) — 35-mm Film Perforated 8-mm Type S, 5R — Magnetic Striping. The standards are available from Society Headquarters for \$10.00 each.

Approved SMPTE Recommended Practices

The Society recently approved three SMPTE Recommended Practices: RP 12-1992, Screen Luminance for Drive-In Theaters;

RP 149-1992, Dimensions of Transverse Cemented Splices on 16-mm and 8-mm Type R Motion-Picture Film; and RP 74-1992, 16-mm Sprocket Design. RP 12 and RP 149 are available for \$10.00 each; RP 74 is \$13.00.

Withdrawn SMPTE Recommended Practice

On October 1, 1992, withdrawal action was approved on an SMPTE Recommended Practice: RP 147-1987, Audio Channel Assignments of Multi-Channel Sub-Masters Used in Preparation for Two-Track Masters for Transfer to Video. The practice was withdrawn on the grounds that the rapid change in production practices for stereo television have made it obsolete.

— *Sherwin H. Becker,*
Director of Engineering

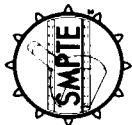
SMPTE Standards Subscription Service

The Society provides a Standards Subscription Service to assist firms, libraries, and individuals in establishing and maintaining a complete and current file of approved American National Standards, SMPTE Recommended Practices, and SMPTE Engineering Guidelines in the motion-picture, television, and video magnetic recording fields. Through this service, the Society makes automatic distribution to standards subscribers of all new and revised standards, recommended practices, and guidelines that are approved during the calendar year in these fields.

For further information, write to: Standards Subscription Service, Engineering Dept., Society of Motion Picture and Television Engineers, 595 West Hartsdale Ave., White Plains, NY 10607.

SMPTE STANDARD

for Motion-Picture Film (8-mm Type S) — Magnetic Striping



1 Scope

This standard specifies the location and dimensions of the magnetic recording stripe and the balance stripe applied to 8-mm motion-picture film with one row of 8-mm type S perforations.

2 Normative reference

The following standard contains provisions which, through reference in this text, constitute provisions of this standard. At the time of publication, the edition indicated was 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 standard indicated below.

ANSI/SMPTE 149-1988, Motion-Picture Film (8-mm Type S) — Perforated 1R

3 Dimensions

3.1 The location and dimensions of the magnetic recording stripe and the balance stripe shall be as given in figure 1 and table 1.

3.2 The magnetic stripe shall be on the side of the film which will be toward the light source when used on a projector arranged for direct front projection on a reflection-type screen.

3.3 The magnetic stripe shall be adjacent to the unperforated edge and is intended for the audio record. The narrow stripe adjacent to the perforated edge is a balance stripe. The balance stripe may be a stripe of magnetic or nonmagnetic material of such thickness that the balance and recording stripes project above the surface of the film to substantially the same degree.

4 Film stock

The film stock used shall be safety type, cut and perforated in accordance with ANSI/SMPTE 149-1988.

NOTE — Notwithstanding the tolerance on dimensions M and N, the width of the stripe, dimension N minus M, shall be 0.0250 in (0.635 mm) minimum.

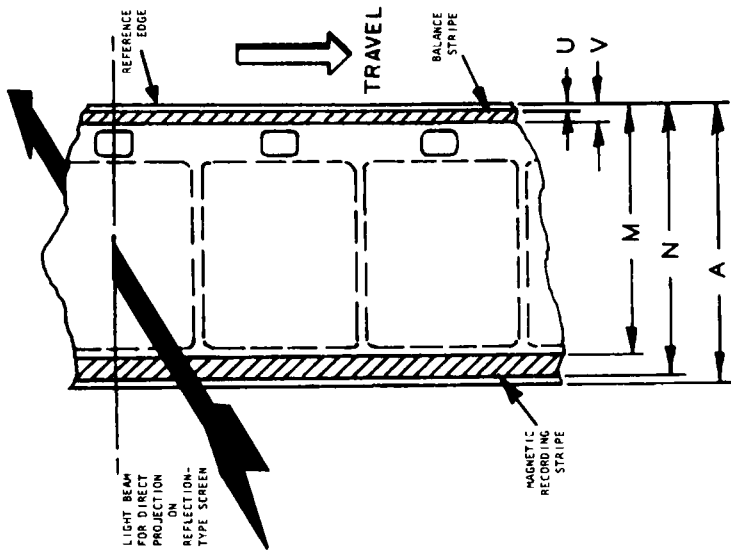


Figure 1 — Film as seen looking toward lens

Table 1

Dimensions	Inches	Millimeters
A	0.314 nom	7.98 nom
M*	0.285 ± 0.002	7.24 ± 0.05
N*	0.312 ± 0.002	7.92 ± 0.05
U	0.003 ± 0.003	0.08 ± 0.08
V	0.015 ± 0.003	0.38 ± 0.08

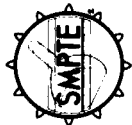
* See note.

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556 W. Hartsdale Ave., White Plains, NY 10607
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Approved
May 14, 1992



SMPTE STANDARD

for Motion-Picture Film (8-mm Type S) — 16-mm Film Perforated 8-mm Type S, (1-4) — Magnetic Striping

Page 1 of 2 pages

1 Scope

This standard specifies the location and dimensions of the magnetic recording stripes and the balance stripes applied to 16-mm motion-picture film with two rows of 8-mm type S perforations in positions 1 and 4.

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 161-1992, Motion-Picture Film (8-mm Type S) — Magnetic Striping
- ANSI/SMPTE 168-1991, Motion-Picture Film (16-mm) — Perforated 8-mm Type S, (1-4)

3 Dimensions

- 3.1 The location and dimensions of the magnetic recording stripes and balance stripes shall be as given in figure 1 and table 1.
- 3.2 The magnetic striping material shall be applied to the surface of the film away from a camera or projector lens, for example, toward the light source of a projector arranged for direct front projection on a reflection-type screen.

3.3 The stripes designated as "recording" are made of a magnetic material and are intended for the audio record. The stripes between the edge of the film and the perforations are the balance stripes. The balance stripes may be stripes of magnetic or nonmagnetic material of such thickness that the balance and recording stripes project above the surface of the film to substantially the same degree.

4 Film stock

The film stock used shall be safety type, cut and perforated in accordance with ANSI/SMPTE 168-1986.

NOTES

- 1 The width and edge-to-perforation distance of the 8-mm slit strip shall be in accordance with ANSI/SMPTE 168-1986. The location of the magnetic recording and balance stripes shall be in accordance with ANSI/SMPTE 161-1992. Consequently, it is not possible to take full advantage of the tolerance of both the slit width and the location of the magnetic recording and balance stripes.
- 2 Tolerances for the recording stripes are specified to permit usage of a single wide stripe or two separate stripes. If two stripes are used, the amount of separation between the stripes should be sufficient to permit sitting within the requisites of the standard without obtaining undesirable feather edges of magnetic material. The separation required is determined by laboratory practice.
- 3 Notwithstanding the tolerance on dimensions M, N, P, and Q, the width of the stripes, dimension N minus M and Q minus P, shall be 0.0250 in (0.635 mm) minimum.

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Approved
May 14, 1992

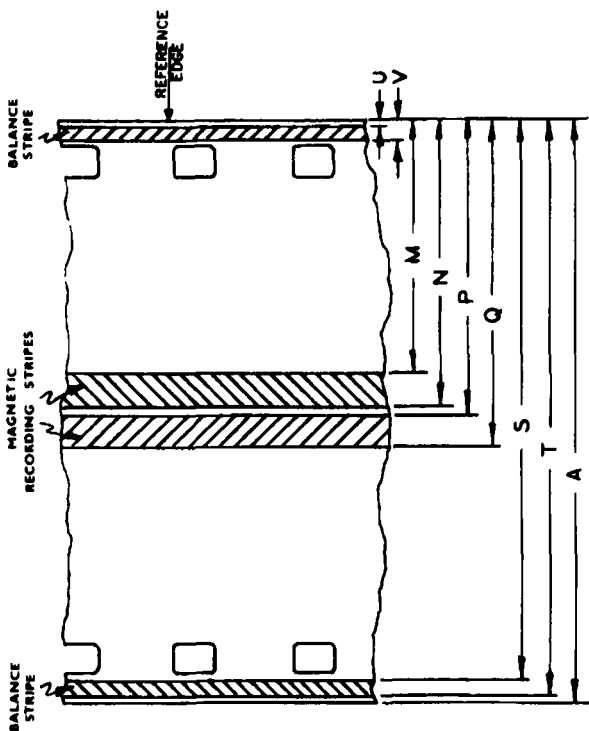


Figure 1

Table 1

Dimensions	Inches	Millimeters
A	0.628 nom	15.95 nom
M*	0.285 ± 0.002	7.24 ± 0.05
N*	0.312 ± 0.002	7.92 ± 0.05
P††	0.316 ± 0.002	8.02 ± 0.05
Q*	0.343 ± 0.002	8.71 ± 0.05
S	0.613 ± 0.003	15.57 ± 0.08
T	0.625 ± 0.003	15.88 ± 0.08
U	0.003 ± 0.003	0.08 ± 0.08
V	0.015 ± 0.003	0.38 ± 0.08

* See note 3.

† The millimeter conversion is approximate so that dimension P minimum equals dimension N maximum.

SMPTE STANDARD**for Motion-Picture Film (8-mm Type S) —
35-mm Film Perforated
8-mm Type S, 5R —
Magnetic Striping**

Page 1 of 2 pages

1 Scope

This standard specifies the location and dimensions of the magnetic recording stripes and the balance stripes applied to 35-mm motion-picture film with four rows of 8-mm type S perforations and one row of special perforations.

2 Normative references

The following standards contain provision 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 161-1992, Motion-Picture Film (8-mm Type S) — Magnetic Striping

ANSI/SMPTE 165-1988, Motion-Picture Film (35-mm) — Perforated 8-mm Type S, 5R (1-3-5-7-0)

3 Dimensions

3.1 The location and dimensions of the magnetic recording stripes and balance stripes shall be as given in figure 1 and table 1.

3.2 The magnetic striping material shall be applied to the surface of the film away from a camera or projector lens, for example, toward the light source of a projector arranged for direct front projection on a reflection-type screen.

3.3 The stripes designated as "recording" are made of a magnetic material and are intended for the audio record. The balance stripes may be stripes of magnetic or nonmagnetic material of such thickness that the balance and recording stripes project above the surface of the film to substantially the same degree.

4 Film stock

The film stock used shall be safety type, cut and perforated in accordance with ANSI/SMPTE 165-1988.

NOTES

1 The width and edge-to-perforation distance of the 8-mm slit strip shall be in accordance with ANSI/SMPTE 165-1988. The location of the magnetic recording and balance stripes shall be in accordance with ANSI/SMPTE 161-1992. Consequently, it is not possible to take full advantage of the tolerance of both the slit width and the location of the magnetic recording and balance stripes.

2 Tolerances for the recording stripes and balance stripes are specified to permit usage of a single wide stripe or two separate stripes where they are adjacent. If two stripes are used, the amount of separation between the stripes should be sufficient to permit slitting within the requisites of standard without obtaining undesirable feather edges of magnetic material. The separation required is determined by laboratory practice.

3 Notwithstanding the tolerance on dimensions M₁, N₁, M₂, N₂, M₃, N₃, M₄, and N₄, the width of the stripe, dimension N minus M, shall be 0.0250 in (0.635 mm) minimum.

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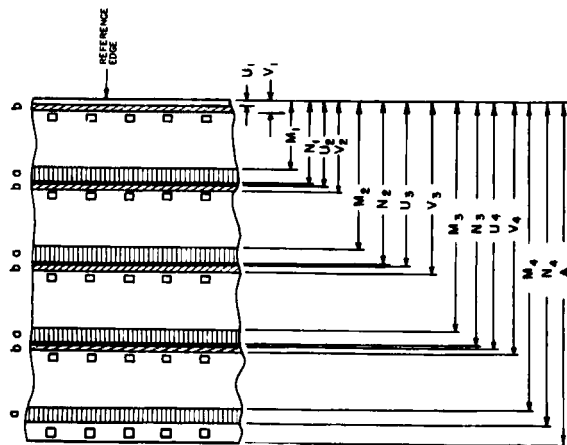
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American National Standard



Approved
May 14, 1992

(O) MAGNETIC RECORDING STRIPES (D) BALANCE STRIPES

**Figure 1****Table 1**

Dimensions	Inches	Millimeters
A	1.377 nom	34.98 nom
M1*	0.315 ± 0.002	8.00 ± 0.05
M2*	0.629 ± 0.002	15.98 ± 0.05
M3*	0.943 ± 0.002	23.95 ± 0.05
M4*	1.257 ± 0.002	31.93 ± 0.05
N1*	0.342 ± 0.002	8.69 ± 0.05
N2*	0.656 ± 0.002	16.66 ± 0.05
N3*	0.970 ± 0.002	24.64 ± 0.05
N4*	1.284 ± 0.002	32.61 ± 0.05
U1	0.033 ± 0.003	0.84 ± 0.08
U2	0.947 ± 0.003	8.81 ± 0.08
U3	0.661 ± 0.003	16.79 ± 0.08
U4	0.975 ± 0.003	24.76 ± 0.08
V1	0.045 ± 0.003	1.14 ± 0.08
V2	0.359 ± 0.003	9.12 ± 0.08
V3	0.673 ± 0.003	17.09 ± 0.08
V4	0.987 ± 0.003	25.07 ± 0.08

*See note 3.