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Sound system equipment - Part 7: Headphones and earphones

Táto norma obsahuje anglickú verziu európskej normy.
This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 11/25

Obsahuje: EN IEC 60268-7:2025, IEC 60268-7:2025

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EUROPÄISCHE NORM

EN IEC 60268-7

August 2025

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English Version

**Sound system equipment - Part 7: Headphones and earphones
(IEC 60268-7:2025)**

Equipements pour systèmes électroacoustiques - Partie 7:
Casques et écouteurs
(IEC 60268-7:2025)

Elektroakustische Geräte - Teil 7: Kopfhörer und Ohrhörer
(IEC 60268-7:2025)

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Europäisches Komitee für Elektrotechnische Normung

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

EN IEC 60268-7:2025 (E)**European foreword**

The text of document 100/4304/FDIS, future edition 4 of IEC 60268-7, prepared by TC 100/Technical Area 20 "Analogue and digital audio" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN IEC 60268-7:2025.

The following dates are fixed:

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- latest date by which the national standards conflicting with the (dow) 2028-08-31 document have to be withdrawn

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In the official version, for Bibliography, the following notes have to be added for the standard indicated:

IEC 60068-1	NOTE Approved as EN 60068-1
IEC 60118-0	NOTE Approved as EN IEC 60118-0
IEC 60268-3	NOTE Approved as EN IEC 60268-3
IEC 60268-4	NOTE Approved as EN IEC 60268-4
IEC 60268-24	NOTE Approved as EN IEC 60268-24
IEC 60318-1	NOTE Approved as EN 60318-1
IEC 61786 (series)	NOTE Approved as EN 61786 (series)
IEC 61938	NOTE Approved as EN IEC 61938
IEC 62368-1	NOTE Approved as EN IEC 62368-1
ISO 4869-1	NOTE Approved as EN ISO 4869-1
ISO 7029	NOTE Approved as EN ISO 7029
ISO 18233	NOTE Approved as EN ISO 18233

Annex ZA (normative)

Normative references to international publications with their corresponding European publications

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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.

NOTE 1 Where an International Publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

NOTE 2 Up-to-date information on the latest versions of the European Standards listed in this annex is available here: www.cencenelec.eu.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60038	-	IEC standard voltages	EN 60038	-
IEC 60050-801	-	International Electrotechnical Vocabulary - Chapter 801: Acoustics and electroacoustics	-	-
IEC 60086-1	-	Primary batteries - Part 1: General	EN IEC 60086-1	-
IEC 60263	-	Scales and sizes for plotting frequency characteristics and polar diagrams	EN IEC 60263	-
IEC 60268-1	-	Sound system equipment. Part 1: General	-	-
IEC 60268-2	-	Sound system equipment. Part 2: Explanation of general terms and calculation methods	-	-
IEC 60268-11	-	Sound system equipment. Part 11: Application of connectors for the interconnection of sound system components	-	-
IEC 60268-12	-	Sound system equipment. Part 12: Application of connectors for broadcast and similar use	EN 60268-12	-
IEC 60318-4	-	Electroacoustics - Simulators of human head and ear - Part 4: Occluded-ear simulator for the measurement of earphones coupled to the ear by means of ear inserts	EN 60318-4	-
IEC 60318-7	-	Electroacoustics - Simulators of human head and ear - Part 7: Head and torso simulator for the measurement of sound sources close to the ear	EN IEC 60318-7	-
IEC 61672-1	-	Electroacoustics - Sound level meters - Part 1: Specifications	EN 61672-1	-
ISO 266	1997	Acoustics - Preferred frequencies	EN ISO 266	-
ISO 48-4	2018	Rubber, vulcanized or thermoplastic - Determination of hardness - Part 4: Indentation hardness by durometer method (Shore hardness)	-	-

EN IEC 60268-7:2025 (E)

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
ISO 3741	-	Acoustics - Determination of sound power levels and sound energy levels of noise sources using sound pressure - Precision methods for reverberation test rooms	EN ISO 3741	-
ISO 4869-3	-	Acoustics - Hearing protectors - Part 3: Measurement of insertion loss of ear-muff type protectors using an acoustic test fixture	EN ISO 4869-3	-



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INTERNATIONAL STANDARD

NORME INTERNATIONALE

**Sound system equipment –
Part 7: Headphones and earphones**

**Equipements pour systèmes électroacoustiques –
Partie 7: Casques et écouteurs**

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CONTENTS

FOREWORD	4
1 Scope	6
2 Normative references	6
3 Terms and definitions	7
4 Classification, designation and coding	9
5 Marking of terminals, controls and polarity	13
6 User instructions	14
7 Conditions for specifications and measurements	14
7.1 Rated conditions	14
7.2 Standard conditions for measurement	15
7.3 Couplers and ear simulators	15
7.3.1 General	15
7.3.2 HATS	16
7.4 Measurement conditions for simulated programme signal	16
7.5 Loudness comparison conditions	17
7.5.1 General	17
7.5.2 Free-field comparison conditions	17
7.5.3 Diffuse-field comparison conditions	17
7.6 Ear canal sound pressure level measurement conditions	17
7.7 Graphical presentation of results	17
8 Characteristics to be specified and their methods of measurement	18
8.1 Power supply	18
8.2 Electrical impedance	18
8.2.1 Rated impedance	18
8.2.2 Impedance/frequency characteristic	18
8.2.3 Rated source impedance	18
8.3 Input voltage	19
8.3.1 Rated input voltage	19
8.3.2 Limiting values of input voltage	19
8.3.3 Characteristic voltage	20
8.3.4 Simulated programme signal characteristic voltage	20
8.3.5 Simulated programme signal characteristic voltage corrected by A-weighting characteristics and free-field response compensation	20
8.3.6 Protective devices	21
8.4 Input power	22
8.5 Sound pressure (level)	22
8.5.1 General	22
8.5.2 Characteristics to be specified	22
8.5.3 Method of measurement	23
8.6 Frequency response	23
8.6.1 Coupler or ear simulator (including HATS) frequency response	23
8.6.2 Free-field compensated frequency response	24
8.6.3 Diffuse-field compensated frequency response	25
8.6.4 Rated frequency range	26
8.6.5 Effective frequency range of the free-field / diffuse-field compensated frequency response	26
8.7 Amplitude non-linearity	26

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8.7.1	General	26
8.7.2	Harmonic distortion.....	26
8.7.3	Modulation distortion	27
8.7.4	Difference-frequency distortion	28
8.8	Rated environmental conditions	28
8.9	External electric and/or magnetic field	29
8.9.1	Characteristics to be specified	29
8.9.2	Method of measurement	29
8.10	Unwanted sound radiation.....	29
8.10.1	Characteristic to be specified.....	29
8.10.2	Method of measurement	29
8.11	Sound attenuation.....	29
8.11.1	Characteristic to be specified.....	29
8.11.2	Method of measurement	30
8.12	Crosstalk attenuation for multi-channel headphones	30
8.12.1	Characteristic to be specified.....	30
8.12.2	Method of measurement	30
8.13	Application force	30
8.13.1	Characteristic to be specified.....	30
8.13.2	Method of measurement	30
8.14	Physical characteristics, cables and connectors.....	30
9	Classification of characteristics	30
Annex A (normative) Pinna simulators for measurements of headphones and earphones		32
Annex B (normative) Free-field comparison frequency response		41
B.1	Characteristic to be specified	41
B.2	Method of measurement (direct)	41
B.3	Method of measurement (by substitution).....	41
Annex C (normative) Diffuse-field comparison frequency response		42
C.1	Characteristic to be specified	42
C.2	Method of measurement (direct)	42
C.3	Method of measurement (by substitution).....	42
Annex D (normative) Free-field and diffuse-field ear canal sound pressure level frequency responses.....		43
D.1	Characteristic to be specified	43
D.2	Method of measurement (direct)	43
D.3	Method of measurement (indirect).....	44
Annex E (normative) Specification and conditions of use of a microphone for use inside the ear canal		45
Annex F (informative) Practical details of free-field comparison conditions		46
Annex G (informative) Practical details of diffuse-field comparison conditions.....		47
Annex H (informative) Practical details of the subjective comparison and ear canal sound pressure level conditions		48
Annex I (informative) Two-tone distortion measurements		49
I.1	General.....	49
I.2	Difference frequency distortion	49
I.3	Procedure for measuring difference frequency distortion.....	50
I.4	Intermodulation distortion.....	52

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I.5	Procedure for measuring intermodulation distortion	53
Annex J (informative)	Left-right tracking response for stereo headphones.....	55
Bibliography		56
Figure 1	– Diagrammatic horizontal sections showing types of earphones and their spatial relationships with the pinna and/or canal entrance.....	12
Figure 2	– Diagrams showing the four possible constructions: Acoustically open or closed, and closed- or open-back earphones	13
Figure 3	– Measurement system using simulated programme signal	16
Figure 4	– Example of a setup for the measurement of free-field/diffuse-field compensated frequency response.....	25
Figure A.1	– Shape of the recommended pinna simulator	33
Figure A.2	– Coordinate for the recommended pinna simulator	34
Figure A.3	– Cross-sectional shapes and dimensions of the recommended pinna simulator, horizontal section	37
Figure A.4	– Cross-sectional shapes and dimensions of the recommended pinna simulator, vertical section	40
Figure I.1	– Definition of difference frequency distortion products and orders.....	50
Figure I.2	– Example of difference frequency distortion of a headphone.....	51
Figure I.3	– Example of total difference frequency distortion of a headphone	52
Figure I.4	– Definition of intermodulation distortion products and orders	52
Figure I.5	– Example of intermodulation distortion of a headphone	53
Figure I.6	– Example of total Intermodulation distortion of a headphone.....	54
Figure J.1	– Example of a left-right tracking response for a stereo headphone.....	55
Table 1	– Classification of characteristics	31

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**Sound system equipment -
Part 7: Headphones and earphones****FOREWORD**

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IEC 60268-7 has been prepared by technical area 20: Analog and digital audio, of IEC technical committee 100: Audio, video and multimedia systems and equipment. It is an International Standard.

This fourth edition cancels and replaces the third edition published in 2010, and Amendment 1 of 2020. This edition constitutes a technical revision.

This edition includes the following significant technical changes with respect to the previous edition:

- consolidated with IEC 60268-7:2010/AMD1:2020;
- clause/subclause/annex reconstruction and renumbering;
- addition of effective frequency range of the free-field / diffuse-field compensated frequency response;

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- update of measurement methods of modulation distortion and difference-frequency distortion;
- addition of details of two-tone distortion measurements, see Annex I;
- addition of details of left-right tracking response for stereo headphones, see Annex J.

The text of this International Standard is based on the following documents:

Draft	Report on voting
100/4303/FDIS	100/4341/RVD

Full information on the voting for its approval can be found in the report on voting indicated in the above table.

The language used for the development of this International Standard is English.

A list of all parts in the IEC 60268 series, published under the general title *Sound system equipment*, can be found on the IEC website.

This document was drafted in accordance with ISO/IEC Directives, Part 2, and developed in accordance with ISO/IEC Directives, Part 1 and ISO/IEC Directives, IEC Supplement, available at www.iec.ch/members_experts/refdocs. The main document types developed by IEC are described in greater detail at www.iec.ch/publications.

The committee has decided that the contents of this document will remain unchanged until the stability date indicated on the IEC website under webstore.iec.ch in the data related to the specific document. At this date, the document will be

- reconfirmed,
- withdrawn, or
- revised.

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1 Scope

This part of IEC 60268 is applicable to headphones, earphones, headsets and earsets, intended to be used on, or in, the human ear. It also applies to equipment, such as pre-amplifiers, passive networks and power supplies which form an integral part of the headphone system.

This document does not deal with:

- a) safety, for which reference is made to IEC 62368-1 or another appropriate standard;
- b) the characteristics of microphones of headsets, for which reference is made to IEC 60268-4;
- c) earphones and other devices for hearing aids, for which reference is made to IEC 60118-0;
- d) headphones for audiometry;
- e) headphones and other devices which form part of an active ear-defender system, although some of the provisions of this document can be applicable;
- f) active noise cancelation characteristics as covered by IEC 60268-24.

This document specifies the characteristics which are included by the manufacturer in specifications, and relevant methods of measurement. It includes a classification of the different types of earphones, mainly characterized by the way in which the transducer is coupled acoustically to the ear, and a classification code which can also be used for marking.

Rated conditions and characteristics in this document provided by the manufacturer are not generally intended for external verification. Measurement methods for rated characteristics are informative and are provided for the benefit of manufacturers for the purpose of test repeatability and data comparison. All other specifications and tests are provided for testing by the manufacturer and for external testing and verification.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 60038, *IEC standard voltages*

IEC 60050-801, *International Electrotechnical Vocabulary – Part 801: Acoustics and electroacoustics*, available at <https://www.electropedia.org>

IEC 60086-1, *Primary batteries – Part 1: General*

IEC 60263, *Scales and sizes for plotting frequency characteristics and polar diagrams*

IEC 60268-1, *Sound system equipment – Part 1: General*

IEC 60268-2, *Sound system equipment – Part 2: Explanation of general terms and calculation methods*

IEC 60268-11, *Sound system equipment – Part 11: Application of connectors for the interconnection of sound system components*

IEC 60268-12, *Sound system equipment – Part 12: Application of connectors for broadcast and similar use*

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IEC 60318-7, *Electroacoustics – Simulators of human head and ear – Part 7: Head and torso simulator for the measurement of sound sources close to the ear*

IEC 61672-1, *Electroacoustics – Sound level meters – Part 1: Specifications*

ISO 266:1997, *Acoustics – Preferred frequencies*

ISO 48-4:2018, *Rubber, vulcanized or thermoplastic – Determination of hardness – Part 4: Indentation hardness by durometer method (Shore hardness)*

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