SLOVENSKI STANDARD
SIST EN 61835:2005

01-januar-2005

Digitalni videokasetni snemalni sistem z zapisovanjem s poševnimi sledmi na magnetnem traku, širokem 12,65 mm (0,5 in) – Format D-5 (IEC 61835:1998)

Helical-scan digital component video cassette recording system using 12,65 mm (0,5 in) magnetic tape - Format D-5

Videokassettensystem mit Schrägspuraufzeichnung digitaler Komponenten-Signale auf Magnetband 12,65 mm (0,5 in) - D5-Format

Système de magnétoscope numérique à composantes à cassette à balayage hélicoïdal sur bande magnétique de 12,65 mm (0,5 in) - Format D-5

Ta slovenski standard je istoveten z: EN 61835:1998

ICS:

33.160.40 Video sistemi Video systems

SIST EN 61835:2005 en

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 61835

October 1998

ICS 33.160.40

Descriptors: Recording apparatus, digital recording, magnetoscopes, cassettes for magnetic tapes, magnetic tapes, dimensions, recording characteristics, data blocks, recording tracks, codification, video signals, acoustic signals, electrical properties, mechanical properties, interchangeability

English version

Helican-scan digital component video cassette recording system using 12,65 mm (0,5 in) magnetic tape - Format D-5
(IEC 61835:1998)

Système de magnétoscope numérique à composantes à cassette à balayage hélicoïdal sur bande magnétique de 12,65 mm (0,5 in) - Format D-5
(CEI 61835:1998)

Videokassettensystem mit Schrägspuraufzeichnung digitaler Komponenten-Signale auf Magnetband 12,65 mm (0,5 in) - D5-Format
(IEC 61835:1998)

This European Standard was approved by CENELEC on 1998-10-01. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CENELEC member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CENELEC member into its own language and notified to the Central Secretariat has the same status as the official versions.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

CENELEC

European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

Central Secretariat: rue de Stassart 35, B - 1050 Brussels

Ref. No. EN 61835:1998 E

Foreword

The text of document 100B/166/FDIS, future edition 1 of IEC 61835, prepared by SC 100B, Recording, of IEC TC 100, Audio, video and multimedia systems and equipment, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as EN 61835 on 1998-10-01.

The following dates were fixed:

- latest date by which the EN has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 1999-07-01
- latest date by which the national standards conflicting with the EN have to be withdrawn (dow) 2001-07-01

Annexes designated "normative" are part of the body of the standard.
Annexes designated "informative" are given for information only.
In this standard, annexes A, B, C and ZA are normative and annexes D, E and F are informative.
Annex ZA has been added by CENELEC.

Endorsement notice

The text of the International Standard IEC 61835:1998 was approved by CENELEC as a European Standard without any modification.

In the official version, for annex F, Bibliography, the following notes have to be added for the standards indicated:

IEC 60735	NOTE: Harmonized as EN 60735:1991 (not modified).
IEC 61327	NOTE: Harmonized as EN 61327:1995 (not modified).

Annex ZA (normative)

Normative references to international publications with their corresponding European publications

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies (including amendments).

NOTE: When an international publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

Publication	Year	Title	EN/HD	Year
IEC 60461	1986	Time and control code for video tape recorders	HD 507 S1	1988
IEC 60958	1989	Digital audio interface	EN 60958	1990
IEC 61179	1993	Helical-scan digital composite video cassette recording system using 19 mm magnetic tape, format D2 (NTSC, PAL, PAL-M)	EN 61179	1993
ITU-R Recommendation BT 601-5	1995	Studio encoding parameters of digital television for standard 4:3 and wide-screen 16:9 aspect ratios	-	-
ITU-R Recommendation 656-3	1995	Interfaces for digital component video signals in 525-line and 625-line television systems operating at the 4:2:2 level of Recommendation ITU-R BT.601	-	-

NORME INTERNATIONALE

INTERNATIONAL STANDARD

CEI
IEC
61835

Première édition
First edition
1998-07

Système de magnétoscope numérique à composante à balayage hélicoïdal sur bande magnétique de 12,65 mm (0,5 in) – Format D-5

Helical-scan digital component video cassette recording system using 12,65 mm (0,5 in) magnetic tape – Format D-5

International Electrotechnical Commission 3, rue de Varembé Geneva, Switzerland
Telefax: +41 22 919 0300 e-mail: inmail@iec.ch IEC web site http: //www.iec.ch

Commission Electrotechnique Internationale
International Electrotechnical Commission
Международная Электротехническая Комиссия

CODE PRIX
PRICE CODE XG

Pour prix, voir catalogue en vigueur
For price, see current catalogue

CONTENTS

Clause Pages

Clause Pages

INTERNATIONAL ELECTROTECHNICAL COMMISSION

HELICAL-SCAN DIGITAL COMPONENT VIDEO CASSETTE RECORDING SYSTEM USING 12,65 mm (0,5 in) MAGNETIC TAPE – FORMAT D-5

FOREWORD

1) The IEC (International Electrotechnical Commission) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of the 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, the IEC publishes International Standards. 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. The IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.

2) The formal decisions or agreements of the IEC on technical matters express, as nearly as possible, an international consensus of opinion on the relevant subjects since each technical committee has representation from all interested National Committees.

3) The documents produced have the form of recommendations for international use and are published in the form of standards, technical reports or guides and they are accepted by the National Committees in that sense.

4) In order to promote international unification, IEC National Committees undertake to apply IEC International Standards transparently to the maximum extent possible in their national and regional standards. Any divergence between the IEC Standard and the corresponding national or regional standard shall be clearly indicated in the latter.

5) The IEC provides no marking procedure to indicate its approval and cannot be rendered responsible for any equipment declared to be in conformity with one of its standards.

6) Attention is drawn to the possibility that some of the elements of this International Standard may be the subject of patent rights. The IEC shall not be held responsible for identifying any or all such patent rights.

International Standard IEC 61835 has been prepared by subcommittee 100B: Audio, video and multimedia information storage systems, of IEC technical committee 100: Audio, video and multimedia systems and equipment.

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

FDIS	Report on voting
100B/166/FDIS	100B/176/RVD

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

Annexes A, B and C form an integral part of this standard.

Annexes D, E and F are for information only.

INTRODUCTION

One video channel and four independent audio channels are recorded in a digital form. The video signal may be input and output in either analogue or digital form. The audio signals may also be input and output in either analogue or digital form. In addition, a cue audio signal is recorded in analogue form.

Figures 1 and 2 provide block diagrams of the processes involved in the recorder.

HELICAL-SCAN DIGITAL COMPONENT VIDEO CASSETTE RECORDING SYSTEM USING 12,65 mm (0,5 in) MAGNETIC TAPE – FORMAT D-5

1 General

1.1 Scope

This International Standard defines the electrical and mechanical characteristics of equipment which permit the interchangeability of 12,65 mm cassettes containing digitally recorded component video programmes.

It specifies the content, format and recording method of the data blocks forming the helical records on the tape containing video, audio and associated data using the 12,65 mm (0,5 in) type D-5 cassettes. In addition, this standard specifies the content, format and recording method of the longitudinal record containing tracking information for the scanning head associated with the helical records, as well as the longitudinal cue audio and time and control code tracks. One video channel and four independent audio channels are recorded in the digital format. Each of these channels is designed to be capable of independent editing. The video channel records and reproduces a component television signal in the 525-line system with a frame frequency of 29,97 Hz (hereinafter referred to as "525/60 system") and 625-line system with a frame frequency of 25,00 Hz (hereinafter referred to as "625/50 system").

1.2 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this International Standard. At the time of publication, the editions indicated were valid. All normative documents are subject to revision, and parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent editions of the normative documents indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

IEC 60461:1986, *Time and control code for video tape recorders*

IEC 60958:1989, *Digital audio interface*

IEC 61179:1993, *Helical-scan digital composite video cassette recording system using 19 mm magnetic tape, format D2 (NTSC, PAL, PAL-M)*

ITU-R Recommendation BT.601-5:1995, *Studio encoding parameters of digital television for standard 4:3 and wide-screen 16:9 aspect ratios*

ITU-R Recommendation 656-3:1995, *Interfaces for digital component video signals in 525-line and 625-line television systems operating at the 4:2:2 level of Recommendation ITU-R BT.601*

1.3 Definitions, symbols and abbreviations

For the purposes of this International Standard, the following definitions apply.

1.3.1
ECL
Emitter coupled logic, a family of digital logic integrated circuits. In this standard, ECL refers to the 10 000 series of logic integrated circuits.

1.3.2
GF
Galois Field. A mathematical field containing a finite number of elements in which algebraic operations may be performed.

The number of field elements is generally written as an argument in parentheses, for example GF(256).

1.3.3
LSB
Least significant bit of a word of data or least significant byte of a data item consisting of 2 or more bytes.

1.3.4
MSB
Most significant bit of a word of data or most significant byte of a data item consisting of 2 or more bytes.

1.3.5
ScH
Colour subcarrier to horizontal sync timing relationship.

1.3.6
ECC
Error correcting code

1.4 Environment and test conditions

Tests and measurements made on the system to check the requirements of this standard shall be carried out under the following conditions:

- temperature: 20 °C ± 1 °C;
- relative humidity: 50 % ± 2 %;
- barometric pressure: from 86 kPa to 106 kPa;
- tape tension: 0,31 N ± 0,05 N [1];
- tape conditioning: not less than 24 h.

---

[1] The value measured with a tension monitor on the entrance side of the scanner may vary between manufacturers, but should typically be 0,30 N ± 0,03 N.