CISPR 20

Edition 6.1 2013-10

CONSOLIDATED VERSION

VERSION CONSOLIDÉE

colour inside

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

Sound and television broadcast receivers and associated equipment – Immunity characteristics – Limits and methods of measurement

Récepteurs de radiodiffusion et de télévision et équipements associés – Caractéristiques d'immunité – Limites et méthodes de mesure

CISPR 20:2006+A1:2013

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INTERNATIONAL
ELECTROTECHNICAL
COMMISSION

COMMISSION
ELECTROTECHNIQUE
INTERNATIONALE

ICS 33.100.20

ISBN 978-2-8322-1187-8

CISPR 20

Edition 6.1 2013-10

REDLINE VERSION

VERSION REDLINE

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In this Redline version, a vertical line in the margin shows where the technical content is modified by amendment 1. Additions and deletions are displayed in red, with deletions being struck through. A separate Final version with all changes accepted is available in this publication.

This publication has been prepared for user convenience.

International Standard CISPR 20 has been prepared by CISPR, subcommittee I: Electromagnetic compatibility of information technology equipment, multimedia equipment and receivers.

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

The committee has decided that the contents of the base publication and its amendment will remain unchanged until the stability 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,
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SOUND AND TELEVISION BROADCAST RECEIVERS AND ASSOCIATED EQUIPMENT – IMMUNITY CHARACTERISTICS – LIMITS AND METHODS OF MEASUREMENT

1 Scope and object

This standard for immunity requirements applies to television broadcast receivers, sound broadcast receivers and associated equipment intended for use in the residential, commercial and light industrial environment.

This standard describes the methods of measurement and specified limits applicable to sound and television receivers and to associated equipment with regard to their immunity characteristics to disturbing signals.

This standard is also applicable to the immunity of outdoor units of direct to home (DTH) satellite receiving systems for individual reception.

NOTE 1 Receiving systems for collective reception, in particular cable distribution head ends (Community Antenna Television, CATV) and community reception systems (Master Antenna Television, MATV) are covered by IEC 60728-2.

NOTE 2 Broadcast receivers for digital signals are covered by Annex I and Annex J.

Immunity requirements are given in the frequency range 0 Hz to 400 GHz. Radio-frequency tests outside the specified frequency bands or concerning other phenomena than given in this standard are not required.

The objective of this standard is to define the immunity test requirements for equipment defined in the scope in relation to continuous and transient, conducted and radiated disturbances including electrostatic discharges.

These test requirements represent essential electromagnetic immunity requirements.

Test requirements are specified for each port (enclosure or connector) considered.

NOTE 3 This standard does not specify electrical safety requirements for equipment such as protection against electric shocks, unsafe operation, insulation co-ordination and related dielectric tests.

NOTE 4 In special cases, situations will arise where the level of disturbances may exceed the levels specified in this standard e.g. where a hand-held transmitter is used in proximity to an equipment. In these instances special mitigation measures may have to be employed.

The environments encompassed by this standard are residential, commercial and light-industrial locations, both indoor and outdoor. The following list, although not comprehensive, gives an indication of locations which are included:

– residential properties, e.g. houses, apartments, etc.;
– retail outlets, e.g. shops, supermarkets, etc.;
– business premises, e.g. offices, banks, etc.;
– areas of public entertainment, e.g. cinemas, public bars, dance halls, etc.;
– outdoor locations, e.g. petrol stations, car parks, amusement and sports centres, etc.;
– light-industrial locations e.g. workshops, laboratories, service centres, etc.;
– car and boat.

Locations which are characterized by their mains power being supplied directly at low voltage from the public mains are considered to be residential, commercial or light industrial.

2 Normative references

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.

CISPR 16-1-3, *Specification for radio disturbance and immunity measuring apparatus and methods - Part 1-3: Radio disturbance and immunity measuring apparatus - Ancillary equipment - Disturbance power*

IEC 60050(161), *International Electrotechnical Vocabulary (IEV) – Chapter 161: Electromagnetic compatibility*

IEC 60268-1:1985, *Sound system equipment – Part 1: General*

IEC 61000-4-2, *Electromagnetic compatibility (EMC) – Part 4-2: Testing and measurement techniques – Electrostatic discharge immunity test.* Basic EMC Publication

IEC 61000-4-3, *Electromagnetic compatibility (EMC) – Part 4-3: Testing and measurement techniques – Radiated, radio-frequency, electromagnetic field immunity test.* Basic EMC Publication

IEC 61000-4-4, *Electromagnetic compatibility (EMC) – Part 4-4: Testing and measurement techniques – Electrical fast transient/burst immunity test.* Basic EMC Publication

IEC 61000-4-6:2008, *Electromagnetic compatibility (EMC) – Part 4-6: Testing and measurement techniques – Immunity to conducted disturbances, induced by radio-frequency fields*

IEC 61672-1:2002, *Electroacoustics – Sound level meters – Part 1: Specifications*

ETS 300 158:1992, *Satellite Earth Stations and Systems (SES) – Television Receive Only (TVRO-FSS) Satellite Earth Stations operating in the 11/12 GHz FSS bands*

ETS 300 249:1993, *Satellite Earth Stations and Systems (SES) – Television Receive-Only (TVRO) equipment used in the Broadcasting Satellite Service (BSS)*

ITU-R BS.468-4, *Measurement of audio-frequency noise voltage level in sound broadcasting*

ITU-R BT.471-1:1986, *Nomenclature and description of colour bar signals*

ITU-R BT.500-10, *Methodology for the subjective assessment of the quality of television pictures*

ITU-T J.61, *Transmission performance of television circuits designed for use in international connections*

3 Terms, definitions and abbreviations

3.1 Terms and definitions

For the purposes of this standard, the definitions contained in IEC 60050(161) as well as the following apply.

A non-exhaustive overview of equipment to which the standard is applicable is given in Table 1. The terminology and abbreviations of Table 1 are also used in other tables.