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मसौदा भारतीय मानक
ध्वनि तंत्र उपकरण भाग 7: हेडफोन और इयरफोन
(दूसरा संशोधन)

Draft Indian Standard

**Sound System Equipment Part 7: Headphones and
Earphones**

(Second Revision)

ICS No. 33.160.50

Audio, video and multimedia systems and
equipment Sectional committee, LITD 07

Last Date for Comments: 28 October
2025

NATIONAL FOREWORD

(Formal clauses will be added later)

This draft Indian Standard (Part 7) (Second Revision) which is identical to IEC 60268-7:2025 'Sound system equipment - Part 7: Headphones and earphones' issued by the International Electro Technical Commission (IEC) will be adopted by the Bureau of Indian Standards on the recommendations of the Audio, Video and Multimedia Systems and Equipment Sectional Committee and approval of the Electronics and Information Technology Division Council.

This standard was first published in 2005 and was identical with IEC 60268-7: 1996. The first revision was published in 2016 and was identical with IEC 60268-7: 2010. The second revision of this standard has been undertaken to align it with the latest version of IEC 60268-7:2025.

This standard (Part 7) is one of the parts of a series of standards on ‘Sound system equipment’. The other parts in this series are:

Part 1 General

Part 2 Explanation of general terms and calculation methods

Part 3 Amplifiers

Part 4 Microphones

Part 5 Loudspeakers

Part 10 Peak Programme Level Meters

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

- a) consolidated with IEC 60268-7:2010/AMD1:2020;
- b) clause/subclause/annex reconstruction and renumbering;
- c) addition of effective frequency range of the free-field / diffuse-field compensated frequency response;
- d) update of measurement methods of modulation distortion and difference-frequency distortion;
- e) addition of details of two-tone distortion measurements, see Annex I;
- f) addition of details of left-right tracking response for stereo headphones, see Annex J.

The text of IEC Standard may be approved as suitable for publication as an Indian Standard without deviations. Certain conventions are however not identical to those used in Indian Standards. Attention is particularly drawn to the following:

- a) Wherever the words ‘International Standard’ appears referring to this standard, they should be read as ‘Indian Standard’
- b) Comma (,) has been used as a decimal marker while in Indian Standards, the current Practice is to use a point (.) as the decimal marker.

In this adopted standard, reference appears to certain International Standards for which the Indian Standard also exists. The corresponding Indian Standard which is to be substituted in its respective place is listed below along with its degree of equivalence for the edition indicated. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies:

International standard	Corresponding Indian standard	Degree of equivalence
IEC 60038, IEC standard voltages	IS 12360: 1988 Voltage bands for electrical installations including preferred voltages and frequency	Modified/Technically Equivalent with IEC 60038
IEC 60050-801, International Electrotechnical Vocabulary – Part 801: Acoustics and electroacoustics	IS 1885 (Part 3):2023 IEC 60050(801):1994 International Electrotechnical Vocabulary IEC Part 3: Acoustics and electroacoustics	Identical with IEC 60050-801: 1994
IEC 60263, Scales and sizes for plotting frequency characteristics and polar diagrams	IS 8159:1993 Scales and Sizes for Plotting Frequency Characteristics and Polar Diagrams (First Revision)	Modified/Technically Equivalent with IEC 60263:1982
IEC 60268-1, Sound system equipment – Part 1: General	IS 15596 (Part 1):2005 IEC 60268-1:1985 Sound system equipment: Part 1 general	Identical with IEC 60268-1:1985
IEC 60268-2, Sound system equipment – Part 2: Explanation of general terms and calculation methods	IS 15596 (Part 2): 2005 IEC 60268-2:1987 Sound system equipment: Part 2 explanation of general terms and calculation methods	Identical with IEC 60268-2:1987
IEC 61672-1, Electroacoustics – Sound level meters – Part 1: Specifications	IS 15575 (Part 1): 2016 IEC 61672-1:2013 Electroacoustics - Sound level meters: Part 1 specifications (First Revision)	Identical with IEC 61672-1 : 2013

The technical committee has reviewed the provisions of the following International Standards referred in this adopted standard and has decided that they are acceptable for use in conjunction with this standard. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies:

International Standard	Title
IEC 60086-1	Primary batteries – Part 1: General

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 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
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
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)
ISO 3741,	Acoustics – Determination of sound power levels and sound energy levels of noise sources using sound pressure – Precision methods for reverberation test rooms
ISO 4869-3,	Acoustics – Hearing protectors – Part 3: Measurement of insertion loss of ear-muff type protectors using an acoustic test fixture

For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test or analysis, shall be rounded off in accordance with IS 2:2022 ‘Rules for rounding off numerical values (Second Revision)’. The number of significant places retained in the rounded off value should be same as that of the specified value in this standard.

Scope of IEC 60268-7:2025 is as follows:

“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.”

Note: - The Technical content of this document has not been enclosed as these are identical with the corresponding IEC Standard. For details please refer to IEC 60268-7:2025 or kindly contact

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