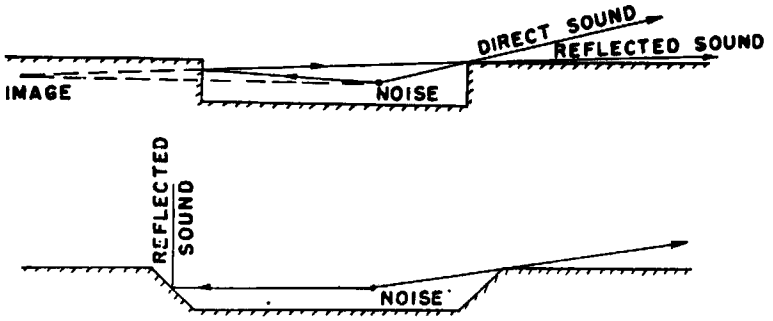


Fig. 5. Diagram illustrating undesirable (top) and desirable deflection (bottom) of noise "rays."

possibly of concrete, since it will be constantly exposed to the weather. There is, of course, also the possibility of erecting a wall beside a depressed freeway to allow an even greater acoustic shadow than would be obtained by the walls of the depression alone, or by some other means shown in Fig. 4.

To avoid the noise reinforcing effect of reflections, it is desirable to slant the walls of the roadway depressions, as shown in Fig. 5. This becomes even more effective when the slanting portions are planted to iceplant or other dense greenery, as this constitutes ground absorptivity which tends to absorb stray reflections.

The cost of all of these types of construction must, finally, be weighed against the comfort that is given the resident near a freeway (a knotty problem of psycho-acoustics) and the extent by which land and property value will remain elevated (with a consequently high tax revenue). Truly, quietness these days comes at a premium.

standards and recommended practices

SMPTE Recommended Practice Approved

Proposed SMPTE Recommended Practice, RP 5, Patch Splices in 2-in. Video Magnetic Tape, published in the October 1959 *Journal* for trial and comment, was approved without change by the Society's Board of Governors on February 12, 1960 at its quarterly meeting.

A copy of this Recommended Practice may be obtained without charge upon request directed to J. Howard Schumacher, Staff Engineer, at Society Headquarters.

SMPTE Recommended Practice RP5

Patch Splices in 2-in. Video Magnetic Tape

Introduction

This Recommended Practice originated in the Video Tape Recording Committee as a Proposed American Standard. At the November 12, 1958, meeting of the Committee it was decided that industry needs could best be met in this instance by an SMPTE Recommended Practice. The proposal, approved by the Video Tape Recording and Standards Committees, was published in the October 1959 Journal. The recommendation received final approval by the Society's Board of Governors on February 12, 1960.

Recommendations

1. *Scope*

1.1 This Recommended Practice specifies the dimensions and location of patch-type splices in magnetic video tape of 2-in. 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 diagram 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 (Note 1).

2.3 The separation between the two cut edges after splicing shall not exceed 0.001 in. 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 not depart from the average distance between successive tracks by more than ±0.0005 in. (Note 1).

3. *Splicing Tape*

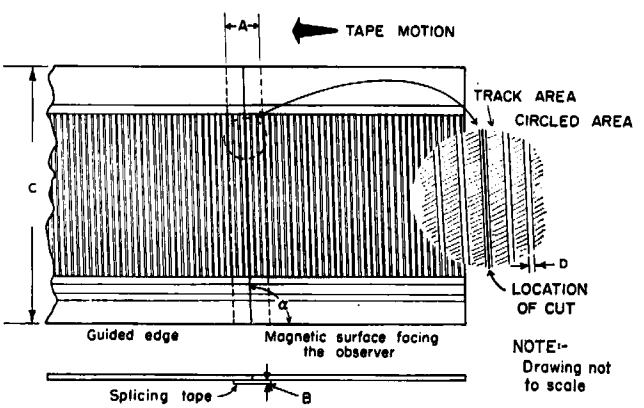
3.1 The dimensions of the splicing tape shall be as given in the diagram and table.

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 either side of a splice shall lie on a common straight line when the tape surface is constrained to lie in a plane.

Note 1: Paragraphs 2.2 and 2.4 apply only to recorded tapes.



Dimension	Inches
A Width of splicing tape	0.25 nom
B Thickness of splicing tape	0.0007 max
C Width of magnetic tape	2.0 nom
D Distance between recorded tracks	0.0056 nom
α Angle of cut	90° 33′ ± 3′

American Standard

Threaded Lens Mounts for 16mm and 8mm Motion-Picture Cameras

ASA
Reg. U.S. Pat. Off.
PH22.76-1960
Revision of
PH22.76-1951

*UDC 778.53:771.352

1. Scope

1.1 This standard specifies the dimensions required for mechanical and optical interchangeability of lenses for 16mm and 8mm motion-picture cameras. For 16mm cameras with threaded lens mounts, threads having a nominal major diameter of 1 in. are often specified. Similarly, for 8mm motion-picture cameras, threads having a nominal major diameter of 5/8 in. are in common use.

1.2 This standard does not apply to continuous-type motion-picture cameras because of the type of optical systems employed in these cameras.

1.3 The notes are a part of this standard.

2. Dimensions

2.1 The dimensions shall be as specified in the diagram and table.

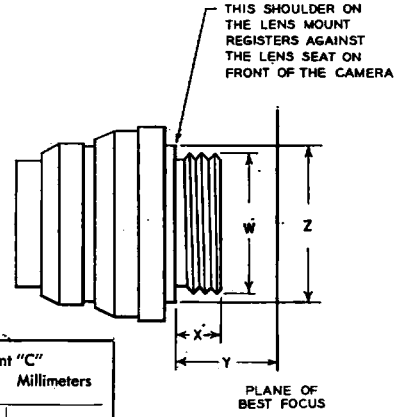
2.2 The lens mounts shall have 32 threads per inch.

2.3 The form of the thread shall be in accordance with American Standard Unified and American Screw Threads for Screws, Bolts, Nuts, and Other Threaded Parts, B1.1-1949.

2.4 Limiting dimensions and tolerances of the threads shall be class NS-2A for the external threads on the lens. These dimensions shall include plating or any other finish.

3. Revision of American Standard Referred to in This Document

When the following American Standard referred to in this document is superseded by a revision approved by the American Standards Association, Incorporated, the revision shall apply: American Standard Unified and American Screw Threads for Screws, Bolts, Nuts, and Other Threaded Parts, B1.1-1949.



Dimension	Mount "D" Inches	Mount "D" Millimeters	Mount "C" Inches	Mount "C" Millimeters
W	0.625	15.88	1.000	25.40
X	0.115	2.92	0.160	4.06
Y	0.484	12.29	0.690	17.53
Z	1.000	25.40	1.187	30.15

NOTES

1. The values specified for dimension X are the maximums for the lenses; additional length for clearance should be provided in the camera. With some lenses the section of the mount, smaller in diameter than the root of the thread, extends beyond the limit of dimension X towards the plane of best focus. For such lenses, clearance must be established individually.

2. For the lens, dimension Y is the distance from the registering shoulder to the plane of the best overall image. For the camera, dimension Y is the distance from the registering shoulder to the plane that best represents the location of the emulsion on the film in a camera operating normally. The allowable tolerance for dimension Y depends upon the f/value of the lens and other variables, and so is not suitable for definite standardization. A tolerance of ± 0.001 in., applied independently to the lens and camera, is suggested as a generally accepted practice.

3. The values given for dimension Z are maximum diameters for the seat on the lenses; the seat on the camera shall provide clearance for these diameters.

Approved January 7, 1960, by the American Standards Association, Incorporated
Sponsor: Society of Motion Picture and Television Engineers

*Universal Decimal Classification

Printed in U.S.A.
ASA¾M160/35

Revision of American Standard

Published here is American Standard PH22.76-1960, Threaded Lens Mounts for 16mm and 8mm Motion-Picture Cameras (revision of PH22.76-1951), which was approved by the American Standards Association on January 7, 1960. This standard does not differ from the proposal published for trial and comment in the February 1959 Journal, where a summary of its development will be found. — *J. Howard Schumacher*, Staff Engineer.

APPENDIXES

(These Appendixes are not a part of American Standard Threaded Lens Mounts for 16mm and 8mm Motion-Picture Cameras, PH22.76-1960, but are included to facilitate its use.)

APPENDIX 1

Past practice has not been entirely consistent so far as dimension X of the "D" mount is concerned. Some existing cameras will not accept a thread longer than 0.115 in.; some lenses have been made with a length of 0.120 or 0.125 in.

APPENDIX 2

If any part of the lens mount has a larger diameter than dimension Z, it should be checked for mechanical interference with the camera on which it is to be used.

Proposed American Standard

Dimensions for Video, Audio and Control Records on 2-in. Video Magnetic Tape

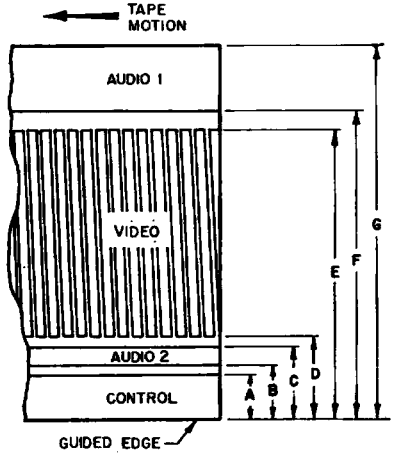
PH22.120

1. Scope

1.1 This standard specifies the locations and dimensions of the video, audio and control records on 2-in. video magnetic tape.

2. Dimensions

2.1 The dimensions shall be as specified in the diagrams and tables.



Dimensions	Inches		Millimeters	
	Min	Max	Min	Max
A	0.045	0.050	1.14	1.27
B	0.055	0.060	1.40	1.52
C	0.075	0.080	1.90	2.03
D	0.085	0.090	2.16	2.29
E	1.905	1.910	48.39	48.51
F	1.925	1.930	48.90	49.02
G	1.996	2.000	50.70	50.80

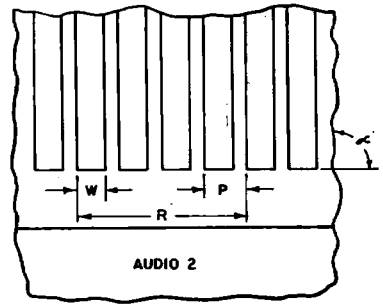
3. Magnetic Coating

3.1 With the direction of tape motion as shown in the diagram, the magnetic coating is on the surface facing the observer.

4. Video Track Curvature

4.1 The video track shall not deviate from a straight line by more than 0.001 in.

DETAIL OF VIDEO TRACKS



Dimensions*	Inches		Millimeters	
	Min	Max	Min	Max
P	0.0155	0.0157	0.394	0.399
R	0.0620	0.0630	1.575	1.600
W	0.0100	0.0105	0.254	0.267
α	90° 33′ ± 1′			

* These dimensions are based on a nominal tape speed of 15 in./sec and a video-track rate of 960 video tracks/sec.

NOT APPROVED

Proposed American Standard

Characteristics of the Audio Records for 2-in. Video Magnetic Tape Recordings

PH22.121

1. Scope

1.1 This standard pertains to the audio records for 2-in. video magnetic tape recordings.

2. Mechanical Characteristics

2.1 The tape path distance between video and audio recording heads shall be 9.250 ± 0.100 in., with the audio record on the tape preceding the corresponding picture record. The distance between the two heads shall be taken as that between the point of intersection of transverse and longitudinal center lines of each magnetic gap, with the video head positioned at the angle of rotation which places it at the center of the audio track.

3. Electrical Characteristics

3.1 Reproducing characteristics shall correspond to the National Association of Broadcasters Recording and Reproducing Standards for Mechanical, Magnetic, and Optical Recording and Reproducing; Section 2.80, Standard Reproducing Characteristic.

NOT APPROVED

Proposed American Standards

Proposed American Standards Dimensions for Video, Audio and Control Records on 2-in. Video Magnetic Tape, PH22.120, and Characteristics of the Audio Records for 2-in. Video Magnetic Tape Recordings, PH22.121, have been approved by the Video Tape Recording and Standards Committees. The standards are published here for a three-month period of trial and criticism. All comments should be addressed to Society Headquarters, attention of J. Howard Schumacher, Staff Engineer, prior to May 15, 1960. If no adverse comments are received, the proposals will then be submitted to ASA Sectional Committee PH22 for further processing as American Standards.—*J.H.S.*

Correction

In the Proposed American Standard Dimensions for 2-in. Video Magnetic Tape Reels, PH22.116, published in the November 1959 *Journal*, p. 770, a decimal point was missing from the engraving plate. The dimension shown in Table I for G should have read "120 ± 0.1."