

Charles E. Anderson on the road: as the chief executive of the SMPTE, President Anderson may travel over 10,000 miles a month, spreading the gospel of motion picture and TV technology.



founded in 1916 to an international organization of more than 9,000. "It is a serious trust that has been placed upon us," Anderson said. "The SMPTE is an organization which has not only encompassed and adapted to the enormous technological advances of recent years, but has been influential in bringing about many advances." Anderson also stressed the unity of the Society, noting all its members have access to its many services.

Charles Anderson leads a full life with many interests. His main interests are, of course, Ampex and the SMPTE, but his hobbies provide balance, color, and zest to a well-rounded life. When he was younger, aviation and flying were his major passion. He flew his own plane, a Debonair (a Beech plane) for a number of years with no mishaps. "A most enjoyable time," he recalled.

Currently he is interested in the historical aspects of commercial air-

lines and airliners. He is the author of "The Martinliner" published in the *Journal of the American Aviation Historical Society*, and "Philippine Clipper," a gripping story of the Philippine Clipper's heroic struggle on December 8, 1941.

A complex personality, Anderson is a dynamic, highly competent man, able to perform with high efficiency in an extremely demanding job—in fact, two jobs, that of SMPTE President in addition to his heavy responsibilities at Ampex. On the other hand, there is an Anderson who feels the need of solitude and contemplation. He told us, "I spend as much time as possible at a cabin I own up in the Sierras in the heart of the Gold Country. In fact, one of the reopened gold mines, The Blazing Star, is just two miles from the cabin. One way to get away from the pressures of daily life is to sit and watch the trees grow and the boulders move."

One of Anderson's on-going hobbies is that of amateur filmmaking. Most of his films are about trains and run for 10 to 15 minutes. They are shown regularly to train buffs.

---

# STANDARDS AND RECOMMENDED PRACTICES

---

## Proposed American National Standards

Two Proposed American National Standards are published here for a trial period and public review: V98.29M, Basic System and Transport Geometry Parameters for 1-in Type B Helical-Scan Video Tape Reference Recorders for Video and Audio Reference Tapes; and V98.30M, Dimensions and Location of Records on Video and Audio Reference Tape for 1-in Type B Helical-Scan Video Tape Recorders.

## Proposed SMPTE Recommended Practice

A Proposed SMPTE Recommended Practice on the 1-in Type B format is also published for review: RP 107, Video and Audio Reference Tape for 1-in Type B Helical-Scan Format.

## Approved SMPTE Recommended Practices

Two SMPTE Recommended Practices were approved by the Society's Board of Governors on November 9, 1980: RP

94-1980, Gain Determination of Front Projection Screens; and RP 95-1980, Installation of Gain Screens. SMPTE Recommended Practices are available from Society Headquarters for \$1.50 each.

## Approved International Standard

The International Organization for Standardization (ISO) recently approved an International Standard, the technical content of which is published here for your information. ISO 5760-1980, Cinematography — Sound Motion-Picture Camera Cartridge, 8-mm Type S, Model 1 — Aperture Opening, Pressure Pad and Film Position — Dimensions and Specifications, is in agreement with American National Standard ANSI PH22.198-1980.

This material is reproduced with permission from the ISO and is copyrighted by the American National Standards Institute, 1430 Broadway, New York, NY 10018, from which complete copies are available.—Alex E. Alden, Manager of Engineering Services.

## Basic System and Transport Geometry Parameters for 1-in Type B Helical-Scan Video Tape Reference Recorders for Video and Audio Reference Tapes

V98.29M

Page 2 of 2 pages

### 1. Scope

This standard specifies test conditions, general video record system, video pole-tip locations, scanner parameters, scanner-guide locations, and the tape tension for 1-in Type B helical-scan video tape reference recorders operating on the 525/60 monochrome of NTSC color systems.

### 2. General Specifications

Tests and measurements made on the recorder to check the requirements of this standard shall be made under the following atmospheric conditions:

Temperature of drum diameter	$23 \pm 0.5$ C
Temperature for all other tests	$23 \pm 1$ C
Relative humidity	$50 \pm 2$ percent
Barometric pressure	86 to 106 kPa (860 to 1060 mbar)
Conditioning before testing	24 h

### 3. Video Record System

3.1 The video modulation system shall be the FM type.

3.2 The video record shall contain all picture lines and vertical sync information.

### 4. Video Heads and Scanner Parameters

4.1 Two video heads shall be positioned  $180^\circ \pm 20'$  apart,  $B$ , measured from the gap of video head 1 to the gap of video head 2, as shown in Fig. 1.

4.2 The drum size shall be  $50.330 \pm 0.003$  mm.

4.3 The nominal rotational speed of the head wheel shall be 150 r/s.

4.4 The video head protrusion shall be  $0.030 \pm 0.005$  mm, measured from the outer surface of the drum to the end of the head tip.

4.5 The video head gap shall be 90 nominal to the plane of rotation of the video head.

4.6 The control head gap shall be located at point Y (see Fig. 1) which lies on a line which is at  $90^\circ \pm 7.5'$ , measured from diameter F-G which is the centerline through the plate assembly.

### 5. Tape Tension

The record tape tension shall be as follows:

$T_{in}$ , tape tension in	measured between B and X $\pm 2.0 \pm 0.1$ N
$T_{out}$ , maximum tape tension out	measured between Y and E $\pm 2.3$ N

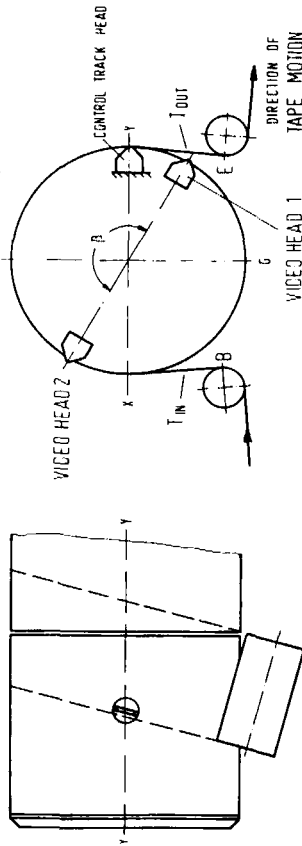


Fig. 1

### 6. Relevant Documents

In addition to this standard, the following documents apply:

Proposed American National Standard Dimensions and Location of Records on Video and Audio Reference Tape for 1-in Type B Helical-Scan Video Tape Recorders, ANSI V98.30M.

Proposed American National Standard Specifications and Conditioning of Raw Tape Stock Used to Record Reference Tapes for 1-in Helical-Scan Video Tape Recorders, ANSI V98.26M.

SMPTE Recommended Practice on Specifications of Tracking Control Record for 1-in Type B Helical-Scan Video Tape Recording, RP 83-1980.

SMPTE Recommended Practice on Video Reference Carrier Frequencies and Pre-emphasis Characteristics for 1-in Type B Helical-Scan Video Tape Recording, RP 84-1980. The tolerances in Table 1 are tightened to  $\pm 0.025$  MHz. Other values shall be held as close as possible. Proposed SMPTE Recommended Practice on Video and Audio Reference Tape for 1-in Type B Helical-Scan Format, RP 107.

# Dimensions and Location of Records on Video and Audio Reference Tape for 1-in Type B Helical-Scan Video Tape Recorders

V98.30M

## 1. Scope

This standard specifies the dimensions and location of video, audio, and tracking control records on reference tapes for 1-in Type B helical-scan video tape recorders, operating on the 525/60 monochrome or NTSC color systems, as described in Proposed American National Standard Basic System and Transport Geometry Parameters for 1-in Type B Helical-Scan Video Tape Reference Recorders for Video and Audio Reference Tapes, ANSI V98.29M.

## 2. General Specifications

2.1 Tests and measurements made on the tape record to check the requirements of this standard shall be made under the following conditions unless otherwise specified:

Temperature	23 ± 1°C
Relative humidity	50 ± 2 percent
Barometric pressure	86 to 106 kPa (860 to 1060 mbar)
Tape tension	2.0 ± 0.1 N

2.2 Before recording and testing, the tape shall be conditioned for 24 hours, and wound on a reel at 2.0 ± 0.5 N.

2.3 The reference edge of the tape for dimensions in this standard shall be the lower edge as

Page 1 of 3 pages

shown in Fig. 1. The magnetic coating is on the side facing the observer.

2.4 The tape speed shall be 245.0 ± 0.8 mm/s.

## 3. Record Location and Dimensions

3.1 Record location and dimensions shall be in accordance with Fig. 1 and Table 1.

3.2 The nominal width of audio records 1, 2, and 3 shall be 0.8 mm.

3.3 The audio and cue recordings shall be downstream from the associated video information. (See Dimension J in the figure and table.)

3.4 The audio recording shall be made so that the azimuth of the recorded record is at an angle of 90° ± 2.5° to the reference edge of the tape. Audio 1 and 2 head gaps shall be in line.

3.5 The position of the field synchronizing signal on the video record shall be 7.609 ± 0.024 mm from the intersection of L<sub>1</sub> and X<sub>1</sub>, in the direction of tape travel as measured along the video track.

3.6 The cue signal and time code shall be recorded in the audio 3 track.

## 4. Video Record Curvature

The edge of the video record shall be contained within two parallel straight lines 0.015 mm apart.

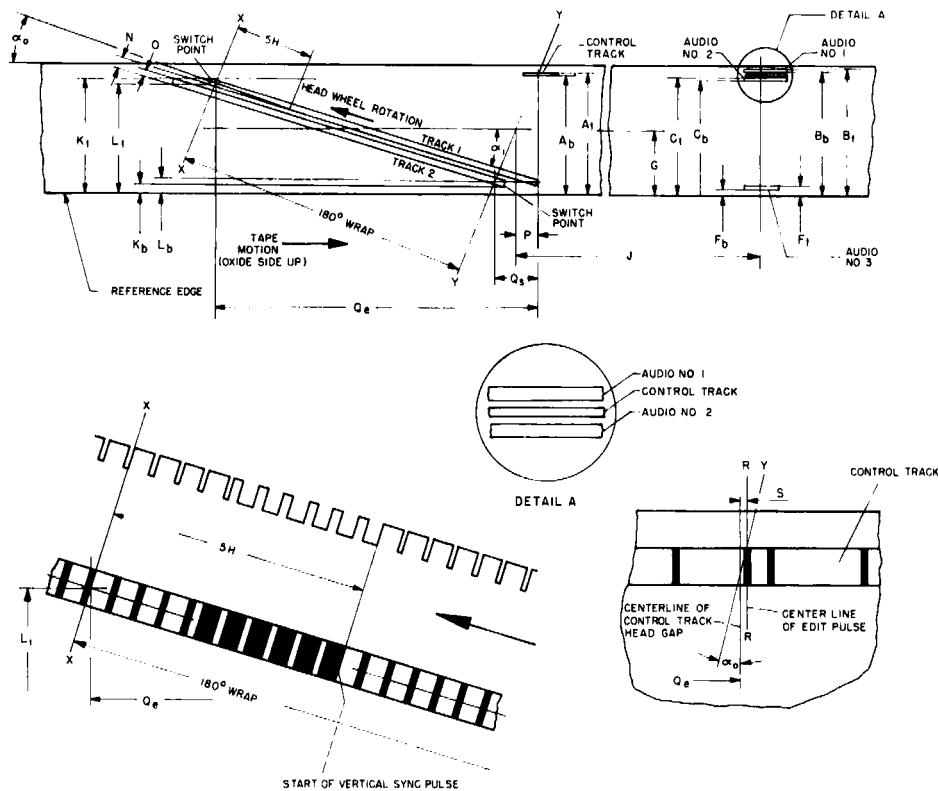


Fig. 1