SLOVENSKI STANDARD
SIST EN 60958-3:2000

01-december-2000

Digitalni zvokovni vmesnik – 3. del: Uporaba pri potrošniku (IEC 60958-3:1999)

Digital audio interface -- Part 3: Consumer applications

Digitalton-Schnittstelle -- Teil 3: Allgemeingebrauch

Interface audionumérique -- Partie 3: Applications grand public

Ta slovenski standard je istoveten z: **EN 60958-3:2000**

ICS:

33.160.30	Avdio sistemi	Audio systems
35.200	Vmesniška in povezovalna oprema	Interface and interconnection equipment

SIST EN 60958-3:2000 **en**

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 60958-3

March 2000

ICS 33.160.01

English version

Digital audio interface
Part 3: Consumer applications
(IEC 60958-3:1999)

Interface audionumérique
Partie 3: Applications grand public
(CEI 60958-3:1999)

Digitalton-Schnittstelle
Teil 3: Allgemeingebrauch
(IEC 60958-3:1999)

This European Standard was approved by CENELEC on 2000-01-01. 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 60958-3:2000 E

Foreword

The text of document 100C/248/FDIS, future edition 1 of IEC 60958-3, prepared by SC 100C, Audio, video and multimedia subsystems and equipment, 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 60958-3 on 2000-01-01.

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) 2000-10-01
- latest date by which the national standards conflicting with the EN have to be withdrawn (dow) 2003-01-01

Annexes designated "normative" are part of the body of the standard.
In this standard, annexes A to O and ZA are normative.
Annex ZA has been added by CENELEC.

Endorsement notice

The text of the International Standard IEC 60958-3:1999 was approved by CENELEC as a European Standard without any modification.

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 60268-11	1987	Sound system equipment Part 11: Application of connectors for the interconnection of sound system components	HD 483.11 S3[1)]	1993
IEC 60841	1988	Audio recording - PCM encoder/decoder system	HD 544 S1	1989
IEC 60908	1999	Audio recording - Compact disc digital audio system	EN 60908	1999
IEC 60958-1	1999	Digital audio interface Part 1: General	EN 60958-1	2000
IEC 60958-4	1999	Part 4: Professional applications	EN 60958-4	2000
IEC 61119-1	1992	Digital audio tape cassette system (DAT) Part 1: Dimensions and characteristics	EN 61119-1	1994
IEC 61119-6	1992	Part 6: Serial copy management system	EN 61119-6	1994

1) HD 483.11 S3 includes A1:1989 + A2:1991.

NORME INTERNATIONALE

INTERNATIONAL STANDARD

CEI
IEC
60958-3

Première édition
First edition
1999-12

Interface audionumérique –

Partie 3:
Applications grand public

Digital audio interface –

Part 3:
Consumer applications

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 X

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

CONTENTS

Page

INTERNATIONAL ELECTROTECHNICAL COMMISSION

DIGITAL AUDIO INTERFACE –

Part 3: Consumer applications

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 specifications, 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 60958-3 has been prepared by subcommittee 100C: Audio, video and multimedia subsystems and equipment, 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
100C/248/FDIS	100C/254/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.

This publication has been drafted in accordance with the ISO/IEC Directives, Part 3.

IEC 60958 consists of the following parts under the general title: Digital audio interface:

Part 1: General

Part 2 (TR): Software information delivery mode

Part 3: Consumer applications

Part 4: Professional applications

Annexes A to O form an integral part of this standard.

The committee has decided that this publication remains valid until 2003.

At this date, in accordance with the committee's decision, the publication will be

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

DIGITAL AUDIO INTERFACE –

Part 3: Consumer applications

1 Scope

This International Standard describes an application of a serial, uni-directional, self-clocking interface as defined in IEC 60958-1, for the interconnection of digital audio equipment for consumer applications.

When used in a consumer digital processing environment, the interface is primarily intended to carry stereophonic programmes, with a resolution of up to 20 bits per sample, an extension to 24 bits per sample being possible.

2 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this International Standard. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply. However, 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. For undated references, the latest edition of the normative document referred to applies. Members of IEC and ISO maintain registers of currently valid International Standards.

IEC 60268-11:1987, *Sound system equipment – Part 11: Application of connectors for the interconnection of sound system components*

IEC 60841:1988, *Audio recording – PCM encoder/decoder system*

IEC 60908:1999, *Audio recording – Compact disc digital audio system*

IEC 60958-1:1999, *Digital audio interface – Part 1: General*

IEC 60958-4:1999, *Digital audio interface – Part 4: Professional applications*

IEC 61119-1:1992, *Digital audio tape cassette system (DAT) – Part 1: Dimensions and characteristics*

IEC 61119-6:1992, *Digital audio tape cassette system (DAT) – Part 6: Serial copy management system*

3 Interface format

The interface format as defined in IEC 60958-1 shall be used.

4 Channel status

4.1 General

For every sub-frame, the channel status provides information related to the audio channel that is carried in that same sub-frame.

Channel status information is organized in a 192-bit block, subdivided into 24 bytes, numbered 0 to 23 (see table 1). The first bit of each block is carried in the frame with preamble “B”.

The individual bits of a block are numbered 0 to 191.

The primary application is indicated by channel status bit 0.

As stated in IEC 60958-1, for professional application this first channel status bit equals “1”.

For the consumer digital audio applications described in this standard, this first channel status bit equals “0”.

Secondary applications may be defined within the framework of these primary applications.

4.2 Application

4.2.1 Channel status general format

For each channel, channel status is used for the following information.

Table 1 – Channel status general format for consumer use

Byte									
0		a = “0”	b	c	d			Mode	
	bit	0	1	2	3	4	5	6	7
1									
	bit	8	9	10	11	12	13	14	15
2									
	bit	16	17	18	19	20	21	22	23
3									
	bit	24	25	26	27	28	29	30	31
4									
	bit	32	33	34	35	36	37	38	39
5									
	bit	40	41	42	43	44	45	46	47
6									
	bit	48	49	50	51	52	53	54	55
7									
	bit	56	57	58	59	60	61	62	63
8									
	bit	64	65	66	67	68	69	70	71
9									
	bit	72	73	74	75	76	77	78	79
10									
	bit	80	81	82	83	84	85	86	87
11									
	bit	88	89	90	91	92	93	94	95
12									
	bit	96	97	98	99	100	101	102	103
13									
	bit	104	105	106	107	108	109	110	111
14									
	bit	112	113	114	115	116	117	118	119
15									
	bit	120	121	122	123	124	125	126	127
16									
	bit	128	129	130	131	132	133	134	135
17									
	bit	136	137	138	139	140	141	142	143
18									
	bit	144	145	146	147	148	149	150	151
19									
	bit	152	153	154	155	156	157	158	159
20									
	bit	160	161	162	163	164	165	166	167
21									
	bit	168	169	170	171	172	173	174	175
22									
	bit	176	177	178	179	180	181	182	183
23									
	bit	184	185	186	187	188	189	190	191

a: use of channel status block.
b: linear PCM identification.
c: copyright information.
d: additional format information.

Byte 0: General control and mode information

Control:

Bit 0	“0”	Consumer use of channel status block.

NOTE The significance of byte 0, bit 0 is such that transmission from an interface conforming to IEC 60958-4 can be identified.

Bit 1	“0”	Audio sample word represents linear PCM samples.
	“1”	Audio sample word used for other purposes.
Bit 2	“0”	Software for which copyright is asserted.
	“1”	Software for which no copyright is asserted.

NOTE Bit 2 is referred to as the “Cp-bit”. It should be indicated whether copyright protection has been asserted.

The copyright status may be unknown for certain applications. The above interpretation is therefore not valid in combination with some category codes (see annexes). The Cp-bit can alternate between 0 and 1 at a rate between 4 Hz and 10 Hz (see annex A).

Bits 3-5 Additional format information, meaning depends on bit 1.

When bit 1 = “0”, linear PCM audio mode:

bit	3 4 5	
state	“0 0 0”	2 audio channels without pre-emphasis.
	“1 0 0”	2 audio channels with 50/15 µs pre-emphasis.
	“0 1 0”	Reserved (for 2 audio channels with pre-emphasis).
	“1 1 0”	Reserved (for 2 audio channels with pre-emphasis).

All other states of bits 3-5 are reserved and shall not be used until further defined.

When bit 1 = “1”, other than linear PCM applications:

bit	3 4 5	
state	“0 0 0”	Default state for applications other than linear PCM.

All other states of bits 3-5 are reserved and shall not be used until further defined.

Bits 6-7 Channel status mode, indicates one of four possible channel status formats (bytes 1 to 23). There are four possible modes for each of the states of bit 1.

bit	6 7	
state	“0 0”	Mode 0, refer to 4.2.2.

All other states of bits 6-7 are reserved and shall not be used until further defined.

The contents of bits 8 to 191 depend on the mode as indicated by bits 6 and 7. If not defined otherwise, the default value is “0”.