



SLOVENSKI STANDARD

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Electromagnetic compatibility and Radio Spectrum Matters (ERM) Ultra-High Frequency (UHF) on-board communications systems and equipment; Part 2: Harmonised EN under article 3.2 of the R&TTE Directive

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Candidate Harmonized European Standard (Telecommunications series)

**Electromagnetic compatibility
and Radio Spectrum Matters (ERM);
Ultra-High Frequency (UHF) on-board
communications systems and equipment;
Part 2: Harmonized EN under article 3.2
of the R&TTE Directive**

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Contents

Intellectual Property Rights	5
Foreword	5
Introduction	6
1 Scope	8
2 References	8
3 Definitions, symbols and abbreviations	9
3.1 Definitions	9
3.2 Abbreviations	9
4 Technical requirements specifications	9
4.1 Environmental profile	9
4.2 Conformance requirements	9
4.2.1 Transmitter frequency error	9
4.2.1.1 Definition	9
4.2.1.2 Limit	9
4.2.1.3 Conformance	10
4.2.2 Transmitter carrier power	10
4.2.2.1 Definition	10
4.2.2.2 Limit	10
4.2.2.3 Conformance	10
4.2.3 Transmitter frequency deviation	10
4.2.3.1 Definition	10
4.2.3.2 Limit	10
4.2.3.3 Conformance	10
4.2.4 Transmitter adjacent channel power	10
4.2.4.1 Definition	10
4.2.4.2 Limit	10
4.2.4.3 Conformance	10
4.2.5 Transient frequency behaviour of the transmitter	10
4.2.5.1 Definition	10
4.2.5.2 Limit	10
4.2.5.3 Conformance	11
4.2.6 Transmitter conducted spurious emissions conveyed to the antenna	11
4.2.6.1 Definition	11
4.2.6.2 Limit	11
4.2.6.3 Conformance	11
4.2.7 Transmitter cabinet radiation and conducted spurious emissions other than those conveyed to the antenna	11
4.2.7.1 Definition	11
4.2.7.2 Limit	11
4.2.7.3 Conformance	11
4.2.8 Receiver maximum usable sensitivity	11
4.2.8.1 Definition	11
4.2.8.2 Limit	11
4.2.8.3 Conformance	11
4.2.9 Receiver co-channel rejection	12
4.2.9.1 Definition	12
4.2.9.2 Limit	12
4.2.9.3 Conformance	12
4.2.10 Receiver adjacent channel selectivity	12
4.2.10.1 Definition	12
4.2.10.2 Limit	12
4.2.10.3 Conformance	12

4.2.11	Receiver spurious response rejection	12
4.2.11.1	Definition	12
4.2.11.2	Limit	12
4.2.11.3	Conformance	12
4.2.12	Receiver intermodulation response	12
4.2.12.1	Definition	12
4.2.12.2	Limit	12
4.2.12.3	Conformance	12
4.2.13	Receiver blocking or desensitization	13
4.2.13.1	Definition	13
4.2.13.2	Limit	13
4.2.13.3	Conformance	13
4.2.14	Receiver conducted spurious emissions conveyed to the antenna	13
4.2.14.1	Definition	13
4.2.14.2	Limit	13
4.2.14.3	Conformance	13
4.2.15	Receiver radiated spurious emissions	13
4.2.15.1	Definition	13
4.2.15.2	Limit	13
4.2.15.3	Conformance	13
5	Testing for compliance with technical requirements	14
5.1	Test conditions, power supply and ambient temperatures	14
5.2	Interpretation of the measurement results	14
5.3	Essential radio test suites	14
5.3.1	Transmitter frequency error	14
5.3.2	Transmitter carrier power	14
5.3.3	Transmitter frequency deviation	15
5.3.4	Transmitter adjacent channel power	15
5.3.5	Transient behaviour of the transmitter	15
5.3.6	Transmitter conducted spurious emissions conveyed to the antenna	15
5.3.7	Transmitter cabinet radiation and conducted spurious emissions other than those conveyed to the antenna	15
5.4	Other test specifications	15
5.4.1	General	15
5.4.2	Receiver maximum usable sensitivity	15
5.4.3	Receiver co-channel rejection	15
5.4.4	Receiver adjacent channel selectivity	15
5.4.5	Receiver spurious response rejection	15
5.4.6	Receiver intermodulation response	16
5.4.7	Receiver blocking or desensitization	16
5.4.8	Receiver conducted spurious emissions conveyed to the antenna	16
5.4.9	Receiver radiated spurious emissions	16
Annex A (normative):	The EN Requirements Table (EN-RT)	17
History		19

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Foreword

This Candidate Harmonized European Standard (Telecommunications series) has been produced by ETSI Technical Committee Electromagnetic compatibility and Radio spectrum Matters (ERM).

The present document is part 2 of a multi-part European Standard, the titles of which are:

Part 1: "Technical characteristics and methods of measurement".

Part 2: "Harmonized EN under article 3.2 of the R&TTE Directive".

The present document has been produced by ETSI in response to a mandate from the European Commission issued under Council Directive 98/34/EC [6] (as amended) laying down a procedure for the provision of information in the field of technical standards and regulations.

The present document is intended to become a Harmonized Standard, the reference of which will be published in the Official Journal of the European Communities referencing the 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 ("the R&TTE Directive"), [1].

National transposition dates

Date of adoption of this EN:	14 July 2000
Date of latest announcement of this EN (doa):	31 October 2000
Date of latest publication of new National Standard or endorsement of this EN (dop/e):	30 April 2001
Date of withdrawal of any conflicting National Standard (dow):	30 April 2001

Introduction

The present document is part of a set of standards designed to fit in a modular structure to cover all radio and telecommunications terminal equipment under the R&TTE Directive [1]. Each standard is a module in the structure. The modular structure is shown in figure 1.

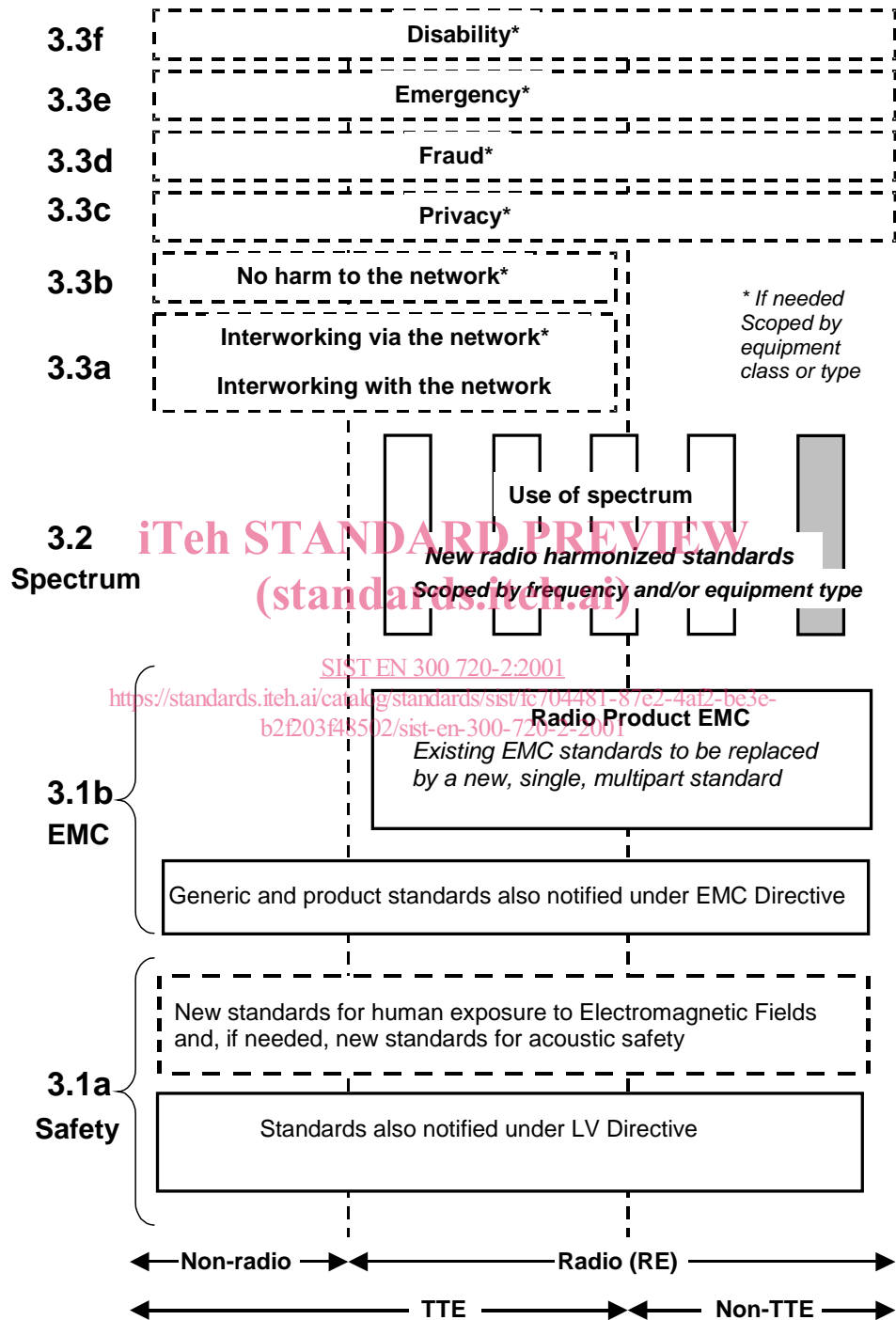


Figure 1: Modular structure for the various standards used under the R&TTE Directive

The left hand edge of the figure 1 shows the different subclauses 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 the new single multipart product EMC standard for radio, and the existing collection of generic and product standards currently used under the EMC Directive [2]. The parts of this new standard will become available in the second half of 2000, and the existing separate product EMC standards will be used until it is available.

For article 3.1a the diagram shows the existing safety standards currently used under the LV Directive [3] 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 on
 - under article 3.3 should the Commission take the necessary decisions without 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 applies to UHF on-board communications systems and equipment.

This equipment is intended for operation, utilizing class of emission G3E, either on single-frequency or two-frequency simplex channels on those frequencies specified in tables 1 and 2.

Table 1: Single frequency simplex channels

Channel designator	Frequency
Channel A	467,525 MHz
Channel B	467,550 MHz
Channel C	467,575 MHz
Channel D	457,525 MHz
Channel E	457,550 MHz
Channel F	457,575 MHz

Table 2: Two-frequency simplex channels for use with repeater only

Channel designator	Transmit frequency	Receive frequency
Channel G	467,525 MHz	457,525 MHz
Channel H	467,550 MHz	457,550 MHz
Channel J	467,575 MHz	457,575 MHz

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The present document is intended to cover the provisions of Directive 1999/5/EC (R&TTE Directive) [1] Article 3.2, which states that "...radio equipment shall be so constructed that it effectively uses the spectrum allocated to terrestrial/space radio communications and orbital resources so as to avoid harmful interference".

In addition to the present document, other ENs that specify technical requirements in respect of essential requirements under other parts of Article 3 of the R&TTE Directive [1] may apply to equipment within the scope of the present document.

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, edition number, version number, etc.) or non-specific.
- For a specific reference, subsequent revisions do not apply.
- For a non-specific reference, the latest version applies.
- A non-specific reference to an ETS shall also be taken to refer to later versions published as an EN with the same number.

- [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] Council Directive of 3 May 1989 on the approximation of the laws of the Member States relating to electromagnetic compatibility (89/336/EEC) (EMC Directive).
- [3] Council Directive of 19 February 1973 on the harmonization of the laws of Member States relating to electrical equipment designed for use within certain voltage limits (73/23/EEC) (LV Directive).

- [4] ETSI EN 300 720-1 (V1.2): "Electromagnetic compatibility and Radio Spectrum Matters (ERM); Ultra-High Frequency (UHF) on-board communications systems and equipment; Part 1: Technical characteristics and methods of measurement".
- [5] ETSI ETR 028: "Radio Equipment and Systems (RES); Uncertainties in the measurement of mobile radio equipment characteristics".
- [6] Directive 98/34/EC of the European Parliament and of the Council of 22 June 1998 laying down a procedure for the provision of information in the field of technical standards and regulations.

3 Definitions, symbols and abbreviations

3.1 Definitions

For the purposes of the present document, the terms and definitions in the R&TTE Directive [1], and the following terms and definitions apply:

environmental profile: range of environmental conditions under which equipment within the scope of the present document is required to comply with the provisions of the present document

supplier: entity referred to in the R&TTE Directive [1] responsible for the placing on the market of an equipment within the scope of the Directive

3.2 Abbreviations

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

EMC	Electro-Magnetic Compatibility
LV	Low Voltage
R&TTE	Radio and Telecommunications Terminal Equipment
RF	Radio Frequency
UHF	Ultra High Frequency

4 Technical requirements specifications

4.1 Environmental profile

The technical requirements of the present document apply under the environmental profile for operation of the equipment, which shall be determined by the environmental class of the equipment. The equipment shall comply with all the technical requirements of the present document at all times when operating within the boundary limits of the required operational environmental profile.

4.2 Conformance requirements

4.2.1 Transmitter frequency error

4.2.1.1 Definition

The transmitter frequency error shall be as defined in EN 300 720-1 [4], subclause 8.1.1.

4.2.1.2 Limit

The transmitter frequency error limit shall be as stated in EN 300 720-1 [4], subclause 8.1.3.