

Acoustics — Procedures for the measurement of real-ear acoustical characteristics of hearing aids

ICS 17.140.50

National foreword

This British Standard reproduces verbatim ISO 12124:2001 and implements it as the UK national standard.

The UK participation in its preparation was entrusted by Technical Committee EH/1, Acoustics, to Subcommittee EH/1/1, Hearing, which has the responsibility to:

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- present to the responsible international/European committee any enquiries on the interpretation, or proposals for change, and keep the UK interests informed;
- monitor related international and European developments and promulgate them in the UK.

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This British Standard, having been prepared under the direction of the Health and Environment Sector Committee, was published under the authority of the Standards Committee and comes into effect on 15 July 2001

Summary of pages

This document comprises a front cover, an inside front cover, the ISO title page, pages ii to v, a blank page, pages 1 to 17 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 37526 9

**Acoustics — Procedures for the
measurement of real-ear acoustical
characteristics of hearing aids**

*Acoustique — Méthodes pour le mesurage des caractéristiques
acoustiques des appareils de correction auditive sur l'oreille réelle*



Reference number
ISO 12124:2001(E)

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 3.

Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

Attention is drawn to the possibility that some of the elements of this International Standard may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

International Standard ISO 12124 was prepared by Technical Committee ISO/TC 43, *Acoustics*.

Annex A of this International Standard is for information only.

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 acoustical influence and coupling presented by individual ears. Measurement methods that take into account the acoustic coupling and the acoustical influence of the individual wearer on the performance of hearing aids are therefore important in the fitting of these devices. Such measurement 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 details the terminology, test environment and test methods, and defines the necessary reference points to be used for the measurement of real-ear acoustical characteristics of hearing aids.

