

Although the *Committees of Technical Experts* are not required to hold formal meetings, they may do so. The value of across-the-table discussions is recognized and informal meetings are encouraged. Brief minutes of the meeting, indicating attendance and agenda, will be prepared for the record. Formal minutes documenting discussions will not be prepared, but their function will be met by an *Annual Status Report* covering the prior calendar year. The report will be prepared by the Staff Engineer and circulated no later than the end of February of each year to all participants of the standards program. The *Annual Report* shall include items completed during the year, the status of subjects under consideration and reports of functioning *Working Groups*.

Procedure for the Adoption of an American National Standard

Figure 2 illustrates the normal path of study and review that leads to the approval and publication of an American National Standard, an engineering report or an SMPTE Recommended Practice. Although a request for a standard or project usually originates within the *Applications Committee*, it is appropriate for

an individual or group to recommend such action. The recommendation is forwarded to the Engineering Vice-President who assigns the task to the appropriate chairman within the *Applications Committee*. The working procedure then follows the path previously outlined.

The Society hopes that the new reorganization plan will permit its engineering program, successful for many years, to achieve an even fuller growth potential, and thereby be of even greater service to the industry and to the nation. Proud of the reputation gained over the last 58 years, the Society does not wish to jeopardize its responsibility for maintaining efficient secretariat programs on the national and international levels — secretariat functions that assist the voluntary programs to improve and extend the usefulness of the motion-picture and television industry and to permit the most effective utilization of the technical support underwritten by so many components of the industry. The standardization program growth must match the response level of industry. To this end the new program is dedicated.

standards and recommended practices

Approved SMPTE Recommended Practices

On 21 April 1974, the Society's Board of Governors approved two SMPTE Recommended Practices: RP 53-1974, Scene-Change Notching for Printing 35mm Motion-Picture Film, specifies the commonly used edge notch in laboratory practices, and RP 54-1974, Edge Numbering on 16mm Release Prints, recommends that edge numbering of 16mm prints be done in accordance with American National Standard PH22.83-1972.

Copies of these and other SMPTE Recommended Practices may be purchased from Society Headquarters.

Proposed SMPTE Recommended Practices

Two Proposed SMPTE Recommended Practices are published here for a trial period and public review: RP 57, Vertical

Interval Reference (VIR) Signal, represents an endorsement by the SMPTE of the Vertical Interval Reference (VIR) Signal as specified in Electronic Industries Association Television Systems Bulletin No. 1, EIA Recommended Practice for Use of a Vertical Interval Reference (VIR) Signal, and RP 58, Nomenclature for Devices Enclosing 8mm Motion-Picture Film for Projection, defines the devices used for enclosing 8mm film for projection as either cartridges or cassettes and the reasons for the specific terminology.

Comments on the proposals should be addressed to Alex E. Alden, Staff Engineer, at Society Headquarters prior to 1 September 1974. If no adverse criticism is received by that date, the Proposed SMPTE Recommended Practices will be submitted to the Board of Governors for final approval. — Alex E. Alden, *Staff Engineer*

*Scene-Change Notching for Printing
35 mm Motion-Picture Film*



Edge Numbering on 16 mm Release Prints



1. *Scope*

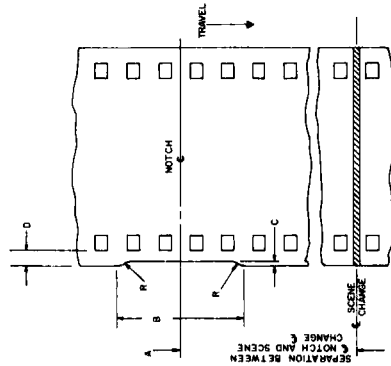
This recommended practice specifies the dimensions and location of a scene-change notch for actuating the printer light-change mechanism when printing 35 mm motion-picture film.

2. *Dimensions and Location*

2.1 The dimensions and location of the scene-change notch shall be as given in the figure and table.

2.2 The scene notch centerline shall be 4.5 in (114 mm) after the scene change with respect to the direction of film travel through the printer.

2.3 For forward and backward printing, a second notch placed in accordance with 2.1 may be added to the opposite edge of the film, and (observing the change in direction of travel) the centerline distance between the two notches shall be two times Dimension A.



FILM AS VIEWED EMULSION UP

Dimensions	Inches	Millimeters
A	4.500 ± 0.012	114.30 ± 0.30
B	1.000 ± 0.012	25.40 ± 0.30
C	0.047 ± 0.000	1.19 ± 0.00
D	0.079 ± 0.000	2.01 ± 0.00
R	0.500 ± 0.060	12.70 ± 1.52

1. *Scope*

This recommended practice covers the size, type and frequency of numbers placed on 16 mm release prints. The purpose of these numbers is usually to determine specific locations on multiple-copy release prints of the same subjects.

2. *Specifications*

2.1 The size, type and location of the numbers shall be as specified in American National Standard Specifications for Location and Spacing of Edge Numbers on 16 mm Motion-Picture Film, PH422.83-1972.

2.2 The frequency of the numbers for release print use shall be 40 frames, with each number increasing one digit from a 0000 start at the head of the print consecutively to the end of the print. In this manner, the numbers represent a footage scale on the print.

Note: Other numbers may appear on the release prints. These numbers may be at different intervals than 40 frames, may differ in sequence and magnitude, and have no relation to the function of footage numbers for release print footage purposes.

SMPTE RECOMMENDED PRACTICE

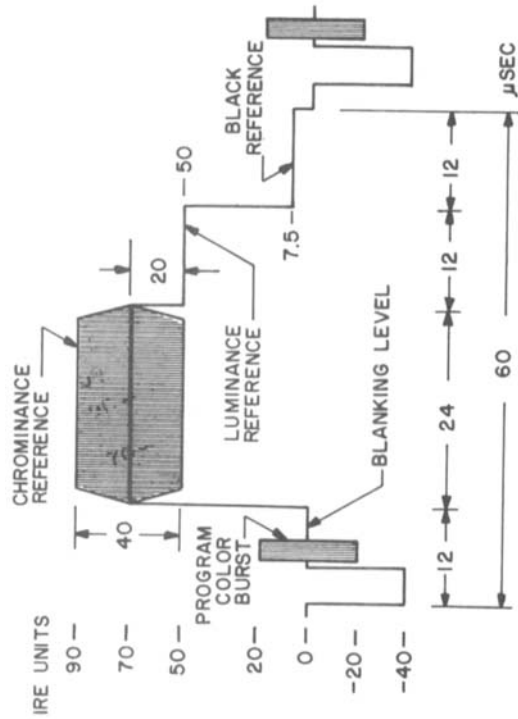
Vertical Interval Reference (VIR) Signal

RP 57

5. Format

4.3 The VIR signal will be recorded by only one head of a multi-head video tape recorder. Since it is essential to balance head output levels, this characteristic does not reduce the usefulness of the VIR signal.

The nominal waveform of the VIR signal is shown below. Note that the chrominance reference and the program color burst have the same phase.



NOMINAL VERTICAL INTERVAL REFERENCE (VIR) SIGNAL

Page 1 of 2 pages

1. Scope

This recommended practice represents an endorsement by the SMPTE of the Vertical Interval Reference (VIR) Signal as specified in Electronic Industries Association Television Systems Bulletin No. 1, EIA Recommended Practice for Use of a Vertical Interval Reference (VIR) Signal. The document may be obtained from the Electronic Industries Association, 2001 Eye Street, NW, Washington, DC 20006.

2. Purpose

2.1 The VIR signal is a program-related reference signal inserted during the vertical blanking interval of a color television program. It is intended to reduce undesirable variations in color throughout the television system by assisting television producers and operators in adjusting various signal parameters so that different programs and program segments have similar amplitude and phase characteristics whether viewed sequentially on the same channel or on different channels.

2.2 The VIR signal is intended to be associated with a particular television program as an operational tool for checking the parameters of that program and is a reference for that program. The VIR signal is not intended to provide quantitative data on transmission distortions.

3. Usage

Because the VIR signal is intended to be associated with a particular program, it should be inserted into the program signal at a point in the video system only where both the correct amplitudes and phase of the composite color signal are established and the artistic judgment is made that color reproduction is as desired. Thus, it is the responsibility of each production organization (local operators, commercial producers, etc.) to make that artistic judgment. Once the VIR signal is inserted in this manner, it represents a certification of and a reference for the program signal. After the VIR signal has been inserted into the

program signal, it must be treated exactly like the program signal in all equipment through which it passes so that the VIR signal will always correspond to the program. Then, when adjustments are made to restore a VIR signal to its proper characteristics at any point in the video system, the program will have been re-established to essentially the same characteristics as when it was initially certified. The VIR signal inserted at the point of certification should remain with the program to its final destination. Exceptions to this practice should be made only at a point of recertification, such as an assembly point of various program segments.

4. Specific Usage with Video Tape Recorders

4.1 One important application of the VIR signal is in the adjustment of a reproduced video tape recording. This usage applies to all video tape formats used for broadcasting and is important both for the playback of a single tape and for the sequential playback of several short commercials and program segments. The VIR signal shall be added to each video tape at a point prior to the duplication of the final release copies but after the correct signal parameters are established (as described in Section 3) and any necessary artistic judgments have been made as to proper color reproduction. The program then will have been certified.

4.2 When a VIR signal is present on a signal to be recorded on a video tape recorder, it shall be recorded and shall appear during playback at the output of the recorder. The VIR signal as passed by the video tape recorder shall be considered as reference for either manual or automatic adjustment of the reproduced signal characteristics listed below:

- Luminance amplitude
- Black-level amplitude
- Sync amplitude
- Chrominance amplitude
- Color burst amplitude and phase

THIS PROPOSAL IS PUBLISHED FOR COMMENT ONLY

Nomenclature for Devices Enclosing 8 mm Motion-Picture Film for Projection

1. Scope

This recommended practice defines the terms CARTRIDGE and CASSETTE when applied to devices enclosing 8 mm motion-picture film intended for projection. It does not apply to enclosures or containers for unexposed 8 mm camera film.

2. Definitions

- 2.1 The term CARTRIDGE should be used for devices enclosing 8 mm motion-picture film for projection where the ends of the film are joined to form an endless loop.
- 2.2 The term CASSETTE should be used for devices enclosing 8 mm motion-picture film for projection where the film is contained in a conventional roll form and the ends are not joined.

Appendix

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

The proliferation of devices to enclose processed motion-picture film intended to simplify and, more or less, automate the use of projectors or display mechanisms has led to some confusion of nomenclature among the basic types of devices. For super 8 projectors especially, such devices generally may be grouped in two categories: those in which the film is in the form of an endless loop and those in which the film is in conventional roll form and the ends are not joined. Each of these groups, aside from the differences of particular design within a group, offers a basically different combination of features and use patterns. It is obvious that suppliers and users alike would benefit from consistent generic nomenclature which would make clear which type of device was being referred to.

Past and present colloquial word usage within the United States makes selection of completely unambiguous terms difficult. Such devices also are already items of international exchange. Thus,

reconciliation of foreign language terms and their translations to English and vice-versa, is also involved. Some similarity to devices and nomenclature in the audio and video magnetic tape and microfilm fields is another complication. These problems, as well as the desirability of consistent nomenclature for processed motion-picture film packaged for projection were recognized by the ad hoc committees of the 16 & 8 mm Committee which have considered the preparation of American National Standards for such devices.

It may be impossible, short of coining new words, to have a completely specific nomenclature that does not conflict with or overlap that used in other areas of interest, such as magnetic tape or microfilm. However, the benefits of consistency within the motion-picture industry outweigh, on a practical basis, the hazards of particular words having slightly different meanings in other areas or languages.

Pierre Mertz Moves to New Jersey



Pierre Mertz has moved from his home at Lido, Long Beach, N.Y., to New Jersey. His new address is Meadow Lakes 901, Etra Rd., Hightstown, NJ 08520.

A member of the Society for more than 33 years, Dr. Mertz has been Chairman of the Society's Board of Editors for almost 20 years. During those years he has been the most important influence in maintaining the quality of the *SMPTE Journal*.

During a distinguished 35-year career with the Bell System, much of Dr. Mertz's work was in the field of transmission prob-

lems relating to telephotography and television. In 1934 a paper entitled "A Theory of Scanning and Its Relation to the Characteristics of the Transmitted Signal in Telephotography and Television" by Pierre Mertz and F. G. Gray appeared in the *Bell System Television Journal* (Vol. 8 No. 3). An extraordinary work now regarded as a classic, it provided the National Television Systems Committee (NTSC) with the means for producing compatible color television.

By the expression in a double Fourier series of the signal resulting from scanning, Mertz and Gray showed that it was possible to demonstrate the existence of gaps in the spectrum in which pilot and control tones or other signals might be transmitted without interference. This mathematical theory of scanning underlies the NTSC color television transmission system. The two men, unknown to each other, had worked independently on the same problem. They were brought together by a colleague who suggested that they join forces in publishing their findings.

Dr. Mertz is the author of many other important papers; among the noteworthy papers that have appeared in this *Journal* are: "Perception of Television Random Noise" (Jan. 1950), "Data on Random-Noise Requirements for Theater Television" (Aug. 1951), "Influence of Echoes on Television Transmission" (May 1953) and "Long Haul Television Transmission"

(Sept. 1966). In addition to the important technical papers, Dr. Mertz's contributions to the *Journal* have included translations, historical notes and reports. He is the author of an extensive entry in "Techniques of Motion Pictures" in the current *Encyclopaedia Britannica*.

Dr. Mertz was made a Fellow of the Society in 1948. In 1971 he was made an Honorary Member (the highest honor bestowed by the Society). In 1962 he was the recipient of the David Sarnoff Gold Medal Award presented in recognition of his development of the mathematical theory of scanning the television and for his studies of the effects of noise and of echoes on the quality of television pictures.

Among other professional organizations of which he is a member are the American Physical Society and the Inter-Society Color Council. He is a Fellow of the Institute of Electrical and Electronic Engineers and of the Optical Society of America. He is listed in *Engineers of Distinction* (the *Who's Who* for engineers) published by the Engineers Joint Council in New York. Of late years he has been active as a consultant in the development of facsimile systems, optical systems and in other fields.

He and Mrs. Mertz took up their new residence at the beginning of June.

A brief Biographical Note about Dr. Mertz's career appears in the May 1958 *Journal* (p. 344).