

STN	Asistenčné načúvacie zariadenia a systémy pre aktívnu asistenciu Časť 1: Všeobecne	STN EN IEC 63087-1
		36 8314

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

Táto norma obsahuje anglickú verziu európskej normy.
This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 12/21

Obsahuje: EN IEC 63087-1:2021, IEC 63087-1:2021

134002

EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN IEC 63087-1

October 2021

ICS 13.180; 33.160.99

English Version

**Assistive listening devices and systems for active assisted living
- Part 1: General
(IEC 63087-1:2021)**

Dispositifs et systèmes d'aide à l'audition pour l'assistance
à l'autonomie à domicile - Partie 1: Généralités
(IEC 63087-1:2021)

Einrichtungen und Systeme für das assistierende Zuhören
und für aktives betreutes Wohnen - Teil 1: Allgemeines
(IEC 63087-1:2021)

This European Standard was approved by CENELEC on 2021-09-30. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CENELEC member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CENELEC member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Bulgaria, Croatia, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.



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

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

EN IEC 63087-1:2021 (E)**European foreword**

The text of document 100/3601/FDIS, future edition 1 of IEC 63087-1, prepared by TC 100/Technical Area 16 "Active Assisted Living (AAL), wearable electronic devices and technologies, accessibility and user interfaces" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN IEC 63087-1:2021.

The following dates are fixed:

- latest date by which the document has to be implemented at national (dop) 2022-06-30 level by publication of an identical national standard or by endorsement
- latest date by which the national standards conflicting with the (dow) 2024-09-30 document have to be withdrawn

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

Any feedback and questions on this document should be directed to the users' national committee. A complete listing of these bodies can be found on the CENELEC website.

Endorsement notice

The text of the International Standard IEC 63087-1:2021 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 60107-1:1997 NOTE Harmonized as EN 60107-1:1997 (not modified)

IEC 60107-2 NOTE Harmonized as EN 60107-2

IEC 60118 (series) NOTE Harmonized as EN IEC 60118 (series)

IEC 60118-4:2014 NOTE Harmonized as EN 60118-4:2015 (not modified)

IEC 60268-3 NOTE Harmonized as EN IEC 60268-3

IEC 60268-4 NOTE Harmonized as EN IEC 60268-4

IEC 60315-4 NOTE Harmonized as EN 60315-4

IEC 60601 (series) NOTE Harmonized as EN 60601 (series)

IEC 61606-3:2008 NOTE Harmonized as EN 61606-3:2008 (not modified)

IEC 60914:1988 NOTE Harmonized as HD 549 S1:1989 (not modified)

IEC 61938:2018 NOTE Harmonized as EN IEC 61938:2018 (not modified)

IEC 62489-1:2010 NOTE Harmonized as EN 62489-1:2010 (not modified)

IEC 62777:2016 NOTE Harmonized as EN 62777:2016 (not modified)



IEC 63087-1

Edition 1.0 2021-08

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**





THIS PUBLICATION IS COPYRIGHT PROTECTED
Copyright © 2021 IEC, Geneva, Switzerland

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from either IEC or IEC's member National Committee in the country of the requester. If you have any questions about IEC copyright or have an enquiry about obtaining additional rights to this publication, please contact the address below or your local IEC member National Committee for further information.

Droits de reproduction réservés. Sauf indication contraire, aucune partie de cette publication ne peut être reproduite ni utilisée sous quelque forme que ce soit et par aucun procédé, électronique ou mécanique, y compris la photocopie et les microfilms, sans l'accord écrit de l'IEC ou du Comité national de l'IEC du pays du demandeur. Si vous avez des questions sur le copyright de l'IEC ou si vous désirez obtenir des droits supplémentaires sur cette publication, utilisez les coordonnées ci-après ou contactez le Comité national de l'IEC de votre pays de résidence.

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

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

About the IEC

The International Electrotechnical Commission (IEC) is the leading global organization that prepares and publishes International Standards for all electrical, electronic and related technologies.

About IEC publications

The technical content of IEC publications is kept under constant review by the IEC. Please make sure that you have the latest edition, a corrigendum or an amendment might have been published.

IEC publications search - webstore.iec.ch/advsearchform
 The advanced search enables to find IEC publications by a variety of criteria (reference number, text, technical committee, ...). It also gives information on projects, replaced and withdrawn publications.

IEC Just Published - webstore.iec.ch/justpublished
 Stay up to date on all new IEC publications. Just Published details all new publications released. Available online and once a month by email.

IEC Customer Service Centre - webstore.iec.ch/csc
 If you wish to give us your feedback on this publication or need further assistance, please contact the Customer Service Centre: sales@iec.ch.

IEC online collection - oc.iec.ch

Discover our powerful search engine and read freely all the publications previews. With a subscription you will always have access to up to date content tailored to your needs.

Electropedia - www.electropedia.org

The world's leading online dictionary on electrotechnology, containing more than 22 000 terminological entries in English and French, with equivalent terms in 18 additional languages. Also known as the International Electrotechnical Vocabulary (IEV) online.

A propos de l'IEC

La Commission Electrotechnique Internationale (IEC) est la première organisation mondiale qui élabore et publie des Normes internationales pour tout ce qui a trait à l'électricité, à l'électronique et aux technologies apparentées.

A propos des publications IEC

Le contenu technique des publications IEC est constamment revu. Veuillez vous assurer que vous possédez l'édition la plus récente, un corrigendum ou amendement peut avoir été publié.

Recherche de publications IEC - webstore.iec.ch/advsearchform

La recherche avancée permet de trouver des publications IEC en utilisant différents critères (numéro de référence, texte, comité d'études, ...). Elle donne aussi des informations sur les projets et les publications remplacées ou retirées.

IEC Just Published - webstore.iec.ch/justpublished

Restez informé sur les nouvelles publications IEC. Just Published détaille les nouvelles publications parues. Disponible en ligne et une fois par mois par email.

Service Clients - webstore.iec.ch/csc

Si vous désirez nous donner des commentaires sur cette publication ou si vous avez des questions contactez-nous: sales@iec.ch.

IEC online collection - oc.iec.ch

Découvrez notre puissant moteur de recherche et consultez gratuitement tous les aperçus des publications. Avec un abonnement, vous aurez toujours accès à un contenu à jour adapté à vos besoins.

Electropedia - www.electropedia.org

Le premier dictionnaire d'électrotechnologie en ligne au monde, avec plus de 22 000 articles terminologiques en anglais et en français, ainsi que les termes équivalents dans 16 langues additionnelles. Egalement appelé Vocabulaire Electrotechnique International (IEV) en ligne.



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**

INTERNATIONAL
ELECTROTECHNICAL
COMMISSION

COMMISSION
ELECTROTECHNIQUE
INTERNATIONALE

ICS 13.180; 33.160.99

ISBN 978-2-8322-1010-3

Warning! Make sure that you obtained this publication from an authorized distributor.

Attention! Veuillez vous assurer que vous avez obtenu cette publication via un distributeur agréé.

CONTENTS

FOREWORD	3
INTRODUCTION	5
1 Scope	6
2 Normative references	6
3 Terms and definitions	6
4 General	7
4.1 Assistive listening devices and systems	7
4.2 Sources of audio for assistive listening	7
4.3 Dedicated assistive listening systems	8
5 Requirements in the context of accessibility and ease of use	8
5.1 Requirements for products and systems under the control of the user	8
5.1.1 General requirements	8
5.1.2 Considerations for specific products and systems under the control of the user	9
5.2 Requirements for products and systems not under the control of the user	9
5.2.1 General requirements	9
5.2.2 Considerations for specific products and systems not under the control of the user	10
6 Claims of conformity	10
Bibliography	11
Table 1 – Sources of audio for assistive listening	7
Table 2 – Dedicated assistive listening systems	8

INTERNATIONAL ELECTROTECHNICAL COMMISSION

ASSISTIVE LISTENING DEVICES AND SYSTEMS FOR ACTIVE ASSISTED LIVING –

Part 1: General

FOREWORD

- 1) The International Electrotechnical Commission (IEC) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, IEC publishes International Standards, Technical Specifications, Technical Reports, Publicly Available Specifications (PAS) and Guides (hereafter referred to as "IEC Publication(s)"). Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
- 2) The formal decisions or agreements of IEC on technical matters express, as nearly as possible, an international consensus of opinion on the relevant subjects since each technical committee has representation from all interested IEC National Committees.
- 3) IEC Publications have the form of recommendations for international use and are accepted by IEC National Committees in that sense. While all reasonable efforts are made to ensure that the technical content of IEC Publications is accurate, IEC cannot be held responsible for the way in which they are used or for any misinterpretation by any end user.
- 4) In order to promote international uniformity, IEC National Committees undertake to apply IEC Publications transparently to the maximum extent possible in their national and regional publications. Any divergence between any IEC Publication and the corresponding national or regional publication shall be clearly indicated in the latter.
- 5) IEC itself does not provide any attestation of conformity. Independent certification bodies provide conformity assessment services and, in some areas, access to IEC marks of conformity. IEC is not responsible for any services carried out by independent certification bodies.
- 6) All users should ensure that they have the latest edition of this publication.
- 7) No liability shall attach to IEC or its directors, employees, servants or agents including individual experts and members of its technical committees and IEC National Committees for any personal injury, property damage or other damage of any nature whatsoever, whether direct or indirect, or for costs (including legal fees) and expenses arising out of the publication, use of, or reliance upon, this IEC Publication or any other IEC Publications.
- 8) Attention is drawn to the Normative references cited in this publication. Use of the referenced publications is indispensable for the correct application of this publication.
- 9) Attention is drawn to the possibility that some of the elements of this IEC Publication may be the subject of patent rights. IEC shall not be held responsible for identifying any or all such patent rights.

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. The main document types developed by IEC are described in greater detail at www.iec.ch/standardsdev/publications.

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.

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 63087-2¹.

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.

koniec náhľadu – text ďalej pokračuje v platenej verzii STN