

SLOVENSKI STANDARD

SIST EN 61603-3:1999

01-april-1999

Nadomešča:
SIST HD 455 S1:1999

Transmission of audio and/or video and related signals using infra-red radiation -- Part 3: Transmission systems for audio signals for conference and similar systems (IEC 61603-3:1997)

Transmission of audio and/or video and related signals using infra-red radiation -- Part 3: Transmission systems for audio signals for conference and similar systems

iTeh STANDARD PREVIEW

Übertragung von Ton- und/oder Bildsignalen und verwandten Signalen mit Infrarot-Strahlung -- Teil 3: Übertragungssysteme für Audiosignale für Konferenzsysteme und ähnliches

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Transmission de signaux audio et/ou vidéo et de signaux similaires au moyen du rayonnement infrarouge -- Partie 3: Transmission audio pour systèmes de conférence et systèmes similaires

Ta slovenski standard je istoveten z: EN 61603-3:1998

ICS:

| | | |
|-----------|--|--|
| 33.160.99 | Druga avdio, video in avdiovizuelna oprema | Other audio, video and audiovisual equipment |
|-----------|--|--|

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EUROPEAN STANDARD

EN 61603-3

NORME EUROPÉENNE

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February 1998

ICS 33.160.99

Supersedes HD 455 S1:1985

Descriptors: Sound transmission, electroacoustic equipment, infrared radiation, specifications, measurements, characteristics, performance evaluation, electromagnetic compatibility, marking

English version

**Transmission of audio and/or video and related signals
using infra-red radiation
Part 3: Transmission systems for audio signals for conference
and similar systems
(IEC 61603-3:1997)**

Transmission de signaux audio et/ou
vidéo et de signaux similaires au moyen
du rayonnement infrarouge
Partie 3: Transmission audio pour
systèmes de conférence et systèmes
similaires
(CEI 61603-3:1997)

Übertragung von Ton- und/oder
Bildsignalen und verwandten Signalen
mit Infrarot-Strahlung
Teil 3: Übertragungssysteme für
Audiosignale für Konferenzsysteme
und ähnliches
(IEC 61603-3:1997)

This European Standard was approved by CENELEC on 1998-01-01. 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.

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

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Foreword

The text of document 100C/129/FDIS, future edition 1 of IEC 61603-3, 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 61603-3 on 1998-01-01.

This European Standard supersedes chapter 2 of HD 455 S1:1985.

This standard is to be used in conjunction with ENV 50185-1:1995.

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) 1998-10-01
- latest date by which the national standards conflicting
with the EN have to be withdrawn (dow) 1998-10-01

Annexes designated "normative" are part of the body of the standard.
In this standard, annex ZA is normative.
Annex ZA has been added by CENELEC.

Endorsement notice

The text of the International Standard IEC 61603-3:1997 was approved by CENELEC as a European Standard without any modification.

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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.

| <u>Publication</u> | <u>Year</u> | <u>Title</u> | <u>EN/HD</u> | <u>Year</u> |
|----------------------------|-------------|--|------------------------------|------------------|
| IEC 60068 | series | Environmental testing | EN 60068 HD 323 | series series |
| IEC 60268-15 ¹⁾ | 1996 | Sound system equipment Part 15: Preferred matching values for the interconnection of sound system components | - | - |
| IEC 60315-4 | 1982 | Methods of measurement on radio receivers for various classes of emission Part 4: Radio-frequency measurements on receivers for frequency modulated sound-broadcasting emissions | - | - |
| IEC 60417 | 1973 | Graphical symbols for use on equipment Index, survey and compilation of the single sheets | HD 243 S12 ²⁾ | 1995 |
| IEC 60914 | 1988 | Conference systems - Electrical and audio requirements | HD 549 S1 | 1989 |
| IEC 61147 | 1993 | Uses of infra-red transmission and the prevention or control of interference between systems | - | - |
| IEC 61603-1 | 1997 | Transmission of audio and/or video and related signals using infra-red radiation Part 1: General | EN 61603-1 | 1997 |
| IEC 61938 | 1996 | Audio, video and audiovisual systems Interconnections and matching values Preferred matching values of analogue signals | EN 61938 + corr. February | 1997 1997 |

1) IEC 60268-15 is superseded by IEC 61938.

2) HD 243 S12 includes supplements A:1974 to M:1994 to IEC 60417.

| <u>Publication</u> | <u>Year</u> | <u>Title</u> | <u>EN/HD</u> | <u>Year</u> |
|--------------------|-------------|---|--------------|-------------|
| ISO 7000 | 1989 | Graphical symbols for use on equipment Index and synopsis | - | - |
| ITU-R 412-6 | 1995 | Planning standards for FM sound broadcasting at VHF | - | - |
| ITU-R 641 | 1990 | Determination of radio-frequency protection ratios for frequency-modulated sound broadcasting | - | - |
| ITU-R 704 | 1990 | Characteristics of FM sound broadcasting reference receivers for planning purposes | - | - |

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NORME
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STANDARD

CEI
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61603-3

Première édition
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**Transmission de signaux audio et/ou vidéo
et de signaux similaires au moyen
du rayonnement infrarouge –**

**Partie 3:
Transmission audio pour systèmes
de conférence et systèmes similaires**
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**Transmission of audio and/or video and
related signals using infra-red radiation –**

**Part 3:
Transmission systems for audio signals
for conference and similar systems**

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Commission Electrotechnique Internationale
International Electrotechnical Commission
Международная Электротехническая Комиссия

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For price, see current catalogue

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

**TRANSMISSION OF AUDIO AND/OR VIDEO AND
RELATED SIGNALS USING INFRA-RED RADIATION –
Part 3: Transmission systems for audio signals for
conference and similar systems**

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 61603-3 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.

This standard should be read in conjunction with IEC 61147 (technical report).

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

| FDIS | Report on voting |
|---------------|------------------|
| 100C/129/FDIS | 100C/181/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.

The series of publications IEC 61603 supersedes IEC 60764 and consists of the following six parts:

- Part 1: General (1997)
- Part 2: Transmission systems for audio wide band and related signals (1997)
- Part 3: Transmission systems for audio signals for conference and similar systems
- Part 4: Transmission systems for low speed remote control
- Part 5: Transmission systems for high speed data and remote control
- Part 6: Transmission systems for video and audiovisual signals of high quality

TRANSMISSION OF AUDIO AND/OR VIDEO AND RELATED SIGNALS USING INFRA-RED RADIATION –

Part 3: Transmission systems for audio signals for conference and similar systems

1 General

1.1 Scope

This part of IEC 61603 gives methods for measuring and specifying those characteristics of audio infra-red (IR) transmission systems for conference and similar systems which are not covered by part 1 (see also 3.1). It allows systems which make different economic use of the available bandwidth to be described in order that conclusions regarding interference and compatibility can be drawn. Interface (matching) values and other system characteristics are also covered. The standard replaces chapter 2 of IEC 60764.

1.2 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this part of IEC 61603. At the time of publication, the editions indicated were valid. All normative documents are subject to revision, and parties to agreements based on this part of IEC 61603 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 60068: *Environmental testing*

IEC 60268-15: 1996, *Sound system equipment – Part 15: Preferred matching values for the interconnection of sound system components*

IEC 60315-4: 1982, *Methods of measurement on radio receivers for various classes of emission – Part 4: Radio-frequency measurements on receivers for frequency modulated sound-broadcasting emissions*

IEC 60417: 1973, *Graphical symbols for use on equipment – Index, survey and compilation of the single sheets*

IEC 60764: 1983, *Sound transmission using infra-red radiation*

IEC 60914: 1988, *Conference systems – Electrical and audio requirements*

IEC 61147: 1993, *Uses of infra-red transmission and the prevention or control of interference between systems*

IEC 61603-1: 1997, *Transmission of audio and/or video and related signals using infra-red radiation – Part 1: General*

IEC 61938: 1996, *Audio, video and audiovisual systems – Interconnections and matching values – Preferred matching values of analogue signals*

ISO 7000: 1989, *Graphical symbols for use on equipment – Index and synopsis*

ITU-R 412-6: 1995, *Planning standards for FM sound broadcasting at VHF*

ITU-R 641: 1990, *Determination of radio-frequency protection ratios for frequency-modulated sound broadcasting*

ITU-R 704: 1990, *Characteristics of FM sound broadcasting reference receivers for planning purposes*

1.3 Definitions

For the purpose of this part of IEC 61603, the definitions given in part 1 apply.

2 Explanation of terms and general information

2.1 Transmitter

A transmitter (link A-B in figure 2) has an audio signal input (analogue or digital), and a special form of electrical output to feed a radiator.

2.2 Combined transmitter and radiator

A combined transmitter and radiator (link A-C in figure 2) does not have an electrical output, and interface values therefore apply only at the input.

2.3 Radiator

A radiator (link B-C in figure 2) has a special form of electrical input, to be fed by a transmitter. A radiator may be combined with other functions, such as a transmitter. At present, radiators normally consist of a number (from ten and more) of infra-red emitting diodes (IREDs) employing different technologies. These devices have peak emissions in the wavelength range 830 nm to 950 nm, and an IR bandwidth of about 100 nm.

2.4 Receiver

Besides the general characteristics given in part 1 and shown as link C-D in figure 2, others may need to be specified if a receiver is combined with other units to serve, for example, as a transmitter for up-stream signals in a duplex system.

To eliminate interference from other modulated IR sources, the receiver shall provide enough selectivity with regard to the modulated subcarrier in addition to selectivity in the IR band. Normally, this selectivity shall correspond to the spectral bandwidth of the modulated subcarrier signal, with some margin for instabilities and possible extra features.

Definitions and methods of measurement for selectivity in relation to analogue FM signals are given in the standards dealing with FM broadcast systems, such as IEC 60315-4 and ITU-R 412, 641 and 704.

NOTE – For digital audio transmission, the subject of receiver selectivity is under consideration.

2.5 Ancillary equipment

Ancillary equipment, such as power supplies or battery chargers, may be required for the operation of the system. The manufacturer should specify all the data necessary for correct operation and maintenance.