ETSI TR 102 137 V1.3.1 (2019-11)

TECHNICAL REPORT

**Electromagnetic compatibility and
Radio spectrum Matters (ERM);
Use of radio frequency spectrum by equipment
meeting ETSI standards**

Reference
RTR/ERM-RM-057

Keywords
IMT-2000, radio, regulation

ETSI

650 Route des Lucioles
F-06921 Sophia Antipolis Cedex - FRANCE

Tel.: +33 4 92 94 42 00   Fax: +33 4 93 65 47 16

Siret N° 348 623 562 00017 - NAF 742 C
Association à but non lucratif enregistrée à la
Sous-Préfecture de Grasse (06) N° 7803/88

Important notice

The present document can be downloaded from:
http://www.etsi.org/standards-search

The present document may be made available in electronic versions and/or in print. The content of any electronic and/or print versions of the present document shall not be modified without the prior written authorization of ETSI. In case of any existing or perceived difference in contents between such versions and/or in print, the prevailing version of an ETSI deliverable is the one made publicly available in PDF format at www.etsi.org/deliver.

Users of the present document should be aware that the document may be subject to revision or change of status. Information on the current status of this and other ETSI documents is available at
https://portal.etsi.org/TB/ETSIDeliverableStatus.aspx

If you find errors in the present document, please send your comment to one of the following services:
https://portal.etsi.org/People/CommiteeSupportStaff.aspx

Copyright Notification

Contents

Intellectual Property Rights

Essential patents

IPRs essential or potentially essential to normative deliverables may have been declared to ETSI. The information pertaining to these essential IPRs, if any, is publicly available for **ETSI members and non-members**, and can be found in ETSI SR 000 314: *"Intellectual Property Rights (IPRs); Essential, or potentially Essential, IPRs notified to ETSI in respect of ETSI standards"*, which is available from the ETSI Secretariat. Latest updates are available on the ETSI Web server (https://ipr.etsi.org/).

Pursuant to the ETSI IPR Policy, no investigation, including IPR searches, has been carried out by ETSI. No guarantee can be given as to the existence of other IPRs not referenced in ETSI SR 000 314 (or the updates on the ETSI Web server) which are, or may be, or may become, essential to the present document.

Trademarks

The present document may include trademarks and/or tradenames which are asserted and/or registered by their owners. ETSI claims no ownership of these except for any which are indicated as being the property of ETSI, and conveys no right to use or reproduce any trademark and/or tradename. Mention of those trademarks in the present document does not constitute an endorsement by ETSI of products, services or organizations associated with those trademarks.

Foreword

This Technical Report (TR) has been produced by ETSI Technical Committee Electromagnetic compatibility and Radio spectrum Matters (ERM).

The present document is related to CEPT/ERC Report 25 [i.1] and the ECO Frequency Information System [i.2].

The CEPT/ERC Report 25 [i.1] contains a European Table of frequency allocations and applications for the frequency band 8,3 kHz to 3 000 GHz, which is commonly known as the European Common Allocation (ECA) table. It is reviewed periodically and revised as necessary by the ECC taking into account the results of World Radio Conferences and other relevant developments.

The ECO Frequency Information System (EFIS, see http://www.efis.dk) is the tool to fulfil EC Decision 2007/344/EC [i.9] on the harmonised availability of information regarding spectrum use in Europe and the ECC Decision ECC/DEC/(01)03 [i.5] on EFIS. The ECA table is also accessible via EFIS.

ETSI standards are listed in both EFIS and CEPT/ERC Report 25 [i.1]. The information provided in the present document is intended to be sent to the ECO and CEPT/ECC to help them in updating the ECA table.

Since the publication of ETSI TR 102 137 (V1.2.1) [i.3], the ETSI New Work Item form on the ETSI portal has been expanded to include frequency information. The present document is the first version of ETSI TR 102 137 with a dump of the frequency information from the ETSI portal and with information on standards related to the Radio Equipment Directive [i.10]. The present document includes the version number of the ETSI deliverable, for example to allow the possibility to distinguish between differences in frequencies covered in different versions of the ETSI deliverable.

Table 1: Void.

Modal verbs terminology

In the present document "**should**", "**should not**", "**may**", "**need not**", "**will**", "**will not**", "**can**" and "**cannot**" are to be interpreted as described in clause 3.2 of the ETSI Drafting Rules (Verbal forms for the expression of provisions).

"**must**" and "**must not**" are **NOT** allowed in ETSI deliverables except when used in direct citation.

Introduction

The number of ETSI deliverables related to radio frequencies is very large. The present document has been developed to provide an overview of ETSI deliverables with applications and radio frequency bands. It may help:

- guide manufacturers to the appropriate Harmonised Standard under the Radio Equipment Directive [i.10];

- provide parameters for compatibility/sharing studies;

- increase understanding and awareness of ETSI radio deliverables;

- in the update of standards in CEPT/ERC Report 25 [i.1] and/or in EFIS [i.2].

It should be noted that the radio frequency spectrum is managed on a national basis, and the national Administration concerned should be approached for the regulations in force in a particular territory.

1 Scope

The present document lists the application(s), frequency band(s), and relation to the Radio Equipment Directive [i.10] of ETSI deliverables when this information has been entered into the ETSI work programme.

Note that some ETSI deliverables may be related to radio frequencies but are not included in the present document since the information has not been entered into the ETSI work programme.

2 References

2.1 Normative references

Normative references are not applicable in the present document.

2.2 Informative references

References are either specific (identified by date of publication and/or edition number or version number) or non-specific. For specific references, only the cited version applies. For non-specific references, the latest version of the referenced document (including any amendments) applies.

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

The following referenced documents are not necessary for the application of the present document but they assist the user with regard to a particular subject area.

[i.1] CEPT/ERC Report 25: "The European table of frequency allocations and applications in the frequency range 8.3 kHz to 3000 GHz (ECA Table)".

[i.2] ECO Frequency Information System.

NOTE: Available at http://www.efis.dk.

[i.3] ETSI TR 102 137 (V1.2.1): "Electromagnetic compatibility and Radio spectrum Matters (ERM); Use of Radio Frequency Spectrum by Equipment meeting ETSI Standards".

[i.4] ETSI EN 301 908 (all parts): "IMT cellular networks; Harmonised Standard for access to radio spectrum".

[i.5] CEPT/ECC Decision (01)03 approved 15 November 2001, Amended 17 November 2017, Annex 2 amended 5 July 2019: ECO Frequency Information System (EFIS).

[i.6] ETSI EN 301 502 (V12.5.2): "Global System for Mobile communications (GSM); Base Station (BS) equipment; Harmonised Standard covering the essential requirements of article 3.2 of the Directive 2014/53/EU".

[i.7] 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).

[i.8] ETSI EN 300 086 (V2.1.2): "Land Mobile Service; Radio equipment with an internal or external RF connector intended primarily for analogue speech; Harmonised Standard covering the essential requirements of article 3.2 of the Directive 2014/53/EU".

[i.9] EC Decision 2007/344/EC: Commission Decision of 16 May 2007 on harmonised availability of information regarding spectrum use within the Community.

[i.10] Directive 2014/53/EU of the European Parliament and of the Council of 16 April 2014 on the harmonisation of the laws of the Member States relating to the making available on the market of radio equipment and repealing Directive 1999/5/EC Text with EEA relevance.

3 Definition of terms, symbols and abbreviations

3.1 Terms

Void.

3.2 Symbols

Void.

3.3 Abbreviations

For the purposes of the present document, the abbreviations given in CEPT/ERC Report 25 [i.1] and the following apply:

ECA   European Common Allocation
EFIS   ERO Frequency Information System
GSM   Global System for Mobile
IMT   International Mobile Telecommunications
PMR   Professional Mobile Radio

4 Table of ETSI deliverables with applications and frequency bands

4.0 General explanatory notes

The Excel file (tr_102137v010301p0.xlsm contained in archive tr_102137v010301p0.zip), which accompanies the present document, contains two worksheets:

- A table of ETSI deliverables with applications and frequency bands which is a dump of information from the ETSI Work Programme. This is further described in clause 4.1.

- In the worksheet "Search", a search facility for finding standards overlapping an input frequency range. See the further description under clause 4.2.

Note that the information dumped from the ETSI Work Programme may be incomplete.

4.1 Explanatory notes to the table

4.1.1 ETSI Document Number columns

ETSI work programme fields: ETSI_STANDARD_TYPE plus ETSI_NUMBER.

Only deliverables for which radio frequency information has been entered into the ETSI Work Programme appear in these columns.

4.1.2 Version column

ETSI work programme field: LAST_VERSION.

The version number is given in this column. Note that there may be differences in the frequencies and/or applications between different versions of the same deliverable.

Note that some parts of a multipart deliverable may be a Harmonised Standard, while others are not. Additionally the parts of a multipart standard may address different frequency bands (e.g. ETSI EN 301 908 [i.4]).

4.1.3 Technical Body column

ETSI work programme field: TB_NAME.

This column gives the ETSI group related to the ETSI deliverable.

4.1.4 Directive column

ETSI work programme field: DIRECTIVE.

If the ETSI deliverable is related to a Directive, then the number of the Directive is given in this column (e.g. '2014/53/EU' for the Radio Equipment Directive [i.10], '99/5/EC' for the R&TTE Directive [i.7]).

If the ETSI deliverable is a Harmonised Standard covering an essential requirement of a Directive, then the article (e.g. "article 3.2", "article 3.3") of the essential requirement of the Directive may be given in the title and/or the scope of the deliverable. However, sometimes it is not visible in the ETSI Work Programme, thus is also not visible here.

4.1.5 Frequency bands columns

ETSI work programme field: FREQUENCY_BAND_TXT.

This column (FREQUENCY_BAND_TXT) provides the frequency bands given in the scope of the ETSI deliverable or tables there within and is hidden.

Every frequency range is in a separate row in the table. Additional columns (Frequency_Low, Frequency_Low_Converted, Frequency_Low_Unit, Frequency_High, Frequency_High_Converted, Frequency_High_Unit) are provided with the frequency converted to Hertz to facilitate searching, but some columns are hidden and need to be made visible if the user wishes to use them.

A standard may have several frequency bands within its scope. For example in ETSI EN 301 502 [i.6], table 2 is given.

Table 2: GSM Base Station System frequency bands

GSM band	Direction of transmission	GSM Base Station System relevant frequency bands
P-GSM 900	Transmit	935 MHz to 960 MHz
	Receive	890 MHz to 915 MHz
E-GSM 900	Transmit	925 MHz to 960 MHz
	Receive	880 MHz to 915 MHz
R-GSM 900	Transmit	921 MHz to 960 MHz
	Receive	876 MHz to 915 MHz
ER-GSM 900	Transmit	918 MHz to 960 MHz
	Receive	873 MHz to 915 MHz
DCS 1 800	Transmit	1 805 MHz to 1 880 MHz
	Receive	1 710 MHz to 1 785 MHz
GSM 450	Transmit	460,4 MHz to 467,6 MHz
	Receive	450,4 MHz to 457,6 MHz
GSM 480	Transmit	488,8 MHz to 496 MHz
	Receive	478,8 MHz to 486 MHz

All of the frequency bands in table 2 are expected to be included in the table in archive tr_102137v010301p0.zip.

The scope of some ETSI deliverables covers a wide frequency ranges (e.g. some PMR standards), and the precise frequency is, for example, further specified in CEPT/ECC deliverables. For example, the scope of the standard ETSI EN 300 086 [i.8] covers the frequency range 30 MHz to 1 000 MHz however the CEPT/ERC Report 25 [i.1] includes ETSI EN 300 086 [i.8] in the following frequencies.

Table 3: Frequencies included in CEPT/ERC Report 25 [i.1] for ETSI EN 300 086 [i.8]

Lower frequency	Higher frequency
30,01 MHz	40,66 MHz
40,7 MHz	74,8 MHz
75,2 MHz	87,5 MHz
146,0 MHz	156,4875 MHz
156,8375 MHz	161,9625 MHz
162,0375 MHz	169,4 MHz
169,8125 MHz	174 MHz
406,1 MHz	430,0 MHz
440,0 MHz	470,0 MHz

For these ETSI deliverables with broad frequency ranges (i.e. the so-called "generic standards"), the specific frequency ranges are given in the ECA table and are not indicated in the table in archive tr_102137v010301p0.zip.

4.1.6 Application column

ETSI work programme field: FREQUENCY_APP_NAME.

The application covered by the ETSI deliverable is given in the column "Application".

The terminology from EFIS for applications given in reference [i.5] is used as far as possible. This facilitates the synchronization of the information between ETSI and CEPT.

The EFIS application names are divided into three layers of detail as explained in Annex 2 of reference [i.5]. Wherever possible, the highest detail possible (i.e. layer 3) has been used in the present document. Note that the layer 3 detail may still not be sufficient to precisely specify the content of the standard (e.g. the different parts of ETSI EN 301 908 [i.4] are given the application "IMT", but they are actually a subset of IMT).

Note that it may occur that, for a particular frequency band, the application in EFIS is different from the application in the present document. This could occur when the frequency band is available in EFIS for an application in layer 2 while the ETSI deliverable addresses an application in layer 3 (which is narrower than layer 2).

4.1.7 Current status columns

ETSI work programme fields: CURRENT_STATUS_CODE1 and CURRENT_STATUS_CODE2.

These columns provide the codes used by the ETSI Secretariat to indicate the status of the deliverable (e.g. 1 = start of work, 12 = publication, 12 W = citation in the Official Journal of the European Union, etc.). The meaning of the list of codes can be found on the advanced search of the ETSI work programme at (https://portal.etsi.org/webapp/WorkProgram/Expert/QueryForm.asp) under 'milestones'.

4.2 Search facilities

The data in the table of ETSI deliverables with applications and frequency bands can be filtered with the help of the auto-filters at the top row of the table. The use of the auto-filters follows the usual Excel rules.

Additionally a search facility for finding standards overlapping an input frequency range is given in the worksheet "Search". The user inputs the lower frequency of the range in the gray field under "lower frequency" (F1), the higher frequency of the range in the gray field under "higher frequency" (F2), the units of the frequency in the gray field under "units (kHz, MHz, GHz)", and presses the "Search" button.