Irish Standard
I.S. EN 55012:2007

Vehicles, boats and internal combustion engines - Radio disturbance characteristics - Limits and methods of measurement for the protection of off-board receivers (CISPR 12:2007 (EQV))

I.S. EN 55012:2007

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I.S. EN 55012:2007/A1:2009

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I.S. EN 55012:2009

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 55012/A1

July 2009

ICS 27.020; 33.100.10

English version

Vehicles, boats and internal combustion engines - Radio disturbance characteristics - Limits and methods of measurement for the protection of off-board receivers

(CISPR 12:2007/A1:2009)

Véhicules, bateaux et moteurs à combustion interne - Caractéristiques de perturbation radioélectrique - Limites et méthodes de mesure pour la protection des récepteurs extérieurs (CISPR 12:2007/A1:2009)

Fahrzeuge, Boote und von Verbrennungsmotoren angetriebene Geräte - Funkstöreigenschaften - Grenzwerte und Messverfahren zum Schutz von außerhalb befindlichen Empfängern (CISPR 12:2007/A1:2009)

This amendment A1 modifies the European Standard EN 55012:2007; it was approved by CENELEC on 2009-07-01. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this amendment 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 Central Secretariat or to any CENELEC member.

This amendment 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 Central Secretariat has the same status as the official versions.

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

CENELEC

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

Central Secretariat: Avenue Marnix 17, B - 1000 Brussels

Ref. No. EN 55012:2007/A1:2009 E

Foreword

The text of document CISPR/D/354/CDV, future amendment 1 to CISPR 12:2007, prepared by CISPR SC D, Electromagnetic disturbances related to electric/electronic equipment on vehicles and internal combustion engine powered devices, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as amendment A1 to EN 55012:2007 on 2009-07-01.

The following dates were fixed:

– latest date by which the amendment has to be implemented at national level by publication of an identical national standard or by endorsement	(dop)	2010-04-01
– latest date by which the national standards conflicting with the amendment have to be withdrawn	(dow)	2012-07-01

Endorsement notice

The text of amendment 1:2009 to the International Standard CISPR 12:2007 was approved by CENELEC as an amendment to the European Standard without any modification.

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 55012

November 2007

ICS 27.020; 33.100.10

Supersedes EN 55012:2002 + A1:2005

English version

Vehicles, boats and internal combustion engines - Radio disturbance characteristics - Limits and methods of measurement for the protection of off-board receivers

(CISPR 12:2007)

Véhicules, bateaux et moteurs à combustion interne - Caractéristiques de perturbation radioélectrique - Limites et méthodes de mesure pour la protection des récepteurs extérieurs (CISPR 12:2007)

Fahrzeuge, Boote und von Verbrennungsmotoren angetriebene Geräte - Funkstöreigenschaften - Grenzwerte und Messverfahren zum Schutz von außerhalb befindlichen Empfängern (CISPR 12:2007)

This European Standard was approved by CENELEC on 2007-09-01. 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 Central Secretariat 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 Central Secretariat has the same status as the official versions.

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

CENELEC

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Ref. No. EN 55012:2007 E

Foreword

The text of document CISPR/D/322/CDV, future edition 6 of CISPR 12, prepared by CISPR SC D, Electromagnetic disturbances related to electric/electronic equipment on vehicles and internal combustion engine powered devices, was submitted to the IEC-CENELEC parallel Unique Acceptance Procedure and was approved by CENELEC as EN 55012 on 2007-09-01.

This European Standard supersedes EN 55012:2002 + A1:2005.

The following changes were made with respect to EN 55012:2002 + A1:2005:

– deletion of narrowband / broadband determination;

– general improvement of wording.

The following dates were fixed:

– latest date by which the EN has to be implemented at national level by publication of an identical national standard or by endorsement	(dop)	2008-06-01
– latest date by which the national standards conflicting with the EN have to be withdrawn	(dow)	2010-09-01

This European Standard has been prepared under a mandate given to CENELEC by the European Commission and the European Free Trade Association and covers essential requirements of EC Directive EMC (2004/108/EC). See Annex ZZ.

Annexes ZA and ZZ have been added by CENELEC.

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Endorsement notice

The text of the International Standard CISPR 12:2007 was approved by CENELEC as a European Standard without any modification.

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Annex ZA
(normative)

Normative references to international publications with their corresponding European publications

The following referenced documents are indispensable for the application 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 When an international publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

Publication	Year	Title	EN/HD	Year
IEC 60050-161	-[1)]	International Electrotechnical Vocabulary (IEV) - Chapter 161: Electromagnetic compatibility	-	-
CISPR 16-1-1	2006	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	2007
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	2007	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	2007
CISPR 16-2-3	2006	Specification for radio disturbance and immunity measuring apparatus and methods - Part 2-3: Methods of measurement of disturbances and immunity - Radiated disturbance measurements	EN 55016-2-3	2006
CISPR 25	-[1)]	Radio disturbance characteristics for the protection of receivers used on board vehicles, boats, and on devices - Limits and methods of measurement	EN 55025	2003[2)]

[1)] Undated reference.

[2)] Valid edition at date of issue.

Annex ZZ
(informative)

Coverage of Essential Requirements of EC 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 all relevant essential requirements as given in Annex I, Article 1(a) of the EC Directive 2004/108/EC.

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

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

CONTENTS

INTERNATIONAL ELECTROTECHNICAL COMMISSION

INTERNATIONAL SPECIAL COMMITTEE ON RADIO INTERFERENCE

VEHICLES, BOATS AND INTERNAL COMBUSTION ENGINES – RADIO DISTURBANCE CHARACTERISTICS – LIMITS AND METHODS OF MEASUREMENT FOR THE PROTECTION OF OFF-BOARD RECEIVERS

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 12 has been prepared by CISPR subcommittee D: Electromagnetic disturbances related to electric/electronic equipment on vehicles and internal combustion powered devices.

This sixth edition cancels and replaces the fifth edition published in 2001 and its Amendment 1 (2005). This edition constitutes a technical revision.

The following changes were made with respect to the previous edition:

– deletion of narrowband / broadband determination
– general improvement of wording

The text of this standard is based on the following documents:

Enquiry draft	Report on voting
CISPR/D/322CDV	CISPR/D/341/RVC

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

- reconfirmed;
- withdrawn;
- replaced by a revised edition, or
- amended.

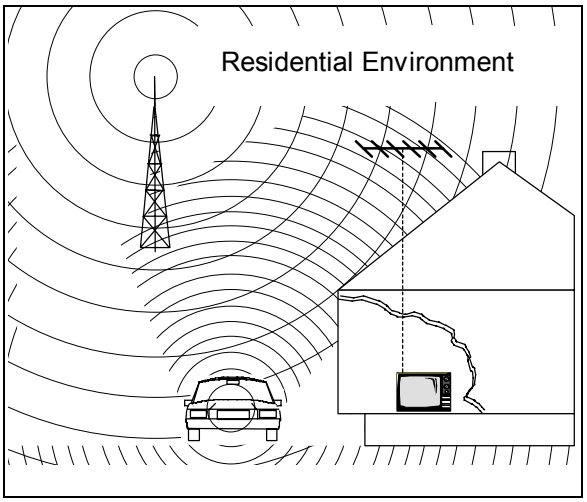
INTRODUCTION

There is a specific need for standards to define acceptable radio frequency performance of all electrical/electronic products. CISPR 12 has been developed to serve the road vehicle and related industries with test methods and limits that provide satisfactory protection for radio reception.

CISPR 12 has been used for many years as a regulatory requirement in numerous countries, to provide protection for radio receivers in the residential environment. It has been extremely effective in protecting the radio environment outside the vehicle.

VEHICLES, BOATS AND INTERNAL COMBUSTION ENGINES – RADIO DISTURBANCE CHARACTERISTICS – LIMITS AND METHODS OF MEASUREMENT FOR THE PROTECTION OF OFF-BOARD RECEIVERS

1 Scope



The limits in this International Standard are designed to provide protection for broadcast receivers in the frequency range of 30 MHz to 1 000 MHz when used in the residential environment. Compliance with this standard may not provide adequate protection for new types of radio transmissions or receivers used in the residential environment nearer than 10 m to the vehicle, boat or device.

NOTE 1 Experience has shown that compliance with this standard may provide satisfactory protection for receivers of other types of transmissions when used in the residential environment, including radio transmissions in frequency ranges other than that specified.

This standard applies to the emission of electromagnetic energy which may cause interference to radio reception and which is emitted from

a) vehicles propelled by an internal combustion engine, electrical means or both (see 3.1);

b) boats propelled by an internal combustion engine, electrical means or both (see 3.2). Boats are to be tested in the same manner as vehicles except where they have unique characteristics as explicitly stated in this standard;

c) devices equipped with internal combustion engines (see 3.3).

See Annex G for a flow chart to help determine the applicability of CISPR 12.

This standard does not apply to aircraft, traction systems (railway, tramway and electric trolley bus), or to incomplete vehicles. In the case of a dual-mode trolley bus (e.g. propelled by power from either a.c./d.c. mains or an internal combustion engine), the internal combustion propulsion system must be included, but the a.c./d.c. mains portion of the vehicle propulsion system is excluded from this standard.

NOTE 2 Protection of receivers used on board the same vehicle as the disturbance source(s) are covered by CISPR 25.

The measurement of electromagnetic disturbances while the vehicle is connected to power mains for charging is not covered in this standard. The user is referred to appropriate IEC and CISPR standards which define measurement techniques and limits for this condition.

Annex H lists work being considered for future revisions.