CEPT ECC
Electronic Communications Committee

ERC Recommendation 70-03

Relating to the Use of Short Range Devices (SRD)

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Subsequent amendments

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

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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.

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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 http://ec.europa.eu/enterprise/sectors/rtte/index_en.htm and the ECO web sites (www.cept.org/ecc).

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 2 and 3 and also the related cross-references in the Annexes may be undertaken by the ECO 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 Decision	Notes
a	6765-6795 kHz	42 dBµA/m at 10m	No requirement	No spacing		The frequency band is also identified in Annex 9
b	13.553-13.567 MHz	42 dBµA/m at 10m	No requirement	No spacing		The frequency band is also identified in Annex 9
c	26.957-27.283 MHz	42 dBµA/m at 10m 10 mW e.r.p	No requirement	No spacing		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	No spacing		
e	138.20-138.45 MHz	10 mW e.r.p.	≤ 1.0 % duty cycle (note 1)	No spacing		
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)	No spacing	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	No spacing	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 Decision	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)	No spacing	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)	No spacing		
f1	433.050-434.790 MHz	1 mW e.r.p. -13 dBm/10 kHz	No requirement except for (note 11)	No spacing		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)	No spacing		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	No spacing, 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 Decision	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)	No spacing, 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)	No spacing, 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. 25 mW e.r.p.	No requirement ≤1% duty cycle or LBT+AFA (note 1)	No spacing 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 Decision	Notes
			on time of 5ms/1s			
g3	915-921 MHz	25 mW e.r.p.	≤ 0.1% duty cycle 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) For ER-GSM protection (918-920.8MHz, where applicable), the duty cycle is limited to ≤ 0.01% and limited to a maximum transmit on-time of 5ms/1s	≤ 600 kHz except for the 4 channels identified in note 9 where ≤ 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	No spacing		The frequency band is also identified in Annexes 3 and 6
i	5725-5875 MHz	25 mW e.i.r.p.	No requirement	No spacing		
j	24.00-24.25 GHz	100 mW e.i.r.p.	No requirement	No spacing		The frequency band is also identified in Annex 5
k	61.0-61.5 GHz	100 mW e.i.r.p.	No requirement	No spacing		
k1	57-64 GHz	100 mW e.i.r.p., a max. transmitter output power of 10 mW, and a power density	No requirement	No spacing		

Frequency Band		Power / Magnetic Field	Spectrum access and mitigation requirements	Modulation/ maximum occupied bandwidth	ECC/ERC Decision	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)	No spacing		
l1	122.25-123.0 GHz	100 mW e.i.r.p.	No requirement	No spacing		
m	244-246 GHz	100 mW e.i.r.p.	No requirement	No spacing		
n	3.1-4.8 GHz 6 - 9 GHz	*	*	*	ECC/DEC/(06)04	Generic UWB regulation * See detailed requirements in the related ECC Decision
n1	6.0-8.5 GHz	*	*	*	ECC/DEC/(12)03	UWB on-board aircraft regulation * 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.

Table 2: Regulatory parameters

	Frequency Band	Power / Magnetic Field	Spectrum access and mitigation requirements	Channel spacing	ECC/ERC Decision	Notes
a	456.9-457.1 kHz	7 dBµA/m at 10 m	No requirement	Continuous wave (CW) – no modulation		Emergency detection of buried victims and valuable items. 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. 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). For ER-GSM protection (873-875.6MHz, where applicable), the duty cycle is limited to ≤ 0.01% and limited to a maximum transmit on time of 5ms/1s (note 2)	≤ 200 kHz		Individual license may be required for Metropolitan / Rural Area Networks. Adaptive Power Control (APC) required. The APC Control is able to reduce a link's transmit power from its maximum to ≤ 5 mW. The frequency band is also identified in Annexes 1 and 5

Frequency Band		Power / Magnetic Field	Spectrum access and mitigation requirements	Channel spacing	ECC/ERC Decision	Notes
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 ≤ 10% duty cycle	Modulation Bandwidth ≤ 3 MHz		The frequency band is also identified in Annex 12. 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 ≤ 2% duty cycle	Modulation Bandwidth ≤ 3 MHz		The frequency band is also identified in Annex 12. The application is for MBANS, indoor only within the patient's home.

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.
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.

Additional Information

Harmonised Standards

EN 300 718 sub-band a)
EN 300 220 sub-band b)
Sub-band c) t.b.d.
EN 303 203 sub-bands d1) and d2) for MBANS 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 and noting that EN 303 203 is under development, 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	Channel spacing	ECC/ERC Decision	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	No spacing		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.	No spacing		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	Channel spacing	ECC/ERC Decision	Notes
a	27.090-27.100 MHz	42 dBµA/m at 10 m	No requirement	No spacing		Tele-powering and Down-link signal for Balise / Eurobalise. May also be optionally used for the activation of the Loop / Euroloop. Note: Centre frequency is 27.095 MHz
b	984-7484 kHz	9 dBµA/m at 10m	≤1% duty cycle	No spacing		Transmitting only on receipt of a Balise / Eurobalise tele-powering signal from a train. Note: Centre frequency is 4234 kHz
c	7.3-23.0 MHz	-7 dBµA/m at 10m	No requirement	No spacing		Maximum field strength specified in a bandwidth of 10 kHz, spatially averaged over any 200m length of the loop. Transmitting only in presence of trains. Spread Spectrum Signal, Code Length: 472 Chips. Note: Centre frequency is 13.547 MHz
d	76-77 GHz	55 dBm peak e.i.r.p.	No requirement	No spacing		Obstruction/Vehicle detection via radar Sensor at railway level crossings. 50 dBm average power or 23.5 dBm average power for pulse radar. 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) (under revision).

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, water and air, 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.

Table 5: Regulatory parameters

Frequency Band		Power / Magnetic Field	Spectrum access and mitigation requirements	Channel spacing	ECC/ERC Decision	Notes
a	870.000-875.800 MHz	500 mW e.r.p. 100 mW e.r.p.	≤ 0.1% duty cycle 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. 100 mW is restricted to in-vehicle applications. Adaptive Power Control (APC) is required. The APC is able to reduce a link's transmit power from its maximum to ≤ 5 mW. The frequency band is also identified in Annexes 1 and 2
b1	5795-5805 MHz	2 W e.i.r.p. 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. 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	No spacing		50 dBm average power or 23.5 dBm average power for pulse radar only. For ground based vehicle and infrastructure systems only 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). * See detailed requirements in related ECC Decision.

Frequency Band		Power / Magnetic Field	Spectrum access and mitigation requirements	Channel spacing	ECC/ERC Decision	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) See detailed requirements in related ECC Decision. 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) * See detailed requirements in related ECC Decision
f1	24.050-24.075 GHz	100 mW e.i.r.p.	No requirement			For vehicle radars
f2	24.075-24.150 GHz	0.1 mW e.i.r.p.	No requirement			For vehicle radars
		100 mW e.i.r.p.	≤ 4µs/40 kHz dwell time every 3ms			For automotive radars 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. 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 The spectrum access and mitigation requirement is given for devices mounted either behind a bumper or mounted without a bumper. 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 vehicle radars
g1	24.250-24.495 GHz	-11 dBm e.i.r.p.	≤ 0.25%/s/25 MHz			For automotive radars

Frequency Band		Power / Magnetic Field	Spectrum access and mitigation requirements	Channel spacing	ECC/ERC Decision	Notes
			duty cycle			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-band 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

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	Channel spacing	ECC/ERC Decision	Notes
a	2400.0-2483.5 MHz	25 mW e.i.r.p.	No requirement	No spacing	ERC/DEC/(01)08	
b	9200-9500 MHz	25 mW e.i.r.p.	No requirement	No spacing		
c	9500-9975 MHz	25 mW e.i.r.p.	No requirement	No spacing		
d	10.5-10.6 GHz	500 mW e.i.r.p.	No requirement	No spacing		
e	13.4-14.0 GHz	25 mW e.i.r.p.	No requirement	No spacing		
f	24.05-24.25 GHz	100 mW e.i.r.p.	No requirement	No spacing		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	No spacing		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	No spacing		For Tank Level Probing Radar (TLPR). 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 structure	No requirement	No spacing		For Tank Level Probing Radar (TLPR)
j	57-64 GHz	-41.3 dBm/MHz e.i.r.p. outside the enclosed test tank structure	No requirement	No spacing		For Tank Level Probing Radar (TLPR)

Frequency Band		Power / Magnetic Field	Spectrum access and mitigation requirements	Channel spacing	ECC/ERC Decision	Notes
k	75-85 GHz	-41.3 dBm/MHz e.i.r.p. outside the enclosed test tank structure	No requirement	No spacing		For Tank Level Probing Radar (TLPR)
l	6.0-8.5 GHz	*	*	No spacing	ECC/DEC/(11)02	For Industrial Level Probing Radar (LPR). *See detailed requirements in related ECC Decision
m	24.05-26.5 GHz	*	*	No spacing	ECC/DEC/(11)02	For Industrial Level Probing Radar (LPR). *See detailed requirements in related ECC Decision
n	57-64 GHz	*	*	No spacing	ECC/DEC/(11)02	For Industrial Level Probing Radar (LPR). *See detailed requirements in related ECC Decision
o	75-85 GHz	*	*	No spacing	ECC/DEC/(11)02	For Industrial Level Probing Radar (LPR). *See detailed requirements in related ECC Decision
p	17.1-17.3 GHz	26 dBm e.i.r.p.	DAA	No spacing		For Ground Based Synthetic Aperture Radar (GBSAR) 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. * See detailed requirements in related ECC Decision
r	2.2-8 GHz	*	*	*	ECC/DEC/(07)01	For Material Sensing Devices. * See detailed requirements in related ECC Decision

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)

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	Channel spacing	ECC/ERC Decision	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	Channel spacing	ECC/ERC Decision	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 include for example car immobilisers, 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 (e.g. NFC) and wireless control systems, as well as animal identification, alarm systems, cable detection, waste management, personal identification, wireless voice links, access control, proximity sensors, data transfer to handheld devices, automatic article identification, wireless control systems, 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	Channel spacing	ECC/ERC Decision	Notes
a1	9 - 90 kHz	72 dBµA/m at 10m (**note 1**)	No requirement	No spacing		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	No spacing		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	No spacing		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	No spacing		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	No spacing		In case of external antennas only loop coil antennas may be employed
d	6765-6795 kHz	42 dBµA/m at 10m	No requirement	No spacing		
e	7400-8800 kHz	9 dBµA/m at 10m	No requirement	No spacing		
f	13.553-13.567 MHz	42 dBµA/m at 10m	No requirement	No spacing		
f1	13.410-13.553 MHz 13.567-13.710 MHz	9 dBµA/m at 10m	No requirement	No spacing		For RFID only, Only in connection with band f
	13.110-13.410 MHz	-3.5 dBµA/m at 10m	No requirement	No spacing		For RFID only, Only in connection with band f

Frequency Band		Power / Magnetic Field	Spectrum access and mitigation requirements	Channel spacing	ECC/ERC Decision	Notes
	13.710-14.010 MHz					
	12.660-13.110 MHz 14.010-14.460 MHz	-10 dBµA/m at 10m	No requirement	No spacing		For RFID only, Only in connection with band f
	11.810-12.660 MHz 14.460-15.310 MHz	-16 dBµA/m at 10m	No requirement	No spacing		For RFID only, Only in connection with band f
f2	13.553-13.567 MHz	60 dBµA/m at 10m	No requirement	No spacing		For RFID and EAS only
f3	13.460-13.553 MHz 13.567-13.660 MHz	27 dBµA/m at 10m	No requirement	No spacing		For RFID only, Only in connection with band f2
	13.360-13.460 MHz 13.660-13.760 MHz	Linear transition from 27 to -3.5 dBµA/m at 10m	No requirement	No spacing		For RFID only, Only in connection with band f2
	13.110-13.360 MHz 13.760-14.010 MHz	-3.5 dBµA/m at 10m	No requirement	No spacing		For RFID only, Only in connection with band f2
	12.660-13.110 MHz 14.010-14.460 MHz	-5 dBµA/m at 10m	No requirement	No spacing		For RFID only, Only in connection with band f2
g	26.957-27.283 MHz	42 dBµA/m at 10m	No requirement	No spacing		
h	10.200-11.000 MHz	9 dBµA/m at 10m	No requirement	No spacing		
k	3155-3400 kHz	13.5 dBµA/m at 10m	No requirement	No spacing		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	No spacing		In case of external antennas only loop coil antennas may be employed. *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 (-15 dBµA/m in a bandwidth of 10 kHz)*
l2	5 - 30 MHz	-20 dBµA/m at 10 m	No requirement	No spacing		In case of external antennas only loop coil antennas may be employed. *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)*
l3	400 - 600 kHz	-8 dBµA/m at 10 m	No requirement	No spacing		For RFID only.

Frequency Band		Power / Magnetic Field	Spectrum access and mitigation requirements	Channel spacing	ECC/ERC Decision	Notes
						In case of external antennas only loop coil antennas may be employed. *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.)* 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 AIDS FOR THE HEARING IMPAIRED

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 aids for the hearing impaired (also referred to as assistive listening devices). 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 more 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 aids for the hearing impaired.

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:

- Aids for the hearing impaired: sub-bands b), c), d), h1), h2), i)
- Radio microphones: sub-bands a), c), d), e1), e2), e3), e4), f), g), g1), j).

Aids for the hearing impaired 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	Channel spacing	ECC/ERC Decision	Notes
a	29.7-47.0 MHz	10 mW e.r.p.	No requirement	≤ 50 kHz		On a tuning range basis The frequency bands 30.3-30.5 MHz, 32.15-32.45 MHz and 41.015-47.00 MHz are harmonised military bands. Individual licence may be required
b	173.965-174.015 MHz	2 mW e.r.p.	No requirement	≤ 50 kHz		Aids for the hearing impaired
c	863-865 MHz	10 mW e.r.p.	No requirement	No spacing		The frequency band is also identified in Annex 13
c1	916.1-916.5 MHz, 917.3-917.7 MHz, 918.5-918.9 MHz, 919.7-920.1 MHz	10 mW e.r.p.	≤ 25 % duty cycle	≤ 400 kHz		Indoor Digital Assistive Listening Device Systems. The frequency band is also identified in Annexes 1 and 11

Frequency Band		Power / Magnetic Field	Spectrum access and mitigation requirements	Channel spacing	ECC/ERC Decision	Notes
d	174-216 MHz	50 mW e.r.p.	No requirement	No spacing		On a tuning range basis. Individual licence may be required
e1	470-786 MHz	50 mW e.r.p.	No requirement	No spacing		On a tuning range basis. Individual licence may be required
e2	786-789 MHz	12 mW e.r.p.	No requirement	No spacing		On a tuning range basis. Individual licence may be required. 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. 100 mW e.i.r.p.	No requirement	≤ 200 kHz		Individual licence may be required. 100 mW restricted to body worn equipment. 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. 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. 50 mW e.i.r.p.	No requirement	No spacing		Individual licence may be required. 50 mW restricted to body worn equipment
g	1795-1800 MHz	20 mW e.i.r.p. 50 mW e.i.r.p.	No requirement	No spacing		Individual licence may be required. 50 mW restricted to body worn equipment
g1	1800-1804.8 MHz	20 mW e.i.r.p. 50 mW e.i.r.p.	No requirement	No spacing		Individual licence may be required 50 mW restricted to body worn equipment
h1	169.4000-169.4750 MHz	10 mW e.r.p.	No requirement	≤ 50 kHz	ECC/DEC/(05)02	Aids for the hearing impaired. (Personal Hearing Aid System)
		500 mW e.r.p.	No requirement	≤ 50 kHz	ECC/DEC/(05)02	Aids for the hearing impaired. (Public Hearing Aid System). Individual licence may be required
h2	169.4875-169.5875 MHz	10 mW e.r.p.	No requirement	≤ 50 kHz	ECC/DEC/(05)02	Aids for the hearing impaired. (Personal Hearing Aid System)
		500 mW e.r.p.	No requirement	≤ 50 kHz	ECC/DEC/(05)02	Aids for the hearing impaired. (Public Hearing Aid System)

Frequency Band		Power / Magnetic Field	Spectrum access and mitigation requirements	Channel spacing	ECC/ERC Decision	Notes
						Individual licence may be required
I	169.4-174.0 MHz	10 mW e.r.p.	No requirement	≤ 50 kHz		Aids for the hearing impaired. On a tuning range basis
j	1492- 1518 MHz	50 mW e.i.r.p	No requirement	No spacing		On a tuning range basis. Individual licence required. Restricted to indoor use

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 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-band d)

Some countries may allow radio microphones and aids for the hearing impaired to operate in parts of this band with maximum transmitter power of 10 mW e.r.p. and without individual licence. Detailed information can be obtained from national administrations.

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	Channel spacing	ECC/ERC Decision	Notes
a1	2446-2454 MHz	≤ 500 mW e.i.r.p.	No requirement	No spacing		
a2	2446-2454 MHz	> 500 mW to 4 W e.i.r.p	≤ 15% duty cycle FHSS techniques should be used	No spacing		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. 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 400kHz.

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	Channel spacing	ECC/ERC Decision	Notes
a	9-315 kHz	30 dBµA/m at 10m	≤ 10% duty cycle	No spacing		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	No spacing		The application is for animal implantable devices
C	30.0-37.5 MHz	1 mW e.r.p.	≤ 10% duty cycle	No spacing		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	No spacing		The application is for ULP active animal implantable devices (ULP-AID), limited to indoor only applications. The maximum field strength is specified in a bandwidth of 10 kHz. The transmission mask of ULP-AID is defined as follows: 3dB bandwidth 300 kHz 10dB bandwidth 800 kHz 20dB bandwidth 2 MHz
e	2483.5-2500 MHz	10 dBm e.i.r.p.	LBT+AFA and ≤ 10% duty cycle. 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. Individual transmitters may combine adjacent channels on a dynamic basis for increased bandwidth higher than 1 MHz. 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	Channel spacing	ECC/ERC Decision	Notes
a	863-865 MHz	10 mW e.r.p.	No requirement	No spacing		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	No spacing		
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: COUNTRIES FOR CLASS 1 EQUIPMENT

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 } 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 1E2: 169.4000-169.4875 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 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	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	P	N	N	N	N	N	N	N	N	Y	Y	N	P	Y	Y
Annex 1G2.1: 870.000-875.800 MHz	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	P	N	N	N	N	N	N	N	N	Y	Y	N	P	Y	Y
Annex 1G3: 915-921 MHz	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	P	N	N	N	N	N	N	N	N	Y	Y	N	P	Y	Y
Annex 1G3.1: 915.2-920.8 MHz	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	P	N	N	N	N	N	N	N	N	Y	Y	N	P	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	N	N	N	N	Y	L	N	N	U	Y	N	L	N	N	N	N	Y	P	Y	N	Y	P	N	N	N	N	Y	N	Y	N	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	N	N	N	N	N	N	N	N	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	N	N	N	N	N	N	N	N	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 2D2: 2483.5-2500 MHz	N	N	N	N	N	N	N	N	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 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	N	N	N	N	N	N	N	N	N	N	N	N	L	N	N	N	N	N	N	N	N	N	Y	N	P	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	P	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
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
*)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 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	Y	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	P	N	N	N	Y	N	N	N	N	N	Y	P	N	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	P	N	N	N	Y	N	N	N	N	N	Y	P	N	N	Y
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	Y	L	Y	L	L	L	N
Annex 10B: 173.965-174.015 MHz	Y	N	L	Y	Y	N	Y	Y	N	Y	Y	N	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N	N	Y
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 / 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	P	N	N	N	N	N	N	N	N	N	Y	N	P	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	N	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	N	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	N	N	L	N	N	N	Y	Y	Y	L	P
Annex 10F: 1785-1795 MHz	L	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	L	Y	Y	L	Y	Y	Y	L	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	N	N	N	N	N	Y	N	N	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	N	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	L	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	N	N	N	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 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	P	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

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Annex to ERC/REC 70-03	ALB	AZE	BIH	BLR	GEO	MDA	MKD	MNE	RUS	SRB	TUR	UKR
Annex 1 - Non-Specific SRDs												
Annex 1A: 6765-6795 kHz	Y		Y		N	Y	Y	Y	N	Y	Y	L
Annex 1B: 13.553-13.567 MHz	Y		Y		N	Y	Y	Y	Y	Y	Y	N
Annex 1C: 26.957-27.283 MHz	Y		Y		N	Y	Y	Y	Y	Y	Y	N
Annex 1C1: 26.995, 27.045, 27.095, 27.145, 27.195 MHz	Y		N		N	Y	N	N	N	N	N	N
Annex 1D: 40.660-40.700 MHz	Y		Y		N	Y	Y	Y	Y	Y	Y	N
Annex 1E: 138.20-138.45 MHz	Y		Y		N	Y	Y	Y	N	Y	Y	N
Annex 1E1: 169.4000-169.4750 MHz	Y		Y		N	Y	Y	Y	N	Y	Y	U
Annex 1E2: 169.4000-169.4875 MHz **DEC/(05)02**	Y		N		N	Y	N	N	N	N	N	N
Annex 1E3: 169.4875-169.5875 MHz	Y		N		N	Y	N	N	N	N	N	N
Annex 1E4: 169.5875-169.8125 MHz	Y		N		N	Y	N	N	N	N	N	N
Annex 1F: 433.050-434.790 MHz	Y		Y		L	Y	Y	Y	L	Y	Y	L
Annex 1F1: 433.050-434.790 MHz	Y		Y		L	Y	Y	Y	N	Y	Y	L
Annex 1F2: 434.040-434.790 MHz	Y		Y		L	Y	Y	Y	N	Y	Y	L
Annex 1G1: 863-870 MHz	Y		Y		N	Y	Y	Y	L	Y	Y	L
Annex 1G1.1: 868.000-868.600 MHz	Y		Y		N	Y	Y	Y	N	Y	Y	L
Annex 1G1.2: 868.700-869.200 MHz	Y		Y		N	Y	Y	Y	Y	Y	Y	N
Annex 1G1.3: 869.400-869.650 MHz	Y		Y		N	Y	Y	Y	N	Y	Y	N
Annex 1G1.4: 869.700-870.000 MHz	Y		Y		N	Y	Y	Y	N	Y	Y	N
Annex 1G2: 870-876 MHz	Y	N	N	N	N	Y	N	N	N	N	N	N
Annex 1G2.1: 870.0-875.8 MHz	Y	N	N	N	N	Y	N	N	N	N	N	N
Annex 1G3: 915-921 MHz	Y	N	N	N	N	Y	N	N	N	N	N	N
Annex 1G3.1: 915.200-920.800 MHz	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	L
Annex 1I: 5725-5875 MHz	Y		Y		Y	Y	Y	Y	L	Y	Y	Y
Annex 1J: 24.00–24.25 GHz	Y		Y		Y	Y	Y	Y	N	Y	Y	Y
Annex 1K: 61.0-61.5 GHz	Y		Y		N	Y	Y	Y	N	Y	Y	Y
Annex 1K1: 57-64 GHz	Y		N		N	Y	N	N	N	N	U	N
Annex 1L: 122.00-122.25 GHz	Y		Y		N	Y	Y	Y	N	Y	Y	Y
Annex 1L1: 122.25-123.00 GHz	Y		Y		N	Y	Y	Y	N	Y	Y	Y
Annex 1M: 244-246 GHz	Y		Y		N	Y	Y	Y	N	Y	Y	Y
Annex 1N: 3.1-4.8 GHz **DEC/(06)04**	Y		L	N	N	Y	Y	Y	L	N	Y	U
Annex 1N: 6-9 GHz	Y		L	N	N	Y	Y	Y	L	N	Y	U
Annex 1N1: 6.0-8.5 GHz **DEC/(12)03**	Y		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	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		N	Y	Y	Y	Y	Y	Y	L
Annex 2B: 169.400-169.475 MHz **DEC/(05)02**	Y		Y		N	Y	Y	Y	N	Y	Y	U
Annex 2C: 870.000-875.600 MHz	Y	N	N	N	N	Y	N	N	N	N	N	N
Annex 2D1: 2483.5-2500 MHz	Y	N	N	N	N	Y	N	N	N	N	N	N
Annex 2D2: 2483.5-2500 MHz	Y	N	N	N	N	Y	N	N	N	N	N	N
Annex 3 - Wideband Data Transmission Systems												
Annex 3A: 2400.0-2483.5 MHz	Y		Y		Y	Y	Y	Y	L	Y	Y	L
Annex 3B: 57–66 GHz	Y		L		N	Y	Y	Y	N	L	Y	N
Annex 4 - Railway Applications												
Annex 4A: (*27.095 MHz) 27.090-27.100 MHz	Y		Y		N	Y	Y	Y	N	Y	Y	N
Annex 4B: (*4234 kHz) 984-7484 kHz	Y		Y		N	Y	P	Y	N	N	Y	N
Annex 4C: (*13.547 MHz) 7.3-23.0 MHz	Y		Y		N	Y	P	Y	N	L	Y	N
Annex 4D: 76-77 GHz	Y		N		N	Y	N	N	N	N	U	N
Annex 5 - Road Transport and Traffic Telematics - RTTT												
Annex A: 870.000-875.800 MHz	Y	N	Y	N	N	Y	N	N	N	N	N	N
Annex 5B1: 5795–5805 MHz	Y		Y		L	Y	Y	Y	L	Y	Y	N
Annex 5B2: 5805-5815 MHz	Y		Y		L	Y	Y	Y	L	Y	Y	N
Annex 5C: 76-77 GHz	Y		Y		N	Y	Y	Y	N	Y	Y	Y
Annex 5D1: 21.65-26.65 GHz } **DEC(04)10**	Y	N	L	N	N	Y	N	Y	N	N	Y	N
Annex 5D2: 24.25-26.65 GHz } **DEC(04)10**	Y	N	L	N	N	Y	N	Y	N	N	Y	N
Annex 5E: 77-81 GHz **DEC(04)03**	Y		L	Y	N	Y	Y	Y	N	N	Y	U
Annex 5F1: 24.050-24.075 GHz	Y		L		N	Y	N	Y	N	N	Y	N
Annex 5F2: 24.075-24.150 GHz	Y		L		N	Y	N	Y	N	N	Y	N
Annex 5F3: 24.150-24.250 GHz	Y		L		N	Y	N	Y	N	N	Y	N
Annex 5G1: 24.250-24.495 GHz	Y	N	N	N	N	Y	N	N	N	N	Y	N
Annex 5G2: 24.495-24.500 GHz	Y	N	N	N	N	Y	N	N	N	N	Y	N
Annex 5G3: 24.250-24.500 GHz	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	L	Y	Y	Y	N	Y	Y	L
Annex 6B: 9200-9500 MHz	Y		Y		L	Y	Y	Y	L	Y	Y	U
Annex 6C: 9500-9975 MHz	Y		Y		L	Y	Y	Y	L	Y	Y	U
Annex 6D:10.5-10.6 GHz	Y		Y		L	Y	Y	Y	L	Y	N	L
Annex 6E:13.4-14.0 GHz	Y		Y		L	Y	Y	Y	N	Y	Y	U
Annex 6F: 24.05-24.25 GHz	Y		Y		L	Y	Y	Y	L	Y	Y	L
Annex 6G: 4.5-7.0 GHz	Y		Y		N	Y	P	Y	N	L	Y	U

*)Center frequency for the band

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Annex to ERC/REC 70-03	ALB	AZE	BIH	BLR	GEO	MDA	MKD	MNE	RUS	SRB	TUR	UKR
Annex 6 - Radiodetermination applications - continue												
Annex 6H: 8.5-10.6 GHz	Y		Y		N	Y	P	Y	N	L	Y	U
Annex 6I: 24.05-27.0 GHz	Y		Y		N	Y	P	Y	N	L	Y	L
Annex 6J: 57-64 GHz	Y		Y		N	Y	P	Y	N	L	Y	U
Annex 6K: 75-85 GHz	Y		Y		N	Y	P	Y	L	L	Y	L
Annex 6L: 6.0-8.5 GHz	Y	N	N	L	N	Y	U	N	N	N	Y	N
Annex 6M: 24.05-26.5 GHz ~~DEC/(11)02~~	Y	N	N	L	N	Y	U	N	N	N	Y	N
Annex 6N: 57-64 GHz ~~DEC/(11)02~~	Y	N	N	L	N	Y	U	N	N	N	Y	N
Annex 6O: 75-85 GHz ~~DEC/(11)02~~	Y	N	N	L	N	Y	U	N	N	N	Y	N
Annex 6P: 17.1-17.3 GHz	Y		Y		N	Y	P	Y	N	L	Y	N
Annex 6Q: 30 MHz-12.4 GHz **DEC/(06)08**	Y		L		N	Y	N	U	N	N	Y	U
Annex 6R: 2.2-8.0 GHz **DEC/(07)01**	Y		L		N	Y	N	Y	N	N	Y	N
Annex 7 - Alarms												
Annex 7A: 868.6-868.7 MHz	Y		Y		N	Y	Y	Y	N	Y	Y	L
Annex 7B: 869.250-869.300 MHz	Y		Y		N	Y	Y	Y	N	Y	Y	N
Annex 7C: 869.650-869.700 MHz	Y		Y		N	Y	Y	Y	N	Y	Y	U
Annex 7D: 869.200-869.250 MHz	Y		Y		N	Y	Y	Y	N	Y	Y	L
Annex 7E: 869.300-869.400 MHz	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 **DEC/(01)11+12**	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	N	Y	Y	Y	N	Y	Y	Y
Annex 8C: 40.665,40.675 40.685, 40.695 MHz **DEC/(01)11+12**	Y		Y	Y	N	Y	Y	Y	Y	Y	Y	Y
Annex 9 - Inductive Applications												
Annex 9A1: 9-90 kHz	Y		Y		N	Y	N	Y	L	N	Y	L
Annex 9A2: 90-119 kHz	Y		Y		L	Y	N	Y	Y	N	Y	L
Annex 9A3: 119-135 kHz	Y		Y		N	Y	Y	Y	Y	Y	Y	L
Annex 9B: 135-140 kHz	Y		Y		N	Y	Y	Y	N	Y	Y	L
Annex 9C 140.0-148.5 kHz	Y		Y		N	Y	Y	Y	N	Y	Y	L
Annex 9D: 6765-6795 kHz	Y		Y		N	Y	Y	Y	Y	Y	Y	N
Annex 9E: 7400-8800 kHz	Y		Y		N	Y	Y	Y	Y	Y	Y	N
Annex 9F: 13.553-13.567 MHz	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	Y	N	N	N	N	Y	N	N	N	N	N	N
Annex 9F2: 13.553-13.567 MHz	Y		Y		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	Y	N	N	N	N	Y	N	N	N	N	N	N
Annex 9G: 26.957-27.283 MHz	Y		Y		N	Y	Y	Y	Y	Y	Y	L
Annex 9H: 10.200-11.000 MHz	Y		Y		N	Y	Y	Y	L	Y	Y	L
Annex 9K: 3155-3400 kHz	Y		Y		N	Y	Y	Y	N	Y	Y	L
Annex 9L1: 148.5 kHz-5 MHz	Y		Y		N	Y	Y	Y	N	Y	Y	U
Annex 9L2: 5-30 MHz	Y		Y		N	Y	Y	Y	N	Y	Y	N
Annex 9L3: 400-600 kHz	Y		Y		N	Y	Y	Y	N	Y	Y	U

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Annexes to ERC/REC 70-03	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	Y		Y		N	Y	Y	Y	L	Y	Y	L
Annex 10B: 173.965-174.015 MHz	Y		Y		N	Y	Y	Y	N	Y	Y	N
Annex 10C: 863-865 MHz	Y		Y		N	Y	Y	Y	L	Y	Y	L
Annex 10C1: 916.1-916.5 MHz / 917.3-917.7 MHz / 918.5-918.9 MHz / 919.7-920.1 MHz	Y	N	N	N	N	Y	N	N	N	N	N	N
Annex 10D: 174-216 MHz	Y		Y		N	Y	Y	Y	L	Y	Y	L
Annex 10E1: 470-786 MHz	Y		Y		N	Y	Y	Y	L	Y	Y	L
Annex 10E2: 786-789 MHz	Y		N		N	Y	N	N	N	N	Y	N
Annex 10E3: 823-826 MHz	Y		N		N	Y	N	N	N	N	Y	N
Annex 10E4: 826-832 MHz	Y		N		N	Y	N	N	N	N	Y	N
Annex 10F: 1785-1795 MHz	Y		Y		N	Y	Y	Y	N	Y	Y	U
Annex 10G: 1795-1800 MHz	Y		Y		N	Y	Y	Y	N	Y	Y	U
Annex 10G1: 1800-1804.8 MHz	Y	N	N	N	N	Y	N	N	N	N	N	U
Annex 10H1: 169.4000-169.4750 MHz } DEC/(05)02	Y		Y		N	Y	Y	Y	N	Y	Y	U
Annex 10H2: 169.4875-169.5875 MHz	Y		Y		N	Y	Y	Y	N	Y	Y	U
Annex 10I: 169.4-174.0 MHz	Y		Y		N	Y	Y	Y	N	N	Y	N
Annex 10J: 1492-1518 MHz	Y		N		N	Y	N	N	N	N	N	N
Annex 11 - Radio Frequency Identification Applications												
Annex 11A: 2446-2454 MHz	Y		Y		Y	Y	Y	Y	N	Y	Y	U
Annex 11B1: 865.0-865.6 MHz	Y		Y		N	Y	N	Y	N	Y	Y	U
Annex 11B2: 865.6-867.6 MHz	Y		Y		N	Y	N	Y	L	Y	Y	U
Annex 11B3: 867.6-868.0 MHz	Y		Y		N	Y	N	Y	L	Y	Y	U
Annex 11C: 915-921 MHz	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		N	Y	Y	Y	N	Y	Y	L
Annex 12B: 315-600 kHz	Y		Y		N	Y	Y	Y	N	Y	Y	L
Annex 12C: 30.0-37.5 MHz	Y		Y		N	Y	Y	Y	N	N	Y	L
Annex 12D: 12.5-20.0 MHz	Y		Y		N	Y	Y	Y	N	L	Y	U
Annex 12E: 2483.5-2500 MHz	Y		N		N	Y	N	N	N	N	Y	N
Annex 13 - Wireless Audio Applications												
Annex 13A: 863-865 MHz	Y		Y		N	Y	Y	Y	Y	Y	Y	N
Annex 13B: 864.8-865.0 MHz	Y		Y		Y	Y	Y	Y	N	Y	Y	L
Annex 13C: 1795-1800 MHz	Y		Y		L	Y	Y	Y	N	Y	Y	U
Annex 13D: 87.5-108.0 MHz	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

ECC/DEC/(12)03	The harmonised conditions for UWB applications onboard aircraft
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 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
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

Specific standards	
	in the CEPT recommended 863 MHz to 865 MHz frequency range
EN 301 559	Low Power Active Medical Implants (LP-AMI) operating in the frequency range 2 483,5 MHz to 2 500 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

Table 19: EC Decisions

EC Decision	Title
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
2007/90/EC	Amending Decision 2005/513/EC on the harmonised use of radio spectrum in the 5 GHz frequency band for the implementation of Wireless Access Systems including Radio Local Area Networks (WAS/RLANs)
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
2005/513/EC	Harmonised use of radio spectrum in the 5 GHz frequency band for the implementation of wireless access systems including radio local area networks (WAS/RLANs)
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		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. 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

Frequency Band	Country	Implementation	Reason/remarks
			Director of the Communications Regulatory Authority (Official Gazette 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

Frequency Band	Country	Implementation	Reason/remarks
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
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	
	Russian Federation	Not implemented	
	Russian Federation	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	
	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	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	
	Poland	Not implemented	Military application

Frequency Band	Country	Implementation	Reason/remarks
	Russian Federation	Not implemented	
	Slovenia	Not implemented	Not available
	Spain	Not implemented	Military application
	Sweden	Not implemented	
	Switzerland	Not implemented	Exclusive defence systems
	The Netherlands	Not implemented	Exclusive defence systems
	Ukraine	Not implemented	
Annex 1 Band E1 (Non- Specific SRDs) 169.4000-169.4750 MHz	Georgia	Not implemented	
	Russian Federation	Not implemented	
	Ukraine	Not implemented	Under study
Annex 1 Band E2 (Non- Specific SRDs) 169.4000-169.4875 MHz	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	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	Bosnia & Herzegovina	Not implemented	
	Georgia	Not implemented	
	Macedonia (FYROM)	Not implemented	
	Montenegro	Not implemented	

Frequency Band	Country	Implementation	Reason/remarks
	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	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	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	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) 868.700-869.200 MHz	Georgia	Not implemented	
	Ukraine	Not implemented	
Annex 1 Band G1.3	Georgia	Not implemented	

Frequency Band	Country	Implementation	Reason/remarks
(Non- Specific SRDs) 869.400-869.650 MHz	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			
	Liechtenstein	Not implemented	Planned with ER-GSM protection
	Switzerland	Not implemented	Planned with 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			
	Liechtenstein	Not implemented	Planned with ER-GSM protection
	Switzerland	Not implemented	Planned with 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			
	Liechtenstein	Not implemented	Planned with ER-GSM protection
	Switzerland	Not implemented	Planned with 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			
	Liechtenstein	Not implemented	Planned with ER-GSM protection
	Switzerland	Not implemented	Planned with 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		Bluetooth
	Ukraine	Limited implementation	e.i.r.p. ≤100 mW

Frequency Band	Country	Implementation	Reason/remarks
Annex 1 Band I (Non- Specific SRDs) 5725-5875 MHz	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	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) 57-64 GHz	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 1 Band L (Non- Specific SRDs) 122.00-122.25 GHz	Georgia	Not implemented	
	Portugal	Implemented	100mW
	Russian Federation	Not implemented	
Annex 1 Band L1 (Non- Specific SRDs) 122.25-123.00 GHz	Georgia	Not implemented	
	Portugal	Implemented	100mW
	Russian Federation	Not implemented	
Annex 1 Band M (Non- Specific SRDs) 244-246 GHz	Georgia	Not implemented	Planned
	Russian Federation	Not implemented	
Annex 1 Band N (Non- Specific SRDs)	Belarus	Not implemented	
	Bosnia & Herzegovina	Limited implementation	Committed

Frequency Band	Country	Implementation	Reason/remarks
3.1-4.8 GHz/6-9 GHz	Georgia	Not implemented	
	Russian Federation	Limited implementation	In accordance with National restrictions For Indoor applications: 1. Prohibited to use outside buildings 2. Prohibited to use onboard aircraft while arriving and departure 3. Prohibited to use in freight terminals in airports. Power spectral density limits: 2850-3375 MHz: -57 dBm/MHz 3375-3950 MHz: -61.5 dBm/MHz 3950-4425 MHz: -54.5 dB/MHz 4425-5470 MHz: -50 dB/MHz 5470-6000 MHz: -62.5 dBm/MHz 6000-8100 MHz: -47 dBm/MHz 8100-8625 MHz: -65 dBm/MHz 8625-9150 MHz: -47 dB/MHz 9150-10600 MHz: -45 dBm/MHz For Outdoor applications: Power spectral density limits: 2850-3375 MHz: -57 dBm/MHz 3375-4800 MHz: -76 dBm/MHz 4800-5475 MHz: -50 dBm/MHz 5475-6000 MHz: -62.5 dBm/MHz 6000-7250 MHz: -47 dBm/MHz 7250-7750 MHz: -73 dBm/MHz 7750-8625 MHz: -69 dBm/MHz 8625-9150 MHz: -47 dBm/MHz 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	Austria	Not implemented	Planned
	Belgium	Not implemented	
	Bosnia & Herzegovina	Not implemented	
	Bulgaria	Not implemented	
	Czech Republic	Not implemented	
	Cyprus	Not implemented	
	Estonia	Limited implementation	Will be implemented through reference in "The Estonian radio frequency allocation plan in 2014

Frequency Band	Country	Implementation	Reason/remarks
	Finland	Not implemented	
	France	Not implemented	
	Germany	Not implemented	Under study
	Greece	Not implemented	
	Georgia	Not implemented	
	Hungary	Limited implementation	Planned in 2014 Version of 12 November 2010 implemented. 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	
	Ireland	Not implemented	
	Italy	Not implemented	
	Latvia	Not implemented	
	Lithuania	Limited implementation	Planned
	Macedonia (FYROM)	Not implemented	
	Malta	Not implemented	
	Montenegro	Not implemented	
	Norway	Not implemented	Planned 2014
	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	Under study
	Ukraine	Not implemented	
	United Kingdom	Limited implementation	
Annex 2 Band A	Bulgaria	Implemented	457 kHz centre frequency is allocated 456.9-457.1 kHz band is not

Frequency Band	Country	Implementation	Reason/remarks
Tracking, Tracing and Data Acquisition 456.9-457.1 kHz			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	Georgia	Not implemented	
	Russian Federation	Not implemented	
	The Netherlands	Implemented	Channel spacing 12.5 kHz
	Ukraine	Not implemented	Under study
Annex 2 Band C Tracking, Tracing and Data Acquisition 870.000-875.600 MHz			
	Liechtenstein	Not implemented	Planned with ER-GSM protection
	Switzerland	Not implemented	Planned with ER-GSM protection
	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			
	Liechtenstein	Not implemented	Planned
	Switzerland	Not implemented	Planned
	United Kingdom	Not Implemented	
Annex 2 Band D2 Tracking, Tracing and Data Acquisition 2483.5-2500 MHz			
	Liechtenstein	Not implemented	Planned
	Switzerland	Not implemented	Planned
	United Kingdom	Not implemented	
Annex 3 Band A Wideband Data Transmission systems 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 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** 1.1. Maximum 2.5 mW e.i.r.p.

Frequency Band	Country	Implementation	Reason/remarks
			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. 1.3.Maximum 100 mW e.i.r.p. Indoor applications **2. SRD with DSSS and other than FHSS wideband modulation** 2.1. Maximum mean e.i.r.p. density is 2 mW/MHz. Maximum 100 mW e.i.r.p. 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. 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. 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	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

Frequency Band	Country	Implementation	Reason/remarks
kHz)			for the mobile maritime applications (4063-4438 kHz)
	Ukraine	No info	
Annex 4 Band C Railway applications 7.3-23.0 MHz (Centre frequency 13.547 MHz)	Georgia	Not implemented	
	Macedonia (FYROM)	Not implemented	Planned
	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	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 TTT 870.000-875.800 MHz			
	Liechtenstein	Not implemented	Planned with ER-GSM protection
	Switzerland	Not implemented	Planned with ER-GSM protection
	United Kingdom	Implemented	The Additional restrictions to protect ER-GSM apply in the UK
Annex 5 Band B1 TTT 5795-5805 MHz	France	Limited implementation	Limited to automatic toll collection. Power limited to 2 W e.i.r.p. 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 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. An authorisation for using radio frequencies or channels should too

Frequency Band	Country	Implementation	Reason/remarks
			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 TTT 5805-5815 MHz	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. 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
	The Netherlands	Not implemented	Planned
	Ukraine	Not implemented	
	United Kingdom	Limited implementation	2 Watts only permitted
Annex 5 Band C TTT 76-77 GHz	Georgia	No info	
	Russian Federation	Not implemented	
Annex 5 Band D1 TTT 21.65-26.65 GHz	Azerbaijan	Not implemented	
	Belarus	Not implemented	
	Bosnia & Herzegovina	Limited implementation	
	Georgia	Not implemented	
	Macedonia (FYROM)	Not implemented	
	Russian Federation	Not implemented	

Frequency Band	Country	Implementation	Reason/remarks
	Serbia	Not implemented	
	Ukraine	Not implemented	
Annex 5 Band D2 TTT 24.25-26.65 GHz	Azerbaijan	Not implemented	
	Belarus	Not implemented	
	Bosnia & Herzegovina	Limited implementation	
	Georgia	Not implemented	
	Macedonia (FYROM)	Not implemented	
	Russian Federation	Not implemented	
	Serbia	Not implemented	
	Ukraine	Not implemented	
Annex 5 Band E TTT 77-81 GHz	Bosnia & Herzegovina	Limited implementation	
	Georgia	Not implemented	
	Russian Federation	Not implemented	
	Serbia	Not implemented	
	Ukraine	Not implemented	Under study
Annex 5 Band F1 **TTT 24.050-24.075 GHz**	Bosnia & Herzegovina	Limited implementation	Committed
	Georgia	Not implemented	
	Macedonia (FYROM)	Not implemented	
	Russian Federation	Not implemented	
	Serbia	Not implemented	
	Ukraine	Not implemented	
Annex 5 Band F2 **TTT 24.075-24.150 GHz**	Bosnia & Herzegovina	Limited implementation	Committed
	Georgia	Not implemented	
	Macedonia (FYROM)	Not implemented	
	Russian Federation	Not implemented	

Frequency Band	Country	Implementation	Reason/remarks
	Serbia	Not implemented	
	Ukraine	No info	
Annex 5 Band F3 **TTT** **24.150-24.250 GHz**	Bosnia & Herzegovina	Limited implementation	Committed
	Georgia	Not implemented	
	Macedonia (FYROM)	Not implemented	
	Russian Federation	Not implemented	
	Serbia	Not implemented	
	Ukraine	Not implemented	
Annex 5 Band G1 **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 **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	
	Serbia	Not implemented	
	Ukraine	Not implemented	
Annex 5 Band G3	Azerbaijan	Not implemented	

Frequency Band	Country	Implementation	Reason/remarks
TTT 24.250-24.500 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	
	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	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	France	Limited implementation	Limited to 9.88-9.92 with max e.i.r.p. 50 mW
	Georgia	Limited implementation	
	Germany	Not implemented	
	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

Frequency Band	Country	Implementation	Reason/remarks
	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 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. 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	10.51-10.54 GHz
Annex 6 Band E Radiodetermination applications 13.4-14.0 GHz	France	Not implemented	
	Georgia	Limited implementation	
	Russian Federation	Not implemented	
	Spain	Not implemented	Due to lack of demand
	Sweden	Not implemented	
	Ukraine	Not implemented	Under study
Annex 6 Band F	France	Limited implementation	No restriction for fixed applications. Power limited otherwise to 0.1

Frequency Band	Country	Implementation	Reason/remarks
Radiodetermination applications **24.05-24.25 GHz**			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. 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 Fixed radars: Maximum 100 mW e.i.r.p. 1. The equipment for detecting movement should be installed along roads at 4 m distance from controlled part of road. 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. 3. The installation height of equipment for detecting movement should not exceed 5m above a road. 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**	Georgia	Not implemented	Under study
	Macedonia (FYROM)	Not implemented	Planned
	Russian Federation	Not implemented	
	Serbia	Available in the range: 5.725-5.875 GHz 5.15-5.25 GHz / 5.250-5.255 GHz / 5.255-5.350 GHz	According to the Frequency Plan, 5.725-5.875 GHz is available for the SRD applications. 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	Georgia	Not implemented	
	Macedonia (FYROM)	Not implemented	Planned

Frequency Band	Country	Implementation	Reason/remarks
Radiodetermination applications 8.5-10.6 GHz	Russian Federation	Not implemented	
	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	Not implemented	
	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	24.05-24.25 GHz
Annex 6 Band J Radiodetermination applications 57-64 GHz	Georgia	No info	
	Macedonia (FYROM)	Not implemented	Planned
	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	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	Available in the range: 76.0-77.5 GHz	According to the Frequency Plan, only this part of the spectrum is aimed for the SRD applications (traffic radiolocation)
	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	

Frequency Band	Country	Implementation	Reason/remarks
	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	
	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	

Frequency Band	Country	Implementation	Reason/remarks
	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**	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**	Austria	Limited implementation	
	Belgium	Not implemented	Under study
	Bosnia & Herzegovina	Limited implementation	
	Cyprus	Not implemented	Under study
	France	Limited implementation	
	Georgia	Not implemented	
	Greece	Not implemented	
	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	

Frequency Band	Country	Implementation	Reason/remarks
	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**	Austria	Limited implementation	According to Commission Decision 2009/343/EC
	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	According to Commission Decision 2009/343/EC
	Malta	Limited implementation	According to Commission Decision 2009/343/EC
	Macedonia (FYROM)	Not implemented	
	Portugal	Limited implemented	According to Commission Decision 2009/343/EC. 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	
	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 7 Band A Alarms 868.600-868.700 MHz	Georgia	Not implemented	
	Russian Federation	Not implemented	
	Ukraine	Limited implementation	The maximal transmitter power 10 mW
Annex 7 Band B Alarms	Georgia	Not implemented	
	Russian Federation	Not implemented	

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

Frequency Band	Country	Implementation	Reason/remarks
9 – 90 kHz	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	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	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
Annex 9 Band B	Georgia	Not implemented	
	Russian Federation	Not implemented	

Frequency Band	Country	Implementation	Reason/remarks
Inductive applications 135-140 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 135-140 kHz is 42 dBµA/m
Annex 9 Band C Inductive applications 140.0-148.5 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 in the band 140-148.5 kHz is 37.7 dBµA/m
Annex 9 Band D Inductive applications 6765-6795 kHz	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	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	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 F1 Inductive applications 13.410-13.553 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 11.810-112.660 MHz 14.460-15.310 MHz			
	Georgia	Not implemented	
	Liechtenstein	Not implemented	Planned
	Russian Federation	Implemented	Maximum magnetic field strength is +42 dBµA/m at 10 m
	Switzerland	Not implemented	Planned
	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			

Frequency Band	Country	Implementation	Reason/remarks
Inductive applications 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			
	Liechtenstein	Not implemented	Planned
	Switzerland	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 Inductive applications 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 Inductive applications 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 Inductive applications 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
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	
	Georgia	Not implemented	
	Russian Federation	Not implemented	
	Ukraine	No info	
Annex 9 Band L3 Inductive applications	Georgia	Not implemented	
	Russian Federation	Not implemented	

Frequency Band	Country	Implementation	Reason/remarks
400-600 kHz	Ukraine	Not implemented	Under study
Annex 10 Band A Radio Microphone applications including aids for the hearing impaired 29.7-47.0 MHz	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
	Croatia	Not implemented	Defence systems
	Czech Republic	Limited implementation	Only four sub-bands allowed: 27.415-27.915 MHz 10 mW e.r.p. channel max 50 kHz 36.4-36.65 MHz 10 mW e.r.p. channel max 50 kHz 36.65-38.0 MHz 2 mW e.r.p. channel max 50 kHz 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	to 32.8, 36.4, 39.2 MHz 1 mW e.r.p. and 200 kHz
	Georgia	Not implemented	
	Germany	Limited implementation	to 32.4-38.2 MHz. Permitted channel spacing 10 kHz below 36 MHz and 40 kHz above 36 MHz
	Greece	Limited implementation	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
	Hungary	Limited implementation	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. Main use by defence systems
	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	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

Frequency Band	Country	Implementation	Reason/remarks
	Russian Federation	Limited implementation	Hearing and speech training radio devices for persons with speech defects. Power limited to 10 mW Fixed frequencies in the bands 33.175-40MHz and 40.025-48.5 MHz: 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, 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	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 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	Belgium	Not implemented	
	Bulgaria	Limited implementation	Limited to 174.000-174.015 MHz
	Denmark	Not implemented	PMR band
	France	Not implemented	Governmental band

Frequency Band	Country	Implementation	Reason/remarks
173.965-174.015 MHz	Georgia	Not implemented	
	Greece	Not implemented	
	Liechtenstein	Not implemented	Closely occupied with mobile services
	Russian Federation	Not implemented	
	Spain	Not implemented	Due to lack of demand
	Sweden	Not implemented	Land Mobile
	Switzerland	Not implemented	Closely occupied with mobile services
	Ukraine	Not implemented	
Annex 10 Band C **Radio Microphone applications including aids for the hearing impaired** **863-865 MHz**	Croatia	Limited implementation	Individual license required
	Georgia	Not implemented	
	Russian Federation	Limited implementation	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** **918.5-918.9 MHz** **919.7-920.1 MHz**			
	Liechtenstein	Not implemented	Planned with ER-GSM protection
	Switzerland	Not implemented	Planned with ER-GSM protection
	United Kingdom	Implemented	The Additional restrictions to protect ER-GSM apply in the UK
Annex 10 *Band D* ***Radio Microphone applications including aids for the hearing impaired*** **174-216 MHz**	Denmark	Limited implementation	Tuning range
	France	Limited implementation	For professional users. 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	174.100, 174.300, 175.500, 176.300, 179.300, 188.100, 188.500,

Frequency Band	Country	Implementation	Reason/remarks
			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 Radio Microphone applications including aids for the hearing impaired 470-786 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
	Germany	Limited implementation	
	Greece	Limited implementation	10 mW e.r.p. max
	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 implement ation	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
Annex 10 Band E2 Radio Microphone applications including aids for the hearing impaired 786-789 MHz	Austria	Limited implementation	Currently old regulation (470-862 MHz; 50 mW e.r.p.; 200 kHz channel spacing) is in force
	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

Frequency Band	Country	Implementation	Reason/remarks
	Greece	Limited implementation	10 mW e.r.p. max
	Georgia	Not implemented	
	Hungary	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	
	The Netherlands	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
	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.

Frequency Band	Country	Implementation	Reason/remarks
			Limited to 50 mW e.r.p.
	Georgia	Not implemented	
	Greece	Not implemented	
	Hungary	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
	The Netherlands	Not implemented	
	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
	Belgium	Not implemented	Planned
	Bosnia & Herzegovina	Not implemented	
	Bulgaria	Not implemented	
	Croatia	Not implemented	
	Cyprus	Not implemented	

Frequency Band	Country	Implementation	Reason/remarks
	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	
	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.
	The Netherlands	Not implemented	
	United Kingdom	Planned	
Annex 10 Band F **Radio Microphone applications including aids for the hearing impaired** **1785-1795 MHz**	Austria	Limited implementation	to 1785.7-1795 MHz
	Georgia	Not implemented	
	Italy	Not implemented	Military application
	Ireland	Not implemented	All-island WAPECS in Operation
	Malta	Not implemented	Planned
	Russian Federation	Not implemented	

Frequency Band	Country	Implementation	Reason/remarks
	Slovak Republic	Not implemented	Fixed Service
	Sweden	Not implemented	
	The Netherlands	Implemented	max 50 mW e.r.p. Channel spacing 600 kHz
	Ukraine	Not implemented	Under study
	United Kingdom	Implemented	Individual licence required
Annex 10 Band G Radio Microphone applications including aids for the hearing impaired 1795-1800 MHz	Austria	Limited implementation	to the band 1795-1799.4 MHz
	Croatia	Limited implementation	Individual licence required
	Czech Republic	Limited implementation	
	Finland	Limited implementation	Individual license required
	Georgia	Not implemented	
	Italy	Not implemented	Military application
	Ireland	Not implemented	All-island WAPECS in Operation
	Russian Federation	Not implemented	
	Slovak Republic	Not implemented	Fixed Service
	Sweden	Not implemented	
	The Netherlands	Implemented	max 50 mW e.r.p. Channel spacing 600 kHz
	Ukraine	Not implemented	Under study
	United Kingdom	Implemented	Individual licence required
Annex 10 Band G1 Radio Microphone applications including aids for the hearing impaired 1800 – 1804.8 MHz			
	Liechtenstein	Not implemented	Planned
	Switzerland	Not implemented	Planned
	United Kingdom	Not Implemented	
Annex 10 Band H1 Radio Microphone applications including aids for the hearing impaired169.4000-169.4750	Georgia	Not implemented	
	Russian Federation	Not implemented	
	Ukraine	Not implemented	Under study

Frequency Band	Country	Implementation	Reason/remarks
MHz			
Annex 10 Band H2 Radio Microphone applications including aids for the hearing impaired169.4875-169.5875 MHz	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	Austria	Not implemented	Implementation depends on market demand
	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. 173.965-174.015 MHz: 2 mW e.r.p. channel spacing max 50 kHz. Other services in the rest of the band
	Finland	Not implemented	
	France	Not implemented	
	Georgia	Not implemented	
	Greece	Not implemented	
	Hungary	Not planned	Governmental use in the band
	Iceland	No info	
	Ireland	Not implemented	
	Italy	Limited to 169.815 MHz	
	Liechtenstein	Not implemented	Occupied with mobile services
	Malta	Not implemented	
	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

Frequency Band	Country	Implementation	Reason/remarks
			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
	The Netherlands	Not implemented	Planned
	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			
	Liechtenstein	Not implemented	Under study
	Switzerland	Not implemented	Under study
	United Kingdom	Limited implementation	Limited PMSE operation allowed in 1517-1518 MHz subject to individual authorisation
Annex 11 Band A1 RFID 2446-2454 MHz	Russian Federation	Not implemented	
	Ukraine	Not implemented	Under study
Annex 11 Band A2 RFID 2446-2454 MHz	Russian Federation	Not implemented	
	Ukraine	Not implemented	Under study
Annex 11 Band B1 RFID 865.0-865.6 MHz	Georgia	Not implemented	
	Russian Federation	Not implemented	
	Ukraine	Not implemented	Under study
Annex 11 Band B2 RFID 865.6-867.6 MHz	France	Limited implementation	Power limited to 500 mW e.r.p. within defined zones around certain military camps in France (see list of military camps with geographical coordinates in national radio interface specification). Tactical Radio Relay
	Georgia	No info	
	Macedonia (FYROM)	Not implemented	

Frequency Band	Country	Implementation	Reason/remarks
	Russian Federation	Limited implementation	866.6-867.4 MHz with e.r.p 100 mW. The assignment of radio frequencies or channels is not required in when: a) LBT is applied b) equipment is used at the airport 866.0-867.6 MHz with e.r.p 2 W. 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**	Georgia	No info	
	Macedonia (FYROM)	Not implemented	
	Russian Federation	Limited implementation	866-868 MHz. The assignment of radio frequencies or channels should too be performed in established order
	Ukraine	Not implemented	Under study
Annex 11 Band C **RFID** **915-921 MHz**			
	Liechtenstein	Not implemented	Planned
	Switzerland	Not implemented	Planned
	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**	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**	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**	Georgia	Not implemented	
	Russian Federation	Not implemented	

Frequency Band	Country	Implementation	Reason/remarks
and their associated peripherals 30.0-37.5 MHz	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	Georgia	Not implemented	
	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	Not implemented	Under study
Annex 12 Band E Active Medical Implants and their associated peripherals 2483.5-2500 MHz	Bosnia & Herzegovina	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 Wireless Audio Applications 863-865 MHz	Georgia	Not implemented	
	Ukraine	Not implemented	
Annex 13 Band B Wireless Audio Applications 864.8-865 MHz	Russian Federation	Not implemented	
	Ukraine	Limited implementation	e.i.r.p. ≤10 $_{M}B_{T}$
Annex 13 Band C Wireless Audio Applications 1795-1800 MHz	Austria	Not implemented	Under study
	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
	The Netherlands	Not implemented	Planned
	Ukraine	Not implemented	Under study
	United Kingdom	Limited implementation	Individual licence required
Annex 13 Band D Wireless Audio Applications 87.5-108.0 MHz	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	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)

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
LBT	Listen Before Talk
LP-AMI	Low Power Active Medical Implant
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
WLL	Wireless Local Loop

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 18. 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%

Table 22: Document History

	Text	Page	Edition
Text of the introduction of the ERC Recommendation 70-03 changed to align with 'channel spacing or modulation/maximum occupied bandwidth'		4	February 2014
Rearranged text of Recommendation 18 October 2005			
Annex 1	Non-specific Short Range Devices	6	February 2014
Annex 2	Tracking, Tracing and Data Acquisition	12	February 2014
Annex 3	Wideband Data Transmission systems	14	October 2012
Annex 4	Railway applications	16	October 2012
Annex 5	Transport & Traffic Telematics (TTT)	18	February 2014
Annex 6	Radiodetermination applications	21	May 2012
Annex 7	Alarms	24	May 2013
Annex 8	Model Control	25	October 2009
Annex 9	Inductive applications	26	February 2014
Annex 10	Radio microphones and Assistive Listening Devices	30	February 2014
Annex 11	Radio frequency identification applications	33	February 2014
Annex 12	Active Medical Implants and their associated peripherals	35	October 2012
Annex 13	Wireless Audio applications	37	February 2014
Appendix 1	Implementation Status	38	October 2014
Appendix 2	List of relevant ECC/ERC Decisions, Reports, EC Decisions and ETSI Standards	46	February 2014
Appendix 3	National restrictions	55	October 2014