

Household and similar electrical appliances - Test code
for the determination of airborne acoustical noise -
Part 1: General requirements

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

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English Version

Household and similar electrical appliances - Test code for the
determination of airborne acoustical noise - Part 1: General
requirements
(IEC 60704-1:2021)

Appareils électrodomestiques et analogues - Code d'essai
pour la détermination du bruit aérien - Partie 1: Exigences
générales
(IEC 60704-1:2021)

Elektrische Geräte für den Hausgebrauch und ähnliche
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Europäisches Komitee für Elektrotechnische Normung

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European foreword

The text of document 59/753/FDIS, future edition 4 of IEC 60704-1, prepared by IEC/TC 59 "Performance of household and similar electrical appliances" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN IEC 60704-1:2021.

The following dates are fixed:

- latest date by which the document has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2022-01-15
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) –

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

IEC 60038:2009	NOTE	Harmonized as EN 60038:2011 (modified)
ISO 3741:2010	NOTE	Harmonized as EN ISO 3741:2010 (not modified)
ISO 3745:2012	NOTE	Harmonized as EN ISO 3745:2012 (not modified)

Annex ZA (normative)

Normative references to international publications with their corresponding European publications

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

NOTE 1 Where an International Publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

NOTE 2 Up-to-date information on the latest versions of the European Standards listed in this annex is available here: www.cenelec.eu.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60704-2	series	Household and similar electrical appliances - Test code for the determination of airborne acoustical noise	EN IEC 60704-2	series
IEC 60704-3 (mod)	2019	Household and similar electrical appliances - Test code for the determination of airborne acoustical noise - Part 3: Procedure for determining and verifying declared noise emission values	EN 60704-3	2019
IEC 61260-1	2014	Electroacoustics - Octave-band and fractional-octave-band filters - Part 1: Specifications	EN 61260-1	2014
IEC 61672-1	2013	Electroacoustics - Sound level meters - Part 1: Specifications	EN 61672-1	2013
ISO 3743-1	2010	Acoustics - Determination of sound power levels and sound energy levels of noise sources using sound pressure - Engineering methods for small movable sources in reverberant fields - Part 1: Comparison method for a hard-walled test room	EN ISO 3743-1	2010
ISO 3743-2	2018	Acoustics - Determination of sound power levels of noise sources using sound pressure - Engineering methods for small, movable sources in reverberant fields - Part 2: Methods for special reverberation test rooms	EN ISO 3743-2	2019
ISO 3744	2010	Acoustics - Determination of sound power levels and sound energy levels of noise sources using sound pressure - Engineering methods for an essentially free field over a reflecting plane	EN ISO 3744	2010

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
ISO 9614-1	1993	Acoustics - Determination of sound power levels of noise sources using sound intensity - Part 1: Measurement at discrete points	EN ISO 9614-1	2009
ISO 9614-2	1996	Acoustics - Determination of sound power levels of noise sources using sound intensity - Part 2: Measurement by scanning	EN ISO 9614-2	1996
ISO 9614-3	2002	Acoustics - Determination of sound power levels of noise sources using sound intensity - Part 3: Precision method for measurement by scanning	EN ISO 9614-3	2009
ISO 6926	2016	Acoustics - Requirements for the performance and calibration of reference sound sources used for the determination of sound power levels	EN ISO 6926	2016
ISO 12001	1996	Acoustics - Noise emitted by machinery and equipment - Rules for the drafting and presentation of a noise test code	EN ISO 12001	2009

INTERNATIONAL STANDARD

NORME INTERNATIONALE

**Household and similar electrical appliances – Test code for the determination
of airborne acoustical noise –
Part 1: General requirements**

**Appareils électrodomestiques et analogues – Code d’essai pour la détermination
du bruit aérien –
Partie 1: Exigences générales**



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INTERNATIONAL ELECTROTECHNICAL COMMISSION

**HOUSEHOLD AND SIMILAR ELECTRICAL APPLIANCES –
TEST CODE FOR THE DETERMINATION
OF AIRBORNE ACOUSTICAL NOISE –****Part 1: General requirements****FOREWORD**

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International Standard IEC 60704-1 has been prepared by IEC technical committee 59: Performance of household and similar electrical appliances.

This fourth edition cancels and replaces the third edition published in 2010. This edition constitutes a technical revision.

It includes the following significant changes with respect to the previous edition:

- a) update of references (especially to ISO standards);
- b) revision of requirements on climatic conditions;
- c) revision of requirements on background noise level.

The text of this International Standard is based on the following documents:

FDIS	Report on voting
59/753/FDIS	59/762/RVD

Full information on the voting for the approval of this International Standard can be found in the report on voting indicated in the above table.

This document has been drafted in accordance with the ISO/IEC Directives, Part 2.

A list of all the parts in the IEC 60704 series, under the general title *Household and similar electrical appliances – Test code for the determination of airborne acoustical noise*, can be found on the IEC website.

The committee has decided that the contents of this document will remain unchanged until the stability date indicated on the IEC website under "<http://webstore.iec.ch>" in the data related to the specific document. At this date, the document will be

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INTRODUCTION

Although the noise emitted by household appliances does not generally present a hazard to the hearing of the operator and other exposed persons, the need for standardization procedures for the determination of the noise emitted has been recognized for a long time. Such procedures should be specified, not only for special types of appliances, but also the principles should be applicable to the majority of appliances in general use.

Generally, the determination of noise levels is only part of a comprehensive testing procedure covering many aspects of the properties and performances of the appliance. It is therefore important that the requirements for noise measurements (such as test environment, instrumentation, and amount of labour involved) be kept at a modest level.

The results of noise measurements are used for many purposes, for example for noise declaration, as well as for comparing the noise emitted by a specific appliance to the noise emitted by other appliances of the same family. In other cases, the results are taken as a basis for engineering action in the development stages of new pieces of equipment, or in deciding on means for sound insulation. For all purposes, it is important to specify procedures with known accuracy so that the results of measurements taken by different laboratories can be compared.

These conditions have, as far as possible, been taken into account in the preparation of this test code. The acoustic measuring methods are based on those described in ISO 3743-1:2010, ISO 3743-2:2018 and ISO 3744:2010.

The adoption of these methods permits the use of hemi-anechoic rooms, special reverberation test rooms and hard-walled test rooms. The result of the measurements is the sound power level of the appliance. Within the measuring uncertainty specific to these methods, the results from the determination under free field conditions over a reflecting plane are equal to those obtained in reverberant fields.

The use of intensity methods as described in ISO 9614-1:1993, ISO 9614-2:1996, and ISO 9614-3:2002 is applicable under special conditions, which are described in specific parts of the IEC 60704-2 series.

This test code is concerned with airborne noise only. In some cases, structure-borne noise, for example transmitted to the adjoining room, can be of importance.