



Fire Industry Association

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NEW EMC DIRECTIVE

1. Introduction

The new EMC Directive 2004/108/EC was introduced in 2004 after a review of the current EMC Directive 89/336/EC under the SLIM (Simpler Legislation for Internal Market) initiative. As a result of the SLIM process and a subsequent independent consultation the new Directive complete, reinforce and clarify the framework established by Directive 89/336/EEC.

The new EMC Directive was introduced in the UK legislation by Statutory Instrument 2006 No. 3418, The Electromagnetic Compatibility Regulations 2006, revoking the 2005 Regulations

2. Overview of the new Directive

The fundamentals of the new Directive remain the same as the old one.

That is: equipment must not interfere or be interfered with. However, it introduces a new and important aspect in regulating EMC by ensuring the functioning of the installed material (IM).

The New Directive has been introduced to:

- Clarify the definition of "Apparatus" as opposed to "Fixed installations"
- Clarify and expand Essential (Protection) Requirements to "Fixed installations"
- Amend the regulatory approach for apparatus
- Introduce a regulatory approach to "Fixed installations"
- Clarify the role of Harmonized standards
- Simplify Conformity assessment procedures
- Introduce voluntary use of Competent (Notified) Bodies
- Define new documentation requirements

3. Key dates

The key milestone dates for the application of the new EMC directive and the consequences are given in table 1 below:

Fact File No 0028

Table 1 Key Dates	
12 December 2004 - Publication : T- 20 days	<ul style="list-style-type: none"> Starting point
20 January 2005 - Entry into force : T	<ul style="list-style-type: none"> All national provisions incompatible with the act no longer apply
20 January 2007 - Deadline for transposition : T+24 months	<ul style="list-style-type: none"> Transposition must be performed in each EU State 89/336/EEC still into force New directive cannot be applied even if transposed
20 July 2007 - Date of application : T +30 months	<ul style="list-style-type: none"> Pivot date 89/336/EEC is repealed New directive can be applied from that date Apparatus compliant with the previous directive can still be put on the market.
20 July 2009 - End of transitional period : T+54 months (20/07/2009)	<ul style="list-style-type: none"> New directive is of mandatory application Apparatus compliant with the previous directive (89/336) cannot be put on the market anymore

4. DEFINITIONS OF APPARATUS AND FIXED INSTALLATIONS

Apparatus are defined as:

"Finished appliance or combination thereof made commercially available as a single functional unit". This covers components and subassemblies as well as mobile installations combining one or more apparatus.

Fixed Installations are defined as:

"Combination of several types of apparatus which are assembled installed and intended to be used permanently at a pre-defined location".

5. CLARIFICATION AND EXPENSION OF THE ESSENTIAL REQUIREMENTS

5.1. Apparatus

The new EMC Directive requires that:

"Equipment shall be so designed and manufactured, having regard to the state of the art, as to ensure that:

- the EM disturbance generated does not exceed the level above which radio and telecommunications equipment or other equipment cannot operate as intended;
- it has a level of immunity to the EM disturbance to be expected in its intended use which allows it to operate without unacceptable degradation of its intended use".

The use of the term "state of the art" is significant. In its Guidance Document, the DTI advises that two aspects need to be considered: the performance requirements and the design and construction technique. It also advises that harmonised standards reflect the acknowledged state of the art as regards EMC performance requirements in the EU. Compliance with these standards is deemed sufficient to achieve the essential requirements of the new EMC Directive. The use of the term "the state of the art" also signifies that there is a need to think of possible other modern technologies which may affect the product but which are not covered by the current harmonized standards.

5.2. Fixed installations

With a view to meeting the same essential requirements as set out for apparatus, the new EMC Directive adds specific requirements to which a fixed installation must be installed. They are:

- applying good engineering practices, and
- respecting the information on the intended use of its components (apparatus).

It also requires that the good engineering practices used are documented and that a responsible person for the installation hold the documentation at the disposal of the enforcement authority for as long as the installation is in operation.

6. A NEW APPROACH FOR APPARATUS COMPLIANCE

The old EMC Directive had two possible routes to compliance:

1. Assessment to harmonized standards (Self-certification);
2. Mandatory assessment of a Technical Construction File (TCF) by a Competent Body.

The New EMC Directive has only one route to compliance:

- EMC assessment (to standards) supported by Technical Documentation (TD). Assessment by a Notified Body can be used to support the TD but is purely optional.

7. MANUFACTURER'S RESPONSIBILITIES

In the New Directive, the Manufacturer is responsible for:

- conducting Conformity Assessment and Internal Production Control to confirm that the protection requirements are met and continues to be met throughout the life of the product, based on the correct use of all relevant standards published in the OJEU;
- Ensuring that the CE marking has been properly affixed;
- An EC Declaration of Conformity is issued in accordance with the requirements of the Directive;
- producing a Declaration of Conformity (DoC) together with the TD that provides evidence for the conformity of the apparatus as well as cover its design and manufacture;
- holding the TD for 10 years after the date of last manufacture and keeping it up-to-date.

8. APPARATUS CONFORMITY ASSESSMENT

The Manufacturer must perform EMC assessment of apparatus, on basis of relevant phenomena, with a view to meeting the Essential Requirements. The following applies:

- demonstration of compliance to harmonised standards can be used for assessment;
- the assessment must take into account all normal intended operating conditions for the apparatus;
- the assessment must confirm that the apparatus meets the essential requirements in all the possible configurations identified by the manufacturer.

8.1. New product information requirements

The new Directive places additional requirements on equipment manufacturers to provide additional information. This includes:

- Type, batch, serial number,
- Name & address of manufacturer or agent,
- Specific precautions for assembly, installation, maintenance used to ensure the product meets the essential requirements, (if not for use in residential area),
- Instructions to enable apparatus to be used for intended purpose.

8.2. Additional requirements for the Technical Documentation

Where applicable the TD must also include the following:

- any changes/deviations and associated reasons when the full harmonized standard has not been applied or when the correct equipment has not been used;
- a Technical Rationale report of reasons for deviations of deviations from standards, exclusions or changes, this must be maintained throughout the life of the report and include any engineering changes and reasons for additional testing, etc;
- a Technical Rationale to back up why products have been grouped together in the case of variants of product range;
- a block diagram showing sections of the product and areas of emission or susceptibility;
- drawing reference and bills of material and details of build state
- any justification for not performing specific tests;
- copies of any design calculations and test reports.

9. REQUIREMENTS FOR FIXED INSTALLATIONS

To meet the essential requirements for fixed installations:

- system components must be used as they were intended;
- good engineering practices must be applied during the installation and these must be documented;

- the documentation must be updated as necessary to take into account changes to the installation that could affect its EMC characteristics, over its operating life;
- a “Responsible” person must be nominated and he is required to hold the installation documentation for as long as the installation is in operation;
- the apparatus must only be incorporated in the fixed installation for which it was intended and such incorporation must respect the intended use of the apparatus and comply with good engineering practice.

Good engineering practices are defined sound technical custom, based on accumulated understanding and experience. It is not possible to define these further as they will vary according to technologies used for the apparatus and the installation surroundings.

Fixed installations do not require CE Marking or a DoC.

The Enforcement Authorities can initiate an EMC assessment of installation and impose appropriate measures

9.1. The "responsible" person in relation to fixed installations

The responsible person is define as "the person, who by virtue of their control of the fixed installation, is able to determine that the configuration of the installation is such that when used it complies with the essential requirements".

9.2. Appropriate documentation for fixed installations

The documentation that is retained by the responsible person at the fixed installation must be sufficient to demonstrate compliance with the essential requirements and to enable an enforcing authority to determine whether good practices have been followed. The level of details that is necessary will vary in accordance with the complexity of the fixed installation.

Where apparatus compliant with the Regulation have been used in accordance with the manufacturer's instructions and precautions for installation and use, retention of the apparatus documentation may well suffice for establishing the installation documentation. Where interactions between constituent parts are possible or when non-fully compliant apparatus are used, more information will however be required.

9.3. Evidence of compliance in relation to fixed installations

For as long as the fixed installation is in operation, the responsible person must maintain available for the enforcement authority documentation demonstrating the compliance of the fixed installation with the essential requirements.

10. USEFUL LINKS

- Main European Commission site on technical harmonisation and conformity assessment:
http://ec.europa.eu/enterprise/newapproach/index_en.htm
- Directives, standards, Q's & A's

<http://www.newapproach.org/>

- A guide to implementation of directives
<http://ec.europa.eu/enterprise/newapproach/legislation/guide/index.htm>

- The text of the UK Statutory Instrument 2006 No. 3418
http://www.opsi.gov.uk/si/si2006/uksi_20063418_en.pdf

- Explanatory Memorandum to the 2006 EMC Regulations
http://www.opsi.gov.uk/si/em2006/uksiem_20063418_en.pdf

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