Letter to the Editor

Re: The New SMPTE Leader and Position of Sound

Dear Sir:

In reviewing the use of the new SMPTE leader our attention was drawn to what appears to be a recent practice of bringing the sound up into the leader. This is a trend that is not in accord with accepted practice, nor will it improve the programing.

There is no doubt that the reasons for desiring to participate in this type of practice is to make the sound simultaneous with the first frame. It is also rather obvious that moving the sound into the leader will give appreciably more time in a short spot. It is very obvious that it is possible to pick up almost a second in the audio, which is an appreciable portion of a short multi-second spot.

There are arguments against this practice:

One of the strongest arguments is that of splicing. If the sound is up into the leader either the film cannot be spliced without cutting the sound, or if it is cut and spliced before the sound starts there will be approximately one second of leader before the first frame.

In operation there is a reaction time of the operator. If he is waiting to see the first frame before he makes a switch the reaction time alone will probably cause him to up-cut the sound.

One of the more subtle problems is that of starting times of projectors. Since it takes a period of time for the sound to stabilize, the projectors are normally started between a compromise of stability and lead time. Moving the sound into the leader can take almost a second away from the starting time of a projector. The results of this are quite obvious, in that many projectors will not be up to speed and there will be the complaint of wowing.

There is also a more subtle argument, and that is the argument of loudness. This obviously is a subject of great concern to all people in the television business. There appears to me to be a definite advantage in this argument of loudness if there is a short pause between the end of one message and the start of the next message. We are sure all recognize that loudness is something that cannot be defined and that rapid-fire delivery can be offensive.

We believe it is obvious that the cons outweigh the pros in this argument. It is, in our estimation, not only very bad practice, but it is also contrary to all published standards on leaders. Basically a leader is a leader and is for the purpose of cuing and not for the purpose of carrying a message. We believe that it is up to everyone involved in the television business to do all that we can to stop this practice before it gets such a firm hold on the industry that control is lost.

Good control of this will assure us smooth continuity as well as increase our pride in program continuity and acceptability by the public.

May 26, 1966

R. E. Putman, *Chairman*
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Comment: If the air time is so important, it might be well to make a special television projector with a sound pickup ahead of the picture gate and place the sound record directly adjacent to the corresponding frame. The pickup could be connected with a delay device such as a magnetic drum or belt which would hold the sound record for the time of arrival of the picture in the gate. No splicing problem would be incurred, as any straight-across splice would affect the same part of the records. With today's quality of magnetic recording and reproduction, there should be no quality problem. The only problem is economics — is the improvement of quality worth the cost?— *Deane R. White,* SMPTE Engineering Vice-President.

standards and recommended practices

Proposed American Standards

Two proposed American Standards are published here for a trial period and public review. Comments should be addressed to Alex E. Alden, Staff Engineer, at Society Headquarters prior to August 15. The proposals have been submitted to ASA Sectional Committee PH22. Consequently, all comments received through journal publication will be reviewed prior to conclusion of action by that Committee.

Proposed American Standard PH22.40, Dimensions of Photographic Sound Record on 35mm Motion-Picture Prints, is substantially a reaffirmation of the earlier issue, modified editorially to facilitate its use.

Proposed American Standard PH22.148, Specifications for Film Image Area Used for Review Room Viewing of 35mm and 16mm Motion-Picture Prints Intended for Television Transmission, is a new standard based on the SMPTE Recommended Practice RP 13, Safe Action Area for Television Transmission. It is concerned with that part of the image which is assumed to be seen on the majority of properly adjusted home television receivers.—*A.E.A.*

Proposed American Standard Dimensions of

Photographic Sound Record on 35mm Motion-Picture Prints

PH22.40

Revision of PH22.40-1957

1. Scope

1.1 This standard specifies the location and dimensions of variable area and variable density sound records on 35mm motion-picture prints.

1.2 This standard specifies the area scanned in the sound reproducer.

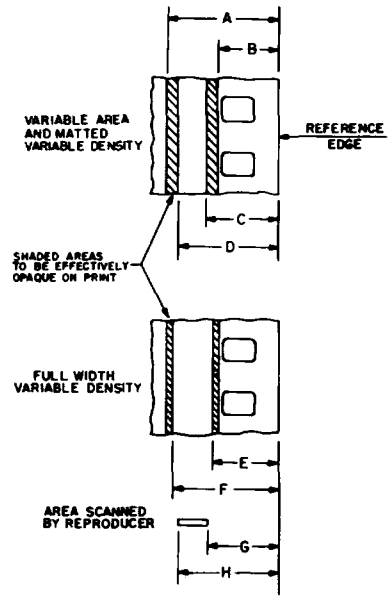
2. Dimensions

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

2.2 The sound record on the film shall be displaced from the center of the corresponding picture by a distance of 21 frames ± ½ frame in the direction of film travel during normal projection.

3. Related Standards

3.1 Prints made in conformance with this standard are intended to be used in accordance with American Standard 35mm Photographic Sound Motion-Picture Film, Usage in Projector, PH22.3-1961.



Dimensions	Inches	Millimeters
A	0.308 nom	7.82 nom
B	0.192 nom	4.88 nom
C	0.205 ± 0.001	5.21 ± 0.03
D	0.281 ± 0.001	7.14 ± 0.03
E	0.193 + 0.004 − 0.000	4.90 + 0.10 − 0.00
F	0.293 + 0.000 − 0.004	7.44 + 0.00 − 0.10
G	0.202 ± 0.001	5.13 ± 0.03
H	0.286 ± 0.001	7.26 ± 0.03

NOT APPROVED

3.2 Dimensions A and B, describing the printed area of the sound record, are established by American Standard Dimensions of Exposed Areas for Picture and Photographic Sound on 35mm Motion-Picture Prints Made on Continuous Contact Printers, PH22.111-1965, and are shown in the table as nominal values for reference only.

Appendix

(This Appendix is not a part of Proposed American Standard Dimensions of Photographic Sound Record on 35mm Motion-Picture Prints, PH22.40, but is included to facilitate its use.)

This standard specifies that the photographic sound record will be advanced with respect to the picture by 21 frames when a composite print is produced. Consequently, when sound and corresponding picture should be synchronized for an observer close to the projected picture, or if a situation not introducing an acoustic delay at the time of projection is desired, the scanning point of the sound record must be positioned at the 21st frame ahead of the corresponding picture frame.

For example, if the positioning of frame 21 at the scanning point brings the corresponding picture and sound to the screen and the speaker at the same instant, then positioning frame 20 at the scanning point would give synchronism at about 50 ft from the screen, 19 frames would give synchronism at 100 ft, etc.

In the average theater, however, it is necessary to emit the sound pulses before the corresponding picture frame is positioned in the aperture. Since sound travels approximately 1100 ft per second or about 50 ft per frame during the normal projection rate of 24 frames p' second, the projectionist can place the sound and p ure in synchronization in the theater where he wishes by varying the length of the threading path in the projector.

Proposed American Standard Specifications for

Film Image Area Used for Review Room Viewing of 35mm and 16mm Motion-Picture Prints Intended for Television Transmission

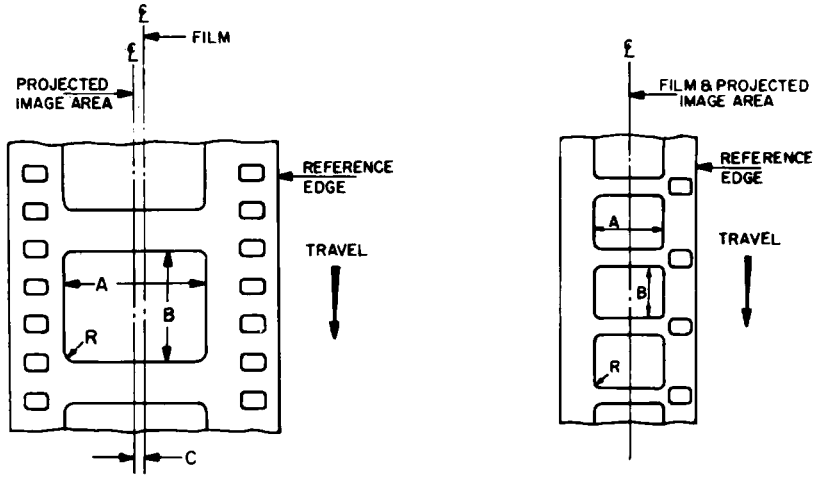
PH22.148

1. Scope

This standard specifies the dimensions of that part of the film image area used for review room viewing of 35mm and 16mm motion-picture prints intended for television transmission, and the placement of this area relative to the perforations and reference edge of the film.

2. Dimensions

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



35mm			16mm	
Inches	Millimeters	Dimensions	Inches	Millimeters
0.713	18.11	A	0.331	8.41
0.535	13.59	B	0.248	6.30
0.050	1.27	C		
0.143	3.63	R	0.066	1.68

NOT APPROVED

2.2 Dimensions A, B and R are specified in conformity with SMPTE Recommended Practice RP 13-1963, Safe Action Area for TV Transmission.

2.3 Review room projector apertures must be centered with reference to the vertical dimension of the image on the film, and remain in that position throughout screening. The center point of the projector aperture shall coincide with the center point of the projectable image specified in American Standard Projected Image Area of 16mm Motion-Picture Film, PH22.8-1957, and American Standard Aperture for 35mm Sound Motion-Picture Projectors, PH22.58-1954.

NOTE: The safe action area should not be confused with either the safe title area, described in SMPTE Recommended Practice RP 8-1961, Safe Title Area for TV Transmission, or the scanned area specified in American Standard Dimensions for Television Image Area on 35mm Motion-Picture Film, PH22.95-1963, and American Standard Dimensions for Television Image Area on 16mm Motion-Picture Film, PH22.96-1963.

Appendix

(This Appendix is not a part of Proposed American Standard Specifications for Film Image Area Used for Review Room Viewing of 35mm and 16mm Motion-Picture Prints Intended for Television Transmission, PH22.148, but is included to facilitate its use.)

A1. Viewing Conditions

During preparation of motion pictures, the producer, the motion-picture film laboratory personnel, and others examine the film many times from the original test shots through many stages to the final release prints. The films are projected in a specialized theater known as a "review room." These installations are designed to permit judgments of projected picture quality and determinations of the suitability and acceptability of release prints, daily and work prints, production tests, printer and processing tests, etc. The rooms are constructed to accommodate a small reviewing group of usually 10 to 20 people. The actual picture size may be large or small, depending upon the space available, but the viewing conditions are chosen to duplicate as nearly as possible actual conditions whether the print is intended for theatrical viewing or television transmission. All viewing conditions are capable of precise control and should be held to a minimum tolerance.

A2. Action Area

This standard specifies a specific area within which all significant action should take place, with the intent of ensuring visibility of the action on a properly adjusted home receiver. Projectors used primarily for print inspection rather than production evaluation should have apertures at least as large as the scanned area which is 0.792 in. wide by 0.594 in. high for 35mm and 0.368 in. wide by 0.275 in. high for 16mm. The dimensions of the safe action area should be indicated at the projection screen.