

FEDERAL CHAMBER OF AUTOMOTIVE INDUSTRIES



VOLUNTARY CODE OF PRACTICE
FOR
ELECTROMAGNETIC COMPATIBILITY (EMC)
OF
MOTOR VEHICLES

(31 October 2018)

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INTRODUCTION

The Federal Chamber of Automotive Industries (FCAI) is the peak industry association representing the importers of passenger vehicles, sport utility vehicles (SUVs) light commercial vehicles (LCVs) and motorcycles in Australia. A full list of our member companies can be found on the [FCAI website](#).

In the preparation of this Voluntary Code of Practice for Electromagnetic Compatibility (EMC) of Motor Vehicles (called the “EMC Code” in the rest of the document) the ACMA agreed that compliance with EMC requirements will be ensured through an FCAI Code of Practice, which is binding to products supplied by FCAI member companies.

BACKGROUND

The Australian Communications and Media Authority (ACMA) has responsibility to achieve effective control over unintended electromagnetic interference through implementation of a system of compliance with relevant standards. The *Radiocommunications Act 1992, Section 182(1)* provides that ACMA may, by legislative instrument, give notice requiring any person who manufactures or imports a device installed in a specified class of devices to apply a label to the device to indicate whether the device meets the requirements of the radiocommunications standards or the class license specified in the standard.

The objective of the electromagnetic compatibility (EMC) regulatory arrangements is to minimise the risk of unintentional electromagnetic interference from products which may affect the performance of other electrical products or disrupt radiocommunications services. The requirements are detailed in the:

- *Radiocommunications Labelling (Electromagnetic Compatibility) Notice 2017* (the EMC LN), and
- *Radiocommunications (Electromagnetic Compatibility) Standard 2017* (the EMC Standard)

The EMC LN and the EMC Standard specify the maximum allowable level for unintended emissions of electromagnetic energy from electrical and electronic devices, vehicles and products with internal combustion engines. The EMC LN specifies, among other things, the form and placement of the compliance label, the compliance level, the applicable EMC testing and record keeping arrangements.

The EMC regulatory arrangements require that, prior to supplying a product to the Australian market, a supplier must;

- Assess applicability, i.e. establish whether the product is subject to the EMC regulatory arrangements.
- Identify the applicable EMC standards (from list registered on the ACMA website).
- Demonstrate compliance.
- Complete a Declaration of Conformity and maintain compliance records.
- Register on the national database.
- Apply a compliance label.

(Further information is available on the ACMA website: [EMC regulatory arrangements](#))

1. ENDORSEMENTS

The EMC Code has been prepared under the direction of the FCAI Board and endorsed by FCAI members.

2. DEFINITIONS

For the purposes of this document the following definitions apply:

(a) FCAI Member

Means the organisation in Australia, that is an Ordinary Member of the FCAI:

- Which imports motor vehicles for distribution in Australia; or
- Which is the authorised representative in Australia of an overseas manufacturer and is responsible for the distribution of that manufacturer's motor vehicles in Australia.

(b) New Model Vehicle

A new model vehicle is one which has a type approval issued after the date specified in clause 7, or in the case of a non-road vehicle, is first offered for sale after the date specified in clause 7.

(c) Existing Model Vehicle

An existing model vehicle is one which has a type approval issued prior to the date specified in clause 7, or in the case of a non-road registered vehicle, is on sale prior to the date specified in clause 7.

(d) Vehicle Category

Is the categorisation of a vehicle as per the definitions contained in the *Vehicle Standard (Australian Design Rule – Definitions and Vehicle Categories) 2005*.

(e) Terms

For the definitions of Broadband emissions, Narrowband emissions, Immunity, electrical/electronic sub assemblies (ESA) and technical units refer to UN-ECE R10 or CISPR12 as appropriate.

(e) Road Vehicle

Has the same meaning as Section 6 of the Road Vehicle Standards Act 2018.

3. SCOPE

The EMC Code applies to all new L, M and N category Road Vehicles as defined in the *Vehicle Standard (Australian Design Rule – Definitions and Vehicle Categories) 2005* supplied by FCAI members from the dates specified in Clause 7.

In addition, the EMC Code applies to the following new non-Road Vehicles supplied by FCAI members (from the date specified in Clause 7):

- Motorcycle / motor-scooter derived and/or propelled.
- Off-road or utility vehicles.
- All-terrain vehicles.
- Personal watercraft.
- Snowmobiles.
- Other vehicles (e.g. Power-assisted pedal cycle or Pedalec).

4. BASIC CONCEPTS

Compliance with the relevant standard(s) will be ensured in all cases via the self-regulatory process of adherence to the EMC Code. Audit and penalty provisions applicable to products complying with the ACMA Electromagnetic Compatibility Regulations are not applicable to products complying with the EMC Code.

The ACMA Radiocommunications Labelling (Electromagnetic Compatibility) Notice 2017 does not apply to product covered by the EMC Code as full traceability of individual product compliance status is provided by reference to manufacturer name and series/serial/model numbers.

It is possible to extend compliance status to cover other vehicle types, either as variants to a model or as a superseding model provided UN-ECE R10 (as appropriate) is met.

A complying vehicle may have additional or replacement electrical/electronic equipment fitted to it without requiring retest/confirmation of the vehicle provided this equipment also complies with UN-ECE R10 (for L, M and N group) or CISPR12 (for L group).

Optional 'generic' electronic equipment fitted to vehicles by the vehicle manufacturer (i.e. where substantially the same equipment e.g. mobile telephone or television etc could be fitted to any manufacturers vehicle) requires compliance with either the Code of Practice or a relevant standard from the EMC Standard.

FCAI Member's will maintain records to demonstrate compliance with the chosen standard. The ACMA may, at its own discretion, request companies to submit documents to this effect which may be in the form of approval certificates from UN-ECE test reports from specialist facilities and/or internal documents.

5. TECHNICAL REQUIREMENTS

Compliance with the EMC Code requires that sufficient evaluations have been undertaken to ensure that performance of vehicles and or electronic sub-assemblies (ESA's) satisfies the standards called up by the EMC Standard:

- 5.1) In the case of M and N group vehicles
 - United Nations Economic Commission for Europe (UN-ECE) Regulation 10.
- 5.2) In the case of L group vehicles (including off-road, utility, all terrain, personal watercraft, snowmobiles and other vehicles):
 - International Electrotechnical Commission (IEC) CISPR 12, or
 - United Nations Economic Commission for Europe (UN-ECE) Regulation 10.
- 5.3) Issue of an approval certificate for UN-ECE R10 shall be taken as evidence of conformity without any additional assessment being necessary.
- 5.4) FCAI member companies shall maintain records sufficient to be able to confirm compliance in the event of a request from the ACMA.

6. TEST FACILITIES

Broadband emission measurements can be carried out at an open-air test site. Narrowband emissions measurement is difficult to carry out at an open-air test site due to interference by incoming RF noise, although some open-air facilities are operating in areas with low background RF noise. On the other hand, Immunity testing requires large anechoic chambers which could be used also for large size commercial vehicles. Furthermore, Immunity testing requires considerable additional equipment; e.g. high-power RF power amplifiers, etc.

It is desirable, although not essential that test reports associated with the declaration of conformity against the primary standards be issued by a test laboratory accredited for the relevant tests by the National Association of Testing Authorities (NATA) - for testing in Australia, or a test laboratory accredited for the relevant tests by a body that has a mutual recognition agreement with NATA – in the case of overseas laboratories. The laboratory may be 'In-house,' or that of a client or second party (supplier) or a third-party commercial test facility.

7. IMPLEMENTATION TIMING

This version of the FCAI EMC Code applies from the date of the introduction of the EMC LN, i.e. 18 December 2017.

Vehicles supplied by FCAI Members prior to 18 December 2017 may comply with earlier versions of the EMC Code.