

ETSI EN 300 135-2 V1.2.1 (2008-02)

Harmonized European Standard (Telecommunications series)

**Electromagnetic compatibility
and Radio spectrum Matters (ERM);
Land Mobile Service;
Citizens' Band (CB) radio equipment;
Angle-modulated Citizens' Band radio equipment
(PR 27 Radio Equipment);
Part 2: Harmonized EN covering essential requirements
of article 3.2 of the R&TTE Directive**

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ReferenceREN/ERM-TGDMR-267-2

KeywordsCB, radio, regulation, testing

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Sous-Préfecture de Grasse (06) N° 7803/88

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Foreword

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

The present document has been produced by ETSI in response to a mandate from the European Commission issued under Council Directive 98/34/EC (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").

Technical specifications relevant to Directive 1999/5/EC are given in annex A.

The present document is part 2 of a multi-part deliverable covering angle-modulated Citizens' Band (CB) radio equipment (PR 27 Radio Equipment), as identified below:

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

Part 2: "Harmonized EN covering essential requirements of article 3.2 of the R&TTE Directive".

The existing national Citizens' Band standards or specifications which also permit the use of other forms of modulation (including amplitude and single sideband) will not be affected by the adoption of the present document.

National transposition dates	
Date of adoption of this EN:	22 February 2008
Date of latest announcement of this EN (doa):	31 May 2008
Date of latest publication of new National Standard or endorsement of this EN (dop/e):	30 November 2008
Date of withdrawal of any conflicting National Standard (dow):	30 November 2009

Introduction

The present document is part of a set of standards developed by ETSI and is designed to fit in a modular structure to cover all radio and telecommunications terminal equipment within the scope of the R&TTE Directive. The modular structure is shown in EG 201 399 (see bibliography).

1 Scope

The present document covers the technical requirements for transmitters and receivers used in stations of angle modulated Citizens' Band (CB) radio equipment.

It applies to angle modulated Citizens' Band (CB) radio equipment (PR 27) operation in all or part of the frequency band from 26,960 MHz to 27,410 MHz with channel separations of 10 kHz, and intended for analogue speech in accordance with CEPT/ERC/Decision (98)11. This includes the possibility of data transmissions within the speech channel, where applicable.

The equipment operates on one or more channels of the carrier frequencies as shown in table 1.

Table 1: Carrier frequencies

Carrier frequencies	Channel Number	Carrier frequencies	Channel Number
26,965 MHz	1	27,215 MHz	21
26,975 MHz	2	27,225 MHz	22
26,985 MHz	3	27,235 MHz	24
27,005 MHz	4	27,245 MHz	25
27,015 MHz	5	27,255 MHz	23
27,025 MHz	6	27,265 MHz	26
27,035 MHz	7	27,275 MHz	27
27,055 MHz	8	27,285 MHz	28
27,065 MHz	9	27,295 MHz	29
27,075 MHz	10	27,305 MHz	30
27,085 MHz	11	27,315 MHz	31
27,105 MHz	12	27,325 MHz	32
27,115 MHz	13	27,335 MHz	33
27,125 MHz	14	27,345 MHz	34
27,135 MHz	15	27,355 MHz	35
27,155 MHz	16	27,365 MHz	36
27,165 MHz	17	27,375 MHz	37
27,175 MHz	18	27,385 MHz	38
27,185 MHz	19	27,395 MHz	39
27,205 MHz	20	27,405 MHz	40

Transmission and reception takes place on the same channel (single frequency simplex mode).

The present document can also be used for any equipment using national regulations on Citizens' Band (CB) permitting the use of channels outside of the carrier frequencies shown in table 1 and within the frequency range from 26 MHz to 28 MHz can use the present document.

The types of equipment covered by the present document are as follows:

- base station: equipment fitted with antenna connector;
- mobile station: equipment fitted with antenna connector.
- handportable stations:
 - a) either fitted with an antenna connector; or
 - b) without an external antenna connector but fitted with a permanent internal or a temporary internal 50 Ω RF connector which allows access to the transmitter output and the receiver input.

Handportable station equipment without an external or internal Radio Frequency (RF) connector and without the possibility of having a temporary internal 50 Ω RF connector is not covered by the present document.

The present document is intended to cover the provisions of Article 3.2, of Directive 1999/5/EC (R&TTE Directive), 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 may apply to equipment within the scope of the present document.

2 References

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.
- Non-specific reference may be made only to a complete document or a part thereof and only in the following cases:
 - if it is accepted that it will be possible to use all future changes of the referenced document for the purposes of the referring document;
 - for informative references.

Referenced documents which are not found to be publicly available in the expected location might be found at <http://docbox.etsi.org/Reference>.

For online referenced documents, information sufficient to identify and locate the source shall be provided. Preferably, the primary source of the referenced document should be cited, in order to ensure traceability. Furthermore, the reference should, as far as possible, remain valid for the expected life of the document. The reference shall include the method of access to the referenced document and the full network address, with the same punctuation and use of upper case and lower case letters.

NOTE: While any hyperlinks included in this clause were valid at the time of publication ETSI cannot guarantee their long term validity.

2.1 Normative references

The following referenced documents are indispensable for the application of the present document. For dated references, only the edition cited applies. For non-specific references, the latest edition of the referenced document (including any amendments) applies.

- [1] ETSI EN 300 135-1 (V1.2.1): "Electromagnetic compatibility and Radio spectrum Matters (ERM); Land Mobile Service; Citizens' Band (CB) radio equipment; Angle-modulated Citizens' Band radio equipment (PR 27 Radio Equipment); Part 1: Technical characteristics and methods of measurement".

3 Definitions, symbols and abbreviations

3.1 Definitions

For the purposes of the present document, the terms and definitions given in EN 300 135-1 [1] apply.

3.2 Symbols

For the purposes of the present document, the symbols given in EN 300 135-1 [1] apply.

3.3 Abbreviations

For the purposes of the present document, the abbreviations given in EN 300 135-1 [1] apply.

4 Technical requirements

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 Transmitter requirements

4.2.1 Frequency error

4.2.1.1 Definition

The frequency error is defined in EN 300 135-1 [1], clause 7.1.1.

4.2.1.2 Limit

The frequency error shall not exceed the limit in EN 300 135-1 [1], clause 7.1.3.

4.2.1.3 Conformance

If the transmitter adjacent channels power (clause 5.3.4) has not been measured under extreme test conditions, then the conformance tests as defined in clause 5.3.1 shall be carried out.

4.2.2 Transmitter carrier power

4.2.2.1 Definition

The transmitter carrier power is defined in EN 300 135-1 [1], clause 7.2.1.

4.2.2.2 Limit

The transmitter carrier power shall not exceed the limit in EN 300 135-1 [1], clause 7.2.3.

4.2.2.3 Conformance

Conformance tests as defined in clause 5.3.2 shall be carried out.

4.2.3 Maximum permissible frequency deviation

4.2.3.1 Definition

The maximum permissible frequency deviation is defined in EN 300 135-1 [1], clause 7.3.1.

4.2.3.2 Limit

The maximum permissible frequency deviation shall not exceed the limit in EN 300 135-1 [1], clause 7.3.3.

4.2.3.3 Conformance

Conformance tests as defined in clause 5.3.3 shall be carried out.

4.2.4 Adjacent channel power

4.2.4.1 Definition

The adjacent channel power is defined in EN 300 135-1 [1], clause 7.4.1.

4.2.4.2 Limit

The adjacent channel power shall not exceed the limit in EN 300 135-1 [1], clause 7.4.3.

4.2.4.3 Conformance

Conformance tests as defined in clause 5.3.4 shall be carried out.

4.2.5 Unwanted emissions in the spurious domain

4.2.5.1 Definition

The unwanted emissions in the spurious domain are defined in EN 300 135-1 [1], clause 7.5.1.

4.2.5.2 Limits

The unwanted emissions in the spurious domain shall not exceed the limits in EN 300 135-1 [1], clause 7.5.3, tables 2, 3 and 4.

4.2.5.3 Conformance

Conformance tests as defined in clause 5.3.5 shall be carried out.

4.2.6 Transient behaviour of the transmitter

4.2.6.1 Definition

The transient behaviour of the transmitter is defined in EN 300 135-1 [1], clause 7.6.1.

4.2.6.2 Limits

The transient behaviour of the transmitter shall not exceed the limits in EN 300 135-1 [1], clause 7.6.3.

4.2.6.3 Conformance

Conformance tests as defined in clause 5.3.6 shall be carried out.

4.3 Receiver requirements

4.3.1 Spurious radiations

4.3.1.1 Definition

The spurious radiations are defined in EN 300 135-1 [1], clause 8.1.1.

4.3.1.2 Limits

The spurious radiations shall not exceed the limits in EN 300 135-1 [1], clause 8.1.3, tables 5b and 6.