

**NIST GCR 01-813**

**A Guide to the EU Directive on  
Electromagnetic Compatibility**

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Order No. 43SBNB060086

**June 2001**



## ABSTRACT

This guide (prepared under contract by Helen Delaney and Rene van de Zande, DVZ Joint Ventures) is an easy-to-use introductory reference for industry and government officials on the requirements of the European Union's (EU) Electromagnetic Compatibility (EMC) Directive [Directive 89/336/EEC]. It is designed to help business and government officials understand the purpose of the directive, its relationship to other directives, the essential requirements contained in the directive, and the basic steps necessary for compliance. The guide offers explanations of such requirements as: the products covered by the directive, the products excluded from coverage under the directives, differences in the essential requirements for components, finished product, systems and installations. The guide contains the text of the directive and a list of applicable standards. The guide also references appropriate sections of *NIST Special Publication 951: A Guide to EU Standards and Conformity Assessment* for further information on some of the generic conformity assessment concepts and requirements of the EU's New Approach.

Key Words: CEN; CENELEC; conformity assessment; directives; electrical products; electromagnetic compatibility; EMC; European Union; New Approach directives; technical construction files; user manuals



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# The Directive on Electromagnetic Compatibility<sup>1</sup>

Directive EMC 89/336/EEC

Applicable since January 1, 1996

## To Be Considered:

1. *Unlike New Approach Directives that cover specific families of products (such as toys and simple pressure vessels), the Directive on Electromagnetic Compatibility addresses a particular hazard and may be applicable to a wide range of products. In this, it is like the Low Voltage Directive.*
2. *The Directive on Electromagnetic Compatibility has a unique feature: competent bodies. With the exception of radiocommunications equipment, manufacturers of products covered by the EMC Directive may choose the aspects of conformity assessment the manufacturer himself will perform, and those which will be performed by a competent body. Other New Approach Directives, such as the Medical Device Directive and Machinery Directive, may (depending on the product) require third party conformity assessment procedures to be carried out by Notified Bodies (See NIST SP 951 A Guide to EU Standards and Conformity Assessment Page 20).*
3. *It should also be noted that the requirements of the Low Voltage and the EMC Directives are integrated into the Radio Equipment and Telecommunications Terminal Equipment Directive.*

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## Purpose of the Directive on Electromagnetic Compatibility

The EMC Directive has two purposes:

- (1) To Control Electromagnetic (Radiated and Power Line Conducted) Emissions:  
To ensure that electromagnetic disturbances produced by electrical and electronic apparatuses do not degrade the performance of other apparatuses, radio and telecommunications networks, electricity distribution networks and related equipment; i.e., to ensure that electrical and electronic products do not emit electromagnetic disturbances that will adversely affect other products.

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<sup>1</sup> Readers of this report may wish to refer to NIST SP 951: A Guide to EU Standards and Conformity Assessment, which is available on NIST's website at: <http://ts.nist.gov/ca>.

- (2) To Provide Immunity Against Outside Interference Sources: To protect the apparatus in question from electromagnetic disturbances so that it may operate correctly; i.e., to make the apparatus immune to electromagnetic disturbances.

## **Basic Steps to Compliance**

### **I. Determining Whether or Not the Product Has To Comply with the EMC Directive**

Products in question will belong to one of three categories: (A) products totally covered by the Directive; (B) products partially covered by the Directive; and (C) products excluded from the Directive.

#### **A. Products Totally Covered by the Directive**

- The general definition of a product that must comply with the EMC Directive is any electrical or electronic appliance, together with equipment and installations containing electrical and/or electronic components (whether or not connected to the mains), which is liable to cause electromagnetic disturbances or is liable to be affected by such a disturbance.

Examples include: products that can affect the performance of radiocommunications devices or systems, electric energy distribution networks, and telecommunications networks and the equipment connected to them. Other examples include electrical household appliances, portable tools and similar equipment, and fluorescent lighting luminaries fitted with starters.

- The Directive also applies to those products for which the European Commission has mandated an *EMC Harmonized Standard*, whether or not the product is mentioned explicitly in the Scope of the Directive.
- *Annex III* of the Directive lists examples of apparatuses that must be protected from and immune to EM disturbances.

#### **B. Products Partially Covered by the Directive**

- There are products that are only partially covered by the EMC Directive because certain protection or immunity requirements of that product are covered by other regulations. For example, the EMC Directive covers the emission requirements for non-automatic weighing instruments. Immunity requirements for the same products are covered by Directive 90/384 (on Non-Automatic Weighing Instruments).



Emission requirements for agricultural and forestry tractors are covered by Directive 75/322; but the EMC Directive covers immunity requirements for tractors.

*Products in question must be examined in accordance with other Directives that apply to them to determine if they are fully covered, partially covered, or excluded from the requirements of the EMC Directive. These other Directives should specify the EMC requirements with which to comply.*

### C. Products Excluded from the Directive

- Obviously, if a product contains no electrical or electronic components, or if it is electromagnetically passive, it is not bound by the Directive. In other words, if the product cannot (without intervention) create any switching of oscillation of current or voltage and it is likewise not affected by EM disturbances, it is excluded from the Directive.

Examples:

Cables and cabling systems and accessories;  
Equipment without automatic switching devices;  
Batteries; and  
Accumulators.

- Products whose emission levels are far below the most stringent limits of the EMC Harmonized Standards are exempted.
- The same standard determination holds true for the immunity requirements of the Directive. Examples are protection equipment that does not contain electronic components, such as fuses, circuit breakers, manual switches, home and building switches, high voltage inductors and transformers. Other examples are capacitors, induction motors and filament lamp bulbs.

*Note: Standards development has identified (at this point) three types of emitted disturbances: (1) conducted (continuous and intermittent) radio-frequency disturbance; (2) radiated radio frequency disturbances; and (3) harmonics, flicker and voltage fluctuations on the main power supply.*

*See: EMC Harmonized Standards listed at the end of this report.*

- Components not intended for final use and without a direct function may be exempted from some provisions of the Directive.
- Products totally excluded from the Directive are
  - Radio equipment used by radio amateurs (unless the apparatus is available commercially;

- Motor vehicles;
- Active implantable medical devices;
- Medical devices;
- In vitro diagnostic medical devices;
- Equipment intended for use in aircraft in flight; and
- Marine equipment.

## II. Essential Requirements

Following are the essential requirements of the EMC Directive, as taken directly from Article 4 of the Directive:

“The apparatus...shall be so constructed that:

- (a) the electromagnetic disturbance it generates does not exceed a level allowing radio and telecommunications equipment and other apparatus to operate as intended;
- (b) the apparatus has an adequate level of intrinsic immunity to electromagnetic disturbance to enable it to operate as intended.”

## III. Understanding How the Directive Distinguishes Between Components, Finished Products, Systems, and Installations

### A. Components

A component may or may not have to comply with the EMC Directive. The manufacturer must determine whether his component is considered to be an apparatus that must comply with the Directive, or a component (with or without a direct function) which does not have to comply with the Directive.

- A component is considered an apparatus when it has a direct function and can be placed on the market as a single commercial unit. These kinds of components must comply with the EMC Directive, must be accompanied by instructions for use, and they must bear the CE Mark (See *NIST SP 951 A Guide to EU Standards and Conformity Assessment, Page 17*), i.e., **Sold Commercially, CE Marked.**

Examples:

- Electronic circuit boards;
  - Plug-in cards for computer systems, microprocessor cards, central processing unit cards/motherboards, electronic mail cards, telecommunication cards etc.;
  - Programmable logic controllers;
  - Electric motors (except for induction motors);
  - Computer disk drives;
  - Power supply units, when they are autonomous equipment; and
  - Electronic temperature controls.
- A component with a direct function that is not intended for sale to the public, but intended exclusively for incorporation into a final apparatus by a professional assembler or manufacturer, does not have to comply with any of the requirements of the EMC Directive except one: it must be accompanied by instructions for use. The instructions are intended for the manufacturer to help him solve EMC problems within the final apparatus. These kinds of components do not have to bear the CE Mark (See *NIST SP 951 A Guide to EU Standards and Conformity Assessment, Page 17*), i.e., **Exclusively for Incorporation, No CE Mark.**

They may, however, require a Declaration of Incorporation. (See *NIST SP 951 A Guide to EU Standards and Conformity Assessment, Pages, 29 and 31.*)

*It should be noted that nothing precludes a contractor from requiring a subcontractor to CE Mark his component, whether or not it is required by the Directive.*

- Components, which by themselves perform no direct function, are excluded from the Directive; i.e., **No Direct Function, No CE Mark.**

Examples:

- Electrical or electronic components which form part of electrical or electronic circuits, such as resistors, capacitors, coils, diodes, transistors, thyristors, triacs, and integrated circuits;
- Cables and cabling accessories;
- All or nothing relays;
- Plugs, sockets, terminal blocks, etc.;
- Light-emitting diodes (LED), liquid-crystal displays, etc.;
- Simple mechanical thermostats.

## B. Finished Products

A finished product is any device or unit of equipment that always has a direct function, an enclosure of its own and, if applicable, ports and connections intended for end-users. Finished products are handled much like components. A finished product must comply with the EMC Directive if it is available commercially as a single unit, i.e., **Sold Commercially, CE Marked.**

A finished product that is intended exclusively for an industrial assembly operation in another apparatus, must only comply with the requirement that it be accompanied by instructions for use that indicate EMC aspects to be considered by the manufacturer of the final apparatus, i.e., **Exclusively for Incorporation, No CE Mark.**

*Again, it should be noted that nothing precludes a contractor from requiring a subcontractor to CE Mark his finished product, whether or not it is required by the Directive.*

## C. Systems

A system is a combination of apparatuses or parts.

### 1. System of all CE Marked Apparatuses

An example of a system is a computer system consisting of a CPU (central processing unit), keyboard, printer, and monitor.

Each part, or apparatus, is placed on the market as a single unit that may be sold independently. Each part complies with the EMC Directive, and each part bears a CE Mark. (See *NIST SP 951 A Guide to EU Standards and Conformity Assessment, Page 17.*) This kind of system needs no additional CE Mark for the system as a whole. (Instructions for connection and use must be provided, however.)

*Note that the components within the CPU that come with it at time of sale (CD-ROM, mother board and disk drive, supplied in the enclosure) do not have to be CE Marked.*

### 2. System of CE Marked Apparatuses and non-CE Marked Apparatuses

This system must be combined or connected by a professional person who is responsible for fulfilling the objectives of the Directive. In this situation, the system becomes an apparatus, and must comply as an apparatus to all provisions of the EMC Directive. One CE Marking (See *NIST SP 951 A Guide to EU Standards and Conformity Assessment, Page 17*) will be affixed to the main part

of the system, if all parts are supplied as one unit. (Those parts that are CE Marked, may, of course, be used and distributed outside the system.)

### 3. System With Various Configurations

Some systems may be configured differently or be assembled in various combinations when they perform different tasks. In this case, the responsible person must define the configuration that is likely to cause the maximum disturbance, or is likely to be the most susceptible to disturbances. This is known as the **worst-case configuration**. In a system, then, which can be configured in various ways, the worst-case configuration is the guide for the manufacturer in complying with the EMC Directive.

In some cases, the variations in the product may not be typified by a “worst-case.” In these situations, the product may need to be evaluated under the Technical File (See *NIST SP 951 A Guide to EU Standards and Conformity Assessment, Page 24*) route allowed for in the Directive. This route allows a manufacturer to make certain engineering assumptions about a product’s EMC characteristics. The Technical File can be constructed to include all the variants in a product line. The File must, however, be evaluated by a Competent Body (See *NIST SP 951 A Guide to EU Standards and Conformity Assessment, Page 21*) or Notified Body (See *NIST SP 951 A Guide to EU Standards and Conformity Assessment, Page 20*).

A manufacturer may want to add components that were not included in the original system. In that case, he must take into consideration whether or not the added components are electromagnetically relevant or irrelevant. Electromagnetically irrelevant components will not require the manufacturer to re-verify the system. Electromagnetically relevant components will, however, require the manufacturer to use the worst-case configuration concept in making sure that the system is in full compliance.

Under the Technical File Route, it is possible to include additional variations and enhancements in the original product and maintain the compliance of the entire system.

## D. Installations

### 1. Fixed Installations

A “fixed” installation has the following characteristics:

- It is a combination of several types of equipment, *systems*, *finished products*, and/or *components* (known as “parts”).
- It is assembled and/or erected by an assembler/installer **at a given place**.

- It is intended to operate together in an expected environment.
- It is expected to perform a specific task.
- It is not intended for the market as a single functional or commercial unit.

Some parts of an installation may be available commercially (and CE Marked), and others may be intended for incorporation only (and not CE Marked), much like a system described above (C2). The manufacturer of each part is only responsible for the electromagnetic aspects of that part, but is not, under the EMC Directive, responsible for the electromagnetic effects of an installation as a whole.

The installation as a whole, however, must comply with the *Essential Requirements* of the Directive; and the person(s) responsible for the design, engineering, and construction of the installation is responsible for complying with all the provisions of the Directive. Since the installation is not intended to move around the European Economic Area (See *NIST SP 951 A Guide to EU Standards and Conformity Assessment, Page 1*), however, it is not required to bear the CE Marking (See *NIST SP 951 A Guide to EU Standards and Conformity Assessment, Page 17*). There is no need to involve a *competent body*, and there is no need for an EC Declaration of Conformity (See *NIST SP 951 A Guide to EU Standards and Conformity Assessment, Page 26*). The persons responsible, however, are required to provide clear instructions for operation and maintenance in a User's Manual (See *NIST SP 951 A Guide to EU Standards and Conformity Assessment, Page 26*). Compliance of a fixed installation is determined on a case-by-case basis.

## 2. Movable Installations

Installations which may be moved and operated within a range of locations (ex: the outside broadcast vehicle of a TV or radio station), may experience or cause changes in the electromagnetic environment. These installations, because they may move within the European Economic Area (See *NIST SP 951 A Guide to EU Standards and Conformity Assessment, Page 1*) must comply with the Directive as if they were a system.

## IV. Understanding How the Directive Defines Used, Second-Hand, and Modified Apparatuses

### A. Used Apparatus

A used apparatus is one that has previously and legally been placed on the market and put into service within the European Economic Area (See *NIST SP 951 A Guide to EU Standards and Conformity Assessment, Page 1*). This apparatus must have been in compliance with whatever European legislation was applicable to it at the time (European National or European Union). If it was placed on the market before the EMC Directive

was applicable, it is not covered by it. If it was placed on the market after the EMC Directive was applicable, it is covered by it.

Used apparatus imported from a country outside the EEA, but made available in the EEA for the first time is not considered “used.” It is considered **new** apparatus and must comply with the EMC Directive (providing, of course, that it is electromagnetically relevant and within the scope of the Directive).

## **B. Second Hand Apparatus**

Second hand apparatus is used apparatus supplied to a user. It may or may not have been modified by refurbishment, reconditioning, or reconfiguration.

## **C. Reconditioned Apparatus**

Reconditioned apparatus is used apparatus whose performance has changed over time. It has been modified, the object being restoration. *Note: A restoration could involve a change of electromagnetic characteristics. For example, a metallic enclosure may provide much better electromagnetic shielding than a plastic enclosure.*

## **D. Reconfigured Apparatus**

A reconfigured apparatus is a used apparatus that has been upgraded or downgraded by the addition or removal of one or more parts.

## **E. As-New Apparatus**

An As-New apparatus is a used apparatus that has undergone a substantial modification. An As-New apparatus is a used apparatus whose modification has changed it so much that it performs like a new apparatus, or like one that is being placed on the market at the same time.

## **V. Determining if the Directive Must be Applied or Reapplied to Used, Second Hand Reconditioned, or Reconfigured Parts**

### **A. When the EMC Directive Must Be Applied**

The first general rule of thumb is that the EMC Directive must be applied or reapplied to used and/or modified apparatus if

- It is imported from a country outside the EEA;
- It has been previously placed on the EEA market, but modified to the extent that it is As-New; and
- It is intended to be placed on the market again as a single commercial unit.

*Note: The modifier of the apparatus, however, must have supporting documentation as to what has been done, plus an EMC analysis, a record of tests performed, and final conclusions as a result of the analysis and tests. Enforcement authorities and end users must be able to determine that the apparatus has been modified and to know the identification of the modifier; and this information must appear in the documentation or on the apparatus.*

## **B. When the EMC Directive Does Not Have to Be Applied**

The second rule of thumb is that the EMC Directive does not have to be applied or reapplied if repairs, restorations, or modifications do not change the intentions of the original manufacturer, or if the modifications do not change the manufacturer's conformity assessment or the manufacturer's conformance with the Directive.

The EMC Directive does not apply to a used apparatus, of course, if it did not apply to it when it was new. Likewise, the EMC Directive will not apply to a modified apparatus if it did not apply to the original apparatus.

## **C. Repaired Apparatus and Spare Parts**

### **1. Repaired Apparatus**

A repaired apparatus is one whose functionality has been restored without adding any new features. From an EMC point of view, the repaired apparatus is no different from the original. **The Directive does not have to be applied.**

### **2. Spare Parts**

- (a) Spare parts, whether they are identical to the ones being replaced or different ones, (due to technical progress or discontinuation of the old parts) **do not need to be brought into conformity with the Directive if they do not cause the apparatus to change its EMC performance for the worse.**
- (b) Spare parts that are commercially available as single units must be assessed as any other part as to whether or not the Directive applies.



## VI. Determining the Conformity Assessment Method

There are three conformity assessment procedures prescribed in the Directive:

- A. A procedure with the application of harmonized standards;
- B. A procedure where no harmonized standards are used, or only parts are used;
- C. A specific procedure for apparatus used for the transmission of radiocommunications.

### **A. The Procedure with the Application of Harmonized Standards** (See *NIST SP 951 A Guide to EU Standards and Conformity Assessment, Page 11*).

If the manufacturer uses *EMC Harmonized Standards* in the design, production, and testing of the apparatus, he need only

- Affix the CE Marking (See *NIST SP 951 A Guide to EU Standards and Conformity Assessment, Page 17*).
- Draw up a written Declaration of Conformity (See *NIST SP 951 A Guide to EU Standards and Conformity Assessment, Page 26*). See also *Annex I* of the Directive.

*Note: Although no Technical File (See *NIST SP 951 A Guide to EU Standards and Conformity Assessment, Page 24*) is required, it is recommended that manufacturers retain all relevant technical documentation as if it were a technical file, i.e., 10 years after the last apparatus was placed on the market.*

### **B. The Procedure Where No EMC Harmonized Standards are Used, or Only Parts are Used**

If the manufacturer has not used EMC Harmonized Standards or only parts of them, he must

- Compile and keep a Technical File (See *NIST SP 951 A Guide to EU Standards and Conformity Assessment, Page 24*).

A Technical File should contain the following:

- A general description of the product;
- Design and manufacturing drawings, together with layout diagrams covering components, subassemblies, circuits, etc.;
- Descriptions and explanations needed in order to understand the abovementioned drawings and diagrams as well as the operational aspects of the product;

- A list of standards applied in whole or in part and a description of the solutions adopted in order to comply with the protection requirements of the Directive in cases where the standards have not been applied;
  - Design calculation results arising from the EMC tests;
  - The technical report or the certificate issued by a competent body (see below);
  - A copy of the EC Declaration of conformity (See *NIST SP 951 A Guide to EU Standards and Conformity Assessment, Page 26*). See also *Annex I of the Directive*;
  - A copy of the instructions for use (See *Annex III* of the Directive).
- Obtain a Report or Certificate from a Competent Body (See *NIST SP 951 A Guide to EU Standards and Conformity Assessment, Page 21*).

A report or certificate from a competent body need only declare that the conformity assessment procedures for the parts that were *not* covered by harmonized standards have been correctly performed, regardless of whether they were done by the manufacturer or by the competent body.

*Note: Whether or not EMC Harmonized Standards are used, the manufacturer may have a competent body do some or all of the testing required to complete the conformity assessment; or the manufacturer may do all of the testing in-house and submit documentary proof to a competent body for evaluation. Testing and evaluation are, however, required to be separate functions within a competent body. In other words, a person(s) evaluating a technical file cannot be involved in producing it or any test results being reviewed. In the final analysis, however, the manufacturer is the only one responsible for complying with the Directive*

The technical file and the report or certification from a competent body must be kept available for inspection by surveillance (competent) authorities (Ministries of National Governments of EEA Member States) for 10 years after the last apparatus was placed on the market (See *NIST SP 951 A Guide to EU Standards and Conformity Assessment, Manufacturer, Page 22, Importer, page 23, Authorized Representative, page 23*).

### C. The Procedure for Apparatus Used for the Transmission of Radiocommunications

*Please note that the provisions of the Radio and Telecommunications, Terminal Equipment Directive (R&TTE), have superseded this section. Under the R&TTE, the Manufacturer may self-declare compliance. For EMC aspects, the R&TTE Directive supercedes the EMC Directive. It is included here to be consistent with the original text of the EMC Directive.*

This type of apparatus must undergo a conformity assessment procedure that is different from the procedures described above. The procedure is known as EC type-examination (See *NIST SP 951 A Guide to EU Standards and Conformity Assessment, Page 22*).

For EC type-examinations, the manufacturer:

- Makes an application to the Notified Body of his choice, or a subcontractor of that Notified Body located in the U.S. (See *NIST SP 951 A Guide to EU Standards and Conformity Assessment, Page 20*).
- Submits a sample (a type) of the apparatus to the Notified Body or its subcontractor.
- Submits technical documentation to the Notified Body or its subcontractor. The technical documentation must cover the design, manufacture and operation of the apparatus, must specify which standards have been applied, and/or which conformity assessment solutions the manufacturer has utilized to assure that the apparatus has met with the provisions of the Directive.

In turn, the Notified Body:

- Verifies that the sample has been manufactured in accordance with the technical documentation, i.e., that the apparatus has been designed and manufactured in accordance with the standards indicated by the manufacturer.
- Performs tests to check (where standards have not been applied), whether the manufacturer has applied solutions that will bring the apparatus in compliance with the Directive.
- Issues an EC type-examination certificate.

If a certificate is denied, the Notified Body provides the reasons for the denial. In cases of denial, the manufacturer may modify the apparatus; and the Notified Body may issue a second certificate.

*Note: Notified Bodies share information concerning EC type-examination and certificates issued or withdrawn.*

The Manufacturer, upon receiving an EC-type examination certificate;

- Affixes the CE Marking (See *NIST SP 951 A Guide to EU Standards and Conformity Assessment, Declaration of Conformity, Page 17*).
- Draws up a written Declaration of Conformity (See *NIST SP 951 A Guide to EU Standards and Conformity Assessment, Declaration of Conformity, Page 26*). See also *Annex I of the Directive*.
- Keeps the Declaration of Conformity, EC-Type examination certificate, and technical documentation available for inspection by surveillance (competent) authorities (Ministries of National Governments of EEA Member States) for 10 years after the last apparatus has been placed on the market (See *NIST SP 951 A Guide to EU Standards and Conformity Assessment, Manufacturer, Page 22, Importer, page 23, Authorized Representative, page 23*).

*FOR FURTHER INFORMATION, REFER TO THE ACTUAL TEXT OF THE DIRECTIVE ,WHICH FOLLOWS.*

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### Text of Directive EMC 89/336/EEC

*The following text of the Directive on Electromagnetic Compatibility (89/336/EEC) has been taken from EUR-Lex, the digital version of the legislation issued in the Official Journal of the European Communities Web Site: [http://www.europa.eu.int/eur-lex/en/lif/dat/1989/en\\_389L00336.html](http://www.europa.eu.int/eur-lex/en/lif/dat/1989/en_389L00336.html)*

*Only European Community's legislation printed in the Official Journal of the European Communities is deemed to be authentic.*

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#### COUNCIL DIRECTIVE

Of 3 May 1989

On The Approximation Of The Laws Of The Member States Relating To Electromagnetic Compatibility (89/336/EEC)

THE COUNCIL OF THE EUROPEAN COMMUNITIES,  
 Having regard to the Treaty establishing the European Economic Community, and in particular Article 100a thereof,  
 Having regard to the proposal from the Commission (1),  
 In cooperation with the European Parliament (2),  
 Having regard to the opinion of the Economic and Social Committee (3),  
 Whereas it is necessary to adopt measures with the aim of progressively establishing the internal market over a period expiring on 31 December 1992; whereas the internal market comprises an area without internal frontiers in which the free movement of goods, persons, services and capital is ensured;  
 Whereas Member States are responsible for providing adequate protection for radiocommunications and the devices, apparatus or systems whose performance may be degraded by electromagnetic disturbance produced by electrical and electronic apparatus against the degradation

caused by such disturbances;  
 Whereas Member States are also responsible for ensuring that electric energy distribution networks are protected from electromagnetic disturbance with can affect them and, consequently, equipment fed by them;  
 Whereas Council Directive 86/361/EEC of 24 July 1986 on the initial stage of the recognition of type-approval for telecommunications terminal equipment (4) covers in particular the signals emitted by such equipment when it is operating normally and the protection of public telecommunications networks from harm;  
 whereas it is therefore still necessary to provide adequate protection for these networks, including the equipment connected to them, against temporary disturbances caused by signals of an accidental nature that may be emitted by this equipment;  
 Whereas in some Member States, mandatory provisions define in particular the permissible electromagnetic disturbance levels that this equipment is liable to cause and its degree of

immunity to such signals; whereas these mandatory provisions do not necessarily lead to different protection levels from one Member State to another but do, by their disparity, hinder trade within the Community; Whereas the national provisions ensuring such protection must be harmonized in order to guarantee the free movement of electrical and electronic apparatus without lowering existing and justified levels of protection in the Member States;

Whereas Community legislation as it stands at present provides that, notwithstanding one of the fundamental rules of the Community, namely the free movement of goods, barriers to intra-Community trade resulting from disparities in national laws on the marketing of products have to be accepted in so far as those provisions may be recognized as necessary to satisfy essential requirements; whereas the harmonization of laws in the case in point must therefore be confined to those provisions needed to comply with the protection requirements relating to electromagnetic compatibility; whereas these requirements must replace the corresponding national provisions; Whereas this Directive therefore defines only protection requirements relating to electromagnetic compatibility; whereas, to facilitate proof of conformity with these requirements, it is important to have harmonized standards at European level concerning electromagnetic compatibility, so that products complying with them may be assumed to comply with the protection requirements; whereas these standards harmonized at European level are drawn up by private bodies and must remain non-binding texts; whereas for that purpose the European Committee for Electrotechnical Standardization (CENELEC) is recognized as the competent body in the field of this Directive for the adoption of harmonized standards in accordance with the general guidelines for cooperation between the Commission and the European Committee

for Standardization (CEN) and CENELEC signed on 13 November 1984; whereas, for the purposes of this Directive, a harmonized standard is a technical specification (European standard or harmonization document) adopted by CENELEC upon a remit from the Commission in accordance with the provisions of Council Directive 83/189/EEC of 28 March 1983 laying down a procedure for the provision of information in the field of technical standards and regulations (1), as last amended by Directive 88/182/EEC (2), and pursuant to the abovementioned general guidelines; Whereas, pending the adoption of harmonized standards for the purposes of this Directive, the free movement of goods should be facilitated by accepting, as a transitional measure, on a Community level, apparatus complying with the national standards adopted, in accordance with the Community inspection procedure ensuring that such national standards meet the protection objectives of this Directive; Whereas the EC declaration of conformity concerning the apparatus constitutes a presumption of its conformity with this Directive; whereas this declaration must take the simplest possible form; Whereas, for apparatus covered by Directive 86/361/EEC, in order to obtain efficient protection as regards electromagnetic compatibility, compliance with the provisions of this Directive should nevertheless be certified by marks or certificates of conformity issued by bodies notified by the Member States; whereas, to facilitate the mutual recognition of marks and certificates issued by these bodies, the criteria to be taken into consideration for appointing them should be harmonized; Whereas it is nevertheless possible that equipment might disturb radiocommunications and telecommunications networks; whereas provision should therefore be made for a procedure to reduce this hazard;

Whereas this Directive applies to the appliances and equipment covered by Directives 76/889/EEC (3) and 76/890/EEC (4) which relate to the approximation of the laws of the Member States relating to radio interference caused by electrical household appliances, portable tools and similar equipment and to the suppression of radio interference with regard to fluorescent lighting luminaires fitted with starters; whereas those Directive should therefore be repealed,

HAS ADOPTED THIS DIRECTIVE:

#### Article 1

For the purposes of this Directive:

1. 'apparatus' means all electrical and electronic appliances together with equipment and installations containing electrical and/or electronic components.
2. 'electromagnetic disturbance' means any electromagnetic phenomenon which may degrade the performance of a device, unit of equipment or system. An electromagnetic disturbance may be electromagnetic noise, an unwanted signal or a change in the propagation medium itself.
3. 'immunity' means the ability of a device, unit of equipment or system to perform without degradation of quality in the presence of an electromagnetic disturbance.
4. 'electromagnetic compatibility' means the ability of a device, unit of equipment or system to function satisfactorily in its electromagnetic environment without introducing intolerable electromagnetic disturbances to anything in that environment.
5. 'competent body' means any body which meets the criteria listed in Annex II and is recognized as such.
6. 'EC type-examination certificate' is a document in which a notified body referred to in Article 10 (6) certifies that the type of equipment examined complies with the provisions of this Directive which concern it.

#### Article 2

1. This Directive applies to apparatus liable to cause electromagnetic disturbance or the

performance of which is liable to be affected by such disturbance.

It defines the protection requirements and inspection procedures relating thereto.

2. In so far as protection requirements specified in this Directive are harmonized, in the case of certain apparatus, by specific Directives, this Directive shall not apply or shall cease to apply with regard to such apparatus or protection requirements upon the entry into force of those specific Directives.

3. Radio equipment used by radio amateurs within the meaning of Article 1, definition 53, of the radio regulations in the International Telecommunications Convention, shall be excluded from the scope of this Directive, unless the apparatus is available commercially.

#### Article 3

Member States shall take all appropriate measures to ensure that apparatus as referred to in Article 2 may be placed on the market or taken into service only if it complies with the requirements laid down by this Directive when it is properly installed and maintained and when it is used for the purposes for which it is intended.

#### Article 4

The apparatus referred to in Article 2 shall be so constructed that:

- (a) the electromagnetic disturbance it generates does not exceed a level allowing radio and telecommunications equipment and other apparatus to operate as intended;
- (b) the apparatus has an adequate level of intrinsic immunity of electromagnetic disturbance to enable it to operate as intended.

The principal protection requirements are set out in Annex III.

#### Article 5

Member States shall not impede for reasons relating to electromagnetic compatibility the placing on the market and the taking into service on their territory of apparatus covered by this Directive which satisfies the

requirements thereof.

#### Article 6

1. The requirements of this Directive shall not prevent the application in any Member State of the following special measures:

(a) measures with regard to the taking into service and use of the apparatus taken for a specific site in order to overcome an existing or predicted electromagnetic compatibility problem;

(b) measures with regard to the installation of the apparatus taken in order to protect the public telecommunications networks or receiving or transmitting stations used for safety purposes.

2. Without prejudice to Directive 83/189/EEC, Member States shall inform the Commission and the other Member States of the special measures taken pursuant to paragraph 1.

3. Special measures that have been recognized as justified shall be contained in an appropriate notice made by the Commission in the Official Journal of the European Communities.

#### Article 7

1. Member States shall presume compliance with the protection requirements referred to in Article 4 in the case of apparatus which is in conformity;

(a) with the relevant national standards transposing the harmonized standards, the reference numbers of which have been published in the Official Journal of the European Communities. Member States shall publish the reference numbers of such national standards;

(b) or with the relevant national standards referred to in paragraph 2 in so far as, in the areas covered by such standards, no harmonized standards exist.

2. Member States shall communicate to the Commission the texts of their national standards, as referred to in paragraph 1 (b), which they regard as complying with the protection requirements referred to in Article 4. The Commission shall forward such texts forthwith to the other Member States. In

accordance with the procedure provided for in Article 8 (2), it shall notify the Member States of those national standards in respect of which there is a presumption of conformity with the protection requirements referred to in Article 4.

Member States shall publish the reference numbers of those standards. The Commission shall also publish them in the Official Journal of the European Communities.

3. Member States shall accept that where the manufacturer has not applied, or has applied only in part, the standards referred to in paragraph 1, or where no such standards exist, apparatus shall be regarded as satisfying the protection requirements has been certified by the means of attestation provided for in Article 10 (2).

#### Article 8

1. Where a Member State or the Commission considers that the harmonized standards referred to in Article 7 (1) (a) do not entirely satisfy the requirements referred to in Article 4, the Member State concerned or the Commission shall bring the matter before the Standing Committee set up by Directive 83/189/EEC, hereinafter referred to as 'the Committee', giving the reasons therefor. The Committee shall deliver an opinion without delay.

Upon receipt of the Committee's opinion, the Commission shall inform the Member States as soon as possible whether or not it is necessary to withdraw in whole or in part those standards from the publications referred to in Article 7 (1) (a). 2. After receipt of the communication referred to in Article 7 (2), the Commission shall consult the Committee. Upon receipt of the latter's opinion, the Commission shall inform the Member States as soon as possible whether or not the national standard in question shall enjoy the presumption of conformity and, if so, that the references thereof shall be published nationally.

If the Commission or a Member State



considers that a national standard no longer satisfies the necessary conditions for presumption of compliance with the protection requirements referred to in Article 4, the Commission shall consult the Committee, which shall give its opinion without delay. Upon receipt of the latter's opinion, the Commission shall inform the Member States as soon as possible whether or not the standard in question shall continue to enjoy a presumption of conformity and, if not, that it must be withdrawn in whole or in part from the publications referred to in Article 7 (2).

#### Article 9

1. Where a Member State ascertains that apparatus accompanied by one of the means of attestation provided for in Article 10 does not comply with the protection requirements referred to in Article 4, it shall take all appropriate measures to withdraw the apparatus from the market, prohibit its placing on the market or restrict its free movement.

The Member State concerned shall immediately inform the Commission of any such measure, indicating the reasons for its decision and, in particular, whether non-compliance is due to:

- (a) failure to satisfy the protection requirements referred to in Article 4, where the apparatus does not meet the standards referred to in Article 7 (1);
- (b) incorrect application of the standards referred to in Article 7 (1);
- (c) shortcomings in the standards referred to in Article 7 (1) themselves.

2. The Commission shall consult the parties concerned as soon as possible. If the Commission finds, after such consultations, that the action is justified, it shall forthwith so inform the Member State that took the action and the other Member States.

Where the decision referred to in paragraph 1 is attributed to shortcomings in the standards, the Commission, after consulting the parties, shall bring the matter before the

Committee within two months if the Member State which has taken the measures intends to uphold them, and shall initiate the procedures referred to in Article 8.

3. Where apparatus which does not comply is accompanied by one of the means of attestation referred to in Article 10, the competent Member State shall take appropriate action against the author of the attestation and shall inform the Commission and the other Member States thereof.

4. The Commission shall ensure that the Member States are kept informed of the progress and outcome of this procedure.

#### Article 10

1. In the case of apparatus for which the manufacturer has applied the standards referred to in Article 7 (1), the conformity of apparatus with this Directive shall be certified by an EC declaration of conformity issued by the manufacturer or his authorized representative established within the Community. The declaration shall be held at the disposal of the competent authority for ten years following the placing of the apparatus on the market.

The manufacturer or his authorized representative established within the Community shall also affix the EC conformity mark to the apparatus or else to the packaging, instructions for use or guarantee certificate.

Where neither the manufacturer nor his authorized representative is established within the Community, the above obligation to keep the EC declaration of conformity available shall be the responsibility of the person who places the apparatus on the Community market.

The provisions governing the EC declaration and the EC mark are set out in Annex I.

2. In the case of apparatus for which the manufacturer has not applied, or has applied only in part, the standards referred to in Article 7 (1) or failing such standards, the manufacturer or his authorized representative established within the

Community shall hold at the disposal of the relevant competent authorities, as soon as the apparatus is placed on the market, a technical construction file. This file shall describe the apparatus, set out the procedures used to ensure conformity of the apparatus with the protection requirements referred to in Article 4 and include a technical report or certificate, one or other obtained from a competent body.

The file shall be held at the disposal of the competent authorities for ten years following the placing of the apparatus on the market. Where neither the manufacturer nor his authorized representative is established within the Community, this obligation to keep a technical file available shall be the responsibility of the person who places the apparatus on the Community market. The conformity of apparatus with that described in the technical file shall be certified in accordance with the procedure laid down in paragraph 1.

Member States shall presume, subject to the provisions of this paragraph, that such apparatus meets the protection requirements referred to in Article 4. 3. Where the standards referred to in Article 7 (1) are not yet in existence, and without prejudice to the provisions of paragraph 2 of this Article, the apparatus concerned may, on a transitional basis until 31 December 1992 at the latest, continue to be governed by the national arrangements in force on the date of adoption of this Directive, subject to the compatibility of such arrangements with the provisions of the Treaty.

4. Conformity of apparatus covered by Article 2 (2) of Directive 86/361/EEC with the provisions of this Directive shall be certified in accordance with the procedure laid down in paragraph 1 once the manufacturer or his authorized representative established within the Community has obtained an EC type-examination certificate concerning this apparatus issued by one of the notified bodies referred to in paragraph 6 of this

Article.

5. The conformity of apparatus designed for the transmission of radiocommunications, as defined in the International Telecommunication Union Convention, with the provisions of this Directive shall be certified in accordance with the procedure laid down in paragraph 1 once the manufacturer or his authorized representative established within the Community has obtained an EC type-examination certificate concerning this apparatus issued by one of the notified bodies referred to in paragraph 6 below. This provision shall not apply to the above apparatus where it is designed and intended exclusively for radio amateurs within the meaning of Article 2 (3).

6. Each Member State shall notify the Commission and the other Member States of the competent authorities referred to in this Article and of the bodies responsible for issuing the EC type-examination certificates referred to in paragraphs 4 and 5. The Commission shall publish a list of those authorities and bodies, for information purposes, in the Official Journal of the European Communities and shall ensure that the list is updated.

Such notification shall state whether those bodies are competent for all apparatus covered by this Directive or whether their responsibility is limited to certain specific areas.

Member States shall apply the criteria listed in Annex II for the assessment of the bodies to be notified.

Bodies which comply with the assessment criteria fixed by the relevant harmonized standards shall be presumed to comply with the aforementioned criteria.

A Member State which has notified a body must withdraw approval if it finds that the body no longer meets the criteria listed in Annex II. It shall forthwith inform the Commission and the other Member States thereof.

#### Article 11

Directive 76/889/EEC and Directive 76/890/EEC shall be repealed as from 1 January 1992.

#### Article 12

1. By 1 July 1991, Member States shall adopt and publish the laws, regulations and administrative provisions necessary to comply with this Directive. They shall inform the Commission thereof.

They shall apply these provisions as from 1 January 1992.

2. Member States shall communicate to the Commission the texts of the provisions of national law which they adopt in the field covered by this Directive.

#### Article 13

This Directive is addressed to the Member States.

Done at Brussels, 3 May 1989.

For the Council

The President

P. SOLBES

(1) OJ No C 322, 2. 12. 1987, p. 4.

(2) OJ No C 262, 10. 10. 1988, p. 82 and OJ No C 69, 20. 3. 1989, p. 72.

(3) OJ No C 134, 24. 5. 1988, p. 2.

(4) OJ No L 217, 5. 8. 1986, p. 21.

(1) OJ No L 109, 26. 4. 1983, p. 8.

(2) OJ No L 81, 26. 3. 1988, p. 75.

(3) OJ No L 336, 4. 12. 1976, p. 1.

(4) OJ No L 336, 4. 12. 1976, p. 22.

#### ANNEX I

##### 1. EC declaration of conformity

The EC declaration of conformity must contain the following:

- description of the apparatus to which it refers,
- reference to the specifications under which conformity is declared, and, where appropriate, to the national measures implemented to ensure the conformity of the apparatus with the provisions of the Directive,
- identification of the signatory empowered to bind the manufacturer or his authorized

representative,

- where appropriate, reference to the EC type-examination certificate issued by a notified body.

##### 2. EC conformity mark

- The EC conformity mark shall consist of the letters CE as set out below and the figures of the year in which the mark was affixed.

- This mark should, where appropriate, be accompanied by the distinctive letters used by the notified body issuing the EC type-examination certificate.

- Where apparatus is the subject of other Directives providing for the EC conformity mark, the affixing of the EC mark shall also indicate conformity with the relevant requirements of those other Directives.

#### ANNEX II

Criteria for the assessment of the bodies to be notified

The bodies designated by the Member States must fulfil the following minimum conditions:

1. availability of personnel and of the necessary means and equipment;
2. technical competence and professional integrity of personnel;
3. independence, in carrying out the tests, preparing the reports, issuing the certificates and performing the verification function provided for in this Directive, of staff and technical personnel in relation to all circles, groups or persons directly or indirectly concerned with the product in question;
4. maintenance of professional secrecy by personnel;
5. possession of civil liability insurance unless such liability is covered by the State under national law.

Fulfilment of the conditions under points 1 and 2 shall be verified at intervals by the competent authorities of the Member States.

#### ANNEX III

Illustrative list of the principal protection requirements

The maximum electromagnetic disturbance generated by the apparatus shall be such as not to hinder the use of in particular the following apparatus:

- (a) domestic radio and television receivers
- (b) industrial manufacturing equipment
- (c) mobile radio equipment
- (d) mobile radio and commercial radiotelephone equipment
- (e) medical and scientific apparatus
- (f) information technology equipment
- (g) domestic appliances and household electronic equipment
- (h) aeronautical and marine radio apparatus
- (i) educational electronic equipment
- (j) telecommunications networks and apparatus
- (k) radio and television broadcast transmitters
- (l) lights and fluorescent lamps.

Apparatus, and especially the apparatus referred to in (a) to (l), should be constructed in such a way that it has an adequate level of electromagnetic immunity in the usual electromagnetic compatibility environment where the apparatus is intended to work so as to allow its unhindered operation taking into account the levels of disturbance generated by apparatus complying with the standards laid down in Article 7.

The information required to enable use in accordance with the intended purpose of the apparatus must be contained in the instructions accompanying the apparatus.

## EMC Harmonized Standards

*Note: This list of EMC Harmonized Standards is from the Web Site:  
<http://www.newapproach.org>*

European Standards Body	Reference and title of the standard	Reference document	Reference of the superseded standard	Date of cessation of presumption of conformity of the superseded standard  Note 1
CENELEC	EN 50065-1:1991  Signalling on low-voltage electrical installations in the frequency range 3 kHz to 148,5 kHz --  Part 1: General requirements, frequency bands and electromagnetic disturbances		NONE	-
	Amendment A1:1992 to EN 50065-1:1991		Note 3	Date expired (01.12.1994)
	Amendment A2:1995 to EN 50065-1:1991		Note 3	Date expired (01.10.1995)
	Amendment A3:1996 to EN 50065-1:1991		Note 3	Date expired (01.03.1997)
CENELEC	EN 50081-1:1992  Electromagnetic compatibility - Generic emission standard --  Part 1: Residential, commercial and light industry		NONE	-
CENELEC	EN 50081-2:1993  Electromagnetic compatibility - Generic emission standard --  Part 2: Industrial environment		NONE	-
CENELEC	EN 50082-1:1992		NONE	-

	Electromagnetic compatibility - Generic immunity standard -- Part 1: Residential, commercial and light industry			
CENELEC	EN 50082-1:1997 Electromagnetic compatibility - Generic immunity standard -- Part 1: Residential, commercial and light industry		EN 50082-1:1992 Note 2.1	01.07.2001
CENELEC	EN 50082-2:1995 Electromagnetic compatibility - Generic immunity standard -- Part 2: Industrial environment		NONE	-
CENELEC	EN 50083-2:1995 Cable networks for television signals, sound signals and interactive services -- Part 2: Electromagnetic compatibility for equipment		Relevant generic standard(s) Note 2.3	Date expired (01.09.1996)
	Amendment A1:1997 to EN 50083-2:1995		Note 3	Date expired (01.09.1997)
CENELEC	EN 50090-2-2:1996 Home and building electronic systems (HBES) -- Part 2-2: System overview - General technical requirements		Relevant generic standard(s) Note 2.3	Date expired (01.10.1999)
CENELEC	EN 50091-2:1995 Uninterruptible power systems (UPS) -- Part 2: EMC requirements		Relevant generic standard(s) Note 2.3	Date expired (01.03.1999)
CENELEC	EN 50130-4:1995 Alarm systems -- Part 4: Electromagnetic compatibility - Product family standard: Immunity requirements for components of fire, intruder and social alarm systems		Relevant generic standard(s) Note 2.3	01.01.2001

	Amendment A1:1998 to EN 50130-4:1995		Note 3	01.01.2001
CENELEC	EN 50148:1995 Electronic taximeters		Relevant generic standard(s) Note 2.3	Date expired (15.12.1995)
CENELEC	EN 50199:1995 Electromagnetic compatibility (EMC) - Product standard for arc welding equipment		Relevant generic standard(s) Note 2.3	Date expired (01.07.1996)
CENELEC	EN 50227:1997 Control circuit devices and switching elements proximity sensors, d.c. interface for proximity sensors and switching amplifiers (NAMUR)		Relevant generic standard(s) Note 2.3	Date expired (01.04.1998)
CENELEC	EN 50263:1999 Electromagnetic compatibility (EMC) - Product standard for measuring relays and protection equipment		Relevant generic standard(s) Note 2.3	01.08.2002
CENELEC	EN 50270:1999 Electromagnetic compatibility - Electrical apparatus for the detection and measurement of combustible gases, toxic gases or oxygen		Relevant generic standard(s) Note 2.3	01.10.2001
CENELEC	EN 55011:1991 Limits and methods of measurement of radio disturbance characteristics of industrial, scientific and medical (ISM) radio-frequency equipment	CISPR 11:1990 (Modified)	NONE	-
	Amendment A2:1996 to EN 55011:1991	CISPR 11:1990 /A2:1996	Note 3	Date expired (01.01.1998)
	Amendment A1:1997 to EN 55011:1991	CISPR 11:1990 /A1:1996 (Modified)	Note 3	Date expired (01.01.1998)
CENELEC	EN 55011:1998 Industrial, scientific and medical (ISM) radio-frequency equipment - Radio disturbance characteristics - Limits and methods of measurement	CISPR 11:1997 (Modified)	EN 55011:1991 and its amendments Note 2.1	01.01.2001

			Note 2.1	
	Amendment A1:1999 to EN 55011:1998	CISPR 11:1997 /A1:1999	Note 3	01.08.2002
CENELEC	EN 55013:1990 Limits and methods of measurement of radio disturbance characteristics of broadcast receivers and associated equipment	CISPR 13:1975 + A1:1983 (Modified)	NONE	-
	Amendment A12:1994 to EN 55013:1990		Note 3	Date expired (31.12.1998)
	Amendment A13:1996 to EN 55013:1990		Note 3	Date expired (01.06.1999)
	Amendment A14:1999 to EN 55013:1990		Note 3	01.08.2001
CENELEC	EN 55014-1:1993 Electromagnetic compatibility - Requirements for household appliances, electric tools and similar apparatus -- Part 1: Emission - Product family standard	CISPR 14-1:1993	EN 55014:1987 +A2:1990 Note 2.1	Date expired (31.12.1995)
	Amendment A1:1997 to EN 55014-1:1993	CISPR 14-1:1993 /A1:1996	Note 3	Date expired (01.01.1998)
	Amendment A2:1999 to EN 55014-1:1993	CISPR 14-1:1993 /A2:1998	Note 3	01.10.2001
CENELEC	EN 55014-2:1997 Electromagnetic compatibility - Requirements for household appliances, electric tools and similar apparatus -- Part 2: Immunity - Product family standard	CISPR 14-2:1997	EN 55104:1995 Note 2.1	01.01.2001
CENELEC	EN 55015:1996 Limits and methods of measurement of radio disturbance characteristics of electrical lighting and similar equipment	CISPR 15:1996	EN 55015:1993 Note 2.1	Date expired (01.01.2000)
	Amendment A1:1997 to EN 55015:1996	CISPR 15:1996 /A1:1997	Note 3	Date expired (01.01.2000)



	Amendment A2:1999 to EN 55015:1996	CISPR 15:1996 /A2:1998	Note 3	01.10.2001
CENELEC	EN 55020:1994  Electromagnetic immunity of broadcast receivers and associated equipment		EN 55020:1988 Note 2.1	Date expired (31.12.1998)
	Amendment A11:1996 to EN 55020:1994		Note 3	Date expired (01.06.1999)
	Amendment A12:1999 to EN 55020:1994		Note 3	01.08.2001
	Amendment A13:1999 to EN 55020:1994		Note 3	01.08.2001
	Amendment A14:1999 to EN 55020:1994		Note 3	01.08.2001
CENELEC	EN 55022:1994  Limits and methods of measurement of radio disturbance characteristics of information technology equipment	CISPR 22:1993	EN 55022:1987 Note 2.1	Date expired (31.12.1998)
	Amendment A1:1995 to EN 55022:1994	CISPR 22:1993 /A1:1995	Note 3	Date expired (31.12.1998)
	Amendment A2:1997 to EN 55022:1994	CISPR 22:1993 /A2:1996 (Modified)	Note 3	Date expired (31.12.1998)
CENELEC	EN 55022:1998  Information technology equipment - Radio disturbance characteristics - Limits and methods of measurement	CISPR 22:1997 (Modified)	EN 55022:1994 and its amendments Note 2.1	01.08.2001
CENELEC	EN 55024:1998  Information technology equipment - Immunity characteristics - Limits and methods of measurement	CISPR 24:1997 (Modified)	Relevant generic standard(s) Note 2.3	01.07.2001
CENELEC	EN 55103-1:1996  Electromagnetic compatibility - Product family standard for audio, video, audio-visual and entertainment lighting control apparatus for professional use --		Relevant generic standard(s) Note 2.3	Date expired (01.09.1999)

	Part 1: Emission			
CENELEC	EN 55103-2:1996 Electromagnetic compatibility - Product family standard for audio, video, audio-visual and entertainment lighting control apparatus for professional use -- Part 2: Immunity		Relevant generic standard(s) Note 2.3	Date expired (01.09.1999)
CENELEC	EN 55104:1995 Electromagnetic compatibility - Immunity requirements for household appliances, tools and similar apparatus - Product family standard		Relevant generic standard(s) Note 2.3	01.01.2001
CENELEC	EN 60204-31:1998 Safety of machinery - Electrical equipment of machines -- Part 31: Particular safety and EMC requirements for sewing machines, units and systems	IEC 60204-31:1996 (Modified)	Relevant generic standard(s) Note 2.3	01.06.2002
CENELEC	EN 60439-1:1994 Low-voltage switchgear and controlgear assemblies -- Part 1: Type-tested and partially type-tested assemblies	IEC 60439-1:1992	-	-
	Amendment A11:1996 to EN 60439-1:1994		Relevant generic standard(s) Note 2.3	Date expired (01.11.1996)
CENELEC	EN 60439-1:1999 Low-voltage switchgear and controlgear assemblies -- Part 1: Type-tested and partially type-tested assemblies	IEC 60439-1:1999	EN 60439-1:1994 and its amendment Note 2.1	01.08.2002
CENELEC	EN 60521:1995 Class 0,5, 1 and 2 alternating-current watt-hour meters	IEC 60521:1988	Relevant generic standard(s) Note 2.3	Date expired (15.07.1995)
CENELEC	EN 60555-2:1987			

	Disturbances in supply systems caused by household appliances and similar electrical equipment -- Part 2: Harmonics	IEC 60555-2:1982 + A1:1985 (Modified)	NONE	-
CENELEC	EN 60555-3:1987 Disturbances in supply systems caused by household appliances and similar electrical equipment -- Part 3: Voltage fluctuations	IEC 60555-3:1982	NONE	-
	Amendment A1:1991 to EN 60555-3:1987	IEC 60555-3:1982 /A1:1990	Note 3	Date expired (01.10.1992)
CENELEC	EN 60669-2-1:1996 Switches for household and similar fixed-electrical installations -- Part 2: Particular requirements -- Section 1: Electronic switches	IEC 60669-2-1:1994 + A1:1994 + A2:1995 (Modified)	-	-
	Amendment A11:1997 to EN 60669-2-1:1996		Relevant generic standard(s) Note 2.3	Date expired (01.06.1999)
CENELEC	EN 60669-2-2:1997 Switches for household and similar fixed electrical installations -- Part 2: Particular requirements -- Section 2: Electromagnetic remote-control switches (RCS)	IEC 60669-2-2:1996	Relevant generic standard(s) Note 2.3	Date expired (01.06.1999)
CENELEC	EN 60669-2-3:1997 Switches for household and similar fixed electrical installations -- Part 2-3: Particular requirements - Time-delay switches (TDS)	IEC 60669-2-3:1997	EN 60669-2-3:1996 Note 2.1	Date expired (01.06.1999)
CENELEC	EN 60687:1992 Alternating current static watt-hour meters for active energy (classes 0,2 S and 0,5 S)	IEC 60687:1992	Relevant generic standard(s) Note 2.3	Date expired (01.06.1993)

CENELEC	EN 60730-1:1995 Automatic electrical controls for household and similar use -- Part 1: General requirements	IEC 60730-1:1993 (Modified)	-	-
	Amendment A11:1996 to EN 60730-1:1995		Relevant generic standard(s) Note 2.3	Date expired (01.01.1998)
	Amendment A17:2000 to EN 60730-1:1995		Note 3	01.10.2002
CENELEC	EN 60730-2-5:1995 Automatic electrical controls for household and similar use -- Part 2: Particular requirements for automatic electrical burner control systems	IEC 60730-2-5:1993 (Modified)	EN 60730-1:1995 and its amendments Note 2.3	Date expired (15.12.2000)
CENELEC	EN 60730-2-6:1995 Automatic electrical controls for household and similar use -- Part 2: Particular requirements for automatic electrical pressure sensing controls including mechanical requirements	IEC 60730-2-6:1991 (Modified)	-	-
	Amendment A1:1997 to EN 60730-2-6:1995	IEC 60730-2-6:1991 /A1:1994 (Modified)	EN 60730-1:1995 and its amendments Note 2.3	Date expired (15.12.2000)
CENELEC	EN 60730-2-7:1991 Automatic electrical controls for household and similar use -- Part 2: Particular requirements for timers and time switches	IEC 60730-2-7:1990 (Modified)	-	-
	Amendment A1:1997 to EN 60730-2-7:1991	IEC 60730-2-7:1990 /A1:1994 (Modified)	EN 60730-1:1995 and its amendments Note 2.3	Date expired (01.01.2000)
CENELEC	EN 60730-2-8:1995 Automatic electrical controls for household and similar use --	IEC 60730-2-8:1992 (Modified)	-	-

	Part 2: Particular requirements for electrically operated water valves, including mechanical requirements	(Modified)		
	Amendment A1:1997 to EN 60730-2-8:1995	IEC 60730-2-8:1992 /A1:1994 (Modified)	EN 60730-1:1995 and its amendments Note 2.3	Date expired (15.12.2000)
	Amendment A2:1997 to EN 60730-2-8:1995	IEC 60730-2-8:1992 /A2:1997	EN 60730-1:1995 and its amendments Note 2.3	Date expired (15.12.2000)
CENELEC	EN 60730-2-9:1995 Automatic electrical controls for household and similar use -- Part 2: Particular requirements for temperature sensing controls	IEC 60730-2-9:1992 (Modified)	-	-
	Amendment A1:1996 to EN 60730-2-9:1995	IEC 60730-2-9:1992 /A1:1994 (Modified)	EN 60730-1:1995 and its amendments Note 2.3	Date expired (15.12.2000)
	Amendment A2:1997 to EN 60730-2-9:1995	IEC 60730-2-9:1992 /A2:1994 (Modified)	EN 60730-1:1995 and its amendments Note 2.3	Date expired (15.12.2000)
CENELEC	EN 60730-2-11:1993 Automatic electrical controls for household and similar use -- Part 2: Particular requirements for energy regulators	IEC 60730-2-11:1993	-	-
	Amendment A1:1997 to EN 60730-2-11:1993	IEC 60730-2-11:1993 /A1:1994 (Modified)	EN 60730-1:1995 and its amendments Note 2.3	Date expired (01.07.2000)
CENELEC	EN 60730-2-13:1998 Automatic electrical controls for household and similar use --	IEC 60730-2-13:1995 (Modified)	EN 60730-1:1995 and its	01.08.2001

	Part 2: Particular requirements for humidity sensing controls		amendments Note 2.3	
CENELEC	EN 60730-2-14:1997  Automatic electrical controls for household and similar use --  Part 2: Particular requirements for electric actuators	IEC 60730-2-14:1995 (Modified)	EN 60730-1:1995 and its amendments Note 2.3	01.06.2004
CENELEC	EN 60730-2-18:1999  Automatic electrical controls for household and similar use --  Part 2: Particular requirements for automatic electrical water and air flow sensing controls, including mechanical requirements	IEC 60730-2-18:1997 (Modified)	EN 60730-1:1995 and its amendments Note 2.3	01.04.2002
CENELEC	EN 60870-2-1:1996  Telecontrol equipment and systems --  Part 2: Operating conditions --  Section 1: Power supply and electromagnetic compatibility	IEC 60870-2-1:1995	Relevant generic standard(s) Note 2.3	Date expired (01.09.1996)
CENELEC	EN 60945:1997  Maritime navigation and radiocommunication equipment and systems - General requirements - Methods of testing and required test results	IEC 60945:1996	EN 60945:1995 Note 2.1	Date expired (01.09.1997)
CENELEC	EN 60947-1:1997  Low-voltage switchgear and controlgear --  Part 1: General rules  Note 6	IEC 60947-1:1996 (Modified)	EN 60947-1:1991 +A11:1994 Note 2.1	Date expired (01.06.1998)
CENELEC	EN 60947-1:1999  Low-voltage switchgear and controlgear --  Part 1: General rules  Note 6	IEC 60947-1:1999 (Modified)	EN 60947-1:1997 Note 2.1	01.11.2001
CENELEC	EN 60947-2:1996  Low-voltage switchgear and controlgear --	IEC 60947-2:1995	Relevant generic standard(s)	Date expired (01.10.1997)

	Part 2: Circuit-breakers		Note 2.3	
	Amendment A1:1997 to EN 60947-2:1996	IEC 60947-2:1995 /A1:1997	EN 60947-2:1996 /A11:1997 Note 3	Date expired (01.08.1998)
CENELEC	EN 60947-3:1992 Low-voltage switchgear and controlgear -- Part 3: Switches, disconnectors, switch-disconnectors and fuse-combination units	IEC 60947-3:1990 (Modified)	Relevant generic standard(s) Note 2.3	Date expired (01.03.1993)
	Amendment A1:1995 to EN 60947-3:1992	IEC 60947-3:1990 /A1:1994	Note 3	Date expired (01.12.1995)
CENELEC	EN 60947-3:1999 Low-voltage switchgear and controlgear -- Part 3: Switches, disconnectors, switch-disconnectors and fuse-combination units	IEC 60947-3:1999	EN 60947-3:1992 and its amendment Note 2.1	01.01.2002
CENELEC	EN 60947-4-1:1992 Low-voltage switchgear and controlgear -- Part 4-1: Contactors and motor-starters - Electromechanical contactors and motor-starters	IEC 60947-4-1:1990	Relevant generic standard(s) Note 2.3	Date expired (01.10.1997)
	Amendment A2:1997 to EN 60947-4-1:1992	IEC 60947-4-1:1990 /A2:1996	Note 3	Date expired (01.10.1997)
CENELEC	EN 60947-4-2:1996 Low-voltage switchgear and controlgear -- Part 4: Contactors and motor-starters -- Section 2: A.C. semiconductor motor controllers and starters	IEC 60947-4-2:1995 (Modified)	Relevant generic standard(s) Note 2.3	Date expired (01.03.1999)
	Amendment A2:1998 to EN 60947-4-2:1996	IEC 60947-4-2:1995 /A2:1998	Note 3	01.07.2001
CENELEC	EN 60947-4-2:2000 Low-voltage switchgear and controlgear -- Part 4-2: Contactors and motor-starters - AC	IEC 60947-4-2:1999	EN 60947-4-2:1996 and its amendment	01.12.2002

	semiconductor motor controllers and starters		Note 2.1	
CENELEC	EN 60947-4-3:2000 Low-voltage switchgear and controlgear -- Part 4-3: Contactors and motor-starters - AC semiconductor controllers and contactors for non-motor loads	IEC 60947-4-3:1999	Relevant generic standard(s) Note 2.3	01.12.2002
CENELEC	EN 60947-5-1:1991 Low-voltage switchgear and controlgear -- Part 5: Control circuit devices and switching elements -- Section 1: Electromechanical control circuit devices	IEC 60947-5-1:1990	-	-
	Amendment A12:1997 to EN 60947-5-1:1991		Relevant generic standard(s) Note 2.3	Date expired (01.10.1997)
CENELEC	EN 60947-5-1:1997 Low-voltage switchgear and controlgear -- Part 5-1: Control circuit devices and switching elements - Electromechanical control circuit devices	IEC 60947-5-1:1997	-	-
	Amendment A12:1999 to EN 60947-5-1:1997		EN 60947-5-1:1991 and its amendment Note 2.1	01.10.2002
CENELEC	EN 60947-5-2:1997 Low-voltage switchgear and controlgear -- Part 5: Control circuit devices and switching elements -- Section 2: Proximity switches	IEC 60947-5-2:1992 + A1:1994 + A2:1995 (Modified)	Relevant generic standard(s) Note 2.3	Date expired (01.06.1999)
CENELEC	EN 60947-5-2:1998 Low-voltage switchgear and controlgear -- Part 5-2: Control circuit devices and switching elements - Proximity switches	IEC 60947-5-2:1997 (Modified)	EN 60947-5-2:1997 Note 2.1	01.10.2001



CENELEC	EN 60947-5-3:1999 Low-voltage switchgear and controlgear -- Part 5-3: Control circuit devices and switching elements - Requirements for proximity devices with defined behaviour under fault conditions (PDF)	IEC 60947-5-3:1999	Relevant generic standard(s) Note 2.3	01.05.2002
CENELEC	EN 60947-5-6:2000 Low-voltage switchgear and controlgear -- Part 5-6: Control circuit devices and switching elements - DC interface for proximity sensors and switching amplifiers (NAMUR)	IEC 60947-5-6:1999	EN 50227:1997 Note 2.1	01.01.2003
CENELEC	EN 60947-6-1:1991 Low-voltage switchgear and controlgear -- Part 6-1: Multiple function equipment - Automatic transfer switching equipment	IEC 60947-6-1:1989	Relevant generic standard(s) Note 2.3	Date expired (01.10.1997)
	Amendment A2:1997 to EN 60947-6-1:1991	IEC 60947-6-1:1989 /A2:1997	EN 60947-6-1:1991 /A11:1997 Note 3	Date expired (01.07.1998)
CENELEC	EN 60947-6-2:1993 Low-voltage switchgear and controlgear -- Part 6-2: Multiple function equipment - Control and protective switching devices (or equipment) (CPS)	IEC 60947-6-2:1992	Relevant generic standard(s) Note 2.3	Date expired (01.10.1997)
	Amendment A1:1997 to EN 60947-6-2:1993	IEC 60947-6-2:1992 /A1:1997	EN 60947-6-2:1993 /A11:1997 Note 3	Date expired (01.07.1998)
CENELEC	EN 61000-3-2:1995 Electromagnetic compatibility (EMC) -- Part 3-2: Limits - Limits for harmonic current emissions (equipment input current up to and including 16 A per phase)	IEC 61000-3-2:1995	EN 60555-2:1987 Note 2.2 Note 4	01.01.2001
	Amendment A1:1998 to EN 61000-3-2:1995	IEC 61000-3-2:1995 /A1:1997	EN 61000-3-2:1995 /A13:1997 Note 3	01.01.2001

	Amendment A2:1998 to EN 61000-3-2:1995	IEC 61000-3-2:1995 /A2:1998	Note 3	01.01.2001
	Amendment A14:2000 to EN 61000-3-2:1995		Note 3	01.01.2004
CENELEC	EN 61000-3-3:1995 Electromagnetic compatibility (EMC) -- Part 3-3: Limits - Limitation of voltage fluctuations and flicker in low-voltage supply systems for equipment with rated current up to 16 A	IEC 61000-3-3:1994	EN 60555-3:1987 and its amendment Note 2.2 Note 5	01.01.2001
CENELEC	EN 61000-3-11:2000 Electromagnetic compatibility (EMC) -- Part 3-11: Limits - Limitation of voltage changes, voltage fluctuations and flicker in public low-voltage supply systems - Equipment with rated current <= 75 A and subject to conditional connection	IEC 61000-3-11:2000	Relevant generic standard(s) Note 2.3	01.11.2003
CENELEC	EN 61000-6-2:1999 Electromagnetic compatibility (EMC) -- Part 6-2: Generic standards - Immunity for industrial environments	IEC 61000-6-2:1999	EN 50082-2:1995 Note 2.1	01.04.2002
CENELEC	EN 61008-1:1994 Electrical accessories - Residual current operated circuit-breakers without integral overcurrent protection for household and similar uses (RCCB's) -- Part 1: General rules	IEC 61008-1:1990 + A1:1992 (Modified)	-	-
	Amendment A2:1995 to EN 61008-1:1994	IEC 61008-1:1990 /A2:1995	Relevant generic standard(s) Note 2.3	Date expired (01.07.2000)
	Amendment A14:1998 to EN 61008-1:1994		Relevant generic standard(s) Note 2.3	01.01.2001
CENELEC	EN 61009-1:1994 Electrical accessories - Residual current operated circuit-breakers with intearal	IEC 61009-1:1991 (Modified)	-	-

	overcurrent protection for household and similar uses (RCBO's) -- Part 1: General rules	(Modified)		
	Amendment A1:1995 to EN 61009-1:1994	IEC 61009-1:1991 /A1:1995	Relevant generic standard(s) Note 2.3	Date expired (01.07.2000)
	Amendment A14:1998 to EN 61009-1:1994		Note 3	01.01.2001
CENELEC	EN 61036:1996 Alternating current static watt-hour meters for active energy (classes 1 and 2)	IEC 61036:1996	EN 61036:1992 Note 2.1	Date expired (01.06.1997)
	Amendment A1:2000 to EN 61036:1996	IEC 61036:1996 /A1:2000	Note 3	01.06.2003
CENELEC	EN 61037:1992 Electricity metering - Tariff and load control - Particular requirements for electronic ripple control receivers	IEC 61037:1990 (Modified)	NONE	-
	Amendment A1:1996 to EN 61037:1992	IEC 61037:1990 /A1:1996	Note 3	Date expired (01.12.1996)
	Amendment A2:1998 to EN 61037:1992	IEC 61037:1990 /A2:1998	Note 3	01.05.2001
CENELEC	EN 61038:1992 Electricity metering - Tariff and load controls - Particular requirements for time switches	IEC 61038:1990 (Modified)	NONE	-
	Amendment A1:1996 to EN 61038:1992	IEC 61038:1990 /A1:1996	Note 3	Date expired (01.12.1996)
	Amendment A2:1998 to EN 61038:1992	IEC 61038:1990 /A2:1998	Note 3	01.05.2001
CENELEC	EN 61131-2:1994 Programmable controllers -- Part 2: Equipment requirements and tests	IEC 61131-2:1992	Relevant generic standard(s) Note 2.3	Date expired (15.03.1995)

	Amendment A11:1996 to EN 61131-2:1994		Note 3	Date expired (01.12.1996)
	Amendment A12:2000 to EN 61131-2:1994		Note 3	01.01.2003
CENELEC	EN 61268:1996 Alternating current static var-hour meters for reactive energy (classes 2 and 3)	IEC 61268:1995	Relevant generic standard(s) Note 2.3	Date expired (01.07.1996)
CENELEC	EN 61326:1997 Electrical equipment for measurement, control and laboratory use - EMC requirements	IEC 61326:1997	Relevant generic standard(s) Note 2.3	01.07.2001
	Amendment A1:1998 to EN 61326:1997	IEC 61326:1997 /A1:1998	Note 3	01.07.2001
CENELEC	EN 61543:1995 Residual current-operated protective devices (RCDs) for household and similar use - Electromagnetic compatibility	IEC 61543:1995	Relevant generic standard(s) Note 2.3	Date expired (04.07.1998)
CENELEC	EN 61547:1995 Equipment for general lighting purposes - EMC immunity requirements	IEC 61547:1995	Relevant generic standard(s) Note 2.3	Date expired (01.07.1996)
CENELEC	EN 61800-3:1996 Adjustable speed electrical power drive systems -- Part 3: EMC product standard including specific test methods	IEC 61800-3:1996	Relevant generic standard(s) Note 2.3	Date expired (01.04.1997)
	Amendment A11:2000 to EN 61800-3:1996		Note 3	01.01.2002
CENELEC	EN 61812-1:1996 Specified time relays for industrial use -- Part 1: Requirements and tests	IEC 61812-1:1996	-	-
	Amendment A11:1999 to EN 61812-1:1996		Relevant generic standard(s) Note 2.3	01.01.2002

CEN	EN 12015:1998 Electromagnetic compatibility - Product family standard for lifts, escalators and passenger conveyors – Emission			
CEN	EN 12016:1998 Electromagnetic compatibility - Product family standard for lifts, escalators and passenger conveyors – Immunity			
CEN	EN ISO 14982:1998 Agricultural and forestry machines - Electromagnetic compatibility - Test methods and acceptance criteria (ISO 14982:1998)			
ETSI	ETS 300 086/A2 : 1997 Radio Equipment and Systems (RES); Land mobile group; Technical characteristics and test conditions for radio equipment with an internal or external RF connector intended primarily for analogue speech		None	-
ETSI	ETS 300 113/A1 : 1997 Radio Equipment and Systems (RES); Land mobile service; Technical characteristics and test conditions for radio equipment intended for the transmission of data (and speech) and having an antenna connector		None	-
ETSI	ETS 300 135/A1 : 1997 Radio Equipment and Systems (RES); Angle-modulated Citizens Band radio equipment (CEPT PR 27 Radio Equipment); Technical characteristics and methods of measurement		None	-
ETSI	ETS 300 162 : 1996 Electromagnetic compatibility and Radio spectrum Matters (ERM); Radiotelephone transmitters and receivers for		None	-

	<p>the maritime mobile service operating in VHF bands;</p> <p>Technical characteristics and methods of measurement</p>			
ETSI	<p>ETS 300 197/A2 : 1997</p> <p>Transmission and Multiplexing (TM);</p> <p>Parameters for radio relay systems for the transmission of digital signals and analogue video signals operating at 38 GHz</p>		None	-
ETSI	<p>EN 300 198/A1 : 1997</p> <p>Transmission and Multiplexing (TM);</p> <p>Parameters for radio relay systems for the transmission of digital signals and analogue video signals operating at 23 GHz</p>		None	-
ETSI	<p>EN 300 220-1 : 1997</p> <p>Electromagnetic compatibility and Radio spectrum Matters (ERM);</p> <p>Short range devices;</p> <p>Technical characteristics and test methods for radio equipment to be used in the 25 MHz to 1 000 MHz frequency range with power levels ranging up to 500 mW; Part 1: Parameters intended for regulatory purposes</p>		None	-
ETSI	<p>ETS 300 224 : 1998</p> <p>Electromagnetic compatibility and Radio spectrum Matters (ERM);</p> <p>On-site paging service;</p> <p>Technical and functional characteristics for on-site paging systems, including test methods</p>		None	-
ETSI	<p>EN 300 279 : 1999</p> <p>Electromagnetic compatibility and Radio spectrum Matters (ERM);</p> <p>Electromagnetic compatibility (EMC) standard for Private land Mobile Radio (PMR) and ancillary equipment (speech and/or non-speech)</p>		ETS 300 279/A1 : 1997	30.04.2002

ETSI	ETS 300 279/A1 : 1997 Radio Equipment and Systems (RES); Electromagnetic compatibility (EMC) standard for Private land Mobile Radio (PMR) and ancillary equipment (speech and/or non-speech)		None	-
ETSI	ETS 300 296/A1 : 1997 Radio Equipment and Systems (RES); Land mobile service; Technical characteristics and test conditions for radio equipment using integral antennas intended primarily for analogue speech		None	-
ETSI	ETS 300 328/A1 : 1997 Radio Equipment and Systems (RES); Wideband transmission systems; Technical characteristics and test conditions for data transmission equipment operating in the 2,4 GHz ISM band and using spread spectrum modulation techniques		None	-
ETSI	ETS 300 329 : 1997 Radio Equipment and Systems (RES); Electromagnetic compatibility (EMC) for Digital Enhanced Cordless Telecommunications (DECT) equipment		None	-
ETSI	EN 300 339 : 1998 Electromagnetic compatibility and Radio spectrum Matters (ERM); General Electromagnetic compatibility (EMC) for radio communications equipment		None	-
ETSI	ETS 300 340/A1 : 1997 Radio Equipment and Systems (RES); Electromagnetic compatibility (EMC) for European Radio Message System (ERMES) paging receivers		None	-
ETSI	ETS 300 341/A1 : 1997		None	-

	Radio Equipment and Systems (RES); Land mobile service; Technical characteristics and test conditions for radio equipment using an integral antenna transmitting signals to initiate a specific response in the receiver			
ETSI	ETS 300 342-1 : 1997 Radio Equipment and Systems (RES); Electromagnetic compatibility (EMC) for European digital cellular telecommunications system (GSM 900 MHz and DCS 1 800 MHz); Part 1: Mobile and portable radio and ancillary equipment		None	-
ETSI	ETS 300 384/A1 : 1997 Radio broadcasting systems; Very High Frequency (VHF), frequency modulated, sound broadcasting transmitters		None	-
ETSI	EN 300 385 : 1999 Electromagnetic compatibility and Radio spectrum Matters (ERM); Electromagnetic compatibility (EMC) standard for fixed radio links and ancillary equipment		ETS 300 385/A1 : 1997	31.12.2002
ETSI	EN 300 385/A1 : 1997 Radio Equipment and Systems (RES); Electromagnetic compatibility (EMC) standard for fixed radio links and ancillary equipment with data rates at around 2 Mbit/s and above		None	-
ETSI	EN 300 386 : 2000 Electromagnetic compatibility and Radio spectrum Matters (ERM); Telecommunication network equipment; Electromagnetic compatibility (EMC) requirements		EN 300 386-2 : 1997	31.05.2003
ETSI	EN 300 386-2 : 1997 Electromagnetic compatibility and Radio spectrum Matters (ERM);		Relevant generic standards	30.9.2001



	Telecommunication network equipment; Electromagnetic compatibility (EMC) requirements; Part 2: Product family standard			
ETSI	ETS 300 390/A1 : 1997  Radio Equipment and Systems (RES);  Land mobile service;  Technical characteristics and test conditions for radio equipment intended for the transmission of data (and speech) and using an integral antenna		None	-
ETSI	ETS 300 433/A2 : 1997  Radio Equipment and Systems (RES);  Double Side Band (DSB) and/or Single Side Band (SSB) amplitude modulated Citizens Band (CB) radio equipment;  Technical characteristics and methods of measurement		None	-
ETSI	ETS 300 445/A1 : 1997  Radio Equipment and Systems (RES);  Electromagnetic compatibility (EMC) standard for wireless microphones and similar Radio Frequency (RF) audio link equipment		None	-
ETSI	ETS 300 446 : 1997  Radio Equipment and Systems (RES);  Electromagnetic compatibility (EMC) standard for second generation Cordless Telephone (CT2) apparatus operating in the frequency band 864,1 MHz to 868,1 MHz, including public access services		None	-
ETSI	ETS 300 447 : 1997  Radio Equipment and Systems (RES);  Electromagnetic compatibility (EMC) standard for VHF FM broadcasting transmitters		None	-
ETSI	ETS 300 454/A1 : 1997  Radio Equipment and Systems (RES);  Wide band audio links;		None	-

	Technical characteristics and test methods			
ETSI	<p>ETS 300 460/A1 : 1997</p> <p>Satellite Earth Stations and Systems (SES);</p> <p>Maritime Mobile Earth Stations (MMESs) operating in the 1,5/1,6 GHz bands providing Low Bit Rate Data Communications (LBRDCs) for the Global Maritime Distress and Safety System (GMDSS);</p> <p>Technical characteristics and methods of measurement</p>		None	-
ETSI	<p>ETS 300 487/A1 : 1997</p> <p>Satellite Earth Stations and Systems (SES);</p> <p>Receive-Only Mobile Earth Stations (ROMES) operating in the 1,5 GHz band providing data communications;</p> <p>Radio Frequency (RF) specifications</p>		None	-
ETSI	<p>ETS 300 673 : 1997</p> <p>Radio Equipment and Systems (RES);</p> <p>Electromagnetic compatibility (EMC) standard for 4/6 GHz and 11/12/14 GHz Very Small Aperture Terminal (VSAT) equipment and 11/12/13/14 GHz Satellite News Gathering (SNG) Transportable Earth Station (TES) equipment</p>		None	-
ETSI	<p>ETS 300 680-1 : 1997</p> <p>Radio Equipment and Systems (RES);</p> <p>Electromagnetic compatibility (EMC) standard for Citizens Band (CB) radio and ancillary equipment (speech and/or non-speech);</p> <p>Part 1: Angle-modulated</p>		None	-
ETSI	<p>ETS 300 680-2 : 1997</p> <p>Radio Equipment and Systems (RES);</p> <p>Electromagnetic compatibility (EMC) standard for Citizens Band (CB) radio and ancillary equipment (speech and/or non-speech);</p> <p>Part 2: Double Side Band (DSB) and/or Single Side Band (SSB)</p>		None	-

ETSI	ETS 300 682 : 1997 Radio Equipment and Systems (RES); Electromagnetic compatibility (EMC) standard for On-Site Paging equipment		None	-
ETSI	ETS 300 683 : 1997 Radio Equipment and Systems (RES); Electromagnetic compatibility (EMC) standard for Short Range Devices (SRD) operating on frequencies between 9 kHz and 25 GHz		None	-
ETSI	ETS 300 684 : 1997 Radio Equipment and Systems (RES); Electromagnetic compatibility (EMC) standard for commercially available amateur radio equipment		None	-
ETSI	ETS 300 717 : 1998 Electromagnetic compatibility and Radio spectrum Matters (ERM); Electromagnetic compatibility (EMC) for analogue cellular radio communications equipment; Mobile and portable equipment		None	-
ETSI	ETS 300 719-1 : 1997 Radio Equipment and Systems (RES); Private wide area paging service; Part 1: Technical characteristics for private wide-area paging systems		None	-
ETSI	ETS 300 741 : 1998 Electromagnetic compatibility and Radio spectrum Matters (ERM); Electromagnetic compatibility (EMC) standard for wide-area paging equipment		None	-
ETSI	ETS 300 826 : 1997 Electromagnetic compatibility and Radio spectrum Matters (ERM);		None	-

	Electromagnetic compatibility (EMC) standard for 2,4 GHz wideband transmission systems and High Performance Radio Local Area Network (HIPERLAN) equipment			
ETSI	EN 300 827 : 1998  Electromagnetic compatibility and Radio spectrum Matters (ERM);  Electromagnetic compatibility (EMC) standard for Terrestrial Trunked Radio (TETRA) and ancillary equipment		None	-
ETSI	EN 300 828 : 1998  Electromagnetic compatibility and Radio spectrum Matters (ERM);  Electromagnetic compatibility (EMC) for radiotelephone transmitters and receivers for the maritime mobile service operating in the VHF bands		None	-
ETSI	EN 300 829 : 1998  Electromagnetic compatibility and Radio spectrum Matters (ERM);  Electromagnetic compatibility (EMC) for Maritime Mobile Earth Stations (MMES) operating in the 1,5/1,6 GHz bands providing Low Bit Rate Data Communications (LBRDC) for the Global Maritime Distress and Safety System (GMDSS)		None	-
ETSI	ETS 300 830 : 1998  Electromagnetic compatibility and Radio spectrum Matters (ERM);  Electromagnetic compatibility (EMC) for Receive-Only Mobile Earth Stations (ROMES) operating in the 1,5 GHz band providing data communications		None	-
ETSI	EN 300 831 : 1999  Electromagnetic compatibility and Radio spectrum Matters (ERM);  Electromagnetic compatibility (EMC) for Mobile Earth Stations (MES) used within Satellite Personal Communications Networks (S-PCN) operating in the 1.5/1.6/2.4 GHz and		EN 300 831 : 1998	31.12.2002

	2 GHz frequency bands			
ETSI	EN 300 831 : 1998 Electromagnetic compatibility and Radio spectrum Matters (ERM); Electromagnetic compatibility (EMC) for Mobile Earth Stations (MES) used within Satellite Personal Communications Networks (S-PCN) operating in the 1,6/2,4 GHz and 2 GHz frequency bands		None	-
ETSI	EN 300 832 : 1998 Electromagnetic compatibility and Radio spectrum Matters (ERM); Electromagnetic compatibility (EMC) for Mobile Earth Stations (MES) providing Low Bit Rate Data Communications (LBRDC) using satellites in Low Earth Orbits (LEO) operating in frequency bands below 1 GHz		None	-
ETSI	EN 301 011 : 1998 Electromagnetic compatibility and Radio spectrum Matters (ERM); Electromagnetic compatibility (EMC) for Narrow-Band Direct-Printing (NBDP) NAVTEX receivers operating in the maritime mobile service		None	-
ETSI	EN 301 090 : 1998 Electromagnetic compatibility and Radio spectrum Matters (ERM); Electromagnetic compatibility (EMC) for maritime radiotelephone watch receivers operating on 2 182 kHz		None	-

General remark: when there is a stroke in the column 4 (reference of the superseded standard), it means that the referenced standard may not be used without amendment or particular part for EMC purpose.

Note 1: Generally the date of cessation of presumption of conformity will be the date of withdrawal ("dow"), set by the European standards body, but attention of users of these standards is drawn to the fact that in certain exceptional cases this can be otherwise.

Note 2.1: The new (or amended) standard has the same scope as the superseded standard. On the date stated, the superseded standard ceases to give presumption of conformity with the essential requirements of the directive.

Note 2.2: The new standard has a broader scope than the superseded standard. On the date stated the superseded standard ceases to give presumption of conformity with the essential requirements of the directive.

Note 2.3: The new standard has a narrower scope than the superseded standard. On the date stated the (partially) superseded standard ceases to give presumption of conformity with the essential requirements of the directive for those products that fall within the scope of the new standard. Presumption of conformity with the essential requirements of the directive for products that still fall within the scope of the (partially) superseded standard, but that do not fall within the scope of the new standard, is unaffected.

Note 3: In case of amendments, the referenced standard is EN CCCC:YY, its previous amendments, if any, and the new, quoted amendment. The superseded standard (column 4) therefore consists of EN CCCC:YY and its previous amendments, if any, but without the new quoted amendment. On the date stated, the superseded standard ceases to give presumption of conformity with the essential requirements of the directive.

Example: For EN 55013:1990, the following applies :

CENELEC	<p>EN 55013:1990</p> <p>Limits and methods of measurement of radio disturbance characteristics of broadcast receivers and associated equipment <i>[The referenced standard is EN 55013:1990]</i></p> <p>Amendment A12:1994 to EN 55013:1990 <i>[The referenced standard is EN 55013:1990 +A12:1994 to EN 55013:1990]</i></p> <p>Amendment A13:1996 to EN 55013:1990 <i>[The referenced standard is EN 55013:1990 +A12:1994 to EN 55013:1990 +A13:1996 to EN 55013:1990]</i></p> <p>Amendment A14:1999 to EN 55013:1990 <i>[The referenced standard is EN 55013:1990 +A12:1994 to EN 55013:1990 +A13:1996 to EN 55013:1990 +A14:1999 to EN 55013:1990]</i></p>	CISPR 13:1975 + A1:1983 (Modified)	NONE <i>[There is no superseded]</i>
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