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INTERNATIONAL STANDARD

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

INTERNATIONAL
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INTERNATIONAL ELECTROTECHNICAL COMMISSION

SOUND SYSTEM EQUIPMENT –

Part 7: Headphones and earphones

FOREWORD

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International Standard IEC 60268-7 has been prepared by IEC technical committee TC 100: Audio, video and multimedia systems and equipment.

This third edition cancels and replaces the second edition published in 1996, and constitutes a technical revision. This edition contains the following changes:

- clause/subclause renumbering in accordance with ISO/IEC Directives, Part 2;
- addition of a measurement system using HATS;
- addition of details on pinna simulators for high measurement reproducibility, see Annex A.

The text of this standard is based on the following documents:

| FDIS | Report on voting |
|---------------|------------------|
| 100/1621/FDIS | 100/1641/RVD |

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

This publication has been drafted in accordance with the ISO/IEC Directives, Part 2.

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

The committee has decided that the contents of this publication will remain unchanged until the maintenance result date indicated on the IEC web site under "<http://webstore.iec.ch>" in the data related to the specific publication. At this date, the publication will be

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

A bilingual version of this publication may be issued at a later date.

SOUND SYSTEM EQUIPMENT –

Part 7: Headphones and earphones

1 Scope

This part of IEC 60268, is applicable to headphones, headsets, earphones 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.

It does not deal with:

- a) safety, for which reference should be made to IEC 60065 or another appropriate standard;
- b) the characteristics of microphones of headsets, for which reference should be made to IEC 60268-4;
- c) earphones and other devices for hearing aids, for which reference should be 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 its provisions may be applicable.

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

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 60038, *IEC standard voltages*

IEC 60050(801):1994, *International Electrotechnical Vocabulary – Chapter 801: Acoustics and electroacoustics*

IEC 60068-1, *Environmental testing – Part 1: General and guidance*

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

IEC Guide 106, *Guide for specifying environmental conditions for equipment performance rating*

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*

IEC 60711, *Occluded-ear simulator for the measurement of earphones coupled to the ear by ear inserts*¹

IEC TR 60959, *Provisional head and torso simulator for acoustic measurements on air conduction hearing aids*²

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

ISO 3741, *Acoustics – Determination of sound power levels of noise sources using sound pressure – Precision methods for reverberation rooms*

ISO 4869-1, *Acoustics – Hearing protectors – Part 1: Subjective method for the measurement of sound attenuation*

ISO 4869-3, *Acoustics – Hearing protectors – Part 3: Measurement of insertion loss of ear-muff type protectors using an acoustic test fixture*

ISO 7619-1, *Rubber, vulcanized and thermoplastic – Determination of indentation hardness – Part 1: Durometer method (Shore hardness)*

¹ This publication will be replaced by future IEC 60318-4 (to be published).

² This publication is planned to be replaced by future IEC 60318-7 (under consideration).