IEC 60118-0

Edition 4.0 2022-08

INTERNATIONAL STANDARD

NORME INTERNATIONALE

Electroacoustics – Hearing aids –
Part 0: Measurement of the performance characteristics of hearing aids

Électroacoustique – Appareils de correction auditive –
Partie 0: Mesure des caractéristiques fonctionnelles des appareils de correction auditive

IEC 60118-0:2022-08 (en-fr)

IEC Secretariat
3, rue de Varembé
CH-1211 Geneva 20
Switzerland

Tel.: +41 22 919 02 11
info@iec.ch
www.iec.ch

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ELECTROACOUSTICS – HEARING AIDS –

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FOREWORD

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IEC 60118-0 has been prepared by technical committee 29: Electroacoustics. It is an International Standard.

This fourth edition merges and updates the methods previously described in IEC 60118-0:2015 and IEC 60118-7:2005. It cancels and replaces the third edition of IEC 60118-0 published in 2015. This edition constitutes a technical revision.

Measurements for quality control as described in IEC 60118-7:2005 can be found in Clause 10 of this document.

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

a) the default use of an acoustic coupler according to IEC 60318-5,
b) addition of the optional use of an occluded ear simulator according to IEC 60318-4,

c) addition of the optional use of an acoustic coupler according to IEC 60318-8 (new standard based on IEC TS 62886) when information about the response above 8 kHz is needed, or the optional use of the acoustic coupler according to IEC 60318-8 for deep insert hearing aids,

d) the addition of measurements of the performance of hearing aids for production, supply and delivery quality assurance purposes,

e) corrected and updated measurement configuration and methods, adding the use of a sequential measurement as preferred configuration,

f) updated and expanded measurement procedures for the non-acoustic inputs of the hearing aid.

NOTE The substitution method described in Annex B has no relation to the substitution method described in IEC 60118-0:2015.

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

Draft	Report on voting
29/1126/FDIS	29/1129/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. The main document types developed by IEC are described in greater detail at www.iec.ch/standardsdev/publications.

A list of all parts in the IEC 60118 series, published under the general title *Electroacoustics – Hearing aids*, 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 in the data related to the specific document. At this date, the document will be

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

ELECTROACOUSTICS – HEARING AIDS –

Part 0: Measurement of the performance characteristics of hearing aids

1 Scope

This part of IEC 60118 gives recommendations for the measurement of the performance characteristics of air conduction hearing aids measured with an acoustic coupler or occluded ear simulator.

This document is applicable to the measurement and evaluation of the electroacoustical characteristics of hearing aids, for example for type testing and manufacturer data sheets.

This document is also applicable for the measurement of the performance characteristics of hearing aids for production, supply and delivery quality-assurance purposes.

The measurement results obtained by the methods specified in this document will express the performance under conditions of the measurement and can deviate substantially from the performance of the hearing aid under actual conditions of use.

This document primarily uses an acoustic coupler according to IEC 60318-5 which is only intended for loading a hearing aid with specified acoustic impedance and is not intended to reproduce the sound pressure in a person's ear. For measurements reflecting the output level in the normal human ear the occluded ear simulator according to IEC 60318-4 can be used. For extended high-frequency measurements and for deep insert hearing aids, the acoustic coupler according to IEC 60318-8 can be used.

This document also covers measurement of hearing aids with non-acoustic inputs, such as wireless, inductive or electrical input.

This document does not cover the measurement of hearing aids for simulated in situ working conditions, for which IEC 60118-8 can be applied.

This document does not cover the measurement of hearing aids under typical user settings and using a speech-like signal, for which IEC 60118-15 can be applied.

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 60118-12, *Hearing aids – Part 12: Dimensions of electrical connector systems*

IEC 60318-4:2010, *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 60318-5, *Electroacoustics – Simulators of human head and ear – Part 5: 2 cm^3 coupler for the measurement of hearing aids and earphones coupled to the ear by means of ear inserts*