

SMPTÉ RECOMMENDED PRACTICE

Dimensions of Photographic Control and Data Record on 16-mm Motion-Picture Film

Appendix

(The Appendix is not a part of this SMPTÉ Recommended Practice, but is included for information purposes only.)

The spectral response specified in Section 3 is intended to ensure that the control and data track will be adequately reproduced whether the track image is formed of dyes, silver, or dyes and silver. Restriction of the infrared response is necessary because the dyes used in conventional

color motion-picture films do not absorb infrared light effectively. Since dirt and scratches on the film will absorb infrared light, restriction of the infrared response will improve the signal-to-noise ratio of the system.

Page 1 of 2 pages

1. Scope

This practice specifies the lateral location and dimensions of a photographic control and data record on 16-mm motion-picture originals, intermediates, and prints, the width scanned by the control and data reproducer, and the reproducer spectral sensitivity.

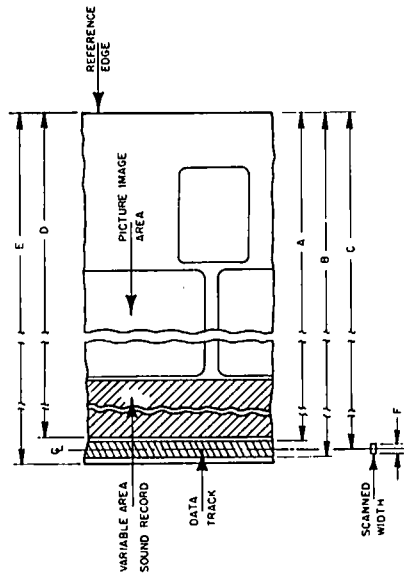
2. Data Record

2.1 The dimensions and lateral location of the control and data record shall be as specified in the figure and table.

2.2 The recording and reproducing slit images shall be positioned at an angle of $90^\circ \pm 1^\circ$ to the reference edge of the film.

3. Reproducer Spectral Sensitivity

The peak or maximum response of the combination of the control and data track reproducer, light source, filter, and receptor shall be at $550 \pm 130 - 0$ nanometers. The integrated response of this combination to all wavelengths greater than 800 nm shall be less than 5 percent of the total integrated response measured from 400 to 800 nm.



Dimensions	Inches	Millimeters
A	0.612 ± 0.001	15.54 ± 0.03
B	0.622 ± 0.001	15.80 ± 0.03
C	0.617 ± 0.001	15.67 ± 0.03
D	0.600 ref	15.24 ref
E	0.628 ref	15.95 ref
F	0.005 ± 0.001	0.13 ± 0.03

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PROPOSED SMPTE RECOMMENDED PRACTICE

RP 115

Dimensions of Photographic Control and Data Record on 35-mm Motion-Picture Release Prints

Page 1 of 2 pages

1. *Scope*

This practice specifies the lateral location and dimensions of a photographic control and data record on 35-mm motion-picture release prints, the width scanned by the control and data reproducer, and the reproducer spectral sensitivity.

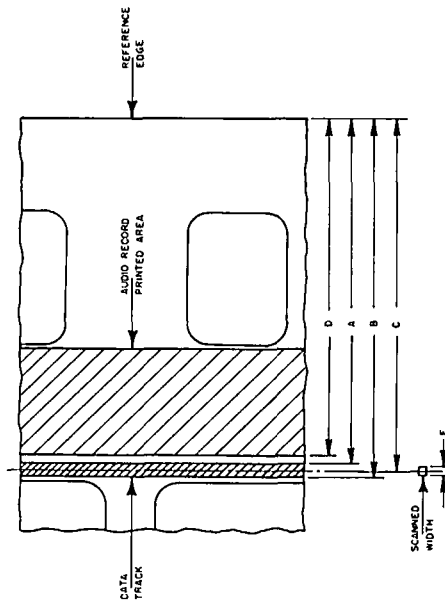
2. *Data Record*

2.1 The dimensions and lateral location of the control and data record shall be as specified in the figure and table.

2.2 The recording and reproducing slit images shall be positioned at an angle of $90^\circ \pm 1^\circ$ to the reference edge of the film.

3. *Reproducer Spectral Sensitivity*

The peak or maximum response of the combination of the control and data track reproducer, light source, filter, and receptor shall be at $550 \pm 150 - 0$ nanometers. The integrated response of this combination to all wavelengths greater than 800 nm shall be less than 5 percent of the total integrated response measured from 400 to 800 nm.



Dimensions	Inches	Millimeters
A	0.292 ± 0.001	7.42 ± 0.03
B	0.302 ± 0.001	7.67 ± 0.03
C	0.297 ± 0.001	7.54 ± 0.03
D	0.281 ref	7.14 ref
F	0.005 ± 0.001	0.13 ± 0.03

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A1. The spectral response specified in Section 3 is intended to ensure that the control and data track will be adequately reproduced whether the track image is formed of dyes, silver, or dyes and silver. Restriction of the infrared response is necessary because the dyes used in conventional color motion-picture films do not absorb infrared light effectively. Since dirt and scratches on the film will absorb infrared light, restriction of the infrared response will improve the signal-to-noise ratio of the system.

A2. Particular care must be taken with printer and projector alignment when printing and projecting motion-picture release prints containing control and data records to minimize the risk of the audio scanned area covering any part of the control and data record, or projecting the data track on the screen.

SMPTE RECOMMENDED PRACTICE

RP 116

Dimensions of Photographic Control and Data Record on 35-mm Motion-Picture Camera Negatives

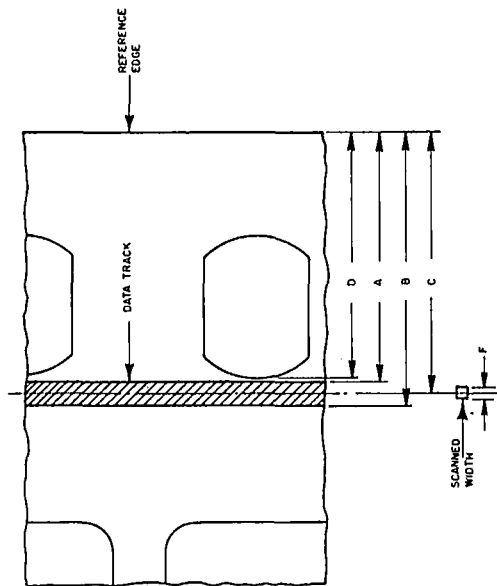
1. Scope

This practice specifies the lateral location and dimensions of a photographic control and data record on 35-mm motion-picture camera negatives, the width scanned by the control and data recorder and reproducer, the camera aperture, and the reproducer spectral sensitivity.

2. Data Record

2.1 The dimensions and lateral location of the control and data record shall be as specified in the figure and table.

2.2 The recording and reproducing slit images shall be positioned at an angle of $90^\circ \pm 1^\circ$ to the reference edge of the film.



Dimensions	Inches	Millimeters
A	0.191 ± 0.001	4.85 ± 0.03
B	0.211 ± 0.001	5.36 ± 0.03
C	0.201 ± 0.001	5.11 ± 0.03
D	0.189 ref	4.80 ref
F	0.005 ± 0.001	0.13 ± 0.03

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3. Camera Aperture

Cameras intended for recording a control and data record must have a modified aperture which positions the picture edge next to the sound record area at 0.214 in. (5.44 mm) minimum from the reference edge of the film. This is Dimension D as specified in American National Standard Dimensions of 35 mm Motion-Picture Camera Aperture Images, ANSI PH22.59-1974 (R1981).

4. Reproducer Spectral Sensitivity

The peak or maximum response of the combination of the control and data track reproducer, light source, filter, and receptor shall be at 530 ± 130 — 0 nanometers. The integrated response of this combination to all wavelengths greater than 800 nm shall be less than 5 percent of the total integrated response measured from 400 to 800 nm.

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The spectral response specified in Section 4 is intended to ensure that the control and data track will be adequately reproduced whether the track image is formed of dyes, silver, or dyes and silver. Restriction of the infrared response is necessary because the dyes used in con-

ventional color motion-picture films do not absorb infrared light effectively. Since dirt and scratches on the film will absorb infrared light, restriction of the infrared response will improve the signal-to-noise ratio of the system.