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

Part 2: Compression format

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CONTENTS

FOREWORD 5

1 Scope 7
2 Normative references 7
3 Abbreviations and acronyms 8
4 Data processing 8
4.1 General 8
4.1.1 Video encoding parameter 9
4.1.2 Audio encoding parameter 9
4.1.3 Subcode data 9
4.1.4 Frame structure 9
4.2 Data structure 9
4.3 Header section 11
4.3.1 ID 11
4.3.2 Data 14
4.4 Subcode section 15
4.4.1 ID 15
4.4.2 Data 15
4.5 VAUX section 19
4.5.1 ID 19
4.5.2 Data 19
4.6 Audio section 23
4.6.1 ID 23
4.6.2 Data 23
4.7 Video section 28
4.7.1 ID 28
4.7.2 Data 28
5 Video compression 32
5.1 Video structure 32
5.1.1 Video sampling structure 32
5.1.2 DCT block 37
5.1.3 Macro block 38
5.1.4 Super block 49
5.1.5 Definition of super block number, macro block number and value of the pixel 49
5.1.6 Definition of video segment and compressed macro block 53
5.2 DCT processing 54
5.2.1 DCT mode 54
5.2.2 Weighting 55
5.2.3 Output order 56
5.3 Quantization 57
5.3.1 Introduction 57
5.3.2 Bit assignment for quantization 57
5.3.3 Quantization step 57
5.4 Variable length coding (VLC) 58
5.5 Arrangement of a compressed macro block 61
5.6 Arrangement of a video segment 63

Annex A (informative) Block diagram of D-12 recorder 67
Annex B (normative) Digital filter for sampling-rate conversion 68
Annex C (informative) Relation to IEC 61834-3 69

Bibliography 70

Figure 1 – Data processing block diagram 9
Figure 2 – Data structure 10
Figure 3 – Data structure of a DIF sequence 11
Figure 4 – Data in the subcode section 15
Figure 5 – Pack in SSYB 16
Figure 6 – Data in the VAUX section 20
Figure 7 – Data in the audio section 23
Figure 8 – Conversion of audio sample to audio data bytes 25
Figure 9 – Arrangement of AAUX packs in audio auxiliary data 25
Figure 10 – Sampling structure for the 1080/60i system 35
Figure 11 – Sampling structure for the 1080/50i system 36
Figure 12 – Sampling structure for the 720/60p system 37
Figure 13 – DCT block and the pixel coordinates for the 1080-line system 41
Figure 14 – DCT block and the pixel coordinates for the 720-line system 41
Figure 15 – DCT block arrangement for the 1080/60i system 41
Figure 16 – DCT block arrangement for the 1080/50i system 41
Figure 17 – DCT block arrangement for the 720/60p system 42
Figure 18 – Macro block and DCT blocks for the 1080-line system 42
Figure 19 – Macro block and DCT blocks for the 720-line system 42
Figure 20 – Arrangement of macro blocks for the 1080/60i system 43
Figure 21 – Arrangement of macro blocks for the 1080/50i system 44
Figure 22 – Arrangement of macro blocks for the 720/60p system 45
Figure 23 – Divided blocks for the 1080/60i system 46
Figure 24 – Divided blocks for the 1080/50i system 47
Figure 25 – Divided blocks for the 720/60p system 48
Figure 26 – Super blocks and macro blocks in a divided block for the 1080/60i system 50
Figure 27 – Macro block order in a super block for the 1080/60i system 50
Figure 28 – Super blocks and macro blocks for the 1080/50i system 51
Figure 29 – Macro block order in a super block for the 1080/50i system 51
Figure 30 – Super blocks and macro blocks in a divided block for the 720/60p system 52
Figure 31 – Macro block order in a super block for the 720/60p system 52
Figure 32 – Rearrangement of pixels in the 8-8-field-DCT mode 55
Figure 33 – Quantizer matrix for the 1080/60i system 56
Figure 34 – Quantizer matrix for the 1080/50i system 56
Figure 35 – Quantizer matrix for the 720/60p system 56
Figure 36 – The output order of a weighted DCT block 57

Figure 37 – Arrangement of a compressed macro block 61
Figure 38 – Arrangement of a video segment after the bit rate reduction 65
Figure 39 – Video error code 66
Figure A.1 – Block diagram of D-12 recorder 67
Figure B.1 – Template for insertion-loss frequency characteristic 68
Figure B.2 – Pass band ripple tolerance 68

Table 1 – ID data of a DIF block 12
Table 2 – Section type 12
Table 3 – DIF sequence number for the 60 Hz system 13
Table 4 – DIF sequence number for the 50 Hz system 13
Table 5 – DIF channel number 14
Table 6 – DIF block number 14
Table 7 – Data (payload) in the header section 14
Table 8 – SSYB ID 16
Table 9 – Pack header table 17
Table 10 – Mapping of packets in SSYB data 17
Table 11 – Mapping of time code pack 18
Table 12 – Mapping of binary group pack 19
Table 13 – Mapping of VAUX pack in a DIF sequence 20
Table 14 – Mapping of VAUX source pack 20
Table 15 – Mapping of VAUX source control pack 21
Table 16 – FF/FS for the 1080-line system 22
Table 17 – FF/FS for the 720-line system 22
Table 18 – Mapping of AAUX pack in a DIF sequence 25
Table 19 – Mapping of AAUX source pack 26
Table 20 – Mapping of AAUX source control pack 27
Table 21 – SPEED code definition 28
Table 22 – Video DIF blocks and compressed macro blocks for the 60 Hz system 30
Table 23 – Video DIF blocks and compressed macro blocks for the 50 Hz system 31
Table 24 – Construction of input video 34
Table 25 – Quantization step 58
Table 26 – Length of codewords 59
Table 27 – Codewords of variable length coding 60
Table 28 – Definition of STA 62
Table 29 – Codewords of the QNO 63
Table B.1 – Parameter of digital filter 68

INTERNATIONAL ELECTROTECHNICAL COMMISSION

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

Part 2: Compression format

FOREWORD

1) The International Electrotechnical Commission (IEC) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, IEC publishes International Standards, Technical Specifications, Technical Reports, Publicly Available Specifications (PAS) and Guides (hereafter referred to as "IEC Publication(s)"). Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
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International Standard IEC 62247-2 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
100/1092/CDV	100/1187/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 62247 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 2 describes the specifications for encoding process and data format for 1080i, 1080p and 720p systems.

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

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 2: Compression format

1 Scope

This part of IEC 62247 defines the data structure for the interface of DV-based digital audio, subcode data, and compressed video at 100 Mb/s. This standard defines the processes required to decode the DV-based data structure into eight channels of AES-3 digital audio at 48 kHz, subcode data, and high-definition video at 1080/60i, 1080/50i, and 720/60p.

The following high-definition video parameters are used in this standard:

1080/60i system

Input video format: 1920 × 1080 image sampling structure, 59,94 Hz field rate, interlace format. Compressed video data rate: 100 Mb/s

1080/50i system

Input video format: 1920 × 1080 image sampling structure, 50 Hz field rate, interlace format. Compressed video data rate: 100 Mb/s

720/60p system

Input video format: 1280 × 720 image sampling structure, 59,94 Hz frame rate, progressive format. Compressed video data rate: 100 Mb/s

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. The 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.

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.

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

SMPTE 274M:1998, *Television, 1920 x 1080 Scanning and Analog and Parallel Digital Interfaces for Multiple Picture Rates*

SMPTE 260M:1999, *Television, 1125/60 High-Definition Production System – Digital Representation and Bit Parallel Interface*

SMPTE 296M:1997, *Television, 1280 x 720 Scanning, Analog and Digital Representation and Analog Interface*

AES3:1992, *Serial Transmission Format for Two-Channel Linearly Represented Digital Audio Data*