

**BS 6840 :**  
**Part 15 : 1992**  
**IEC 268-15 :**  
**1987**

*(including Amendment No.1  
(April 1989) and Amendment  
No.2 (February 1990) to  
IEC 268-15 : 1987)*

# Sound system equipment

## Part 15. Specification for matching values for the interconnection of sound system components

(Implementation of CENELEC HD 483.15 S3)

Équipements pour systèmes  
électroacoustiques  
Partie 15. Valeurs d'adaptation pour la  
raccordement entre les éléments des systèmes  
électroacoustiques

Elektroakustische Geräte  
Teil 15. Anpassungswerte für die  
Zusammenschaltung von elektroakustischen  
Geräten

# Committees responsible for this British Standard

The preparation of this British Standard was entrusted by the Electronic Equipment Standards Policy Committee (EEL/-) to Technical Committee EEL/32, upon which the following bodies were represented:

- Association for Consumer Research (ACRE)
- Association of British Theatre Technicians
- Audio Engineering Society
- British Broadcasting Corporation
- British Educational Equipment Association
- British Kinematograph, Sound and Television Society
- British Radio and Electronic Equipment Manufacturers' Association
- British Telecommunications plc
- Consumer Policy Committee of BSI
- Federation of British Audio
- Independent Television Association
- Institution of Electrical Engineers
- National Council for Educational Technology (NCET)
- Professional Lighting and Sound Association
- Radio Electrical and Television Retailers' Association
- Royal Institute of British Architects
- Royal National Institute for Deaf People
- Society of Cable Television Engineers
- Sound and Communication Industries Federation

This British Standard, having been prepared under the direction of the Electronic Equipment Standards Policy Committee, was published under the authority of the Standards Board and comes into effect on 15 August 1992

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The following BSI references relate to the work on this standard:  
Committee reference EEL/32  
Draft for comment 83/26271 DC  
and 88/27622 DC

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## Amendments issued since publication

| Amd. No. | Date | Text affected |
|----------|------|---------------|
|          |      |               |
|          |      |               |
|          |      |               |
|          |      |               |
|          |      |               |

**Amendment No. 1**  
**published and effective from 15 July 1993**  
**to BS 6840 : Part 15 : 1992**

**Sound system equipment**  
**Part 15. Specification for matching values for**  
**the interconnection of sound system**  
**components**

NOTE. This amendment is being published to effect the implementation of Amendment No. 3 : 1991 to IEC 268-15 : 1987 and CENELEC HD 483.15 S4.

## Revised text

AMD 7700  
July 1993

### Front cover

Underneath IEC 268-15 : 1987 delete '*and Amendment No. 2 (February 1990)*' after '*(April 1989)*' and insert '*, Amendment No. 2 (February 1990) and Amendment No. 3 (June 1991)*'.

Underneath the title delete '**HD 483.15 S3**' and substitute '**HD 483.15 S4**'.

AMD 7700  
July 1993

### Contents list

After the entry for 10.6, insert the following new entry.

**'10.7 Input from microphone to computer (for example for a voice recognition system)'**

AMD 7700  
July 1993

### National foreword

In paragraph 1, line 5, delete '*and Amendment No. 2 (February 1990)*' and substitute '*, Amendment No. 2 (February 1990) and Amendment No. 3 (June 1991)*'. In line 6 delete '**HD 483.15 S3**' and substitute '**HD 483.15 S4**'.

AMD 7700  
July 1993

### HD title page and foreword

Delete the HD 483.15 S3 title page and foreword page and substitute the attached HD 483.15 S4 title page and foreword page.

AMD 7700  
July 1993

### Clause 10.7 Input from microphone to computer (for example for a voice recognition system)

Insert the following new clause 10.7.

**'10.7 Input from microphone to computer (for example for a voice recognition system)'**

| Microphone              |                  | Computer               |                  |
|-------------------------|------------------|------------------------|------------------|
| Output for computer     | Preferred values | Input                  | Preferred values |
| Output source impedance | —                | Rated source impedance | —                |
| Rated load impedance    | 1 k $\Omega$     | Input impedance        | 1 k $\Omega$     |
| Rated output voltage    | 0,2 mV           | Rated source e.m.f.    | 0,2 mV           |
| Maximum output voltage  | 20 mV            | Overload source e.m.f  | 20 mV            |



## Clause 14.2 Current-fed input

After note 4, insert the following new note 5.

'5.— Current-fed inputs and outputs are not recommended for new designs of household equipment. *It is proposed to delete Sub-clause 14.2 in the next revision of this standard.*'

## Clause 14.3 Voltage-fed input

Delete entirely 14.3 and substitute the following.

### 14.3 Voltage-fed input (for current-fed input, see Sub-clause 14.2)

*Note.*— The matching of analogue tape recorders and the analogue matching of digital tape recorders are included.

| Amplifier or auxiliary equipment |                  |        | Magnetic tape recorder                          |                  |        |
|----------------------------------|------------------|--------|-------------------------------------------------|------------------|--------|
| Output                           | Preferred values |        | Input                                           | Preferred values |        |
|                                  | Note 1           | Note 2 |                                                 | Note 1           | Note 2 |
| Output source impedance          | ≤10 kΩ           | ≤1 kΩ  | Rated source impedance                          | 10 kΩ            | 1 kΩ   |
| Rated load impedance             | 47 kΩ            | 10 kΩ  | Input impedance                                 | ≥47 kΩ           | ≥10 kΩ |
| Rated output voltage (note 3)    | 0,5 V            | 0,5 V  | Rated source e.m.f.                             | 0,5 V            | 0,5 V  |
| Minimum output voltage (note 4)  | 0,2 V            | 0,2 V  | Minimum source e.m.f. for rated recording level | 0,2 V            | 0,2 V  |
| Maximum output voltage (note 5)  | 2 V              | 2 V    | Overload source e.m.f.                          | ≥2 V             | ≥2,8 V |

*Notes 1.*— Preferred values for household equipment in current practice. These values may affect signal-to-noise ratio adversely if used with digital tape recorders. Amplifiers and auxiliary equipment complying with these values will operate with tape recorders complying with the values in the column under "Note 2", but there may be some attenuation of the signal.

*2.*— Preferred values for analogue matching of digital audio sources and digital magnetic tape recorders for household and similar use (see also Amendment 2 to IEC 268-15).

*3.*— *a)* In the case of reproducing a calibration tape in accordance with IEC 94-2.

*b)* In the case of tuners, see note 1 of Clause 12.

*c)* In the case of amplifiers, when applying the rated source e.m.f. to the input of the amplifier.

*4.*— *a)* In the case of reproducing a tape modulated 8 dB below the recording level given in note 3 *a)*.

*b)* In the case of a tuner, see note 2 of Clause 12.

*c)* In the case of amplifiers, when applying the relevant minimum source e.m.f. for rated output voltage to the input of the amplifier.

*5.*— *a)* In the case of a tuner, see note 3 of Clause 12.

*b)* In the case of amplifiers, when applying the relevant overload source e.m.f. to the input of the amplifier.'

## Clause 15.1 Output

After note 3, insert the following new note 4.

'4.— In the case of a computer as auxiliary equipment, the matching values in the columns "sound reinforcement" are valid.'

## Clause 15.2 Input

After note 3, insert the following new note 4.

'4.— In the case of a computer as auxiliary equipment, the matching values in the columns "sound reinforcement" are valid.'



**Annex ZA. Other international publications quoted in this standard  
with the references of the relevant European publications**

Against IEC 38, insert the footnote indicator <sup>1)</sup> after the title.

Against IEC 94-1, delete 'HD 311.1 S1' and '1983' and substitute 'HD 311.1 S2' and '1991'.

Against IEC 94-2, insert the footnote indicator <sup>2)</sup> after 'HD 311.2 S2'.

Against IEC 268-1, insert the footnote indicator <sup>3)</sup> after 'HD 483.1 S2'.

Delete the entry for IEC 268-3 and substitute the following.

|        |                    |                                 |                           |       |
|--------|--------------------|---------------------------------|---------------------------|-------|
| '268-3 | 1988 <sup>4)</sup> | Part 3: Sound system amplifiers | HD 483.3 S2 <sup>5)</sup> | 1992' |
|--------|--------------------|---------------------------------|---------------------------|-------|

Delete the entry for IEC 268-5 and substitute the following.

|        |                    |                      |             |       |
|--------|--------------------|----------------------|-------------|-------|
| '268-5 | 1989 <sup>6)</sup> | Part 5: Loudspeakers | HD 483.5 S1 | 1990' |
|--------|--------------------|----------------------|-------------|-------|

Against IEC 268-11, delete 'HD 483.11 S1' and '1990' and substitute 'HD 483.11 S2<sup>7)</sup>' and '1991'.

Delete the entry for IEC 315 and substitute the following.

|      |        |                                                                                 |        |         |
|------|--------|---------------------------------------------------------------------------------|--------|---------|
| '315 | series | Methods of measurement on radio<br>receivers for various classes of<br>emission | HD 560 | series' |
|------|--------|---------------------------------------------------------------------------------|--------|---------|

At the bottom of the page, delete the existing footnote and substitute the following new footnotes.

<sup>1)</sup>The title of HD 472 S1 is 'Nominal voltages for low voltage public electricity supply systems'.

<sup>2)</sup>HD 311.2 S2 includes A1 : 1987 to IEC 94-2.

<sup>3)</sup>HD 483.1 S2 includes A1 : 1988 to IEC 268-1.

<sup>4)</sup>IEC 268-3 : 1988 superseded IEC 268-3 : 1969.

<sup>5)</sup>HD 483.3 S2 : 1992 includes A1 : 1990 and A2 : 1992 to IEC 268-3.

<sup>6)</sup>IEC 268-5 : 1989 superseded IEC 268-5 : 1972.

<sup>7)</sup>HD 483.11 S2 includes A1 : 1989 to IEC 268-11.'

**National annex NA**

In the shoulder heading at the top of the page, delete 'BS 6480 : Part 10 : 1992' and substitute 'BS 6840 : Part 15 : 1992'.



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Descriptors: Sound system equipment, interconnection, characteristic, rated value

English version

**Sound system equipment**  
**Part 15: Preferred matching values for the**  
**interconnection of sound system components**

(IEC 268-15 : 1987 + A1 : 1989 + A2 : 1990 + A3 : 1991)

Equipements pour systèmes électroacoustiques  
Quinzième partie: Valeurs d'adaptation  
recommandées pour le raccordement entre  
les éléments des systèmes électroacoustiques  
(CEI 268-15 : 1987 + A1 : 1989 + A2 : 1990 +  
A3 : 1991)

Elektroakustische Geräte  
Teil 15: Empfohlene Anpassungswerte für  
die Verbindung von Teilen elektroakustischer  
Anlagen  
(IEC 268-15 : 1987 + A1 : 1989 + A2 : 1990 +  
A3 : 1991)

This Harmonization Document was approved by CENELEC on 1992-12-09. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for implementation of this Harmonization Document on a national level.

Up-to-date lists and bibliographical references concerning national implementation may be obtained on application to the Central Secretariat or to any CENELEC member.

This Harmonization Document exists in three official versions (English, French, German).

CENELEC members are the national electrotechnical committees of Austria, Belgium, 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**

## **Foreword**

The CENELEC questionnaire procedure, performed for finding out whether or not the International Standard IEC 268-15 : 1987 and its amendments 1 : 1989, 2 : 1990 and 3 : 1991 could be accepted without textual changes, has shown that no common modifications were necessary for the acceptance as Harmonization Document.

The reference document was submitted to the CENELEC members for formal vote and was approved by CENELEC as HD 483.15 S4 on 9 December 1992.

The following dates were fixed:

- latest date of announcement  
of the HD at national level (doa) 1993-06-01
- latest date of publication of  
a harmonized national standard (dop) 1993-12-01
- latest date of withdrawal of  
conflicting national standards (dow) 1993-12-01

For products which have complied with HD 483.15 S3 : 1991 before 1993-12-01, as shown by the manufacturer or by a certification body, this previous standard may continue to apply for production until 1998-12-01.

Annexes designated 'normative' are part of the body of the standard. In this standard, annex ZA is normative.

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