

Domestic and similar electronic equipment interconnection requirements: Peritelevision connector

The European Standard EN 50049-1:1997 with the incorporation of amendment A1:1998 has the status of a British Standard

ICS 31.220.10; 33.160.40

National foreword

This British Standard is the English language version of EN 50049-1:1997 including amendment A1:1998. It supersedes BS 6552:1990 which was withdrawn on 98-06-01.

The UK participation in its preparation was entrusted by Technical Committee EPL/100, Audio, video and multimedia systems and equipment, to Subcommittee EPL/100/3, Equipment and systems in the field of audio, video and audiovisual engineering, which has the responsibility to:

- aid enquirers to understand the text;
- present to the responsible European Subcommittee any enquiries on the interpretation, or proposals for change, and keep the UK interests informed;
- monitor related international and European developments and promulgate them in the UK.

A list of organizations represented on this subcommittee can be obtained on request to its secretary.

Cross-references

The British Standards which implement international or European publications referred to in this document may be found in the BSI Standards Catalogue under the section entitled “International Standards Correspondence Index”, or by using the “Find” facility of the BSI Standards Electronic Catalogue.

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Summary of pages

This document comprises a front cover, an inside front cover, the EN title page, pages 2 to 16, an inside back cover and a back cover.

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Sidelining in this document indicates the most recent changes by amendment.

Amendments issued since publication

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English version

Domestic and similar electronic equipment interconnection requirements: Peritelevision connector

(includes amendment A1:1998)

Prescriptions d'interconnexion des appareils
électroniques grand public et analogues:
Connecteur de péritélévision
(inclut l'amendement A1:1998)

Kennwerte für die Kleinsignalverbindung zwischen
elektronischen Geräten für den Heimgebrauch und
ähnliche Anwendungen: Peritelevision Verbindung
(enthält Änderung A1:1998)

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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

This European Standard was prepared by Technical Committee CENELEC TC 203, Electronic entertainment and educational systems for household and similar use.

The text of the draft was submitted to the formal vote and was approved by CENELEC as EN 50049-1 on 1997-07-01.

This European Standard supersedes EN 50049-1:1989, which was approved by CENELEC on 1988-09-13.

Since this date the evolution of services is such that several amendments were approved. Also the application implies the introduction in the European Standard of some general rules independent of the interconnection architecture. Due to this a new edition has become necessary.

Significant technical differences are:

- a) addition: contents of amendments A1, A2, A3, A4
- b) deletion: connector characteristics which are contained in IEC 60807-9.
- c) addition: clause **6** Essential/optional signal types for various applications.

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) 1998-06-01
- latest date by which national standards conflicting with the EN have to be withdrawn (dow) 1998-06-01

Foreword to amendment A1

This amendment was prepared by the former Technical Committee CENELEC TC 203, Electronic entertainment and educational systems for household and similar use (in July 1998 TC 203 has become part of TC 206, Consumer equipment for entertainment and information and related sub-systems).

The text of the draft (prAA) was submitted to the formal vote and was approved by CENELEC as amendment A1 to EN 50049-1:1997 on 1998-08-01.

The following dates were fixed:

- latest date by which the amendment has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 1999-08-01
- latest date by which national standards conflicting with the amendment have to be withdrawn (dow) 1999-08-01

1 Introduction

1.1 Object

This standard defines the interconnection characteristics of peritelevision devices, both between themselves and with television receivers (monochrome or colour).

The interconnections covered by this standard are at baseband (video and audio) or digital signals.

For the purpose of defining conformance, this standard specifies the types and related groups of signals, composite video, audio, primary colour and control that shall be present on the connectors. The levels and impedances together with the tolerances on these values are also specified.

The manner in which the signals on the connector are processed within the products incorporating the connectors and the presentation of the results of such processing to the user is outside the scope of this standard. These details depend upon the system involved, e.g. PAL or SECAM and the specification of the product.

This standard lays down collectively the electrical matching characteristics (type of signals, voltage and impedance values), dimensional, mechanical and electrical characteristics of the connectors, type and wiring of interconnection cordsets.

Attention is drawn to the fact that the interconnection covered by this standard shall in any circumstances meet the safety requirements specified in EN 60065:1993 and the electromagnetic compatibility requirements specified in the appropriate publications.

1.2 Field of application

This standard applies to the connector socket mounted on various devices that are components of domestic audio-visual systems, and includes the designation of contacts, the type of interchanged signals and the matching values of voltage and impedance. This standard does not apply to equipment so small that its size is not compatible with the dimensions of the socket.

It applies also to the plug fitted to the end of interconnection cordsets.

It covers the interconnection cordsets themselves (type of conductors, wiring).

Permanent connection of several pieces of equipment which may be used simultaneously or otherwise is ensured:

- either by fitting each piece of equipment with a suitable number of connectors;
- or by a single connector on each piece of equipment linked to a central interconnection and switching device.

The user shall be informed about the possible applications that are provided by a device.

2 Normative references

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).

EN 60065, *Safety requirements for mains operated electronic and related apparatus for household and similar general use.*
(IEC 60065, modified)

IEC 60268-15, *Sound system equipment — Part 15: Preferred matching values for the interconnection of sound system components.*
(harmonized as HD 483.15 S4:1992)

IEC 60608, *Interconnections between video-tape recorders and television receivers for 50 Hz-625 lines.*

NOTE IEC 60608 is restricted to a specific system, whereas this standard relates to an interconnection system intended to cover a substantially wider scope. Thus in particular, the interconnection as defined in IEC 60608 does not provide for simultaneous conveyance, on separate pins, of receiver input and output (audio and video) signals in order to be processed by a peripheral device.

IEC 60807-9, *Rectangular connectors for frequencies below 3 MHz Part 9: Detail specification for a range of peritelevision connectors.*

IEC 60933-1, *21 pin-connector for video systems (Application No. 1 and Amendment 1).*

Recommendation ITU-R draft (11 A/XE “Enhanced wide-screen PAL TV transmission system”).

3 Characteristics of the interconnections

(See Table 1)

General remarks:

All input and output signals may be present simultaneously.

All input and output signals are defined and measured taking into account the appropriate CCIR and IEC Publications.

Table 1

Signal designation	Matching value	Contact number	Test conditions and comments
audio output A ¹⁾ mono stereo channel left independent channel A	300 Ω $\leq$ impedance $\leq$ 1 k Ω ²⁾ Voltage (r.m.s. value) nominal 0,5 V* $\pm$ 3 dB maximum 5,65 V _{pp} <i>Superimposed d.c. component within 0 V and + 1 V</i>	3	Load impedance for compliance testing: 10 k Ω *for a modulation factor <i>by a sinusoidal signal at 1 kHz</i> at the transmitter of 54 % in A.M and F.M. type of modulation with a vision carrier level of 70 dB (μ V). for a level at the transmitter corresponding in digital system to: – 11,2 dB FS for the NICAM B G and L – 15,8 dB FS for the NICAM I – 11,2 dB FS for the D2 MAC Note FS = Full Scale If a MAC coded signal is present at pin 19 the connected equipment shall ignore the signal at this contact
AUDIO output B ¹⁾ mono stereo channel right independent channel B		1	
AUDIO input A ¹⁾ mono stereo channel left independent channel A	Impedance $\geq$ 10 k Ω ²⁾ Electromotive force (r.m.s. value) nominal 0,5 V minimum 0,2 V* maximum 5,65 V _{pp} <i>Superimposed d.c. component within 0 V and + 1 V</i>	6	Source impedance for compliance testing: 1 k Ω *for a nominal output value according to the equipment specifications
AUDIO input B ¹⁾ mono stereo channel right independent channel B		2	
AUDIO common return		4	