

Transmission systems for audio and/or video and related signals using infra-red radiation —

Part 7: Digital audio signals for conference and similar applications

The European Standard EN 61603-7:2003 has the status of a
British Standard

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National foreword

This British Standard is the official English language version of EN 61603-7:2003. It is identical with IEC 61603-7:2003. It partially supersedes subclause 2.6.2 of BS EN 61603-3:1998.

The UK participation in its preparation was entrusted to Technical Committee EPL/100, Audio, visual and multimedia systems and equipment, which has the responsibility to:

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**Transmission systems for audio and/or video and related signals
using infra-red radiation**
Part 7: Digital audio signals for conference and similar applications
(IEC 61603-7:2003)

Transmission de signaux audio
et/ou vidéo et de signaux similaires
au moyen du rayonnement infrarouge
Partie 7: Systèmes de transmissions
numériques des signaux audio destinés
aux conférences et applications similaires
(CEI 61603-7:2003)

Übertragung von Ton- und/oder
Bildsignalen und verwandten Signalen
mit Infrarot-Strahlung
Teil 7: Übertragungssysteme für digitale
Audiosignale für Konferenzsysteme
und ähnliche Anwendungen
(IEC 61603-7:2003)

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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.

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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

Foreword

The text of document 100/649/FDIS, future edition 1 of IEC 61603-7, prepared by Technical Area 3, Infrared systems and applications, 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 61603-7 on 2003-10-01.

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The following dates were fixed:

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- latest date by which the national standards conflicting
with the EN have to be withdrawn (dow) 2006-10-01

Annexes designated "normative" are part of the body of the standard.

Annexes designated "informative" are given for information only.

In this standard, annexes A and ZA are normative and annexes B and C are informative.

Annex ZA has been added by CENELEC.

Endorsement notice

The text of the International Standard IEC 61603-7:2003 was approved by CENELEC as a European Standard without any modification.

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

Part 7: Digital audio signals for conference and similar applications

1 Scope

This part of IEC 61603 describes the characteristics of a digital multiple channel, multiple carrier audio transmission system as an extension to conference interpretation or similar systems using the frequency ranges 45 kHz to 1 MHz and 2 MHz to 6 MHz.

NOTE These frequency ranges are also covered by analogue pulse systems used for the same applications. Interference is not expected because both transmission systems are normally not applied at the same time in the same room.

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

IEC 61603-3:1997, *Transmission of audio and/or video and related signals using infrared radiation – Part 3: Transmission systems for audio signals for conference and similar systems*

IEC 61920, *Infrared transmission systems – Free air applications*¹

ISO/IEC 7498-1:1994, *Information technology – Open Systems Interconnection – Basic Reference Model: The Basic Model*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in IEC 61603-1 apply.

4 Abbreviations

APCM	Adaptive pulse code modulation
AQM	Audio quality mode
CAT	Channel allocation table
CM	Configuration message
CRC	Cyclic redundancy check
DCI	Display changed identifier
DM	Display message
DM-CRC	Data message CRC

¹ To be published. For the purposes of the reference in C.1, IEC 61920:1998 is equally valid.

DMI	Data message identifier
DML	Data message length
DQPSK	Differential quadrature phase shift keying
HQ	High quality
MAXCN	Maximum channel number
MHQ	Mono high quality
MMQ	Mono medium quality
MQ	Medium quality
OSI	Open systems interconnection
PCM	Pulse code modulation
PRBS	Pseudo-random binary sequence
SCI	Source coding identifier
SEI	Setting changed identifier
SF	Scale factor
SHQ	Stereo high quality
SMQ	Stereo medium quality
SRRC	Square root raised cosine
XOR	Exclusive OR

5 Explanation of terms and general information

For the purposes of this part of IEC 61603, the explanation and information given in IEC 61603-3, Clause 2, apply.

6 System considerations

For the purposes of this part of IEC 61603, the considerations given in IEC 61603-3, Clause 3, apply.

NOTE With regard to the primary band, the special caution advised in IEC 61603-3, 3.3 should be observed, especially for inductive lighting and future developments.

7 Basic system concept

The basic system concept is shown in Figure 1.

The system consists of a number (N) of audio sources, either analogue or digital, which are connected to a transmitter. The transmitter processes the audio signals (in accordance with the protocol described in Clause 8) into an electrical output to feed the infrared radiator. The infrared signal is received by the infrared receiver that processes the signal and outputs an audio signal and/or associated data.

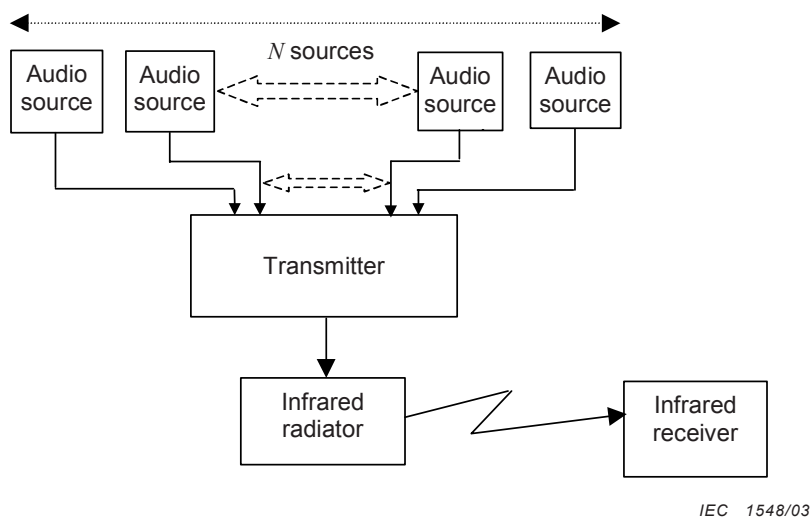


Figure 1 – System

8 Protocol

8.1 System context

In terms of the conceptual OSI reference model, the transmission protocol shall implement the following layers:

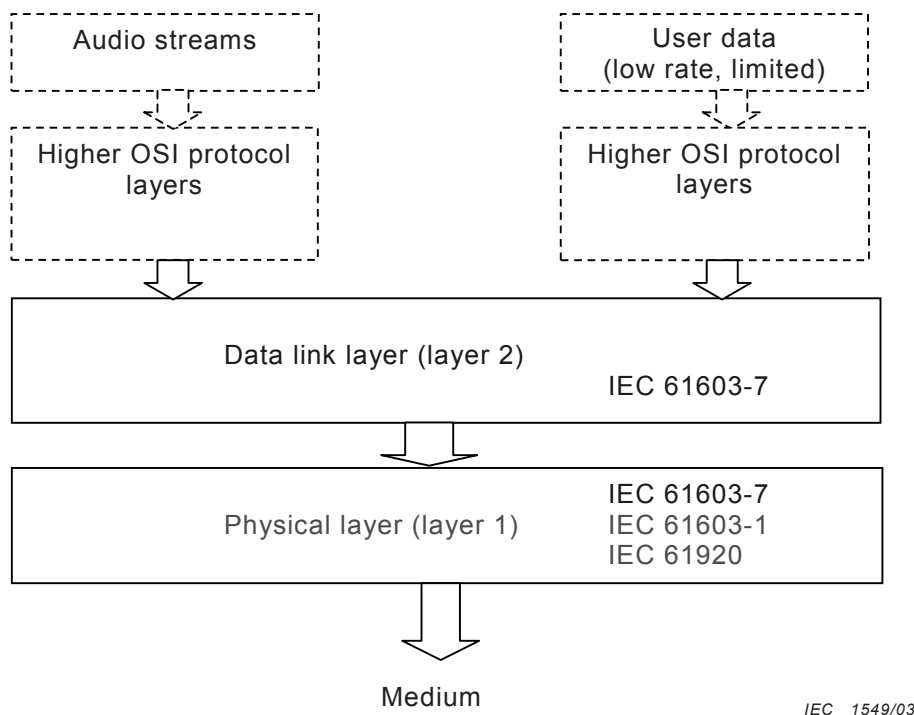


Figure 2 – Conceptual model

Figure 2 shows the system context using the OSI reference model. Layers 1 and 2 will be part of the transmission protocol defined in this standard.