



NSAI
Standards

Irish Standard
I.S. EN 50332-1:2013

Sound system equipment: Headphones and earphones associated with personal music players - Maximum sound pressure level measurement methodology -- Part 1: General method for one package equipment

I.S. EN 50332-1:2013

Incorporating amendments/corrigenda issued since publication:

The National Standards Authority of Ireland (NSAI) produces the following categories of formal documents:

I.S. xxx: Irish Standard – national specification based on the consensus of an expert panel and subject to public consultation.

S.R. xxx: Standard Recommendation - recommendation based on the consensus of an expert panel and subject to public consultation.

SWiFT xxx: A rapidly developed recommendatory document based on the consensus of the participants of an NSAI workshop.

| | | |
|---|--|---|
| <i>This document replaces:</i> EN 50332-1:2000 | <i>This document is based on:</i> EN 50332-1:2013 EN 50332-1:2000 | <i>Published:</i> 25 October, 2013 31 March, 2000 |
| This document was published under the authority of the NSAI and comes into effect on: 31 October, 2013 | | ICS number: 17.140.50 33.160.50 |
| NSAI 1 Swift Square, Northwood, Santry Dublin 9 | T +353 1 807 3800 F +353 1 807 3838 E standards@nsai.ie W NSAI.ie | Sales: T +353 1 857 6730 F +353 1 857 6729 W standards.ie |
| Údarás um Chaighdeáin Náisiúnta na hÉireann | | |

English version

**Sound system equipment: Headphones and earphones associated with personal music players -
Maximum sound pressure level measurement methodology -
Part 1: General method for "one package equipment"**

Équipement de systèmes acoustiques:
Casques et écouteurs associés avec un baladeur -
Méthode de mesure de niveau maximal de pression acoustique -
Partie 1: Méthode générale pour "un équipement complet"

Elektroakustische Geräte: Kopfhörer und Ohrhörer in Verbindung mit tragbaren Audiogeräten -
Verfahren zur Messung des maximalen Schalldruckpegels -
Teil 1: Allgemeines Verfahren für "Original-Geräte-Sets"

This European Standard was approved by CENELEC on 2013-09-23. 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, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

CENELEC

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

CEN-CENELEC Management Centre: Avenue Marnix 17, B - 1000 Brussels

| Contents | Page |
|--|-------------|
| Foreword | 3 |
| 1 Scope | 4 |
| 2 Normative references | 4 |
| 3 Terms and definitions | 5 |
| 4 Measuring principle | 5 |
| 4.1 General description | 5 |
| 4.2 Measuring principle | 6 |
| 5 Test signal | 6 |
| 5.1 General | 6 |
| 5.2 Test signal level for analogue recorders | 7 |
| 5.3 Test signal level for FM radio | 7 |
| 5.4 Test signal level for digital music players | 7 |
| 6 Measuring arrangement and test protocol | 7 |
| 6.1 General | 7 |
| 6.2 Headphone fit | 8 |
| 6.3 Operating conditions | 8 |
| 6.4 Measurements and evaluation | 9 |
| Bibliography | 10 |

Foreword

This document (EN 50332-1:2013) has been prepared by CLC/TC 108X, "Safety of electronic equipment within the fields of Audio/Video, Information Technology and Communication Technology".

The following dates are fixed:

- latest date by which this document has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2014-09-23
- latest date by which the national standards conflicting with this document have to be withdrawn (dow) 2016-09-23

This document supersedes EN 50332-1:2000.

EN 50332-1:2013 includes the following significant technical changes with respect to EN 50332-1:2000:

- deletion of limits;
- addition of digital signals;
- adaptations to use the term "personal music players".

EN 50332, *Sound system equipment: Headphones and earphones associated with personal music players — Maximum sound pressure level measurement methodology*, is composed with the following parts:

- *Part 1: General method for "one package equipment"*;
 - *Part 2: Matching of sets with headphones if either or both are offered separately, or are offered as one package equipment but with standardised connectors between the two allowing to combine components of different manufacturers or different design.*
-

1 Scope

The scope of this European Standard is to set up a suitable measuring methodology allowing accurate measurement of the maximum sound pressure level produced by consumer's headphones and earphones when associated with personal music players.

NOTE This standard does not apply to acoustically open or acoustically closed headphones associated with mains operated Hi-Fi home equipment nor does it apply to headphones for medical purposes (hard of hearing etc.) or to headphones or similar parts being part of active hearing protection systems. Other requirements for safety, e.g. for noise protection in offices and industry are not affected by this standard.

Requested features:

- The method should be reproducible and easily applicable to every type and shape of headphone or earphone available on the market (good mechanical adaptability).
- As safety and health are addressed, the method should faithfully reflect the pressure level effective at the user's ear (good correlation with subjective tests) to support protection against excessive sound pressure from personal music players (the limits themselves are found in EN 60950-1:2006/A12:2011 and EN 60065:2002/A12:2011 respectively).
- And finally, it is desirable to establish a global measuring procedure, including each component in the chain:
 - Portable set
 - + specific test signal
 - + associated headphone or earphone.

The standard is split into two parts:

- Part 1 deals with sets provided as a package equipment by the manufacturer. In this case, "Personal music players" means the association of one set (compact cassette player, FM radio receiver, digital media player, streaming audio player...) with supplied headphones or earphones.
- Part 2 gives guidelines to associate portable audio sets (FM radio receiver, digital media player, streaming audio player...) with headphones or earphones provided separately by any source. And the package sets with standardised connectors or interfaces between the two allowing to combine components of different manufacturers or different design.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

HD 483.1 S2, *Sound system equipment — Part 1: General (IEC 60268-1)*

EN 50332-2:2013, *Sound system equipment: Headphones and earphones associated with personal music players — Maximum sound pressure level measurement methodology — Part 2: Matching of sets with headphones if either or both are offered separately, or are offered as one package equipment but with standardised connectors between the two allowing to combine components of different manufacturers or different design*

EN 60094-7, *Magnetic tape sound recording and reproducing systems — Part 7: Cassette for commercial tape records and domestic use (IEC 60094-7)*

EN 60268-7, *Sound system equipment — Part 7: Headphones and earphones (IEC 60268-7)*

EN 60315-4, *Methods of measurement on radio receivers of various classes of emission — Part 4: Receivers for frequency-modulated sound broadcasting emissions (IEC 60315-4)*

This is a free preview. Purchase the entire publication at the link below:

[Product Page](#)

-
- [Looking for additional Standards? Visit Intertek Inform Infostore](#)
 - [Learn about LexConnect, All Jurisdictions, Standards referenced in Australian legislation](#)
-