Draft USA Standards

Four draft USA Standards are published here for a trial period and public review. Comments should be addressed to Alex E. Alden, Staff Engineer, at Society Headquarters before July 31, 1968. The proposals have also been submitted to USASI Standards Committee PH22. Consequently, all comments received through *Journal* publication will be reviewed prior to the conclusion of action by the PH22 Committee.

Two of the proposals are revisions of existing standards. PH22.61, Specifications for 35mm Sound Focusing Test Films, Photographic Type, is in fact a reaffirmation of the earlier issue modified editorially. This revision also incorporates the technical material originally published in PH22.62-1960, which is being withdrawn. The earlier issue, PH22.75, Designation of A and B Windings for Motion-Picture Raw Stock, covered only 16mm films; it has now been expanded to include all widths of non-symmetrically perforated raw stock.

PH22.172.1, Dimensions of Cemented Splices on 8mm Motion-Picture Film, Perforated Super 8, Projection Type, and PH22.172.2, Dimensions of Tape Splices on 8mm Motion-Picture Film, Perforated Super 8, Projection Type, are new standards covering the splicing of super 8 type film.

Proposed Withdrawal of USA Standard

The Sound and Standards Committees have recommended the withdrawal of USA Standard PH22.62-1960, 9-Kilocycle Sound Focusing Test Film for 35mm Motion-Picture Sound Reproducers. The Standard was published in the November 1948 issue of the *Journal*.

Withdrawal action has been initiated because the content of the standard has been incorporated into the revision of PH22.61, published here.

If no objections are received, USA Standards Committee PH22 will be requested to approve termination of this document.—*AEA*

Draft USA Standard Specifications for

35mm Sound Focusing Test Films, Photographic Type

PH22.61

Revision of PH22.61-1963

1. Scope

This standard describes test films that may be used for focusing the optical systems in 35mm motion-picture sound reproducers.

2. Test Films

2.1 The test films shall be of two types, as follows:

Type A—A film with a 9 kHz record to be used in factories or laboratories, for precise adjustment of the sound-focusing system.

Type B—A film with a 7 kHz record to be used when simpler instruments are available or when lower quality is adequate, for quick adjustment of the sound-focusing system.

2.2 The film shall be a print from an original negative and shall contain a sinusoidal, variable-area record recorded at 1 dB below 100 percent modulation. The variation in amplitude shall be not more than ± 0.25 dB.

2.3 The azimuth of the sound record shall be perpendicular to the direction of film travel within ± 3 min of arc.

2.4 The sound record shall comply with USA Standard Dimensions of Photographic Sound Record on 35mm Motion-Picture Prints, PH22.40-1967.

3. Film Stock

The film stock used shall be of the low-shrinkage, safety type, cut and perforated in accordance with USA Standard Dimensions for 35mm Motion-Picture Film, KS-1870, PH22.36-1964.

4. Identification

Each film of Type A shall be marked PH22.61-9 kHz Focusing. Each film of Type B shall be marked PH22.61-7 kHz Focusing. This marking shall be printed lengthwise in the central portion of the film and the spacing between consecutive titles shall be approximately 12 in.

5. Film Length

The film shall be supplied in minimum lengths of 50 ft.

NOTE 1: The 9 kHz test film (Type A) is not recommended for theater use because the reproducing amplifiers ordinarily installed in theaters normally have low-pass filters which cut off below 9 kHz.

NOTE 2: Test films made in accordance with this standard are available from the Society of Motion-Picture and Television Engineers.

NOT APPROVED

Draft USA Standard Designation of

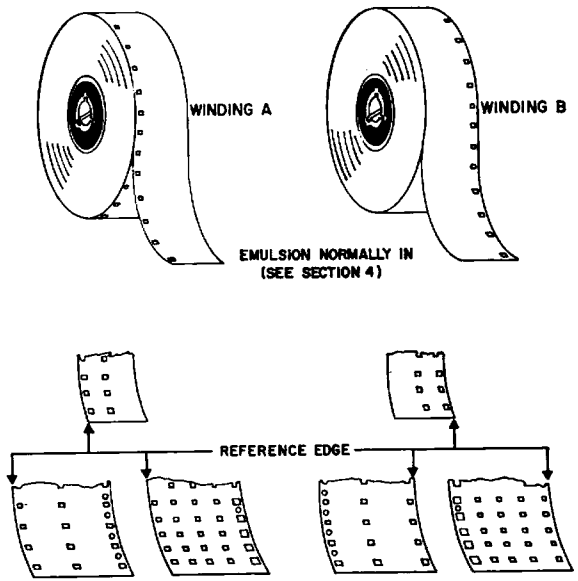
A and B Windings for Motion-Picture Raw Stock

PH22.75

Revision of PH22.75-1953

1. Scope

This standard specifies a method for designating the type of winding for rolls of single-row perforated and multiple-row, nonsymmetrically perforated motion-picture raw stock films in terms of the position of the perforations. A method for designating the photographic emulsion orientation is also specified.



2. Reference Edge of Film

2.1 For single-row perforated raw stock, the reference edge shall be that edge closest to the perforations.

2.2 For multiple-row, nonsymmetrically perforated raw stock, the reference edge shall be that edge closest to a row of perforations which may be retained if the film is subsequently slit into narrower widths.

3. Winding Designation

The winding of the film shall be designated A or B. When a roll of motion-picture raw stock is held so that the roll of film is above and away from the observer and the film end unwinds from the side of the roll which is toward the observer and down, Winding A shall have the reference edge of the film along the left side; Winding B shall have the reference edge of the film along the right side. No preference for either type of winding is implied, since both types are required for use on existing equipment. The film may be wound on cores for darkroom loading or on spools for daylight loading.

4. Emulsion Orientation Designation

If the emulsion side of the film is in, it shall face toward the center of the wound roll and no prefix shall precede the winding designation of A and B. If the emulsion side of the film is out, it shall face away from the center of the wound roll and the winding designation of A or B will be preceded by the letters EO and written as EOA or EOB.

NOTE: Many 35mm multiple-row, nonsymmetrically perforated films contain a discard row of perforations usually having some form of visible identification. It has been the practice to identify the winding orientation by this visible identification, such as L or R. Temporarily, some manufacturers may wish to supplement the new A and B film identification with L (which is now B) or R (which is now A).

Appendix

(The Appendix is not a part of this Draft USA Standard, but is included to facilitate its use.)

Some 16mm films are supplied on spools with a square hole in one flange and a round hole in the other. Since the flange orientation is important to a customer when requesting A or B winding for his product, it may be desirable for a manufacturer to identify the flange orientation when spools with dissimilar holes are used.

Draft USA Standard Dimensions of

Tape Splices on 8mm Motion-Picture Film Perforated Super 8, Projection Type

PH22.172.2

1. Scope

This standard specifies the dimensions of mated cut splices on 8mm motion-picture film perforated super 8 made with an adhesive tape and intended only for projection.

2. Dimensions

2.1 The dimensions shall be as given in the figures and table and apply to a freshly-made splice.

2.2 The mated cut of the film shall fall within the area defined by Dimensions A, C, and D. However, if the mated cut is not a straight cut made on one frameline, the cut configuration shall intrude into only one of the two adjoining picture frames.

2.3 The spliced films shall not be offset by more than 0.002 in. (0.05mm), Dimension G, as measured by the difference in the alignment of the reference side edge of the perforation holes on either side of the spliced halves.

2.4 In the plan view, the angle between the respective edges of the spliced film shall be 180° ± 8′. Thus, the spliced film shall be aligned to the extent that, when one portion of the film is placed against a straight edge, the other portion will not deviate more than 0.014 in. (0.36mm) in 6 in. (152 4mm).

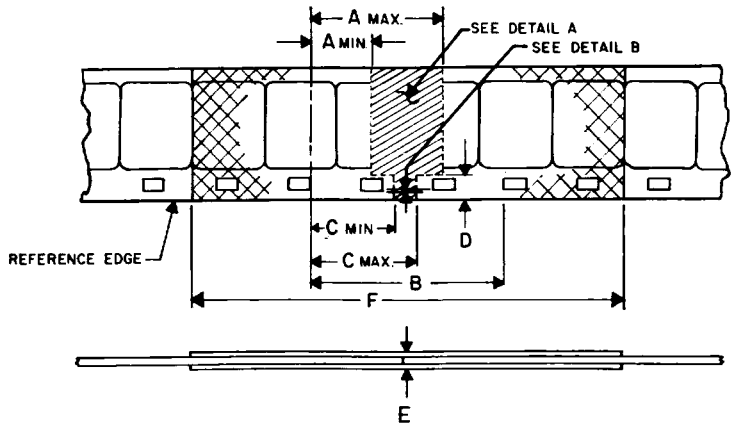
2.5 Except as described in 2.6 below, the dimensions of the tape applied to secure the splice shall be such as not to interfere with the film dimensions (especially perforations) as specified in USA Standard Dimensions for 8mm Motion-Picture Film Perforated Super 8, 1R-1667, PH22.149-1967, and fall within the area described by Dimension F. The width of the adhesive material should encompass the full width of the film if applied to only one side; however, if also applied to the second side, it may exclude either the perforation area or the sound stripe area.

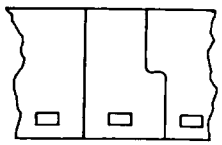
2.6 If the tape used to form a splice is wrapped around the film, either film edge may be used as the wrap-around edge. However, if the perforated edge is used, it is recommended that the splice add no more than 0.002 in. (0.05mm) to the film width. The overall width of the spliced area should not exceed 0.319 in. (8.10mm). If the film is trimmed after the wrap-around splice has been made, the film width shall not be less than 0.312 in. (7.92mm) and shall not affect the perforated edge of the film.

NOTE 1: The splice should have a negligible gap between the mated cuts of the film ends and there should not be any film overlap at the splice.

NOTE 2: Films joined with tape splices are not acceptable for use as originals in commercial printing operations. (See Draft USA Standard Dimensions of Cemented Splices on 8mm Motion-Picture Film Perforated Super 8, Projection Type, PH22.172.1, for this use.)

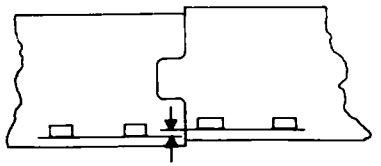
NOT APPROVED





DETAIL A

TYPICAL SPLICE CUT CONFIGURATIONS



DETAIL B

ALIGNMENT DIMENSION SPECIFICATION

Dimensions	Inches		Millimeters	
A	0.144	min	3.66	min
	0.311	max	7.90	max
B	0.455 ± 0.002		11.56 ± 0.05	
C	0.197	min	5.00	min
	0.258	max	6.55	max
D	0.062	min	1.57	min
E	0.010	max	0.25	max
F	1.00	max	25.4	max
G	0.002	max	0.05	max

Draft USA Standard Dimensions of

Cemented Splices on 8mm Motion-Picture Film Perforated Super 8, Projection Type

PH22.172.1

1. Scope

This standard specifies the dimensions of cemented splices on 8mm film perforated super 8 primarily intended for projection.

2. Dimensions

2.1 The dimensions shall be as given in the figure and table.

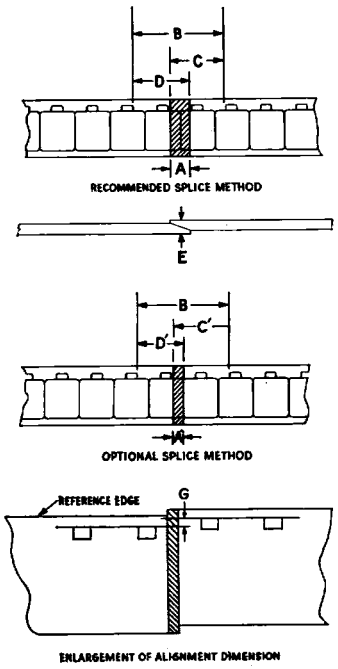
2.2 The film width at the splice shall not exceed 0.318 in. (8.08mm). If the film has been widened during scraping, the extra material shall be removed.

2.3 The spliced films shall not be offset by more than 0.002 in. (0.05mm), Dimension G, as measured by the difference in the alignment of the reference edge side of the perforation holes on either side of the spliced halves.

2.4 In the plan view, the angle between the respective edges of the spliced film shall be 180° ± 8′. Thus, the spliced film shall be aligned to the extent that, when one portion of the film is placed against a straight edge, the other portion will not deviate more than 0.014 in. (0.36mm) in 6 in. (152.4mm).

NOTE: The splice should never cut into or include a perforation.

Dimensions	Inches	Millimeters
A	0.055 ± 0.015	1.40 ± 0.38
A′	0.055 ± 0.008	1.40 ± 0.20
B	0.454 ± 0.001	11.53 ± 0.03
C	0.255 ± 0.007	6.48 ± 0.18
C′	0.283 ± 0.004	7.20 ± 0.10
D	0.255 ± 0.007	6.48 ± 0.18
D′	0.228 + 0.001 − 0.004	5.79 + 0.03 − 0.10
E	0.012 max	0.30 max
G	0.002 max	0.05 max



NOT APPROVED

Appendix

(This Appendix is not a part of this Draft USA Standard, but is included to facilitate its use.)

A1. The transverse cut to provide the mated pairs of film for the tape splice may be made in numerous configurations. Detail A of the figure shows only some typical configurations. It is desirable, however, to make the splice as inconspicuous as possible; therefore, the transverse cuts would usually be on the frameline or occur in only one frame.

A2. Dimension B controls the longitudinal registration of the two films being spliced. It is measured to the perforations that are most commonly used for registration on splicing blocks, and to the nearer edges of these perforations, because they are the edges generally used.

A3. If tape splices are made with films to which magnetic oxide has been applied or may be applied, it will be necessary to exclude the splicing material from the magnetic record stripe area.

A4. The visual disruption of the projected image caused by the splice will be minimized if the length of the splicing tape, Dimension F, is kept as short as possible within the requirements of dimensional stability. It is anticipated that, as adhesives are improved, the length of the splicing tape may become as little as one or two frames.

PH22.172.2—NOT APPROVED

Appendix

(This Appendix is not a part of this Draft USA Standard, but is included to facilitate its use.)

A1. Splices for super 8 films have been made narrower than conventional 8mm splices because narrower splices are less conspicuous on the screen and are less likely to affect the usual curvature of the film as it follows the bends in its path through cine machinery or continuous-loop cartridges.

A2. Dimension B controls the longitudinal registration of the two films being spliced. It is measured to the perforations that are most commonly used for registration on splicing blocks and to the nearer edges of these perforations because they are the edges generally used.

A3. In the plan view, the splice is arranged with the perforations at the top in order to show them as they appear on most splicers. Bevelled splices are recommended, especially for films which will be run over magnetic heads. However, if unbevelled overlap splices are made, it is desirable to orient the films in splicing so that a magnetic head scanning the film would, at a splice, drop down onto the trailing film rather than bump up onto it.

A4. The scraped area should be limited as closely as possible to the area covered by the overlapping film, in order to prevent the appearance of a white line on the screen.

PH22.172.1—NOT APPROVED