

SLOVENSKI STANDARD

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Zvokovni in radiodifuzijski sprejemniki s pripadajočo opremo - Karakteristike občutljivosti za radijske motnje – Mejne vrednosti in merilne metode

Sound and television broadcast receivers and associated equipment - Radio disturbance characteristics - Limits and methods of measurement

Ton- und Fernseh-Rundfunkempfänger und verwandte Geräte der Unterhaltungselektronik - Funkstöreigenschaften - Grenzwerte und Messverfahren

Récepteurs de radiodiffusion et de télévision et équipements associés - Caractéristiques des perturbations radioélectriques - Limites et méthodes de mesure

Ta slovenski standard je istoveten z: EN 55013:2013

ICS:

33.100.99	Drugi vidiki v zvezi z EMC	Other aspects related to EMC
33.160.20	Radijski sprejemniki	Radio receivers

SIST EN 55013:2013 en

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EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 55013

June 2013

ICS 33.100.10

Supersedes EN 55013:2001 + A1:2003 + A2:2006, EN 55013:2001/IS1:2009

English version

**Sound and television broadcast receivers and associated equipment -
Radio disturbance characteristics -
Limits and methods of measurement
(CISPR 13:2009, modified)**

Récepteurs de radiodiffusion et de
télévision et équipements associés -
Caractéristiques des perturbations
radioélectriques -
Limites et méthodes de mesure
(CISPR 13:2009, modifiée)

Ton- und Fernseh-Rundfunkempfänger
und verwandte Geräte der
Unterhaltungselektronik -
Funkstöreeigenschaften -
Grenzwerte und Messverfahren
(CISPR 13:2009, modifiziert)

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This European Standard was approved by CENELEC on 2013-04-22. 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.

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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.

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CENELEC

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

Management Centre: Avenue Marnix 17, B - 1000 Brussels

Foreword

The text of document CISPR/I/296/FDIS, future edition 5 of CISPR 13, prepared by CISPR SC I "Electromagnetic compatibility of information technology equipment, multimedia equipment and receivers" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 55013:2013.

A draft amendment, which covers common modifications to CISPR 13:2009, was prepared by CLC/TC 210 "Electromagnetic Compatibility (EMC)" and approved by CENELEC.

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) 2014-04-22
- latest date by which the national standards conflicting with this document have to be withdrawn (dow) 2016-04-22

This document supersedes EN 55013:2001 + IS1:2009 + A1:2003 + A2:2006.

EN 55013:2013 includes the following significant technical changes with respect to EN 55013:2001:

EN 55013:2013 constitutes the introduction of the RMS-average detector as an alternative to quasi-peak and average detector for conducted and radiated emission measurements.

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

This document has been prepared under a mandate given to CENELEC by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive(s).

For the relationship with EU Directive(s) see informative Annex ZZ, which is an integral part of this document.

Endorsement notice

The text of the International Standard CISPR 13:2009 was approved by CENELEC as a European Standard with agreed common modifications.

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

CISPR 11:2003 + A1:2004	NOTE	Harmonised as EN 55011:2007 (modified).
CISPR 16-2-1:2008	NOTE	Harmonised as EN 55016-2-1:2009 (not modified).
CISPR 16-2-3:2006	NOTE	Harmonised as EN 55016-2-3:2006 (not modified).

COMMON MODIFICATIONS

4.2 Disturbance Voltage at the mains terminals

Add the following new paragraph after the 1st sentence:

In addition to the RMS-average limit as specified in Table 1, a Peak limit with an increased value of 20 dB shall apply. Both RMS-average and Peak limits shall be met.

4.5 Disturbance power

Add the following new paragraph after the 1st sentence:

In addition to the RMS-average limit as specified in Table 4, a Peak limit with an increased value of 20 dB shall apply. Both RMS-average and Peak limits shall be met.

4.6 Radiated disturbance

Replace existing Table 5 in CISPR 13:2009 by the following new table:

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Table 5 – Limits of radiated disturbances at 3 m distance

Equipment type	Source	Frequency MHz	Limit dB(μ V/m) Quasi-peak ^a	Limit dB(μ V/m) RMS-average ^{a, b}		
Television receivers, video recorders and PC tuner cards	Local oscillator	$\leq 1\ 000$	Fundamental	57 ^a	Fundamental	57 ^a
		30 to 300	Harmonics	52	Harmonics	52
	Other	300 to 1 000	Harmonics	56	Harmonics	56
		30 to 230		40		34/ 40 ^c
		230 to 1 000		47	47	
Television and sound receivers for broadcast satellite transmissions (except outdoor units), Infrared remote control units and Infrared headphone systems	Other	30 to 230		40		34/ 40 ^c
		230 to 1 000		47		47
Frequency modulation sound receivers and PC tuner cards	Local oscillator	$\leq 1\ 000$	Fundamental	60	Fundamental	60
		30 to 300	Harmonics	52	Harmonics	52
	Other	300 to 1 000	Harmonics	56	Harmonics	56
		30 to 230		40		34/ 40 ^c
		230 to 1 000		47	47	

^a In Japan: 57 dB(μ V/m) is relaxed to 66 dB(μ V/m) for operating channels <300 MHz and to 70 dB(μ V/m) for operating channels >300 MHz.

^b The RMS-average limits can be applied as an alternative to quasi-peak limits.

^c For narrowband disturbances 40 dB(μ V/m) applies. For this application a narrowband disturbance is identified if the difference between Peak and RMS-average value is ≤ 3 dB. All other signals are considered as broadband disturbances. For these signals a Peak limit of 54 dB(μ V/m) applies in addition to the RMS-average limit of 34 dB(μ V/m).

Annex ZA (normative)

Normative references to international publications with their corresponding European publications

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.

NOTE When an international publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
CISPR 16-1-1 + A1 + A2	2006 2006 2007	Specification for radio disturbance and immunity measuring apparatus and methods - Part 1-1: Radio disturbance and immunity measuring apparatus - Measuring apparatus	EN 55016-1-1 + A1 + A2	2007 2007 2008
CISPR 16-1-2 + corr. January + A1 + A2	2003 2009 2004 2006	Specification for radio disturbance and immunity measuring apparatus and methods - Part 1-2: Radio disturbance and immunity measuring apparatus - Ancillary equipment - Conducted disturbances	EN 55016-1-2 + A1 + A2	2004 2005 2006
CISPR 16-1-3	2004	Specification for radio disturbance and immunity measuring apparatus and methods - Part 1-3: Radio disturbance and immunity measuring apparatus - Ancillary equipment - Disturbance power	EN 55016-1-3	2006
CISPR 16-1-4 + A1 + A2	2007 2007 2008	Specification for radio disturbance and immunity measuring apparatus and methods - Part 1-4: Radio disturbance and immunity measuring apparatus - Ancillary equipment - Radiated disturbances	EN 55016-1-4 + A1 + A2	2007 2008 2009
CISPR 16-2-2 + A1 + A2	2003 2004 2005	Specification for radio disturbance and immunity measuring apparatus and methods - Part 2-2: Methods of measurement of disturbances and immunity - Measurement of disturbance power	EN 55016-2-2 + A1 + A2	2004 2005 2005
CISPR 22 (mod)	2008	Information technology equipment - Radio disturbance characteristics - Limits and methods of measurement	EN 55022 + AC:2011	2010 2011
IEC 60050-161 + A1 + A2	1990 1997 1998	International Electrotechnical Vocabulary (IEV) - Chapter 161: Electromagnetic compatibility	-	-
IEC 60728-2	2002	Cabled distribution systems for television and sound signals - Part 2: Electromagnetic compatibility for equipment	-	-
ITU-R BT.471-1	-	Nomenclature and description of colour bar signals	-	-

Annex ZZ
(informative)

Coverage of Essential Requirements of EU Directives

This European Standard has been prepared under a mandate given to CENELEC by the European Commission and the European Free Trade Association and within its scope the standard covers protection requirements of Annex I Article 1(a) of the EU Directive 2004/108/EC.

Compliance with this standard provides one means of conformity with the specified essential requirements of the Directives concerned.

WARNING: Other requirements and other EU Directives may be applicable to the products falling within the scope of this standard.

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INTERNATIONAL STANDARD

NORME INTERNATIONALE

INTERNATIONAL SPECIAL COMMITTEE ON RADIO INTERFERENCE
COMITÉ INTERNATIONAL SPÉCIAL DES PERTURBATIONS RADIOÉLECTRIQUES

**Sound and television broadcast receivers and associated equipment – Radio
disturbance characteristics – Limits and methods of measurement**

**Récepteurs de radiodiffusion et de télévision et équipements associés –
Caractéristiques des perturbations radioélectriques – Limites et méthodes de
mesure**

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INTERNATIONAL ELECTROTECHNICAL COMMISSION
INTERNATIONAL SPECIAL COMMITTEE ON RADIO INTERFERENCE

**SOUND AND TELEVISION BROADCAST RECEIVERS
AND ASSOCIATED EQUIPMENT –
RADIO DISTURBANCE CHARACTERISTICS –
LIMITS AND METHODS OF MEASUREMENT**

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.
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International Standard CISPR 13 has been prepared by CISPR subcommittee I: Electromagnetic compatibility of information technology equipment, multimedia equipment and receivers.

This fifth edition of CISPR 13 cancels and replaces the fourth edition published in 2001, its Amendment 1 (2003) and Amendment 2 (2006). This edition constitutes the introduction of the RMS-average detector as an alternative to quasi-peak and average detector for conducted and radiated emission measurements.

The document CISPR/I/296/FDIS, circulated to the National Committees as Amendment 3, led to the publication of the new edition.

The text of this standard is based on the fourth edition, Amendment 1, Amendment 2 and the following documents:

FDIS	Report on voting
CISPR/1/296/FDIS	CISPR/1/297/RVD

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

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

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

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- replaced by a revised edition, or
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INTRODUCTION

The CISPR recommends that the limits and methods of measurement of radio disturbance characteristics of sound and television receivers contained in the latest edition of CISPR 13, including amendments, be used, without regional or national addenda or modifications. The requirements are considered sufficient to reach adequate emission levels to protect radio broadcast and telecommunication services and to allow other apparatus to operate as intended at a reasonable distance.

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