

**ERC RECOMMENDATION 70-03 (Tromsø 1997 and subsequent amendments)**

**RELATING TO THE USE OF SHORT RANGE DEVICES (SRD)**

**Recommendation adopted by the Frequency Management, Regulatory Affairs and  
Spectrum Engineering Working Groups**

**Version of 9 February 2011.**

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

PLEASE NOTE  
IMPLEMENTATION STATUS  
page 24

## 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 ERO ([thomas.weber@eco.cept.org](mailto: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 advise users on the risks of potential interference and its consequences.

## INDEX TABLE

<b>FOREWORD.....</b>	<b>2</b>
<b>INTRODUCTION.....</b>	<b>4</b>
ANNEX 1 NON-SPECIFIC SHORT RANGE DEVICES.....	6
ANNEX 2 TRACKING, TRACING AND DATA ACQUISITION .....	8
ANNEX 3 WIDEBAND DATA TRANSMISSION SYSTEMS .....	9
ANNEX 4 RAILWAY APPLICATIONS .....	10
ANNEX 5 ROAD TRANSPORT AND TRAFFIC TELEMATICS (RTTT) .....	11
ANNEX 6 RADIODETERMINATION APPLICATIONS .....	13
ANNEX 7 ALARMS .....	14
ANNEX 8 MODEL CONTROL .....	15
ANNEX 9 INDUCTIVE APPLICATIONS .....	16
ANNEX 10 RADIO MICROPHONE APPLICATIONS INCLUDING AIDS FOR THE HEARING IMPAIRED .....	18
ANNEX 11 RADIO FREQUENCY IDENTIFICATION APPLICATIONS .....	20
ANNEX 12 ACTIVE MEDICAL IMPLANTS AND THEIR ASSOCIATED PERIPHERALS .....	21
ANNEX 13 WIRELESS AUDIO APPLICATIONS .....	23
<b>APPENDIX 1 Implementation status .....</b>	<b>24</b>
<b>APPENDIX 2 List of relevant ECC/ERC Decisions, Reports EC Decisions and ETSI Standards.....</b>	<b>30</b>
ECC/ERC DECISIONS .....	30
ECC/ERC REPORTS .....	31
ETSI STANDARDS INCLUDING HARMONISED STANDARDS .....	34
GENERIC STANDARDS .....	34
SPECIFIC STANDARDS .....	34
EC DECISIONS.....	35
<b>APPENDIX 3 National restrictions.....</b>	<b>36</b>
LIST OF ABBREVIATIONS AS USED IN THIS DOCUMENT .....	60
DUTY CYCLE CATEGORIES .....	61
DOCUMENT HISTORY .....	62

## INTRODUCTION

CEPT has adopted this Recommendation to deal with Short Range Devices and the European Telecommunications Standards Institute (ETSI) has now developed harmonised 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 and 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 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 ERC Decisions and ETSI standards.

For countries having implemented the R&TTE Directive further details can be found on the relevant EC ([http://europa.eu.int/comm/enterprise/rtte/index\\_en.htm](http://europa.eu.int/comm/enterprise/rtte/index_en.htm)) and the ERO web sites ([www.ero.dk](http://www.ero.dk)).

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 derogations that have 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.

“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 ERO 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.”

Note:

Please check the Office web site ( [www.ero.dk](http://www.ero.dk) ) for the up to date position on the implementation of this and other ECC/ERC recommendations.

## 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.

### Regulatory parameters related to Annex 1

Frequency Band	Power / Magnetic Field	Spectrum access and mitigation requirement	Channel spacing	ECC/ERC Decision	Notes
<b>a</b> 6765-6795 kHz	42 dBµA/m at 10m	No requirement	No spacing		
<b>b</b> 13.553-13.567 MHz	42 dBµA/m at 10m	No requirement	No spacing		
<b>c</b> 26.957-27.283 MHz	42 dBµA/m at 10m 10 mW e.r.p	No requirement	No spacing	ERC/DEC/(01)02	
<b>d</b> 40.660-40.700 MHz	10 mW e.r.p.	No requirement	No spacing	ERC/DEC/(01)03	
<b>e</b> 138.20-138.45 MHz	10 mW e.r.p.	< 1.0 % (note 1)	No spacing		
<b>f</b> 433.050-434.790 MHz (note 4)	10 mW e.r.p.	< 10 % (note 1)	No spacing		
<b>f1</b> 433.050-434.790 MHz (note 4bis)	1 mW e.r.p. -13 dBm/10 kHz	No requirement	No spacing		Power density limited to -13 dBm/10 kHz for wideband modulation with a bandwidth greater than 250 kHz
<b>f2</b> 434.040-434.790 MHz (note 4bis)	10 mW e.r.p.	No requirement	Up to 25 kHz		
<b>g</b> 863-870 MHz (note 3, 4 and 6)	≤ 25 mW e.r.p.	≤ 0.1% or LBT (note 1 and 5)	≤ 100 kHz for 47 or more channels (note 2)		FHSS modulation
	≤ 25 mW e.r.p. (note 6) Power density : - 4.5 dBm/100 kHz (note 7)	≤ 0.1% or LBT+AFA (note 1, 5 and 6)	No spacing		DSSS and other wideband modulation other than FHSS
	≤ 25 mW e.r.p.	≤ 0.1% or LBT+AFA (note 1 and 5)	≤ 100 kHz, for 1 or more channels modulation bandwidth ≤ 300 kHz (note 2)		Narrow /wide-band modulation
<b>g1</b> 868.000-868.600 MHz (note 4)	≤ 25 mW e.r.p.	≤ 1% 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
<b>g2</b> 868.700-869.200 MHz (note 4)	≤ 25 mW e.r.p.	≤ 0.1% 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
<b>g3</b> 869.400-869.650 MHz	≤ 500 mW e.r.p.	≤ 10% or LBT+AFA (note 1)	25 kHz (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
<b>g4</b> 869.700-870.000 MHz (note 4bis)	≤ 5 mW e.r.p.	No requirement	No spacing (for 1 or more channels)		Narrow / wide-band modulation. No channel spacing, however the whole stated frequency band may be used
	≤ 25 mW e.r.p.	up to 1% or LBT+AFA (note 1)			
<b>h</b> 2400.0-2483.5 MHz	10 mW e.i.r.p.	No requirement	No spacing		
<b>i</b> 5725-5875 MHz	25 mW e.i.r.p.	No requirement	No spacing		
<b>j</b> 24.00-24.25 GHz	100 mW e.i.r.p.	No requirement	No spacing		
<b>k</b> 61.0-61.5 GHz	100 mW e.i.r.p.	No requirement	No spacing		
<b>l</b> 122-123 GHz	100 mW e.i.r.p.	No requirement	No spacing		
<b>m</b> 244-246 GHz	100 mW e.i.r.p.	No requirement	No spacing		
<b>n</b> 3.1-4.8 GHz 6 – 9 GHz	*	*	*	ECC/DEC/(06)04 ECC/DEC/(06)12	Generic UWB regulation * See detailed requirements in related ECC Decisions

- Note 1: When either a 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  $\leq 25$  kHz.  
In sub-band 863-865 MHz voice and audio conditions of Annexes 10 and 13 of ERC/REC 70 – 03 apply respectively.
- Note 4bis: Audio and video applications are excluded. Analogue or digital voice applications are allowed with a max. bandwidth  $\leq 25$  kHz and with spectrum access technique such as LBT or equivalent. The transmitter shall include a power output sensor controlling the transmitter to a maximum transmit period of 1 minute for each transmission
- Note 5: Duty cycle may be increased to 1% if the band is limited to 865-868 MHz.
- Note 6: For other wide-band modulation than FHSS and DSSS with a bandwidth of 200 kHz to 3 MHz, duty cycle can be increased to 1% if the band is limited to 865-868 MHz and power to  $\leq 10$  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.

### ***Additional Information***

#### **Harmonised Standards**

EN 300 220	sub-bands c) to g4 )
EN 300 330	sub-bands a) to c)
EN 300 440	sub-bands h) i) and j)
EN 302 065	subband n)
EN 302 500-2	subband n)

#### **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.

##### **Sub-band g)**

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.

## 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

- Detecting avalanche victims
- Meter Reading
- Asset Tracking and Tracing

### Regulatory parameters related to Annex 2

Frequency Band	Power / Magnetic field	Spectrum access and mitigation requirement	Channel Spacing	ECC/ERC Decision	Notes
<b>a</b> 456.9-457.1 kHz	7 dBµA/m at 10 m	No requirement	Continuous wave (CW) – no modulation.	ECC/DEC/(04)01	Detection of avalanche victims. Note: Center frequency is 457 kHz
<b>b</b> 169.4-169.475 MHz	500 mW e.r.p.	< 10% duty cycle	Max 50 kHz	ECC/DEC/(05)02	Meter Reading
<b>c</b> 169.4-169.475 MHz	500 mW e.r.p.	< 1% duty cycle	Max 50 kHz	ECC/DEC/(05)02	Asset Tracking and Tracing

### Additional Information

#### Harmonised Standards

EN 300 718 Sub-band a)  
EN 300 220 Sub-band b) & c)

#### Frequency issues

No information

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

No information



## 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) (formerly known as Radio Local Area Networks (RLANs)) within the band 2400-2483.5 MHz, for Wireless Access Systems including Radio Local Area Networks (WAS/RLANs) within the bands 5150-5350 MHz, 5470-5725 MHz and 17.1-17.3 GHz and for Multiple-Gigabit WAS/RLAN Systems within the band 57-66 GHz.

### Regulatory parameters related to Annex 3

Frequency Band	Power	Spectrum access and mitigation requirement	Channel spacing	ECC/ERC Decision	Notes
<b>a</b> 2400.0–2483.5 MHz	100 mW e.i.r.p.	See note 1	No spacing	ERC/DEC/(01)07	For wide band modulations other than FHSS, the maximum e.i.r.p. density is limited to 10 mW/MHz
<b>b</b> 5150–5350 MHz	200 mW mean e.i.r.p. See note 3	See notes 1 and 2	No spacing	ECC/DEC/(04)08	Restricted to indoor use. The maximum mean e.i.r.p. density shall be limited to 10 mW/MHz in any 1 MHz band.
<b>c</b> 5470–5725 MHz	1 W mean e.i.r.p. See note 3	See notes 1 and 2	No spacing	ECC/DEC/(04)08	Indoor as well as outdoor use allowed. The maximum mean e.i.r.p. density shall be limited to 50 mW/MHz in any 1 MHz band.
<b>d</b> 17.1–17.3 GHz	100 mW e.i.r.p.	No requirement	No spacing		
<b>e</b> 57–66 GHz	40 dBm mean e.i.r.p.	See note 1	No spacing		Fixed outdoor installations are not allowed. The maximum mean e.i.r.p density is limited to 13 dBm/MHz

Note 1: The equipment shall implement an adequate spectrum sharing mechanism in order to facilitate sharing between the various technologies and applications covered by this annex 3.

Note 2: WAS/RLANs operating in the bands 5 250-5 350 MHz and 5 470-5 725 MHz shall use mitigation techniques that give at least the same protection as the detection, operational and response requirements described in EN 301 893 to ensure compatible operation with radiodetermination systems (radars). Such mitigation techniques shall equalise the probability of selecting a specific channel for all available channels so as to ensure, on average, a near-uniform spread of spectrum loading. Specific information about the applicability of EN 301 893 can be found at <http://ec.europa.eu/comm/enterprise/rtr/harstand.htm>.

Note 3: WAS/RLANs operating in the bands 5 250-5 350 MHz and 5 470-5 725 MHz shall employ transmitter power control (TPC), which provides, on average, a mitigation factor of at least 3 dB on the maximum permitted output power of the systems. If transmitter power control is not in use, the maximum permitted mean e.i.r.p. and the corresponding mean e.i.r.p. density limits shall be reduced by 3 dB.

### Additional Information

#### Harmonised Standards

EN 300 328 sub-band a)  
EN 301 893 sub-bands b), and c) sub-band d): t.b.d.  
EN 302 567 sub-bands e)

#### Frequency issues

Wireless Access Systems including Radio Local Area Networks (WAS/RLANs) within the bands 5250-5350 MHz and 5470-5725 MHz shall only be allowed to operate when the mandatory features required in the ECC Decision (04)08 are implemented. See also note 1 above.

In the band 57-66 GHz, point-to-point links of the Fixed Service are regulated by ECC/REC/(05)02 and ECC/REC/(09)01.

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

The power levels for band b), c), e) and f) refer to mean e.i.r.p.. The mean e.i.r.p. refers to the highest power level of the transmitter power control range during the transmission burst if transmitter power control is implemented.

In bands a), b) and c), the adequate spectrum sharing mechanism referred to in Note 1 can be e.g. LBT (Listen Before Talk), DAA (Detect And Avoid) or any other mechanism providing a similar level of mitigation.

## 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) Automatic vehicle identification systems for railways including Automatic Vehicle Identification for Railways (AVI)
- band b) Balise tele-powering and down-link (train to ground) systems including Eurobalise and activation of the Loop / Euroloop
- band c) Balise up-link (ground to train) systems including Eurobalise
- band d1) and d2) Loop up-link (ground to train) systems including Euroloop

### Regulatory parameters related to Annex 4

Frequency Band	Power	Spectrum access and mitigation requirement	Channel spacing	ECC/ERC Decision	Notes
<b>a</b> 2446-2454 MHz	500 mW e.i.r.p.	No requirement			Transmitting only in presence of trains. 5 channels, each 1.5 MHz wide within the band 2446-2454 MHz
<b>b</b> 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: Center frequency is 27.095 MHz
<b>c</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: Center frequency is 4234 kHz
<b>d1</b> 516 - 8516 kHz	7 dBμA/m at 10 m	No requirement	No spacing		Not intended for new applications, existing applications to be phased out by 2010. Note: Center frequency is 4516 kHz
<b>d2</b> 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: Center frequency is 13.547 MHz

### Additional Information

#### Harmonised Standards

EN 300 761	sub-band a)
EN 302 608	sub-bands b) and c)
EN 300 330	sub-bands b), c), d1)
EN 302 609	sub-band d2)

#### Frequency issues

No information

#### 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.

## Annex 5 Road Transport and Traffic Telematics (RTTT)

### Scope of Annex

This annex covers frequency bands and regulatory as well as informative parameters recommended for Road Transport and Traffic Telematics (RTTT) including radar system installations to be used in vehicles.

### Regulatory parameters related to Annex 5

Frequency Band	Power	Spectrum access and mitigation requirement	Channel spacing	ECC/ERC Decision	Notes
<b>a</b> 5795-5805 MHz	2 W e.i.r.p. 8 W e.i.r.p.	No requirement		ECC/DEC/(02)01	
<b>b</b> 5805-5815 MHz	2 W e.i.r.p. 8 W e.i.r.p.	No requirement		ECC/DEC/(02)01	Individual license required
<b>c</b> 63-64 GHz			No spacing	ECC/DEC/(02)01	Vehicle to vehicle and road to vehicle systems Power level and Spectrum access and mitigation requirement to be determined
<b>d</b> 76-77 GHz	55 dBm peak e.i.r.p.	No requirement	No spacing	ECC/DEC/(02)01	Power level 55 dBm peak power e.i.r.p. 50 dBm average power - 23.5 dBm average power for pulse radar only Vehicle and infrastructure radar systems
<b>e</b> 21.65-26.65 GHz	*	*	*	ECC/DEC/(04)10	For automotive Short Range Radars (SRR) * See detailed requirements in related ECC Decision New SRR equipment may only be placed onto the market until 1 July 2013
<b>f</b> 77-81 GHz	*	*	*	ECC/DEC/(04)03	For automotive Short Range Radars (SRR) * See detailed requirements in related ECC Decision
<b>g1</b> 24.050-24.075 GHz	100 mW e.i.r.p.	No requirement			For vehicle radars
<b>g2</b> 24.075-24.150 GHz	0.1mW e.i.r.p.	No requirement			For vehicle radars
	100 mW e.i.r.p.	$\leq 4\mu\text{s}/40\text{kHz}$ dwell time every 3ms (note 1)			For vehicle radars. The spectrum access and mitigation requirement is given for devices mounted behind a bumper. If mounted without a bumper, the requirement should be $3\mu\text{s}/40\text{kHz}$ maximum dwell time every 3ms
		$\leq 1\text{ms}/40\text{kHz}$ dwell time every 40ms (note 1)			The spectrum access and mitigation requirement is given for devices mounted either behind a bumper or mounted without a bumper
<b>g3</b> 24.150-24.250 GHz	100mW e.i.r.p.	No requirement			For vehicle radars

Note 1: 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.

### Additional Information

#### Harmonised Standards

EN 300 674 sub-bands a) and b)  
 EN 301 091 sub-band d)  
 ES 200 674 sub-bands a) and b)  
 EN 302 288 sub-band e)  
 EN 302 264 sub-band f)  
 EN 300 440 for sub-bands g1), g2) and g3) (Pending replacement by EN 302 858 which is under development).

### **Frequency issues**

The frequency band a) is intended for road to vehicle systems, particularly (but not exclusively) road toll systems.

The frequency band a) and b) are recommended for 5 MHz channel spacing systems with the frequencies: 5797.5 MHz, 5802.5 MHz, 5807.5 MHz and 5812.5 MHz. For 10 MHz channel spacing systems 5800 MHz and 5810 MHz.

5805 - 5815 MHz on a national basis for multi-lane road junctions, particularly, but not exclusively road toll systems.

The use of 8 W e.i.r.p. allows for 1 Mbit/s in accordance with ETSI standard ES 200 674-1.

2W e.i.r.p. allows for 500 kbit/s downlink and 250 kbit/s uplink in accordance with EN 300 674-1 and for low data rates (31 kbit/s) in accordance with  
EN 300 674-2.

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

No information

## 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 SRD radar systems, 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.

### Regulatory parameters related to Annex 6

Frequency Band	Power	Spectrum access and mitigation requirement	Channel spacing	ECC/ERC Decision	Notes
<b>a</b> 2400.0-2483.5 MHz	25 mW e.i.r.p.	No requirement	No spacing	ERC/DEC/(01)08	
<b>b</b> 9200-9500 MHz	25 mW e.i.r.p.	No requirement	No spacing		
<b>c</b> 9500-9975 MHz	25 mW e.i.r.p.	No requirement	No spacing		
<b>d</b> 10.5-10.6 GHz	500 mW e.i.r.p.	No requirement	No spacing		
<b>e</b> 13.4-14.0 GHz	25 mW e.i.r.p.	No requirement	No spacing		
<b>f</b> 24.05-24.25 GHz	100 mW e.i.r.p.	No requirement	No spacing		
<b>g</b> 4.5-7.0 GHz	-41.3 dBm/MHz e.i.r.p.	No requirement	No spacing		Tank Level Probing Radar (TLPR)
<b>h</b> 8.5-10.6 GHz	-41.3 dBm/MHz e.i.r.p.	No requirement	No spacing		Tank Level Probing Radar (TLPR)
<b>i</b> 24.05-27.00 GHz	-41.3 dBm/MHz e.i.r.p.	No requirement	No spacing		Tank Level Probing Radar (TLPR)
<b>j</b> 57-64 GHz	-41.3 dBm/MHz e.i.r.p.	No requirement	No spacing		Tank Level Probing Radar (TLPR)
<b>k</b> 75-85 GHz	-41.3 dBm/MHz e.i.r.p.	No requirement	No spacing		Tank Level Probing Radar (TLPR)
<b>l</b> 17.1-17.3 GHz	+26 dBm e.i.r.p.	DAA	No spacing		Ground Based Synthetic Aperture Radar (GBSAR) (note 1)
<b>m</b> 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
<b>n</b> 2.2-8 GHz	*	*	*	ECC/DEC/(07)01	For Building Material Analysis (BMA) devices. * See detailed requirements in related ECC Decision.

Note 1: Specific requirements for the radar antenna pattern and for the implementation of Detect And Avoid (DAA) technique apply as described in EN 300 440 for Ground Based Synthetic Aperture Radar (GBSAR) systems

### Additional Information

#### Harmonised Standards

EN 300 440 sub-bands a), b), c), d), e), f), l)  
 EN 302 372 (for TLPR) sub-bands g), h), i), j), k)  
 EN 302 066 sub-band m)  
 EN 302 435-2 sub-band n)

#### Frequency issues

Bands a), b), c), d), e) and f)

Some countries may allow equipment with transmitter powers between 25 mW and 500 mW in which case an individual licence or a general licence may be required.

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

Bands g), h), i), j) and k) are to be used by TLPR equipment only.

The power limit is the radiated emission outside an enclosed tank structure.

The maximum emission inside an enclosed tank structure is given in EN 302 372.

Band h)

For the frequency range 10.6 GHz to 10.7 GHz, the radiated unwanted radiated emissions outside the tank enclosure shall be less than -60 dBm/MHz e.i.r.p.

## 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 general band a), b), c) and e)
- Social Alarms band d), f) and g)

### Regulatory parameters related to Annex 7

Frequency Band	Power	Spectrum access and mitigation requirement	Channel spacing	ECC/ERC Decision	Notes
<b>a</b> 868.6-868.7 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>b</b> 869.250-869.300 MHz	10 mW e.r.p.	< 0.1 % duty cycle	25 kHz		
<b>c</b> 869.650-869.700 MHz	25 mW e.r.p.	< 10 % duty cycle	25 kHz		
<b>d</b> 869.200-869.250 MHz	10 mW e.r.p.	< 0.1 % duty cycle	25 kHz		Social Alarms
<b>e</b> 869.300-869.400 MHz	10 mW e.r.p.	< 1.0 % duty cycle	25 kHz		
<b>f</b> 169.4750-169.4875 MHz	10 mW e.r.p.	< 0.1 % duty cycle	12.5 kHz	ECC/DEC/(05)02	Social Alarms (exclusive use)
<b>g</b> 169.5875-169.6000 MHz	10 mW e.r.p.	< 0.1 % duty cycle	12.5 kHz	ECC/DEC/(05)02	Social Alarms (exclusive use)

### Additional Information

#### Harmonised Standards

EN 300 220

#### Frequency issues

No information

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

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.

### Regulatory parameters related to Annex 8

Frequency Band	Power	Spectrum access and mitigation requirement	Channel spacing	ECC/ERC Decision	Notes
<b>a</b> 26.995, 27.045, 27.095, 27.145, 27.195 MHz	100 mW e.r.p	No requirement	10 kHz	ERC/DEC/(01)10	
<b>b</b> 34.995-35.225 MHz	100 mW e.r.p	No requirement	10 kHz	ERC/DEC/(01)11	Only for flying models
<b>c</b> 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

#### Frequency issues

No information

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

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, 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. It should be noted that other types of anti-theft systems can be operated in accordance with other relevant annexes.

### Regulatory parameters related to Annex 9

Frequency Band	Magnetic field strength	Spectrum access and mitigation requirement	Channel spacing	ECC/ERC Decision	Notes
<b>a1</b> 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
<b>a2</b> 90-119 kHz	42 dBμA/m at 10m	No requirement	No spacing		In case of external antennas only loop coil antennas may be employed
<b>a3</b> 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>b</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
<b>c</b> 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
<b>d</b> 6765-6795 kHz	42 dBμA/m at 10m	No requirement	No spacing		
<b>e</b> 7400-8800 kHz	9 dBμA/m at 10m	No requirement	No spacing		
<b>f</b> 13.553-13.567 MHz	42 dBμA/m at 10m	No requirement	No spacing		
<b>f1</b> 13.553-13.567 MHz	60 dBμA/m at 10m	No requirement	No spacing		For RFID and EAS only
<b>g</b> 26.957-27.283 MHz	42 dBμA/m at 10m	No requirement	No spacing	ERC/DEC/(01)16	
<b>h</b> 10.200-11.000 MHz	9 dBμA/m at 10m	No requirement	No spacing		
<b>k</b> 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
<b>11</b> 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. <i>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)</i>
<b>12</b> 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. <i>The maximum 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)</i>
<b>13</b> 400 - 600 kHz	-8 dBμA/m at 10 m	No requirement	No spacing		For RFID only. In case of external antennas only loop coil antennas may be employed. <i>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 measured at the center frequency whilst keeping the density limit (-8 dBμA/m in a bandwidth of 10 kHz.)</i> These systems should operate with a minimum operating bandwidth of 30 kHz



Note 1: Limit is reduced to 42 dB $\mu$ A/m at 10 m according to Table 1.

Station	Frequency	Protection bandwidth	Maximum Field strength at 10 m	Location
MSF	60 kHz	+/-250Hz	42 dB $\mu$ A/m	United Kingdom
RBU	66.6 kHz	+/-750Hz	42 dB $\mu$ A/m	Russian Federation
HBG	75 kHz	+/-250Hz	42 dB $\mu$ A/m	Switzerland
DCF77	77.5 kHz	+/-250Hz	42 dB $\mu$ A/m	Germany
DCF49	129.1 kHz	+/-500Hz	42 dB $\mu$ A/m	Germany

**Table 1: Standard frequencies and time standards to be protected within 9 - 90 kHz and 119 - 135 kHz**

### *Additional Information*

#### **Harmonised Standards**

EN 300 330 for all sub-bands

EN 302 291 sub-band f)

#### **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 aa) and ac) integral or dedicated within an area between 0.05 m<sup>2</sup> and 0.16 m<sup>2</sup>, the field strength is reduced by  $10 \cdot \log(\text{area}/0.16 \text{ m}^2)$ ; for an antenna area less than 0.05 m<sup>2</sup> 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.

#### **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.

## 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)

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.

### Regulatory parameters related to Annex 10

Frequency Band	Power	Spectrum access and mitigation requirement	Channel spacing	ECC/ERC Decision	Notes
<b>A</b> 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
<b>b</b> 173.965-174.015 MHz	2 mW e.r.p.	No requirement	50 kHz		Aids for the hearing impaired
<b>C</b> 863-865 MHz	10 mW e.r.p.	No requirement	No spacing		
<b>D</b> 174-216 MHz	50 mW e.r.p.	No requirement	No spacing		On a tuning range basis. Individual licence required
<b>e1</b> 470-786 MHz	50 mW e.r.p.	No requirement	No spacing		On a tuning range basis. Individual licence required
<b>e2</b> 786-789 MHz	12 mW e.r.p.	No requirement	No spacing		On a tuning range basis. Individual licence required. See technical conditions for PMSE (including radio microphones) in Annex 3 of Decision ECC/DEC/(09)03 section 3.1.
<b>e3</b> 823-826 MHz	20 mW e.i.r.p. 100 mW e.i.r.p.	No requirement	200 kHz		Individual licence required. 100 mW restricted to body worn microphones. See technical conditions for PMSE (including radio microphones) in Annex 3 of Decision ECC/DEC/(09)03 section 3.1.
<b>e4</b> 826-832 MHz	100 mW e.i.r.p.	No requirement	200 kHz		Individual licence required. See technical conditions for PMSE (including radio microphones) in Annex 3 of Decision ECC/DEC/(09)03 section 3.1.
<b>f</b> 1785-1795 MHz	20 mW e.i.r.p. 50 mW e.i.r.p.	No requirement	No spacing		Individual licence required. 50 mW restricted to body worn microphones
<b>g</b> 1795-1800 MHz	20 mW e.i.r.p. 50 mW e.i.r.p.	No requirement	No spacing		50 mW restricted to body worn equipment
<b>h1</b> 169.4000-169.4750 MHz	10 mW e.r.p.	No requirement	Max 50 kHz	ECC/DEC/(05)02	Aids for the hearing impaired (Personal Hearing Aid System)
	500 mW e.r.p.	No requirement	Max 50 kHz	ECC/DEC/(05)02	Aids for the hearing impaired (Public Hearing Aid System) Individual licence may be required.

<b>h2</b> 169.4875-169.5875 MHz	10 mW e.r.p.	No requirement	Max 50 kHz	ECC/DEC/(05)02	Aids for the hearing impaired (Personal Hearing Aid System)
	500 mW e.r.p.	No requirement	Max 50 kHz	ECC/DEC/(05)02	Aids for the hearing impaired (Public Hearing Aid System) Individual licence may be required.
<b>i</b> 169.4-174.0 MHz	10 mW e.r.p.	No requirement	Max 50 kHz		Aids for the hearing impaired On a tuning range basis Administrations should consider channel plan for band 169.4 - 169.8125 MHz detailed in ECC/DEC/(05)02 and the risk of interference towards systems operated in the band 169.6 - 169.8125 MHz when developing their national frequency table

### *Additional Information*

#### **Harmonised Standards**

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

#### **Frequency Issues**

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.

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

No information

## 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.

### Regulatory parameters related to Annex 11

Frequency Band	Power	Spectrum access and mitigation requirement	Channel spacing	ECC/ERC Decision	Notes
<b>a1</b> 2446-2454 MHz	≤500 mW e.i.r.p.	No requirement	No spacing		
<b>a2</b> 2446-2454 MHz	>500 mW-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).
<b>b1</b> 865.0-865.6 MHz	100 mW e.r.p.	No requirement	200 kHz		
<b>b2</b> 865.6-867.6 MHz	2 W e.r.p.	No requirement	200 kHz		
<b>b3</b> 867.6-868.0 MHz	500 mW e.r.p.	No requirement	200 kHz		

### Additional Information

#### Harmonised Standards

EN 300 440 Sub-band a)  
EN 302 208 Sub-bands b1), b2) and b3)

#### Frequency issues

Sub-band a)

To assist enforcement authorities any emissions due to the RFID device when measured outside of the building at a distance of 10 metres shall not exceed the equivalent field strength for 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.

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

Sub-band a)

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.

## 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.

### Regulatory parameters related to Annex 12

Frequency Band	Power/Magnetic Field	Spectrum access and mitigation requirement	Channel spacing	ECC/ERC Decision	Notes
<b>a</b> 402-405 MHz	25 $\mu$ W e.r.p.	See Note 3	25 kHz	ERC/DEC/(01)17	For Ultra Low Power Active Medical Implants covered by the applicable harmonised standard. Individual transmitters may combine adjacent channels for increased bandwidth up to 300 kHz.
<b>a1</b> 401-402 MHz	25 $\mu$ W e.r.p.	LBT or duty cycle $\leq 0.1\%$ (see note 2)	25 kHz		For Ultra Low Power Active Medical Implants and accessories covered by the applicable harmonised standard and not covered by band a. Individual transmitters may combine adjacent 25 kHz channels for increased bandwidth up to 100 kHz (see note 1).
<b>a2</b> 405-406 MHz	25 $\mu$ W e.r.p.	LBT or duty cycle $\leq 0.1\%$ (see note 2)	25 kHz		For Ultra Low Power Active Medical Implants and accessories covered by the applicable harmonised standard and not covered by band a. Individual transmitters may combine adjacent 25 kHz channels for increased bandwidth up to 100 kHz (see note 1).
<b>B</b> 9-315 kHz	30 dB $\mu$ A/m at 10m	< 10%	No spacing		The application is for Ultra Low Power Active Medical Implant systems using inductive loop techniques for telemetry purposes
<b>C</b> 315-600 kHz	-5 dB $\mu$ A/m at 10m	< 10%	No spacing		The application is for animal implantable devices.
<b>d</b> 30.0-37.5 MHz	1 mW e.r.p.	< 10%	No spacing		The application is for Ultra Low Power medical membrane implants for blood pressure measurements.
<b>e</b> 12.5-20.0 MHz	-7 dB $\mu$ A/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.
<b>f</b> 2483.5-2500 MHz	10 dBm e.i.r.p	LBT+AFA and < 10% duty cycle. See Note 3	1MHz		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.

Note 1: Due to the limited available spectrum of 1 MHz, a maximum bandwidth of 100 kHz is proposed for these bands to ensure that several users could access the band concurrently.

Note 2: Systems not providing frequency agility based on ambient RF field sensing, be limited to a maximum permitted e.r.p. of 250 nanowatts with a duty cycle of  $\leq 0.1\%$ .

Note 3: The equipment shall implement a spectrum access mechanism as described in the applicable harmonized standard or an equivalent spectrum access mechanism

***Additional Information***

**Harmonised Standards**

EN 301 839	Sub-band a)
EN 302 537	Sub-bands a1) and a2)
EN 302 195	Sub-band b)
EN 302 536	Sub-band c)
EN 302 510	Sub-band d)
EN 300 330	Sub-band e)

**Frequency issues**

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

No information

## 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 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.

### Regulatory parameters related to Annex 13

Frequency Band	Power	Spectrum access and mitigation requirement	Channel spacing	ECC/ERC Decision	Notes
<b>a</b> 863-865 MHz	10 mW e.r.p.	No requirement	No spacing		
<b>b</b> 864.8-865.0 MHz	10 mW e.r.p.	No requirement	50 kHz		Narrow band analogue voice devices
<b>c</b> 1795-1800 MHz	20 mW e.i.r.p.	No requirement	No spacing		
<b>d</b> 87.5-108.0 MHz	50 nW e.r.p.	No requirement	200 kHz		

### Additional Information

#### Harmonised Standards

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

#### 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.

#### 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.

Annexes to ERC REC 70-03		AUT	BEL	BUL	CZE	CYP	DNK	EST	FIN	F	D	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		EU member states and EFTA countries																														
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
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
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
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
Annex 1E	138.20-138.45 MHz	Y	N	Y	Y	Y	Y	Y	Y	N	N	Y	N	Y	P	N	N	N	Y	Y	Y	N	Y	N	Y	Y	N	N	N	N	N	N
Annex 1F	433.050-434.790 MHz	Y	Y	Y	Y	Y	Y	L	Y	Y	Y	Y	Y	Y	Y	Y	Y	L	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	L	Y	Y	Y	Y	Y	Y	Y	Y	Y	L	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	L	N	Y	Y	Y	Y	Y	Y	Y	Y	L	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Annex 1G	863-870 MHz	N	Y	Y	Y	Y	Y	L	Y	Y	L	Y	Y	Y	Y	Y	Y	L	Y	Y	U	L	Y	Y	Y	Y	Y	Y	L	Y	N	Y
Annex 1G1	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
Annex 1G2	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
Annex 1G3	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
Annex 1G4	869.700-870.000 MHz	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	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
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
Annex 1J	24.00-24.25 GHz	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	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
Annex 1L	122-123 GHz	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	P	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	P
Annex 1M	244-246 GHz	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	P	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N
Annex 1N	3.1-4.8 GHz	L	N	Y	N	N	Y	Y	Y	N	Y	N	P	N	N	N	N	Y	N	N	N	Y	N	N	N	Y	N	Y	Y	Y	N	N
Annex 1N	6 - 9 GHz	L	N	Y	N	N	Y	Y	Y	N	Y	N	P	N	N	N	N	Y	N	N	N	Y	N	N	N	Y	N	Y	Y	Y	N	N
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	
Annex 2B	169.4-169.475 MHz	P	N	N	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	P	Y	Y	Y	Y	Y	Y	Y	L	Y	Y	Y	Y	Y	Y	Y	Y	
Annex 2C	169.4-169.475 MHz	P	N	N	Y	Y	N	Y	Y	Y	Y	N	Y	Y	P	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Annex 3 - Wideband Data Transmission Systems																																
Annex 3A	2400.0-2483.5 MHz	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	
Annex 3B	5150-5350 MHz	Y	Y	Y	Y	Y	Y	Y	L	Y	Y	Y	Y	L	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	
Annex 3C	5470-5725 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	
Annex 3D	17.1-17.3 GHz	Y	N	Y	P	N	Y	Y	Y	N	N	Y	P	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	N	N	N	Y	Y	N
Annex 3E	57-66 GHz	N	Y	Y	P	Y	Y	Y	Y	N	Y	N	Y	Y	N	N	Y	Y	N	N	Y	P	Y	N	N	Y	Y	Y	Y	Y	N	Y
Annex 3F	57-66 GHz	N	Y	Y	P	Y	Y	Y	N	Y	N	Y	Y	N	N	Y	Y	N	N	Y	P	Y	N	N	Y	Y	Y	Y	Y	N	Y	
Annex 4 - Railway Applications																																
Annex 4A	2446-2454 MHz	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	N	Y	N	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	U	Y	Y	Y	L	Y
Annex 4B (*27.095 MHz)	27.090-27.100 MHz	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y
Annex 4C (*4234 kHz)	984-7484 kHz	P	N	Y	U	N	Y	Y	Y	N	Y	N	Y	N	P	N	Y	Y	N	Y	N	P	Y	Y	Y	Y	U	Y	N	Y	N	Y
Annex 4D1 (*4516 kHz)	516-8516 kHz	Y	N	Y	N	N	Y	Y	Y	N	Y	N	L	N	Y	Y	Y	Y	N	Y	N	P	Y	Y	Y	Y	U	Y	N	Y	Y	Y
Annex 4D2 (*13.547 MHz)	7.3-23.0 MHz	N	N	Y	N	N	Y	Y	Y	N	Y	N	Y	N	P	N	P	Y	N	Y	N	P	N	Y	Y	Y	U	Y	N	Y	N	Y
Annex 5 - Road Transport and Traffic Telematics - RTTT																																
Annex 5A	5795-5805 MHz	Y	Y	Y	Y	Y	Y	Y	L	Y	Y	Y	Y	L	Y	Y	L	Y	Y	L	Y	L	Y	Y	Y	Y	Y	Y	L	Y	L	
Annex 5B	5805-5815 MHz	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	L	Y	Y	L	Y	Y	L	Y	L	Y	Y	Y	Y	Y	Y	L	Y	L	
Annex 5C	63-64 GHz	Y	Y	Y	Y	Y	L	Y	N	N	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	N	N	P	
Annex 5D	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	
Annex 5E	21.65-26.65 GHz	N	N	Y	N	Y	Y	Y	Y	N	Y	N	P	N	N	N	Y	Y	N	N	N	Y	N	N	N	Y	N	Y	Y	Y	N	N
Annex 5F	77 - 81 GHz	N	N	Y	N	N	Y	Y	Y	N	Y	N	P	N	N	N	Y	Y	N	N	N	Y	N	N	N	Y	N	Y	Y	Y	N	N

\*)Center frequency for the band  
Highlighted yellow = not implemented  
Y=impleme implemented  
L=limited implementation  
P=planned  
U=under study  
Edition of 6 August 2010  
Countries for Class 1 equipment



Implementation Status		AUT	BEL	BUL	CZE	CYP	DNK	EST	FIN	F	D	GRC	HNG	ISL	IRL	I	LVA	LIE	LTU	LUX	MLT	HOL	NOR	POL	POR	ROU	SVK	SVN	E	SUI	S	G	
Annex 5 - Road Transport and Traffic Telematics - RTTT - continued																																	
Annex 5G1: 24.050-24.075 GHz		N	N	N	N	N	Y	U	Y	N	Y	N	P	N	N	N	Y	Y	N	N	N	Y	N	N	N	U	N	Y	N	Y	N	P	
Annex 5G2: 24.075-24.150 GHz		N	N	N	N	N	Y	U	Y	N	Y	N	P	N	N	N	Y	Y	N	N	N	Y	N	N	N	U	N	Y	N	Y	N	P	
Annex 5G3: 24.150-24.250 GHz		N	N	N	N	N	Y	U	Y	N	Y	N	P	N	N	N	Y	Y	N	N	N	Y	N	N	N	U	N	Y	N	Y	N	P	
Annex 6 - Radiodetermination applications																																	
Annex 6A 2400.0-2483.5 MHz		ERC/DEC(01)08		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 6B 9200-9500 MHz		Y	Y	Y	Y	Y	Y	Y	N	N	Y	Y	Y	Y	Y	N	Y	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	N	Y	N	Y	N	L	
Annex 6D 10.5-10.6 GHz		N	Y	Y	N	Y	Y	N	N	L	N	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	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	L	
Annex 6G 4.5 - 7.0 GHz		U	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	P	N	Y	Y	N	Y	N	P	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	
Annex 6H 8.5 - 10.6 GHz		U	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	P	N	Y	Y	N	Y	N	P	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	
Annex 6I 24.05 - 27.0 GHz		U	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	P	N	Y	Y	N	Y	N	P	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	
Annex 6J 57 - 64 GHz		U	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	P	N	Y	Y	N	Y	N	P	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	
Annex 6K 75 - 85 GHz		U	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	P	N	Y	Y	N	Y	N	P	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	
Annex 6L 17.1 - 17.3 GHz		N	N	Y	U	Y	Y	Y	Y	N	Y	N	Y	Y	N	U	Y	Y	N	N	N	P	Y	N	U	Y	Y	Y	Y	Y	N	Y	
Annex 6M 30 MHz - 12.4 GHz		ECC/DEC(06)08		N	N	Y	N	N	Y	Y	Y	N	Y	N	P	N	N	N	Y	Y	N	N	N	P	N	N	N	U	N	Y	N	Y	P
Annex 6N 2.2 - 8.0 GHz		ECC/DEC(07)01		L	N	Y	N	N	Y	Y	Y	N	Y	N	P	N	N	N	Y	Y	L	N	N	Y	N	N	N	Y	N	Y	N	Y	P
Annex 7 - Alarms																																	
Annex 7A 868.6-868.7 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	
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	
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	
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	
Annex 7E 869.300-869.400 MHz		Y	Y	Y	Y	Y	Y	Y	Y	N	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	
Annex 7F 169.4750-169.4875 MHz		ECC/DEC(05)02	P	Y	N	Y	Y	N	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	
Annex 7G 169.5875-169.6000 MHz			P	Y	N	Y	Y	N	Y	Y	Y	N	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		ERC/DEC(01)10-12	Y	Y	Y	Y	Y	Y	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			Y	Y	Y	Y	Y	Y	Y	Y	L	L	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	L	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
Annex 9 - Inductive Applications																																	
Annex 9A1 9-90 kHz		N	N	L	P	N	L	Y	Y	L	Y	N	Y	Y	N	N	L	Y	N	Y	N	P	N	N	N	Y	N	Y	L	Y	Y	L	
Annex 9A2 90-119 kHz		L	N	Y	Y	N	L	Y	Y	Y	Y	N	Y	Y	N	N	L	Y	N	Y	N	P	N	N	N	Y	N	Y	Y	Y	Y	N	
Annex 9A3 119-135 kHz		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	P	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	N	P	Y	Y	Y	Y	Y	Y	Y	Y	Y	P	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	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	P	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	
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	
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	
Annex 9F1 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	
Annex 9G 26.957-27.283 MHz		ERC/DEC(01)16		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	

\*)Center frequency for the band

Highlighted yellow = not implemented

Y=impleme implemented

L=limited implementation

P=planned

U=under study

Implementation Status	AUT	BEL	BUL	CZE	CYP	DNK	EST	FIN	F	D	GRC	HNG	ISL	IRL	I	LVA	LIE	LTU	LUX	MLT	HOL	NOR	POL	POR	ROU	SVK	SVN	E	SUI	S	G	
Annex 9 - Inductive Applications - continued																																
Annex 9H 10.200-11.000 MHz	P	Y	Y	Y	Y	Y	Y	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	
Annex 9L1 148.5 kHz - 5 MHz	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	P	Y	Y	Y	Y	Y	Y	Y	Y	L	Y	Y	Y	Y	Y	Y	Y	Y	
Annex 9L2 5 - 30 MHz	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	P	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	
Annex 9L3 400-600 kHz	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	P	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	
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	L	L	Y	P	L	Y	Y	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	L	N	Y	N	Y	Y	P	Y	Y	N	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	N	N	N	Y	
Annex 10C 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	
Annex 10D 174-216 MHz	Y	Y	Y	Y	Y	L	Y	L	L	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	L	Y	L	L	L	L	Y	Y	N	L	Y	Y	Y	Y	L	Y	L	Y	Y	Y	Y	Y	N	Y	Y	Y	
Annex 10E2 786-789 MHz	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	
Annex 10E3 823-826 MHz	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	
Annex 10E4 826-832 MHz	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	
Annex 10F 1785-1795 MHz	L	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N	Y	Y	N	Y	P	Y	Y	Y	Y	Y	N	Y	Y	Y	Y		
Annex 10G 1795-1800 MHz	L	Y	Y	L	Y	Y	Y	L	Y	Y	Y	Y	Y	N	N	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	L	
Annex 10H1 169.4000-169.4750 MHz	P	Y	N	Y	Y	N	Y	Y	Y	N	N	Y	Y	P	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	
Annex 10H2 169.4875-169.5875 MHz	P	Y	N	Y	Y	N	Y	Y	Y	Y	N	Y	Y	P	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	N	N	N	N	N	L	Y	N	N	Y	N	P	Y	N	N	Y	U	Y	L	N	Y	L	
Annex 11 - Radio Frequency Identification Applications																																
Annex 11A 2446-2454 MHz	Y	Y	Y	Y	Y	Y	Y	Y	L	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	L	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	
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	
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	
Annex 12 - Active Medical Implants and their associated peripherals																																
Annex 12A 402-405 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	L	Y	Y	Y	Y	Y	Y	
Annex 12A1 401-402 MHz	U	N	Y	U	Y	Y	Y	Y	Y	Y	P	P	Y	P	N	Y	Y	Y	Y	Y	U	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	
Annex 12A2 405-406 MHz	U	N	Y	U	Y	Y	Y	Y	Y	Y	P	Y	Y	P	N	Y	Y	Y	Y	Y	U	Y	Y	Y	N	Y	Y	N	Y	Y	Y	
Annex 12B 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	
Annex 12C 315-600 kHz	Y	Y	Y	Y	Y	Y	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	
Annex 12D 30.0-37.5 MHz	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	P	Y	Y	Y	Y	Y	Y	Y	Y	L	Y	N	P	Y	Y	
Annex 12E 12.5-20.0 MHz	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	P	N	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	U	Y	N	Y	Y	Y	
Annex 12F 2483.5-2500 MHz	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	
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	
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	
Annex 13C 1795-1800 MHz	N	Y	Y	Y	Y	Y	Y	L	N	Y	Y	Y	Y	N	N	Y	Y	Y	Y	N	Y	Y	Y	Y	N	Y	N	Y	Y	L		
Annex 13D 87.5-108.0 MHz	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	P	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=impleme implemented

L=limited implementation

P=planned

U=under study

Annexes to ERC REC 70-03			BIH	GEO	HRV	MKD	MNE	RUS	SRB	TUR	UKR
Annex 1 - Non-Specific SRDs											
Annex 1A	6765-6795 kHz		Y	N	Y	Y	Y	N	Y	Y	L
Annex 1B	13.553-13.567 MHz		Y	N	Y	Y	Y	Y	Y	Y	N
Annex 1C	26.957-27.283 MHz	ERC/DEC/(01)02	Y	N	Y	Y	Y	Y	Y	Y	N
Annex 1D	40.660-40.700 MHz	ERC/DEC/(01)03	Y	N	Y	Y	Y	Y	Y	Y	N
Annex 1E	138.20-138.45 MHz		Y	N	U	Y	Y	N	Y	N	N
Annex 1F	433.050-434.790 MHz	ECC/DEC/(04)02	Y	L	Y	Y	Y	L	Y	Y	L
Annex 1F1	433.050-434.790 MHz		Y	L	Y	Y	Y	N	Y	Y	L
Annex 1F2	434.040-434.790 MHz		Y	L	Y	Y	Y	N	Y	Y	L
Annex 1G	863-870 MHz		Y	N	Y	Y	Y	L	Y	Y	L
Annex 1G1	868.000-868.600 MHz		Y	N	Y	Y	Y	N	Y	Y	L
Annex 1G2	868.700-869.200 MHz		Y	N	Y	Y	Y	Y	Y	Y	N
Annex 1G3	869.400-869.650 MHz		Y	N	Y	Y	Y	N	Y	Y	N
Annex 1G4	869.700-870.000 MHz		Y	N	Y	Y	Y	N	Y	Y	N
Annex 1H	2400.0-2483.5 MHz		Y	Y	Y	Y	Y	Y	Y	Y	L
Annex 1I	5725-5875 MHz		Y	Y	Y	Y	Y	L	Y	Y	Y
Annex 1J	24.00-24.25 GHz		Y	Y	Y	Y	Y	N	Y	Y	Y
Annex 1K	61.0-61.5 GHz		Y	N	U	Y	Y	N	Y	Y	Y
Annex 1L	122-123 GHz		Y	N	N	Y	Y	N	Y	Y	Y
Annex 1M	244-246 GHz		Y	N	N	Y	Y	N	Y	Y	Y
Annex 1N	3.1-4.8 GHz	ECC/DEC/(06)04	L	N	Y	N	Y	L	N	N	N
Annex 1N	6 - 9 GHz	ECC/DEC/(06)12	L	N	Y	N	Y	L	N	N	N
Annex 2 - Tracking, Tracing and Data Acquisition											
Annex 2A	(*457 kHz) 456.9-457.1 kHz	ECC/DEC/(04)01	Y	N	Y	Y	Y	Y	Y	Y	L
Annex 2B	169.4-169.475 MHz	ECC/DEC/(05)02	Y	N	L	Y	Y	N	Y	Y	U
Annex 2C	169.4-169.475 MHz		Y	N	L	Y	Y	N	Y	Y	U
Annex 3 - Wideband Data Transmission Systems											
Annex 3A	2400.0-2483.5 MHz	ERC/DEC/(01)07	Y	Y	Y	Y	Y	L	Y	Y	L
Annex 3B	5150-5350 MHz	ECC/DEC/(04)08	Y	L	Y	Y	Y	L	Y	Y	L
Annex 3C	5470-5725 MHz		Y	Y	Y	Y	Y	L	Y	Y	L
Annex 3D	17.1-17.3 GHz		Y	L	Y	Y	Y	N	Y	N	N
Annex 3E	57-66 GHz		L	N	Y	Y	Y	N	L	N	N
Annex 3F	57-66 GHz		L	N	Y	Y	Y	N	L	N	N
Annex 4 - Railway Applications											
Annex 4A	2446-2454 MHz		Y	L	Y	Y	Y	N	Y	Y	N
Annex 4B	(*27.095 MHz) 27.090-27.100 MHz		Y	N	Y	Y	Y	N	Y	Y	N
Annex 4C	(*4234 kHz) 984-7484 kHz		Y	N	P	P	Y	N	N	U	N
Annex 4D1	(*4516 kHz) 516-8516 kHz		Y	N	Y	Y	Y	N	N	Y	N
Annex 4D2	(*13.547 MHz) 7.3-23.0 MHz		Y	N	P	P	Y	N	L	U	N
Annex 5 - Road Transport and Traffic Telematics - RTTT											
Annex 5A	5795-5805 MHz	ECC/DEC/(02)01	Y	L	Y	Y	Y	L	Y	Y	N
Annex 5B	5805-5815 MHz		Y	L	U	Y	Y	L	Y	Y	N
Annex 5C	63-64 GHz		Y	N	U	Y	Y	N	Y	U	U
Annex 5D	76-77 GHz		Y	N	Y	Y	Y	N	Y	Y	Y
Annex 5E	21.65-26.65 GHz	ECC/DEC(04)10	L	N	Y	N	Y	N	N	N	N
Annex 5F	77 - 81 GHz	ECC/DEC(04)03	L	N	U	N	Y	N	N	N	N
Annex 5G1	24.050-24.075 GHz		L	N	U	N	Y	N	N	N	N
Annex 5G2	24.075-24.150 GHz		L	N	U	N	Y	N	N	N	N
Annex 5G3	14.150-24.250 GHz		L	N	U	N	Y	N	N	N	N
Annex 6 - Radiodetermination applications											
Annex 6A	2400.0-2483.5 MHz	ERC/DEC/(01)08	Y	L	Y	Y	Y	N	Y	Y	L
Annex 6B	9200-9500 MHz		Y	L	Y	Y	Y	N	Y	Y	U
Annex 6C	9500-9975 MHz		Y	L	Y	Y	Y	N	Y	Y	U
Annex 6D	10.5-10.6 GHz		Y	L	Y	Y	Y	U	Y	N	L
Annex 6E	13.4-14.0 GHz		Y	L	Y	Y	Y	N	Y	Y	U
Annex 6F	24.05-24.25 GHz		Y	L	Y	Y	Y	L	Y	Y	L
Annex 6G	4.5 - 7.0 GHz		Y	N	Y	P	Y	N	L	U	U
Annex 6H	8.5 - 10.6 GHz		Y	N	N	P	Y	N	L	U	U
*)The center frequency for the band											
Highlighted yellow = not implemented											

Implementation Status		BIH	GEO	HRV	MKD	MNE	RUS	SRB	TUR	UKR
<b>Annex 6 - Radiodetermination applications - continued</b>										
Annex 6I	24.05 - 27.0 GHz	Y	N	Y	P	Y	N	L	U	L
Annex 6J	57 - 64 GHz	Y	N	N	P	Y	N	L	U	U
Annex 6K	75 - 85 GHz	Y	N	N	P	Y	N	L	U	L
Annex 6L	17.1 - 17.3 GHz	Y	N	N	P	Y	N	L	N	N
Annex 6M	30 MHz - 12.4 GHz	L	N	N	N	U	N	N	N	N
Annex 6N	2.2 - 8.0 GHz	L	N	N	N	Y	N	N	N	N
<b>Annex 7 - Alarms</b>										
Annex 7A	868.6-868.7 MHz	Y	N	Y	Y	Y	N	Y	Y	L
Annex 7B	869.250-869.300 MHz	Y	N	Y	Y	Y	N	Y	Y	N
Annex 7C	869.650-869.700 MHz	Y	N	Y	Y	Y	N	Y	Y	U
Annex 7D	869.200-869.250 MHz	Y	N	Y	Y	Y	N	Y	Y	L
Annex 7E	869.300-869.400 MHz	Y	N	Y	Y	Y	N	Y	Y	N
Annex 7F	169.4750-169.4875 MHz	Y	N	Y	Y	Y	N	Y	Y	N
Annex 7G	169.5875-169.6000 MHz	Y	N	Y	Y	Y	N	Y	Y	N
<b>Annex 8 - Model Control</b>										
Annex 8A	26.995,27.045,27.095, 27.145,27.195 MHz	Y	N	Y	Y	Y	L	Y	Y	L
Annex 8B	34.995-35.225 MHz	Y	N	Y	Y	Y	N	Y	Y	L
Annex 8C	40.665,40.675 40.685, 40.695 MHz	Y	N	Y	Y	Y	Y	Y	Y	N
<b>Annex 9 - Inductive Applications</b>										
Annex 9A1	9 - 90 kHz	L	N	Y	N	Y	L	N	N	L
Annex 9A2	90-119 kHz	L	L	Y	N	Y	Y	N	N	L
Annex 9A3	119-135 kHz	Y	N	Y	Y	Y	Y	Y	Y	L
Annex 9B	135-140 kHz	Y	N	Y	Y	Y	N	Y	Y	L
Annex 9C	140.0-148.5 kHz	Y	N	Y	Y	Y	N	Y	Y	L
Annex 9D	6765-6795 kHz	Y	N	Y	Y	Y	Y	Y	Y	N
Annex 9E	7400-8800 kHz	Y	N	Y	Y	Y	Y	Y	Y	N
Annex 9F	13.553-13.567 MHz	Y	N	Y	Y	Y	Y	Y	Y	N
Annex 9F1	13.553-13.567 MHz	Y	N	Y	Y	Y	Y	Y	Y	L
Annex 9G	26.957-27.283 MHz	Y	N	Y	Y	Y	Y	Y	Y	L
Annex 9H	10.200-11.000 MHz	Y	N	Y	Y	Y	L	Y	Y	L
Annex 9K	3155-3400 kHz	Y	N	Y	Y	Y	N	Y	Y	L
Annex 9L1	148.5 kHz - 5 MHz	Y	N	Y	Y	Y	N	Y	Y	U
Annex 9L2	5 - 30 MHz	Y	N	Y	Y	Y	N	Y	Y	N
Annex 9L3	400-600 kHz	Y	N	Y	Y	Y	N	Y	Y	U
<b>Annex 10 - Radio microphone applications including aids for the hearing impaired</b>										
Annex 10A	29.7-47.0 MHz	Y	N	N	Y	Y	L	Y	Y	L
Annex 10B	173.965-174.015 MHz	Y	N	Y	Y	Y	N	Y	Y	N
Annex 10C	863-865 MHz	Y	N	L	Y	Y	N	Y	Y	L
Annex 10D	174-216 MHz	Y	N	Y	Y	Y	L	Y	Y	L
Annex 10E1	470-786 MHz	Y	N	Y	Y	Y	L	Y	Y	L
Annex 10E2	786-789 MHz	N	N	N	N	N	N	N	N	N
Annex 10E3	823-826 MHz	N	N	N	N	N	N	N	N	N
Annex 10E4	826-832 MHz	N	N	N	N	N	N	N	N	N
Annex 10F	1785-1795 MHz	Y	N	Y	Y	Y	N	Y	Y	U
Annex 10G	1795-1800 MHz	Y	N	L	Y	Y	N	Y	Y	U
Annex 10H1	169.4000-169.4750 MHz	Y	N	Y	Y	Y	N	Y	Y	N
Annex 10H2	169.4875-169.5875 MHz	Y	N	Y	Y	Y	N	Y	Y	N
Annex 10I	169.4-174.0 MHz	Y	N	N	Y	Y	N	N	N	N
<b>Annex 11 - Radio Frequency Identification Applications</b>										
Annex 11A	2446-2454 MHz	Y	Y	Y	Y	Y	N	Y	Y	U
Annex 11B1	865.0-865.6 MHz	Y	N	Y	N	Y	N	Y	Y	U
Annex 11B2	865.6-867.6 MHz	Y	N	Y	N	Y	L	Y	Y	U
Annex 11B3	867.6-868.0 MHz	Y	N	Y	N	Y	L	Y	Y	U
<b>Annex 12 - Active Medical Implants and their associated peripherals</b>										
Annex 12A	402-405 MHz	Y	N	Y	Y	Y	N	Y	Y	L
Annex 12A1	401-402 MHz	Y	N	Y	Y	Y	N	N	U	Y
Annex 12A2	405-406 MHz	Y	N	Y	Y	Y	N	N	U	Y
Annex 12B	9-315 kHz	Y	N	Y	Y	Y	N	Y	Y	L
Annex 12C	315-600 kHz	Y	N	Y	Y	Y	N	Y	Y	L

\*)The center frequency for the band

Highlighted yellow = not implemented

Implementation Status	BIH	GEO	HRV	MKD	MNE	RUS	SRB	TUR	UKR
<b>Annex 12 - Active Medical Implants and their associated peripherals - continued</b>									
Annex 12D 30.0-37.5 MHz	Y	N	Y	Y	Y	N	N	Y	L
Annex 12E 12.5-20.0 MHz	Y	N	Y	Y	Y	N	L	Y	U
Annex 12F 2483.5-2500 MHz	N	N	N	N	N	N	N	N	N
<b>Annex 13 - Wireless Audio Applications</b>									
Annex 13A 863-865 MHz	Y	N	Y	Y	Y	Y	Y	Y	N
Annex 13B 864.8-865.0 MHz	Y	Y	Y	Y	Y	N	Y	Y	L
Annex 13C 1795-1800 MHz	Y	L	N	Y	Y	N	Y	Y	U
Annex 13D 87.5-108.0 MHz	Y	Y	Y	Y	Y	L	Y	Y	L
*)The center frequency for the band									
Highlighted yellow = not implemented									

## APPENDIX 2

### List of relevant ECC/ERC Decisions, Reports, EC Decisions and ETSI Standards

#### ECC/ERC Decisions

ECC/DEC/(07)01	Building Material Analysis (BMA) devices using UWB technology
ECC/DEC/(06)12	Supplementary regulatory provisions to decision ECC/DEC/(06)04 for UWB devices using mitigation techniques
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)08	The harmonised use of the 5 GHz frequency bands for the implementation of Wireless Access Systems including Radio Local Area Networks (WAS/RLANs)
ECC/DEC/(04)03	The frequency band 77 – 81 GHz to be designated for the use of Automotive Short Range Radars
ECC/DEC/(04)02	Non-specific Short Range Devices in the band 433.05-434.79 MHz
ECC/DEC/(04)01	Short Range Devices for detection of Avalanche Victims
ECC/DEC/(02)01	The frequency bands to be designated for the coordinated introduction of Road Transport and Traffic Telematic Systems.
ERC/DEC(01)02	Non-specific Short Range Devices in 26.957-27.283 MHz
ERC/DEC(01)03	Non-specific Short Range Devices in 40.660-40.700 MHz
ERC/DEC(01)07	Radio-LAN Short Range Devices in 2400-2483.5 MHz
ERC/DEC(01)08	Short Range Devices for Movement Detection and Alert in 2400-2483.5 MHz
ERC/DEC(01)10	Short Range Devices for Model control in 26.995, 27.045, 27.095, 27.145 and 27.195 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
ERC/DEC(01)16	Short Range Devices for Inductive applications in 26.957-27.283 MHz
ERC/DEC(01)17	Short Range Devices for Medical Implants in 402-405 MHz

### 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 23	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 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 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 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 092	Coexistence between Ultra Low Power Active Medical Implants devices (ULP-AMI) and existing radiocommunication systems and services in the frequency bands 401–402 MHz and 405–406 MHz
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 135	Inductive limits in the frequency range 9 kHz to 148.5 kHz
ECC Report 149	Compatibility of LP-AMI applications within 2360-3400 MHz, in particular for the band 2483.5-2500 MHz, with incumbent services
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	ERC Report on sharing inductive systems and radiocommunication systems in the band 9-135 kHz
ERC Report 047	ERC Report on 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	ERC Report on 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	ERC Report on 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	ERC Report on 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	ERC Report on sharing inductive Short Range Devices and radio communication systems in 10.2-11 MHz
ERC Report 095	ERC Report on the use of 3155-3400 kHz for general inductive applications



ERC Report 096	ERC Report on the use of 290-300 kHz and 500-510 kHz for general inductive applications
ERC Report 098	ERC Report on 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 Standards including harmonised standards

**ETSI standards consist of at least two parts, the last part will normally be harmonised under the R&TTE Directive. Further information can be found at <http://europa.eu.int/comm/enterprise/rtte/harstand.htm>**

### 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; Part 3: Harmonised EN covering essential requirements under article 3.2 of the R&TTE Directive
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; Part 2: Harmonised EN under article 3.2 of the R&TTE Directive
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; Part 2: Harmonised EN under article 3.2 of the R&TTE Directive

### 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; Part 2: Harmonised EN covering essential requirements under article 3.2 of the R&TTE Directive .
EN 300 422	Electromagnetic compatibility and Radio spectrum Matters (ERM); Wireless microphones in the 25 MHz to 3 GHz frequency range; Part 2: Harmonised EN under article 3.2 of the R&TTE Directive
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; Part 3: Harmonised EN covering essential requirements of article 3.3e of the R&TTE Directive
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; Part 2: Harmonised standard covering essential requirements under article 3.2 of the R&TTE Directive
EN 301 091	Electromagnetic Compatibility and Radio Spectrum Matters (ERM); Road Transport and Traffic Telematics (RTTT); Technical characteristics and test methods for radar equipment operating in the 76 GHz to 77 GHz band
EN 301 357	Electromagnetic compatibility and Radio spectrum Matters (ERM); Analogue cordless wideband audio devices using integral antennas operating in the CEPT recommended 863 MHz to 865 MHz frequency range; Part 2: Harmonised EN under article 3.2 of the R&TTE Directive
EN 301 839	Electromagnetic compatibility and Radio spectrum Matters (ERM); Radio equipment in the frequency range 402 MHz to 405 MHz for Ultra Low Power Active Medical Implants and Accessories; Part 2: Harmonised EN covering essential requirements of article 3.2 of the R&TTE Directive
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 302 195	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; Part 1: Technical characteristics and test methods
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; Part 2: Harmonised EN under article 3.2 of the R&TTE Directive
EN 302 291	Close Range Inductive Data Communication equipment operating at 13.56 MHz; Part 2: Harmonised EN under article 3.2 of the R&TTE Directive
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 302 537	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	60 GHz Multiple-Gigabit WAS/RLAN Systems
ES 200 674	Electromagnetic compatibility and Radio spectrum Matters (ERM); Road Transport and Traffic Telematics (RTTT); Part 1: Technical characteristics and test methods for High Data Rate (HDR) data transmission equipment operating in the 5.8 GHz Industrial, Scientific and Medical (ISM) band

#### EC Decisions

Decision	Title
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
2005/928/EC	Harmonisation of the 169,4-169,8125 MHz frequency band in the Community
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/remark
All Annexes	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 CEPT/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 CEPT/ERC/REC 70-03
	Lithuania		The radio frequencies may be used without an individual authorisation in case the relevant radio frequency or radio frequencies/bands, which may be used without an Individual Authorisation, approved by Order No. 1V-27 of the Director of the Communications Regulatory Authority of 13 March 2003 (Official Gazette Valstybes žinios, Nr.30-1277, 2003). 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
	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	

Frequency band	Country	Implementation	Reason/remark
		national standard system (GOST) and issue of conformity certificate. Only equipment with national mark can be placed on the market in Russia	
	Turkey		The short range and low powered devices under the scope of SRD Ordinance (enter into force 17 March 2007) can be used without any need to get the certificate, use permit and frequency registers on condition that they shall meet the determined conditions and be in accordance with the technical regulations specifications accepted by The Authority
<b>Annex 1 Band A</b> <b>(Non- Specific SRDs)</b> <b>6765-6795 kHz</b>	Georgia	No info	
	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
<b>Annex 1 Band E</b> <b>(Non- Specific SRDs)</b> <b>138.20-138.45 MHz</b>	Belgium	Not implemented	
	Croatia	Not implemented	Under study till 01.03.2011
	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	
	Luxembourg	Implemented	Notification Number: 2005/0347/L)
	Poland	Not implemented	Defence systems
	Russian Federation	Not implemented	
	Slovak Republic	Not implemented	Defence systems
	Slovenia	Not implemented	Not available
	Spain	Not implemented	Not implemented due to lack of demand
	Sweden	Not implemented	
	Switzerland	Not implemented	Exclusive defence systems
	The Netherlands	Not implemented	Exclusive defence systems
	Turkey	Not implemented	Defence systems
	Ukraine	Not implemented	
	United Kingdom	Not implemented	Not implemented due to lack of demand
<b>Annex 1 Band F</b> <b>(Non- Specific SRDs)</b> <b>433.050-434.790 MHz</b>	Finland	Limited implementation	Audio and voice not allowed – Planned 2011
	Georgia	Limited implementation	
	Italy	Limited implementation	Audio applications are limited in the range 433.05-433.575 MHz with 12.5 or 25 kHz channel spacing
	Lithuania	Limited implementation	Audio, voice and video applications are not allowed
	Luxembourg	Limited implementation	No audio and no voice
	Russian Federation	Limited implementation	433.075-434.790 MHz. Possible use of low power stations and devices for processing of bar-codes
<b>Annex 1 Band F1</b> <b>(Non- Specific SRDs)</b> <b>433.050-434.790 MHz</b>	Ukraine	Limited implementation	The maximal transmitter power 10 mW
	Finland	Limited implementation	Voice not allowed – Planned 2011
	Georgia	Limited implementation	
	Italy	Limited implementation	Audio applications are limited in the range 433.05-433.575 MHz with 12.5 or 25 kHz channel spacing
	Lithuania	Limited implementation	Voice applications are not allowed
	Luxembourg	Limited implementation	No audio and no voice
	Russian Federation	Not implemented	
	Ukraine	Limited implementation	The maximal transmitter power 10 mW

### Appendix 3 – National Restrictions

<b>Annex 1 Band F2</b> <b>(Non- Specific SRDs)</b> <b>434.040-434.790 MHz</b>	Finland	Limited implementation	Voice signals not allowed – Planned 2011
	France	Not implemented	
	Georgia	Limited implementation	
	Lithuania	Limited implementation	Voice applications are not allowed
	Luxembourg	Implemented	(Notification Number: 2009/375/L)
	Russian Federation	Not implemented	
	Ukraine	Limited implementation	The maximal transmitter power 10 mW
<b>Annex 1 Band G</b> <b>(Non- Specific SRDs)</b> <b>863-870 MHz</b>	Austria	Not implemented	Planned
	Finland	Limited implementation	Audio, video and voice not allowed - Planned 2011
	Georgia	Not implemented	
	Greece	Limited implementation	to 863-865 MHz
	Lithuania	Limited implementation	Only 863-868 MHz and duty cycle can not be increased to 1%
	Norway	Not implemented	
	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)
	Spain	Limited implemented	to the band 863-868 MHz
	Sweden	Not implemented	
	The Netherlands	Not implemented	Under study
<b>Annex 1 Band G1</b> <b>(Non- Specific SRDs)</b> <b>868.000-868.600 MHz</b>	Georgia	Not implemented	
	Russian Federation	Not implemented	
	Ukraine	Limited implementation	e.i.r.p. ≤25 mW
<b>Annex 1 Band G3</b> <b>(Non- Specific SRDs)</b> <b>869.400-869.650 MHz</b>	Georgia	Not implemented	
	Russian Federation	Not implemented	
	Ukraine	Not implemented	
<b>Annex 1 Band G4</b> <b>(Non- Specific SRDs)</b> <b>869.700-870.000 MHz</b>	Finland	Limited implementation	Only 5mW e.r.p. - Planned 2011
	Georgia	Not implemented	
	Russian Federation	Not implemented	
	Ukraine	Not implemented	
<b>Annex 1 Band H</b> <b>(Non- Specific SRDs)</b> <b>2400.0-2483.5 MHz</b>	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
<b>Annex 1 Band I</b> <b>(Non- Specific SRDs)</b> <b>5725-5875 MHz</b>	Russian Federation	Limited implementation	Duty cycle 0.1% or LBT. Antenna height should not exceed 5 m
<b>Annex 1 Band J</b> <b>(Non- Specific SRDs)</b> <b>24.00-24.25 GHz</b>	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 speedmeters
<b>Annex 1 Band K</b> <b>(Non- Specific SRDs)</b> <b>61.0-61.5 GHz</b>	Croatia	Not implemented	Under study till 01.03.2011
	Georgia	No info	
	Russian Federation	Not implemented	
<b>Annex 1 Band L</b> <b>(Non- Specific SRDs)</b> <b>122-123 GHz</b>	Croatia	Not implemented	Lack of demand
	France	Not implemented	
	Georgia	No info	
	Russian Federation	Not implemented	
	United Kingdom	Not implemented	Implementation planned when Standard is available - 2010

<b>Annex 1 Band M</b> <b>(Non- Specific SRDs)</b> <b>244-246 GHz</b>	Croatia	Not implemented	Lack of demand
	France	Not implemented	
	Georgia	No info	
	Russian Federation	Not implemented	
	United Kingdom	Not implemented	Not implementation due to lack of demand
<b>Annex 1 Band N</b> <b>(Non- Specific SRDs)</b> <b>3.1-4.8 GHz/6-9 GHz</b>	Austria	Limited implementation	According to Commission Decision 2009/343/EC
	Belgium	No info	
	Bosnia and Herzegovina	Not implemented	Committed
	Cyprus	No info	
	Czech Republic	No info	
	France	No info	
	Greece	No info	
	Hungary	Not implemented	Planned
	Iceland	No info	
	Ireland	No info	
	Italy	No info	
	Latvia	Not implemented	Planned
	Lithuania	Not implemented	Under study till end of 2010
	Luxembourg	No info	
	Malta	No info	
	Macedonia (FYROM)	No info	
	Norway	No info	
	Poland	No info	
	Portugal	No info	
	Russian Federation	Limited	<p>In accordance with National restrictions</p> <p><b>For Indoor applications:</b></p> <ol style="list-style-type: none"> <li>1. Prohibited to use outside buildings</li> <li>2. Prohibited to use onboard aircraft while arriving and departure</li> <li>3. Prohibited to use in freight terminals in airports.</li> </ol> <p><i>Power spectral density limits:</i></p> <p>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</p> <p><b>For Outdoor applications:</b></p> <p><i>Power spectral density limits:</i></p> <p>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</p>
	Serbia	No info	
	Slovak Republic	No info	
	Spain	Implemented	Generic UWB regulation as ECC/DEC/(06)04
	Sweden	No info	
	Turkey	No info	
	United Kingdom	No info	

### Appendix 3 – National Restrictions

<b>Annex 2 Band A Tracking, Tracing and Data Acquisition 456.9-457.1 kHz</b>	Bulgaria	Implemented	457 kHz center frequency is allocated 456.9-457.1 kHz band is not allocated
	France	Implemented	National regulation specifies only the carrier frequency 457 kHz
	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
<b>Annex 2 Band B Tracking, Tracing and Data Acquisition 169.4-169.475 MHz</b>	Austria	Not implemented	Planned
	Belgium	No info	
	Bulgaria	Not implemented	The band is used for national security needs
	Croatia	Limited implementation	Individual licence required
	Cyprus	Implemented	Cyprus has implemented Decision 2005/928/EC
	Georgia	Not implemented	
	Greece	Not implemented	
	Norway	Limited	Maximum radiated power = 10 mW
	Poland	Implemented	Implemented 169.4-169.425 MHz for meter reading
	Russian Federation	Not implemented	
	The Netherlands	Implemented	Channel spacing 12.5 kHz
	Ukraine	Not implemented	Under study
<b>Annex 2 Band C Tracking, Tracing and Data Acquisition 169.4-169.475 MHz</b>	Austria	Not implemented	Planned
	Belgium	No info	
	Bulgaria	Not implemented	The band is used for national security needs
	Croatia	Limited implementation	Individual licence required
	Cyprus	Implemented	Cyprus has implemented Decision 2005/928/EC
	Denmark	Not implemented	PMR band
	Georgia	Not implemented	
	Greece	Not implemented	
	Poland	Implemented	Implemented 169.425-169.475 MHz for asset tracking and tracing
	Russian Federation	Not implemented	
	The Netherlands	Implemented	Channel spacing 12.5 kHz
	Ukraine	Not implemented	Under study
<b>Annex 3 Band A Wideband Data Transmission systems 2400.0-2483.5 MHz</b>	France	Limited implementation	Outdoor use limited to 10 mW e.i.r.p. within the band 2454-2483.5 MHz. Military Radiolocation use. Refarming of the 2.4 GHz has been ongoing in recent years to allow current relaxed regulation. Full implementation planned 2012
	Italy		For private use, a general authorisation is required if WAS/RLAN's are used outside own premises. For public use, a general authorisation is required
	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	Limited implementation	<p><b>1. SRD with FHSS modulation</b></p> <p>1.1. Maximum 2.5 mW e.i.r.p.</p> <p>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.</p> <p>1.3. Maximum 100 mW e.i.r.p. Indoor applications</p> <p><b>2. SRD with DSSS and other than FHSS wideband modulation</b></p> <p>2.1. Maximum mean e.i.r.p. density is 2 mW/MHz. Maximum 100 mW e.i.r.p.</p> <p>2.2. Maximum mean e.i.r.p. density is 20 mW/MHz. Maximum 100 mW e.i.r.p. Permitted to use SRD for outdoor applications only for purposes of gathering telemetry information for automated monitoring and resources accounting systems or security systems.</p>



			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
<b>Annex 3 Band B Wideband Data Transmission systems 5150-5350 MHz</b>	Georgia	Limited implementation	
	Italy		For private use, a general authorisation is required if WAS/RLAN's are used outside own premises. For public use, a general authorisation is required
	Russian Federation	Limited implementation	<b>5150-5250 MHz: SRD with DSSS and other than FHSS wideband modulation</b> 1. Maximum mean e.i.r.p. density is 5 mW/MHz. Maximum 200 mW e.i.r.p. Indoor applications. 2. Maximum 100 mW. e.i.r.p. Permitted to use on board aircraft. <b>5250-5350 MHz: Maximum 100 mW e.i.r.p.</b> 1. Permitted to use for local networks of aircraft crew service communications on board aircraft in area of the airport and at all stages of flight. 2. Permitted to use for public wireless access local networks on board aircraft during a flight at the altitude not less than 3000 m
	Ukraine	Limited implementation	e.i.r.p. ≤200 mW at average power stream density 10 mW/MHz in any band in width of 1 MHz and use of the built-in antenna with amplification factor up to 6 dBi and presence of algorithm of radiation power control and a dynamic choice of frequency
<b>Annex 3 Band C Wideband Data Transmission systems 5470-5725 MHz</b>	Italy		For private use, a general authorisation is required if WAS/RLAN's are used outside own premises. For public use, a general authorisation is required
	Russian Federation	Limited implementation	5650-5825 MHz with e.i.r.p. 100 mW. Permitted to use on board aircraft during a flight at the altitude not less than 3000 m
	Turkey	Not implemented	Defence systems
	Ukraine	Limited implementation	5470-5670 MHz; e.i.r.p. ≤1 W at the maximal transmitter power up to 250 mW and average power stream density 50 mW/MHz in any band in width of 1 MHz and use of the antenna with amplification factor 12 dBi
<b>Annex 3 Band D Wideband Data Transmission systems 17.1-17.3 GHz</b>	Belgium	Not implemented	
	Czech Republic	Not implemented	Planned in 2010, General Authorisation under preparation
	Cyprus	Not implemented	
	France	Not implemented	Military Radiolocation use. Equipment/Standard not yet developed
	Georgia	Limited implementation	
	Germany	Not implemented	Equipment/Standard not yet developed
	Hungary	Planned	No equipment and standards are available
	Italy		A general authorisation is required if WAS/RLAN's are used outside own premises
	Norway	Not implemented	
	Russian Federation	Not implemented	
	Slovak Republic	Not implemented	Planned service, currently not in use
	Slovenia	Not implemented	Not available
	Spain	Not implemented	Defence systems
	Turkey	Not implemented	
	Ukraine	Not implemented	
	United Kingdom	Not implemented	No requirement
<b>Annex 3 Band E Wideband Data Transmission systems 57-66 GHz</b>	Austria	Not implemented	
	Czech Republic	Not implemented	Planned in 2010, General Authorisation under preparation
	France	Not implemented	
	Georgia	No info	
	Greece	No info	
	Italy	No info	
	Lithuania	Not implemented	
	Norway	No info	
	Poland	No info	

### Appendix 3 – National Restrictions

	Portugal	No info	
	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
	The Netherlands	Not implemented	Planned
	Turkey	No info	
	Ukraine	No info	
<b>Annex 3 Band F Wideband Data Transmission systems 57-66 GHz</b>	Austria	Not implemented	
	Czech Republic	Not implemented	Planned in 2010, General Authorisation under preparation
	France	Not implemented	
	Georgia	No info	
	Greece	No info	
	Italy	No info	
	Lithuania	Not implemented	
	Norway	No info	
	Poland	No info	
	Portugal	No info	
	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
	The Netherlands	Not implemented	Planned
	Turkey	No info	
	Ukraine	No info	
<b>Annex 4 Band A Railway applications 2446-2454 MHz</b>	Cyprus	Not applicable	No railways
	Georgia	Limited implementation	
	Iceland	Not implemented	Service not applicable to Iceland
	Italy	Not implemented	
	Malta	Not implemented	Service not applicable to Malta
	Norway	Limited implementation	Given center frequencies 2447.0, 2448.5, 2450.0, 2451.5 and 2453.0 MHz
	Russian Federation	Not implemented	
	Slovak Republic	Not implemented	Under study
	Sweden	Limited implementation	License required – Defence systems
	Ukraine	Not implemented	
<b>Annex 4 Band B Railway applications 27.090-27.100 MHz (Center frequency 27.095 MHz)</b>	Bulgaria	Implemented	27.095 MHz center frequency is allocated. 27.090-27.100 MHz band is not allocated
	Cyprus	Not implemented	Service not applicable to Cyprus
	France	Implemented	National regulation specifies only the carrier frequency 27.095 MHz
	Georgia	No info	
	Iceland	Not implemented	Service not applicable to Iceland
	Ireland	Limited implementation	Max mean e.i.r.p. density is limited to 10mW/MHz in any 1 MHz band, as per Commission Decision 2007/90/EC
	Malta	Not implemented	Service not applicable to Malta
	Russian Federation	Not implemented	
	Sweden	Not implemented	27.115 MHz used as provided in EU legislation
	Ukraine	Not implemented	
<b>Annex 4 Band C Railway applications 984-7484 kHz (Centre frequency 4234 kHz)</b>	Austria	Not implemented	Planned
	Belgium	No info	
	Bulgaria	Implemented	4234 kHz center frequency is allocated 984-7484 kHz band is not allocated
	Croatia	Not implemented	Planned 01.03.2011
	Cyprus	Not implemented	Service not applicable to Cyprus
	Czech Republic	Not implemented	Under study
	France	Not implemented	

	Georgia	No info	
	Greece	Not implemented	
	Iceland	Not implemented	Service not applicable to Iceland
	Italy	Not implemented	
	Latvia	Implemented	National regulation specifies only the carrier frequency 4234 kHz. The 984-7484 kHz band is not allocated
	Lithuania	Not implemented	
	Luxembourg	Implemented	(New notification will be done)
	Macedonia (FYROM)	Not implemented	Planned
	Malta	Not implemented	Service not applicable to Malta
	Norway	Not implemented	
	Russian Federation	Not implemented	
	Serbia	Not implemented	According to the Frequency Plan, this part of the spectrum is aimed for the mobile maritime applications (4063-4438 kHz)
	Slovak Republic	Not implemented	Under study
	Spain	Not implemented	Not implemented due to lack of demand
	Sweden	Not implemented	
	The Netherlands	Not implemented	Planned
	Turkey	Under study	Planned 2009
	Ukraine	No info	
<b>Annex 4 Band D1 Railway applications 516-8516 kHz (Centre frequency 4516 kHz)</b>	Belgium	No info	
	Bulgaria	Implemented	4516 kHz center frequency is allocated 516-8516 kHz band is not allocated
	Cyprus	Not implemented	Service not applicable to Cyprus
	Czech Republic	Not implemented	
	France	Not implemented	
	Georgia	No info	
	Greece	Not implemented	
	Hungary	Limited implementation	4515 kHz center frequency is allocated. Planned 2011
	Iceland	Not implemented	Service not applicable to Iceland
	Latvia	Implemented	National regulation specifies only the carrier frequency 4516 kHz. The 516-8516 kHz band is not allocated
	Lithuania	Not implemented	
	Luxembourg	Implemented	(New notification will be done)
	Malta	Not implemented	Service not applicable to Malta
	Norway	Not implemented	4515 kHz is allocated
	Russian Federation	Not implemented	
	Serbia	Not implemented	According to the Frequency Plan, this railway application is aimed for the frequency of 4515 kHz (4515 kHz Euroloop)
	Slovak Republic	Not implemented	Under study
	Spain	Not implemented	Not implemented due to lack of demands
	The Netherlands	Not implemented	Planned
	Ukraine	No info	
<b>Annex 4 Band D2 Railway applications 7.3-23.0 MHz (Centre frequency 13.547 MHz)</b>	Austria	Not implemented	
	Belgium	No info	
	Bulgaria	Implemented	11.1-16.0 MHz is allocated 7.3-23.0 MHz band is not allocated
	Croatia	Not implemented	Planned 01.03.2011
	Cyprus	Not implemented	Service not applicable to Cyprus
	Czech Republic	No info	
	France	Not implemented	
	Georgia	No info	
	Greece	Not implemented	
	Iceland	Not implemented	Service not applicable to Iceland
	Ireland	Not implemented	Planned; Notification in progress
	Italy	Not implemented	
	Latvia	Not implemented	Planned
	Lithuania	Not implemented	

### Appendix 3 – National Restrictions

	Luxembourg	Implemented	(New notification will be done)
	Macedonia (FYROM)	Not implemented	Planned
	Malta	Not implemented	Service not applicable to Malta
	Norway	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
	Slovak Republic	Not implemented	Under study
	Spain	Not implemented	Not implemented due to lack of demands
	Sweden	Not implemented	
	The Netherlands	Not implemented	Planned
	Turkey	Under study	Planned 2009
	Ukraine	No info	
<b>Annex 5 Band A RTTT 5795-5805 MHz</b>	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 levels. Lower level with 2 W e.i.r.p. is implemented
	Malta	Limited implementation	Power limited to 2 W e.i.r.p. as per the lower limit of the Annex
	Norway	Limited implementation	Individual license required
	Russian Federation	Limited implementation	200 mW e.r.p. An authorisation for using radio frequencies or channels should too be obtained in established order
	Switzerland	Limited implementation	Annex has two levels. Lower level with 2 W e.i.r.p. is implemented to protect defence systems
	Ukraine	Not implemented	
	United Kingdom	Only 2 W permitted	2 W only
<b>Annex 5 Band B RTTT 5805-5815 MHz</b>	Croatia	Not implemented	Under study till 01.03.2011
	France	Not implemented	
	Georgia	Limited implementation	
	Ireland	Limited implementation	8W system not implemented
	Liechtenstein	Limited implementation	Annex has two 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
	Ukraine	Not implemented	
<b>Annex 5 Band C RTTT 63-64 GHz</b>	United Kingdom	Limited implementation	2 W only
	Croatia	Not implemented	Under study till 01.03.2011
	Estonia	Power limited to 2 W e.i.r.p	
	Georgia	No info	
	Germany	Not implemented	Equipment/standards not yet developed
	France	Not implemented	Equipment/standards not yet developed
	Liechtenstein	Not implemented	No standard available
	Poland	Not implemented	Equipment/standard not yet developed
	Russian Federation	Not implemented	
	Sweden	Not implemented	Equipment/standard not available
	Switzerland	Not implemented	No standard available
	Turkey	Under study	Planned 2009
	Ukraine	Not implemented	Under study
	United Kingdom	Not implemented	Implementation planned – Waiting for power levels from ITS ECC/DEC/(09)01 to be included in ERC/Rec 70-03

<b>Annex 5 Band D RTTT 76-77 GHz</b>	Georgia	No info	
	Russian Federation	Not implemented	
<b>Annex 5 Band E RTTT 21.65-26.65 GHz</b>	Austria	Not implemented	
	Georgia	No info	
	Hungary	Not implemented	Planned 2011
	Ukraine	No info	
<b>Annex 5 Band F RTTT 77-81 GHz</b>	Austria	Not implemented	
	Croatia	Not implemented	Under study till 01.03.2011
	Georgia	No info	
	Hungary	Not implemented	Planned 2011
	Ukraine	No info	
<b>Annex 5 Band G1 RTTT 24.050-24.075 GHz</b>	Austria	Not implemented	Due to implementation of Annex 1J
	Belgium	No info	
	Bosnia and Herzegovina	Not implemented	Committed
	Bulgaria	Not implemented	
	Croatia	Not implemented	Under study till 01.03.2011
	Cyprus	No info	
	Czech Republic	No info	
	Estonia	Not implemented	Under study
	France	No info	
	Greece	No info	
	Hungary	Not implemented	Planned
	Iceland	No info	
	Ireland	No info	
	Italy	No info	
	Lithuania	No info	
	Luxembourg	No info	
	Malta	No info	
	Macedonia (FYROM)	No info	
	Norway	No info	
	Poland	No info	
	Portugal	No info	
	Romania	Not implemented	Under study
	Russian Federation	No info	
	Serbia	No info	
	Slovak Republic	No info	
	Spain	Not implemented	
	Sweden	No info	
	Turkey	No info	
	United Kingdom	Not implemented	Planned (2010)
<b>Annex 5 Band G2 RTTT 24.075-24.150 GHz</b>	Austria	Not implemented	Due to implementation of Annex 1J
	Belgium	No info	
	Bosnia and Herzegovina	Not implemented	Committed
	Bulgaria	Not implemented	
	Croatia	Not implemented	Under study till 01.03.2011
	Cyprus	No info	
	Czech Republic	No info	
	Estonia	Not implemented	Under study
	France	No info	
	Greece	No info	
	Hungary	Not implemented	Planned
	Iceland	No info	
	Ireland	No info	

### Appendix 3 – National Restrictions

	Italy	No info	
	Lithuania	No info	
	Luxembourg	No info	
	Malta	No info	
	Macedonia (FYROM)	No info	
	Norway	No info	
	Poland	No info	
	Portugal	No info	
	Romania	Not implemented	Under study
	Russian Federation	No info	
	Serbia	No info	
	Slovak Republic	No info	
	Spain	Not implemented	
	Sweden	No info	
	Turkey	No info	
	United Kingdom	Not implemented	Planned (2010)
<b>Annex 5 Band G3 RTTT 24.150-24.250 GHz</b>	Austria	Not implemented	Due to implementation of Annex 1J
	Belgium	No info	
	Bosnia and Herzegovina	Not implemented	Committed
	Bulgaria	Not implemented	
	Croatia	Not implemented	Under study till 01.03.2011
	Cyprus	No info	
	Czech Republic	No info	
	Estonia	Not implemented	Under study
	France	No info	
	Greece	No info	
	Hungary	Not implemented	Planned
	Iceland	No info	
	Ireland	No info	
	Italy	No info	
	Lithuania	No info	
	Luxembourg	No info	
	Malta	No info	
	Macedonia (FYROM)	No info	
	Norway	No info	
	Poland	No info	
	Portugal	No info	
	Romania	Not implemented	Under study
	Russian Federation	No info	
	Serbia	No info	
	Slovak Republic	No info	
	Spain	Not implemented	
	Sweden	No info	
	Turkey	No info	
	United Kingdom	Not implemented	Planned (2010)
<b>Annex 6 Band A Radiodetermination applications 2400.0-2483.5 MHz</b>	France	Limited implementation	Military Radiolocation use. Refarming of the 2.4 GHz band has been ongoing in recent years to allow current relaxed regulation. Full implementation planned 2012
	Georgia	Limited implementation	
	Russian Federation	Not implemented	
	Ukraine	Limited implementation	e.i.r.p. <100 mW
<b>Annex 6 Band B Radiodetermination applications 9200-9500 MHz</b>	Finland	Not implemented	
	France	Not implemented	
	Georgia	Limited implementation	
	Italy	Not implemented	
	Russian Federation	Not implemented	
	Spain	Not implemented	Defence systems
	Sweden	Not implemented	
	Ukraine	Not implemented	Under study
	United Kingdom	Limited implementation	May be used for Radar Level Gauges only

<b>Annex 6 Band C</b> <b>Radiodetermination applications</b> <b>9500-9975 MHz</b>	France	Limited implementation	Limited to 9.88-9.92 with max e.i.r.p. 50 mW
	Georgia	Limited implementation	
	Germany	Not implemented	Defence systems
	Russian Federation	Not implemented	
	Slovak Republic	Not implemented	Defence systems
	Spain	Not implemented	Defence systems
	Sweden	Not implemented	
	Ukraine	Not implemented	Under study
	United Kingdom	Limited implementation	May be used for Radar Level Gauges only
<b>Annex 6 Band D</b> <b>Radiodetermination applications</b> <b>10.5-10.6 GHz</b>	Austria	Not implemented	Fixed Service
	Czech Republic	Not implemented	Other service in the band
	Estonia	Not implemented	FWA
	Finland	Not implemented	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	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	Not implemented	Under study
	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 10.577-10.597 GHz. May be used for Radar Level Gauges
	Ukraine	Limited implementation	10.51-10.54 GHz
<b>Annex 6 Band E</b> <b>Radiodetermination applications</b> <b>13.4-14.0 GHz</b>	France	Not implemented	
	Georgia	Limited implementation	
	Russian Federation	Not implemented	
	Spain	Not implemented	Not implemented due to lack of demand
	Sweden	Not implemented	
	Ukraine	Not implemented	Under study
<b>Annex 6 Band F</b> <b>Radiodetermination applications</b> <b>24.05-24.25 GHz</b>	France	Limited implementation	No restriction for fixed applications. Power limited otherwise to 0.1 mW e.i.r.p. in frequency band 24.10 - 24.15 GHz. Alternatively for FMCW modulation, the following conditions are also allowed: power limited to 20 mW (+13 dBm) mean e.i.r.p. and 50 mW (+17 dBm) peak e.i.r.p. with a minimum frequency sweep speed of 5 MHz per millisecond. Military Radiolocation use. Operation by police forces of Radar Speed Meters
	Georgia	Limited implementation	
	Russian Federation	Limited implementation	Vehicle radars: Maximum 100 mW e.i.r.p. 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 speedmeters devices operating in 24.05-24.15 GHz must employ a minimum sweep rate

### Appendix 3 – National Restrictions

<b>Annex 6 Band G</b> <b>Radiodetermination applications</b> <b>4.5-7.0 GHz</b>	Austria	Not implemented	Under study
	Georgia	Not implemented	
	Greece	Not implemented	
	Italy	Not implemented	
	Lithuania	Not implemented	
	Macedonia (FYROM)	Not implemented	Planned
	Malta	Not implemented	Malta implemented the provision of 2006/771/EC, as amended
	Norway	Not implemented	
	Russian Federation	Not implemented	
	Serbia	Available in the range: 5.725-5.875 GHz 5.15-5.25 GHz / 5.250-5.255 GHz and 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, 5.250-5.255 GHz and 5.255-5.350 GHz is available for the WAS and RLANS applications
	Spain	Not implemented	Defence systems
	The Netherlands	Not implemented	Planned
	Turkey	Under study	Planned 2009
	Ukraine	Not implemented	Under study
<b>Annex 6 Band H</b> <b>Radiodetermination applications</b> <b>8.5-10.6 GHz</b>	Austria	Not implemented	Under study
	Croatia	Not implemented	Lack of demand
	Georgia	Not implemented	
	Greece	Not implemented	
	Italy	Not implemented	
	Lithuania	Not implemented	
	Macedonia (FYROM)	Not implemented	Planned
	Malta	Not implemented	Malta implemented the provision of 2006/771/EC, as amended
	Norway	Not implemented	
	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
	Spain	Not implemented	Not implemented due to lack of demand
	The Netherlands	Not implemented	Planned
	Turkey	Under study	Planned 2009
	Ukraine	Not implemented	Under study
<b>Annex 6 Band I</b> <b>Radiodetermination applications</b> <b>24.05-27.0 GHz</b>	Austria	Not implemented	Under study
	Georgia	Not implemented	
	Greece	Not implemented	
	Italy	Not implemented	
	Lithuania	Not implemented	
	Macedonia (FYROM)	Not implemented	Planned
	Malta	Not implemented	Malta implemented the provision of 2006/771/EC, as amended
	Norway	Not implemented	
	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
	Spain	Not implemented	Not implemented due to lack of demand
	The Netherlands	Not implemented	Planned
	Turkey	Under study	Planned 2009
	Ukraine	Limited implementation	24.05-24.25 GHz
<b>Annex 6 Band J</b> <b>Radiodetermination applications</b> <b>57-64 GHz</b>	Austria	Not implemented	Under study
	Croatia	Not implemented	Lack of demand
	Georgia	No info	
	Greece	Not implemented	
	Italy	Not implemented	
	Lithuania	Not implemented	
	Macedonia (FYROM)	Not implemented	Planned
	Malta	Not implemented	Malta implemented the provision of 2006/771/EC, as amended
	Norway	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
	Spain	Not implemented	Not implemented due to lack of demand



<b>Annex 6 Band K Radiodetermination applications 75-85 GHz</b>	The Netherlands	Not implemented	Planned
	Turkey	Not implemented	Planned 2009
	Ukraine	Not implemented	Under study
	Austria	Not implemented	Under study
	Croatia	Not implemented	Lack of demand
	Georgia	No info	
	Greece	Not implemented	
	Italy	Not implemented	
	Lithuania	Not implemented	
	Macedonia (FYROM)	Not implemented	Planned
	Malta	Not implemented	Malta implemented the provision of 2006/771/EC, as amended
	Norway	Not implemented	
	Russian Federation	Not implemented	
	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)
	Spain	Not implemented	Not implemented due to lack of demand
	The Netherlands	Not implemented	Planned
	Turkey	Under study	Planned 2009
	Ukraine	Limited implementation	In the band 76-77 GHz average e.i.r.p. ≤23.5 dBm
<b>Annex 6 Band L Radiodetermination applications 17.1-17.3 GHz</b>	Austria	Not implemented	
	Belgium	No info	
	Croatia	Not implemented	Lack of demand
	Czech Republic	Not implemented	Planned in 2010, General Authorisation under preparation
	France	Not implemented	Military use
	Georgia	Not implemented	
	Greece	Not implemented	
	Italy	Not implemented	Under study
	Lithuania	Not implemented	
	Macedonia (FYROM)	Not implemented	Planned
	Malta	Not implemented	Malta implemented the provision of 2006/771/EC, as amended
	Norway	No info	
	Poland	Not implemented	
	Portugal	Not implemented	Under study
	Russian Federation	Not implemented	
	Serbia	Not implemented	According to the Frequency Plan this part of the spectrum is aimed for WLL and RLNs
	The Netherlands	Not implemented	Planned
	The Netherlands	Not implemented	Planned
	Ukraine	Not implemented	
<b>Annex 6 Band M Radiodetermination applications 30 MHz-12.4 GHz</b>	Austria	No info	
	Belgium	No info	
	Bosnia and Herzegovina	Not implemented	Committed
	Croatia	Not implemented	Lack of demand
	Cyprus	No info	
	Czech Republic	No info	
	France	No info	
	Greece	No info	
	Hungary	Not implemented	
	Iceland	No info	Planned
	Ireland	No info	
	Italy	No info	
	Lithuania	Not implemented	Under study till end of 2011
	Luxembourg	No info	
	Malta	No info	
	Macedonia (FYROM)	No info	
	Montenegro	Not implemented	Under study
	Norway	No info	
	Poland	No info	
	Portugal	No info	
	Romania	Not implemented	Under study
	Russian Federation	No info	
	Serbia	No info	

### Appendix 3 – National Restrictions

	Slovak Republic	No info	
	Spain	Not implemented	
	Sweden	No info	
	The Netherlands	Not implemented	Planned (Pending)
	Turkey	No info	
	United Kingdom	Not implemented	Planned for 2011
<b>Annex 6 Band N</b> <b>Radiodetermination applications</b> <b>2.2 - 8.0 GHz</b>	Austria	Limited implementation	According to Commission Decision 2009/343/EC
	Belgium	No info	
	Bulgaria	Implemented	Old version of ECC/DEC/(07)01 is implemented
	Bosnia and Herzegovina	Not implemented	Committed
	Croatia	Not implemented	Lack of demand
	Cyprus	No info	
	Czech Republic	No info	
	France	No info	
	Greece	No info	
	Hungary	Not implemented	Planned
	Iceland	No info	
	Ireland	No info	
	Italy	No info	
	Lithuania	Limited implementation	only parameters set in 2009/343/EC are allowed
	Luxembourg	No info	
	Malta	No info	
	Macedonia (FYROM)	No info	
	Norway	No info	
	Poland	No info	
	Portugal	No info	
	Russian Federation	No info	
	Serbia	No info	
	Slovak Republic	No info	
	Spain	Not implemented	
	Sweden	No info	
	Turkey	No info	
	United Kingdom	Not implemented	Planned for 2011
<b>Annex 7 Band A</b> <b>Alarms</b> <b>868.600-868.700 MHz</b>	France	Limited implementation	Duty cycle limited to 0.1%
	Georgia	No info	
	Russian Federation	Not implemented	
	Ukraine	Limited implementation	The maximal transmitter power 10 mW
<b>Annex 7 Band B</b> <b>Alarms</b> <b>869.250-869.300 MHz</b>	Georgia	No info	
	Russian Federation	Not implemented	
	Ukraine	No info	
<b>Annex 7 Band C</b> <b>Alarms</b> <b>869.650-869.700 MHz</b>	Georgia	No info	
	Russian Federation	Not implemented	
	Ukraine	Not implemented	Under study
<b>Annex 7 Band D</b> <b>Alarms</b> <b>869.200-869.250 MHz</b>	Georgia	No info	
	Russian Federation	Not implemented	
	Ukraine	Limited implementation	The maximal transmitter power 10 mW
<b>Annex 7 Band E</b> <b>Alarms</b> <b>869.300-869.400 MHz</b> <i>(Technical parameters have been changed)</i>	France	Not implemented	
	Georgia	No info	
	Greece	Not implemented	
	Macedonia (FYROM)	Not implemented	Planned
	Russian Federation	Not implemented	
	Ukraine	No info	

<b>Annex 7 Band F Alarms</b> <b>169.4750-169.4875 MHz</b>	Austria	Not implemented	Planned
	Bulgaria	Not implemented	The band is used for national security needs
	Cyprus	Implemented	Cyprus has implemented Decision 2005/928/EC
	Denmark	Not implemented	PMR band
	Georgia	Not implemented	
	Greece	Not implemented	
	Norway	Limited implementation	Restriction 169.481250 MHz. Given center frequency
	Russian Federation	Not implemented	
	Ukraine	Not implemented	
<b>Annex 7 Band G Alarms</b> <b>169.5875-169.6000 MHz</b>	Austria	Not implemented	Planned
	Bulgaria	Not implemented	The band is used for national security needs
	Cyprus	Implemented	Cyprus has implemented Decision 2005/928/EC
	Denmark	Not implemented	PMR band
	Georgia	Not implemented	
	Greece	Not implemented	
	Norway	Limited implementation	Restriction 169.593750 MHz. Given center frequency
	Russian Federation	Not implemented	
	Ukraine	Not implemented	
<b>Annex 8 Band A Model Control</b> <b>26.995, 27.045, 27.095, 27.145, 27.195 MHz</b>	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
<b>Annex 8 Band B Model Control</b> <b>34.995-35.225 MHz</b>	France	Limited implementation	Limited to 34.995-35.015 MHz. Dedicated networks for Ministry of transport.
	Georgia	No info	
	Germany	Limited to 35.005-35.205 MHz	Emergency services
	Norway	Limited implementation	Given center frequencies (35.000-35.010-35.020 MHz etc.)
	Russian Federation	Not implemented	
	Spain	Limited implementation	to 35.030-35.200 MHz
<b>Annex 9 Band A1 Inductive applications</b> <b>9 – 90 kHz</b>	Ukraine	Limited implementation	The maximal transmitter power 10 mW
	Austria	Not implemented	
	Belgium	No info	
	Bosnia and Herzegovina	Not implemented	Committed
	Bulgaria	Partly implemented	Implemented in the band 9-59.75 kHz. The bands 59.75-60.25 kHz and 70-90 kHz are allowed with a maximum magnetic field strength of 42 dBµA/m at 10 m. The band 60.25-70.0 kHz is allowed with a maximum magnetic field strength of 69 dBµA/m at 10 m
	Cyprus	No info	
	Czech Republic	Planned in 2010	
	Denmark	Limited implementation	Implemented according to the EC SRD Decision 2006/771/EC
	France	Limited implementation	Limited to +42 dBµA/m in the frequency band 70-90 kHz
	Georgia	Not implemented	
	Greece	No info	
	Ireland	No info	
	Italy	No info	
	Latvia	Limited implementation	9-59.750 kHz maximum field strength 72 dBµA/m at 10m; 59.750-60.250 kHz maximum field strength 42 dBµA/m at 10m; 60.250-70 kHz maximum field strength 69 dBµA/m at 10m; 70-119 kHz maximum field strength 42 dBµA/m at 10m
	Lithuania	No info	
	Luxembourg	Implemented	New notification will be done
	Malta	Not implemented	Malta implemented the provision of 2006/771/EC, as amended
	Macedonia (FYROM)	No info	
	Norway	No info	
	Poland	No info	
	Portugal	No info	
	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

### Appendix 3 – National Restrictions

			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	No info	
	Slovak Republic	No info	
	Spain	Limited implementation	to 9-70 kHz
	The Netherlands	Not implemented	Planned (Pending)
	Turkey	No info	
	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
	United Kingdom	Limited implementation	Power restriction in 59.75-90.00kHz. Planned amendment to full implementation 2010
<b>Annex 9 Band A2</b> <b>Inductive applications</b> <b>90-119 kHz</b>	Austria	Limited to 42 dBμA/m at 10m	According to Subclass 40 and Commission Decision 2009/381/EC
	Belgium	No info	
	Bosnia and Herzegovina	Not implemented	Committed
	Cyprus	No info	
	Denmark	Limited implementation	Implemented according to the EC SRD Decision 2006/771/EC
	Georgia	Limited implementation	
	Greece	No info	
	Ireland	No info	
	Italy	No info	
	Latvia	Partly implemented	
	Lithuania	No info	
	Luxembourg	Implemented	(New notification will be done)
	Malta	Not implemented	Malta implemented the provision of 2006/771/EC, as amended
	Macedonia (FYROM)	No info	
	Norway	No info	
	Poland	No info	
	Portugal	No info	
	Serbia	No info	
	Slovak Republic	No info	
	The Netherlands	Not implemented	Planned (Pending)
	Turkey	No info	
	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
	United Kingdom	No info	
<b>Annex 9 Band A3</b> <b>Inductive applications</b> <b>119-135 kHz</b>	Georgia	Not implemented	
	The Netherlands	Not implemented	Planned (Pending)
	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
<b>Annex 9 Band B</b> <b>Inductive applications</b> <b>135-140 kHz</b>	Georgia	Not implemented	
	Greece	Not implemented	
	Russian Federation	Not implemented	
	The Netherlands	Not implemented	Planned (Pending)
	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
<b>Annex 9 Band C</b> <b>Inductive applications</b> <b>140.0-148.5 kHz</b>	Georgia	Not implemented	
	Greece	Not implemented	
	Russian Federation	Not implemented	
	The Netherlands	Not implemented	Planned (Pending)
	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
<b>Annex 9 Band D</b> <b>Inductive applications</b> <b>6765-6795 kHz</b>	Georgia	Not implemented	
	Ukraine	No info	
<b>Annex 9 Band E</b> <b>Inductive applications</b> <b>7400-8800 kHz</b>	Spain	No restriction	Frequency band 7350-8800 kHz
<b>Annex 9 Band F1</b> <b>Inductive applications</b> <b>13.553-13.567 MHz</b>	Georgia	Not implemented	
	Norway	Not implemented	
	Ukraine	Limited implementation	The maximal strength of magnetic field on the distance of 10 m from a construction where the radiator is placed is 42 dBµA/m
<b>Annex 9 Band G</b> <b>Inductive applications</b> <b>26.957-27.283 MHz</b>	Georgia	Not implemented	
	Ukraine	Limited implementation	The maximal strength of magnetic field on the distance of 10 m from a construction where the radiator is placed is 42 dBµA/m
<b>Annex 9 Band H</b> <b>Inductive applications</b> <b>10.200-11.000 MHz</b>	Austria	Not implemented	Planned
	Georgia	Not implemented	
	Norway	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
<b>Annex 9 Band K</b> <b>Inductive applications</b> <b>3155-3400 kHz</b>	Georgia	Not implemented	
	Norway	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
<b>Annex 9 Band L1</b> <b>Inductive applications</b> <b>148.5 kHz-5 MHz</b>	Georgia	Not implemented	
	Greece	Not implemented	
	Poland	Limited implementation	Implemented 148.5 kHz - 1.6. MHz
	Russian Federation	Not implemented	
	Ukraine	Not implemented	Under study
<b>Annex 9 Band L2</b> <b>Inductive applications</b> <b>5-30 MHz</b>	Georgia	Not implemented	
	Greece	Not implemented	
	Poland	Not implemented	
	Russian Federation	No info	
	Ukraine	No info	
<b>Annex 9 Band L3</b> <b>Inductive applications</b> <b>400-600 kHz</b>	Georgia	Not implemented	
	Greece	Not implemented	
	Norway	Not implemented	
	Poland	Not implemented	
	Russian Federation	Not implemented	
	Ukraine	Not implemented	Under study
<b>Annex 10 Band A</b> <b>Radio Microphone applications including aids for the hearing impaired</b> <b>29.7-47.0 MHz</b>	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

### Appendix 3 – National Restrictions

	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 31.4-39.6 MHz
	Lithuania	Limited implementation	only 30.01-30.3 MHz, 30.5-32.15 MHz, and 32.45-37.5 MHz are allowed
	Luxembourg	Limited implementation	excluding the use of the band 34.995-35.225 MHz
	Malta	Limited implementation	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
	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	UK is one of many countries having a restriction here. Many could be removed if licensing was specified in the Annex
<b>Annex 10 Band B Radio Microphone applications including aids for the hearing impaired 173.965-174.015 MHz</b>	Belgium	Not implemented	
	Bulgaria	Limited implementation	Limited to 174.000-174.015 MHz
	Denmark	Not implemented	PMR band
	Finland	Limited implementation	Individual license require - Regional restrictions
	France	Not implemented	Governmental band
	Georgia	Not implemented	
	Greece	Not implemented	
	Liechtenstein	Not implemented	Occupied with mobile services
	Norway	Limited implementation	to 173.8125, 173.8375, 173.8625, 173.8875, 173.9125, 173.9375, 173.9625, 173.9875 MHz
	Poland	Not implemented	Government band
	Russian Federation	Not implemented	
	Spain	Not implemented	Not implemented due to lack of demand
	Sweden	Not implemented	Land Mobile
	Switzerland	Not implemented	Closely occupied with mobile services
	Ukraine	Not implemented	

<b>Annex 10 Band C</b> <b>Radio Microphone applications including aids for the hearing impaired 863-865 MHz</b>	Croatia	Limited implementation	Individual license required
	Georgia	Not implemented	
	Ireland	Implemented	Channel spacing of 200 kHz
	Russian Federation	Not implemented	
	Ukraine	Limited implementation	The maximal transmitter power is 10 mW
<b>Annex 10 Band D</b> <b>Radio Microphone applications including aids for the hearing impaired 174-216 MHz</b>	Denmark	Limited implementation	Tuning range
	Finland	Limited implementation	Regional restrictions
	France	Limited implementation	175.5-178.5 and 183.5-186.5 MHz 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, 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
<b>Annex 10 Band E1</b> <b>Radio Microphone applications including aids for the hearing impaired 470-786 MHz</b>			
<b>Annex 10 Band E2</b> <b>Radio Microphone applications including aids for the hearing impaired 786-789 MHz</b>			
<b>Annex 10 Band E3</b> <b>Radio Microphone applications including aids for the hearing impaired 823-826 MHz</b>			
<b>Annex 10 Band E4</b> <b>Radio Microphone applications including aids for the hearing impaired 826-832 MHz</b>			
<b>Annex 10 Band F</b> <b>Radio Microphone applications including aids for the hearing impaired 1785-1795 MHz</b>	Austria	Limited implementation	to 1785.7-1795 MHz
	Georgia	Not implemented	
	Italy	Not implemented	Military application
	Ireland	Not implemented	All island WAPECS licence in operation
	Lithuania	Not implemented	
	Malta	Not implemented	Planned
	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	Band auctioned in Northern Ireland

### Appendix 3 – National Restrictions

<b>Annex 10 Band G</b> <b>Radio Microphone applications including aids for the hearing impaired 1795-1800 MHz</b>	Austria	Limited implementation	to the band 1795 - 1799.4 MHz
	Croatia	Limited implementation	Individual licence required
	Czech Republic	Limited implementation	Individual license required
	Finland	Limited implementation	Individual license required
	Georgia	Not implemented	
	Italy	Not implemented	Military application
	Ireland	Not implemented	All island WAPECS licence in operation
	Lithuania	Not implemented	
	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	Limited implementation	Band auctioned in Northern Ireland. Licence required
<b>Annex 10 Band H1</b> <b>Radio Microphone applications including aids for the hearing impaired 169.4000-169.4750 MHz</b>	Austria	Not implemented	Planned
	Bulgaria	Not implemented	The band is used for national security needs
	Cyprus	Implemented	Cyprus has implemented Decision 2005/928/EC
	Denmark	Not implemented	PMR band
	Georgia	Not implemented	
	Germany	Not implemented	Planned
	Greece	Not implemented	
	Lithuania	Not implemented	Only exclusive spectrum (169.4875-169.5875 MHz) is allowed
	Russian Federation	Not implemented	
	Ukraine	Not implemented	
<b>Annex 10 Band H2</b> <b>Radio Microphone applications including aids for the hearing impaired 169.4875-169.5875 MHz</b>	Austria	Not implemented	Planned
	Bulgaria	Not implemented	The band is used for national security needs
	Cyprus	Implemented	Cyprus has implemented Decision 2005/928/EC
	Denmark	Not implemented	PMR band
	Georgia	Not implemented	
	Greece	Not implemented	
	Ireland	Not implemented	Planned; Notification in progress
	Russian Federation	Not implemented	
	Ukraine	Not implemented	
<b>Annex 10 Band I</b> <b>Radio Microphone applications including aids for the hearing impaired 169.4-174.0 MHz</b>	Austria	Not implemented	Implementation depends on market demand
	Belgium	Not implemented	
	Bulgaria	Not implemented	The band is used for national security needs
	Croatia	Not implemented	Lack of demand
	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	
	Germany	No info	
	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
	Lithuania	Not implemented	
	Luxembourg	Implemented	(Notification Number: 2009/0375/L)
	Malta	Not implemented	
	Norway	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 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
	Turkey	Not implemented	169.8-174.0 MHz band is used by PMR/PAMR
	Ukraine	Not implemented	
	United Kingdom	Limited implementation	Implemented in 173.325-174.000 MHz and at 2 mW only
<b>Annex 11 Band A RFID 2446-2454 MHz</b>	France	Limited implementation	Power limited to 500 mW e.i.r.p. Military Radiolocation and Fixed Service use
	Italy	Not implemented	
	Russian Federation	Not implemented	
	Sweden	Limited implementation	Limited to 100 mW e.i.r.p. Defence systems
	Ukraine	Not implemented	Under study
<b>Annex 11 Band B1 RFID 865.0-865.6 MHz</b>	Georgia	No info	
	Russian Federation	Not implemented	
	Ukraine	Not implemented	Under study
<b>Annex 11 Band B2 RFID 865.6-867.6 MHz</b>	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	
	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
<b>Annex 11 Band B3 RFID 867.6-868.0 MHz</b>	Georgia	No info	
	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
<b>Annex 12 Band A Active Medical Implants and their associated peripherals 402-405 MHz</b>	Georgia	No info	
	Romania	Limited implementation	The operation of these implants is possible in Romania only in the 402-403 MHz and 404-405 MHz frequency sub-bands. In the 403-404 MHz sub-band there are high power PMR applications. These applications cannot be migrated in other bands because of the current lack of available spectrum in the UHF bands designated for the narrow band PMR/PAMR systems
	Russian Federation	Not implemented	
	Ukraine	Limited implementation	The maximal transmitter power is 25 mW
<b>Annex 12 Band A1 Active Medical Implants and their associated peripherals 401-402 MHz</b>	Austria	Not implemented	Under study
	Belgium	No info	
	Czech Republic	Not implemented	Under study – other service in the band
	Georgia	No info	
	Greece	Not implemented	About to be implemented (info of June 2008)
	Hungary	Not implemented	Planned 2011
	Italy	Not implemented	Military application
	Norway	Not implemented	
	Russian Federation	Not implemented	
	Serbia	Not implemented	In the Frequency Plan in this part of the spectrum there are not available frequency slots for this applications
	Spain	Not implemented	Not implemented due to lack of demand
	The Netherlands	Not implemented	Under study
	Turkey	Under study	Planned 2009

### Appendix 3 – National Restrictions

<b>Annex 12 Band A2</b> <b>Active Medical Implants and their associated peripherals</b> <b>405-406 MHz</b>	Austria	Not implemented	Under study
	Belgium	No info	
	Czech Republic	Not implemented	Under study – other service in the band
	Georgia	No info	
	Greece	Not implemented	About to be implemented (info of June 2008)
	Italy	Not implemented	Military application
	Norway	Not implemented	
	Romania	Not implemented	The frequency band is for military use
	Russian Federation	Not implemented	
	Serbia	Not implemented	In the Frequency Plan in this part of the spectrum there are not available frequency slots for this applications
	Spain	Not implemented	Not implemented due to lack of demand
	The Netherlands	Not implemented	Under study
	Turkey	Under study	Planned 2009
<b>Annex 12 Band B</b> <b>Active Medical Implants and their associated peripherals</b> <b>9-315 kHz</b>	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
<b>Annex 12 Band C</b> <b>Active Medical Implants and their associated peripherals</b> <b>315-600 kHz</b>	Georgia	No info	
	Italy	Not implemented	
	Norway	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
<b>Annex 12 Band D</b> <b>Active Medical Implants and their associated peripherals</b> <b>30.0-37.5 MHz</b>	Czech Republic	No info	
	Georgia	No info	
	Italy	Not implemented	Military application
	Liechtenstein	Not implemented	Planned 1.09.2010
	Norway	Not implemented	
	Russian Federation	Not implemented	
	Serbia	Not implemented	In the Frequency Plan in this part of the spectrum there are not available frequency slots for this applications
	Slovak Republic	Limited to 33 – 37.5 MHz	Defence systems and other services in the rest of the band
	Spain	Not implemented	
	Switzerland	Not implemented	Planned 1.09.2010
	Ukraine	Limited implementation	The maximal transmitter power is 1 mW
<b>Annex 12 Band E</b> <b>Active Medical Implants and their associated peripherals</b> <b>12.5-20.0 MHz</b>	Belgium	No info	
	Georgia	No info	
	Greece	Not implemented	
	Italy	Not implemented	
	Lithuania	Not implemented	
	Norway	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
	Slovak Republic	Not implemented	Under study
	Spain	Not implemented	
	Ukraine	Not implemented	Under study
<b>Annex 12 Band F</b> <b>Active Medical Implants and their associated peripherals</b> <b>2483.5-2500 MHz</b>			

<b>Annex 13 Band B</b> <b>Wireless Audio Applications</b> <b>864.8-865 MHz</b>	Russian Federation	Not implemented	
	Ukraine	Limited implementation	e.i.r.p. $\leq 10 \text{ mB}_T$
<b>Annex 13 Band C</b> <b>Wireless Audio Applications</b> <b>1795-1800 MHz</b>	Austria	Not implemented	
	Croatia	Not implemented	Lack of demand
	Finland	Limited implementation	Individual license required
	France	Not implemented	
	Georgia	Limited implementation	
	Ireland	Not implemented	All island WAPECS licence in operation
	Italy	Not implemented	Military application
	Russian Federation	Not implemented	
	Slovak Republic	Not implemented	Fixed service
	Spain	Not implemented	
	The Netherlands	Not implemented	
	Turkey	Planned	Implemented after SRD Ordinance is revised
	Ukraine	Not implemented	Under study
	United Kingdom	Limited implementation	Band auctioned in Northern Ireland. Licence required
<b>Annex 13 Band D</b> <b>Wireless Audio Applications</b> <b>87.5-108.0 MHz</b>	Greece	Not implemented	About to be implemented (info of June 2008)
	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
	Turkey	Planned	Implemented after SRD Ordinance is revised
	Ukraine	Limited implementation	87.5-92 MHz; 100-108 MHz; (e.i.r.p. $\leq 50 \cdot 10^{-9} \text{ W}$ ); 89.9-90.2 MHz (the maximal transmitter power is 10 mW)

# **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
CB	Citizens' Band (27 MHz)
DAA	Detect and Avoid
DFS	Dynamic Frequency Selection
EAS	Electronic Article Surveillance
ECC	Electronic Communications Committee
EFIS	ERO Frequency Information System
ENG/OB	Electronic News Gathering / Outside Broadcasting
ERC	European Radiocommunications Committee
ERM	Electromagnetic Compatibility and Radio Spectrum Matters
ERO	European Radiocommunications Office
ETSI	European Telecommunications Standard Institute
FHSS	Frequency Hopping Spread Spectrum
FCMW	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
LAN	Local Area Network
LBT	Listen Before Talk
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 1999 on 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
TETRA	Terrestrial Trunked Radio
TLPR	Tank Level Probing Radar
ULP-AID	Ultra Low Power Animal Implant Devices
ULP-AIP	Ultra Low Power Animal Implantable
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 the following table.<sup>1</sup>

These limits are advisory with a view to facilitating sharing between systems in the same frequency band

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

## Document History

	Text	Page	Edition
	Text of the ERC Recommendation changed to align with the R&TTE Directive	4	October 2010
Rearranged text of Recommendation 18 October 2005			
Annex 1	Non-specific Short Range Devices	6	January 2010
Annex 2	Tracking, Tracing and Data Acquisition	8	June 2009
Annex 3	Wideband Data Transmission systems	9	June 2010
Annex 4	Railway applications	10	June 2009
Annex 5	Road Transport & Traffic Telematics (RTTT)	11	January 2010
Annex 6	Radiodetermination applications	13	February 2009
Annex 7	Alarms	14	October 2006
Annex 8	Model Control	15	May 2003
Annex 9	Inductive applications	16	October 2009
Annex 10	Radio microphones and Assistive Listening Devices	18	February 2011
Annex 11	Radio frequency identification applications	20	January 2010
Annex 12	Active Medical Implants and their associated peripherals	21	February 2011
Annex 13	Wireless Audio applications	23	May 2008
Appendix 1	Implementation Status	24	February 2011
Appendix 2	List of relevant ECC/ERC Decisions, Reports, EC Decisions and ETSI Standards	30	October 2010
Appendix 3	National restrictions	36	February 2011