



BS 6840: Part 11: 1988
IEC 268-11: 1987

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British Standard

Sound system equipment

Part 11. Specification for application of connectors for the interconnection of sound system components

[IEC title : Sound system equipment. Part 11 : Application of connectors for the interconnection of sound system components]



(Implementation of CENELEC HD 483.11 S2)

Equipements pour systèmes électroacoustiques

Partie 11. Application des connecteurs pour l'interconnexion des
éléments de systèmes électroacoustiques — Spécifications

Elektroakustische Geräte

Teil 11. Anwendung von Steckverbindern für die Verbindung elektroakustischer Geräte

British Standards Institution

National foreword

This British Standard has been prepared under the direction of the Electronic Equipment Standards Committee and is identical with IEC 268-11: 1987 'Sound system equipment' Part 11 'Application of connectors for the interconnection of sound system components' published by the International Electrotechnical Commission (IEC), as amended by Amendment No. 1 dated October 1989. This British Standard is also in agreement with Harmonization Document HD 483.11 S2, published by the European Committee for Electrotechnical Standardization (CENELEC). This Part of BS 6840 supersedes BS 5428: Part 5: Section 5.2 which is withdrawn.

Other Parts of BS 5428 will be superseded and withdrawn as revisions or new Parts of IEC 268 become available, or by their re-identification as Parts of BS 6840.

BS 6840 consists of the following Parts:

- Part 1. Methods for specifying and measuring general characteristics used for equipment performance (Supersedes part of BS 5428: Part 1.)
- Part 2. Specification for general terms and calculation methods (Supersedes part of BS 5428: Part 1.)
- Part 3. Methods for specifying and measuring the characteristics of sound system amplifiers (Supersedes BS 5428: Part 2.)
- Part 4. Methods for specifying and measuring the characteristics of microphones (Previously BS 5428: Part 3.)
- Part 5. Methods for specifying and measuring the characteristics of loudspeakers (Supersedes BS 5428: Part 11 and Part 11: Supplement 1.)
- Part 6. Methods for specifying and measuring the characteristics of auxiliary passive elements (Previously BS 5428: Part 4.)
- * Part 7. Methods for specifying and measuring the characteristics of headphones and headsets (New.)
- Part 8. Methods for specifying and measuring the characteristics of automatic gain control devices (Previously BS 5428: Part 7.)
- Part 9. Methods for specifying and measuring the characteristics of artificial reverberation, time delay and frequency shift equipment (Previously BS 5428: Part 8.)
- * Part 10. Methods for specifying and measuring the characteristics of peak programme meters (Will supersede BS 5428: Part 9);
- Part 11. Specification for application of connectors for the interconnection of sound system components (Supersedes BS 5428: Part 5: Section 5.2.)
- Part 12. Specification for applications of connectors for broadcast and similar use (Supersedes BS 5428: Part 5: Section 5.3.)
- Part 13. Guide for listening tests on loudspeakers (New.)
- Part 14. Guide for circular and elliptical loudspeakers: outer frame diameters and mounting dimensions (Previously BS 5428: Part 5: Section 5.1.)
- Part 15. Specification for matching values for the interconnection of sound system components (Supersedes BS 5428: Part 10.)
- Part 16. Guide to the RASTI method for the objective rating of speech intelligibility in auditoria (New.)
- Part 17. Methods for specifying and measuring the characteristics of standard volume indicators (New)

Terminology and conventions. The text of the international standard has been approved as suitable for publication as a British Standard without deviation. Some terminology and certain conventions are not identical with those used in British Standards.

Cross-references

International standard	Corresponding British Standard
IEC 268-12: 1987	BS 6840 Sound system equipment Part 12: 1987 Specification for applications of connectors for broadcast and similar use (Identical)
'IEC 268-15: 1987	Part 15: 1988 Specification for matching values for the interconnection of sound system components (Identical)

The Technical Committee has reviewed the provisions of IEC 130-8 and IEC 130-9, to which reference is made in the text, and has decided that they are acceptable for use in conjunction with this British Standard. 'IEC 65: 1985, to which reference is made in the text, has been harmonized by CENELEC under HD 195 and is implemented by BS 415: 1990 which is a related British Standard.'

*In preparation.

Textual errors. When adopting the text of the international standard, the textual errors listed below were discovered. They have been marked in the text and have been reported to the IEC in a proposal to amend the text of the international standard.

Table 1A. In the diagram showing the type 5.7 connector, contacts 1 and 4 as shown are incorrectly located and should reflect an angular displacement of 144° between contacts 1 and 4, with the contacts 2 and 3 equispaced at 72° intervals in between. This detail is essential to assist correct identification of the connector in manufacturers' brochures as there is no published standard available yet.

Table 1B. In the diagram showing the type 5.12 connector, contact 6 should be located on the centreline and not displaced towards contacts 1 and 5 as shown.

Compliance with a British Standard does not of itself confer immunity from legal obligations.

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British Standard

Sound system equipment

Part 11. Specification for application of connectors for the interconnection of sound system components

1. Scope

This standard applies to circular and concentric connectors to be used for the interconnection of sound system components and gives the applications and also the contact arrangement and contact designation for these connectors.

2. Object

In sound systems it is often necessary to connect pieces of equipment from different manufacturers and even from various countries in order to achieve desired objectives. These include the making of recordings or copying of recordings already on tape or cassette, achieving a higher sound level by means of a separate power amplifier, feeding loudspeakers, automatic control of slide projectors, etc.

3. General

- 3.1 The connectors shall comply with the electrical and mechanical requirements given in IEC Publication 130-8: Connectors for Frequencies below 3 MHz, Part 8: Concentric Connectors for Audio Circuits in Radio Receivers, and IEC Publication 130-9: Connectors for Frequencies below 3 MHz, Part 9: Circular Connectors for Radio and Associated Sound Equipment.
- 3.2 For safety considerations, reference is made to IEC Publication 65: Safety Requirements for Mains Operated Electronic and Related Apparatus for Household and Similar General Use.

Notes 1. - The preferred electrical matching values for the interconnection of sound system components are given in IEC Publication 268-15: Sound System Equipment. Part 15: Preferred Matching Values for the Interconnection of Sound System Components.

2. - Connectors for broadcast and similar use are dealt with in IEC Publication 268-12: Part 12: Application of Connectors for Broadcast and Similar Use.
3. - For applications other than those given in this standard, reference is made to IEC Publications 130-8 and 130-9.
4. - At present not all connectors referred to in this standard are included in these publications.

4. Application and contact designation

For circular connectors, the contact arrangement and application shall be as given in Table I and the contact designation shall be as given in Table III. For concentric connectors the contact arrangement and application shall be as given in Table IV and the contact designation shall be as given in Table V.

4.1 Terminology for concentric connectors

In Table IV, the following types of connectors are identified:

- $\frac{1}{4}$ in/6.3 mm concentric connector (2 contacts).
- $\frac{1}{4}$ in/6.3 mm concentric connector (3 contacts).
- Miniature concentric connector (2 contacts) (3.5 mm diameter).
- Miniature concentric connector (3 contacts) (3.5 mm diameter).
- Sub-miniature concentric connector (2 contacts) (2.5 mm diameter).
- Phono/3.2 mm concentric connector (2 contacts).

Note. - The phono/3.2 mm concentric connector has other names in certain countries but these names cannot be used internationally for legal reasons.

SECTION ONE - CIRCULAR CONNECTORS

5. Types of connectors and their application

TABLE I

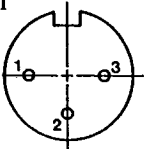
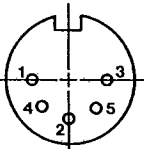
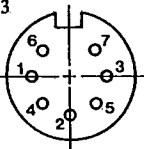
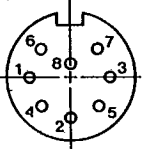
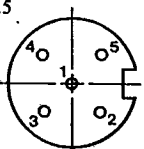
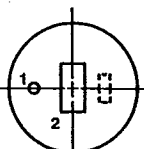
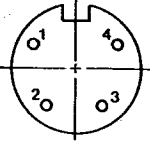
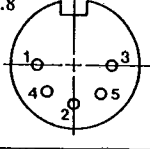
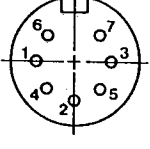
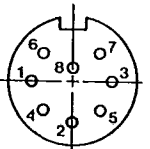
Contact numbers as seen on the mating face of the pin connector			IEC type designation	Application
5.1 	Pin connector	Free	130-9 IEC-01	Microphone; cordset
	Socket connector	Fixed	130-9 IEC-02	Input for microphone on equipment
5.2 	Pin connector	Free	130-9 IEC-03	Record player; microphone; headset; cordset
	Socket connector	Fixed	130-9 IEC-04	Input for record player on equipment; input for microphone on equipment; input for tuner on equipment; output on tuner; combined recording-playback connection on equipment; input-output for headsets on equipment
5.3 	Pin connector	Free	130-9 IEC-12	Microphone with remote control
	Socket connector	Fixed	130-9 IEC-13	Input for microphone with remote switch on equipment; combined recording-playback-microphone connection on equipment
5.4 	Pin connector	Free	130-9 IEC-20	Microphone with remote control switch and with supply voltage
	Socket connector	Fixed	130-9 IEC-21	Input for microphone with remote control switch and with supply voltage on equipment; combined recording-playback-microphone connection on equipment
5.5 	Pin connector	Free	130-9 IEC-14	Headphone
	Socket connector	Fixed	130-9 IEC-15	Output for headphone on equipment
5.6 	Pin connector	Free	130-9 IEC-05	Loudspeaker; cordset
		Fixed	130-9 IEC-06	Input on loudspeaker enclosure
	Socket connector	Fixed	130-9 IEC-07	Output for loudspeaker on equipment
		Fixed	130-9 IEC-08	Output with built-in switch for loudspeaker on equipment
		Free	130-9 IEC-09	Cordset

TABLE IA

Types of connectors and their application

Interconnection between pre-amplifiers and power amplifiers in household equipment

Contact numbers as seen on the mating face of the pin connector			IEC type designation	Application
5.7 	Pin connector	Free	130-9 IEC-aa	Cordset
		Fixed	130-9 IEC-bb	Pre-amplifier input on power amplifier
	Socket connector	Fixed	130-9 IEC-cc	Power amplifier output on pre-amplifier
		Free	130-9 IEC-dd	Cordset
5.8 	Pin connector	Free	130-9 IEC-03	Cordset
	Socket connector	Fixed	130-9 IEC-04	Power amplifier output on pre-amplifier; pre-amplifier input on power amplifier
5.9 	Pin connector	Free	130-9 IEC-10	Cordset
	Socket connector	Fixed	130-9 IEC-11	Power amplifier output on pre-amplifier; pre-amplifier input with possibility for supply on/off switching by relay remote control on power amplifier
5.10 	Pin connector	Free	130-9 IEC-20	Cordset
	Socket connector	Fixed	130-9 IEC-21	Power amplifier output on pre-amplifier; pre-amplifier input with possibility of electronic supply on/off switching by control DC-voltage on power amplifier

* See national foreword for details of textual error.