

INTERNATIONAL STANDARD

NORME INTERNATIONALE

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

AMENDMENT 1
AMENDEMENT 1

**Specification for radio disturbance and immunity measuring apparatus and methods –
Part 2-1: Methods of measurement of disturbances and immunity – Conducted disturbance measurements**

**Spécifications des méthodes et des appareils de mesure des perturbations radioélectriques et de l'immunité aux perturbations radioélectriques –
Partie 2-1: Méthodes de mesure des perturbations et de l'immunité – Mesures des perturbations conduites**



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FOREWORD

This amendment has been prepared by subcommittee A: Radio-interference measurements and statistical methods, of IEC technical committee CISPR: International special committee on radio interference in cooperation with CISPR subcommittee D: Electromagnetic disturbances related to electric/electronic equipment on vehicles and internal combustion engine powered devices.

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

CDV	Report on voting
CISPR/A/874/CDV	CISPR/A/897/RVC

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

The committee has decided that the contents of this publication 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,
- withdrawn,
- replaced by a revised edition, or
- amended.

INTRODUCTION

All stated specifications in CISPR 16-2-1 are met by an instrument independent of the selected implementation or technology in order to be considered suitable for measurements in accordance with CISPR standards. The addition of FFT-based measuring instrumentation requires further specifications as addressed in this amendment. A new Annex F is added as a result of provisions recently introduced into CISPR 16-1-1 on the use of spectrum analyzers for compliance measurements.

2 Normative references

Replace the existing reference to CISPR 16-1-1 by the following new reference:

CISPR 16-1-1:2010, *Specification for radio disturbance and immunity measuring apparatus and methods – Part 1-1: Radio disturbance and immunity measuring apparatus – Measuring apparatus*

Remove the existing reference to CISPR/TR 16-3 and its Amendments 1 and 2.

Add to the existing list, the title of the following new standard as follows:

IEC 60050-161:1990, *International Electrotechnical Vocabulary (IEV) – Chapter 161: Electromagnetic Compatibility*

3 Definitions

Replace the existing term, definition and note 3.7 as follows:

3.7

reference ground plane

RGP

flat conductive surface that constitutes a defined parasitic capacitance to the surrounding of an EUT and serves as reference potential

NOTE 1 See also IEC 60050-161, 161-04-36.

NOTE 2 A reference ground plane is needed for conducted emission measurements, and serves as reference ground for unsymmetrical and asymmetrical disturbance voltage measurements.

3.15

measuring receiver

Replace the existing definition and note as follows:

instrument such as a tunable voltmeter, an EMI receiver, a spectrum analyzer or an FFT-based measuring instrument, with or without preselection, that meets the relevant clauses of CISPR 16-1-1

NOTE See Annex I of CISPR 16-1-1 for further information.

3.16

test configuration

Delete the existing note in definition 3.16.

Replace the existing term, definition and Notes 1 and 2 in definition 3.19 by the following new terms, notes and definitions 3.19, 3.19.1, 3.19.2, 3.19.3, 3.19.4 and 3.19.5:

3.19

weighting (of e.g. impulsive disturbance)

pulse-repetition-frequency (PRF) dependent conversion (mostly reduction) of a peak-detected impulse voltage level to an indication that corresponds to the interference effect on radio reception

NOTE 1 For the analogue receiver, the psychophysical annoyance of the interference is a subjective quantity (audible or visual, usually not a certain number of misunderstandings of a spoken text).

NOTE 2 For the digital receiver, the interference effect is an objective quantity that may be defined by the critical bit error ratio (BER) or bit error probability (BEP) for which perfect error correction can still occur or by another, objective and reproducible parameter.

3.19.1

weighted disturbance measurement

measurement of disturbance using a weighting detector

3.19.2

weighting characteristic

peak voltage level as a function of PRF for a constant effect on a specific radiocommunication system, i.e. the disturbance is weighted by the radiocommunication system itself

3.19.3

weighting detector

detector that provides an agreed weighting function