

# INTERNATIONAL STANDARD

## NORME INTERNATIONALE

**Assistive listening devices and systems for active assisted living –  
Part 1: General**

**Dispositifs et systèmes d'aide à l'audition pour l'assistance à l'autonomie à  
domicile –  
Partie 1: Généralités**



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## INTERNATIONAL ELECTROTECHNICAL COMMISSION

## ASSISTIVE LISTENING DEVICES AND SYSTEMS FOR ACTIVE ASSISTED LIVING –

### Part 1: General

#### FOREWORD

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IEC 63087-1 has been prepared by Technical Area 16: Active Assisted Living (AAL), wearable electronic devices and technologies, accessibility and user interfaces 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:

FDIS	Report on voting
100/3601/FDIS	100/3623/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/standardsdev/publications](http://www.iec.ch/standardsdev/publications).

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## INTRODUCTION

AAL (Active Assisted Living) aims to improve the quality of users lives. The user is any person of any age who uses or benefits from AAL products, services and systems. IEC has created the Systems Committee AAL which is tasked to develop systems standards taking into account the following: products, services and systems, safety, security and privacy.

The TC 100 title items, audio, video and multimedia devices and systems provide various services to users; however, some of users may have difficulties of hearing, viewing and sensing because of their age or some other reasons. As the number of such users is increasing, IEC meets these needs with the philosophy of AAL.

The legacy standardization work focuses on providing quality and functions to the ordinary user, this document specifies the requirement for providing audio quality and functionalities to the users who have some difficulties with hearing and listening.

Personal listening systems are used to improve the perception and audibility of a range of sound sources when listening in non-ideal situations. Examples of these include listening to a television when not seated close to it, following a discussion in a meeting, engaging in a one-to-one conversation, or in other applications where programme material is available such as transport, theatre or education environments where provision for access enables users to overcome the presence of competing background noise.

Personal listening systems are widely used by those with normal hearing, but in some instances by those who have a mild hearing loss, but either do not consider that they need a hearing aid, or do not meet health-care criteria for hearing aid provision.

Unlike hearing aids, which are classified as medical devices and require an appropriately trained and competent hearing aid professional to assess an individual's hearing and select and fit a suitable device, personal listening systems are not provided for by current regulatory requirements. Requirements for hearing aid performance are specified within the IEC 60118 series and aspects relating to hearing aid safety are specified in the relevant parts of the IEC 60601 series.

Changes in regulatory restrictions on the marketing of devices intended to assist hearing lead to the need to create an electroacoustic performance standard (including the related methods of measurement) for personal listening systems. This document specifies basic requirement for personal listening systems, establishes a control on their maximum sound pressure level output and establishes defines recommended performance in other respects, including frequency response, distortion and internally generated noise.

This document only makes provision for the electroacoustic performance of personal listening systems which relate to their input and output. Products which physically resemble modern hearing aids and which are entirely worn on or in the ear are also excluded from the scope of this document.

This document is intended to co-ordinate with IEC TC 100 activity on the accessibility of audio sources.

# ASSISTIVE LISTENING DEVICES AND SYSTEMS FOR ACTIVE ASSISTED LIVING –

## Part 1: General

### 1 Scope

This part of IEC 63087 specifies requirements, and the associated methods of measurement, for the electroacoustic performance of personal listening systems.

This document specifies requirements for the provision of assistive listening in audio, video and multimedia systems and equipment. The requirements are of different kinds, because of the diversity of the hardware concerned. Existing IEC standards for methods of measurement are normatively referenced if they exist. Methods of measurement and performance requirements are specified in IEC 63087-2<sup>1</sup>.

This document does not apply to hearing aids. Also excluded are devices entirely worn on or in the ear, which cannot be measured independently.

### 2 Normative references

There are no normative references in this document.

### 3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- IEC Electropedia: available at <http://www.electropedia.org/>
- ISO Online browsing platform: available at <http://www.iso.org/obp>

#### 3.1

##### product

piece of equipment, possibly comprising several objects that work together, which is typically acquired by a member of the general public as a single purchase

EXAMPLE 1 A television receiver.

EXAMPLE 2 A radio headphone kit, comprising headphones, transmitter and power supply.

Note 1 to entry: The term 'product' is used to improve clarity, as the term 'equipment' is considered to be rather 'technical'.

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<sup>1</sup> Under preparation.