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EMC - Personal Computer Assemblies

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Introduction

The purpose of this Code of Practice is to clarify and simplify the process for compliance made pursuant to section 32 (1)(c) of the Radiocommunications Regulations 2001, for computer equipment.

Electromagnetic Interference

To deal with the problem of electromagnetic interference (EMI), Radio Spectrum Management (RSM) monitors and enforces New Zealand's electromagnetic compatibility (EMC) regulatory arrangements. This is to protect the performance of electrical products and prevent disruption to radio communications. RSM operates under the authority of the Ministry of Economic Development (MED or "the Ministry").

The purpose of the EMC regulatory arrangements is to minimise the electromagnetic interference risks between electronic products that would otherwise diminish their performance or disrupt essential radio communications. This is becoming increasingly important with the rapid growth in the commercial and domestic use of electronic systems and digital technology.

Compliance

All products that fall within the scope of the regulations must meet appropriate compliance standards. Products which present more than a low risk of EMI must be appropriately labeled with the compliance mark, being either a C-Tick or RCM (Regulatory Compliance Mark), and an accepted method of identification (Supplier Code Number). Accountability for compliance with the regulatory arrangements rests with the New Zealand supplier, who must take responsibility for any products placed on the market.

New Zealand suppliers can be importers, distributors or manufacturers who supply electrical and electronic products to the New Zealand market.

Importers and manufacturers (including personal computer (PC) assemblers) or their authorised agents who supply electrical and electronic products to the New Zealand market must meet New Zealand EMC requirements before the products are released into the New Zealand market.



Requirements for PC assemblers

PC assemblers and their customers need to be aware of New Zealand regulations (Radiocommunications (EMC Standards) Notice 2004) requiring compliance with EMC standards. An assembled PC must comply with either the:

- Information Technology Standard AS/NZS CISPR 22:2002,
- the international standard CISPR 22
- or the European standard EN 55022.

These standards set limits for electromagnetic radiation from Information Technology (IT) equipment. Because IT equipment is regarded as presenting a medium level of risk of EMI, it is required to be labeled with a compliance mark (C-Tick or RCM).

A PC is made up of individual components known as sub-assemblies. These include hard drives, floppy drives, CD-ROM drives, motherboards and sound, network or video cards.

Where a supplier assembles a PC using compliant and labeled sub-assemblies, which are installed in an effectively screened metal case, the device is deemed to comply with the standard. Testing the finished product against the standard is not required unless requested by the Ministry where reason exists to doubt effective compliance (e.g. interference may have been traced to operation of the PC). The complete PC should be labeled with the compliance mark. PC assemblers need to register as suppliers with RSM for approval to use the C-Tick compliance mark.

What You Must Do

If you are a computer assembler you must do the following:

1. Apply to RSM for approval to use the C-Tick compliance mark. On receipt of your C-Tick application, RSM will issue you with a Supplier Code Number (SCN). Products for supply in New Zealand must be labeled with the C-Tick mark and the supplier's identification (SCN, company name or GST

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What you must do...(continued)

number is acceptable). The application to use the C-Tick mark can be downloaded from RSM's web site

<http://www.rsm.govt.nz/standards>. There is no charge for the SCN or use of the C-tick.

2. Ensure that the various computer sub-assemblies you use meet the appropriate New Zealand or other Standard as gazetted by the Ministry and published on its web site.

3. Create a Compliance Folder. Products presenting a medium risk of interference (e.g. PCs) are classed as Level of Conformity 2 in the Ministry's compliance legislation. For these products a supplier must hold a compliance folder with the required documentation. For PCs supplied by the assembler, the compliance folder must contain the following documentation:

- a signed Declaration of Conformity. A Declaration of Conformity form can be downloaded from RSM's web site (<http://www.rsm.govt.nz/standards/pdfs/sdoc.pdf>). The Declaration of Conformity should state that all the PCs you have assembled and supplied are made up of compliant, labeled sub-assemblies, and that compliance of the assembled products is assumed on that basis. This is your legal statement that your products comply with the required standard.
- a listing of all sub-assemblies used in the assembled products, and...
- a list of suppliers of those sub-assemblies.

This is called a Generic Compliance Folder and it covers all your assembled computers, demonstrating by documentation that they comply with New Zealand's EMC regime. The folder will be examined when RSM performs audits. Any of your assembled PCs may also be checked to ensure that all sub-assemblies are appropriately labeled and traceable to the original supplier's compliance folder.

If you are the importer or manufacturer of a sub-assembly only, you will also need to establish a compliance folder for each sub-assembly. This must contain a description of the product and a Declaration of Conformity for that product to the appropriate standard, with evidence of the standard being met.

4. Label all products with the C-Tick mark. The label must include the C-Tick plus your Supplier Code Number (SCN) or other

accepted identification. The label signifies that the computer has been assembled entirely from compliant sub-assemblies and can be deemed compliant with New Zealand's relevant EMC standards.

You are responsible for arranging the printing of the labels. A copy of the C-tick in electronic form, together with details of the minimum character size for the associated SCN/identification can be obtained from the RSM web site.

<http://www.rsm.govt.nz/standards>.

NOTE:

- **Cases:** Assemblers need to be aware that C-Tick labeled component sub-assemblies will normally have been tested for compliance in a representative, effectively shielded metal case. The use of a less effective shielded case (e.g. made partly or entirely of plastic, or with cut-outs or windows) may render the assembled product non-compliant. Assemblers using such cases may be required to provide evidence from testing that the completed PC does meet the required standard.
- **Wireless components:** Wireless components (i.e. employing radio transmitters) such as wireless networking PCI cards are not normally marked with the C-tick in New Zealand unless labeled for the Australian market in accordance with Australian standards. These components must be labeled solely with the SCN of the New Zealand supplier holding the Declaration of Conformity.
- **Labeling:** Computer equipment must be labeled with the C-Tick mark and Supplier Code Number (SCN) before it can be legally released into the New Zealand market. Marking a non-compliant product with the C-Tick label is illegal. The label should be located permanently on the external surface of the computer as close as practical to the model identification.



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