

**Fixed Radio Systems;
Point-to-Point and Point-to-Multipoint
Equipment and Antennas;
Identification of European standards (EN), applicable
to fixed radio systems, for the essential requirements
under the article 3.1 of the 1999/5/EC Directive**



Reference

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Foreword

This ETSI Guide (EG) has been produced by ETSI Technical Committee Transmission and Multiplexing (TM).

As developed in the introduction, the present document is a guide to the interpretation of the requirements under article 3.1 of the Directive 1999/5/EC [1].

The present document is complementary to the Harmonized Standards EN 301 751 [10] and EN 301 753 [11] which cover the essential requirements under article 3.2 of the Directive 1999/5/EC [1], for point-to-point and point-to-multipoint equipment and antennas respectively.

Introduction

Fixed Service Digital Radio systems, used in European countries, are presently referred to in a relatively large number of specific ETSI standards.

From the point of view of essential requirements under the Directive 1999/5/EC [1], all these systems are very similar in the "principles of the parameters", therefore they should be subject to same requirements under article 3.1 of the Directive.

ETSI has designed a modular structure for the standards. Each standard is a module in the structure. The modular structure is shown in figure 1.

The present document, for fixed radio systems, is aligned to that modular structure and is relevant only to the essential requirements under the article 3.1. It gives the reference to the relevant set of ETSI and CEN/CENELEC standards which contain the actual requirements and relevant test methods for the declaration of conformity to the essential requirements.

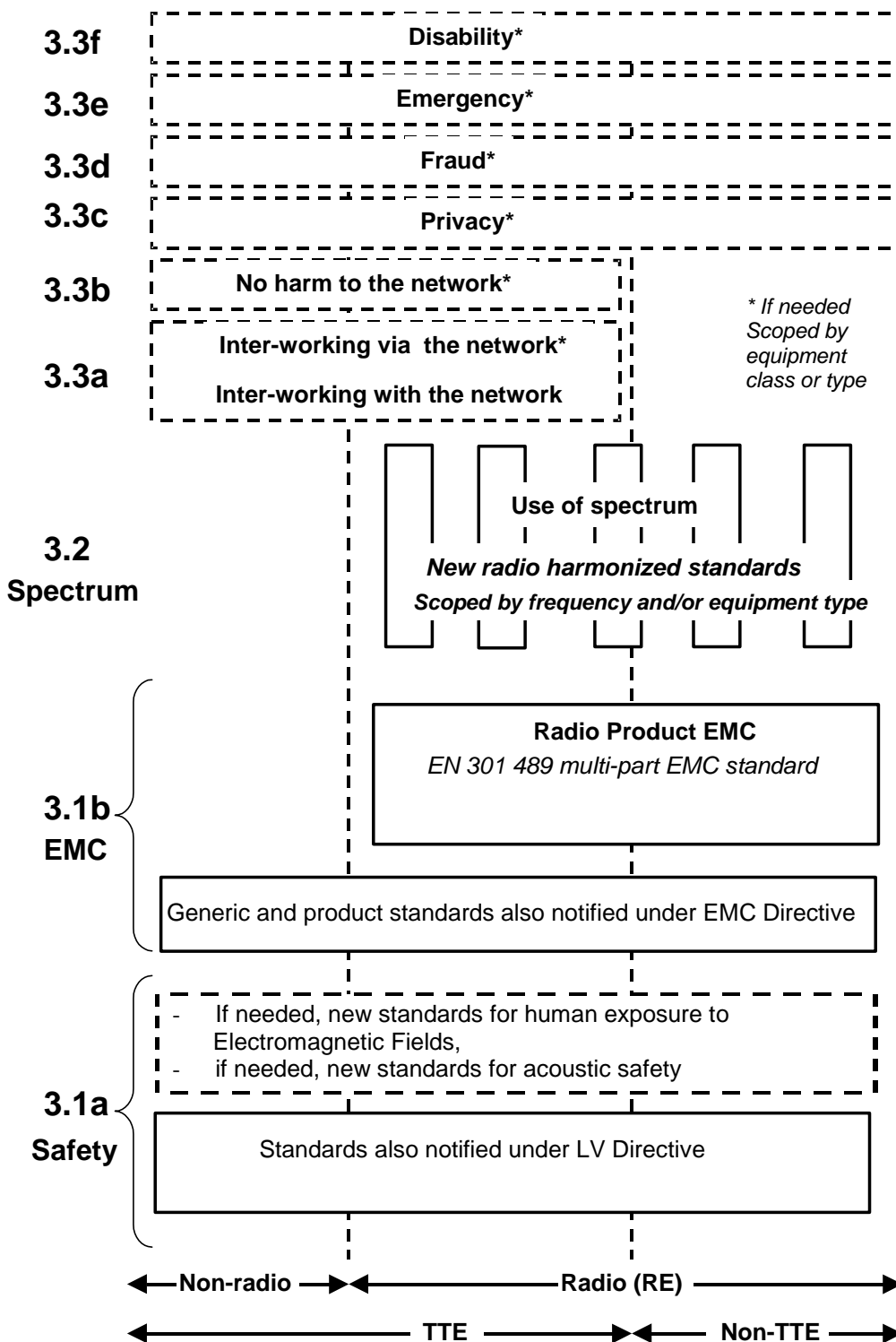


Figure 1: Modular structure for the various standards used under the R&TTE Directive

The left hand edge of the figure 1 shows the different clauses of Article 3 of the R&TTE Directive [1].

For article 3.3 various horizontal boxes are shown. Dotted lines indicate that at the time of publication of the present document essential requirements in these areas have to be adopted by the Commission. If such essential requirements are adopted, and as far and as long as they are applicable, they will justify individual standards whose scope is likely to be specified by function or interface type.

The vertical boxes show the standards under article 3.2 for the use of the radio spectrum by radio equipment. The scopes of these standards are specified either by frequency (normally in the case where frequency bands are harmonized) or by radio equipment type.

For article 3.1b the diagram shows EN 301 489, the multi-part product EMC standard for radio used under the EMC Directive.

For article 3.1a the diagram shows the existing safety standards currently used under the LV Directive and new standards covering human exposure to electromagnetic fields. New standards covering acoustic safety may also be required.

The bottom of the figure shows the relationship of the standards to radio equipment and telecommunications terminal equipment. A particular equipment may be radio equipment, telecommunications terminal equipment or both. A radio spectrum standard will apply if it is radio equipment. An article 3.3 standard will apply as well only if the relevant essential requirement under the R&TTE Directive [1] is adopted by the Commission and if the equipment in question is covered by the scope of the corresponding standard. Thus, depending on the nature of the equipment, the essential requirements under the R&TTE Directive [1] may be covered in a set of standards.

The modularity principle has been taken because:

- it minimizes the number of standards needed. Because equipment may, in fact, have multiple interfaces and functions it is not practicable to produce a single standard for each possible combination of functions that may occur in an equipment;
- it provides scope for standards to be added:
 - under article 3.2 when new frequency bands are agreed; or
 - under article 3.3 should the Commission take the necessary decisionswithout requiring alteration of standards that are already published;
- it clarifies, simplifies and promotes the usage of Harmonized Standards as the relevant means of conformity assessment.

1 Scope

The present document aims only to identify, among those already available, the ones that should generally apply to Fixed Radio Systems (FRS) in the field of essential requirements of Directive 1999/5/EC [1] for:

- article 3.1 (a), which states that ".....the protection of the health and the safety of the user and any other person, including the objectives with respect to safety requirements contained in Directive 73/23/EEC [12], but with no voltage limit applying" is an essential requirement applicable to all apparatus;
- article 3.1 (b), which states that "..... the protection requirements with respect to electro-magnetic compatibility contained in Directive 89/336/EEC [13]" is an essential requirement applicable to all apparatus.

The present document offers, for all fixed radio products, the common view of the responsible technical body for the presumption of conformity to the essential requirements under article 3.1, when following the conformity assessment option through a harmonized standard.

The provision for essential requirements under article 3.2, is subject of separate standards.

The provision for essential requirements under article 3.3, if possibly requested by TCAM, will be subject to a separate standard(s).

General information on application of article 3.1 of R&TTE Directive [1] and their relationship with requirements in other EC Directives 89/336/EEC (EMC) [13] and 73/23/EEC (LVD) [12] are reported in EG 201 450 [15].

It is not in the scope of the present document to indicate original requirements in the field of health, safety and electromagnetic compatibility (EMC) that are under responsibility of other technical bodies.

2 References

The following documents contain provisions which, through reference in this text, constitute provisions of the present document.

- References are either specific (identified by date of publication and/or edition number or version number) or non-specific.
- For a specific reference, subsequent revisions do not apply.
- For a non-specific reference, the latest version applies.

[1] Directive 1999/5/EC of the European Parliament and of the Council of 9 March 1999 on radio equipment and telecommunications terminal equipment and the mutual recognition of their conformity (R&TTE Directive).

[2] EN 60215: "Safety requirements for radio transmitting equipment".

[3] EN 60950 (2000): "Safety of information technology equipment".

[4] Void.

[5] EN 60825-2 (2000): "Safety of laser products - Part 2: Safety of optical fibre communication systems".

[6] ETSI EN 300 385: "Electromagnetic compatibility and Radio spectrum Matters (ERM); ElectroMagnetic Compatibility (EMC) standard for fixed radio links and ancillary equipment".

[7] ETSI EN 301 489-1: "Electromagnetic compatibility and Radio spectrum Matters (ERM); ElectroMagnetic Compatibility (EMC) standard for radio equipment and services; Part 1: Common technical requirements".

- [8] ETSI EN 301 489-4: "Electromagnetic compatibility and Radio spectrum Matters (ERM); ElectroMagnetic Compatibility (EMC) standard for radio equipment and services; Part 4: Specific conditions for fixed radio links and ancillary equipment and services".
- [9] ETSI ETS 300 385/A1: "Radio Equipment and Systems (RES); ElectroMagnetic Compatibility (EMC) standard for digital fixed radio links and ancillary equipment with data rates at around 2 Mbit/s and above".
- [10] ETSI EN 301 751: "Fixed Radio Systems; Point-to-Point equipments and antennas; Generic harmonized standard for Point-to-Point digital fixed radio systems and antennas covering the essential requirements under article 3.2 of the 1999/5/EC Directive".
- [11] ETSI EN 301 753: "Fixed Radio Systems; Point-to-Multipoint equipments and antennas; Generic harmonized standard for Point-to-Multipoint digital fixed radio systems and antennas covering the essential requirements under Article 3.2 of the Directive 1999/5/EC".
- [12] Council Directive 73/23/EEC of 19 February 1973 on the harmonization of the laws of Member States relating to electrical equipment designed for use within certain voltage limits (LVD).
- [13] Council Directive 89/336/EEC of 3 May 1989 on the approximation of the laws of the Member States relating to electromagnetic compatibility (EMC Directive).
- [14] Council Recommendation 1999/519/EC on limitation of exposure of the general public to electromagnetic fields 0 Hz-300 GHz.
- [15] ETSI EG 201 450: "Guidance on the identification of Harmonized Standards and/or other technical specifications for Radio equipment and Telecommunications Terminal Equipment (R&TTE) covering requirements under Article 3.1 of Directive 1999/5/EC".

3 Definitions and abbreviations

3.1 Definitions

For the purposes of the present document, the following terms and definitions apply:

Conformity assessment procedure: See Directive 1999/5/EC [1], annexes II, III, IV and V.

Radio Equipment (article 2 of Directive 1999/5/EC): product, or relevant component thereof, capable of communication by means of the emission and/or reception of radio waves utilizing the spectrum allocated to terrestrial/space radio communication

3.2 Abbreviations

For the purposes of the present document, the following abbreviations apply:

EC OJ	European Community Official Journal
EMC	ElectroMagnetic Compatibility
FRS	Fixed Radio Systems
LVD	Low Voltage Directive
R&TTE	Radio equipment and Telecommunications Terminals Equipment
RE	Radio Equipment

4 Essential requirements

4.1 Article 3.1 a): the protection of the health and the safety

4.1.1 General essential requirements for safety protection

For radio equipment, but excluding antenna systems and antenna feeders, intended for being operated only by trained personnel (e.g. in telecommunication centres or similar restricted areas), EN 60215 [2] apply.

For other cases, at the date of the publishing of the present document, there are no specific safety standards for Radio Equipment (RE).

However for general safety requirements, not related to the radio frequency emissions, but to the common usage by any untrained customer or operator, EN 60950 [3] apply (see note), even if radio equipment is not specifically in its scope.

NOTE: In alternative, until end 2004, also the previous version EN 60950 [3] may be applied.

Equipment providing optical interface is also subject to EN 60825-2 [5], which is also referenced by EN 60950 [3].

Any equivalent or more detailed standard, specifically applicable to fixed radio equipment and possibly published in the European Community Official Journal (EC OJ) under the R&TTE directive in a later date, could supersede the above requirement by the date of implementation eventually provided in the EC OJ.

Any test carried out to assess compliance to essential requirements for safety protection, test report and/or declaration of conformity, required to fulfil any Conformity assessment procedure foreseen by the Directive 1999/5/EC [1] for radio equipment, should be carried out with the same principles and procedures foreseen by the above standards.

4.1.2 Essential requirements for protection of health

Additional requirements for the health of the user or other persons specific for radio equipment may apply: presently there are no identified requirements (see note) and, if they would come up, they will be presented in separate harmonized standard(s) possibly produced by the relevant technical body and published under the R&TTE Directive [1].

For radio equipment not within the scope of any such harmonized standard there are no essential technical requirements for the protection of the health of the user or any other person.

NOTE: Under EC Mandate M.305, ETSI and CENELEC will develop harmonized standard that should describe the test methods, test equipment and calculation methods needed in order to specify product requirements, limiting the emission of EMF. They should take into account the reference levels and basic restrictions in Council Recommendation 1999/519/EC [14] to allow presumption of conformity to article 2 of Directive 73/23/EEC [12] and article 3.1 (a) of Directive 1999/5/EC [1]. However, limits for electromagnetic field (EMF) exposure are not harmonized among EC countries and more stringent limits might be contained in a number of different national laws that have to be locally fulfilled; however these are not relevant for R&TTE conformity assessment, but will be generally included in the national licensing process.

4.2 Article 3.1 b): the protection requirements with respect to electromagnetic compatibility

The equipment in the scope of the present document should comply with relevant parts of the superseding multipart standard EN 301 489-1 [7] and EN 301 489-4 [8] or with EN 300 385 [6], produced by the WG ERM/EMC and published in the EC OJ as harmonized standard under the R&TTE Directive [1].

NOTE 1: ETS 300 385/A1 [9], also presently published in the EC OJ under the R&TTE Directive [1], covering formally only P-P equipment with capacity equal or above 2 Mbit/s, may be used when applicable, however it will cease its role for presumption of conformity by end 2002.

NOTE 2: EN 301 489-1 [7] and EN 301 489-4 [8] contain the same technical requirements and test methods for fixed radio systems as the EN 300 385 [6]; however the latter will also cease its role for presumption of conformity by end 2002.

NOTE 3: It should be noted that, for fixed links, cabinet radiation requirement was exceptionally maintained in EN 301 489-4 [8], while for other radio services it has been included in equipment standards (possibly being undistinguishable from spurious emissions in equipment mostly with integral antennas).

Any test, carried out to generate the test report and/or declaration of conformity, required to fulfil any conformity assessment procedure foreseen by the Directive 1999/5/EC [1] for radio equipment, should be carried out with the same principles and procedures foreseen by the above standards.

History

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