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AS/NZS CISPR 16.1.6:2015

Australian/New Zealand Standard™

Specification for radio disturbance and immunity measuring apparatus and methods

Part 1.6: Radio disturbance and immunity measuring apparatus—EMC antenna calibration

This Joint Australian/New Zealand Standard was prepared by Joint Technical Committee TE-003, Electromagnetic Compatibility. It was approved on behalf of the Council of Standards Australia on 26 October 2015 and on behalf of the Council of Standards New Zealand on 22 October 2015.
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The following are represented on Committee TE-003:

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We also welcome suggestions for improvement in our Standards, and especially encourage readers to notify us immediately of any apparent inaccuracies or ambiguities. Please address your comments to the Chief Executive of either Standards Australia or Standards New Zealand at the address shown on the back cover.

This Standard was issued in draft form for comment as DR AS/NZS CISPR 16.1.6:2015.

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PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee TE-003, Electromagnetic Compatibility.

The objective of this Standard is to provide procedures and supporting information for the calibration of antennas for determining antenna factors (AF) that are applicable to antennas intended for use in radiated disturbance measurements.

This Standard is identical with, and has been reproduced from CISPR 16-1-6, Ed. 1.0 (2014), *Specification for radio disturbance and immunity measuring apparatus and methods*, Part 1-6: *Radio disturbance and immunity measuring apparatus—EMC antenna calibration*.

As this Standard is reproduced from an International Standard, the following applies:

(a) In the source text 'this part of CISPR 16' should read 'this Australian/New Zealand Standard'.

(b) A full point substitutes for a comma when referring to a decimal marker.

References to International Standards should be replaced by references to Australian or Australian/New Zealand Standards, as follows:

Reference to International Standard		*Australian/New Zealand Standard*	
CISPR		AS/NZS CISPR	
16	Specification for radio disturbance and immunity measuring apparatus and methods	16	Specification for radio disturbance and immunity measuring apparatus and methods
16-1-4:2010 AMD1:2012	Part 1-4: Radio disturbance and immunity measuring apparatus—Antennas and test sites for radiated disturbance measurements	16.1.4:2013	Part 1.4: Radio disturbance and immunity measuring apparatus—Antennas and test sites for radiated disturbance measurements
16-1-5:2014	Part 1-5: Radio disturbance and immunity measuring apparatus—Antenna calibration sites and reference test sites for 5 MHz to 18 GHz	16.1.5:2015	Part 1.5: Radio disturbance and immunity measuring apparatus—Antenna calibration sites and reference test sites for 5 MHz to 18 GHz

Only normative references that have been adopted as Australian or Australian/New Zealand Standards have been listed.

The terms 'normative' and 'informative' have been used in this Standard to define the application of the annexes to which they apply. A 'normative' annex is an integral part of a Standard, whereas an 'informative' annex is only for information and guidance.

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1 Scope

This part of CISPR 16 provides procedures and supporting information for the calibration of antennas for determining antenna factors (AF) that are applicable to antennas intended for use in radiated disturbance measurements.

It has the status of a basic EMC Standard in accordance with IEC Guide 107, *Electromagnetic compatibility – Guide to the drafting of electromagnetic compatibility publications.*

The AF of an antenna is influenced by nearby surroundings and by its position in space relative to the radiating source. This standard focuses on antenna calibrations that provide the AF in a free-space environment in the direction of the boresight of the antenna. The frequency range addressed is 9 kHz to 18 GHz. The relevant antenna types covered in this standard are monopole, loop, dipole, biconical, log-periodic dipole-array (LPDA), hybrid and horn antennas.

Guidance is also provided on measurement uncertainties associated with each calibration method and configuration, and the test instrumentation used.

2 Normative references

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.

CISPR 16-1-4:2010, *Specification for radio disturbance and immunity measuring apparatus and methods – Part 1-4: Radio disturbance and immunity measuring apparatus – Antennas and test sites for radiated disturbance measurements*
CISPR 16-1-4:2010/AMD 1:2012

CISPR 16-1-5:2014, *Specification for radio disturbance and immunity measuring apparatus and methods – Part 1-5: Radio disturbance and immunity measuring apparatus – Antenna calibration sites and reference test sites for 5 MHz to 18 GHz*

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

ISO/IEC Guide 98-3:2008, *Uncertainty of measurement – Part 3: Guide to the expression of uncertainty in measurement (GUM:1995)*