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Helical-scan compressed digital video cassette system using 6,35 mm magnetic tape – Format D-12 –

Part 1: VTR specifications

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

HELICAL-SCAN COMPRESSED DIGITAL VIDEO CASSETTE SYSTEM USING 6,35 mm MAGNETIC TAPE – FORMAT D-12 –

Part 1: VTR specifications

FOREWORD

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International Standard IEC 62447-1 has been prepared by IEC technical committee 100: Audio, video and multimedia systems and equipment.

The text of this standard is based on the following documents:

CDV	Report on voting
100/1091/CDV	100/1186/RVC

Full information on the voting for the approval of this standard can be found in the report on voting indicated in the above table.

This publication has been drafted in accordance with the ISO/IEC Directives, Part 2.

The list of all the parts of the IEC 62447-1 series, under the general title *Helical-scan compressed digital video cassette system using 6,35 mm magnetic tape – Format D-12*, can be found on the IEC website.

This Part 1 describes the VTR specifications which are tape, magnetization, helical recording, modulation method and basic system data for video compressed data.

Part 2 describes the specifications for encoding process and data format for 1080i, 1080p and 720p systems.

Part 3 describes the specifications for transmission of DV-based compressed video and audio data stream over 360 Mb/s serial digital interface.

The committee has decided that the contents of this publication will remain unchanged until the maintenance result date indicated on the IEC web site under "http://webstore.iec.ch" in the data related to the specific publication. At this date, the publication will be

- reconfirmed;
- withdrawn;
- replaced by a revised edition, or
- amended.

A bilingual version of this publication may be issued at a later date.

HELICAL-SCAN COMPRESSED DIGITAL VIDEO CASSETTE SYSTEM USING 6,35 mm MAGNETIC TAPE – FORMAT D-12 –

Part 1: VTR specifications

1 Scope

This part of IEC 62447 specifies the content, format, and recording method of the data blocks containing video, audio, and associated data which form the helical records on 6,35-mm tape in cassettes as specified in SMPTE 307M.

In addition, this standard specifies the content, format, and recording method for longitudinal cue and control tracks.

One compressed video channel, eight independent audio channels and subcode data are recorded on tape in the digital form. Each of these channels is capable of independent editing.

On the following digital video formats, the helical recordings are synchronized to:

– 1080 line/59,94 Hz field frequency;

– 1080 line/50 Hz field frequency;

– 720 line/59,94 Hz frame frequency.

These are hereafter referred to as the 1080/60i, 1080/50i,and 720/60p systems, respectively. Similarly, in this standard, the 60 Hz system nomenclature refers to both 1080/60i and 720/60p systems, whereas, the 50 Hz system refers only to the 1080/50i system. Nomenclature 1080 line system refers to both 1080/60i and 1080/50i systems, while the 720 line system refers only to the 720/60p system.

The recorded digital video signal shall be compressed according to the DV-based 100 Mb/s specification.

The recorded digital video signal, eight audio channels and subcode data shall be defined by the data structure according to the DV-based 100 Mb/s specification.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

IEC 62447-2, *Helical-scan compressed digital videocassette system using 6,35 mm magnetic tape – Format D-12 – Part 2: Compression format*

SMPTE 12M:1999, Television, Audio and Film – Time and Control Code

SMPTE 276M:1995, Television – Transmission of AES-EBU Digital Audio Signals Over Coaxial Cable

SMPTE 292M:1998, Television – Bit-Serial Digital Interface for High-Definition Television Systems

AES3-1992(R1997), Serial transmission format for two-channel linearly represented digital audio data