

# INTERNATIONAL STANDARD

## NORME INTERNATIONALE

**Portable multimedia equipment – Determination of battery duration –  
Part 2: Headphones and earphones with active noise-cancelling functions**

**Matériel multimédia portable – Détermination de la durée des batteries –  
Partie 2: Casques et écouteurs avec fonctions de réduction de bruit active**



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## INTERNATIONAL ELECTROTECHNICAL COMMISSION

**PORTABLE MULTIMEDIA EQUIPMENT –  
DETERMINATION OF BATTERY DURATION –**

**Part 2: Headphones and earphones with  
active noise-cancelling functions**

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IEC 63296-2 has been prepared by technical area 19: Environmental and energy aspects for multimedia systems and equipment, of IEC technical committee 100: Audio, video and multimedia systems and equipment. It is an International Standard.

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

Draft	Report on voting
100/4049/FDIS	100/4080/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.

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](http://www.iec.ch/members_experts/refdocs). The main document types developed by IEC are described in greater detail at [www.iec.ch/publications](http://www.iec.ch/publications).

A list of all parts in the IEC 63296 series, published under the general title *Portable multimedia equipment – Determination of battery duration*, can be found on the IEC website.

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](http://webstore.iec.ch) in the data related to the specific document. At this date, the document will be

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## INTRODUCTION

This document specifies a measurement method for battery duration on active acoustic noise-cancelling headphones and earphones. Active acoustic noise-cancelling headphones and earphones are commonly used to reduce the ambient acoustic noise to which the ear is exposed. However, there is no International Standard for a battery duration measurement method of active acoustic noise-cancelling headphones and earphones. Until now, each company has evaluated the performance using its own method, and the evaluation values are not uniform.

This document for the measurement of the battery duration and the notation of measured value allows the comparison of performance data obtained in different locations.

The IEC 63296 series currently consists of the following parts:

- Part 1: Powered loudspeaker equipment
- Part 2: Headphones and earphones with active noise-cancelling functions

# PORTABLE MULTIMEDIA EQUIPMENT – DETERMINATION OF BATTERY DURATION –

## Part 2: Headphones and earphones with active noise-cancelling functions

### 1 Scope

This document is applicable to active acoustic noise-cancelling headphones and earphones that have the function of reducing the ambient noise heard by the user by the level of the output sound from the transducer, which is generated by the ambient noise detection microphones and the noise reduction signal processing circuit.

This document covers headphones and earphones to be worn over-the-ear or in-ear, all of which are referred to as "headphones" in this document.

This document specifies the terms and definitions relating to battery duration of this type of headphones and the measurement and evaluation methods.

The noise detection microphones are mounted in the body, on the surface, or on an accessory of the headphones. Signal-processing circuits are analogue and digital electronic circuits.

This document does not deal with equipment intended for hearing protection. It is also not applicable to music players, recorders, etc. that have a noise-cancelling function.

The battery duration measurement methods can be applied to headphones having no active noise-cancelling function.

### 2 Normative references

The following documents are referenced 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 60268-1, *Sound system equipment – Part 1: General*

IEC 60268-7:2010, *Sound system equipment – Part 7: Headphones and earphones*

IEC 60268-24:2023, *Sound system equipment – Part 24: Headphones and earphones – Active acoustic noise cancelling characteristics*

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*