CEPT ECC
Electronic Communications Committee

# ERC Recommendation 70-03

Relating to the Use of Short Range Devices (SRD)

**Tromsø 1997**

Subsequent amendments

10 September 2015

Please see the Document History at the end of this document for the revision status of individual annexes and appendices.

Please Note

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## FOREWORD

This Recommendation sets out the general position on common spectrum allocations for Short Range Devices (SRDs) for countries within the CEPT. It is also intended that it can be used as a reference document by the CEPT member countries when preparing their national regulations in order to keep in line with the provisions of the R&TTE Directive.

In using this Recommendation it should be remembered that it represents the most widely accepted position within the CEPT but it should not be assumed that all allocations are available in all countries. An indication of where allocations are not available or where deviations from the CEPT position occur is to be found in Appendix 3.

It should also be remembered that the pattern of radio use is not static. It is continuously evolving to reflect the many changes that are taking place in the radio environment; particularly in the field of technology. Spectrum allocations must reflect these changes and the position set out in this Recommendation is therefore subject to continuous review.

Moreover, many administrations have designated additional frequencies or frequency bands for SRD applications on a national basis that do not conform to the CEPT position set out in this Recommendation.

For these reasons, those wishing to develop or market SRDs based on this Recommendation are advised to contact the relevant national administration to verify that the position set out herein still applies. Any inconsistencies between the national position stated in the implementation table in Appendix 1 of this Recommendation and those national positions stated elsewhere should be brought to the attention of the ECO (thomas.weber@eco.cept.org) in order that these differences may be resolved.

When selecting parameters for new SRDs, which may have inherent safety of human, life implications, manufacturers and users should pay particular attention to the potential for interference from other systems operating in the same or adjacent bands. Manufacturers should advice users on the risks of potential interference and its consequences.

This Recommendation is also electronically available in the EFIS database (link).

Information on R&TTE Directive equipment classes is available in the EFIS database (link).

The CEPT country codes used in this Recommendation can be seen under (link).

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## INTRODUCTION

CEPT has adopted this Recommendation to deal with Short Range Devices and the European Telecommunications Standards Institute (ETSI) has now developed harmonised European standards for the majority of these devices. Other standards or technical specifications will be applicable within the framework of the R&TTE Directive for placing on the market.

The term “Short Range Device” (SRD) is intended to cover the radio transmitters which provide either uni-directional or bi-directional communication which have low capability of causing interference to other radio equipment. SRDs use either integral, dedicated or external antennas and all modes of modulation can be permitted subject to relevant standards. SRDs are not considered a “Radio Service” under the ITU Radio Regulations (Article 1).

This Recommendation describes the spectrum management requirements for SRDs relating to allocated frequency bands, maximum power levels, channel spacing or modulation/maximum occupied bandwidth (Annex 1), and duty cycle.

For CEPT countries that have implemented the R&TTE Directive, Article 12 (CE-marking) and Article 7.2 on putting into service of radio equipment apply. Article 12 states that “any other marking may be affixed to the equipment provided that the visibility and legibility of the CE-marking is not hereby reduced” and Article. 7.2 states that “member states may restrict the putting into service of radio equipment only for reasons related to the effective and appropriate use of the radio spectrum, avoidance of harmful interference or matters relating to public health.”

*"The CEPT has considered the use of SRD devices on board aircraft and it has concluded that, from the CEPT regulatory perspective, such use is allowed under the same conditions provided in the relevant Annex of Recommendation 70-03. For aviation safety aspects, the CEPT is not the right body to address this matter which remains the responsibility of aircraft manufacturers or aircraft owners who should consult with the relevant national or regional aviation bodies before the installation and use of such devices on board aircraft."*

For Short Range Devices individual licenses are normally not required. Where licenses are required this is stated in the relevant Annex.

The following annexes define the regulatory parameters as well as additional information about harmonised standards, frequency issues and important technical parameters. Other technical parameters are indicated in the relevant standard.

Appendix 2 covers the relevant ECC/ERC Decisions and ETSI standards.

For countries having implemented the R&TTE Directive further details can be found on the relevant EC (link) and the Office web sites (link).

Applications for certain short range devices within this recommendation are subject to EC Decisions including Decision 2006/771/EC and EU/EFTA Member States are obliged to implement the EC Decision in all these cases. These applications are identified by a footnote under “Additional Information” in the relevant Annex which also mentions any derogation that has been agreed. A list of relevant EC Decisions can be found in Appendix 2.

Member States of EU/EFTA may allow, at national level, equipment to operate under more permissive conditions than specified in the EC Decision if permitted by that EC Decision. However, in this case such equipment could not operate throughout the European Community without restrictions and would therefore be considered as ‘Class 2’ equipment under the classification in the 1999/5/EC (R&TTE) Directive.

This Recommendation is designed to assist with frequencies available within CEPT member countries for putting short range device radio equipment into service. It is not intended to limit the possibility for placement of product on the market in those Countries which have adopted the RTTE Directive.

## ERC RECOMMENDATION OF 9 OCTOBER 2012 ON RELATING TO THE USE OF SHORT RANGE DEVICES (SRD)

"The European Conference of Postal and Telecommunications Administrations,

*considering*

a) that SRDs in general operate in shared bands and are not permitted to cause harmful interference to radio services;

b) that in general SRDs cannot claim protection from radio services;

c) that due to the increasing interest in the use of SRDs for a growing number of applications it is necessary to harmonise frequencies and regulations for these devices;

d) that there is a need to distinguish between different applications;

e) that additional applications and associated annexes will be added as necessary;

f) that for CEPT countries that have implemented the R&TTE Directive article 12 (CE marking) and article 7.2 on putting into service of radio equipment apply;

g) that equipment marketed before the adoption of this Recommendation marked with the abbreviation CEPT LPD Y according to the abrogated CEPT Recommendation T/R 01-04 should be allowed continuation of free circulation and use;

h) that maintenance of Appendices 1 to 3 and also the related cross-references in the Annexes may be undertaken by the Office based on information from administrations;

i) that information about placing SRD equipment on the market and its use can be obtained by contacting individual administrations, especially with regard to equipment operating in frequencies or frequency bands that may be designated for SRDs by administrations in addition to those covered in this Recommendation;

j) that SRD equipment normally use either integral or dedicated antennas. In exceptional cases external antennas could be used which will be mentioned in the appropriate annex to this Recommendation;

k) that for those countries implementing the provisions of this Recommendation, national restrictions in respect of the annexes can be found in Appendix 3;

l) that EU/EFTA Member States are required to implement the EC Decisions listed in Appendix 2 of this recommendation and that for those countries a "Y" indication in the implementation table means that the least restrictive regulatory parameters of any of the respective EC Decisions listed in Appendix 2 applies. The parameters in the EC Decisions listed in Appendix 2 may be subject to a derogation for an individual country and this should be detailed in Appendix 3.

*recommends*

1) that CEPT administrations implement the parameters in accordance with the indications mentioned in the annexes;

2) that technical parameter limits should not be exceeded by any function of the equipment;

3) that CEPT administrations should allow visitors from other countries to carry and use their equipment temporarily without any further formalities unless there are national restrictions as shown in Appendix 3."

## ANNEX 1: NON-SPECIFIC SHORT RANGE DEVICES

### Scope of Annex

This annex covers frequency bands and regulatory as well as informative parameters recommended primarily for Telemetry, Telecommand, Alarms and Data in general and other similar applications. Video applications should be preferably used above 2.4 GHz.

This annex also includes references to the generic UWB regulation which was primarily developed to allow communication applications using UWB technology in bands below 10.6 GHz; but enables also other types of radio applications.

**Table 1: Regulatory parameters**

| Frequency Band | | Power / Magnetic Field | Spectrum access and mitigation requirements | Modulation/ maximum occupied bandwidth | ECC/ERC deliverable | Notes |
|---|---|---|---|---|---|---|
| **a** | 6765-6795 kHz | 42 dBµA/m at 10m | No requirement | Not specified | | The frequency band is also identified in Annex 9 |
| **b** | 13.553-13.567 MHz | 42 dBµA/m at 10m | No requirement | Not specified | | The frequency band is also identified in Annex 9 |
| **c** | 26.957-27.283 MHz | 42 dBµA/m at 10m<br>10 mW e.r.p | No requirement | Not specified | | The frequency band is also identified in Annex 9 |
| **c1** | 26.995, 27.045, 27.095, 27.145, 27.195 MHz | 100 mW e.r.p | ≤ 0.1 % duty cycle (note 1) | ≤10 kHz | | The frequency band is also identified in Annex 8 |
| **d** | 40.660-40.700 MHz | 10 mW e.r.p. | No requirement | Not specified | | |
| **e** | 138.20-138.45 MHz | 10 mW e.r.p. | ≤ 1.0 % duty cycle (note 1) | Not specified | | |
| **e1** | 169.4000-169.4750 MHz | 500 mW e.r.p. | ≤ 1.0 % duty cycle (note 1) | ≤ 50 kHz | ECC/DEC/(05)02 | The frequency band is also identified in Annexes 2 and 10 |
| **e2** | 169.4000-169.4875 MHz | 10 mW e.r.p. | ≤ 0.1 % duty cycle (note 1) | Not specified | ECC/DEC/(05)02 | Equipment that concentrates or multiplexes individual equipment is excluded |
| **e3** | 169.4875-169.5875 MHz | 10 mW e.r.p. | ≤ 0.001% duty cycle except for 00:00 h to 06:00 h | Not specified | ECC/DEC/(05)02 | Equipment that concentrates or multiplexes individual equipment is excluded. |

| Frequency Band | | Power / Magnetic Field | Spectrum access and mitigation requirements | Modulation/ maximum occupied bandwidth | ECC/ERC deliverable | Notes |
|---|---|---|---|---|---|---|
| | | | local time where the duty cycle limit is ≤ 0.1% (note 1) | | | The frequency band is also identified in Annex 10 |
| **e4** | 169.5875-169.8125 MHz | 10 mW e.r.p. | ≤ 0.1 % duty cycle (note 1) | Not specified | ECC/DEC/(05)02 | Equipment that concentrates or multiplexes individual equipment is excluded |
| **f** | 433.050-434.790 MHz | 10 mW e.r.p. | ≤ 10 % duty cycle (note 1) | Not specified | | |
| **f1** | 433.050-434.790 MHz | 1 mW e.r.p. -13 dBm/10 kHz | No requirement except for (note 11) | Not specified | | Power density limited to -13 dBm/10 kHz for wideband modulation with a bandwidth greater than 250 kHz |
| **f2** | 434.040-434.790 MHz | 10 mW e.r.p. | No requirement except for (note 11) | ≤ 25 kHz | | |
| **g1** | 863-870 MHz (notes 3 and 4) | 25 mW e.r.p. | ≤ 0.1% duty cycle or LBT (notes 1 and 5) | ≤ 100 kHz for 47 or more channels (note 2) | | FHSS |
| | | 25 mW e.r.p. Power density : - 4.5 dBm/100 kHz (note 7) | ≤ 0.1% duty cycle or LBT+AFA (notes 1, 5 and 6) | Not specified | | DSSS and other wideband techniques other than FHSS |
| | | 25 mW e.r.p. | ≤ 0.1% duty cycle or LBT+AFA (notes 1 and 5) | ≤ 100 kHz, for 1 or more channels modulation bandwidth ≤ 300 kHz (note 2) | | Narrow /wide-band modulation |
| **g1.1** | 868.000-868.600 MHz (note 4) | 25 mW e.r.p. | ≤ 1% duty cycle or LBT+AFA | Not specified, for 1 or more | | Narrow / wide-band modulation. No channel spacing, however the whole |

| Frequency Band | | Power / Magnetic Field | Spectrum access and mitigation requirements | Modulation/ maximum occupied bandwidth | ECC/ERC deliverable | Notes |
|---|---|---|---|---|---|---|
| | | | (note 1) | channels (note 2) | | stated frequency band may be used |
| **g1.2** | 868.700-869.200 MHz (note 4) | 25 mW e.r.p. | ≤ 0.1% duty cycle or LBT+AFA (note 1) | Not specified, for 1 or more channels (note 2) | | Narrow / wide-band modulation. No channel spacing, however the whole stated frequency band may be used |
| **g1.3** | 869.400-869.650 MHz | 500 mW e.r.p. | ≤ 10% duty cycle or LBT+AFA (note 1) | Not specified, for 1 or more channels | | Narrow / wide-band modulation The whole stated frequency band may be used as 1 channel for high speed data transmission |
| **g1.4** | 869.700-870.000 MHz (note 11) | 5 mW e.r.p.<br>25 mW e.r.p. | No requirement<br>≤1% duty cycle or LBT+AFA (note 1) | Not specified for 1 or more channels | | Narrow / wide-band modulation. No channel spacing, however the whole stated frequency band may be used |
| **g2** | 870-876 MHz | 25 mW e.r.p. | ≤ 0.1% duty cycle For ER-GSM protection (873-876 MHz, where applicable), the duty cycle is limited to ≤ 0.01% and limited to a maximum transmit on-time of 5ms/1s | ≤ 200 kHz | | This frequency band is also identified in Annexes 2 and 5 |
| **g2.1** | 870.000-875.800 MHz | 25 mW e.r.p. | ≤ 1% duty cycle For ER-GSM protection (873-875.8 MHz, where applicable), the duty cycle is limited to ≤ 0.01% and limited to a maximum transmit | ≤ 600 kHz | | The frequency band is also identified in Annexes 2 and 5 |

| Frequency Band | | Power / Magnetic Field | Spectrum access and mitigation requirements | Modulation/ maximum occupied bandwidth | ECC/ERC deliverable | Notes |
|---|---|---|---|---|---|---|
| | | | on time of 5ms/1s | | | |
| **g3** | 915-921 MHz | 25 mW e.r.p. | ≤ 0.1% duty cycle<br>For ER-GSM protection (918-921 MHz, where applicable), the duty cycle is limited to ≤ 0.01% and limited to a maximum transmit on-time of 5ms/1s | ≤ 200 kHz | | The frequency band is also identified in Annexes 10 and 11 |
| **g3.1** | 915.200-920.800 MHz | 25 mW e.r.p. except for the 4 channels identified in note 9 where100 mW e.r.p. applies | ≤ 1% duty cycle (note 10)<br>For ER-GSM protection (918-920.8 MHz, where applicable), the duty cycle is limited to ≤ 0.01% and limited to a maximum transmit on-time of 5ms/1s | ≤ 600 kHz<br>except for the 4 channels identified in note 9 where<br>≤ 400 kHz applies | | The frequency band is also identified in Annexes 10 and 11 |
| **h** | 2400.0-2483.5 MHz | 10 mW e.i.r.p. | No requirement | Not specified | | The frequency band is also identified in Annexes 3 and 6 |
| **i** | 5725-5875 MHz | 25 mW e.i.r.p. | No requirement | Not specified | | |
| **j** | 24.00-24.25 GHz | 100 mW e.i.r.p. | No requirement | Not specified | | The frequency band is also identified in Annex 5 |
| **k** | 61.0-61.5 GHz | 100 mW e.i.r.p. | No requirement | Not specified | | |
| **k1** | 57-64 GHz | 100 mW e.i.r.p., a max. transmitter output power of 10 mW, and a power density | No requirement | Not specified | | |

| Frequency Band | | Power / Magnetic Field | Spectrum access and mitigation requirements | Modulation/ maximum occupied bandwidth | ECC/ERC deliverable | Notes |
|---|---|---|---|---|---|---|
| | | limited to 13 dBm/MHz e.i.r.p. applies | | | | |
| **l** | 122.0-122.25 GHz | 10 dBm e.i.r.p/ 250 MHz and -48 dBm/MHz at >30° elevation | (note 8) | Not specified | | |
| **l1** | 122.25-123.0 GHz | 100 mW e.i.r.p. | No requirement | Not specified | | |
| **m** | 244-246 GHz | 100 mW e.i.r.p. | No requirement | Not specified | | |
| **n** | 3.1-4.8 GHz<br>6 - 9 GHz | * | * | * | ECC/DEC/(06)04 | Generic UWB regulation<br>* See detailed requirements in the related ECC Decision |
| **n1** | 6.0-8.5 GHz | * | * | * | ECC/DEC/(12)03 | UWB on-board aircraft regulation<br>* See detailed requirements in the related ECC Decision |

Note 1: When either duty cycle, Listen Before Talk (LBT) or equivalent technique applies then it shall not be user dependent/adjustable and shall be guaranteed by appropriate technical means.
For LBT devices without Adaptive Frequency Agility (AFA), or equivalent techniques, the duty cycle limit applies.
For any type of frequency agile device the duty cycle limit applies to the total transmission unless LBT or equivalent technique is used.
Note 2: The preferred channel spacing is 100 kHz allowing for a subdivision into 50 kHz or 25 kHz.
Note 3: Sub-bands for alarms are excluded (see ERC/REC 70-03 Annex 7).
Note 4: Audio and video applications are allowed provided that a digital modulation method is used with a max. bandwidth of 300 kHz.
Analogue and digital voice applications are allowed with a max. bandwidth ≤ 25 kHz.
In sub-band 863-865 MHz voice and audio conditions of Annexes 10 and 13 of ERC/REC 70-03 apply respectively.
Note 5: Duty cycle may be increased to 1% if the band is limited to 865-868 MHz.
Note 6: For wide-band techniques, other than FHSS, operating with a bandwidth of 200 kHz to 3 MHz, the duty cycle can be increased to 1% if the band is limited to 865-868 MHz and power to ≤10 mW e.r.p.
Note 7: The power density can be increased to +6.2 dBm/100 kHz and -0.8 dBm/100 kHz, if the band of operation is limited to 865-868 MHz and 865-870 MHz respectively.
Note 8: These limits should be measured with an rms detector and an averaging time of 1 ms or less.
Note 9: The available channel centre frequencies are 916.3 MHz, 917.5 MHz, 918.7 MHz and 919.9 MHz. The channel bandwidth is 400 kHz.
Note 10: RFID tag emissions responding to RFID interrogators operating on centre frequencies 916.3 MHz, 917.5 MHz, 918.7 MHz and 919.9 MHz are not duty cycle limited.
Note 11: Audio and video applications are excluded. Voice applications (analogue or digital) are allowed with a maximum bandwidth of ≤ 25 kHz, and with spectrum access technique such as LBT or equivalent and shall include a power output sensor controlling the transmitter to a maximum transmit period of 1 minute for each transmission.

**Additional Information**

**Harmonised Standards**

EN 300 220 sub-bands c) to g3.1)
EN 300 330 sub-bands a) to c)
EN 300 440 sub-bands h) i) and j)
EN 305 550 sub-bands k), k1), l), l1) and m)
EN 302 065 sub-band n)
EN 302 500 sub-band n) (only 6-9 GHz)

**Technical parameters also referred to in the harmonised standard**
Listen before talk (LBT) with Adaptive Frequency Agility (AFA) technique feature may be used instead of duty cycle.
LBT is defined in EN 300 220.
Audio and voice are defined in EN 300 220.

**Frequency issues**
The bands in Annex 1 a - b - c - d f - f1 - f2 - h - i - j - k - l and m are also designated for industrial, scientific and medical (ISM) applications as defined in ITU Radio Regulations.

Band g1):

Certain channels may be occupied by RFID operating at higher powers (See Annex 11 for further details). To minimise the risk of interference from RFID, SRDs should use LBT with AFA or observe suitable separation distances. (In the high power RFID channels typically these may vary from 918 m (indoor) to 3.6 km (rural outdoor). In the remaining 2.2 MHz, where tags at -20 dBm e.r.p. occupy the spectrum, this may vary from 24 m (indoor) to 58 m (rural outdoor)).

The adjacent frequency bands below 862 MHz and above 870 MHz may be used by high power systems. Manufacturers should take this into account in the design of equipment and choice of power levels.

Sub-bands g2) to g3.1):

Use of all or part of sub-bands g2) to g3.1) may be denied in some European countries that use all or part of these sub-bands for defence/governmental systems. In other countries that use sub-bands 873-876 / 918-921 MHz for GSM for railways, extended band (ER-GSM), access to the part 873-876 / 918-921 MHz by non-specific SRD applications require implementing additional mitigation measures such as transmission timing limitations as set out in ECC Report 200. See Appendix 3 for national implementation concerning ER-GSM and defence/governmental services.

The adjacent frequency bands below 915 MHz and above 876 MHz as well as 921 MHz may be used by high power systems. Manufacturers should take this into account in the design of equipment and choice of power levels.

## ANNEX 2: **TRACKING, TRACING AND DATA ACQUISITION**

### Scope of Annex

This annex covers frequency bands and regulatory as well as informative parameters recommended for a number of specific devices including:

- Emergency detection of buried victims and valuable items such as detecting avalanche victims;
- Meter Reading;
- **Sensors** (water, gas and electricity; meteorological instruments; pollution measurement; environmental data, such as levels of allergens (pollen, dust), electromagnetic pollution (solar activity), noise) and **actuators** (controlling devices such as street or traffic lights);
- Medical Body Area Network Systems (MBANS), used for medical data acquisition, are intended to be used in healthcare facilities and patients' homes. They are low power area network systems used for the transmission of non-voice data to and from medical devices for the purposes of monitoring, diagnosing and treating patients as prescribed by duly authorised healthcare professionals and are defined in the context of medical applications only;
- Wireless Industrial Applications (WIA) to be used for wireless links in industrial environments including monitoring and worker communications, wireless sensors and actuators.

**Table 2: Regulatory parameters**

| | Frequency Band | Power / Magnetic Field | Spectrum access and mitigation requirements | Modulation/ maximum occupied bandwidth | ECC/ERC deliverable | Notes |
|---|---|---|---|---|---|---|
| **a** | 456.9-457.1 kHz | 7 dBµA/m at 10 m | No requirement | Continuous wave (CW)<br>– no modulation | | Emergency detection of buried victims and valuable items.<br>Note: Centre frequency is 457 kHz |
| **b** | 169.400-169.475 MHz | 500 mW e.r.p. | ≤ 10% duty cycle | ≤ 50 kHz | ECC/DEC/(05)02 | Meter Reading.<br>The frequency band is also identified in Annex 1 |
| **c** | 870.000-875.600 MHz | 500 mW e.r.p. | ≤ 2.5% duty cycle and APC required (note 1).<br>For ER-GSM protection (873-875.6MHz, where applicable), the duty cycle is limited to ≤ 0.01% and limited to a maximum | ≤ 200 kHz | | Individual license may be required for Metropolitan / Rural Area Networks.<br>Adaptive Power Control (APC) required. The APC Control is able to reduce a link's transmit power from its |

| Frequency Band | | Power / Magnetic Field | Spectrum access and mitigation requirements | Modulation/ maximum occupied bandwidth | ECC/ERC deliverable | Notes |
|---|---|---|---|---|---|---|
| | | | transmit on time of 5ms/1s (note 2) | | | maximum to ≤ 5 mW.<br>The frequency band is also identified in Annexes 1 and 5 |
| **d1** | 2483.5-2500 MHz | 1 mW e.i.r.p. | Adequate spectrum sharing mechanisms (e.g. Listen-Before-Talk and Adaptive Frequency Agility) shall be implemented by the equipment and<br>≤ 10% duty cycle | ≤ 3 MHz | | The frequency band is also identified in Annex 12.<br>The application is for MBANS, indoor only within healthcare facilities |
| **d2** | 2483.5-2500 MHz | 10 mW e.i.r.p. | Adequate spectrum sharing mechanisms (e.g. Listen-Before-Talk and Adaptive Frequency Agility) shall be implemented by the equipment and<br>≤ 2% duty cycle | ≤ 3 MHz | | The frequency band is also identified in Annex 12.<br>The application is for MBANS, indoor only within the patient's home |
| **e** | 5725-5875 MHz | ≤ 400 mW e.i.r.p. | APC required<br>Adequate spectrum sharing mechanisms (e.g. DFS and DAA) shall be implemented (note 3) | ≥ 1 MHz and<br>≤ 20 MHz | | Wireless Industrial Applications (WIA).<br>Registration and/or notification may be required.<br>The Adaptive Power Control is able to reduce the e.i.r.p. to ≤ 25 mW.<br>The frequency band is also identified in Annex 1 |

Note 1: a duty cycle of up to 10% may be allowed for network relay points forming part of metropolitan/rural area networks such as for utilities or other applications for the purpose of data acquisition. Network relay points should be individually licensed. National regulatory authorities may consider the provision of general authorisations (options as defined in ECC Report 132) for network relay points forming part of metropolitan/rural area networks which have implemented additional Listen-Before-Talk (LBT) and frequency/channel agility/adaptivity mitigation techniques and/or coordination in geographic areas of a high number of network relay points.

Note 2: except if a procedure with the railway operator is employed (e.g. coordination or cognitive techniques) in order to avoid interference into occupied ER-GSM channels.

Note 3: DFS is required in the frequency range 5725-5850 MHz to ensure an appropriate protection to the radiolocation service (including frequency hopping radars), DAA is required in the frequency range 5855-5875 MHz for the protection of ITS, in the frequency range 5725-5875 MHz for the protection of BFWA, and in the frequency range 5795-5815 MHz for the protection of TTT applications.

## Additional Information

### Harmonised Standards

EN 300 718 sub-band a)
EN 300 220 sub-band b)
EN 303 204 sub-band c)
EN 303 203 sub-bands d1) and d2)
EN 303 258 sub-band e) for WIA systems is under development

### Technical parameters also referred to in the harmonised standard

No information

### Frequency issues

Sub-bands d1) and d2):
MBANS equipment shall implement a spectrum access mechanism as described in the applicable harmonised European standard EN 303 203 or an equivalent spectrum access mechanism. Based on the assumptions used in ECC Report 201, the modulation bandwidth for MBANS shall not exceed 3 MHz.

Sub-band c):
Use of all or part of sub-band d may be denied in some European countries that use all or part of these sub-bands for defence/governmental systems. In other countries that use sub-band 873-876 MHz for GSM for railways, extended band (ER-GSM), access to the part 873-876 MHz by non-specific SRD applications require implementing additional mitigation measures such as transmission timing limitations as set out in ECC Report 200. See Appendix 3 for national implementation concerning ER-GSM and defence/governmental services.

## ANNEX 3: **WIDEBAND DATA TRANSMISSION SYSTEMS**

### Scope of Annex

This annex covers frequency bands and regulatory as well as informative parameters recommended for Wideband Data Transmission Systems and Wireless Access Systems including Radio Local Area Networks (WAS/RLANs) within the bands 2400-2483.5 MHz and for Multiple-Gigabit WAS/RLAN Systems within the band 57-66 GHz.

**Table 3: Regulatory parameters**

| | Frequency Band | Power / Magnetic Field | Spectrum access and mitigation requirements | Modulation/ maximum occupied bandwidth | ECC/ERC deliverable | Notes |
|---|---|---|---|---|---|---|
| **a** | 2400.0–2483.5 MHz | 100 mW e.i.r.p. | Adequate spectrum sharing mechanism (e.g. Listen-before-Talk, Detect-And-Avoid) shall be implemented by the equipment | Not specified | | For wide band modulations other than FHSS, the maximum e.i.r.p. density is limited to 10 mW/MHz |
| **b** | 57–66 GHz | 40 dBm mean e.i.r.p. This refers to the highest power level of the transmitter power control range during the transmission burst if transmitter power control is implemented | Adequate spectrum sharing mechanism (e.g. Listen-before-Talk, Detect-And-Avoid) shall be implemented by the equipment. | Not specified | | Fixed outdoor installations are not allowed. The maximum mean e.i.r.p density is limited to 13 dBm/MHz. Point-to-point links of the Fixed Service are regulated by ECC/REC/(05)02 and ECC/REC/(09)01 |

## Additional Information

### Harmonised Standards

EN 300 328 sub-band a)
EN 302 567 sub-band b)

### Technical parameters also referred to in the harmonised standard

No information

### Frequency issues

No information

## ANNEX 4: **RAILWAY APPLICATIONS**

### Scope of Annex

This annex covers frequency bands and regulatory as well as informative parameters recommended for applications specifically intended for use on railways.

The sub-bands below are intended for the following applications:

- band a) Balise tele-powering and down-link (train to ground) systems including Eurobalise and activation of the Loop / Euroloop;
- band b) Balise up-link (ground to train) systems including Eurobalise;
- band c) Loop up-link (ground to train) systems including Euroloop;
- band d) Obstruction/Vehicle detection via radar sensor at railway level crossings.

**Table 4: Regulatory parameters**

| Frequency Band | | Power / Magnetic Field | Spectrum access and mitigation requirements | Modulation/ maximum occupied bandwidth | ECC/ERC deliverable | Notes |
|---|---|---|---|---|---|---|
| **a** | 27.090-27.100 MHz | 42 dBµA/m at 10 m | No requirement | Not specified | | Tele-powering and Down-link signal for Balise / Eurobalise. May also be optionally used for the activation of the Loop / Euroloop.<br>Note: Centre frequency is 27.095 MHz |
| **b** | 984-7484 kHz | 9 dBµA/m at 10m | ≤1% duty cycle | Not specified | | Transmitting only on receipt of a Balise / Eurobalise tele-powering signal from a train.<br>Note: Centre frequency is 4234 kHz |
| **c** | 7.3-23.0 MHz | -7 dBµA/m at 10m | No requirement | Not specified | | Maximum field strength specified in a bandwidth of 10 kHz, spatially averaged over any 200m length of the loop.<br>Transmitting only in presence of trains.<br>Spread Spectrum Signal, Code Length: 472 Chips.<br>Note: Centre frequency is 13.547 MHz |
| **d** | 76-77 GHz | 55 dBm peak e.i.r.p. | No requirement | Not specified | | Obstruction/Vehicle detection via radar Sensor at railway level crossings.<br>50 dBm average power or 23.5 dBm average power for pulse radar.<br>The frequency band is also included in Annex 5 |

## Additional Information

### Harmonised Standards

EN 302 608 sub-bands a) and b)
EN 302 609 sub-band c)
EN 301 091 sub-band d)

### Technical parameters also referred to in the harmonised standard

Spectrum masks for Eurobalise and Euroloop are defined in ETSI standards EN 302 608 and EN 302 609, in accordance with the elements given in ECC Report 98.

### Frequency issues

No information

# ANNEX 5: **TRANSPORT AND TRAFFIC TELEMATICS (TTT)**

## Scope of Annex

This annex covers frequency bands and regulatory as well as informative parameters recommended for radio systems used in the field of transport and traffic telematics (road, rail and water depending on the relevant technical restrictions), traffic management, and navigation and mobility management. Typical applications are used for interfaces between different modes of transport, communication between vehicles (e.g. car-to-car), between vehicles and fixed locations (e.g. car-to-infrastructure), Communication from and to users as well as radar system installations. Automotive radar is defined as a moving radar device supporting functions of the vehicle.

**Table 5: Regulatory parameters**

| Frequency Band | | Power / Magnetic Field | Spectrum access and mitigation requirements | Modulation/ maximum occupied bandwidth | ECC/ERC deliverable | Notes |
|---|---|---|---|---|---|---|
| **a** | 870.000-875.800 MHz | 500 mW e.r.p.<br>100 mW e.r.p. | ≤ 0.1% duty cycle<br>For ER-GSM protection (873-875.8MHz, where applicable), the duty cycle is limited to ≤ 0.01% and limited to a maximum transmit on-time of 5ms/1s | ≤ 500 kHz | | 500 mW restricted to vehicle-to-vehicle applications.<br>100 mW is restricted to in-vehicle applications.<br>Adaptive Power Control (APC) is required.<br>The APC is able to reduce a link's transmit power from its maximum to ≤ 5 mW.<br>The frequency band is also identified in Annexes 1 and 2 |
| **b1** | 5795-5805 MHz | 2 W e.i.r.p.<br>8 W e.i.r.p. | No requirement | | | Individual license may be required for the higher power of 8 W systems |
| **b2** | 5805-5815 MHz | 2 W e.i.r.p.<br>8 W e.i.r.p. | No requirement | | | Individual license may be required |
| **c** | 76-77 GHz | 55 dBm peak e.i.r.p. | No requirement | Not specified | | 50 dBm average power or 23.5 dBm average power for pulse radar only.<br>For ground based vehicle and infrastructure systems only.<br>The frequency band is also included in Annex 4 |
| **d1** | 21.65-26.65 GHz | * | * | * | ECC/DEC/(04)10 | For automotive Short Range Radars (SRR).<br>* See detailed requirements in related ECC Decision. |

| Frequency Band | | Power / Magnetic Field | Spectrum access and mitigation requirements | Modulation/ maximum occupied bandwidth | ECC/ERC deliverable | Notes |
|---|---|---|---|---|---|---|
| | | | | | | New SRR equipment shall not be placed onto the market as of 1 July 2013 |
| **d2** | 24.25 -26.65 GHz | * | * | * | ECC/DEC/(04)10 | For automotive Short Range Radars (SRR).<br>See detailed requirements in related ECC Decision.<br>SRR equipment may only be placed onto the market until 1 January 2018. This date is extended by 4 years for SRR equipment mounted on motor vehicles for which vehicle conformity compliance has been granted before 1 January 2018 |
| **e** | 77-81 GHz | * | * | * | ECC/DEC/(04)03 | For automotive Short Range Radars (SRR).<br>* See detailed requirements in related ECC Decision |
| **f1** | 24.050-24.075 GHz | 100 mW e.i.r.p. | No requirement | | | For automotive radars |
| **f2** | 24.075-24.150 GHz | 0.1 mW e.i.r.p. | No requirement | | | For automotive radars |
| | | 100 mW e.i.r.p. | ≤ 4µs/40 kHz dwell time every 3ms | | | For automotive radars (road vehicles only).<br>The spectrum access and mitigation requirement is given for devices mounted behind a bumper. If mounted without a bumper, the requirement should be 3µs/40kHz maximum dwell time every 3ms.<br>A requirement for minimum frequency modulation range (applicable to FMCW or step frequency signals) or minimum instantaneous bandwidth (applicable to pulsed signal) of 250 kHz applies in addition to the requirement on maximum dwell time |
| | | | ≤ 1ms/40 kHz dwell time every 40ms | | | For automotive radars (road vehicles only).<br>The spectrum access and mitigation requirement is given for devices mounted either behind a bumper or mounted without a bumper.<br>A requirement for minimum frequency modulation range (applicable to FMCW or step frequency signals) or minimum instantaneous bandwidth (applicable to pulsed signal) of 250 kHz applies in addition to the requirement on maximum dwell time |
| **f3** | 24.150-24.250 GHz | 100 mW e.i.r.p. | No requirement | | | For automotive radars (road vehicles only) |

| Frequency Band | | Power / Magnetic Field | Spectrum access and mitigation requirements | Modulation/ maximum occupied bandwidth | ECC/ERC deliverable | Notes |
|---|---|---|---|---|---|---|
| **g1** | 24.250-24.495 GHz | -11 dBm e.i.r.p. | ≤ 0.25%/s/25 MHz duty cycle | | | For automotive radars.<br>The activity of the Wideband Low Activity Mode (WLAM) is limited to avoid the risk of interference and this mode is only activated in specific configurations as a complementary to designation f1 to f3 as described in ECC Report 164 |
| **g2** | 24.495-24.500 GHz | -8 dBm e.i.r.p. | ≤ 1.5%/s/5 MHz duty cycle | | | |
| **g3** | 24.250-24.500 GHz | +20 dBm e.i.r.p. | ≤ 5.6%/s/25 MHz duty cycle | | | |
| | | +16 dBm e.i.r.p. | ≤ 2.3%/s/25 MHz duty cycle | | | |

**Additional Information**

**Harmonised Standards**

EN 300 220 sub-band a)
EN 300 674 sub-bands b1) and b2)
EN 301 091 sub-band c)
EN 302 288 sub-bands d1) and d2)
EN 302 264 sub-band e)
EN 302 858 sub-bands f1) to f3) and g1) to g3)

**Technical parameters also referred to in the harmonised standard**

No information

**Frequency issues**

Sub-band a1:

Use of sub-band a) may be denied in some European countries that use all or part of this band for defence/governmental systems. In other countries that use sub-band 873-876 MHz for GSM for railways, extended band (ER-GSM), access to the part 873-876 MHz by automotive SRD applications requires implementing additional mitigation measures such as transmission timing limitations as set out in ECC Report 200. See Appendix 3 for national implementation concerning ER-GSM and defence/governmental services.

Sub-bands f1, f2, f3 as well as d1 and d2:

Note that the regulation in the bands f1, f2, f3 for the band 24.05-24.25 GHz for automotive radars is without any plans for a time limit within CEPT (see document ECC(15)058). Only the bands d1 and d2 for Short Range Radar (SRR) are time limited.

## ANNEX 6: RADIODETERMINATION APPLICATIONS

### Scope of Annex

This annex covers frequency bands and regulatory as well as informative parameters recommended for SRD radiodetermination applications including Equipment for Detecting Movement and Alert. Radiodetermination is defined as the determination of the position, velocity and/or other characteristics of an object, or the obtaining of information relating to these parameters, by means of the propagation properties of radio waves.

**Table 6: Regulatory parameters**

| Frequency Band | | Power / Magnetic Field | Spectrum access and mitigation requirements | Modulation/ maximum occupied bandwidth | ECC/ERC deliverable | Notes |
|---|---|---|---|---|---|---|
| **a** | 2400.0-2483.5 MHz | 25 mW e.i.r.p. | No requirement | Not specified | ERC/DEC/(01)08 | |
| **b** | 9200-9500 MHz | 25 mW e.i.r.p. | No requirement | Not specified | | |
| **c** | 9500-9975 MHz | 25 mW e.i.r.p. | No requirement | Not specified | | |
| **d** | 10.5-10.6 GHz | 500 mW e.i.r.p. | No requirement | Not specified | | |
| **e** | 13.4-14.0 GHz | 25 mW e.i.r.p. | No requirement | Not specified | | |
| **f** | 24.05-24.25 GHz | 100 mW e.i.r.p. | No requirement | Not specified | | The frequency band 24.0–24.25 GHz is identified with the same emission parameters in Annex 1 band j |
| **g** | 4.5-7.0 GHz | -41.3 dBm/MHz e.i.r.p. outside the enclosed test tank structure | No requirement | Not specified | | For Tank Level Probing Radar (TLPR) |
| **h** | 8.5-10.6 GHz | -41.3 dBm/MHz e.i.r.p. outside the enclosed test tank structure | No requirement | Not specified | | For Tank Level Probing Radar (TLPR).<br>The radiated unwanted emissions within the frequency band 10.6-10.7 GHz outside the test tank enclosure shall be less than -60 dBm/MHz e.i.r.p. |
| **i** | 24.05-27.00 GHz | -41.3 dBm/MHz e.i.r.p. outside the enclosed test tank | No requirement | Not specified | | For Tank Level Probing Radar (TLPR) |

| Frequency Band | | Power / Magnetic Field | Spectrum access and mitigation requirements | Modulation/ maximum occupied bandwidth | ECC/ERC deliverable | Notes |
|---|---|---|---|---|---|---|
| | | structure | | | | |
| **j** | 57-64 GHz | -41.3 dBm/MHz e.i.r.p. outside the enclosed test tank structure | No requirement | Not specified | | For Tank Level Probing Radar (TLPR) |
| **k** | 75-85 GHz | -41.3 dBm/MHz e.i.r.p. outside the enclosed test tank structure | No requirement | Not specified | | For Tank Level Probing Radar (TLPR) |
| **l** | 6.0-8.5 GHz | * | * | Not specified | ECC/DEC/(11)02 | For Industrial Level Probing Radar (LPR).<br>*See detailed requirements in related ECC Decision |
| **m** | 24.05-26.5 GHz | * | * | Not specified | ECC/DEC/(11)02 | For Industrial Level Probing Radar (LPR).<br>*See detailed requirements in related ECC Decision |
| **n** | 57-64 GHz | * | * | Not specified | ECC/DEC/(11)02 | For Industrial Level Probing Radar (LPR).<br>*See detailed requirements in related ECC Decision |
| **o** | 75-85 GHz | * | * | Not specified | ECC/DEC/(11)02 | For Industrial Level Probing Radar (LPR).<br>*See detailed requirements in related ECC Decision |
| **p** | 17.1-17.3 GHz | 26 dBm e.i.r.p. | DAA | Not specified | | For Ground Based Synthetic Aperture Radar (GBSAR)<br>Specific requirements for the radar antenna pattern and for the implementation of Detect And Avoid (DAA) technique apply as described in EN 300 440 |
| **q** | 30 MHz-12.4 GHz | * | * | * | ECC/DEC/(06)08 | For Ground- and Wall- Probing Radar (GPR/WPR) imaging systems, subject to an appropriate licensing regime.<br>* See detailed requirements in related ECC Decision |
| **r** | 2.2-8 GHz | * | * | * | ECC/DEC/(07)01 | For Material Sensing Devices.<br>* See detailed requirements in related ECC Decision |
| **s1** | 3.1-4.8 GHz | * | * | * | ECC/REC/(11)09 | For UWB Location Tracking Systems Type 2 (LT2), subject to an appropriate licensing regime.<br>* See detailed requirements in related ECC Recommendation |

| Frequency Band | | Power / Magnetic Field | Spectrum access and mitigation requirements | Modulation/ maximum occupied bandwidth | ECC/ERC deliverable | Notes |
|---|---|---|---|---|---|---|
| **s2** | 3.1-4.8 GHz | * | * | * | ECC/REC/(11)10 | For UWB Location tracking application for emergency and disaster situations (LAES), subject to an appropriate licensing regime.<br>* See detailed requirements in related ECC Recommendation |

**Additional Information**

**Harmonised Standards**

EN 300 440 sub-bands a), b), c), d), e), f), p)
EN 302 372 sub-bands g), h), i), j), k)
EN 302 729 sub-bands l), m), n), and o)
EN 302 066 sub-band q)
EN 302 435 sub-band r)
EN 302 065 sub-bands s1), and s2)

**Technical parameters also referred to in the harmonised standard**

No information

**Frequency issues**

No information

## ANNEX 7: **ALARMS**

### Scope of Annex

This annex covers frequency bands and regulatory as well as informative parameters recommended exclusively for alarm systems including social alarms and alarms for security and safety.

The sub-bands below are intended for the following applications:

- Alarms in sub-bands a), b) ,c) and e);
- Social Alarms sub-band d).

**Table 7: Regulatory parameters**

| | Frequency Band | Power / Magnetic Field | Spectrum access and mitigation requirements | Modulation/ maximum occupied bandwidth | ECC/ERC deliverable | Notes |
|---|---|---|---|---|---|---|
| **a** | 868.600-868.700 MHz | 10 mW e.r.p. | ≤ 1.0 % duty cycle | 25 kHz | | The whole frequency band may also be used as 1 channel for high speed data transmissions |
| **b** | 869.250-869.300 MHz | 10 mW e.r.p. | ≤ 0.1 % duty cycle | 25 kHz | | |
| **c** | 869.650-869.700 MHz | 25 mW e.r.p. | ≤ 10 % duty cycle | 25 kHz | | |
| **d** | 869.200-869.250 MHz | 10 mW e.r.p. | ≤ 0.1 % duty cycle | 25 kHz | | Social Alarms |
| **e** | 869.300-869.400 MHz | 10 mW e.r.p. | ≤ 1.0 % duty cycle | 25 kHz | | |

### Additional Information

### Harmonised Standards

EN 300 220 all sub-bands

### Technical parameters also referred to in the harmonised standard

No information

### Frequency issues

No information

# ANNEX 8: **MODEL CONTROL**

## Scope of Annex

This annex covers frequency bands and regulatory as well as informative parameters recommended for the application of model control equipment, which is solely for the purpose of controlling the movement of the model, in the air, on land or over or under the water surface. Although the bands are not harmonised, the parameters given in the table are common in a majority of CEPT countries. It should be noted that the bands are not exclusive for this type of application.

**Table 8: Regulatory parameters**

| | Frequency Band | Power / Magnetic Field | Spectrum access and mitigation requirements | Modulation/ maximum occupied bandwidth | ECC/ERC deliverable | Notes |
|---|---|---|---|---|---|---|
| **a** | 26.995, 27.045, 27.095, 27.145, 27.195 MHz | 100 mW e.r.p | No requirement | 10 kHz | | |
| **b** | 34.995-35.225 MHz | 100 mW e.r.p | No requirement | 10 kHz | ERC/DEC/(01)11 | Only for flying models |
| **c** | 40.665, 40.675, 40.685, 40.695 MHz | 100 mW e.r.p | No requirement | 10 kHz | ERC/DEC/(01)12 | |

## Additional Information

### Harmonised Standards

EN 300 220 all sub-bands

### Technical parameters also referred to in the harmonised standard

No information

### Frequency issues

No information

## ANNEX 9: **INDUCTIVE APPLICATIONS**

### Scope of Annex

This annex covers frequency bands and regulatory as well as informative parameters recommended for inductive applications including for example car immobilisers, radio frequency identification (RFID) applications such as automatic article identification, asset tracking, alarm systems, waste management, personal identification, access control, proximity sensors, anti-theft systems, location systems, data transfer to handheld devices (e.g. NFC) and wireless control systems, animal identification, cable detection, wireless voice links, automatic road tolling and anti-theft systems including RF anti-theft induction systems (e.g. EAS). It should be noted that other types of anti-theft systems can be operated in accordance with other relevant annexes.

**Table 9: Regulatory parameters**

| Frequency Band | | Power / Magnetic Field | Spectrum access and mitigation requirements | Modulation/ maximum occupied bandwidth | ECC/ERC deliverable | Notes |
|---|---|---|---|---|---|---|
| **a1** | 9 - 90 kHz | 72 dBµA/m at 10m (note 1) | No requirement | Not specified | | In case of external antennas only loop coil antennas may be employed. Field strength level descending 3 dB/oct at 30 kHz |
| **a2** | 90-119 kHz | 42 dBµA/m at 10m | No requirement | Not specified | | In case of external antennas only loop coil antennas may be employed |
| **a3** | 119-135 kHz | 66 dBµA/m at 10m (note 1) | No requirement | Not specified | | In case of external antennas only loop coil antennas may be employed. Field strength level descending 3 dB/oct at 119 kHz |
| **b** | 135-140 kHz | 42 dBµA/m at 10m | No requirement | Not specified | | In case of external antennas only loop coil antennas may be employed |
| **c** | 140-148.5 kHz | 37.7 dBµA/m at 10m | No requirement | Not specified | | In case of external antennas only loop coil antennas may be employed |
| **d** | 6765-6795 kHz | 42 dBµA/m at 10m | No requirement | Not specified | | |
| **e** | 7400-8800 kHz | 9 dBµA/m at 10m | No requirement | Not specified | | |
| **f** | 13.553-13.567 MHz | 42 dBµA/m at 10m | No requirement | Not specified | | |
| **f1** | 13.410-13.553 MHz | 9 dBµA/m at 10m | No requirement | Not | | For RFID only, Only in connection with band f |

| Frequency Band | | Power / Magnetic Field | Spectrum access and mitigation requirements | Modulation/ maximum occupied bandwidth | ECC/ERC deliverable | Notes |
|---|---|---|---|---|---|---|
| | 13.567-13.710 MHz | | | specified | | |
| | 13.110-13.410 MHz<br>13.710-14.010 MHz | -3.5 dBµA/m at 10m | No requirement | Not specified | | For RFID only, Only in connection with band f |
| | 12.660-13.110 MHz<br>14.010-14.460 MHz | -10 dBµA/m at 10m | No requirement | Not specified | | For RFID only, Only in connection with band f |
| | 11.810-12.660 MHz<br>14.460-15.310 MHz | -16 dBµA/m at 10m | No requirement | Not specified | | For RFID only, Only in connection with band f |
| **f2** | 13.553-13.567 MHz | 60 dBµA/m at 10m | No requirement | Not specified | | For RFID and EAS only |
| **f3** | 13.460-13.553 MHz<br>13.567-13.660 MHz | 27 dBµA/m at 10m | No requirement | Not specified | | For RFID only, Only in connection with band f2 |
| | 13.360-13.460 MHz<br>13.660-13.760 MHz | Linear transition from 27 to -3.5 dBµA/m at 10m | No requirement | Not specified | | For RFID only, Only in connection with band f2 |
| | 13.110-13.360 MHz<br>13.760-14.010 MHz | -3.5 dBµA/m at 10m | No requirement | Not specified | | For RFID only, Only in connection with band f2 |
| | 12.660-13.110 MHz<br>14.010-14.460 MHz | -5 dBµA/m at 10m | No requirement | Not specified | | For RFID only, Only in connection with band f2 |
| **g** | 26.957-27.283 MHz | 42 dBµA/m at 10m | No requirement | Not specified | | |
| **h** | 10.200-11.000 MHz | 9 dBµA/m at 10m | No requirement | Not specified | | |
| **k** | 3155-3400 kHz | 13.5 dBµA/m at 10m | No requirement | Not specified | | In case of external antennas only loop coil antennas may be employed |
| **l1** | 148.5 kHz - 5 MHz | -15 dBµA/m at 10 m | No requirement | Not specified | | In case of external antennas only loop coil antennas may be employed.<br>*The maximum field strength is specified in a bandwidth of 10 kHz.The maximum allowed total field strength is*<br>*-5 dBµA/m at 10 m for systems operating at bandwidths larger than 10 kHz whilst keeping the density limit (-15 dBµA/m in a bandwidth of 10 kHz)* |
| **l2** | 5 - 30 MHz | -20 dBµA/m at 10 m | No requirement | Not | | In case of external antennas only loop coil antennas |

| Frequency Band | | Power / Magnetic Field | Spectrum access and mitigation requirements | Modulation/ maximum occupied bandwidth | ECC/ERC deliverable | Notes |
|---|---|---|---|---|---|---|
| | | | | specified | | may be employed.<br>*The maximum field strength is specified in a bandwidth of 10 kHz. The maximum allowed total field strength is -5 dBµA/m at 10 m for systems operating at bandwidths larger than 10 kHz whilst keeping the density limit (-20 dBµA/m in a bandwidth of 10 kHz)* |
| **I3** | 400 - 600 kHz | -8 dBµA/m at 10 m | No requirement | Not specified | | For RFID only.<br>In case of external antennas only loop coil antennas may be employed.<br>*The maximum field strength is specified in a bandwidth of 10 kHz. The maximum allowed total field strength is -5dBµA/m at 10 m for systems operating at bandwidths larger than 10 kHz measured at the centre frequency whilst keeping the density limit (-8dBµA/m in a bandwidth of 10 kHz.)*<br>These systems should operate with a minimum operating bandwidth of 30 kHz |
| Note 1: The limit is reduced to 42 dBµA/m at 10 m according to Table 10 | | | | | | |

**Table 10: Standard frequency and time signals to be protected within 9 - 90 kHz and 119 - 135 kHz**

| Stations | Frequency | Protection bandwidth | Maximum field strength at 10 m | Location |
|---|---|---|---|---|
| MSF | 60 kHz | +/-250Hz | 42 dBµA/m | United Kingdom |
| RBU | 66.6 kHz | +/-750Hz | 42 dBµA/m | Russian Federation |
| HBG | 75 kHz | +/-250Hz | 42 dBµA/m | Switzerland |
| DCF77 | 77.5 kHz | +/-250Hz | 42 dBµA/m | Germany |
| DCF49 | 129.1 kHz | +/-500Hz | 42 dBµA/m | Germany |

**Additional Information**

**Harmonised Standards**

EN 300 330 all sub-bands

**Technical parameters also referred to in the harmonised standard**

Sub-band a3):
RFIDs operating in the frequency sub-band 119-135 kHz shall meet the spectrum mask given in EN 300 330. This will permit a simultaneous use of the various sub-bands within the range 90-148.5 kHz.

Sub-bands f) and f2):
RFIDs operating in the frequency band 13.56 MHz shall meet the spectrum masks given in the EN 300 330. This will permit the simultaneous use of the sub-band f) together with the limits the sub-bands f1), I1) and I2). The same applies for the sub-band f2) in in conjunction with the limits in sub-band f3).

**Frequency issues**

Users should be aware that emissions from inductive applications could cause interference to nearby receivers of other radio services.

In case of loop antennas used within bands a1) and a3) integral or dedicated within an area between 0.05 $m^2$ and 0.16 $m^2$, the field strength is reduced by 10 * log (area/0.16 $m^2$); for an antenna area less than 0.05 $m^2$ the field strength is reduced by 10 dB.

Particular attention should also be paid to the more stringent protection requirements identified by the ITU for global distress and safety communications frequencies in the same or adjacent bands.

# ANNEX 10: RADIO MICROPHONE APPLICATIONS INCLUDING ASSISTIVE LISTENING DEVICES (ALD)

## Scope of Annex

This annex covers frequency bands and regulatory as well as informative parameters recommended for radio microphone applications (also referred to as wireless microphones or cordless microphones) including Assistive Listening Devices (ALD) (also referred to as aids for the hearing impaired). Radio microphones are small, low power (typically 50 mW or less) transmitters designed to be worn on the body, or hand held, for the transmission of sound. The receivers are tailored to specific uses and may range from small and portable to rack mounted modules as part of a multichannel system. This annex covers professional and consumer radio microphones, both hand-held and body-worn, and Assistive Listening Devices (ALD).

Because of the difficulty in determining harmonised frequency bands for radio microphones, frequency band limits should be regarded as tuning ranges within which a device can be designated to operate. In most cases, Appendix 3 indicates those parts of the range that are not available in individual countries but this does not apply to the broadcasting bands at 174-216 MHz and 470-862 MHz where national geographical and licensing restrictions are likely to exist and the national administration should be contacted.

The sub-bands below are intended for the following applications:

- ALD: sub-bands b), c), c1), h1), h2), i)
- Radio microphones: sub-bands a), c), d), e1), e2), e3), e4), f), g), g1), j).

ALD are specific radio microphone applications which capture an acoustic signal that is transmitted by radio to the hearing aid receivers.

**Table 11: Regulatory parameters**

| Frequency Band | | Power / Magnetic Field | Spectrum access and mitigation requirements | Modulation/ maximum occupied bandwidth | ECC/ERC deliverable | Notes |
|---|---|---|---|---|---|---|
| **a** | 29.7-47.0 MHz | 10 mW e.r.p. | No requirement | ≤ 50 kHz | | On a tuning range basis<br>The frequency bands 30.3-30.5 MHz, 32.15-32.45 MHz and 41.015-47.00 MHz are harmonised military bands.<br>Individual licence may be required |
| **b** | 173.965-216 MHz | 10 mW e.r.p. | Notes 1 and 2 requirement | ≤ 50 kHz | ECC Report 230 | For Assistive Listening Device (ALD) systems.<br>On a tuning range basis.<br>Individual licence may be required |
| **c** | 863-865 MHz | 10 mW e.r.p. | No requirement | Not specified | | The frequency band is also identified in Annex 13 |

| Frequency Band | | Power / Magnetic Field | Spectrum access and mitigation requirements | Modulation/ maximum occupied bandwidth | ECC/ERC deliverable | Notes |
|---|---|---|---|---|---|---|
| **c1** | 916.1-916.5 MHz,<br>917.3-917.7 MHz,<br>918.5-918.9 MHz,<br>919.7-920.1 MHz | 10 mW e.r.p. | ≤ 25 % duty cycle | ≤ 400 kHz | | Indoor Digital Assistive Listening Device systems.<br>The frequency band is also identified in Annexes 1 and 11 |
| **d** | 174-216 MHz | 50 mW e.r.p. | No requirement | Not specified | | On a tuning range basis.<br>Individual licence may be required |
| **e1** | 470-786 MHz | 50 mW e.r.p. | No requirement | Not specified | | On a tuning range basis.<br>Individual licence may be required |
| **e2** | 786-789 MHz | 12 mW e.r.p. | No requirement | Not specified | | On a tuning range basis.<br>Individual licence may be required.<br>See technical conditions for PMSE (including radio microphones) in Annex 3 of Decision ECC/DEC/(09)03 section 3.1 |
| **e3** | 823-826 MHz | 20 mW e.i.r.p.<br>100 mW e.i.r.p. | No requirement | ≤ 200 kHz | | Individual licence may be required.<br>100 mW restricted to body worn equipment.<br>See technical conditions for PMSE (including radio microphones) in Annex 3 of Decision ECC/DEC/(09)03 section 3.1 |
| **e4** | 826-832 MHz | 100 mW e.i.r.p. | No requirement | ≤ 200 kHz | | Individual licence may be required.<br>See technical conditions for PMSE (including radio microphones) in Annex 3 of Decision ECC/DEC/(09)03 section 3.1 |
| **f** | 1785-1795 MHz | 20 mW e.i.r.p.<br>50 mW e.i.r.p. | No requirement | Not specified | | Individual licence may be required.<br>50 mW restricted to body worn equipment |
| **g** | 1795-1800 MHz | 20 mW e.i.r.p.<br>50 mW e.i.r.p. | No requirement | Not specified | | Individual licence may be required.<br>50 mW restricted to body worn equipment.<br>The frequency band is also identified in Annex 13 |
| **g1** | 1800-1804.8 MHz | 20 mW e.i.r.p.<br>50 mW e.i.r.p. | No requirement | Not specified | | Individual licence may be required.<br>50 mW restricted to body worn equipment |
| **h1** | 169.4000-169.4750 MHz | 10 mW e.r.p.<br><br>500 mW e.r.p. | No requirement<br><br>No requirement | ≤ 50 kHz<br><br>≤ 50 kHz | ECC/DEC/(05)02<br><br>ECC/DEC/(05)02 | Assistive Listening Device (ALD).<br>(Personal Hearing Aid System)<br>Assistive Listening Device (ALD). |

| Frequency Band | | Power / Magnetic Field | Spectrum access and mitigation requirements | Modulation/ maximum occupied bandwidth | ECC/ERC deliverable | Notes |
|---|---|---|---|---|---|---|
| | | | | | | (Public Hearing Aid System).<br>Individual licence may be required |
| **h2** | 169.4875-169.5875 MHz | 10 mW e.r.p. | No requirement | ≤ 50 kHz | ECC/DEC/(05)02 | Assistive Listening Device (ALD).<br>(Personal Hearing Aid System) |
| | | 500 mW e.r.p. | No requirement | ≤ 50 kHz | ECC/DEC/(05)02 | Assistive Listening Device (ALD).<br>(Public Hearing Aid System).<br>Individual licence may be required |
| **I** | 169.4-174.0 MHz | 10 mW e.r.p. | No requirement | ≤ 50 kHz | | Assistive Listening Device (ALD).<br>On a tuning range basis |
| **j** | 1492- 1518 MHz | 50 mW e.i.r.p | No requirement | Not specified | | On a tuning range basis.<br>Individual licence required.<br>Restricted to indoor use |

Note 1: a threshold of 35 dBµV/m is required to ensure the protection of a DAB receiver located at 1.5m from the ALD device, subject to DAB signal strength measurements taken around the ALD operating site.
Note 2: the ALD device should operate under all circumstances at least 300 kHz away from the channel edge of an occupied DAB channel.

## Additional Information

### Harmonised Standards

| | |
|---|---|
| EN 300 422 | all sub-bands |
| EN 301 357 | sub-band c) |

### Technical parameters also referred to in the harmonised standard

No information

### Frequency Issues

Sub-band b):

ECC Report 230 provides information on ALD frequency issues in the frequency band 174-216 MHz including an example for an on-site measurement procedure. It should be noted that ALD applications are a secondary, un-protected application and may need to move in frequency, if changes of the primary service take place.

Sub-band c1):

The available channel centre frequencies are 916.3 MHz, 917.5 MHz, 918.7 MHz and 919.9 MHz.

Use of all or part of sub-band c1) may be denied in some European countries that use all or part of these sub-bands for defence/governmental systems or, in some countries that use sub-band 918-921 MHz for GSM for railways, extended band (ER-GSM). See Appendix 3 for national implementation concerning ER-GSM and defence/governmental services.

Sub-bands e2), e3), e4):

Some national administrations which have not introduced mobile/fixed communication networks (MFCN) in accordance with Decision ECC/DEC/(09)03 may authorise larger parts or the whole of the band 786-862 MHz to be used by radio microphones.

# ANNEX 11: **RADIO FREQUENCY IDENTIFICATION APPLICATIONS**

## Scope of Annex

This annex covers frequency bands and regulatory as well as informative parameters recommended for radio frequency identification (RFID) applications including for example automatic article identification, asset tracking, alarm systems, waste management, personal identification, access control, proximity sensors, anti-theft systems, location systems, data transfer to handheld devices and wireless control systems. It should be noted that other types of RFID systems can be operated in accordance with other relevant annexes.

**Table 12: Regulatory parameters**

| Frequency Band | | Power / Magnetic Field | Spectrum access and mitigation requirements | Modulation/ maximum occupied bandwidth | ECC/ERC deliverable | Notes |
|---|---|---|---|---|---|---|
| **a1** | 2446-2454 MHz | ≤ 500 mW e.i.r.p. | No requirement | Not specified | | |
| **a2** | 2446-2454 MHz | > 500 mW to 4 W e.i.r.p | ≤ 15% duty cycle FHSS techniques should be used | Not specified | | Power levels above 500 mW are restricted to be used inside the boundaries of a building and the duty cycle of all transmissions shall in this case be ≤15 % in any 200 ms period (30 ms on /170 ms off). |
| **b1** | 865.0-865.6 MHz | 100 mW e.r.p. | No requirement | ≤ 200 kHz | | |
| **b2** | 865.6-867.6 MHz | 2 W e.r.p. | No requirement | ≤ 200 kHz | | |
| **b3** | 867.6-868.0 MHz | 500 mW e.r.p. | No requirement | ≤ 200 kHz | | |
| **c** | 915-921 MHz | 4 W e.r.p. (note 1) | For ER-GSM protection (918-921 MHz, where applicable), DAA is required | ≤ 400 kHz | | The frequency band is also identified in Annexes 1 and 10.<br>Operation only when necessary to perform the intended operation, i.e. when RFID tags are expected to be present |

Note 1: Interrogator transmissions in band c at 4 W e.r.p, are only permitted within the four channels centred at 916.3 MHz, 917.5 MHz, 918.7 MHz and 919.9 MHz; each with a maximum bandwidth of 400 kHz.

## Additional Information

### Harmonised Standards

EN 300 440 Sub-bands a1) and a2)
EN 300 761 Sub-band a1)
EN 302 208 Sub-bands b1), b2), b3) and c)

### Technical parameters also referred to in the harmonised standard

Sub-band a2):
In addition, antenna beamwidth limits shall be observed as described in the standard EN 300 440.

In addition, for an RFID device which can exceed 500 mW, the device should be fitted with an automatic power control to reduce the radiated power below 500 mW; this automatic power control shall guarantee the reduction of the power to a maximum of 500 mW in cases where the device is moved and used outside the boundary of the user's building or premises as described above.

### Frequency issues

Sub-band a2):

To assist enforcement authorities any emissions from an RFID device when measured outside of the building at a distance of 10 metres shall not exceed the field strength from a 500 mW RFID device mounted outside the building when measured at the same distance. Where a building consists of a number of premises, such as shops within a shopping arcade or Mall then the measurements shall be referenced to the boundary of the user's premises within the building.

Sub-bands b1), b2) and b3):
Channel centre frequencies are 864.9 MHz + (0.2 MHz * channel number).

The available channel numbers for each sub-band are:

b1: channel numbers 1 to 3
b2: channel numbers 4 to 13
b3: channel numbers 14 to 15.

Note: The same equipment is allowed to operate in several sub-bands.

Frequency hopping or other spread spectrum techniques shall not be used.

Sub-band c):
Use of all or part of sub-band c) may be denied in some European countries that use all or part of these sub-bands for defence/governmental systems. In other countries that use sub-band 918-921 MHz for GSM for railways, extended band (ER-GSM), access to the part 918-921 MHz by UHF RFID applications requires implementation of additional mitigation measures such as Detect-And-Avoid (DAA) as set out in ECC Report 200. See Appendix 3 for national implementation concerning ER-GSM and defence/governmental services.

## ANNEX 12: ACTIVE MEDICAL IMPLANTS AND THEIR ASSOCIATED PERIPHERALS

### Scope of Annex

This annex covers frequency bands and regulatory as well as informative parameters recommended for Active Medical Implants and their associated peripherals.

**Table 13: Regulatory parameters**

| Frequency Band | | Power / Magnetic Field | Spectrum access and mitigation requirements | Modulation/ maximum occupied bandwidth | ECC/ERC deliverable | Notes |
|---|---|---|---|---|---|---|
| **a** | 9-315 kHz | 30 dBµA/m at 10m | ≤ 10% duty cycle | Not specified | | The application is for Ultra Low Power Active Medical Implant systems using inductive loop techniques for telemetry purposes |
| **b** | 315-600 kHz | -5 dBµA/m at 10m | ≤ 10% duty cycle | Not specified | | The application is for animal implantable devices |
| **C** | 30.0-37.5 MHz | 1 mW e.r.p. | ≤ 10% duty cycle | Not specified | | The application is for Ultra Low Power medical membrane implants for blood pressure measurements |
| **d** | 12.5-20.0 MHz | -7 dBµA/m at 10m | ≤ 10% duty cycle | Not specified | | The application is for ULP active animal implantable devices (ULP-AID), limited to indoor only applications.<br>The maximum field strength is specified in a bandwidth of 10 kHz.<br>The transmission mask of ULP-AID is defined as follows:<br>3dB bandwidth 300 kHz;<br>10dB bandwidth 800 kHz;<br>20dB bandwidth 2 MHz |
| **e** | 2483.5-2500 MHz | 10 dBm e.i.r.p. | LBT+AFA and<br>≤ 10% duty cycle.<br>The equipment shall implement a spectrum access mechanism as described in the applicable harmonised standard or an equivalent spectrum access mechanism | 1 MHz | | For Low Power Active Medical Implants and associated peripherals, covered by the applicable harmonised standard.<br>Individual transmitters may combine adjacent channels on a dynamic basis for increased bandwidth higher than 1 MHz.<br>Peripheral units are for indoor use only |

## Additional Information

### Harmonised Standards

| | |
|---|---|
| EN 302 195 | Sub-band a) |
| EN 302 536 | Sub-band b) |
| EN 302 510 | Sub-band c) |
| EN 300 330 | Sub-band d) |
| EN 301 559 | Sub-band e) |

### Technical parameters also referred to in the harmonised standard

No information.

### Frequency issues

## ANNEX 13: **WIRELESS AUDIO APPLICATIONS**

### Scope of Annex

This annex covers frequency bands and regulatory as well as informative parameters recommended for applications for wireless audio and multimedia streaming systems including the following, cordless loudspeakers; cordless headphones; cordless headphones for portable use, for example portable CD, cassette or radio devices carried on a person; cordless headphones for use in a vehicle, for example for use with a radio or mobile telephone etc; in-ear monitoring, for use with concerts or other stage productions.

**Table 14: Regulatory parameters**

| Frequency Band | | Power / Magnetic Field | Spectrum access and mitigation requirements | Modulation/ maximum occupied bandwidth | ECC/ERC deliverable | Notes |
|---|---|---|---|---|---|---|
| **a** | 863-865 MHz | 10 mW e.r.p. | No requirement | Not specified | | Wireless Audio and Multimedia Streaming Devices. The frequency band is also identified in Annex 10 |
| **b** | 864.8-865.0 MHz | 10 mW e.r.p. | No requirement | 50 kHz | | Narrow band analogue voice devices |
| **c** | 1795-1800 MHz | 20 mW e.i.r.p. | No requirement | Not specified | | The frequency band is also identified in Annex 10 |
| **d** | 87.5-108.0 MHz | 50 nW e.r.p. | No requirement | 200 kHz | | |

### Additional Information

**Harmonised Standards**

EN 301 357 sub-bands a) c) and d)
EN 300 220 sub-band b)

**Technical parameters also referred to in the harmonised standard**

Systems should be designed so that when not in use there should be no transmission of an RF carrier.

Sub-band d):
The user interface of SRD shall permit as a minimum the selection of any and all possible frequencies within the 88.1 MHz to 107.9 MHz and as a maximum 87.6 MHz to 107.9 MHz.

When audio signals are not present, apparatus must employ a transmission time out facility. Pilot tones that ensure continuity of transmission are not permitted.

**Frequency issues**

Sub-band b):
Narrow band analogue voice devices, such as baby voice monitors, door entry systems etc should only use the band b) 864.8-865 MHz.

## APPENDIX 1: NATIONAL IMPLEMENTATION

The CEPT country codes (abbreviations) can be seen under http://www.cept.org/cept/cept-country-codes

| Annexes to ERC/REC 70-03 | AUT | BEL | BUL | CZE | CYP | DNK | EST | FIN | F | D | HRV | GRC | HNG | ISL | IRL | I | LVA | LIE | LTU | LUX | MLT | HOL | NOR | POL | POR | ROU | SVK | SVN | E | SUI | S | G |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ***Annex 1 - Non-Specific SRDs*** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Annex 1A: 6765-6795 kHz | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| Annex 1B: 13.553-13.567 MHz | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| Annex 1C: 26.957-27.283 MHz | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| Annex 1C1: 26.995, 27.045, 27.095, 27.145, 27.195 MHz | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| Annex 1D: 40.660-40.700 MHz | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| Annex 1E: 138.20-138.45 MHz | Y | N | Y | Y | Y | Y | Y | Y | N | N | Y | Y | N | Y | Y | N | N | N | Y | Y | Y | N | Y | N | Y | Y | N | N | N | N | N | Y |
| Annex 1E1: 169.4000-169.4750 MHz | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| Annex 1E2: 169.4000-169.4875 MHz } DEC/(05)02 | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| Annex 1E3: 169.4875-169.5875 MHz | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| Annex 1E4: 169.5875-169.8125 MHz | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| Annex 1F: 433.050-434.790 MHz | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| Annex 1F1: 433.050-434.790 MHz | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| Annex 1F2: 434.040-434.790 MHz | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| Annex 1G1: 863-870 MHz | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | L | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | L | Y | Y | Y | Y | Y | L | Y | N | Y |
| Annex 1G1.1: 868.000-868.600 MHz | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| Annex 1G1.2: 868.700-869.200 MHz | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| Annex 1G1.3: 869.400-869.650 MHz | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| Annex 1G1.4: 869.700-870.000 MHz | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| Annex 1G2: 870-876 MHz | U | N | N | N | N | Y | N | L | N | N | N | N | N | N | N | N | N | L | N | N | N | N | N | N | N | N | Y | Y | N | L | Y | Y |
| Annex 1G2.1: 870.000-875.800 MHz | U | N | N | N | N | Y | N | L | N | N | N | N | N | N | N | N | N | L | N | N | N | N | N | N | N | N | Y | Y | N | L | Y | Y |
| Annex 1G3: 915-921 MHz | U | N | N | N | N | Y | N | N | N | N | N | N | N | N | N | N | N | L | N | N | N | N | N | N | N | N | Y | Y | N | L | Y | Y |
| Annex 1G3.1: 915.2-920.8 MHz | U | N | N | N | N | Y | N | N | N | N | N | N | N | N | N | N | N | L | N | N | N | N | N | N | N | N | Y | Y | N | L | Y | Y |
| Annex 1H: 2400.0-2483.5 MHz | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| Annex 1I: 5725-5875 MHz | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| Annex 1J: 24.00–24.25 GHz | Y | Y | Y | Y | Y | Y | Y | Y | L | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | L |
| Annex 1K: 61.0-61.5 GHz | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| Annex 1K1: 57-64 GHz | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| Annex 1L: 122.00-122.25 GHz | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| Annex 1L1: 122.25-123.00 GHz | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| Annex 1M: 244-246 GHz | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| Annex 1N: 3.1-4.8 GHz } DEC/(06)04 | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| Annex 1N: 6-9 GHz | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| Annex 1N1: 6.0-8.5 GHz DEC/(12)03 | P | P | P | P | P | Y | Y | Y | P | P | Y | P | L | P | P | P | P | Y | L | Y | P | Y | P | P | P | P | P | Y | P | Y | P | L |

Highlighted yellow = not implemented  Y=implemented  L=limited implementation  P=planned  U=under study

| Annexes to ERC/REC 70-03 | AUT | BEL | BUL | CZE | CYP | DNK | EST | FIN | F | D | HRV | GRC | HNG | ISL | IRL | I | LVA | LIE | LTU | LUX | MLT | HOL | NOR | POL | POR | ROU | SVK | SVN | E | SUI | S | G |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ***Annex 2 - Tracking, Tracing and Data Acquisition*** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Annex 2A: (*457 kHz) 456.9-457.1 kHz | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| Annex 2B: 169.400-169.475 MHz **DEC/(05)02** | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| Annex 2C: 870.000-875.600 MHz | U | N | N | N | N | Y | N | L | N | N | N | N | N | N | N | N | N | P | N | N | N | N | N | N | N | N | N | Y | N | P | N | Y |
| Annex 2D1: 2483.5-2500 MHz | Y | N | N | N | N | Y | N | P | N | Y | N | N | N | N | N | N | N | Y | N | N | N | P | N | N | N | N | N | Y | N | Y | N | N |
| Annex 2D2: 2483.5-2500 MHz | Y | N | N | N | N | Y | N | P | N | Y | N | N | N | N | N | N | N | Y | N | N | N | P | N | N | N | N | N | Y | N | Y | N | N |
| Annex 2E: 5725-5875 MHz | | | | | | | | | | | | | | | | | | | | | | P | | | | | | | | | | |
| ***Annex 3 - Wideband Data Transmission Systems*** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Annex 3A: 2400.0-2483.5 MHz | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| Annex 3B: 57–66 GHz | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| ***Annex 4 - Railway Applications*** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Annex 4A: (*27.095 MHz) 27.090-27.100 MHz | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| Annex 4B: (*4234 kHz) 984-7484 kHz | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| Annex 4C: (*13.547 MHz) 7.3-23.0 MHz | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| Annex 4D: 76-77 GHz | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| ***Annex 5 - Transport and Traffic Telematics - TTT*** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Annex 5A: 870.000-875.800 MHz | N | N | N | N | N | Y | N | L | N | N | N | N | N | N | N | N | N | L | N | N | N | N | N | N | N | N | N | Y | N | L | N | Y |
| Annex 5B.1: 5795–5805 MHz | Y | Y | Y | Y | Y | Y | Y | Y | L | Y | Y | Y | Y | Y | L | Y | Y | L | Y | Y | L | Y | L | Y | Y | Y | Y | Y | Y | L | Y | L |
| Annex 5B.2: 5805-5815 MHz | Y | Y | Y | Y | Y | Y | Y | Y | N | Y | P | Y | Y | Y | L | Y | Y | L | Y | Y | L | Y | L | Y | Y | Y | Y | Y | Y | L | Y | L |
| Annex 5C: 76-77 GHz | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| Annex 5D1: 21.65-26.65 GHz } **DEC(04)10** | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| Annex 5D2: 24.25-26.65 GHz } | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| Annex 5E: 77-81 GHz **DEC(04)03** | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| Annex 5F1: 24.050-24.075 GHz | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| Annex 5F2: 24.075-24.150 GHz | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| Annex 5F3: 24.150-24.250 GHz | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| Annex 5G1: 24.250-24.495 GHz | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| Annex 5G2: 24.495-24.500 GHz | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| Annex 5G3: 24.250-24.500 GHz | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| ***Annex 6 - Radiodetermination applications*** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Annex 6A: 2400.0-2483.5 MHz **DEC/(01)08** | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| Annex 6B: 9200-9500 MHz | Y | Y | Y | Y | Y | Y | Y | N | N | Y | Y | Y | Y | Y | Y | N | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | N | Y | N | L |
| Annex 6C: 9500-9975 MHz | Y | Y | Y | Y | Y | Y | Y | Y | L | N | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | N | Y | N | Y | N | L |
| Annex 6D:10.5-10.6 GHz | N | Y | Y | N | Y | Y | N | L | L | N | Y | Y | L | Y | L | Y | Y | Y | Y | L | Y | Y | Y | Y | Y | Y | N | Y | Y | Y | L | L |
| Annex 6E:13.4-14.0 GHz | Y | Y | Y | Y | Y | Y | Y | Y | N | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | N | Y | N | Y |
| Annex 6F: 24.05-24.25 GHz | Y | Y | Y | Y | Y | Y | Y | Y | L | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | L |
| Annex 6G: 4.5-7.0 GHz | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| Annex 6H: 8.5-10.6 GHz | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| Annex 6I: 24.05-27.0 GHz | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| Annex 6J: 57-64 GHz | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| Annex 6K: 75-85 GHz | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| Annex 6L: 6.0-8.5 GHz | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| Annex 6M: 24.05-26.5 GHz } **DEC(11)02** | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| Annex 6N: 57-64 GHz } | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| Annex 6O: 75-85 GHz } | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| *)Center frequency for the band | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Highlighted yellow = not implemented | | | Y=implemented | | | | | L=limited implementation | | | | | | | | | | P=planned | | | | | | | | | U=under study | | | | | |

| Annexes to ERC/REC 70-03 | AUT | BEL | BUL | CZE | CYP | DNK | EST | FIN | F | D | HRV | GRC | HNG | ISL | IRL | I | LVA | LIE | LTU | LUX | MLT | HOL | NOR | POL | POR | ROU | SVK | SVN | E | SUI | S | G |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ***Annex 6 - Radiodetermination applications - continue*** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Annex 6P: 17.1-17.3 GHz | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| Annex 6Q: 30 MHz-12.4 GHz **DEC/(06)08** | L | U | Y | Y | U | Y | Y | Y | L | Y | Y | N | Y | Y | L | N | Y | Y | U | Y | Y | Y | Y | Y | Y | Y | Y | Y | U | Y | N | L |
| Annex 6R: 2.2-8.0 GHz **DEC/(07)01** | L | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | L | Y | Y | Y | L | Y | Y | L | Y | L | Y | Y | Y | L | Y | Y | Y | L | Y | L | L |
| Annex 6S1: 3.1-4.8 GHz **REC/(11)09** | U | | N | Y | | Y | P | N | U | N | Y | | Y | N | N | | U | | N | P | | P | Y | | U | | Y | Y | N | U | Y | Y |
| Annex 6S2: 3.1-4.8 GHz **REC/(11)10** | U | | N | Y | | Y | P | N | P | N | Y | | Y | N | N | | U | | N | P | | Y | Y | | U | | Y | Y | N | U | Y | Y |
| ***Annex 7 - Alarms*** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Annex 7A: 868.600-868.700 MHz | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| Annex 7B: 869.250-869.300 MHz | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| Annex 7C: 869.650-869.700 MHz | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| Annex 7D: 869.200-869.250 MHz | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| Annex 7E: 869.300-869.400 MHz | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| ***Annex 8 - Model Control*** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Annex 8A: 26.995,27.045,27.095,27.145,27.195 MHz | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| Annex 8B: 34.995-35.225 MHz **DEC/(01)11+12** | Y | Y | Y | Y | Y | Y | Y | Y | L | L | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| Annex 8C: 40.665,40.675 40.685,40.695 MHz | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| ***Annex 9 - Inductive Applications*** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Annex 9A1: 9-90 kHz | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| Annex 9A2: 90-119 kHz | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| Annex 9A3: 119-135 kHz | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| Annex 9B: 135-140 kHz | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| Annex 9C 140.0-148.5 kHz | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| Annex 9D: 6765-6795 kHz | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| Annex 9E: 7400-8800 kHz | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| Annex 9F: 13.553-13.567 MHz | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| Annex 9F1: 14.410-13.553 / 13.567-13.710 MHz / 13.110-13.410 / 13.710-14.010 / 12.660-13.110 MHz / 14.010-14.460 / 11.810-12.660 / 14.460-15.310 MHz | N | N | N | N | N | N | N | Y | N | N | N | N | N | N | N | N | N | Y | N | N | N | Y | N | N | N | N | N | Y | P | Y | N | Y |
| Annex 9F2: 13.553-13.567 MHz | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| Annex 9F3: 13.460-13.553 / 13.567-13.660 MHz / 13.360-13.460 / 13.660-13.760 / 13.110-13.360 MHz / 13.760-14.010 / 12.660-13.110 / 14.010-14.460 MHz | N | N | N | N | N | N | N | Y | N | N | N | N | N | N | N | N | N | Y | N | N | N | Y | N | N | N | N | N | Y | P | Y | N | L |
| Annex 9G: 26.957-27.283 MHz | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| Annex 9H: 10.200-11.000 MHz | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| Annex 9K: 3155-3400 kHz | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| Annex 9L1: 148.5 kHz-5 MHz | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| Annex 9L2: 5-30 MHz | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| Annex 9L3: 400-600 kHz | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |

Highlighted yellow = not implemented  Y=implemented  L=limited implementation  P=planned  U=under study

| Annexes to ERC/REC 70-03 | AUT | BEL | BUL | CZE | CYP | DNK | EST | FIN | F | D | HRV | GRC | HNG | ISL | IRL | I | LVA | LIE | LTU | LUX | MLT | HOL | NOR | POL | POR | ROU | SVK | SVN | E | SUI | S | G |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ***Annex 10 – Radio microphone applications including aids for the hearing impaired*** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Annex 10A: 29.7-47.0 MHz | L | Y | Y | L | Y | Y | L | L | L | L | N | L | L | Y | Y | L | Y | L | L | L | L | Y | L | Y | N | L | L | Y | L | L | L | N |
| Annex 10B: 173.965-216 MHz | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Annex 10C: 863-865 MHz | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | L | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| Annex 10C1: 916.1-916.5 MHz / 917.3-917.7 MHz | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | Y | N | N | N | N | N | N | N | N | N | Y | N | Y | N | Y |
| Annex 10C1: 918.5-918.9 MHz / 919.7-920.1 MHz | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | Y | N | N | N | Y |
| Annex 10D: 174-216 MHz | Y | Y | Y | Y | Y | L | Y | Y | L | Y | Y | Y | Y | Y | N | Y | Y | Y | Y | Y | N | Y | N | Y | Y | Y | Y | Y | L | Y | Y | Y |
| Annex 10E1: 470-786 MHz | Y | Y | Y | Y | Y | Y | Y | L | L | L | Y | L | Y | Y | Y | L | Y | Y | L | Y | L | Y | L | L | Y | Y | Y | Y | Y | Y | Y | Y |
| Annex 10E2: 786-789 MHz | L | P | N | Y | N | Y | Y | L | L | Y | N | L | N | Y | Y | N | N | Y | L | Y | N | Y | N | L | Y | N | N | Y | N | Y | N | Y |
| Annex 10E3: 823-826 MHz | L | P | N | Y | N | Y | U | Y | L | Y | N | N | N | Y | Y | N | N | Y | L | Y | N | Y | N | L | N | N | N | Y | Y | Y | L | P |
| Annex 10E4: 826-832 MHz | L | P | N | Y | N | Y | U | Y | L | Y | N | N | N | Y | Y | N | N | Y | L | Y | N | Y | N | L | N | N | N | Y | Y | Y | L | P |
| Annex 10F: 1785-1795 MHz | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | N | N | Y | Y | Y | Y | P | Y | Y | Y | Y | Y | N | Y | Y | Y | Y | Y |
| Annex 10G: 1795-1800 MHz | Y | Y | Y | L | Y | Y | Y | Y | Y | Y | L | Y | Y | Y | N | N | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| Annex 10G1: 1800-1804.8 MHz | P | N | N | N | N | Y | N | Y | N | Y | N | N | N | N | N | N | N | P | N | N | N | N | N | N | N | N | N | Y | N | P | N | N |
| Annex 10H1: 169.4000-169.4750 MHz } DEC/(05)02 | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| Annex 10H2: 169.4875-169.5875 MHz } DEC/(05)02 | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| Annex 10I: 169.4-174.0 MHz | N | N | N | L | N | Y | Y | N | N | Y | Y | N | N | N | N | L | Y | N | Y | Y | N | P | Y | N | N | Y | U | Y | L | N | Y | L |
| Annex 10J: 1492-1518 MHz | P | N | N | N | N | N | N | N | N | Y | N | N | N | N | N | N | N | U | N | Y | N | N | N | N | N | N | N | Y | N | U | N | L |
| ***Annex 11 - Radio Frequency Identification Applications*** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Annex 11A1: 2446-2454 MHz | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| Annex 11A2: 2446-2454 MHz | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| Annex 11B1: 865.0-865.6 MHz | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| Annex 11B2: 865.6-867.6 MHz | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| Annex 11B3: 867.6-868.0 MHz | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| Annex 11C: 915-921 MHz | N | N | N | N | N | Y | N | N | N | N | N | N | N | N | N | N | N | L | N | N | N | N | N | N | N | N | N | Y | N | L | N | Y |
| ***Annex 12 - Active Medical Implants and their associated peripherals*** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Annex 12A: 9-315 kHz | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| Annex 12B: 315-600 kHz | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| Annex 12C: 30.0-37.5 MHz | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| Annex 12D: 12.5-20.0 MHz | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| Annex 12E: 2483.5-2500 MHz | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| ***Annex 13 - Wireless Audio Applications*** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Annex 13A: 863-865 MHz | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| Annex 13B: 864.8-865.0 MHz | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| Annex 13C: 1795-1800 MHz | U | Y | Y | Y | Y | Y | Y | L | N | Y | N | Y | Y | Y | N | N | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | N | Y | Y | Y | Y | L |
| Annex 13D: 87.5-108.0 MHz | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| Highlighted yellow = not implemented | | | Y=implemented | | | | | L=limited implementation | | | | | | | | | | P=planned | | | | | | | | | U=under study | | | | | |

| Annex to ERC/REC 70-03 | AND | ALB | AZE | BIH | BLR | GEO | MDA | MKD | MNE | RUS | SRB | TUR | UKR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ***Annex 1 - Non-Specific SRDs*** | | | | | | | | | | | | | |
| Annex 1A: 6765-6795 kHz | Y | Y | | Y | Y | N | Y | Y | Y | N | Y | Y | L |
| Annex 1B: 13.553-13.567 MHz | Y | Y | | Y | Y | N | Y | Y | Y | Y | Y | Y | N |
| Annex 1C: 26.957-27.283 MHz | Y | Y | | Y | Y | N | Y | Y | Y | Y | Y | Y | N |
| Annex 1C1: 26.995, 27.045, 27.095, 27.145, 27.195 MHz | Y | Y | | N | Y | N | Y | N | N | N | N | N | N |
| Annex 1D: 40.660-40.700 MHz | Y | Y | | Y | Y | N | Y | Y | Y | Y | Y | Y | N |
| Annex 1E: 138.20-138.45 MHz | N | Y | | Y | Y | N | Y | Y | Y | N | Y | Y | N |
| Annex 1E1: 169.4000-169.4750 MHz } DEC/(05)02 | Y | Y | | Y | N | N | Y | Y | Y | N | Y | Y | U |
| Annex 1E2: 169.4000-169.4875 MHz | Y | Y | | N | N | N | Y | N | N | N | N | N | N |
| Annex 1E3: 169.4875-169.5875 MHz | Y | Y | | N | N | N | Y | N | N | N | N | N | N |
| Annex 1E4: 169.5875-169.8125 MHz | Y | Y | | N | N | N | Y | N | N | N | N | N | N |
| Annex 1F: 433.050-434.790 MHz | Y | Y | | Y | Y | L | Y | Y | Y | L | Y | Y | L |
| Annex 1F1: 433.050-434.790 MHz | Y | Y | | Y | Y | L | Y | Y | Y | N | Y | Y | L |
| Annex 1F2: 434.040-434.790 MHz | Y | Y | | Y | Y | L | Y | Y | Y | N | Y | Y | L |
| Annex 1G1: 863-870 MHz | Y | Y | | Y | L | N | Y | Y | Y | L | Y | Y | L |
| Annex 1G1.1: 868.000-868.600 MHz | Y | Y | | Y | Y | N | Y | Y | Y | N | Y | Y | L |
| Annex 1G1.2: 868.700-869.200 MHz | Y | Y | | Y | L | N | Y | Y | Y | Y | Y | Y | N |
| Annex 1G1.3: 869.400-869.650 MHz | Y | Y | | Y | L | N | Y | Y | Y | N | Y | Y | N |
| Annex 1G1.4: 869.700-870.000 MHz | Y | Y | | Y | Y | N | Y | Y | Y | N | Y | Y | N |
| Annex 1G2: 870-876 MHz | N | Y | N | N | N | N | Y | N | N | N | N | N | N |
| Annex 1G2.1: 870.0-875.8 MHz | N | Y | N | N | N | N | Y | N | N | N | N | N | N |
| Annex 1G3: 915-921 MHz | N | Y | N | N | N | N | Y | N | N | N | N | N | N |
| Annex 1G3.1: 915.200-920.800 MHz | N | Y | N | N | N | N | Y | N | N | N | N | N | N |
| Annex 1H: 2400.0-2483.5 MHz | Y | Y | | Y | Y | Y | Y | Y | Y | Y | Y | Y | L |
| Annex 1I: 5725-5875 MHz | Y | Y | | Y | N | Y | Y | Y | Y | L | Y | Y | Y |
| Annex 1J: 24.00–24.25 GHz | Y | Y | | Y | Y | Y | Y | Y | Y | N | Y | Y | Y |
| Annex 1K: 61.0-61.5 GHz | Y | Y | | Y | Y | N | Y | Y | Y | N | Y | Y | Y |
| Annex 1K1: 57-64 GHz | Y | Y | | N | N | N | Y | N | N | N | N | U | N |
| Annex 1L: 122.00-122.25 GHz | Y | Y | | Y | N | N | Y | Y | Y | N | Y | Y | Y |
| Annex 1L1: 122.25-123.00 GHz | Y | Y | | Y | N | N | Y | Y | Y | N | Y | Y | Y |
| Annex 1M: 244-246 GHz | Y | Y | | Y | N | N | Y | Y | Y | N | Y | Y | Y |
| Annex 1N: 3.1-4.8 GHz } DEC/(06)04 | Y | Y | | L | N | N | Y | Y | Y | L | N | Y | U |
| Annex 1N: 6-9 GHz | Y | Y | | L | N | N | Y | Y | Y | L | N | Y | U |
| Annex 1N1: 6.0-8.5 GHz **DEC/(12)03** | N | Y | | N | N | N | Y | N | N | N | N | U | N |
| Highlighted yellow =not implemented Y=implemented L=limited implementation P=planned U=under study | | | | | | | | | | | | | |

| Annex to ERC/REC 70-03 | AND | ALB | AZE | BIH | BLR | GEO | MDA | MKD | MNE | RUS | SRB | TUR | UKR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ***Annex 2 - Tracking, Tracing and Data Acquisition*** | | | | | | | | | | | | | |
| Annex 2A: (*457 kHz) 456.9-457.1 kHz | Y | Y | | Y | Y | N | Y | Y | Y | Y | Y | Y | L |
| Annex 2B: 169.400-169.475 MHz **DEC/(05)02** | Y | Y | | Y | N | N | Y | Y | Y | N | Y | Y | U |
| Annex 2C: 870.000-875.600 MHz | N | Y | N | N | N | N | Y | N | N | N | N | N | N |
| Annex 2D1: 2483.5-2500 MHz | N | Y | N | N | N | N | Y | N | N | N | N | N | N |
| Annex 2D2: 2483.5-2500 MHz | N | Y | N | N | N | N | Y | N | N | N | N | N | N |
| Annex 2E: 5725-5875 MHz | | Y | | | | | Y | | | | | | |
| ***Annex 3 - Wideband Data Transmission Systems*** | | | | | | | | | | | | | |
| Annex 3A: 2400.0-2483.5 MHz | Y | Y | | Y | N | Y | Y | Y | Y | L | Y | Y | L |
| Annex 3B: 57–66 GHz | Y | Y | | L | Y | N | Y | Y | Y | N | L | Y | N |
| ***Annex 4 - Railway Applications*** | | | | | | | | | | | | | |
| Annex 4A: (*27.095 MHz) 27.090-27.100 MHz | Y | Y | | Y | Y | N | Y | Y | Y | N | Y | Y | N |
| Annex 4B: (*4234 kHz) 984-7484 kHz | Y | Y | | Y | Y | N | Y | P | Y | N | N | Y | N |
| Annex 4C: (*13.547 MHz) 7.3-23.0 MHz | Y | Y | | Y | Y | N | Y | P | Y | N | L | Y | N |
| Annex 4D: 76-77 GHz | Y | Y | | N | N | N | Y | N | N | N | N | U | N |
| ***Annex 5 - Transport and Traffic Telematics - TTT*** | | | | | | | | | | | | | |
| Annex A: 870.000-875.800 MHz | N | Y | N | Y | N | N | Y | N | N | N | N | N | N |
| Annex 5B1: 5795–5805 MHz | Y | Y | | Y | Y | L | Y | Y | Y | L | Y | Y | N |
| Annex 5B2: 5805-5815 MHz | Y | Y | | Y | Y | L | Y | Y | Y | L | Y | Y | N |
| Annex 5C: 76-77 GHz | Y | Y | | Y | Y | N | Y | Y | Y | L | Y | Y | Y |
| Annex 5D1: 21.65-26.65 GHz } **DEC (04)10** | Y | Y | N | L | Y | N | Y | N | Y | L | N | Y | N |
| Annex 5D2: 24.25-26.65 GHz } **DEC (04)10** | Y | Y | N | L | N | N | Y | N | Y | L | N | Y | N |
| Annex 5E: 77-81 GHz **DEC (04)03** | Y | Y | | L | Y | N | Y | Y | Y | Y | N | Y | U |
| Annex 5F1: 24.050-24.075 GHz | Y | Y | | L | Y | N | Y | N | Y | Y | N | Y | N |
| Annex 5F2: 24.075-24.150 GHz | Y | Y | | L | Y | N | Y | N | Y | Y | N | Y | N |
| Annex 5F3: 24.150-24.250 GHz | Y | Y | | L | Y | N | Y | N | Y | Y | N | Y | N |
| Annex 5G1: 24.250-24.495 GHz | Y | Y | N | N | N | N | Y | N | N | N | N | Y | N |
| Annex 5G2: 24.495-24.500 GHz | Y | Y | N | N | N | N | Y | N | N | N | N | Y | N |
| Annex 5G3: 24.250-24.500 GHz | Y | Y | N | N | N | N | Y | N | N | N | N | Y | N |
| ***Annex 6 - Radiodetermination applications*** | | | | | | | | | | | | | |
| Annex 6A: 2400.0-2483.5 MHz **DEC/(01)08** | Y | Y | | Y | Y | L | Y | Y | Y | N | Y | Y | L |
| Annex 6B: 9200-9500 MHz | N | Y | | Y | Y | L | Y | Y | Y | L | Y | Y | U |
| Annex 6C: 9500-9975 MHz | N | Y | | Y | Y | L | Y | Y | Y | L | Y | Y | U |
| Annex 6D:10.5-10.6 GHz | Y | Y | | Y | Y | L | Y | Y | Y | L | Y | N | L |
| Annex 6E:13.4-14.0 GHz | N | Y | | Y | Y | L | Y | Y | Y | N | Y | Y | U |
| Annex 6F: 24.05-24.25 GHz | Y | Y | | Y | Y | L | Y | Y | Y | L | Y | Y | L |
| Annex 6G: 4.5-7.0 GHz | Y | Y | | Y | N | N | Y | P | Y | L | L | Y | U |
| Annex 6H: 8.5-10.6 GHz | Y | Y | | Y | N | N | Y | P | Y | L | L | Y | U |
| Annex 6I: 24.05-27.0 GHz | Y | Y | | Y | Y | N | Y | P | Y | L | L | Y | L |
| Annex 6J: 57-64 GHz | Y | Y | | Y | Y | N | Y | P | Y | L | L | Y | U |
| Annex 6K: 75-85 GHz | Y | Y | | Y | Y | N | Y | P | Y | L | L | Y | L |
| Annex 6L: 6.0-8.5 GHz | Y | Y | N | N | L | N | Y | U | N | N | N | Y | N |
| Annex 6M: 24.05-26.5 GHz **DEC/(11)02** | Y | Y | N | N | L | N | Y | U | N | N | N | Y | N |
| Annex 6N: 57-64 GHz **DEC/(11)02** | Y | Y | N | N | L | N | Y | U | N | N | N | Y | N |
| Annex 6O: 75-85 GHz **DEC/(11)02** | Y | Y | N | N | L | N | Y | U | N | N | N | Y | N |
| *)Center frequency for the band | | | | | | | | | | | | | |
| Highlighted yellow =not implemented Y=implemented L=limited implementation P=planned U=under study | | | | | | | | | | | | | |

| Annex to ERC/REC 70-03 | | AND | ALB | AZE | BIH | BLR | GEO | MDA | MKD | MNE | RUS | SRB | TUR | UKR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ***Annex 6 - Radiodetermination applications - continue*** | | | | | | | | | | | | | | |
| Annex 6P: 17.1-17.3 GHz | | Y | Y | | Y | N | N | Y | P | Y | N | L | Y | N |
| Annex 6Q: 30 MHz-12.4 GHz | **DEC/(06)08** | U | Y | | L | N | N | Y | N | U | N | N | Y | U |
| Annex 6R: 2.2-8.0 GHz | **DEC/(07)01** | L | Y | | L | N | N | Y | N | Y | N | N | Y | N |
| Annex 6S1: 3.1-4.8 GHz | **REC/(11)09** | Y | Y | | | | | Y | | | | | Y | |
| Annex 6S2: 3.1-4.8 GHz | **REC/(11)10** | Y | Y | | | | | Y | | | | | Y | |
| ***Annex 7 - Alarms*** | | | | | | | | | | | | | | |
| Annex 7A: 868.6-868.7 MHz | | Y | Y | | Y | Y | N | Y | Y | Y | N | Y | Y | L |
| Annex 7B: 869.250-869.300 MHz | | Y | Y | | Y | Y | N | Y | Y | Y | N | Y | Y | N |
| Annex 7C: 869.650-869.700 MHz | | Y | Y | | Y | Y | N | Y | Y | Y | N | Y | Y | U |
| Annex 7D: 869.200-869.250 MHz | | Y | Y | | Y | Y | N | Y | Y | Y | N | Y | Y | L |
| Annex 7E: 869.300-869.400 MHz | | Y | Y | | Y | Y | N | Y | Y | Y | N | Y | Y | N |
| ***Annex 8 - Model Control*** | | | | | | | | | | | | | | |
| Annex 8A: 26.995,27.045,27.095, 27.145,27.195 MHz | | Y | Y | | Y | Y | N | Y | Y | Y | L | Y | Y | Y |
| Annex 8B: 34.995-35.225 MHz | **DEC/(01)11+12** | Y | Y | Y | Y | Y | N | Y | Y | Y | U | Y | Y | Y |
| Annex 8C: 40.665,40.675 40.685, 40.695 MHz | | Y | Y | Y | Y | Y | N | Y | Y | Y | Y | Y | Y | Y |
| ***Annex 9 - Inductive Applications*** | | | | | | | | | | | | | | |
| Annex 9A1: 9-90 kHz | | Y | Y | | Y | Y | N | Y | N | Y | L | N | Y | L |
| Annex 9A2: 90-119 kHz | | Y | Y | | Y | Y | L | Y | N | Y | Y | N | Y | L |
| Annex 9A3: 119-135 kHz | | Y | Y | | Y | Y | N | Y | Y | Y | Y | Y | Y | L |
| Annex 9B: 135-140 kHz | | Y | Y | | Y | Y | N | Y | Y | Y | N | Y | Y | L |
| Annex 9C 140.0-148.5 kHz | | Y | Y | | Y | Y | N | Y | Y | Y | N | Y | Y | L |
| Annex 9D: 6765-6795 kHz | | Y | Y | | Y | Y | N | Y | Y | Y | Y | Y | Y | N |
| Annex 9E: 7400-8800 kHz | | Y | Y | | Y | Y | N | Y | Y | Y | Y | Y | Y | N |
| Annex 9F: 13.553-13.567 MHz | | Y | Y | | Y | Y | N | Y | Y | Y | Y | Y | Y | N |
| Annex 9F1: 14.410-13.553 MHz / 13.567-13.710 MHz / 13.110-13.410 MHz / 13.710-14.010 MHz / 12.660-13.110 MHz / 14.010-14.460 MHz / 11.810-12.660 MHz / 14.460-15.310 MHz | | P | Y | N | N | N | N | Y | N | N | N | N | N | N |
| Annex 9F2: 13.553-13.567 MHz | | Y | Y | | Y | N | N | Y | Y | Y | Y | Y | Y | L |
| Annex 9F3: 13.460-13.553 MHz / 13.567-13.660 MHz / 13.360-13.460 MHz / 13.660-13.760 MHz / 13.110-13.360 MHz / 13.760-14.010 MHz / 12.660-13.110 MHz / 14.010-14.460 MHz | | P | Y | N | N | N | N | Y | N | N | N | N | N | N |
| Annex 9G: 26.957-27.283 MHz | | Y | Y | | Y | Y | N | Y | Y | Y | Y | Y | Y | L |
| Annex 9H: 10.200-11.000 MHz | | Y | Y | | Y | Y | N | Y | Y | Y | L | Y | Y | L |
| Annex 9K: 3155-3400 kHz | | Y | Y | | Y | Y | N | Y | Y | Y | N | Y | Y | L |
| Annex 9L1: 148.5 kHz-5 MHz | | Y | Y | | Y | Y | N | Y | Y | Y | N | Y | Y | U |
| Annex 9L2: 5-30 MHz | | Y | Y | | Y | Y | N | Y | Y | Y | N | Y | Y | N |
| Annex 9L3: 400-600 kHz | | Y | Y | | Y | Y | N | Y | Y | Y | N | Y | Y | U |

Highlighted yellow =not implemented Y=implemented L=limited implementation P=planned U=under study

| Annexes to ERC/REC 70-03 | AND | ALB | AZE | BIH | BLR | GEO | MDA | MKD | MNE | RUS | SRB | TUR | UKR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ***Annex 10 – Radio microphone applications including aids for the hearing impaired*** | | | | | | | | | | | | | |
| Annex 10A: 29.7-47.0 MHz | L | Y | | Y | L | N | Y | Y | Y | L | Y | Y | L |
| Annex 10B: 173.965-216 MHz | | Y | | | | | Y | | | | | | |
| Annex 10C: 863-865 MHz | Y | Y | | Y | N | N | Y | Y | Y | Y | Y | Y | L |
| Annex 10C1: 916.1-916.5 MHz / 917.3-917.7 MHz | N | Y | N | N | N | N | Y | N | N | N | N | N | N |
| Annex 10C1: 918.5-918.9 MHz / 919.7-920.1 MHz | N | Y | N | N | N | N | Y | N | N | N | N | N | N |
| Annex 10D: 174-216 MHz | L | Y | | Y | N | N | Y | Y | Y | L | Y | Y | L |
| Annex 10E1: 470-786 MHz | Y | Y | | Y | L | N | Y | Y | Y | L | Y | Y | L |
| Annex 10E2: 786-789 MHz | N | Y | | N | N | N | Y | N | N | N | N | Y | N |
| Annex 10E3: 823-826 MHz | Y | Y | | N | Y | N | Y | N | N | N | N | Y | N |
| Annex 10E4: 826-832 MHz | Y | Y | | N | Y | N | Y | N | N | N | N | Y | N |
| Annex 10F: 1785-1795 MHz | Y | Y | | Y | N | N | Y | Y | Y | N | Y | Y | U |
| Annex 10G: 1795-1800 MHz | Y | Y | | Y | N | N | Y | Y | Y | N | Y | Y | U |
| Annex 10G1: 1800-1804.8 MHz | N | Y | N | N | N | N | Y | N | N | N | N | N | U |
| Annex 10H1: 169.4000-169.4750 MHz } DEC/(05)02 | Y | Y | | Y | N | N | Y | Y | Y | N | Y | Y | U |
| Annex 10H2: 169.4875-169.5875 MHz } DEC/(05)02 | Y | Y | | Y | N | N | Y | Y | Y | N | Y | Y | U |
| Annex 10I: 169.4-174.0 MHz | L | Y | | Y | N | N | Y | Y | Y | N | N | Y | N |
| Annex 10J: 1492-1518 MHz | N | Y | | N | N | N | Y | N | N | N | N | N | N |
| ***Annex 11 - Radio Frequency Identification Applications*** | | | | | | | | | | | | | |
| Annex 11A1: 2446-2454 MHz | Y | Y | | Y | Y | Y | Y | Y | Y | N | Y | Y | U |
| Annex 11A2: 2446-2454 MHz | Y | Y | | Y | Y | Y | Y | Y | Y | N | Y | Y | U |
| Annex 11B1: 865.0-865.6 MHz | Y | Y | | Y | Y | N | Y | N | Y | N | Y | Y | U |
| Annex 11B2: 865.6-867.6 MHz | Y | Y | | Y | Y | N | Y | N | Y | L | Y | Y | U |
| Annex 11B3: 867.6-868.0 MHz | Y | Y | | Y | Y | N | Y | N | Y | L | Y | Y | U |
| Annex 11C: 915-921 MHz | N | Y | N | N | N | N | Y | N | N | N | N | N | U |
| ***Annex 12 - Active Medical Implants and their associated peripherals*** | | | | | | | | | | | | | |
| Annex 12A: 9-315 kHz | Y | Y | | Y | Y | N | Y | Y | Y | N | Y | Y | L |
| Annex 12B: 315-600 kHz | Y | Y | | Y | Y | N | Y | Y | Y | N | Y | Y | L |
| Annex 12C: 30.0-37.5 MHz | Y | Y | | Y | Y | N | Y | Y | Y | N | N | Y | L |
| Annex 12D: 12.5-20.0 MHz | Y | Y | | Y | Y | N | Y | Y | Y | N | L | Y | U |
| Annex 12E: 2483.5-2500 MHz | Y | Y | | N | N | N | Y | N | N | N | N | Y | N |
| ***Annex 13 - Wireless Audio Applications*** | | | | | | | | | | | | | |
| Annex 13A: 863-865 MHz | Y | Y | | Y | Y | N | Y | Y | Y | Y | Y | Y | N |
| Annex 13B: 864.8-865.0 MHz | Y | Y | | Y | Y | Y | Y | Y | Y | N | Y | Y | L |
| Annex 13C: 1795-1800 MHz | Y | Y | | Y | N | L | Y | Y | Y | N | Y | Y | U |
| Annex 13D: 87.5-108.0 MHz | Y | Y | | Y | Y | Y | Y | Y | Y | L | Y | Y | L |
| Highlighted yellow =not implemented Y=implemented | | L=limited implementation | | | | P=planned | | | U=under study | | | | |

## APPENDIX 2: LIST OF RELEVANT ECC/ERC DECISIONS, REPORTS, EC DECISIONS AND ETSI HARMONISED EUROPEAN STANDARDS

### Table 15: ECC/ERC Decisions and Recommendations

| | |
|---|---|
| ECC/DEC/(12)03 | The harmonised conditions for UWB applications onboard aircraft |
| ECC/REC/(11)10 | Location tracking application for emergency and disaster situations (LAES) |
| ECC/REC/(11)09 | UWB Location Tracking Systems TYPE 2 (LT2) |
| ECC/DEC/(11)02 | Industrial Level Probing Radars (LPR) operating in frequency bands 6-8.5 GHz, 24.05-26.5 GHz, 57-64 GHz and 75-85 GHz |
| ECC/DEC/(09)03 | Harmonised conditions for Mobile/Fixed Communications Networks (MFCN) operating in the band 790-862 MHz |
| ECC/DEC/(07)01 | Building Material Analysis (BMA) devices using UWB technology |
| ECC/DEC/(06)08 | The conditions for use of the radio spectrum by Ground- and Wall- probing radar (GPR/WPR) imaging systems |
| ECC/DEC/(06)04 | The harmonised conditions for devices using Ultra-wideband (UWB) technology in bands below 10.6 GHz |
| ECC/DEC/(05)02 | The use of the frequency band 169.4-169.8125 MHz |
| ECC/DEC(04)10 | The frequency bands to be designated for the temporary introduction of Automotive Short Range Radars |
| ECC/DEC/(04)03 | The frequency band 77-81 GHz to be designated for the use of Automotive Short Range Radars |
| ECC/DEC/(04)01 | Short Range Devices for detection of Avalanche Victims |
| ERC/DEC(01)08 | Short Range Devices for Movement Detection and Alert in 2400-2483.5 MHz |
| ERC/DEC(01)11 | Short Range Devices for Flying Model Control in 34.995-35.225 MHz |
| ERC/DEC(01)12 | Short Range Devices for Model Control in 40.665, 40.675, 40.685 and 40.695 MHz |

## Table 16: ECC/ERC Reports

| | |
|---|---|
| ECC Report 001 | Compatibility between inductive LF and HF RFID transponder and other radio communications systems in the frequency ranges 135-148.5 kHz, 4.78-8.78 MHz and 11.56-15.56 MHz |
| ECC Report 002 | SAP/SAB (Incl. ENG/OB) spectrum use and future requirements |
| ECC Report 007 | Compatibility between inductive LF RFID systems and radio communications systems in the frequency range 135 – 148.5 kHz |
| ECC Report 011 | Strategic Plans for the future use of the frequency bands 862-870 MHz and 2400-2483.5 MHz for Short Range Devices |
| ECC Report 012 | Ultra Low Power Active Medical Implant systems (ULP-AMI) |
| ECC Report 013 | Adjacent band compatibility between Short Range Devices and TETRA TAPS mobile services at 870 MHz |
| ECC Report 023 | Compatibility of automotive collision warning short range radar operating at 24 GHz with FS, EESS and Radio Astronomy |
| ECC Report 024 | PLT, DSL, CABLE communications (Including CABLE TV), LANS and their effect on radio services |
| ECC Report 037 | Compatibility of planned SRD applications in 863-870 MHz |
| ECC Report 040 | Adjacent band compatibility between CDMA-PAMR mobile services and Short Range Devices below 870 MHz |
| ECC Report 055 | Compatibility between existing and proposed SRDs and other radiocommunication applications in the 169.4-169.8 MHz frequency band. See supplementary excel spreadsheets in download |
| ECC Report 056 | Compatibility of automotive collision warning short range radar operating at 79 GHz with radiocommunication services |
| ECC Report 064 | The protection requirements of radiocommunication systems below 10.6 GHz from generic UWB applications |
| ECC Report 067 | Compatibility study for generic limits for the emission levels of inductive SRDs below 30 MHz |
| ECC Report 068 | Compatibility studies in the band 5725-5875 MHz between Fixed Wireless Access (FWA) systems and other systems |
| ECC Report 073 | Compatibility of SRD in the FM radio broadcasting band |

| | |
|---|---|
| ECC Report 081 | The coexistence between Ultra Low Power – Animal Implant Devices (ULP-AID) operating in the frequency band 12.5-20 MHz and existing radiocommunication systems |
| ECC Report 094 | Technical requirements for UWB LDC devices to ensure the protection of FWA systems |
| ECC Report 098 | Studying the compatibility issues of the UIC EUROLOOP system with other systems in the frequency band 9.5 to 17.5 MHz |
| ECC Report 100 | Compatibility studies in the band 3400-3800 MHz between broadband wireless access (BWA) systems and other services |
| ECC Report 111 | Compatibility studies between Ground Based Synthetic Aperture Radar (GBSAR) and existing services in the range 17.1 GHz to 17.3 GHz |
| ECC Report 113 | Compatibility studies around 63 GHz between Intelligent Transport Systems (ITS) and other systems |
| ECC Report 114 | Compatibility studies between multiple GIGABIT wireless systems in frequency range 57-66 GHz and other services and systems (except its in 63-64 GHz) |
| ECC Report 120 | Technical requirements for UWB DAA (Detect And Avoid) devices to ensure the protection of radiolocation in the bands 3.1-3.4 GHz and 8.5-9 GHz and BWA terminals in the band 3.4-4.2 GHz |
| ECC Report 134 | Analysis of potential impact of mobile Vehicle Radars (VR) on Radar Speed Meters (RSM) operating at 24 GHz |
| ECC Report 135 | Inductive limits in the frequency range 9 kHz to 148.5 kHz |
| ECC Report 139 | Impact of Level Probing Radars (LPR), using Ultra-Wideband Technology on radiocommunications services |
| ECC Report 149 | Compatibility of LP-AMI applications within 2360-3400 MHz, in particular for the band 2483.5-2500 MHz, with incumbent services |
| ECC Report 164 | Compatibility between Wide Band Low Activity Mode (WLAM) automotive radars in the frequency range 24.25 GHz to 24.5 GHz, and other radiocommunication systems/services |
| ECC Report 170 | Specific UWB applications in the bands 3.4-4.8 GHz and 6-8.5 GHz Location Tracking Applications for Emergency Services (LAES), location tracking applications type 2 (LT2) and location tracking and sensor applications for automotive and transportation environments (LTA) |
| ECC Report 175 | Co-existence study considering UWB applications inside aircraft and existing radio services in the frequency bands from 3.1 GHz to 4.8 GHz and from 6.0 GHz to 8.5 GHz |
| ECC Report 176 | The impact of non-specific SRDs on radio services in the band 57–66 GHz |

| | |
|---|---|
| ECC Report 181 | Improving spectrum efficiency in SRD bands |
| ECC Report 182 | Survey about the use of the frequency band 863-870 MHz |
| ECC Report 189 | Future Spectrum Demand for Short Range Devices in the UHF Frequency Bands |
| ECC Report 190 | Compatibility between Short-Range Devices (SRD) and EESS (passive) in the 122 to 122.25 GHz band |
| ECC Report 200 | Co-existence studies for proposed SRD and RFID applications in 870 to 876 MHz and 915 to 921 MHz |
| ECC Report 201 | Compatibility study between MBANS operating in the 2400 - 2483.5 MHz and 2483.5 - 2500 MHz bands and other systems in the same bands or in adjacent bands |
| ECC Report 204 | Spectrum use and future requirements for PMSE |
| ECC Report 206 | Compatibility studies in the band 5725-5875 MHz between SRD equipment for wireless industrial applications and other systems |
| ECC Report 207 | Adjacent band co-existence of SRDs in the band 863-870 MHz with LTE usage below 862 MHz |
| ECC Report 208 | Impact of RFID devices on radio services in the band 13.56 MHz |
| ECC Report 230 | Harmonisation Possibilities for Assistive Listening Devices in the Band 174-216 MHz |
| ECC Report 234 | Analyses of LDC UWB mitigation techniques with respect to incumbent radiocommunication services within the band 3.1 to 3.4 GHz |
| ERC Report 001 | Harmonisation of frequency bands to be designated for Radio Local Area Networks (RLANs) |
| ERC Report 003 | Harmonisation of frequency bands to be designated for road transport information systems (RTTT) |
| ERC Report 005 | ERC Report on frequency bands for Low Power Devices |
| ERC Report 008 | General methodology for assessing compatibility between Radio Local Area Networks (RLANs) and the fixed Service |
| ERC Report 014 | Co-existence of radio local area networks with the microwave landing system |
| ERC Report 015 | Compatibility study between radar and RLANs operating at frequencies around 5.5 GHz |

| | |
|---|---|
| ERC Report 042 | Handbook on radio equipment and systems radio microphones and simple wide band audio links |
| ERC Report 044 | Sharing inductive systems and radiocommunication systems in the band 9-135 kHz |
| ERC Report 047 | Compatibility fixed services and motion sensors at 10.5 GHz |
| ERC Report 062 | Compatibility analysis regarding possible sharing between the UIC system and radio microphones in the frequency ranges 876-880 MHz and 921-925 MHz |
| ERC Report 063 | Radio microphone applications in the frequency range 1785-1800 MHz |
| ERC Report 067 | Study of the Frequency sharing between HIPERLANs and MSS feeder links in the 5 GHz band |
| ERC Report 069 | Propagation model and interference range calculation for inductive systems in 10 kHz – 30 MHz |
| ERC Report 072 | Compatibility studies related to the possible extension band for HIPERLANs at 5 GHz |
| ERC Report 074 | RFID and the radioastronomy services at 13 MHz |
| ERC Report 088 | Compatibility and sharing analysis between DVB-T and radio microphones in bands IV and V |
| ERC Report 092 | Sharing inductive Short Range Devices and radio communication systems in 10.2-11 MHz |
| ERC Report 095 | The use of 3155-3400 kHz for general inductive applications |
| ERC Report 096 | The use of 290-300 kHz and 500-510 kHz for general inductive applications |
| ERC Report 098 | Compatibility of Short Range Devices at 900 MHz with adjacent services |
| ERC Report 109 | Compatibility of Bluetooth with other existing and proposed radiocommunication systems in the 2.45 GHz frequency band |

## ETSI Harmonised European Standards

**Further information can be found at** Harmonised European Standards List

### Table 17: ETSI Harmonised European Standards – Generic Standards

| Generic standards | |
|---|---|
| EN 300 220 | Electromagnetic compatibility and Radio spectrum Matters (ERM); Short Range Devices (SRD); Radio equipment to be used in the 25 MHz to 1000 MHz frequency range with power levels ranging up to 500 mW |
| EN 300 330 | Electromagnetic compatibility and Radio spectrum Matters (ERM); Short Range Devices (SRD); Radio equipment in the frequency range 9 kHz to 25 MHz and inductive loop systems in the frequency range 9 kHz to 30 MHz |
| EN 300 440 | Electromagnetic compatibility and Radio spectrum Matters (ERM); Short range devices; Radio equipment to be used in the 1 GHz to 40 GHz frequency range |
| EN 302 065 | Electromagnetic compatibility and Radio spectrum Matters (ERM); Short Range Devices (SRD) using Ultra Wide Band technology (UWB) for communications purposes |
| EN 305 550 | Electromagnetic compatibility and Radio spectrum Matters (ERM); Short Range Devices (SRD); Radio equipment to be used in the 40 GHz to 246 GHz frequency range. |

### Table 18: ETSI Harmonised European Standards – Specific Standards

| Specific standards | |
|---|---|
| EN 300 328 | Electromagnetic compatibility and Radio spectrum Matters (ERM); Wideband Transmission systems; Data transmission equipment operating in the 2.4 GHz ISM band and using spread spectrum modulation techniques |
| EN 300 422 | Electromagnetic compatibility and Radio spectrum Matters (ERM); Wireless microphones in the 25 MHz to 3 GHz frequency range |
| EN 300 674 | Electromagnetic Compatibility and Radio Spectrum Matters (ERM); Road Transport and Traffic Telematics (RTTT); Technical characteristics and test methods for Dedicated Short Range Communication (DSRC) transmission equipment (500 kbit/s / 250 kbit/s) operating in the 5.8 GHz Industrial, Scientific and Medical (ISM) band |
| EN 300 718 | Electromagnetic compatibility and Radio spectrum matters (ERM); Avalanche Beacons; Transmitter-receiver systems |
| EN 300 761 | Electromagnetic compatibility and Radio spectrum Matters (ERM); Short Range Devices (SRD); Automatic Vehicle Identification (AVI) for railways operating in the 2.45 GHz frequency range |
| EN 301 091 | Electromagnetic Compatibility and Radio Spectrum Matters (ERM); Road Transport and Traffic Telematics (RTTT); Technical characteristics and test methods for radar equipment operating in the 76 GHz to 77 GHz band |
| EN 301 357 | Electromagnetic compatibility and Radio spectrum Matters (ERM); Analogue cordless wideband audio devices using integral antennas operating in the CEPT recommended 863 MHz to 865 MHz frequency range |

| Specific standards | |
|---|---|
| EN 301 559 | Low Power Active Medical Implants (LP-AMI) operating in the frequency range 2483.5 MHz to 2500 MHz |
| EN 301 893 | Broadband Radio Access Networks (BRAN); 5 GHz high performance RLAN; Harmonised EN covering essential requirements of article 3.2 of the R&TTE Directive |
| EN 302 066 | Electromagnetic compatibility and Radio spectrum Matters (ERM);Ground- and Wall- Probing Radar applications (GPR/WPR) imaging systems |
| EN 302 195 | Electromagnetic compatibility and Radio spectrum Matters (ERM); Radio equipment in the frequency range 9 kHz to 315 kHz for Ultra Low Power Active Medical Implants (ULP-AMI) and accessories |
| EN 302 208 | Electromagnetic compatibility and Radio spectrum Matters (ERM); Radio Frequency Identification Equipment operating in the band 865 MHz to 868 MHz with power levels up to 2 W |
| EN 302 372 | Electromagnetic compatibility and Radio spectrum Matters (ERM);Short Range Devices (SRD); Equipment for Detection and Movement; Tanks Level Probing Radar (TLPR) operating in the frequency bands 5.8 GHz, 10 GHz, 25 GHz, 61 GHz and 77 GHz |
| EN 302 264 | Electromagnetic compatibility and Radio spectrum Matters (ERM);Short Range Devices; Road Transport and Traffic Telematics (RTTT);Short Range Radar equipment operating in the 77 GHz to 81 GHz band |
| EN 302 288 | Electromagnetic compatibility and Radio spectrum Matters (ERM);Short Range Devices; Road Transport and Traffic Telematics (RTTT);Short range radar equipment operating in the 24 GHz range |
| EN 302 435 | Electromagnetic compatibility and Radio spectrum Matters (ERM);Short Range Devices (SRD);Technical characteristics for SRD equipment using Ultra WideBand technology (UWB);Building Material Analysis and Classification equipment applications operating in the frequency band from 2.2 GHz to 8.5 GHz |
| EN 302 500 | Electromagnetic compatibility and Radio spectrum Matters (ERM);Short Range Devices (SRD) using Ultra WideBand (UWB) technology; Location Tracking equipment operating in the frequency range from 6 GHz to 8.5 GHz |
| EN 302 510 | Electromagnetic compatibility and Radio spectrum Matters (ERM);Radio equipment in the frequency range 30 MHz to 37.5 MHz for Ultra Low Power Active Medical Membrane Implants and Accessories |
| EN 302 536 | Electromagnetic compatibility and Radio spectrum Matters (ERM);Short Range Devices (SRD);Radio equipment in the frequency range 315 kHz to 600 kHz |
| EN 302 537 | Electromagnetic compatibility and Radio spectrum Matters (ERM); Short Range Devices (SRD); Ultra Low Power Medical Data Service Systems operating in the frequency range 401 MHz to 402 MHz and 405 MHz to 406 MHz |
| EN 302 567 | Broadband Radio Access Networks (BRAN); 60 GHz Multiple-Gigabit WAS/RLAN Systems |
| EN 302 608 | Electromagnetic compatibility and Radio spectrum Matters (ERM);Short Range Devices (SRD);Radio equipment for Eurobalise railway systems |
| EN 302 609 | Electromagnetic compatibility and Radio spectrum Matters (ERM);Short Range Devices (SRD);Radio equipment for Euroloop railway systems |
| EN 302 858 | Electromagnetic compatibility and Radio spectrum Matters (ERM);Road Transport and Traffic Telematics (RTTT);Short range radar equipment operating in the 24.05 GHz to 24.25 GHz frequency range for automotive applications |
| EN 303 203 | Electromagnetic compatibility and Radio spectrum Matters (ERM); Short Range Devices (SRD); Medical Body Area Network Systems (MBANSs) operating in the 2483.5 MHz to 2500 MHz range |
| EN 303 204 | Electromagnetic compatibility and Radio spectrum Matters (ERM); Network Based Short Range Devices (SRD); Radio equipment to be used in the 870 MHz to 876 MHz frequency range with power levels ranging up to 500 mW |

| Specific standards | |
|---|---|
| EN 303 258 | Electromagnetic compatibility and Radio spectrum Matters (ERM); Wireless industrial automation; Radio equipment to be used in the 5.725 GHz to 5.875 GHz frequency range with power levels ranging up to 400 mW (under development) |

## Table 19: EC Decisions

| EC Decision | Title |
|---|---|
| 2014/702/EU | Amending 2007/131/EC on allowing the use of the radio spectrum for equipment using ultra-wideband technology in a harmonised manner in the Community |
| 2013/752/EU | Amending Decision 2006/771/EC on harmonisation of the radio spectrum for use by short-range devices and repealing Decision 2005/928/EC |
| 2011/829/EU | Amending Decision 2006/771/EC on the harmonisation of the radio spectrum for use by SRDs |
| 2011/485/EU | Harmonisation of the 24 GHz range radio spectrum band for the time-limited use by automotive SRR equipment in the Community |
| 2010/368/EU | Amending the Decision 2006/771/EC on harmonisation of the radio spectrum for use by SRDs |
| 2009/381/EC | Amending Decision 2006/771/EC on harmonisation of the radio spectrum for use by SRDs |
| 2009/343/EC | Amending the Decision 2007/131/EC on the harmonised use of the radio spectrum for equipment using UWB technology |
| 2008/673/EC | Amending Decision 2005/928/EC on the harmonisation of the 169.4-169.8125 MHz frequency band in the Community |
| 2008/432/EC | Amending Decision 2006/771/EC on harmonisation of the radio spectrum for use by short-range devices |
| 2007/346/EC | Granting a derogation requested by France pursuant to Decision 2006/804/EC on harmonisation of the radio spectrum for Radio Frequency Identification (RFID) devices operating in the Ultra High Frequency (UHF) band |
| 2007/131/EC | Allowing the use of the radio spectrum for equipment using Ultra-wideband technology in a harmonised manner in the community |
| 2006/804/EC | Harmonisation of the radio spectrum for radio frequency identification (RFID) devices operating in the ultra high frequency (UHF) band |
| 2006/771/EC | Harmonisation of the radio spectrum for use by short-range devices |
| 2005/50/EC | The harmonisation of the 24 GHz range radio spectrum band for the time-limited use by Automotive Short-Range Radar equipment in the community |
| 2004/545/EC | The harmonisation of radio spectrum in the 79 GHz range for the use of Automotive Short-Range Radar equipment in the community |

## APPENDIX 3 – NATIONAL RESTRICTIONS

*"Appendix 3 lists national restrictions. The first section contains general comments from administrations and these apply to all annexes in this Recommendation. The second section contains comments from administrations and these are on specific frequency bands contained within this Recommendation. These indicate where administrations are not able to implement frequency allocations or where implementation is incomplete. For consistency, one of the following four standard positions should be used:*

- *Implemented: If the Appendix entry is blank then Recommendation 70-03 has been fully implemented.*
- *Limited implementation: A short explanation can be provided. If under study or planned, then a date should be given.*
- *Not implemented: A short explanation can be provided. If under study or planned, then a date should be given.*
- *No information: No information has yet been provided by the administration."*

| Frequency Band | Country | Implementation | Reason/remarks |
|---|---|---|---|
| **All Annexes** | Albania | Ft | Frequencies covered by ERC/REC 70-03 are implemented through the notes of the National Frequency Table, for each band mentioned in 70-03 |
| | France | France does not recognise the former marking CEPT SRD Aa Y and CEPT RLAN Y recommended by T/R 01-04 and T/R 10-01 respectively.<br>The free circulation and use of products bearing these old markings must then be confined to existing equipments and to countries which have already adopted these markings. The marking CEPT SRD Aa Y proposed by ERC/REC 70-03 will not be recognised in France. In any case in France marking issues are in line with the R&TTE Directive | |
| | Germany | | Clarification of the terms contained in the table reference to the German Telecommunications Act of 22 June 2004: The use of frequencies or frequency bands for the operation of transmitting equipment requires "frequency assignment". There are two types of frequency assignments: individual frequency assignments are granted upon application and correspond to "individual license required" within the meaning of ERC/REC 70-03; general frequency assignments are granted ex officio by administrative act, published in the Federal Network Agency's Official Gazette and correspond to "individual license not required" within the meaning of ERC/REC 70-03 |
| | Lithuania | | The radio frequencies may be used without an individual authorisation in case the relevant radio frequency or radio frequencies band is included in the List of Radio Frequencies, which may be used without an Individual Authorisation, approved by Order No. 1V-893 of 9 September 2010 of the Director of the Communications Regulatory Authority (Official Gazette |

| Frequency Band | Country | Implementation | Reason/remarks |
|---|---|---|---|
| | | | Valstybes zinios, Nr. 108-5577, 2010). Radio equipment must conform to the requirements of the List |
| | Moldova | Telecommunication equipment and cables are imported commercialized only on basis of conformity certificates issued by the Telecommunication Products Certification Body of Moldova and must be marked in Moldova. It is not permitted to utilise non-certificated and non-marked telecommunication equipment and cables. Subject to the above all SRD frequency bands with technical parameters indicated in ERC/REC 70-03 are permitted on secondary basis | In accordance with Law of Telecommunications of Republic of Moldova. Decision Nr. 126 dated 02.06.2009 of the Administrative Council of the National Regulatory Agency for electronic Communications and Information Technology of the Republic of Moldova, owners of short range radiocommunication devices have the right to use several categories of frequencies in compliance with the ERC/REC 70-03 without obtaining a license for the use of radio frequencies/channels or a technical permit |
| | Russian Federation | In accordance with the current National Frequency Allocation Table, different communication services, including special applications operate in frequency bands designated for SRD applications. All radiocommunication systems require individual license and authorisation for using certain radio frequencies, which is granted after conformity assessment procedures. All types of radio equipment require national approval based on the national standard system (GOST) and issue of conformity certificate. Only equipment with national mark can be placed on the market in the Russian Federation | |
| | Turkey | | The short range and low powered devices under the scope of SRD Bylaw (entered into force 11 September 2012) may be used without licence, permission for use of radio or frequency assignment and registration in case when devices meet the requirements in the By-law and are conformable with the technical regulations done by the Authority. SRDs should be used within any natural person's or legal entity's property under his/its own use, not exceeding any property's borders, upon exclusively individual or organizational needs, not for providing any electronic communications services to third parties (except ISPs), providing without any commercial intention and not publicly available |
| **Annex 1 Band A (Non- Specific SRDs) 6765-6795 kHz** | Georgia | Not implemented | |
| | Russian Federation | Not implemented | |
| | Ukraine | Limited implementation | The maximal strength of a magnetic field on distance of 10 m from the station is 42 dBµA/m |

| Frequency Band | Country | Implementation | Reason/remarks |
|---|---|---|---|
| **Annex 1 Band B (Non- Specific SRDs) 13.553-13.567 MHz** | Georgia | Not implemented | |
| | Russian Federation | Not implemented | |
| **Annex 1 Band C (Non- Specific SRDs) 26.957-27.283 MHz** | Georgia | Not implemented | |
| | Ukraine | Not implemented | |
| **Annex 1 Band C1 (Non- Specific SRDs) 26.995, 27.045, 27.095, 27.145, 27.195 kHz** | Bosnia & Herzegovina | Not implemented | |
| | Georgia | Not implemented | |
| | Macedonia (FYROM) | Not implemented | |
| | Montenegro | Not implemented | |
| | Russian Federation | Not implemented | |
| | Serbia | Not implemented | |
| | Turkey | Not implemented | |
| | Ukraine | Not implemented | |
| **Annex 1 Band D (Non- Specific SRDs) 138.20-138.45 MHz** | Georgia | Not implemented | |
| | Ukraine | Not implemented | |
| **Annex 1 Band E (Non- Specific SRDs) 138.20-138.45 MHz** | Andorra | Not implemented | |
| | Belgium | Not implemented | |
| | France | Not implemented | Military use. The use of this band by SRDs is not planned in France |
| | Georgia | Not implemented | |
| | Germany | Not implemented | Defence systems |
| | Hungary | Not implemented | Aeronautical mobile applications operate in the band |
| | Italy | Not implemented | Military application |
| | Latvia | Not implemented | Exclusive defence systems |
| | Liechtenstein | Not implemented | |
| | Netherlands | Not implemented | Exclusive defence systems |
| | Poland | Not implemented | Military application |
| | Russian Federation | Not implemented | |
| | Slovakia | Not implemented | Not available |

| Frequency Band | Country | Implementation | Reason/remarks |
|---|---|---|---|
| | Slovenia | Not implemented | |
| | Spain | Not implemented | Military application |
| | Sweden | Not implemented | |
| | Switzerland | Not implemented | Exclusive defence systems |
| | Ukraine | Not implemented | |
| **Annex 1 Band E1 (Non- Specific SRDs) 169.4000-169.4750 MHz** | Belarus | Not implemented | |
| | Georgia | Not implemented | |
| | Russian Federation | Not implemented | |
| | Ukraine | Not implemented | Under study |
| **Annex 1 Band E2 (Non- Specific SRDs) 169.4000-169.4875 MHz** | Belarus | Not implemented | |
| | Bosnia & Herzegovina | Not implemented | |
| | Georgia | Not implemented | |
| | Macedonia (FYROM) | Not implemented | |
| | Montenegro | Not implemented | |
| | Russian Federation | Not implemented | |
| | Serbia | Not implemented | |
| | Turkey | Not implemented | |
| | Ukraine | Not implemented | |
| **Annex 1 Band E3 (Non- Specific SRDs) 169.4875-169.5875 MHz** | Belarus | Not implemented | |
| | Bosnia & Herzegovina | Not implemented | |
| | Georgia | Not implemented | |
| | Macedonia (FYROM) | Not implemented | |
| | Montenegro | Not implemented | |
| | Russian Federation | Not implemented | |
| | Serbia | Not implemented | |
| | Turkey | Not implemented | |
| | Ukraine | Not implemented | |
| **Annex 1 Band E4 (Non- Specific SRDs) 169.5875-169.8125 MHz** | Belarus | Not implemented | |
| | Bosnia & Herzegovina | Not implemented | |
| | Georgia | Not implemented | |

| Frequency Band | Country | Implementation | Reason/remarks |
|---|---|---|---|
| | Macedonia (FYROM) | Not implemented | |
| | Montenegro | Not implemented | |
| | Russian Federation | Not implemented | |
| | Serbia | Not implemented | |
| | Turkey | Not implemented | |
| | Ukraine | Not implemented | |
| **Annex 1 Band F (Non- Specific SRDs) 433.050-434.790 MHz** | Georgia | Limited implementation | |
| | Russian Federation | Limited implementation | Limited to 433.075-434.790 MHz. Possible use of low power stations and devices for processing of bar-codes |
| | Ukraine | Limited implementation | The maximal transmitter power 10 mW |
| **Annex 1 Band F1 (Non- Specific SRDs) 433.050-434.790 MHz** | Georgia | Limited implementation | |
| | Russian Federation | Not implemented | |
| | Ukraine | Limited implementation | The maximal transmitter power 10 mW |
| **Annex 1 Band F2 (Non- Specific SRDs) 434.040-434.790 MHz** | Georgia | Limited implementation | |
| | Russian Federation | Not implemented | |
| | Ukraine | Limited implementation | The maximal transmitter power 10 mW |
| **Annex 1 Band G1 (Non- Specific SRDs) 863-870 MHz** | Belarus | Limited implementation | Limited to 864.4-868.6 MHz |
| | Georgia | Not implemented | Planned |
| | Greece | Limited implementation | |
| | Norway | Limited implementation | |
| | Russian Federation | Limited implementation | 864-865 MHz with max e.r.p 25 mW, duty cycle 0.1% or LBT. Forbidden to use at the airports (aerodromes) 868.7-869.2 MHz with max e.r.p. 25 mW |
| | Spain | Limited implementation | |
| | Sweden | Not implemented | |
| | Ukraine | Limited implementation | Limited to 863-865 / 868-868.6 / 868.6-868.7 / 869.2-869.25 MHz |
| **Annex *1 Band G1.1* (Non- Specific SRDs) 868.000-868.600 MHz** | Georgia | Not implemented | |
| | Russian Federation | Not implemented | |
| | Ukraine | Limited implementation | e.i.r.p. ≤25 mW |
| **Annex *1 Band G1.2* (Non- Specific SRDs)** | Belarus | Limited implementation | Limited to 869-869.2 MHz |
| | Georgia | Not implemented | |

| Frequency Band | Country | Implementation | Reason/remarks |
|---|---|---|---|
| **868.700-869.200 MHz** | Ukraine | Not implemented | |
| **Annex 1 Band G1.3 (Non- Specific SRDs) 869.400-869.650 MHz** | Belarus | Limited implementation | e.r.p. 150 MW |
| | Georgia | Not implemented | |
| | Russian Federation | Not implemented | |
| | Ukraine | Not implemented | |
| **Annex 1 Band G1.4 (Non- Specific SRDs) 869.700-870.000 MHz** | Georgia | Not implemented | |
| | Russian Federation | Not implemented | |
| | Ukraine | Not implemented | |
| **Annex 1 Band G2 (Non- Specific SRDs) 870-876 MHz** | Belarus | Not implemented | |
| | | | |
| | Finland | Not implemented | Limited to 870-873 MHz |
| | Germany | Not implemented | Not available |
| | | | |
| | Liechtenstein | Limited implementation | Limited to 870-873 MHz: ER-GSM protection |
| | | | |
| | Switzerland | Limited implementation | Limited to 870-873 MHz: ER-GSM protection |
| | United Kingdom | Implemented | The Additional restrictions to protect ER-GSM apply in the UK |
| | | | |
| **Annex 1 Band G2.1 (Non- Specific SRDs) 870.000-875.800 MHz** | Belarus | Not implemented | |
| | | | |
| | Finland | Limited implementation | Limited to 870-873 MHz |
| | Germany | Not implemented | Not available |
| | | | |
| | Liechtenstein | Limited implementation | Limited to 870-873 MHz: ER-GSM protection |
| | | | |
| | Switzerland | Limited implementation | Limited to 870-873 MHz: ER-GSM protection |
| | United Kingdom | Implemented | The Additional restrictions to protect ER-GSM apply in the UK |
| **Annex 1 Band G3 (Non- Specific SRDs) 915-921 MHz** | Belarus | Not implemented | |
| | | | |
| | Germany | Not implemented | Not available |

| Frequency Band | Country | Implementation | Reason/remarks |
|---|---|---|---|
| | Liechtenstein | Limited implementation | Limited to 915-918 MHz: ER-GSM protection |
| | | | |
| | | | |
| | Switzerland | Limited implementation | Limited to 915-918 MHz: ER-GSM protection |
| | United Kingdom | Implemented | The Additional restrictions to protect ER-GSM apply in the UK |
| **Annex 1 Band G3.1 (Non- Specific SRDs) 915.200-920.800 MHz** | Belarus | Not implemented | |
| | | | |
| | Germany | Not implemented | Not available |
| | Liechtenstein | Limited implementation | Limited to 915.2-918 MHz: ER-GSM protection |
| | | | |
| | Switzerland | Limited implementation | Limited to 915.2-918 MHz: ER-GSM protection |
| | United Kingdom | Implemented | The Additional restrictions to protect ER-GSM apply in the UK |
| | | | |
| **Annex 1 Band H (Non- Specific SRDs) 2400.0-2483.5 MHz** | Norway | Implemented | This subsection does not apply for the geographical area within a radius of 20 km from the centre of Ny-Ålesund |
| | Russian Federation | Implemented | Bluetooth |
| | Ukraine | Limited implementation | e.i.r.p. ≤100 mW |
| **Annex 1 Band I (Non- Specific SRDs) 5725-5875 MHz** | Belarus | Not implemented | |
| | Russian Federation | Limited implementation | Duty cycle 0.1% or LBT. Antenna height should not exceed 5 m, with max e.r.p. 25 mW |
| **Annex 1 Band J (Non- Specific SRDs) 24.00-24.25 GHz** | France | Limited implementation | Power limited to 0.1 mW e.i.r.p.in frequency band 24.10-24.15 GHz . Military Radiolocation use. Operation by police forces of radar speed meters |
| | Russian Federation | Not implemented | |
| | United Kingdom | Limited implementation | Only 24.150-24.250 GHz to protect police speed meters |
| **Annex 1 Band K (Non- Specific SRDs) 61.0-61.5 GHz** | Georgia | Not implemented | |
| | | | |
| | Russian Federation | Not implemented | |
| **Annex 1 Band K1 (Non- Specific SRDs)** | Belarus | Not implemented | |
| | Bosnia & Herzegovina | Not implemented | |

| Frequency Band | Country | Implementation | Reason/remarks |
|---|---|---|---|
| **57-64 GHz** | Georgia | Not implemented | |
| | Macedonia (FYROM) | Not implemented | |
| | Montenegro | Not implemented | |
| | Russian Federation | Not implemented | |
| | Serbia | Not implemented | |
| | Turkey | Not implemented | Under study |
| | Ukraine | Not implemented | |
| **Annex 1 Band L (Non- Specific SRDs) 122.00-122.25 GHz** | Belarus | Not implemented | |
| | Georgia | Not implemented | |
| | Portugal | Implemented | 100mW p.i.r.e. is allowed without additional requirements (in conformity with Decision 2011/829/EU) |
| | Russian Federation | Not implemented | |
| **Annex 1 Band L1 (Non- Specific SRDs) 122.25-123.00 GHz** | Belarus | Not implemented | |
| | Georgia | Not implemented | |
| | Portugal | Implemented | 100mW p.i.r.e. is allowed without additional requirements (in conformity with Decision 2011/829/EU) |
| | Russian Federation | Not implemented | |
| **Annex 1 Band M (Non- Specific SRDs) 244-246 GHz** | Belarus | Not implemented | |
| | Georgia | Not implemented | Planned |
| | Russian Federation | Not implemented | |
| **Annex 1 Band N (Non- Specific SRDs) 3.1-4.8 GHz/6-9 GHz** | Belarus | Not implemented | |
| | Bosnia & Herzegovina | Limited implementation | Committed |
| | Georgia | Not implemented | |
| | Russian Federation | Limited implementation | In accordance with National restrictions<br>For Indoor applications:<br>1. Prohibited to use outside buildings<br>2. Prohibited to use onboard aircraft while arriving and departure<br>3. Prohibited to use in freight terminals in airports.<br>Power spectral density limits:<br>2850-3375 MHz: -57 dBm/MHz<br>3375-3950 MHz: -61.5 dBm/MHz<br>3950-4425 MHz: -54.5 dB/MHz |

| Frequency Band | Country | Implementation | Reason/remarks |
|---|---|---|---|
| | | | 4425-5470 MHz: -50 dB/MHz<br>5470-6000 MHz: -62.5 dBm/MHz<br>6000-8100 MHz: -47 dBm/MHz<br>8100-8625 MHz: -65 dBm/MHz<br>8625-9150 MHz: -47 dB/MHz<br>9150-10600 MHz: -45 dBm/MHz<br>For Outdoor applications:<br>Power spectral density limits:<br>2850-3375 MHz: -57 dBm/MHz<br>3375-4800 MHz: -76 dBm/MHz<br>4800-5475 MHz: -50 dBm/MHz<br>5475-6000 MHz: -62.5 dBm/MHz<br>6000-7250 MHz: -47 dBm/MHz<br>7250-7750 MHz: -73 dBm/MHz<br>7750-8625 MHz: -69 dBm/MHz<br>8625-9150 MHz: -47 dBm/MHz<br>9150-10600 MHz: -45 dBm/MHz |
| | Serbia | Not implemented | |
| | Ukraine | Not implemented | Under study for 3.1-4.8 GHz |
| **Annex 1 Band N1 (Non- Specific SRDs) 6.0-8.5 GHz** | Andorra | Not implemented | |
| | Austria | Not implemented | Planned |
| | Belarus | Not implemented | |
| | Belgium | Not implemented | Planned |
| | Bosnia & Herzegovina | Not implemented | |
| | Bulgaria | Not implemented | Planned |
| | Czech Republic | Not implemented | Planned |
| | Cyprus | Not implemented | Planned |
| | France | Not implemented | Planned |
| | Georgia | Not implemented | |
| | Greece | Not implemented | Planned |
| | Hungary | Limited implementation | Version of 12 November 2010 implemented.<br>National footnotes H15A, H29, H78C, H78D of the National Table of Frequency Allocations, which was published by Decree No. 15/2012 (XII.29.)NMHH, and Sections 2, 7 and 10 of Annex 6 to this Decree |
| | Iceland | Not implemented | Planned |

| Frequency Band | Country | Implementation | Reason/remarks |
|---|---|---|---|
| | Ireland | Not implemented | Planned |
| | Italy | Not implemented | Planned |
| | Latvia | Not implemented | Planned |
| | Lithuania | Limited implementation | |
| | Macedonia (FYROM) | Not implemented | |
| | Malta | Not implemented | Planned |
| | Montenegro | Not implemented | |
| | Norway | Not implemented | Planned |
| | Poland | Not implemented | Planned |
| | Portugal | Not implemented | Planned |
| | Romania | Not implemented | Planned |
| | Russian Federation | Not implemented | |
| | Serbia | Not implemented | |
| | Slovakia | Not implemented | Planned |
| | Spain | Not implemented | Planned |
| | Sweden | Not implemented | Planned |
| | Turkey | Not implemented | Under study |
| | Ukraine | Not implemented | |
| | United Kingdom | Limited implementation | |
| **Annex 2 Band A Tracking, Tracing and Data Acquisition 456.9-457.1 kHz** | Bulgaria | Implemented | 457 kHz centre frequency is allocated 456.9-457.1 kHz band is not allocated |
| | Georgia | Not implemented | |
| | Ukraine | Limited implementation | The maximal strength of magnetic field is 7 dBµA/m on distance of 10 m from a construction where the radiator is placed |
| **Annex 2 Band B Tracking, Tracing and Data Acquisition 169.4-169.475 MHz** | Belarus | Not implemented | |
| | Georgia | Not implemented | |
| | Russian Federation | Not implemented | |
| | Ukraine | Not implemented | Under study |
| **Annex 2 Band C Tracking, Tracing and Data Acquisition** | Andorra | Not implemented | |
| | Austria | Not implemented | Under study |
| | Azerbaijan | Not implemented | |

| Frequency Band | Country | Implementation | Reason/remarks |
|---|---|---|---|
| **870.000-875.600 MHz** | Belarus | Not implemented | |
| | Bosnia & Herzegovina | Not implemented | |
| | Bulgaria | Not implemented | |
| | Croatia | Not implemented | |
| | Czech Republic | Not implemented | |
| | Cyprus | Not implemented | |
| | Estonia | Not implemented | |
| | Finland | Limited implementation | Limited to 870-873 MHz |
| | France | Not implemented | |
| | Georgia | Not implemented | |
| | Germany | Not implemented | Not available |
| | Greece | Not implemented | |
| | Hungary | Not implemented | |
| | Iceland | Not implemented | |
| | Ireland | Not implemented | |
| | Italy | Not implemented | |
| | Latvia | Not implemented | |
| | Liechtenstein | Not implemented | Planned with ER-GSM protection |
| | Lithuania | Not implemented | |
| | Luxembourg | Not implemented | |
| | Macedonia | Not implemented | |
| | Malta | Not implemented | |
| | Montenegro | Not implemented | |
| | Netherlands | Not implemented | |
| | Norway | Not implemented | |
| | Poland | Not implemented | |
| | Portugal | Not implemented | |
| | Romania | Not implemented | |
| | Russian Federation | Not implemented | |
| | Serbia | Not implemented | |
| | Slovakia | Not implemented | |

| Frequency Band | Country | Implementation | Reason/remarks |
|---|---|---|---|
| | Spain | Not implemented | |
| | Sweden | Not implemented | |
| | Switzerland | Not implemented | Planned with ER-GSM protection |
| | Turkey | Not implemented | |
| | Ukraine | Not implemented | |
| | United Kingdom | Implemented | The additional restrictions to protect ER-GSM apply in the UK. Planned implementation of network relay points with a duty cycle of up to 10% |
| **Annex 2 Band D1 Tracking, Tracing and Data Acquisition 2483.5-2500 MHz** | Andorra | Not implemented | |
| | Azerbaijan | Not implemented | |
| | Belarus | Not implemented | |
| | Bosnia & Herzegovina | Not implemented | |
| | Bulgaria | Not implemented | |
| | Croatia | Not implemented | |
| | Czech Republic | Not implemented | |
| | Finland | Not implemented | Planned |
| | France | Not implemented | |
| | Georgia | Not implemented | |
| | Greece | Not implemented | |
| | Hungary | Not implemented | |
| | Iceland | Not implemented | |
| | Ireland | Not implemented | |
| | Italy | Not implemented | |
| | Latvia | Not implemented | |
| | Lithuania | Not implemented | |
| | Luxembourg | Not implemented | |
| | Macedonia | Not implemented | |
| | Malta | Not implemented | |
| | Montenegro | Not implemented | |
| | Netherlands | Not implemented | |
| | Norway | Not implemented | |

| Frequency Band | Country | Implementation | Reason/remarks |
|---|---|---|---|
| | Poland | Not implemented | |
| | Portugal | Not implemented | |
| | Romania | Not implemented | |
| | Russian Federation | Not implemented | |
| | Serbia | Not implemented | |
| | Slovakia | Not implemented | |
| | Spain | Not implemented | |
| | Sweden | Not implemented | Planned |
| | Turkey | Not implemented | |
| | Ukraine | Not implemented | |
| | United Kingdom | Not Implemented | |
| **Annex 2 Band D2 Tracking, Tracing and Data Acquisition 2483.5-2500 MHz** | Andorra | Not implemented | |
| | Azerbaijan | Not implemented | |
| | Belarus | Not implemented | |
| | Bosnia & Herzegovina | Not implemented | |
| | Bulgaria | Not implemented | |
| | Croatia | Not implemented | |
| | Czech Republic | Not implemented | |
| | Finland | Not implemented | Planned |
| | France | Not implemented | |
| | Georgia | Not implemented | |
| | Greece | Not implemented | |
| | Hungary | Not implemented | |
| | Iceland | Not implemented | |
| | Ireland | Not implemented | |
| | Italy | Not implemented | |
| | Latvia | Not implemented | |
| | Lithuania | Not implemented | |
| | Luxembourg | Not implemented | |
| | Macedonia | Not implemented | |

| Frequency Band | Country | Implementation | Reason/remarks |
|---|---|---|---|
| | Malta | Not implemented | |
| | Montenegro | Not implemented | |
| | Netherlands | Not implemented | Planned |
| | Norway | Not implemented | |
| | Poland | Not implemented | |
| | Portugal | Not implemented | |
| | Romania | Not implemented | |
| | Russian Federation | Not implemented | |
| | Serbia | Not implemented | |
| | Slovakia | Not implemented | |
| | Spain | Not implemented | |
| | Sweden | Not implemented | |
| | Turkey | Not implemented | |
| | Ukraine | Not implemented | |
| | United Kingdom | Not implemented | |
| **Annex 2 Band E Tracking, Tracing and Data Acquisition 5725-5875 MHz** | | | |
| | Netherlands | Not implemented | Planned |
| | | | |
| **Annex 3 Band A Wideband Data Transmission systems 2400.0-2483.5 MHz** | Belarus | Not implemented | |
| | Norway | Implemented | This subsection does not apply for the geographical area within a radius of 20 km from the centre of Ny-Ålesund on Svalbard |
| | Italy | Implemented | The public use is subject to general authorisation by the respective service provider |
| | Russian Federation | Limited implementation | **1. SRD with FHSS modulation**<br>1.1. Maximum 2.5 mW e.i.r.p.<br>1.2. Maximum 100 mW e.i.r.p. Permitted for use SRD for outdoor applications without restriction on installation height only for purposes of gathering telemetry information for automated monitoring and resources accounting systems. Permitted to use SRD for other purposes for outdoor applications only when the installation height is not exceeding 10 m above the ground surface.<br>1.3.Maximum 100 mW e.i.r.p. Indoor applications |

| Frequency Band | Country | Implementation | Reason/remarks |
|---|---|---|---|
| | | | **2. SRD with DSSS and other than FHSS wideband modulation**<br>2.1. Maximum mean e.i.r.p. density is 2 mW/MHz. Maximum 100 mW e.i.r.p.<br>2.2. Maximum mean e.i.r.p. density is 20 mW/MHz. Maximum 100 mW e.i.r.p. It is permitted to use SRD for outdoor applications only for purposes of gathering telemetry information for automated monitoring and resources accounting systems or security systems.<br>2.3. Maximum mean e.i.r.p. density is 10 mW/MHz. Maximum 100 mW e.i.r.p. Indoor applications |
| | Ukraine | Limited implementation | e.i.r.p. ≤100 mW with built-in antenna with amplification factor up to 6 dBi |
| **Annex 3 Band B Wideband Data Transmission systems 57-66 GHz** | Bosnia & Herzegovina | Limited implementation | |
| | Georgia | Not implemented | |
| | Russian Federation | Not implemented | |
| | Serbia | Available in the range: 61.0-61.5 GHz | According to the Frequency Plan, only this part of the spectrum is aimed for the SRD applications |
| | Ukraine | Not implemented | |
| ***Annex 4 Band A*** **Railway applications 27.090-27.100 MHz (Centre frequency 27.095 MHz** | Bulgaria | Implemented | 27.095 MHz center frequency is allocated.<br>27.090-27.100 MHz band is not allocated |
| | Georgia | No info | |
| | | | |
| | Russian Federation | Not implemented | |
| | Ukraine | Not implemented | |
| **Annex 4 Band B Railway applications 984-7484 kHz (Centre frequency 4234 kHz)** | Georgia | Not implemented | |
| | Macedonia (FYROM) | Not implemented | Planned |
| | | | |
| | Russian Federation | Not implemented | |
| | Serbia | Not implemented | According to the Frequency Plan, this part of the spectrum is aimed for the mobile maritime applications (4063-4438 kHz) |
| | Ukraine | No info | |
| **Annex 4 Band C Railway applications** | Georgia | Not implemented | |
| | Macedonia (FYROM) | Not implemented | Planned |

| Frequency Band | Country | Implementation | Reason/remarks |
|---|---|---|---|
| **7.3-23.0 MHz (Centre frequency 13.547 MHz)** | Russian Federation | Not implemented | |
| | Serbia | Available in the range: 13.553-13.567 MHz | According to the Frequency Plan, this part of the spectrum is available for the SRD applications |
| | Ukraine | No info | |
| **Annex 4 Band D Railway applications 76-77 GHz** | Belarus | Not implemented | |
| | Bosnia & Herzegovina | Not implemented | |
| | Georgia | Not implemented | |
| | Macedonia (FYROM) | Not implemented | |
| | Montenegro | Not implemented | |
| | Russian Federation | Not implemented | |
| | Serbia | Not implemented | |
| | Turkey | Not implemented | Under study |
| | Ukraine | Not implemented | |
| **Annex 5 Band A Transport and traffic telematics (TTT) 870.000-875.800 MHz** | Andorra | Not implemented | |
| | Austria | Not implemented | |
| | Azerbaijan | Not implemented | |
| | Belarus | Not implemented | |
| | Belgium | Not implemented | |
| | Bulgaria | Not implemented | |
| | Croatia | Not implemented | |
| | Czech Republic | Not implemented | |
| | Estonia | Not implemented | |
| | Finland | Limited implementation | Limited to 870-873 MHz |
| | France | Not implemented | |
| | Georgia | Not implemented | |
| | Germany | Not implemented | |
| | Greece | Not implemented | |
| | Hungary | Not implemented | |
| | Iceland | Not implemented | |

| Frequency Band | Country | Implementation | Reason/remarks |
|---|---|---|---|
| | Ireland | Not implemented | |
| | Italy | Not implemented | |
| | Latvia | Not implemented | |
| | Liechtenstein | Limited implementation | Limited to 870-873 MHz: ER-GSM protection |
| | Lithuania | Not implemented | |
| | Luxembourg | Not implemented | |
| | Macedonia (FYROM) | Not implemented | |
| | Malta | Not implemented | |
| | Montenegro | Not implemented | |
| | Netherlands | Not implemented | |
| | Norway | Not implemented | |
| | Poland | Not implemented | |
| | Portugal | Not implemented | |
| | Romania | Not implemented | |
| | Russian Federation | Not implemented | |
| | Serbia | Not implemented | |
| | Slovakia | Not implemented | |
| | Spain | Not implemented | |
| | Sweden | Not implemented | |
| | Switzerland | Limited implementation | Limited to 870-873 MHz: ER-GSM protection |
| | Turkey | Not implemented | |
| | Ukraine | Not implemented | |
| | United Kingdom | Implemented | The Additional restrictions to protect ER-GSM apply in the UK |
| **Annex 5 Band B1 Transport and traffic telematics (TTT) 5795-5805 MHz** | France | Limited implementation | Limited to automatic toll collection.<br>Power limited to 2 W e.i.r.p.<br>Military Radiolocation and Meteorological use |
| | Georgia | Limited implementation | |
| | Ireland | Limited implementation | 8W system not implemented |
| | Liechtenstein | Limited implementation | Annex has two power levels. Lower level with 2 W e.i.r.p. is |

| Frequency Band | Country | Implementation | Reason/remarks |
|---|---|---|---|
| | | | implemented |
| | Malta | Limited implementation | Power limited to 2 W e.i.r.p. as per the lower limit of the Annex |
| | Norway | Limited implementation | Individual license required |
| | Russian Federation | Limited implementation | 200 mW e.r.p.<br>An authorisation for using radio frequencies or channels should too be obtained in established order |
| | Switzerland | Limited implementation | Annex has two levels. Lower level with 2 W e.i.r.p. is implemented to protect defence systems |
| | Ukraine | Not implemented | |
| | United Kingdom | Limited implementation | 2 Watts only permitted |
| **Annex 5 Band B2 Transport and traffic telematics (TTT) 5805-5815 MHz** | Belarus | Implemented | Individual license required |
| | Croatia | Not implemented | Planned |
| | France | Not implemented | |
| | Georgia | Limited implementation | |
| | Ireland | Limited implementation | 8W system not implemented |
| | Liechtenstein | Limited implementation | Annex has two power levels. Lower level with 2 W e.i.r.p. is implemented. For road toll systems only |
| | Malta | Limited implementation | Power limited to 2 W e.i.r.p. as per the lower limit of the Annex |
| | Norway | Limited implementation | Individual license required |
| | Russian Federation | Limited implementation | 200 mW e.r.p.<br>An authorisation for using radio frequencies or channels should too be obtained in established order |
| | Switzerland | Limited implementation | Annex has two levels. Lower level with 2 W e.i.r.p. is implemented. For road toll systems only |
| | Ukraine | Not implemented | |
| | United Kingdom | Limited implementation | 2 Watts only permitted |
| **Annex 5 Band C Transport and traffic telematics (TTT) 76-77 GHz** | Georgia | No info | |
| | Russian Federation | Limited implementation | 1 Watt (30 dBm) |
| **Annex 5 Band D1 Transport and traffic** | Azerbaijan | Not implemented | |
| | Bosnia & Herzegovina | Limited implementation | |

| Frequency Band | Country | Implementation | Reason/remarks |
|---|---|---|---|
| **telematics (TTT)**<br>**21.65-26.65 GHz** | Georgia | Not implemented | |
| | Macedonia (FYROM) | Not implemented | |
| | Russian Federation | Limited implementation | 22-26.65 GHz, limited spectral density, protection areas, automatic deactivation |
| | Serbia | Not implemented | |
| | Ukraine | Not implemented | |
| **Annex 5 Band D2**<br>**Transport and traffic telematics (TTT)**<br>**24.25-26.65 GHz** | Azerbaijan | Not implemented | |
| | Belarus | Not implemented | |
| | Bosnia & Herzegovina | Limited implementation | |
| | Georgia | Not implemented | |
| | Macedonia (FYROM) | Not implemented | |
| | Russian Federation | Limited implementation | 22.00-26.65 GHz, limited spectral density, protection areas, automatic deactivation |
| | Serbia | Not implemented | |
| | Ukraine | Not implemented | |
| **Annex 5 Band E**<br>**Transport and traffic telematics (TTT)**<br>**77-81 GHz** | Bosnia & Herzegovina | Limited implementation | |
| | Georgia | Not implemented | |
| | | | |
| | Serbia | Not implemented | |
| | Ukraine | Not implemented | Under study |
| ***Annex 5 Band F1***<br>**Transport and traffic telematics (TTT)**<br>**24.050-24.075 GHz** | Bosnia & Herzegovina | Limited implementation | Committed |
| | Georgia | Not implemented | |
| | Macedonia (FYROM) | Not implemented | |
| | Serbia | Not implemented | |
| | Ukraine | No info | |
| ***Annex 5 Band F2*** | Bosnia & Herzegovina | Limited implementation | Committed |

| Frequency Band | Country | Implementation | Reason/remarks |
|---|---|---|---|
| **Transport and traffic telematics (TTT) 24.075-24.150 GHz** | Georgia | Not implemented | |
| | Liechtenstein | Implemented | 100 mW and no dwell time restrictions |
| | Macedonia (FYROM) | Not implemented | |
| | Serbia | Not implemented | |
| | Switzerland | Implemented | 100 mW and no dwell time restrictions |
| | Ukraine | No info | |
| ***Annex 5 Band F3*** **Transport and traffic telematics (TTT) 24.150-24.250 GHz** | Bosnia & Herzegovina | Limited implementation | Committed |
| | Georgia | Not implemented | |
| | Macedonia (FYROM) | Not implemented | |
| | Serbia | Not implemented | |
| | Ukraine | No info | |
| **Annex 5 Band G1 Transport and traffic telematics (TTT) 24.250-24.495 GHz** | Azerbaijan | Not implemented | |
| | Belarus | Not implemented | |
| | Bosnia & Herzegovina | Not implemented | |
| | Georgia | Not implemented | |
| | Macedonia (FYROM) | Not implemented | |
| | Montenegro | Not implemented | |
| | Russian Federation | Not implemented | |
| | Serbia | Not implemented | |
| | Ukraine | Not implemented | |
| **Annex 5 Band G2 Transport and traffic telematics (TTT) 24.495-24.500 GHz** | Azerbaijan | Not implemented | |
| | Belarus | Not implemented | |
| | Bosnia & Herzegovina | Not implemented | |
| | Georgia | Not implemented | |
| | Macedonia (FYROM) | Not implemented | |
| | Montenegro | Not implemented | |
| | Russian Federation | Not implemented | |

| Frequency Band | Country | Implementation | Reason/remarks |
|---|---|---|---|
| | Serbia | Not implemented | |
| | Ukraine | Not implemented | |
| **Annex 5 Band G3 Transport and traffic telematics (TTT) 24.250-24.500 GHz** | Azerbaijan | Not implemented | |
| | Belarus | Not implemented | |
| | Bosnia & Herzegovina | Not implemented | |
| | Georgia | Not implemented | |
| | Macedonia (FYROM) | Not implemented | |
| | Montenegro | Not implemented | |
| | Russian Federation | Not implemented | |
| | Serbia | Not implemented | |
| | Ukraine | Not implemented | |
| **Annex 6 Band A Radiodetermination applications 2400.0-2483.5 MHz** | Georgia | Limited implementation | |
| | Russian Federation | Not implemented | |
| | Ukraine | Limited implementation | e.i.r.p. ≤100 mW |
| **Annex 6 Band B Radiodetermination applications 9200-9500 MHz** | Andorra | Not implemented | |
| | Finland | Not implemented | |
| | France | Not implemented | |
| | Georgia | Limited implementation | |
| | Italy | Not implemented | |
| | Russian Federation | Limited implementation | e.i.r.p. ≤13 dBm |
| | Spain | Not implemented | Military application |
| | Sweden | Not implemented | |
| | Ukraine | Not implemented | Under study |
| | United Kingdom | Limited implementation | May be used for Radar Level Gauges only |
| **Annex 6 Band C Radiodetermination applications 9500-9975 MHz** | Andorra | Not implemented | |
| | France | Limited implementation | Limited to 9880-9920 MHz with max e.i.r.p. 50 mW |
| | Georgia | Limited implementation | |
| | Germany | Not implemented | Defence system |

| Frequency Band | Country | Implementation | Reason/remarks |
|---|---|---|---|
| | Russian Federation | Limited implementation | e.i.r.p. ≤13 dBm |
| | Slovak Republic | Not implemented | Defence systems |
| | Spain | Not implemented | Military application |
| | Sweden | Not implemented | |
| | Ukraine | Not implemented | Under study |
| | United Kingdom | Limited implementation | May be used for Radar Level Gauges only |
| **Annex 6 Band D Radiodetermination applications 10.5-10.6 GHz** | Austria | Not implemented | Fixed Service |
| | Czech Republic | Not implemented | Other service in the band |
| | Estonia | Not implemented | FWA |
| | Finland | Limited implementation | Effective radiated power ≤ 25 mW e.i.r.p., duty cycle ≤ 10%, indoor use only. 10.45-10.50 GHz available |
| | France | Limited implementation | Limited to 10.57-10.61 with max e.i.r.p. 20 mW |
| | Georgia | Limited implementation | |
| | Germany | Not implemented | ENG/OB video links equipment |
| | Hungary | Limited implementation | e.i.r.p. 25 mW. ENG/OB systems are protected |
| | Ireland | Limited implementation | Max power limitation of 25 mW to protect Fixed Wireless Access Local Area Service operating in the 10.5 GHz band |
| | Luxembourg | Limited implementation | Limited to 25 mW. Reason: To avoid interference with other services |
| | Russian Federation | Limited implementation | e.i.r.p. 10mW, may be used for Radar Level Gauges only.<br>In the band 10.54-10.56 GHz with max e.i.r.p. 20 dBm, may be used on river and sea vessels only |
| | Slovak Republic | Not implemented | Fixed Service |
| | Sweden | Limited implementation | Limited to 10.51-10.58 GHz |
| | Turkey | Not implemented | Fixed Service and radiolocation |
| | United Kingdom | Limited implementation | Limited to 10.575-10.600 GHz. Band may also be used for Radar Level Gauges |
| | Ukraine | Limited implementation | Limited to 10.51-10.54 GHz |
| **Annex 6 Band E Radiodetermination applications** | Andorra | Not implemented | |
| | France | Not implemented | |
| | Georgia | Limited implementation | |

| Frequency Band | Country | Implementation | Reason/remarks |
|---|---|---|---|
| **13.4-14.0 GHz** | Russian Federation | Not implemented | |
| | Spain | Not implemented | Due to lack of demand |
| | Sweden | Not implemented | |
| | Ukraine | Not implemented | Under study |
| **Annex 6 Band F Radiodetermination applications 24.05-24.25 GHz** | France | Limited implementation | No restriction for fixed applications. Power limited otherwise to 0.1 mW e.i.r.p. in frequency band 24.10 – 24.15 GHz. Alternatively for FMCW modulation, the following conditions are also allowed: power limited to 20 mW (+13 dBm) mean e.i.r.p. and 50 mW (+17 dBm) peak e.i.r.p. with a minimum frequency sweep speed of 5 MHz per millisecond. Military Radiolocation use. Operation by police forces of Radar Speed Meters |
| | Georgia | Limited implementation | |
| | Russian Federation | Limited implementation | Vehicle radars: Maximum 100 mW e.i.r.p.<br>No restrictions if emission bandwidth is not less than 9 MHz. If emission bandwidth is less than 9 MHz then the requirement should be 0.14 µs/60 kHz maximum dwell time every 3ms<br>Fixed radars: Maximum 100 mW e.i.r.p.<br>1. The equipment for detecting movement should be installed along roads at 4 m distance from controlled part of road.<br>2. The installation of equipment for detecting movement should be performed perpendicularly to movement direction of one- or multilane road with permissible deviation ±15 degrees.<br>3. The installation height of equipment for detecting movement should not exceed 5m above a road.<br>4. The tilt angle of the main beam to horizon should be minus 20 degrees or less |
| | Ukraine | Limited implementation | e.i.r.p. ≤100 mW |
| | United Kingdom | Limited implementation | To protect police speed meters devices operating in 24.05-24.15 GHz must employ a minimum sweep rate |
| **Annex 6 Band G Radiodetermination applications 4.5-7.0 GHz** | Belarus | Not implemented | |
| | Georgia | Not implemented | Under study |
| | Macedonia (FYROM) | Not implemented | Planned |
| | Russian Federation | Limited implementation | |
| | Serbia | Available in the range: | According to the Frequency Plan, 5.725-5.875 GHz is available for |

| Frequency Band | Country | Implementation | Reason/remarks |
|---|---|---|---|
| | | 5.725-5.875 GHz<br>5.15-5.25 GHz / 5.250-5.255 GHz / 5.255-5.350 GHz | the SRD applications.<br>According to the Frequency Plan, 5.15-5.25 GHz, 5.250-5255 GHz and 5.255-5.350 GHz is available for the WAS and RLANS applications |
| | Ukraine | Not implemented | Under study |
| **Annex 6 Band H Radiodetermination applications 8.5-10.6 GHz** | Belarus | Not implemented | |
| | Georgia | Not implemented | |
| | Macedonia (FYROM) | Not implemented | Planned |
| | Russian Federation | Limited implementation | |
| | Serbia | Available in the range: 10.50-10.55 GHz and 10.55-10.60 GHz | According to the Frequency Plan, this part of the spectrum is available for the SRD applications |
| | Ukraine | Not implemented | Under study |
| **Annex 6 Band I Radiodetermination applications 24.05-27.0 GHz** | Georgia | Not implemented | Under study |
| | Macedonia (FYROM) | Not implemented | Planned |
| | Russian Federation | Limited implementation | |
| | Serbia | Available in the range: 24.05-24.25 GHz | According to the Frequency Plan, this part of the spectrum is available for the SRD applications |
| | Ukraine | Limited implementation | Limited to 24.05-24.25 GHz |
| **Annex 6 Band J Radiodetermination applications 57-64 GHz** | Georgia | No info | |
| | Macedonia (FYROM) | Not implemented | Planned |
| | Russian Federation | Limited implementation | |
| | Serbia | Available in the range: 61.0-61.5 GHz | According to the Frequency Plan, only this part of the spectrum is aimed for the SRD applications |
| | Ukraine | Not implemented | Under study |
| **Annex 6 Band K Radiodetermination applications 75-85 GHz** | Georgia | No info | |
| | Macedonia (FYROM) | Not implemented | Planned |
| | Russian Federation | Limited implementation | In the band 76-77 GHz with max e.i.r.p. 30 dBm for automotive radars with continuous radiation with frequency modulation FM CW / in the band 77-81 GHz with max. e.i.r.p. spectral density -3 dBm/ MHz for UWB automotive radars (channel bandwidth > 500 MHz) |
| | Serbia | Limited implementation | Available in the range: 76.0-77.5 GHz.<br>According to the Frequency Plan, only this part of the spectrum is aimed for the SRD applications (traffic radiolocation) |

| Frequency Band | Country | Implementation | Reason/remarks |
|---|---|---|---|
| | Ukraine | Limited implementation | In the band 76-77 GHz average e.i.r.p. ≤23.5 dBm |
| **Annex 6 Band L Radiodetermination applications 6.0-8.5 GHz** | Azerbaijan | Not implemented | |
| | Belarus | Limited implementation | |
| | Bosnia & Herzegovina | Not implemented | |
| | Georgia | Not implemented | |
| | Macedonia (FYROM) | Not implemented | Under study |
| | Montenegro | Not implemented | |
| | Russian Federation | Not implemented | |
| | Serbia | Not implemented | |
| | Ukraine | Not implemented | |
| | United Kingdom | Implemented | Exclusion Zones to protect RAS sites apply. See ECC/DEC/(11)02 |
| **Annex 6 Band M Radiodetermination applications 24.5-26.5 GHz** | Azerbaijan | Not implemented | |
| | Belarus | Limited implementation | |
| | Bosnia & Herzegovina | Not implemented | |
| | Georgia | Not implemented | |
| | Macedonia (FYROM) | Not implemented | Under study |
| | Montenegro | Not implemented | |
| | Russian Federation | Not implemented | |
| | Serbia | Not implemented | |
| | Ukraine | Not implemented | |
| | United Kingdom | Implemented | Exclusion Zones to protect RAS sites apply. See ECC/DEC/(11)02 |
| **Annex 6 Band N Radiodetermination applications 57-64 GHz** | Azerbaijan | Not implemented | |
| | Belarus | Limited implementation | |
| | Bosnia & Herzegovina | Not implemented | |
| | Georgia | Not implemented | |
| | Macedonia (FYROM) | Not implemented | Under study |
| | Montenegro | Not implemented | |

| Frequency Band | Country | Implementation | Reason/remarks |
|---|---|---|---|
| | Russian Federation | Not implemented | |
| | Serbia | Not implemented | |
| | Ukraine | Not implemented | |
| ***Annex 6 Band O*** **Radiodetermination applications** **75-85 GHz** | Azerbaijan | Not implemented | |
| | Belarus | Limited implementation | |
| | Bosnia & Herzegovina | Not implemented | |
| | Georgia | Not implemented | |
| | Macedonia (FYROM) | Not implemented | Under study |
| | Montenegro | Not implemented | |
| | Russian Federation | Not implemented | |
| | Serbia | Not implemented | |
| | Ukraine | Not implemented | |
| ***Annex 6 Band P*** **Radiodetermination applications** **17.1-17.3 GHz** | Belarus | Not implemented | |
| | Georgia | Not implemented | Lack of demand |
| | Macedonia (FYROM) | Not implemented | Planned |
| | Russian Federation | Not implemented | |
| | Serbia | Not implemented | According to the Frequency Plan this part of the spectrum is aimed for WLL and RLANs |
| | Ukraine | Not implemented | |
| ***Annex 6 Band Q*** **Radiodetermination applications** **30 MHz-12.4 GHz** | Andorra | Not implemented | Under study |
| | Austria | Limited implementation | |
| | Belarus | Not implemented | |
| | Belgium | Not implemented | Under study |
| | Bosnia & Herzegovina | Limited implementation | |
| | Cyprus | Not implemented | Under study |
| | France | Limited implementation | |
| | Georgia | Not implemented | |
| | Greece | Not implemented | |

| Frequency Band | Country | Implementation | Reason/remarks |
|---|---|---|---|
| | Ireland | Limited implementation | |
| | Italy | No info | |
| | Lithuania | Not implemented | Under study |
| | Macedonia (FYROM) | Not implemented | |
| | Montenegro | Not implemented | Under study |
| | Russian Federation | Not implemented | |
| | Serbia | Not implemented | |
| | Spain | Not implemented | Under study |
| | Sweden | No | |
| | Ukraine | Not implemented | Under study |
| | United Kingdom | Limited implementation | Devices are limited to GPR only. Full implementation planned |
| ***Annex 6 Band R*** **Radiodetermination applications** **2.2 - 8.0 GHz** | Andorra | Limited implementation | |
| | Austria | Limited implementation | According to Commission Decision 2009/343/EC |
| | Belarus | Not implemented | |
| | Bosnia & Herzegovina | Limited implementation | According to Commission Decision 2009/343/EC |
| | Cyprus | Limited implementation | According to Commission Decision 2009/343/EC |
| | Georgia | Not implemented | |
| | Greece | Limited implementation | According to Commission Decision 2009/343/EC |
| | Italy | Limited implementation | According to Commission Decision 2009/343/EC |
| | Latvia | Limited implementation | |
| | Lithuania | Limited implementation | Only parameters set in 2009/343/EC are allowed |
| | Malta | Limited implementation | According to Commission Decision 2009/343/EC |
| | Macedonia (FYROM) | Not implemented | |
| | Portugal | Limited implemented | ECC/DEC/(07)01 of 30 March 2007 on BMA was implemented. The implementation of the amended ECC/DEC/(07)01 on 26 June 2009 is planned |
| | Russian Federation | Not implemented | |

| Frequency Band | Country | Implementation | Reason/remarks |
|---|---|---|---|
| | Serbia | Not implemented | |
| | Spain | Limited implementation | According to Commission Decision 2009/343/EC |
| | Sweden | Limited implementation | According to Commission Decision 2009/343/EC |
| | Ukraine | Not implemented | |
| | United Kingdom | Limited implementation | According to Commission Decision 2009/343/EC |
| ***Annex 6 Band S1*** **Radiodetermination applications** **3.1 - 4. 8 GHz** | Austria | Not implemented | Under study |
| | Azerbaijan | No info | |
| | Belarus | No info | |
| | Belgium | No info | |
| | Bosnia and Herzegovina | No info | |
| | Bulgaria | Not implemented | |
| | Cyprus | Not implemented | |
| | Estonia | Not implemented | Planned |
| | Finland | Not implemented | |
| | France | Not implemented | Under study |
| | Georgia | No info | |
| | Germany | Not implemented | |
| | Greece | No info | |
| | Iceland | No info | |
| | Ireland | Not implemented | |
| | Italy | No info | |
| | Latvia | Not implemented | Under study |
| | Liechtenstein | No info | |
| | Lithuania | Not implemented | |
| | Luxembourg | Not implemented | Planned |
| | Macedonia (FYROM) | No info | |
| | Malta | No info | |

| Frequency Band | Country | Implementation | Reason/remarks |
|---|---|---|---|
| | Monaco | No info | |
| | Montenegro | No info | |
| | Netherlands | Not implemented | Planned |
| | Poland | No info | |
| | Portugal | Not implemented | Under study |
| | Romania | No info | |
| | Russian Federation | No info | |
| | Serbia | No info | |
| | Spain | Not implemented | |
| | Switzerland | Not implemented | Under study |
| | Ukraine | No info | |
| ***Annex 6 Band S2*** **Radiodetermination applications** **3.1 - 4. 8 GHz** | Austria | Not implemented | Under study |
| | Azerbaijan | No info | |
| | Belarus | No info | |
| | Belgium | No info | |
| | Bosnia and Herzegovina | No info | |
| | Bulgaria | Not implemented | |
| | Cyprus | No info | |
| | Estonia | Not implemented | Planned |
| | Finland | Not implemented | |
| | France | Not implemented | Planned |
| | Georgia | No info | |
| | Germany | Not implemented | |
| | Greece | No info | |
| | Iceland | No info | |
| | Ireland | Not implemented | |
| | Italy | No info | |

| Frequency Band | Country | Implementation | Reason/remarks |
|---|---|---|---|
| | Latvia | Not implemented | Under study |
| | Liechtenstein | No info | |
| | Lithuania | Not implemented | |
| | Luxembourg | Not implemented | Planned |
| | Macedonia (FYROM) | No info | |
| | Malta | No info | |
| | Monaco | No info | |
| | Montenegro | No info | |
| | Netherlands | Not implemented | Planned |
| | Poland | No info | |
| | Portugal | Not implemented | Under study |
| | Romania | No info | |
| | Russian Federation | No info | |
| | Serbia | No info | |
| | Spain | Not implemented | |
| | Switzerland | Not implemented | Under study |
| | Ukraine | No info | |
| **Annex 7 Band A Alarms 868.600-868.700 MHz** | Azerbaijan | No info | |
| | Georgia | Not implemented | |
| | Russian Federation | Not implemented | |
| | Ukraine | Limited implementation | The maximal transmitter power 10 mW |
| **Annex 7 Band B Alarms 869.250-869.300 MHz** | Azerbaijan | No info | |
| | Georgia | Not implemented | |
| | Russian Federation | Not implemented | |
| | Ukraine | Not implemented | |
| **Annex 7 Band C** | Azerbaijan | No info | |

| Frequency Band | Country | Implementation | Reason/remarks |
|---|---|---|---|
| **Alarms**<br>**869.650-869.700 MHz** | Georgia | Not implemented | |
| | Russian Federation | Not implemented | |
| | Ukraine | Not implemented | Under study |
| **Annex 7 Band D**<br>**Alarms**<br>**869.200-869.250 MHz** | Azerbaijan | No info | |
| | Georgia | No info | |
| | Russian Federation | Not implemented | |
| | Ukraine | Limited implementation | The maximal transmitter power 10 mW |
| ***Annex 7 Band E***<br>**Alarms**<br>**869.300-869.400 MHz**<br>*(Technical parameters have been changed)* | Azerbaijan | No info | |
| | Georgia | No info | |
| | Russian Federation | Not implemented | |
| | Ukraine | Not implemented | |
| **Annex 8 Band A**<br>**Model Control**<br>**26.995, 27.045, 27.095, 27.145, 27.195 MHz** | Azerbaijan | No info | |
| | Georgia | No info | |
| | Russian Federation | Limited implementation | Power limited to 10 mW.<br>Maximum antenna gain is 3 dB, channel spacing 50 kHz |
| **Annex 8 Band B**<br>**Model Control**<br>**34.995-35.225 MHz** | France | Limited implementation | Limited to 34.995-35.055 MHz. Dedicated networks for Ministry of transport |
| | Georgia | Not implemented | |
| | Germany | Limited to 35.005-35.205 MHz | Limited to 35.005-35.205 MHz. Emergency services |
| | Russian Federation | Not implemented | Under study |
| **Annex 8 Band C**<br>**Model Control**<br>**40.665, 40.675, 40.685, 40.695 MHz** | Georgia | Not implemented | |
| **Annex 9 Band A1**<br>**Inductive applications**<br>**9 – 90 kHz** | Azerbaijan | No info | |
| | Georgia | Not implemented | |
| | Macedonia (FYROM) | Not implemented | |

| Frequency Band | Country | Implementation | Reason/remarks |
|---|---|---|---|
| | Russian Federation | Limited implementation | 9-59.75 kHz: Maximum magnetic field strength is +72 dBµA/m at 10 m. In case of external antennas only loop coil antennas may be employed. Field strength level descending 3 dB/oct at 30 kHz. 59.75-60.25 kHz: Maximum magnetic field strength is +42 dBµA/m at 10 m. In case of external antennas only loop coil antennas may be employed. 60.25-70 kHz: Maximum magnetic field strength is +69 dBµA/m at 10 m. In case of external antennas only loop coil antennas may be employed. Field strength level descending 3dB/oct at 30 kHz. 70-90 kHz: Maximum magnetic field strength is +42 dBµA/m at 10 m. In case of external antennas only loop coil antennas may be employed |
| | Serbia | Not implemented | |
| | Ukraine | Limited implementation | The maximal strength of magnetic field on the distance of 10 m from a construction where the radiator is placed in the band 9-59.75 kHz is 72 dBµA/m, in the band 59.75-60.25 kHz is 42 dBµA/m, in the band 60.250-70 kHz is 69 dBµA/m, in the band 70-119 kHz is 42 dBµA/m |
| **Annex 9 Band A2 Inductive applications 90-119 kHz** | Azerbaijan | No info | |
| | Georgia | Limited implementation | Implemented according to the EC SRD Decision 2006/771/EC |
| | Macedonia (FYROM) | Not implemented | |
| | Russian Federation | Implemented | 70-119 kHz: Maximum magnetic field strength is +42 dBµA/m at 10 m. In case of external antennas only loop coil antennas may be employed |
| | Serbia | Not implemented | |
| | Ukraine | Limited implementation | The maximal strength of magnetic field on the distance of 10 m from a construction where the radiator is placed in the band 70-119 kHz is 42 dBµA/m |
| **Annex 9 Band A3 Inductive applications 119-135 kHz** | Azerbaijan | No info | |
| | Georgia | Not implemented | |
| | Russian Federation | Implemented | Maximum magnetic field strength is +66 dBµA/m at 10 m. In case of external antennas only loop coil antennas may be employed. Field strength level descending 3dB/oct at 30 kHz |
| | Ukraine | Limited implementation | The maximal strength of magnetic field on the distance of 10 m from a construction where the radiator is placed in the band 119-135 kHz is 66 dBµA/m |

| Frequency Band | Country | Implementation | Reason/remarks |
|---|---|---|---|
| **Annex 9 Band B Inductive applications 135-140 kHz** | Azerbaijan | No info | |
| | Georgia | Not implemented | |
| | Russian Federation | Not implemented | |
| | Ukraine | Limited implementation | The maximal strength of magnetic field on the distance of 10 m from a construction where the radiator is placed in the band 135-140 kHz is 42 dBµA/m |
| **Annex 9 Band C Inductive applications 140.0-148.5 kHz** | Azerbaijan | No info | |
| | Georgia | Not implemented | |
| | Russian Federation | Not implemented | |
| | Ukraine | Limited implementation | The maximal strength of magnetic field on the distance of 10 m from a construction where the radiator is placed in the band 140-148.5 kHz is 37.7 dBµA/m |
| **Annex 9 Band D Inductive applications 6765-6795 kHz** | Azerbaijan | No info | |
| | Georgia | Not implemented | |
| | Russian Federation | Implemented | Maximum magnetic field strength is +42 dBµA/m at 10 m |
| | Ukraine | Not implemented | |
| **Annex 9 Band E Inductive applications 7400-8800 kHz** | Azerbaijan | No info | |
| | Georgia | Not implemented | |
| | Russian Federation | Implemented | Maximum magnetic field strength is +9 dBµA/m at 10 m |
| | Spain | No restriction | Frequency band 7350-8800 kHz |
| | Ukraine | Not implemented | |
| **Annex 9 Band F Inductive applications 13.553-13.567 MHz** | Georgia | Not implemented | |
| | Russian Federation | Implemented | Maximum magnetic field strength is +42 dBµA/m at 10 m |
| | Ukraine | Not implemented | |
| **Annex 9 Band F1 Inductive applications 13.410-13.553 MHz 13.567-13.710 MHz 13.110-13.410 MHz 13.710-14.010 MHz** | Andorra | Not implemented | Planned |
| | Belarus | Not implemented | |
| | | | |
| | | | |
| | | | |
| | Spain | Not implemented | Planned |

| Frequency Band | Country | Implementation | Reason/remarks |
|---|---|---|---|
| **12.660-13.110 MHz**<br>**14.010-14.460 MHz**<br>**11.810-112.660 MHz**<br>**14.460-15.310 MHz** | Switzerland | Not implemented | Planned |
| | | | |
| | | | |
| | Ukraine | Not implemented | |
| **Annex 9 Band F2**<br>**Inductive applications**<br>**13.553-13.567 MHz** | Belarus | Not implemented | |
| | Georgia | Not implemented | |
| | Ukraine | Limited implementation | The maximal strength of magnetic field on the distance of 10 m from a construction where the radiator is placed is 42 dBµA/m |
| **Annex 9 Band F3**<br>**Inductive applications**<br>**13.460-13.553 MHz**<br>**13.567-13.660 MHz**<br>**13.360-13.460 MHz**<br>**13.660-13.760 MHz**<br>**13.110-13.360 MHz**<br>**13.760-14.010 MHz**<br>**12.660-13.110 MHz**<br>**14.010-14.460 MHz** | Andorra | Not implemented | Planned |
| | Belarus | Not implemented | |
| | | | |
| | | | |
| | Spain | Not implemented | Planned |
| | | | |
| | United Kingdom | Limited implementation | The bands 13.460-13.553 MHz and 13.567-13.660 MHz are limited to 9 dBuA/m @ 10m |
| | | | |
| **Annex 9 Band G**<br>**Inductive applications**<br>**26.957-27.283 MHz** | Georgia | Not implemented | |
| | Russian Federation | Implemented | Maximum magnetic field strength is +42 dBµA/m at 10 m |
| | Ukraine | Limited implementation | The maximal strength of magnetic field on the distance of 10 m from a construction where the radiator is placed is 42 dBµA/m |
| **Annex 9 Band H**<br>**Inductive applications**<br>**10.200-11.000 MHz** | Georgia | Not implemented | |
| | Russian Federation | Limited implementation | Maximum magnetic field strength is -4 dBµA/m at 10 m |
| | Ukraine | Limited implementation | The maximal strength of magnetic field on the distance of 10 m from a construction where the radiator is placed is 9 dBµA/m |
| **Annex 9 Band K**<br>**Inductive applications**<br>**3155-3400 kHz** | Georgia | Not implemented | |
| | Russian Federation | Not implemented | |
| | Ukraine | Limited implementation | The maximal strength of magnetic field on the distance of 10 m from a construction where the radiator is placed is 13.5 dBµA/m |

| Frequency Band | Country | Implementation | Reason/remarks |
|---|---|---|---|
| **Annex 9 Band L1 Inductive applications 148.5 kHz-5 MHz** | Georgia | Not implemented | |
| | Russian Federation | Not implemented | |
| | Ukraine | Not implemented | Under study |
| **Annex 9 Band L2 Inductive applications 5-30 MHz** | Georgia | Not implemented | |
| | Russian Federation | Not implemented | |
| | Ukraine | No info | |
| **Annex 9 Band L3 Inductive applications 400-600 kHz** | Georgia | Not implemented | |
| | Russian Federation | Not implemented | |
| | Ukraine | Not implemented | Under study |
| **Annex 10 Band A Radio Microphone applications including aids for the hearing impaired 29.7-47.0 MHz** | Andorra | No info | |
| | Austria | Limited implementation | only the frequencies 36.8, 36.85, 37.45, 37.50-37.55 MHz for narrow band and 36.7-37.1-44.55-45.0 MHz for broadband radio microphones are available |
| | Azerbaijan | No info | |
| | Belarus | Limited implementation | Limited to 33.175-40 MHz / 40.025-48.5 MHz |
| | Croatia | Not implemented | Defence systems |
| | Czech Republic | Limited implementation | Only four sub-bands allowed:<br>27.415-27.915 MHz 10 mW e.r.p. channel max 50 kHz.<br>36.4-36.65 MHz 10 mW e.r.p. channel max 50 kHz.<br>36.65-38.0 MHz 2 mW e.r.p. channel max 50 kHz.<br>38.0-38.5 MHz 10 mW e.r.p. channel max 200 kHz |
| | Estonia | Limited to 37.6-38.6 MHz | Land mobile |
| | Finland | Limited implementation | only 31.1, 32.1, 32.9, 33.5, 36.7, 37.1 and 42.4-43.6 MHz with max 200 kHz channels |
| | France | Limited implementation | Limited to 32.8, 36.4, 39.2 MHz 1 mW e.r.p. and 200 kHz |
| | Georgia | Not implemented | |
| | Germany | Limited implementation | Limited to 32.4-38.2 MHz. Permitted channel spacing 10 kHz below 36 MHz and 40 kHz above 36 MHz |
| | Greece | Limited implementation | Limited to 30.00 MHz, 30.50 MHz, 31.00 MHz, 35.00 MHz, 36.50 MHz, 36.70 MHz, 37.00 MHz, 37.10 MHz, 37.50 MHz |

| Frequency Band | Country | Implementation | Reason/remarks |
|---|---|---|---|
| | Hungary | Limited implementation | Limited to 34.9-38.5 MHz band is allocated |
| | Italy | Limited to 41.0-43.6 MHz | Military application |
| | Liechtenstein | Limited implementation | Limited to 10 channels in the band 31.4-39.6 MHz |
| | Lithuania | Limited implementation | only 30.01-30.3 MHz, 30.5-32.15 MHz, and 32.45-37.5 MHz are allowed |
| | Luxembourg | Limited implementation | excluding the use of the band 34.995-35.225 MHz |
| | Malta | Limited implementation | Limited to 29.7-34.9 and 37.5-40.98 MHz |
| | Norway | Limited implementation | to 41.0-43.6 MHz max channel spacing 10 kHz. Max 100 mW e.r.p. AM not allowed |
| | Portugal | Not implemented | Defence systems |
| | Romania | Limited implementation | Only sub-bands: 29.7-30.3 MHz; 30.5-32.15 MHz; 32.45- 33.1 MHz; 33.6-34.975 MHz; 37.5- 40.02 MHz; 40.66- 41.015 MHz; 44.5- 45.2 MHz are allowed |
| | Russian Federation | Limited implementation | Hearing and speech training radio devices for persons with speech defects. Power limited to 10 mW<br>Fixed frequencies in the bands 33.175-40MHz and 40.025-48.5 MHz:<br>33.2, 33.35, 33.45, 33.55, 33.575, 33.6, 33.75, 33.85, 33.875, 33.9, 34.05, 34.15, 34.175, 34.2, 34.3, 34.375, 34.4, 34.975, 35.025, 35.15, 35.225, 35.375, 35.55, 35.65, 35.95, 35.975, 36.025, 36.075, 36.125, 36.175, 36.225, 36.275, 36.325, 36.375, 36.425, 36.475, 36.525, 36.575, 36.625, 36.675, 36.725, 36.775, 36.825, 36.875, 36.925, 36.975, 37.025, 37.075, 37.125, 37.175, 37.225, 37.275, 37.325, 37.375, 37.425, 37.475, 37.525, 37.575, 37.625, 37.675, 37.725, 37.775, 37.825, 37.875, 37.925, 37.975, 38.025, 38.075, 38.125, 38.175, 38.225, 38.275, 38.325, 38.375, 38.425, 38.475, 38.525, 38.575, 38.625, 38.675, 38.725, 38.775, 39.025, 39.225, 39.400, 39.6, 39.75, 39.85, 39.925, 39.975, 40.05, 40.15, 40.25, 40.325, 40.425, 40.65, 40.825, 41.3, 41.325, 41.35, 41.375, 41.4, 41.5, 41.6, 41.625, 41.65, 41.675, 41.7, 41.75, 41.8, 41.9, 41.95, 42.1, 42.15, 42.2, 42.25, 42.35, 42.45, 42.475, 42.5, 42.525, 42.55, 42.575, 42.6, 42.625, 42.65, 42.675, 42.7, 42.725, 42.75, 42.8, 42.85, 42.95, 42.975, 43, 43.15, 43.175, 43.2, 43.225, 43.25, 43.4, 43.5, 43.7, 43.725, 43.75, 43.8, 44, 44.25, 44.4, 44.475, 44.5, 44.65, 44.75, 44.975, 45, 45.25, 45.45, 45.475, 45.5, 45.65, 45.75, 45.8, 45.95, 45.975, 46, 46.125. 46.175, 46.225, 46.425, 46.45, 46.475, 46.55, 46.575, 46.6, 46.65, 46.675, 46.7, 46.775, 46.8, 46.825, |

| Frequency Band | Country | Implementation | Reason/remarks |
|---|---|---|---|
| | | | 46.85, 46.875, 46.925, 46.95, 46.975, 47, 47.075, 47.125, 47.25 MHz |
| | Slovak Republic | Limited to 27.75-27.9 and 36.4-38.5 MHz | Defence systems in the rest of the band |
| | Spain | Limited implementation | Limited to 31.500, 31.750, 37.850, 38.300 and 38.550 MHz |
| | Sweden | Limited implementation | Limited to 41.0-43.6 MHz - Land Mobile |
| | Switzerland | Limited implementation | Limited to 10 channels in the band 31.4-39.6 MHz. Main use by defence systems |
| | Ukraine | Limited implementation | In the band 30.01-47 MHz maximal transmitter power is 10 mW |
| | United Kingdom | Not implemented | |
| **Annex 10 Band B Radio Microphone applications including aids for the hearing impaired 173.965-216.000 MHz** | | | |
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| **Annex 10 Band C Radio Microphone applications including aids for the hearing impaired 863-865 MHz** | Azerbaijan | No info | |
| | Belarus | Limited implementation | |
| | Croatia | Limited implementation | |
| | Georgia | Not implemented | |
| | Russian Federation | Not implemented | e.r.p. 10 mW, duty cycle 100% |
| | Ukraine | Limited implementation | The maximal transmitter power is 10 mW |
| **Annex 10 Band C1 Radio Microphone applications including aids for the hearing impaired 916.1-916.5 MHz 917.3-917.7 MHz** | Azerbaijan | Not implemented | |
| | Belarus | Not implemented | |
| | Germany | Not implemented | Not available |
| | | | |
| | | | |
| | United Kingdom | Implemented | The Additional restrictions to protect ER-GSM apply in the UK |
| **Annex 10 Band C1 Radio Microphone applications including aids for the hearing impaired** | Azerbaijan | Not implemented | |
| | Belarus | Limited implementation | |
| | Germany | Not implemented | Not available |
| | Liechtenstein | Not implemented | ER-GSM protection |

| Frequency Band | Country | Implementation | Reason/remarks |
|---|---|---|---|
| **918.5-918.9 MHz**<br>**919.7-920.1 MHz** | | | |
| | | | |
| | Switzerland | Not implemented | ER-GSM protection |
| | | | |
| **Annex 10 *Band D***<br>***Radio Microphone applications including aids for the hearing impaired***<br>**174-216 MHz** | Andorra | Limited implementation | |
| | Azerbaijan | No info | |
| | Belarus | Not implemented | |
| | Denmark | Limited implementation | Tuning range |
| | France | Limited implementation | For professional users.<br>175.5-178.5 and 183.5-186.5 MHz also authorised for consumer products with 10 mW e.r.p. and 200 kHz channel spacing |
| | Georgia | Not implemented | |
| | Ireland | Not implemented | |
| | Malta | Not implemented | |
| | Norway | Not implemented | |
| | Russian Federation | Limited implementation | 174-230 MHz: Power limited to 5 mW. Maximum antenna gain is 3 dB. Channel spacing is 200 kHz |
| | Spain | Limited implementation | Limited to 174.100, 174.300, 175.500, 176.300, 179.300, 188.100, 188.500, 189.100, 191.900 and 194.500 MHz |
| | Ukraine | Limited implementation | Under condition of not causing interference to other stations working in this band. In bands of 174.4-174.6 MHz and 174.9-175.1 MHz the maximal transmitter power is 10 mW |
| | United Kingdom | Implemented | The tuning range in the UK is 174 to 175.1 MHz |
| **Annex 10 Band E1**<br>**Radio Microphone applications including aids for the hearing impaired**<br>**470-786 MHz** | Azerbaijan | No info | |
| | Belarus | Limited implementation | Limited to 470-638 MHz (5 mW).<br>Limited to 774-782 MHz |
| | Finland | Limited implementation | Regional restrictions. Radiomicrophones in the frequency band 694-786 MHz allowed until the end of year 2020 |
| | France | Limited implementation | For professional users |
| | Georgia | Not implemented | |
| | Germany | Limited implementation | |
| | Greece | Limited implementation | 10 mW e.r.p. max |

| Frequency Band | Country | Implementation | Reason/remarks |
|---|---|---|---|
| | Italy | Limited implementation | |
| | Lithuania | Limited implementation | In all 470–862 MHz band 50 mW e.r.p. Only for radio microphones. Individual registrations required |
| | Malta | Limited implementation | |
| | Norway | Limited implementation | |
| | Poland | Limited implementation | Radio Microphones and Assistive Listening Devices are allowed in the whole band 470-862 MHz until introduction of MFCN networks in Poland. After that frequency band will be limited to the band 470-786 MHz. Individual licensing under study |
| | Russian Federation | Limited implementation | 470-638 MHz: Power limited to 5 mW. Maximum antenna gain is 3 dB. Channel spacing is 200 kHz. 710-726 MHz: Power limited to 5 mW. Maximum antenna gain is 3 dB. Channel spacing is 200 kHz |
| | Ukraine | Limited implementation | |
| **Annex 10 Band E2**<br>**Radio Microphone applications including aids for the hearing impaired**<br>**786-789 MHz** | Andorra | Not implemented | |
| | Azerbaijan | No info | |
| | Austria | Limited implementation | Currently old regulation (470-862 MHz; 50 mW e.r.p.; 200 kHz channel spacing) is in force |
| | Belarus | Not implemented | |
| | Belgium | Not implemented | Planned |
| | Bosnia & Herzegovina | Not implemented | |
| | Bulgaria | Not implemented | |
| | Croatia | Implemented | Individual license required |
| | Cyprus | Not implemented | |
| | Finland | Limited implementation | Regional restrictions. Radiomicrophones in the frequency band 694-786 MHz allowed until the end of year 2020 |
| | France | Limited implementation | For professional users |
| | Greece | Limited implementation | 10 mW e.r.p. max |
| | Georgia | Not implemented | |
| | Hungary | Not implemented | |
| | Italy | Not implemented | |
| | Latvia | Not implemented | |

| Frequency Band | Country | Implementation | Reason/remarks |
|---|---|---|---|
| | Lithuania | Limited implementation | In all 470-862 MHz band 50 mW e.r.p. Only for radio microphones. Individual registrations required |
| | Macedonia (FYROM) | Not implemented | |
| | Malta | Not implemented | |
| | Montenegro | Not implemented | |
| | Norway | Not implemented | |
| | Poland | Limited implementation | With technical parameters for the “old” band E. Full implementation and individual licensing under study |
| | Portugal | Not implemented | |
| | Romania | Not implemented | |
| | Russian Federation | Not implemented | |
| | Serbia | Not implemented | |
| | Slovak Republic | Not implemented | |
| | Spain | Not implemented | Only broadcasting TV in this band |
| | Sweden | Not implemented | |
| | Ukraine | Not implemented | |
| **Annex 10 Band E3 Radio Microphone applications including aids for the hearing impaired823-826 MHz** | Austria | Limited implementation | Currently old regulation (470-862 MHz; 50 mW e.r.p.; 200 kHz channel spacing) is in force |
| | Azerbaijan | No info | |
| | Belgium | Not implemented | Planned |
| | Bosnia & Herzegovina | Not implemented | |
| | Bulgaria | Not implemented | |
| | Croatia | Not implemented | |
| | Cyprus | Not implemented | |
| | Estonia | Not implemented | Under study |
| | France | Limited implementation | For professional users. Limited to 50 mW e.r.p. |
| | Georgia | Not implemented | |
| | Greece | Not implemented | |
| | Hungary | Not implemented | |

| Frequency Band | Country | Implementation | Reason/remarks |
|---|---|---|---|
| | Italy | Not implemented | |
| | Latvia | Not implemented | |
| | Lithuania | Limited implementation | In all 470–862 MHz band 50 mW e.r.p. Only for radio microphones. Individual registrations required |
| | Macedonia (FYROM) | Not implemented | |
| | Malta | Not implemented | |
| | Montenegro | Not implemented | |
| | Norway | Not implemented | |
| | Poland | Limited implementation | With technical parameters for the “old” band E. Full implementation and individual licensing under study |
| | Portugal | Not implemented | |
| | Romania | Not implemented | |
| | Russian Federation | Not implemented | |
| | Serbia | Not implemented | |
| | Slovak Republic | Not implemented | |
| | Sweden | Limited implementation | Licence exemption10 mW e.r.p. handheld equipment. Licence exemption 50 mW e.r.p.bodyworn equipment |
| | Ukraine | Not implemented | |
| | United Kingdom | Planned | |
| **Annex 10 Band E4 Radio Microphone applications including aids for the hearing impaired 826-832 MHz** | Austria | Limited implementation | Currently old regulation (470-862 MHz; 50 mW e.r.p.; 200 kHz channel spacing) is in force |
| | Azerbaijan | No info | |
| | Belgium | Not implemented | Planned |
| | Bosnia & Herzegovina | Not implemented | |
| | Bulgaria | Not implemented | |
| | Croatia | Not implemented | |
| | Cyprus | Not implemented | |
| | Estonia | Not implemented | Under study |
| | France | Limited implementation | For professional users. Limited to 826-830 MHz with 50 mW max e.r.p. |
| | Georgia | Not implemented | |

| Frequency Band | Country | Implementation | Reason/remarks |
|---|---|---|---|
| | Greece | Not implemented | |
| | Hungary | Not implemented | |
| | Italy | Not implemented | |
| | Latvia | Not implemented | |
| | Lithuania | Limited implementation | In all 470-862 MHz band 50 mW e.r.p. Only for radio microphones. Individual registrations required |
| | Macedonia (FYROM) | Not implemented | |
| | Malta | Not implemented | |
| | Montenegro | Not implemented | |
| | Norway | Not implemented | |
| | Poland | Limited implementation | With technical parameters for the “old” band E. Full implementation and individual licensing under study |
| | Portugal | Not implemented | |
| | Romania | Not implemented | |
| | Russian Federation | Not implemented | |
| | Slovak Republic | Not implemented | |
| | Sweden | Limited implementation | Licence exemption 50 mW e.r.p. |
| | Ukraine | Not implemented | |
| | United Kingdom | Planned | |
| **Annex 10 Band F Radio Microphone applications including aids for the hearing impaired 1785-1795 MHz** | Azerbaijan | No info | |
| | Belarus | Not implemented | |
| | Georgia | Not implemented | |
| | Ireland | Not implemented | All-island WAPECS in Operation |
| | Italy | Not implemented | Military application |
| | Malta | Not implemented | Planned |
| | Netherlands | Implemented | max 50 mW e.r.p. Channel spacing 600 kHz |
| | Russian Federation | Not implemented | |
| | Slovak Republic | Not implemented | Fixed Service |

| Frequency Band | Country | Implementation | Reason/remarks |
|---|---|---|---|
| | Sweden | Not implemented | |
| | Ukraine | Not implemented | Under study |
| | United Kingdom | Implemented | Individual licence required |
| **Annex 10 Band G**<br>**Radio Microphone applications including aids for the hearing impaired 1795-1800 MHz** | Azerbaijan | No info | |
| | Belarus | Not implemented | |
| | Croatia | Limited implementation | Individual licence required |
| | Czech Republic | Limited implementation | |
| | Georgia | Not implemented | |
| | Ireland | Not implemented | All-island WAPECS in Operation |
| | Italy | Not implemented | Military application |
| | Netherlands | Implemented | max 50 mW e.r.p. Channel spacing 600 kHz |
| | Russian Federation | Not implemented | |
| | Slovak Republic | Not implemented | Fixed Service |
| | Sweden | Not implemented | |
| | Ukraine | Not implemented | Under study |
| | United Kingdom | Implemented | Individual licence required |
| **Annex 10 Band G1**<br>**Radio Microphone applications including aids for the hearing impaired 1800.0-1804.8 MHz** | Austria | Not implemented | Planned |
| | Belarus | Not implemented | |
| | | | |
| | | | |
| | Liechtenstein | Not implemented | Planned |
| | | | |
| | | | |
| | Switzerland | Not implemented | Planned |
| | | | |
| | | | |
| | Ukraine | Not implemented | Under study |
| | United Kingdom | Not Implemented | |
| **Annex 10 Band H1** | Azerbaijan | No info | |

| Frequency Band | Country | Implementation | Reason/remarks |
|---|---|---|---|
| **Radio Microphone applications including aids for the hearing impaired 169.4000-169.4750 MHz** | Belarus | Not implemented | |
| | Georgia | Not implemented | |
| | Russian Federation | Not implemented | |
| | Ukraine | Not implemented | Under study |
| **Annex 10 Band H2 Radio Microphone applications including aids for the hearing impaired 169.4875-169.5875 MHz** | Azerbaijan | No info | |
| | Belarus | Not implemented | |
| | Georgia | Not implemented | |
| | Russian Federation | Not implemented | |
| | Ukraine | Not implemented | Under study |
| **Annex 10 Band I Radio Microphone applications including aids for the hearing impaired 169.4-174.0 MHz** | Andorra | Limited implementation | |
| | Azerbaijan | No info | |
| | Austria | Not implemented | Implementation depends on market demand |
| | Belarus | Not implemented | |
| | Belgium | Not implemented | |
| | Bulgaria | Not implemented | The band is used for national security needs |
| | Cyprus | Not implemented | |
| | Czech Republic | Limited implementation | Only two parts of the band allowed above 169.5875 MHz 173.3 MHz: 50 mW e.r.p. max 75 kHz.<br>173.965-174.015 MHz: 2 mW e.r.p. channel spacing max 50 kHz.<br>Other services in the rest of the band |
| | Finland | Not implemented | |
| | France | Not implemented | |
| | Georgia | Not implemented | |
| | Greece | Not implemented | |
| | Hungary | Not implemented | Not planned. Governmental use in the band |
| | Iceland | No info | |
| | Ireland | Not implemented | |
| | Italy | Limited implementation | Limited to 169.815 MHz |

| Frequency Band | Country | Implementation | Reason/remarks |
|---|---|---|---|
| | Liechtenstein | Not implemented | Occupied with mobile services |
| | Malta | Not implemented | |
| | Netherlands | Not implemented | Planned |
| | Poland | Not implemented | |
| | Portugal | Not implemented | Land Mobile |
| | Russian Federation | Not implemented | |
| | Serbia | Not implemented | In the Frequency Plan in this part of the spectrum there are not available frequency slots for the radio microphones |
| | Slovak Republic | Not implemented | Under study |
| | Spain | Limited implementation | Channel plan for 169.4-169.8 MHz according ECC/DEC/(05)02 |
| | Sweden | Not implemented | |
| | Switzerland | Not implemented | Occupied with mobile services |
| | Ukraine | Not implemented | |
| | United Kingdom | Limited implementation | Implemented in 173.325-174.000 MHz and at 2 mW only |
| **Annex 10 Band J Radio Microphone applications including aids for the hearing impaired 1492-1518 MHz** | Andorra | Not implemented | |
| | Austria | Not implemented | Planned |
| | Azerbaijan | No info | |
| | Belarus | Not implemented | |
| | | | |
| | | | |
| | Liechtenstein | Not implemented | Under study |
| | Netherlands | Not implemented | |
| | | | |
| | | | |
| | Switzerland | Not implemented | Under study |
| | | | |

| Frequency Band | Country | Implementation | Reason/remarks |
|---|---|---|---|
| | United Kingdom | Limited implementation | Limited PMSE operation allowed in 1517-1518 MHz subject to individual authorisation |
| **Annex 11 Band A1 RFID 2446-2454 MHz** | Azerbaijan | No info | |
| | Russian Federation | Not implemented | |
| | Ukraine | Not implemented | Under study |
| **Annex 11 Band A2 RFID 2446-2454 MHz** | Azerbaijan | No info | |
| | Russian Federation | Not implemented | |
| | Ukraine | Not implemented | Under study |
| **Annex 11 Band B1 RFID 865.0-865.6 MHz** | Azerbaijan | No info | |
| | Georgia | Not implemented | |
| | Macedonia (FYROM) | Not implemented | |
| | Russian Federation | Not implemented | |
| | Ukraine | Not implemented | Under study |
| **Annex 11 Band B2 RFID 865.6-867.6 MHz** | Azerbaijan | No info | |
| | Georgia | No info | |
| | Macedonia (FYROM) | Not implemented | |
| | Russian Federation | Limited implementation | 866.6-867.4 MHz with e.r.p 100 mW.<br>The assignment of radio frequencies or channels is not required in when:<br>a) LBT is applied<br>b) equipment is used at the airport 866.0-867.6 MHz with e.r.p 2 W.<br>The assignment of radio frequencies or channels should too be performed in established order |
| | Ukraine | Not implemented | Under study |
| **Annex 11 Band B3 RFID 867.6-868.0 MHz** | Azerbaijan | No info | |
| | Georgia | No info | |
| | Macedonia (FYROM) | Not implemented | |
| | Russian Federation | Limited implementation | Limited to 866-868 MHz. The assignment of radio frequencies or channels should too be performed in established order |
| | Ukraine | Not implemented | Under study |

| Frequency Band | Country | Implementation | Reason/remarks |
|---|---|---|---|
| **Annex 11 Band C RFID 915-921 MHz** | Azerbaijan | Not implemented | |
| | Belarus | Not implemented | |
| | | | |
| | Liechtenstein | Limited implementation | Limited to the 2 channels below 918 MHz: ER-GSM protection |
| | | | |
| | Netherlands | Not implemented | |
| | Switzerland | Limited implementation | Limited to the 2 channels below 918 MHz: ER-GSM protection |
| | Ukraine | Not implemented | Under study |
| | United Kingdom | Implemented | The Additional restrictions to protect ER-GSM apply in the UK |
| **Annex 12 Band A Active Medical Implants and their associated peripherals 9-315 kHz** | Azerbaijan | No info | |
| | Georgia | No info | |
| | Russian Federation | Not implemented | |
| | Ukraine | Limited implementation | The maximal strength of magnetic field on the distance of 10 m from a construction where the radiator is placed is 30 dBµA/m |
| **Annex 12 Band B Active Medical Implants and their associated peripherals 315-600 kHz** | Azerbaijan | No info | |
| | Georgia | Not implemented | |
| | Russian Federation | Not implemented | |
| | Ukraine | Limited implementation | The maximal strength of magnetic field on the distance of 10 m from a construction where the radiator is placed is 30 dBµA/m |
| **Annex 12 Band C Active Medical Implants and their associated peripherals 30.0-37.5 MHz** | Azerbaijan | No info | |
| | Georgia | Not implemented | |
| | Russian Federation | Not implemented | |
| | Serbia | Not implemented | In the Frequency Plan in this part of the spectrum there are not available frequency slots for this applications |
| | Ukraine | Limited implementation | The maximal transmitter power is 1 mW |
| **Annex 12 Band D Active Medical Implants and their associated peripherals 12.5-20.0 MHz** | Azerbaijan | No info | |
| | Georgia | Not implemented | |
| | Russian Federation | Not implemented | |
| | Serbia | Limited implementation | Available in the range: 13.553-13.567 MHz. |

| Frequency Band | Country | Implementation | Reason/remarks |
|---|---|---|---|
| | | | According to the Frequency Plan, this part of the spectrum is available for the SRD applications |
| | Ukraine | Not implemented | Under study |
| **Annex 12 Band E**<br>**Active Medical Implants and their associated peripherals**<br>**2483.5-2500 MHz** | Azerbaijan | No info | |
| | Bosnia & Herzegovina | Not implemented | |
| | Belarus | Not implemented | |
| | Georgia | Not implemented | |
| | Macedonia (FYROM) | Not implemented | |
| | Montenegro | Not implemented | |
| | Russian Federation | Implemented | |
| | Serbia | Not implemented | |
| | Ukraine | Not implemented | |
| **Annex 13 Band A**<br>**Wireless Audio Applications**<br>**863-865 MHz** | Azerbaijan | No info | |
| | Georgia | Not implemented | |
| | Ukraine | Not implemented | |
| **Annex 13 Band B**<br>**Wireless Audio Applications**<br>**864.8-865.0 MHz** | Azerbaijan | No info | |
| | Russian Federation | Not implemented | |
| | Ukraine | Limited implementation | e.i.r.p. ≤10 $_{M}B_{T}$ |
| **Annex 13 Band C**<br>**Wireless Audio Applications**<br>**1795-1800 MHz** | Azerbaijan | No info | |
| | Austria | Not implemented | Under study |
| | Belarus | Not implemented | |
| | Croatia | Not implemented | Lack of demand |
| | Finland | Limited implementation | Individual license required |
| | France | Not implemented | |
| | Georgia | Limited implementation | |
| | Ireland | Not implemented | All-island WAPECS in Operation |
| | Italy | Not implemented | Military application |

| Frequency Band | Country | Implementation | Reason/remarks |
|---|---|---|---|
| | Russian Federation | Not implemented | |
| | Slovak Republic | Not implemented | Fixed service |
| | Ukraine | Not implemented | Under study |
| | United Kingdom | Limited implementation | Individual licence required |
| **Annex 13 Band D Wireless Audio Applications 87.5-108.0 MHz** | Azerbaijan | No info | |
| | Russian Federation | Limited implementation | Maximum e.i.r.p. -43 dBm (50 nW). No spacing. Omnidirectional antenna. Permitted to use inside cars and other vehicles, and also inside of the closed premises |
| | Ukraine | Limited implementation | Limited to 87.5-92 MHz; 100-108 MHz; (e.i.r.p. ≤50*$10^{-9}$W); 89.9-90.2 MHz (the maximal transmitter power is 10 mW) |

## APPENDIX 4: LIST OF ABBREVIATIONS AS USED IN THIS DOCUMENT

**Table 20: List of abbreviations as used in this document**

| List of abbreviations as used in this document | |
|---|---|
| AFA | Adaptive Frequency Agility |
| AVI | Automatic Vehicle Identification for Railways |
| BMA | Building Material Analysis |
| CEPT | European Conference of Postal and Telecommunications Administrations |
| DAA | Detect and Avoid |
| EAS | Electronic Article Surveillance |
| ECC | Electronic Communications Committee |
| ECO | European Communications Office |
| EFIS | ECO Frequency Information System |
| ENG/OB | Electronic News Gathering / Outside Broadcasting |
| ERC | European Radiocommunications Committee |
| ERM | Electromagnetic Compatibility and Radio Spectrum Matters |
| ER-GSM | Extended spectrum for GSM for Railways |
| ETSI | European Telecommunications Standard Institute |
| FHSS | Frequency Hopping Spread Spectrum |
| FMCW | Frequency Modulated Continuous Wave |
| GBSAR | Ground Based Synthetic Aperture Radar |
| FHSS | Frequency Hopping Spread Spectrum |
| GPR/WPR | Ground- and Wall Probing Radars |
| ISM | Industrial, Scientific and Medical applications |
| LAES | Location Application for Emergency Services |
| LBT | Listen Before Talk |
| LDC | Low Duty Cycle |
| LP-AMI | Low Power Active Medical Implant |
| LT2 | Location Tracking Type 2 |
| MBANS | Medical Body Area Network Systems |

| | |
|---|---|
| PMR | Professional Mobile Radio / Private Mobile Radio |
| PMSE | Programme Making Special Events |
| R&TTE | Directive 1999/5/EC of the European Parliament and of the Council of 9 March 1999on radio equipment and telecommunications terminal equipment and the mutual recognition of their conformity |
| RFID | Radio Frequency Identification |
| RTTT | Road Transport & Traffic Telematics |
| SRD | Short Range Devices |
| SRR | Short Range Radar |
| TLPR | Tank Level Probing Radar |
| TTT | Transport & Traffic Telematics |
| ULP-AID | Ultra Low Power Animal Implant Devices |
| ULP-AIP | Ultra Low Power Animal Implantable |
| ULP-AMI | Ultra Low Power Active Medical Implants |
| UWB | Ultra WideBand |
| WAS | Wireless Access Systems |
| WIA | Wireless Industrial Applications |
| WLL | Wireless Local Loop |

## APPENDIX 5: DUTY CYCLE CATEGORIES

For the purposes of this Recommendation the duty cycle is defined as the ratio, expressed as a percentage, of the maximum transmitter “on” time on one carrier frequency, relative to a one hour period unless otherwise mentioned in the relevant Annex.

For pre-programmed devices the maximum transmitter “on” time and minimum “off” time are given in Table 21. These limits are advisory with a view to facilitating sharing between systems in the same frequency band.

For FHSS: the accumulated dwell time per hopping position should always fulfil the duty cycle identified.

**Table 21: Duty Cycle Categories**

| | Name | Transmitting time / Full cycle | Maximum transmitter “on” time (seconds) | Minimum transmitter “off” time (seconds) | Explanation |
|---|---|---|---|---|---|
| 1 | Very Low | ≤0.1% | 0.72 | 0.72 | For example, 5 transmissions of 0.72 seconds within one hour |
| 2 | Low | ≤1.0% | 3.6 | 1.8 | For example, 10 transmissions of 3.6 seconds within one hour |
| 3 | High | ≤10% | 36 | 3.6 | For example, 10 transmissions of 36 seconds within one hour |
| 4 | Very High | Up to 100% | - | - | Typically continuous transmissions but also those with a duty cycle greater than 10% |

## DOCUMENT HISTORY

| | Text | Page | Edition |
|---|---|---|---|
| | Editorial amendment | 2 | September 2015 |
| | | | |
| Annex 1 | Non-specific Short Range Devices | 6 | February 2014 |
| Annex 2 | Tracking, Tracing and Data Acquisition | 12 | May 2015 |
| Annex 3 | Wideband Data Transmission systems | 15 | October 2012 |
| Annex 4 | Railway applications | 17 | October 2012 |
| Annex 5 | Transport & Traffic Telematics (TTT) | 19 | July 2015 |
| Annex 6 | Radiodetermination applications | 22 | May 2015 |
| Annex 7 | Alarms | 25 | May 2013 |
| Annex 8 | Model Control | 26 | October 2009 |
| Annex 9 | Inductive applications | 27 | February 2014 |
| Annex 10 | Radio microphones and Assistive Listening Devices | 31 | September 2015 |
| Annex 11 | Radio frequency identification applications | 35 | February 2014 |
| Annex 12 | Active Medical Implants and their associated peripherals | 37 | October 2012 |
| Annex 13 | Wireless Audio applications | 39 | February 2014 |
| Appendix 1 | Implementation Status | 40 | September 2015 |
| Appendix 2 | List of relevant ECC/ERC Decisions, Reports, EC Decisions and ETSI Standards | 48 | August 2015 |
| Appendix 3 | National restrictions | 57 | September 2015 |
| Appendix 4 | List of abbreviations as used in this document | 106 | May 2015 |
| Appendix 5 | Duty cycle categories | 108 | February 2014 |
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