

Electroacoustics — Equipment for the measurement of real-ear acoustical characteristics of hearing aids

The European Standard EN 61669:2001 has the status of a
British Standard

ICS 17.140.50

National foreword

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The UK participation in its preparation was entrusted to Technical Committee EPL/29, Electroacoustics, which has the responsibility to:

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Summary of pages

This document comprises a front cover, an inside front cover, the EN title page, pages 2 to 19 and a back cover.

The BSI copyright date displayed in this document indicates when the document was last issued.

Amendments issued since publication

Amd. No.	Date	Comments

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ISBN 0 580 38086 6

EUROPEAN STANDARD

EN 61669

NORME EUROPÉENNE

EUROPÄISCHE NORM

May 2001

ICS 17.140.50

English version

**Electroacoustics -
Equipment for the measurement
of real-ear acoustical characteristics of hearing aids
(IEC 61669:2001)**

Electroacoustique -
Appareillage pour la mesure
des caractéristiques acoustiques
des appareils de correction auditive
sur l'oreille réelle
(CEI 61669:2001)

Elektroakustik -
Geräte zur Messung der Kenndaten von
Hörgeräten am menschlichen Ohr
(IEC 61669:2001)

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CENELEC

European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

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Foreword

The text of document 29/476/FDIS, future edition 1 of IEC 61669, prepared by IEC TC 29, Electroacoustics, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as EN 61669 on 2001-03-01.

The following dates were fixed:

- latest date by which the EN has to be implemented
at national level by publication of an identical
national standard or by endorsement (dop) 2001-12-01
- latest date by which the national standards conflicting
with the EN have to be withdrawn (dow) 2004-03-01

Annexes designated "normative" are part of the body of the standard.

In this standard, annex ZA is normative.

Annex ZA has been added by CENELEC.

Endorsement notice

The text of the International Standard IEC 61669:2001 was approved by CENELEC as a European Standard without any modification.

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

IEC 60118-0 NOTE: Harmonized as HD 450.0 S1:1984 (not modified).

IEC 60118-7 NOTE: Harmonized as EN 60118-7:1993 (not modified).

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INTRODUCTION

The performance characteristics of hearing aids in actual use can differ significantly from those determined in accordance with standards such as IEC 60118-0, and IEC 60118-7, due to differing acoustic influence and coupling presented by individual ears. Measuring methods that take into account the acoustic coupling and the acoustic influence of the individual wearer on the performance of hearing aids are therefore important in the fitting of these devices. Such measuring methods have come to be known as “real-ear measurements” and are sometimes performed clinically in less than ideal acoustic environments. The accuracy and repeatability of measurements made under such conditions are complex functions of the sound field, the test environment, the nature of the test signal, the hearing aid under evaluation, the method of test signal control, the location of the sound source, the nature of the data acquisition, analysis and presentation as well as the degree of subject movement permitted.

This International Standard specifies performance requirements separate from the test requirements to show conformity. Conformance to the specifications in this International Standard is demonstrated only when the result of a measurement, extended by the actual expanded uncertainty of measurement of the testing laboratory, lies fully within the tolerances specified in this International Standard extended by the values for $U_{\max}$ given in table 1.