

Radiocommunications (EMC Standards) Notice 2019

Pursuant to Regulations 32(1)(a), (b), (c), (d) and (j) of the Radiocommunications Regulations 2001, the Chief Executive, Ministry of Business, Innovation and Employment, hereby gives the following notice.

Notice

1. Title, commencement and purpose

(a) This notice is the Radiocommunications (EMC Standards) Notice 2019.

(b) This notice comes into force on **4 June 2019**.

(c) This notice prescribes:

(i) classes of electrical and electronic products, being interfering equipment as defined in section 2(1) of the Radiocommunications Act 1989.

(ii) the standards applicable to particular classes of products.

(iii) the level of conformity applicable to a class of product.

(iv) products that are exempt from the need to be the subject of a declaration of conformity.

2. Interpretation

(a) In this notice, unless the context otherwise requires:

“battery powered”, in relation to a product, means a product that is not capable of being connected, either directly or indirectly, to the electrical mains supply.

“code of practice” means a publication prescribing the procedures and processes relating to any of the following:

(i) the installation and maintenance of products.

(ii) the interconnection of products.

(iii) the networking of products.

(iv) the assembling of components, modules and sub-assemblies to form a finished product.

“electromagnetic compatibility”, also known as EMC, means the ability of products to satisfactorily function as intended in their electromagnetic environment, without introducing intolerable electromagnetic disturbances into that environment.

“fixed installation” means a combination of parts, components, modules, or products assembled and installed at a place of use in such a way that the combination cannot be moved without being at least partially disassembled, including electric power lines and wired telecommunication distribution networks, but not including telecommunications terminal equipment designed for installation in customer premises.

(b) For the purposes of the tables of this notice:

“AS/NZS” means a joint Australian/New Zealand standard under the terms of the Active Cooperation Agreement between Standards Australia International Limited and Standards New Zealand.

“CFR” means the Code of Federal Regulations of the United States of America.

“CISPR” means a publication published by the Special Committee on Radio Interference of the International Electrotechnical Commission.

“COP” means a code of practice prescribed in this notice.

“EN” means a standard published by the European Committee for Electrotechnical Standardisation, commonly known as CENELEC.

“ETS” and “ETS EN” means a standard published by the European Telecommunications Standards Institute, commonly known as ETSI.

“IEC” means a publication published by the International Electrotechnical Commission.

“UN ECE R10” means Regulation No. 10 of the United Nations Vehicle Regulations - 1958 Agreement.

(c) Other words and expressions contained in this notice that are defined in the Act, regulations and notices made under the regulations, have the meanings so defined.

3. Scope

(a) Every product that is interfering equipment, except wanted and unwanted emissions from a radio transmitter, is subject to the provisions of this notice.

(b) The following products are exempt from the requirement to be the subject of a declaration of conformity and to

be labelled:

- (i) those with a power consumption not exceeding 6 nano-watts.
- (ii) a spare part intended for use in replacing parts of a product.
- (iii) a vehicle that is registered, or able to be registered for operation on a road in accordance with the Land Transport Act 1998.
- (iv) military equipment or weapons systems of the New Zealand Defence Force.
- (v) military equipment or weapons systems of the defence force of another country operating in co-operation with the New Zealand Defence Force.

4. Applicable standards

- (a) For the purposes of Regulations 32(1)(a), (b), (c) and (d), the applicable standards and levels of conformity apply to specified classes of product as provided in the tables to this notice.
- (b) Unless expressly stated to the contrary in this notice:
 - (i) an amendment or modification to an applicable standard is effective from the date specified by the authority issuing the amendment or modification.
 - (ii) a product that is first supplied 2 years or more after the effective date of an amendment or modification to an applicable standard, must conform to that amended or modified applicable standard.

5. Conformity requirements

- (a) If a product is in a class to which a standard as prescribed in tables 1 to 6 applies, that standard is an applicable standard, and the product must conform to the requirements of that applicable standard, as amended by the provisions of table 7 of this notice.
- (b) The supplier of a product to which subsection (a) applies must comply with the level of conformity requirements applying to that product as prescribed in the Radiocommunications (Compliance) Notice 2013 No. 2, or a notice in replacement thereof.
- (c) If more than one standard prescribed in tables 1 to 6 applies to a product, the applicable standard is the standard most closely related to the primary purpose, use or application of the product.
- (d) Only those requirements of a standard relating to electromagnetic radiations, or inductions apply for the purposes of this notice.

6. Products to which level of conformity 1 requirements apply

If a product is not a product to which level of conformity 2 or level of conformity 3 applies, the supplier of the product must meet the requirements of level of conformity 1. Products to which level of conformity 1 applies include those that are, or only incorporate:

- (a) manually operated switches or simple relays.
- (b) brushless squirrel cage induction motors.
- (c) wire-wound, mains frequency transformers.
- (d) rectifier diodes.
- (e) resistive heating elements.

7. Products to which level of conformity 2 requirements apply

(a) Except as provided in subsection (b), if a product is, or incorporates, any of the following, the supplier of the product must meet the requirements of level of conformity 2. The products are:

- (i) a microprocessor or other clocked digital device.
- (ii) a radio frequency oscillator.
- (iii) a commutator or slip-ring motor.
- (iv) arc welding equipment.
- (v) a lighting ballast.
- (vi) electronic devices operating in a switching or non-linear mode such as switched-mode power supplies, lighting dimmers, electronic transformers, and motor speed controllers.

(b) If a product to which subsection (a) applies is any of the following, then the product is exempt from the requirement to be the subject of a compliance folder or to be labelled. The products are those that are:

- (i) supplied in a total quantity of no more than 10 per annum.
- (ii) battery powered.
- (iii) a prototype for demonstration purposes.

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(iv) a fixed installation, including telecommunications network equipment (TNE).

(c) If a product is Group 1 industrial, scientific and medical (ISM) equipment, as defined in AS/NZS CISPR 11:

(i) the supplier of the product must meet the requirements of level of conformity 2; and

(ii) the product must comply with the provisions of Table 6 in regard to the frequencies of operation.

(d) If a product is telecommunications terminal equipment (TTE) designed for installation in customer premises, the supplier of the product must meet the requirements of level of conformity 2.

8. Products to which level of conformity 3 requirements apply

If a product is Group 2 industrial, scientific and medical (ISM) equipment, as defined in AS/NZS CISPR 11:

(i) the supplier of the product must meet the requirements of level of conformity 3; and

(ii) the product must comply with the provisions of Table 6 in regard to the frequencies of operation.

9. Consequential revocation of notice

The Radiocommunications (EMC Standards) Notice 2015, dated 13 August 2015 and published in the [New Zealand Gazette, 13 August 2015, Issue No. 88, Notice No. 2015-go4671](#), is revoked.

Notwithstanding the revocation of the notice set out in clause 9, every product that is compliant with the requirements of that notice on the commencement date of this notice is deemed to be compliant with the requirements of this notice.

Table 1 - Australian and New Zealand Standards (AS/NZS, AS, NZS) Standards

AS/NZS CISPR 11	ISM radio frequency equipment
AS/NZS CISPR 12	Vehicles, motorboats, and spark-ignited engine-driven equipment
AS/NZS CISPR 14-1	Household appliances, electric tools and similar equipment
AS/NZS CISPR 15	Electrical lighting and similar equipment
AS/NZS CISPR 32	Multimedia equipment
AS/NZS 61000-6-3	EMC generic emission standard - residential, commercial and light industry
AS/NZS 61000-6-4	EMC generic emission standard - industrial environments
NZS 6869	Limits and measurement methods of electromagnetic noise from A.C. powersystems, 0.15 - 1000 MHz
AS 62040.2	Uninterruptible power systems (UPS)

Table 2 - Special Committee On Radio Interference (CISPR) Standards

CISPR 11	ISM radio frequency equipment
CISPR 12	Vehicles, motorboats, and spark-ignited engine-driven equipment
CISPR 14-1	Household appliances, electric tools and similar equipment
CISPR 15	Electrical lighting and similar equipment
CISPR 32	Multimedia equipment

Table 3 - International Electrotechnical Commission (IEC) Standards

IEC 60204-31	Sewing machines, units and systems
IEC 60669-2-1	Electronic switches
IEC 60669-2-2	Remote control switches (RCS)
IEC 60669-2-3	Time-delay switches (TDS)
IEC 60730-1	Automatic electrical controls for household and similar use
IEC 60730-2-5	Automatic electrical burner control systems
IEC 60730-2-6	Automatic electrical pressure sensing controls
IEC 60730-2-7	Timers and time switches
IEC 60730-2-8	Electrically operated water valves

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IEC 60730-2-9	Temperature sensing controls
IEC 60730-2-11	Energy regulators
IEC 60730-2-13	Humidity sensing controls
IEC 60730-2-14	Electric actuators
IEC 60730-2-18	Automatic electrical water and air flow sensing controls
IEC 60870-2-1	Telecontrol equipment and systems
IEC 60945	Maritime navigation and radiocommunication equipment and systems
IEC 60947-1	Low voltage switch gear and control gear
IEC 60947-2	Circuit breakers
IEC 60947-3	Switches, disconnectors, switch-disconnectors and fuse-combination units
IEC 60947-4-1	Electromechanical contactors and motor-starters
IEC 60947-4-2	AC semiconductor motor controllers and starters
IEC 60947-4-3	AC semiconductor controllers and contactors for non-motor loads
IEC 60947-5-1	Electromagnetic control circuit devices
IEC 60947-5-2	Proximity switches
IEC 60947-5-3	Proximity devices and defined behaviour under fault conditions (PDF)
IEC 60947-5-6	DC interface for proximity sensors and switching amplifiers (NAMUR)
IEC 60947-6-1	Automatic transfer switching equipment
IEC 60947-6-2	Control and protective switching devices (or equipment) (CPS)
IEC 60974-10	Arc welding equipment, Electromagnetic compatibility (EMC)
IEC 61000-3-8	Signalling on low voltage electrical installations
IEC 61000-6-3	EMC generic emission standard - residential, commercial and light industry
IEC 61000-6-4	EMC generic emission standard - industrial environments
IEC 61008-1	Residual current operated circuit breakers for household and similar uses (RCCB)
IEC 61326	Electrical equipment for measurement, control and laboratory use
IEC 61439-1	Low voltage switch gear and control gear assemblies
IEC 61543	Residual current operated protective devices (RCD) for household and similar use
IEC 61800-3	Adjustable speed electrical power drive
IEC 61812-1	Specified time relays for industrial use
IEC 62040-2	Uninterruptible power systems (UPS)
IEC 62052-11	Electricity metering equipment (a.c.) - Particular requirements , tests and test conditions - Part 11: Metering equipment
IEC 62052-21	Electricity metering equipment (a.c.) - General requirements, tests and test conditions - Part 21: Tariff and load control equipment
IEC 62054-11	Electricity metering - tariff and load control - electronic ripple control receivers
IEC 62054-21	Electricity metering - tariff and load controls - time switches

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IEC 62236-3-1	Rolling stock - Train and complete vehicle
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Table 4 - European Norm (EN) Standards

EN 50065-1	Signalling on low-voltage electrical installations in the range 3 kHz to 148,5 kHz
EN 50148	Electronic taximeters
EN 50263	Relays and protection equipment
EN 50270	Equipment for detection and measurement of combustible, toxic gases or oxygen
EN 55011	ISM radio frequency equipment
EN 55012	Vehicles, motorboats, and spark-ignited engine-driven equipment
EN 55014-1	Household appliances, electric tools and similar apparatus
EN 55015	Electrical lighting and similar equipment
EN 55032	Multimedia equipment
EN 61000-6-3	EMC generic emission standard - residential, commercial and light industry
EN 61000-6-4	EMC generic emission standard - industrial environments
EN 60204-31	Safety of machinery. Electrical equipment of machines. Particular safety and EMC requirements for sewing machines, units and systems
EN 60669-2-1	Switches for household and similar fixed electrical installations - Electronic switches
EN 60669-2-2	Switches for household and similar fixed electrical installations - Electromagnetic remote-control switches (RCS)
EN 60669-2-3	Switches for household and similar fixed electrical installations - Time-delay switches (T.D.S.)
EN 60730-1	Automatic electrical controls for household and similar use. General requirements
EN 60730-2-5	Automatic electrical controls for household and similar use - automatic electrical burner control systems
EN 60730-2-6	Automatic electrical controls for household and similar use - automatic electrical pressure sensing controls
EN 60730-2-7	Automatic electrical controls for household and similar use - timers and time switches
EN 60730-2-8	Automatic electrical controls for household and similar use - electrically operated water valves
EN 60730-2-9	Automatic electrical controls for household and similar use - temperature sensing controls
EN 60730-2-11	Automatic electrical controls for household and similar use - energy regulators
EN 60730-2-13	Automatic electrical controls for household and similar use - humidity sensing controls
EN 60730-2-14	Automatic electrical controls for household and similar use - electric actuators
EN 60730-2-15	Automatic electrical controls for household and similar use - automatic electrical air flow, water flow and water level sensing controls

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EN 60870-2-1	Telecontrol equipment and systems - Power supply and electromagnetic compatibility
EN 60945	Maritime navigation and radiocommunication equipment and systems. General requirements. Methods of testing and required test results
EN 60947-1	Low-voltage switchgear and controlgear - General rules
EN 60947-2	Low-voltage switchgear and controlgear - Circuit-breakers
EN 60947-3	Low-voltage switchgear and controlgear - Switches, disconnectors, switch-disconnectors and fuse-combination units
EN 60947-4-1	Low-voltage switchgear and controlgear - Electromechanical contactors and motor-starters
EN 60947-4-2	Low-voltage switchgear and controlgear - AC semiconductor motor controllers and starters
EN 60947-4-3	Low-voltage switchgear and controlgear - AC semiconductor controllers and contactors for non-motor loads
EN 60947-5-1	Low-voltage switchgear and controlgear - Electromechanical control circuit devices
EN 60947-5-2	Low-voltage switchgear and controlgear - Proximity switches
EN 60947-5-3	Low-voltage switchgear and controlgear - proximity devices with defined behaviour under fault conditions (PDDB)
EN 60947-5-6	Low-voltage switchgear and controlgear - DC interface for proximity sensors and switching amplifiers (NAMUR).
EN 60947-6-1	Low-voltage switchgear and controlgear - Multiple function equipment. Transfer switching equipment
EN 60947-6-2	Low-voltage switchgear and controlgear - Multiple function equipment. Control and protective switching equipment (CPS)
EN 60974-10	Arc welding equipment. Electromagnetic compatibility (EMC) requirements
EN 61008-1	Residual current operated circuit-breakers without integral overcurrent protection for household and similar uses (RCCBs)
EN 61326-1	Electrical equipment for measurement, control and laboratory use. EMC requirements
EN 61439-1	Low-voltage switchgear and controlgear assemblies
EN 61543	Residual current-operated protective devices (RCDs) for household and similar use
EN 61800-3	Adjustable speed electrical power drive systems. EMC requirements
EN 61812-1	Specified time relays for industrial use. Requirements and tests
EN 62040-2	Uninterruptible power systems (UPS). Electromagnetic compatibility (EMC) requirements
EN 62052-11	Electricity metering equipment (AC). General requirements, tests and test conditions. Metering equipment
EN 62052-21	Electricity metering equipment (AC). General requirements, tests and test conditions. Tariff and load control equipment
EN 62054-11	Electricity metering equipment (AC). Tariff and load control - electronic ripple control receivers
EN 62054-21	Electricity metering equipment (AC). Tariff and load control - time switches

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Table 5 - Codes of Practice and other provisions

COP 001	Personal computer assemblies
UN ECE R10	Uniform provisions concerning the approval of vehicles with regard to electromagnetic compatibility

Table 6 - ISM Frequencies

Characteristic Frequency	Frequency Range
6.780 MHz	6.765 - 6.795 MHz
13.56 MHz	13.553 - 13.567 MHz
27.12 MHz	26.957 - 27.283 MHz
35.7 MHz	35.4 - 36 MHz
40.68 MHz	40.66 - 40.7 MHz
433.92 MHz	433.05 - 434.79 MHz
921.5 MHz	915 - 928 MHz
2.45 GHz	2.4 - 2.5 GHz
5.8 GHz	5.725 - 5.875 GHz
24.125 GHz	24 - 24.25 GHz
61.25 GHz	61 - 61.5 GHz
122.5 GHz	122 - 123 GHz
245 GHz	244 - 246 GHz

Table 7 - Variations to Standards

Standard	Provisions
AS/NZS CISPR 14-1	Subclauses 7.2.1 and 8.4 do not apply
EN 55014	Subclauses 7.2.1 and 8.4 do not apply
CISPR 14	Subclauses 7.2.1 and 8.4 do not apply

Dated at Auckland this Monday the 29th day of May 2019.

FADIA MUDAFAR, National Manager, Radio Spectrum Management, Ministry of Business, Innovation and Employment.

Explanatory Note

This note is not part of the notice, but is intended to indicate its general effect. This notice prescribes:

- (a) classes of products, being interfering equipment and susceptible equipment as defined in section 2(1) of the Radiocommunications Act 1989; and
- (b) the standards applicable to particular classes of products; and
- (c) the level of conformity applicable to a class of product; and
- (d) products that are exempt from the need to be the subject of a declaration of conformity.