ERC Recommendation 70-03

Relating to the use of Short Range Devices (SRD)

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Please Note

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FOREWORD

This Recommendation sets out the CEPT position on common spectrum which can be designated for Short Range Devices (SRD) applications and is a reference document to assist in preparing national spectrum regulations. 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 entries within this Recommendation are available for SRD in all countries. Variations between this Recommendation and national spectrum usage restrictions are indicated in Appendices 1 and 2 . The CEPT administrations are encouraged to regularly update and complete the Appendices 1 and 2 through requests to change or direct changes to EFIS. Moreover, many administrations have designated additional spectrum on a national basis for SRD applications. It is advisable therefore to verify spectrum regulations in EFIS for the relevant CEPT administration(s) and/ or by contacting the relevant national administration. If any discrepancies in Appendices 1 or 2 of this Recommendation are identified this should be brought to the attention of the European Communications Office (ECO) (andreea.craciun@eco.cept.org).

The position set out in this Recommendation is subject to continuous review.

Manufacturers and designers should consider that SRD operate in a shared spectrum environment and there is the potential for interference from other radio equipment. This should be considered in the design and manufacture of SRD.

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

For the CEPT country codes used in this Recommendation see link.

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INTRODUCTION

CEPT has adopted this Recommendation to deal with Short Range Devices and ETSI has developed European standards (EN), most of which are Harmonised Standards (HS) in support of the Radio Equipment Directive (RE Directive).

The term “Short Range Device” (SRD) is intended to cover radio equipment which has a low capability to cause interference. The use of SRD is usually covered by general / non-exclusive authorisations on a non-protected, non-interference basis. SRD applications are not a “radiocommunication service” as defined by the ITU Radio Regulations in Article 1.

This Recommendation describes the spectrum usage requirements for SRD applications including the designated frequency bands, maximum radiated power/ field strength levels etc., channel spacing or modulation / maximum occupied bandwidth and duty cycle.

The conditions provided in the Annexes also apply for the use of SRD on-board aircraft, if such use is not explicitly excluded or restricted by sector-specific regulations in Recommendation 70-03 or other regulations. CEPT does not address aviation safety aspects. Aircraft operators, manufacturers and aircraft owners should consult the relevant national or regional aviation regulatory bodies before installing and using SRD devices on board aircraft. See also the explanatory document FM(23)034 Annex 32 related to non-professional Unmanned Aircraft System (UAS) use under general authorisations (link).

Some Annexes may also contain information for Short Range Devices where individual licenses may be required on a national basis.

The following Annexes define the regulatory usage restrictions for SRD applications. References are given to applicable ETSI EN which specify technical characteristics and methods of measurement to demonstrate compliance of radio equipment with the Essential Requirements of the RE Directive, to allow placing of a product on the market.

For countries having implemented the RE Directive further details can be found on the Office web sites (link).

The text of the RE Directive can be found (link).

Some SRD applications in this Recommendation are also subject to EU harmonisation measures implemented by EC Decisions, including Decision 2006/771/EC (and its amendments) and Decision 2018/1538/EU (and its amendments). These applications are identified by a footnote under “Additional Information” in the relevant Annex which also mentions any derogations.

In accordance with relevant EC Decisions, Member States of the EU / EFTA may allow, at national level, equipment to operate under more permissive conditions than those specified in that EC Decision.

This Recommendation is intended to assist in the identification of frequencies and other regulatory parameters in CEPT member countries for the use (putting into service) of SRD. It is not intended to restrict the free movement of products within the EU / EEA and EFTA.

In accordance with Commission Decision 2000/299/EC radio equipment within the scope of the RE Directive falls into one of two classes as follows:

Class 1 - Radio equipment that can be used without any additional national restrictions in the EU, EEA and EFTA. According to Article 8.1(b) of the RE Directive, it is clarified that no national radio interface specification is required to be notified to the European Commission.

Class 2 - Radio equipment subject to restrictions on use in one or more of the EU, EEA and EFTA countries, where either:

- the technical usage parameters are not harmonised throughout the EU, EEA and EFTA; or
- the technical usage parameters are harmonised throughout EU, EEA and EFTA but do not fall within the above definition of class 1 radio equipment.

Information on RE Directive radio equipment classes is available on the EC website as well as in the EFIS database (link).

The "List of Relevant ECC/ERC Decisions, Reports, EC Decisions and ETSI Harmonised European Standards", shown in earlier versions as Appendix 2, was suppressed by WG FM#111 in October 2025.

ERC RECOMMENDATION RELATING TO THE USE OF SHORT RANGE DEVICES (SRD)

"The European Conference of Postal and Telecommunications Administrations,

considering

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

b. that in general SRD cannot claim protection from interference caused by radiocommunication services as defined by ITU;

c. that due to the increasing use of SRD for a growing number of applications it is necessary to harmonise frequencies and regulations for these devices to allow an economy of scale and improve efficiency for users;

d. that there is a need to distinguish between distinct categories of SRD applications;

e. that low power devices communicating with satellites (LPD-S) are harmonised by ECC/DEC/(25)02;

f. that additional applications and associated annexes will be added as necessary;

g. that maintenance of Appendices 1 and 2 and also the related cross-references in the Annexes may be undertaken by administrations or the ECO within EFIS, based on information from administrations;

h. that information about the use of SRD in each country, in addition to those covered in this Recommendation, can be obtained by contacting the relevant national administration;

i. that for those countries implementing the provisions of this Recommendation, national restrictions in respect of the annexes can be found in Appendix 2;

j. that applications for certain SRD within this Recommendation are also subject to Commission Implementing Decisions

k. that technical parameters in this Recommendation may differ from those in the Commission Implementing Decision, e.g. due to differences in document update cycles, etc;

l. that ETSI develops harmonised European standard(s), that may be cited in the Official Journal (OJ) of the European Union;

m. that references to ETSI standards in this Recommendation are for information only;

recommends

1. that CEPT administrations implement the parameters in accordance with the Annexes in this Recommendation;

2. that the use of SRD in this Recommendation is limited only to terrestrial applications;

3. that equipment intended to be used across borders should not exceed the technical parameters contained in the Annexes of this Recommendation;

4. 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 2."

ANNEX 1: NON-SPECIFIC SHORT RANGE DEVICES

Scope of Annex

This annex covers frequency bands and regulatory as well as informative parameters valid for all types of applications and also 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 Ultra WideBand (UWB) regulation which was primarily developed to allow communication applications using UWB technology in bands below 10.6 GHz; but enables also other types of radio applications.

Table 1: Regulatory parameters

Frequency Band		Power / Magnetic Field	Spectrum access and mitigation requirements	Modulation / occupied bandwidth	ECC/ERC Deliverable	ETSI ENs	Notes
a	13553-13567 kHz	10 mW e.r.p.	No requirement	Not specified		EN 300 330	The frequency band and equivalent Magnetic Field is also identified in Annex 9
b	26957-27283 kHz	10 mW e.r.p.	No requirement	Not specified		EN 300 220, EN 300 330	The frequency band and equivalent Magnetic Field is also identified in Annex 9
c1	26990-27000 kHz	100 mW e.r.p.	≤ 0.1 % duty cycle	Not specified		EN 300 220	The frequency band is also identified in Annex 8
c2	27040-27050 kHz	100 mW e.r.p.	≤ 0.1 % duty cycle	Not specified		EN 300 220	The frequency band is also identified in Annex 8
c3	27090-27100 kHz	100 mW e.r.p.	≤ 0.1 % duty cycle	Not specified		EN 300 220	The frequency band is also identified in Annex 8
c4	27140-27150 kHz	100 mW e.r.p.	≤ 0.1 % duty cycle	Not specified		EN 300 220	The frequency band is also identified in Annex 8
c5	27190-27200 kHz	100 mW e.r.p.	≤ 0.1 % duty cycle	Not specified		EN 300 220	The frequency band is also identified in Annex 8
d	40.66-40.7 MHz	10 mW e.r.p.	No requirement	Not specified		EN 300 220	
e	138.2-138.45 MHz	10 mW e.r.p.	≤ 1% duty cycle	Not specified		EN 300 220	
f1	169.4-169.475 MHz	500 mW e.r.p.	≤ 1% duty cycle	Not specified	ECC/DEC/(05)02	EN 300 220	The frequency band is also identified in Annexes 2 and 10
f2	169.4-169.4875 MHz	10 mW e.r.p.	≤ 0.1% duty cycle	Not specified	ECC/DEC/(05)02	EN 300 220	

Frequency Band		Power / Magnetic Field	Spectrum access and mitigation requirements	Modulation / occupied bandwidth	ECC/ERC Deliverable	ETSI ENs	Notes
f3	169.4875-169.5875 MHz	10 mW e.r.p.	≤ 0.001% duty cycle except for 00:00 h to 06:00 h local time where the duty cycle limit is ≤ 0.1%	Not specified	ECC/DEC/(05)02	EN 300 220	The frequency band is also identified in Annex 10
f4	169.5875-169.8125 MHz	10 mW e.r.p.	≤ 0.1% duty cycle	Not specified	ECC/DEC/(05)02	EN 300 220	
g1	433.05-434.79 MHz	10 mW e.r.p.	≤ 10% duty cycle	Not specified		EN 300 220	
g2	433.05-434.79 MHz	1 mW e.r.p.	No requirement	Not specified		EN 300 220	
g3	434.04-434.79 MHz	10 mW e.r.p.	No requirement	≤ 25 kHz		EN 300 220	
h0	862-863 MHz (note 6)	25 mW e.r.p.	≤ 0.1% duty cycle	≤ 350 kHz		EN 300 220	
h1.0	863-870 MHz (notes 2 and 6)	25 mW e.r.p.	≤ 0.1% duty cycle (note 1)	≤ 100 kHz for 47 or more hop channels		EN 300 220	For Frequency Hopping Spread Spectrum (FHSS). Parts of the frequency band are also identified in Annexes 2, 3, 10 and 11.
h1.2	863-870 MHz (notes 2 and 6)	25 mW e.r.p. -4.5 dBm/100 kHz e.r.p.	≤ 0.1% duty cycle or LBT+AFA	Not specified		EN 300 220	For Non-FHSS. Parts of the frequency band are also identified in Annexes 2, 3, 10 and 11
h1.3	863-865 MHz (note 6)	25 mW e.r.p.	≤ 0.1% duty cycle or LBT+AFA	Not specified		EN 300 220	The frequency band is also identified in Annexes 3 and 10
h1.4	865-868 MHz (note 6)	25 mW e.r.p.	≤ 1% duty cycle or LBT+AFA	Not specified		EN 300 220	The frequency band is also identified in Annexes 2, 3 and 11
h1.5	868-868.6 MHz (note 6)	25 mW e.r.p.	≤ 1% duty cycle or LBT+AFA	Not specified		EN 300 220	
h1.6	868.7-869.2 MHz (note 6)	25 mW e.r.p.	≤ 0.1% duty cycle or LBT+AFA	Not specified		EN 300 220	
h1.7	869.4-869.65 MHz (note 6)	500 mW e.r.p.	≤ 10% duty cycle or LBT+AFA	Not specified		EN 300 220	
h1.8	869.7-870 MHz (note 6)	5 mW e.r.p.	No requirement	Not specified		EN 300 220	
h1.9	869.7-870 MHz (note 6)	25 mW e.r.p.	≤ 1% duty cycle or LBT+AFA	Not specified		EN 300 220	

Frequency Band		Power / Magnetic Field	Spectrum access and mitigation requirements	Modulation / occupied bandwidth	ECC/ERC Deliverable	ETSI ENs	Notes
h2	870-874.4 MHz	25 mW e.r.p.	≤ 1% duty cycle. For Extended spectrum for GSM for Railways (ER-GSM) protection (873-874.4 MHz, where applicable): the duty cycle is limited to ≤ 0.01% and to a maximum transmit on time of 5ms/1s	≤ 600 kHz		EN 300 220	For new implementations, administrations are encouraged to follow the technical conditions for SRD in data networks (see Annex 2). The frequency band is also identified in Annex 2.
h3	915-919.4 MHz	25 mW e.r.p. except within the RFID channels identified in note 5 where100 mW e.r.p. applies	≤ 1% duty cycle. For ER-GSM protection (918-919.4 MHz, where applicable): the duty cycle is limited to ≤ 0.01% and to a maximum transmit on-time of 5ms/1s	≤ 600 kHz except within the RFID channels identified in note 5 where ≤ 400 kHz applies		EN 300 220	For new implementations, administrations are encouraged to follow the technical conditions for SRD in data networks (see Annex 2). The frequency band is also identified in Annexes 2, 3 and 11
i	2400-2483.5 MHz	10 mW e.i.r.p.	No requirement	Not specified		EN 300 440	The frequency band is also identified in Annexes 3 and 6
j	5725-5875 MHz	25 mW e.i.r.p.	No requirement	Not specified		EN 300 440	
k1	3100-4800 MHz	*	*	*	ECC/DEC/(06)04	EN 302 065	Generic Ultra WideBand (UWB) regulation. * See detailed requirements in the related ECC Decision
k2	6000-9000 MHz	*	*	*	ECC/DEC/(06)04	EN 302 065	Generic UWB regulation. * See detailed requirements in the related ECC Decision
l	6000-8500 MHz	*	*	*	ECC/DEC/(12)03	EN 302 065	Ultra WideBand (UWB) regulation on-board aircraft. * See detailed requirements in the related ECC Decision
m	24-24.25 GHz	100 mW e.i.r.p.	No requirement	Not specified		EN 300 440	The frequency band is also identified in Annex 5
n1	57-64 GHz	100 mW e.i.r.p. 10 mW output power	No requirement	Not specified		EN 305 550	The frequency band is also identified in Annex 6 and within frequency bands in Annex 3

Frequency Band		Power / Magnetic Field	Spectrum access and mitigation requirements	Modulation / occupied bandwidth	ECC/ERC Deliverable	ETSI ENs	Notes
n2	61-61.5 GHz	100 mW e.i.r.p.	No requirement	Not specified		EN 305 550	
o1	122-122.25 GHz	10 dBm/250 MHz e.i.r.p. -48 dBm/MHz at >30° elevation (note 4)	No requirement	Not specified		EN 305 550	
o2	122.25-123 GHz	100 mW e.i.r.p.	No requirement	Not specified		EN 305 550	
p	244-246 GHz	100 mW e.i.r.p.	No requirement	Not specified		EN 305 550	

Note 1: The duty cycle applies to the entire transmission (not to each hop channel).
Note 2: Frequency bands for alarms (see Annex 7) are excluded.
Note 3: not used
Note 4: These limits should be measured with an rms detector and an averaging time of 1 ms or less.
Note 5: The available channel centre frequencies are 916.3 MHz, 917.5 MHz, and 918.7 MHz. The channel bandwidth is 400 kHz.
Note 6: The frequency band is also identified in ECC/DEC/(25)02 for low power devices communicating with satellites (LPD-S).

Additional Information

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.

Frequency issues
The bands in Annex 1 a), b), c1) to c5), d), g1) to g3), i), j), m), n1), n2), o1), o2), p) are also designated for industrial, scientific and medical (ISM) applications as defined in ITU Radio Regulations.

Sub-band h0):
SRD vendors wishing to use the band 862-863 MHz should weigh the risk and accept responsibility for deciding themselves whether their specific applications shall be capable of operating in the presence of comparatively high ambient noise levels from out-of-band emissions of Mobile/Fixed Communication Networks (MFCN) terminals and design their products accordingly.

Sub-bands h1.0), h1.2) and h1.4):
Certain channels may be occupied by Radio Frequency Identification (RFID) interrogators transmitting at higher powers than SRD (see Annex 11). To minimise the risk of interference from RFID, SRD should use Listen before talk (LBT) with Adaptive Frequency Agility (AFA) or observe suitable separation distances. In the high power RFID interrogator channels, 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 occupied by systems using high transmission power. SRD manufacturers should take this into account in the design of equipment; choice of frequency bands and power levels.

Sub-bands h2) and h3):
Use of all or part of sub-bands h2) and h3) may be limited or not authorised for non-specific SRD in some countries where the sub-bands are used for defence / governmental systems. Further, some countries use the sub-bands 873-876 MHz and 918-921 MHz as extended Global System for Mobile Communications on Railways (GSM-R) frequency bands, and therefore access to the

frequency bands 873-874.4 MHz / 918-919.4 MHz by non-specific SRD applications may require additional interference mitigation measures to be implemented such as transmission timing limitations, as set out in ECC Report 200.

CEPT administrations wishing to implement new provisions for SRD are encouraged to consider national alignment with the technical conditions for SRD in data networks, as set out in Decision 2018/1538/EU as amended, where all devices within the data network shall be under the control of a network access point (see Annex 2).

National rules, such as local coordination, may also be needed in order to avoid interference to radio services operating in the adjacent bands.

ANNEX 2: TRACKING, TRACING AND DATA ACQUISITION

Scope of Annex

This annex covers frequency bands, regulatory and informative parameters recommended for tracking, tracing and data acquisition applications including: - Emergency detection of buried victims and valuable items such as detecting avalanche victims; - Person detection and collision avoidance; - Meter reading; - Sensors (water, gas, electricity, meteorology, pollution, etc.) and actuators (controlling devices such as street or traffic lights, etc.); - Data acquisition; - Wireless Industrial Applications (WIA) to be used in industrial environments including monitoring and worker communications, wireless sensors and actuators.

Table 2: Regulatory parameters

Frequency Band		Power / Magnetic Field	Spectrum access and mitigation requirements	Modulation / occupied bandwidth	ECC/ERC Deliverable	ETSI ENs	Notes
a1	442.2-450 kHz	7 dBµA/m at 10 m	No requirement	Continuous wave (CW) - no modulation, channel spacing ≥ 150 Hz		To be defined	Person detection and collision avoidance
a2	456.9-457.1 kHz	7 dBµA/m at 10 m	No requirement	Continuous wave (CW) at 457 kHz - no modulation		EN 300 718	Emergency detection of buried victims and valuable items
b	169.4-169.475 MHz	500 mW e.r.p.	≤ 10% duty cycle	Not specified	ECC/DEC/(05)02	EN 300 220	Meter Reading. The frequency band is also identified in Annex 1
c1	865-868 MHz (note 4)	500 mW e.r.p.	Adaptive Power Control (APC) is required for all devices (note 1). ≤ 10% duty cycle for network access points; ≤ 2.5% duty cycle otherwise.	≤ 200 kHz		EN 303 659	Data networks (note 2). Adaptive Power Control (APC) is able to reduce the equipment's ERP from its maximum to ≤ 5 mW. The frequency band is also identified in Annexes 1, 3 and 11

Frequency Band		Power / Magnetic Field	Spectrum access and mitigation requirements	Modulation / occupied bandwidth	ECC/ERC Deliverable	ETSI ENs	Notes
c2	870-874.4 MHz	500 mW e.r.p.	Adaptive Power Control (APC) is required for all devices (note 1). ≤ 10% duty cycle for network access points; ≤ 2.5% duty cycle otherwise.	≤ 200 kHz		EN 303 204	Data networks (notes 2, 3 and 8). All nomadic and mobile devices within the data network shall be controlled by a master network access point (NAP). Adaptive Power Control (APC) is able to reduce the equipment's ERP from its maximum to ≤ 5 mW. The frequency band is also identified in Annex 1.
c3	917.3-918.9 MHz (Note 6)	500 mW e.r.p.	Adaptive Power Control (APC) is required for all devices (note 1). ≤ 10% duty cycle for network access points; ≤ 2.5% duty cycle otherwise.	≤ 200 kHz		EN 303 659	Data networks (notes 2 and 8). All nomadic and mobile devices within the data network shall be controlled by a master network access point (NAP). Adaptive Power Control (APC) is able to reduce the equipment's ERP from its maximum to ≤ 5 mW. The frequency band is also identified in Annexes 1, 3 and 11.
c4	915-919.4 MHz	25 mW e.r.p.	≤ 1% duty cycle	≤ 600 kHz		EN 303 659	Data networks (notes 2 and 8). All nomadic and mobile devices within the data network shall be controlled by a master network access point (NAP). The frequency band is also identified in Annexes 1, 3 and 11.
d	5725-5875 MHz	400 mW e.i.r.p. Adaptive Power Control (APC) required	Adequate spectrum sharing mechanisms (e.g. Dynamic Frequency Selection (DFS) and Detect and Avoid (DAA)) shall be implemented (note 7)	≥ 1 MHz and ≤ 20 MHz		EN 303 258	Wireless Industrial Applications (WIA). Registration and/or notification may be required. Adaptive Power Control (APC) is able to reduce the e.i.r.p. to ≤ 25 mW. The frequency band is also identified in Annex 1.

Note 1: Alternatively other mitigation techniques which achieve at least an equivalent level of spectrum compatibility.
Note 2: A network access point in a data network is a fixed terrestrial short range device that acts as a connection point for the other short range devices in the data network to service platforms located outside of that data network. The term data network refers to several short range devices, including the network access point, as network components and to the wireless connections between them.
Note 3: Individual authorisation or additional mitigation techniques (e.g. Listen Before Talk (LBT)) may be applied to network access point (NAP) in areas with a high number of NAP.
Note 4: Transmissions only permitted within the frequency ranges 865.6-865.8 MHz, 866.2-866.4 MHz, 866.8-867.0 MHz and 867.4-867.6 MHz.

Note 5: not used
Note 6: Transmissions only permitted within the frequency ranges 917.3-917.7 MHz and 918.5-918.9 MHz.
Note 7: Dynamic Frequency Selection (DFS) is required in the frequency range 5725-5850 MHz to ensure an appropriate protection to the radiolocation service (including frequency hopping radars), Detect and Avoid (DAA) is required in the frequency range 5855-5875 MHz for the protection of Intelligent Transportation Systems (ITS), in the frequency range 5725-5875 MHz for the protection of Broadband Fixed Wireless Access (BFWA), and in the frequency range 5795-5815 MHz for the protection of Transport and Traffic Telematics (TTT) applications
Note 8: In some countries, usage may be limited such that installation and operation are performed only by professional users and individual authorisation may be required, e.g. to administer geographical sharing and/ or the application of mitigation techniques to ensure protection of radio services.

Additional Information

Technical parameters also referred to in the harmonised standard
Sub-bands c1, c2) and c3:
The harmonised standard should define adequate spectrum sharing mechanisms.

EN 303 204 includes for network access points the requirement to implement Listen Before Talk (LBT).

Frequency issues
Sub-bands c2) to c4):
Use of all or part of sub-bands c2) to c4) may be limited or not authorised for SRD in data networks in some countries where the sub-bands are used for defence / governmental systems. Further, some countries use the sub-bands 873-876 MHz and 918-921 MHz as extended GSM-R frequency bands; therefore geographical restrictions may apply.

National rules, such as local coordination, may also be needed in order to avoid interference to radio services operating in the adjacent bands.

With regard to sub-bands c2) and c4), the Decision 2018/1538/EU as amended harmonises a subset of these frequency bands.

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.

Table 3: Regulatory parameters

Frequency Band		Power / Magnetic Field	Spectrum access and mitigation requirements	Modulation / occupied bandwidth	ECC/ERC Deliverable	ETSI ENs	Notes
a1	863-868 MHz	25 mW e.r.p.	Polite spectrum access is required for all devices. ≤ 10% duty cycle for network access points; ≤ 2.8% duty cycle otherwise.	> 600 kHz ≤ 1 MHz		EN 304 220	Wideband data transmission in data networks (note 1). The frequency band is also identified in Annexes 1, 2, 10 and 11
a2	915.8-919.4 MHz	25 mW e.r.p.	Polite spectrum access is required for all devices. ≤ 10% duty cycle for network access points; ≤ 2.8% duty cycle otherwise.	> 600 kHz ≤ 1 MHz		EN 304 220	Wideband data transmission in data networks (notes 1 and 2). All nomadic and mobile devices within the data network shall be controlled by a master network access point (NAP). The frequency band is also identified in Annexes 1, 2 and 11
b	2400-2483.5 MHz	100 mW e.i.r.p.	Adequate spectrum sharing mechanism (e.g. LBT and DAA) shall be implemented	Not specified		EN 300 328	For wideband modulations other than Frequency Hopping Spread Spectrum (FHSS), the maximum e.i.r.p. density is limited to 10 mW/MHz
c1	57-71 GHz	40 dBm e.i.r.p., 23 dBm/MHz e.i.r.p. density	Adequate spectrum sharing mechanism shall be implemented	Not specified		EN 302 567, EN 303 722, EN 303 753	Fixed outdoor installations are not allowed.
c2	57-71 GHz	40 dBm e.i.r.p., 23 dBm/MHz e.i.r.p. density and maximum transmit power of 27 dBm at the antenna port or ports	Adequate spectrum sharing mechanism shall be implemented	Not specified	ECC Report 288	EN 302 567, EN 303 722, EN 303 753	

Frequency Band		Power / Magnetic Field	Spectrum access and mitigation requirements	Modulation / occupied bandwidth	ECC/ERC Deliverable	ETSI ENs	Notes
c3	57-71 GHz	55 dBm e.i.r.p., 38 dBm/MHz e.i.r.p. density and transmit antenna gain ≥ 30 dBi	Adequate spectrum sharing mechanism shall be implemented	Not specified	ECC Report 288	EN 302 567, EN 303 722, EN 303 753	Applies only to fixed outdoor installations (note 3)
d	1910-1920 MHz	20 dBm e.i.r.p.	Transmit Power Control (TPC) and pre-transmit scanning (note 4) required	≤ 3.5 MHz		EN 301 406	UAS are not allowed under this entry.

Note 1: A network access point in a data network is a fixed terrestrial short range device that acts as a connection point for the other short range devices in the data network to service platforms located outside of that data network. The term data network refers to several short range devices, including the network access point, as network components and to the wireless connections between them.
Note 2: Usage may be limited such that installation and operation are performed only by professional users and individual authorisation may be required, e.g. to administer geographical sharing and/or the application of mitigation techniques to ensure protection of radio services.
Note 3: Some CEPT administrations have an existing regulatory framework for the Fixed Service in 57-66 GHz and may implement a self-coordination mechanism similar to “light licensing” described in ECC Report 80.
Note 4: Operating channel and subslot selection as set out in ETSI TS 103 636-4, or an equivalent method

Additional Information

Technical parameters also referred to in the harmonised standard
No information

Frequency issues
Sub-band a1):
The harmonised standard needs to define minimum requirements for the spectrum access protocol to lower the interference probability towards audio applications including Assistive Listening Devices (ALD) in 863-865 MHz, with a detection threshold requirement in line with ECC Report 261.

Sub-band a2):
Use of all or part of the sub-band a2) may be limited or not authorised for wideband data transmission systems in data networks in some countries where all or part of this sub-band is used for defence / governmental systems. Further, some countries use the sub-band 918-921 MHz as extended Global System for Mobile Communications on Railways (GSM-R) frequency band; therefore geographical restrictions may apply. See Appendices 1 and 2 for national implementation concerning GSM-R and defence/governmental services.

Sub-band d):
ECC/REC/(24)02 provides guidance on the use of governmental UAS in 1910-1920 MHz.

ANNEX 4: RAILWAY APPLICATIONS

Scope of Annex

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

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

Band a) Balise up-link (ground to train) systems including Eurobalise;

Band b) Loop up-link (ground to train) systems including Euroloop;

Band c) Balise tele-powering and down-link (train to ground) systems including Eurobalise and activation of the Loop / Euroloop;

Band d) Obstruction/Vehicle detection via radar sensor at railway level crossings.

Table 4: Regulatory parameters

Frequency Band		Power / Magnetic Field	Spectrum access and mitigation requirements	Modulation / occupied bandwidth	ECC/ERC Deliverable	ETSI ENs	Notes
a	984-7484 kHz	9 dBµA/m at 10 m	≤ 1% duty cycle	Not specified		EN 302 608	Transmitting only on receipt of a Balise/ Eurobalise tele-powering signal from a train. Note: Centre frequency is 4234 kHz
b	7300-23000 kHz	-7 dBµA/m at 10 m	No requirement	Not specified		EN 302 609	Maximum field strength specified in a bandwidth of 10 kHz, spatially averaged over any 200 m length of the loop. Transmitting only in presence of trains. Spread Spectrum Signal, Code Length: 472 Chips. Note: Centre frequency is 13.547 MHz
c	27090-27100 kHz	42 dBµA/m at 10 m	No requirement	Not specified		EN 302 608	Tele-powering and Down-link signal for Balise/ Eurobalise. May also be optionally used for the activation of the Loop/Euroloop. Note: Centre frequency is 27.095 MHz
d	76-77 GHz	55 dBm peak e.i.r.p.	No requirement	Not specified		EN 301 091	Obstruction/Vehicle detection via radar Sensor at railway level crossings. 50 dBm average power or 23.5 dBm average power for pulse radar. The frequency band is also included in Annex 5

Additional Information

Technical parameters also referred to in the harmonised standard
Spectrum masks for Eurobalise and Euroloop are defined in ETSI standards EN 302 608 and EN 302 609, in accordance with the elements given in ECC Report 98.

Frequency issues
No information

ANNEX 5: TRANSPORT AND TRAFFIC TELEMATICS (TTT)

Scope of Annex

This annex covers frequency bands and regulatory as well as informative parameters recommended for radio systems used in the field of transport and traffic telematics (road, rail and water depending on the relevant technical restrictions), traffic management, navigation and mobility management. Typical applications are used for interfaces between different modes of transport, communication between vehicles (e.g. car-to-car), between vehicles and fixed locations (e.g. car-to-infrastructure), communication from and to users as well as radar system installations. Automotive radar is defined as a moving radar device supporting functions of the vehicle. Entry e2) is limited to obstacle detection radars for rotorcraft use.

Table 5: Regulatory parameters

Frequency Band		Power / Magnetic Field	Spectrum access and mitigation requirements	Modulation / occupied bandwidth	ECC/ERC Deliverable	ETSI ENs	Notes
a	5795-5805 MHz	2 W e.i.r.p. / 8 W e.i.r.p.	No requirement			EN 300 674	Individual license may be required for the higher power of 8 W systems
b	5805-5815 MHz	2 W e.i.r.p. / 8 W e.i.r.p.	No requirement			EN 300 674	Individual license may be required
c1	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 shall not be placed onto the market
c2	24.25-26.65 GHz	*	*	*	ECC/DEC/(04)10	EN 302 288	For automotive Short Range Radars (SRR). See detailed requirements in related ECC Decision. SRR equipment may only be placed onto the market until 1 January 2018. This date is extended by 4 years for SRR equipment mounted on motor vehicles for which vehicle conformity compliance has been granted before 1 January 2018
d1	24.05-24.075 GHz	100 mW e.i.r.p.	No requirement			EN 302 858	For automotive radars
d2	24.075-24.15 GHz	0.1 mW e.i.r.p.	No requirement			EN 302 858	For automotive radars

Frequency Band		Power / Magnetic Field	Spectrum access and mitigation requirements	Modulation / occupied bandwidth	ECC/ERC Deliverable	ETSI ENs	Notes
d3	24.075-24.15 GHz	100 mW e.i.r.p.	≤ 4µs/40 kHz dwell time every 3ms			EN 302 858	For automotive radars (road vehicles only). The spectrum access and mitigation requirement is given for devices mounted behind a bumper. If mounted without a bumper, the requirement should be 3µs/40kHz maximum dwell time every 3ms. A requirement for minimum frequency modulation range (applicable to Frequency Hopping Spread Spectrum (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
d4	24.075-24.15 GHz	100 mW e.i.r.p.	≤ 1ms/40 kHz dwell time every 40ms			EN 302 858	For automotive radars (road vehicles only). The spectrum access and mitigation requirement is given for devices mounted either behind a bumper or mounted without a bumper. A requirement for minimum frequency modulation range (applicable to Frequency Hopping Spread Spectrum (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
d5	24.15-24.25 GHz	100 mW e.i.r.p.	No requirement			EN 302 858	For automotive radars (road vehicles only)
e1	76-77 GHz	55 dBm peak e.i.r.p.	(note 1)	Not specified	ECC Report 262	EN 301 091	50 dBm average power or 23.5 dBm average power for pulse radar only. For ground based vehicle and infrastructure systems only. The frequency band is also included in Annex 4
e2	76-77 GHz	*	*	*	ECC/DEC/(16)01	EN 303 360	For obstacle detection radars for rotorcraft use. Use is not possible in specific areas of some European countries due to exclusion zones implementation around Radio Astronomy Service (RAS) observatories. * See detailed requirements in related ECC Decision

	Frequency Band	Power / Magnetic Field	Spectrum access and mitigation requirements	Modulation / occupied bandwidth	ECC/ERC Deliverable	ETSI ENs	Notes
f	5855-5875 MHz	*	*		ECC/REC/(08)01	EN 302 571	For non-safety related Road Intelligent Transport Systems (ITS) * See detailed requirements in related ECC Recommendation

Note 1: Fixed transportation infrastructure radars have to be of a scanning nature in order to limit the illumination time and ensure a minimum silent time to achieve coexistence with automotive radar systems.

Additional Information

Technical parameters also referred to in the harmonised standard
No information

Frequency issues
Sub-bands d1) to d5) as well as c1), c2):
Note that the regulation in the bands d1) to d5) for the band 24.05-24.25 GHz for automotive radars is without any plans for a time limit within CEPT (see document ECC(15)058). Only the bands c1), c2) for Short Range Radar (SRR) are time limited.

ANNEX 6: RADIODETERMINATION APPLICATIONS

Scope of Annex

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

Radiodetermination equipment typically conducts measurements to obtain such characteristics. Any kind of point-to-point or point-to-multipoint radio communications is outside of this definition.

Table 6: Regulatory parameters

Frequency Band		Power / Magnetic Field	Spectrum access and mitigation requirements	Modulation / occupied bandwidth	ECC/ERC Deliverable	ETSI ENs	Notes
a	30 MHz-12.4 GHz	*	*	*	ECC/DEC/(06)08	EN 302 066	For Ground- and Wall- Probing Radar (GPR/WPR) imaging systems, subject to an appropriate licensing regime. * See detailed requirements in related ECC Decision
b	2200-8500 MHz	*	*	*	ECC/DEC/(07)01	EN 302 065	For Material Sensing Devices. * See detailed requirements in related ECC Decision
c	2400-2483.5 MHz	25 mW e.i.r.p.	No requirement	Not specified		EN 300 440	
d	3100-4800 MHz	*	*	*	ECC/REC/(11)09	EN 302 065	For UWB Location Tracking Systems Type 2 (LT2), subject to an appropriate licensing regime. * See detailed requirements in related ECC Recommendation
e	3100-4800 MHz	*	*	*	ECC/REC/(11)10	EN 302 065	For UWB Location tracking application for emergency and disaster situations (LAES), subject to an appropriate licensing regime. * See detailed requirements in related ECC Recommendation
f1	4500-7000 MHz	-41.3 dBm/MHz e.i.r.p. outside the enclosed test tank structure	No requirement	Not specified		EN 302 372	For Tank Level Probing Radar (TLPR)

Frequency Band		Power / Magnetic Field	Spectrum access and mitigation requirements	Modulation / occupied bandwidth	ECC/ERC Deliverable	ETSI ENs	Notes
f2	8500 MHz-10.6 GHz	-41.3 dBm/MHz e.i.r.p. outside the enclosed test tank structure	No requirement	Not specified		EN 302 372	For Tank Level Probing Radar (TLPR). The radiated unwanted emissions within the frequency band 10.6-10.7 GHz outside the test tank enclosure shall be less than -60 dBm/MHz e.i.r.p.
f3	24.05-27 GHz	-41.3 dBm/MHz e.i.r.p. outside the enclosed test tank structure	No requirement	Not specified		EN 302 372	For Tank Level Probing Radar (TLPR)
f4	57-64 GHz	-41.3 dBm/MHz e.i.r.p. outside the enclosed test tank structure	No requirement	Not specified		EN 302 372	For Tank Level Probing Radar (TLPR)
f5	75-85 GHz	-41.3 dBm/MHz e.i.r.p. outside the enclosed test tank structure	No requirement	Not specified		EN 302 372	For Tank Level Probing Radar (TLPR)
g1	6000-8500 MHz	*	*	Not specified	ECC/DEC/(11)02	EN 302 729	For Industrial Level Probing Radar (LPR). *See detailed requirements in related ECC Decision
g2	24.05-26.5 GHz	*	*	Not specified	ECC/DEC/(11)02	EN 302 729	For Industrial Level Probing Radar (LPR). *See detailed requirements in related ECC Decision
g3	57-64 GHz	*	*	Not specified	ECC/DEC/(11)02	EN 302 729	For Industrial Level Probing Radar (LPR). *See detailed requirements in related ECC Decision
g4	75-85 GHz	*	*	Not specified	ECC/DEC/(11)02	EN 302 729	For Industrial Level Probing Radar (LPR). *See detailed requirements in related ECC Decision
h	9200-9500 MHz	25 mW e.i.r.p.	No requirement	Not specified		EN 300 440	
i	9500-9975 MHz	25 mW e.i.r.p.	No requirement	Not specified		EN 300 440	
j	10.5-10.6 GHz	500 mW e.i.r.p.	No requirement	Not specified		EN 300 440	
k	13.4-14 GHz	25 mW e.i.r.p.	No requirement	Not specified		EN 300 440	
l	17.1-17.3 GHz	26 dBm e.i.r.p.	DAA	Not specified		EN 303 661	For Ground Based Synthetic Aperture Radar (GBSAR). Specific requirements for the radar antenna pattern and for the implementation of Detect And Avoid (DAA) technique apply as described in EN 300 440

Frequency Band		Power / Magnetic Field	Spectrum access and mitigation requirements	Modulation / occupied bandwidth	ECC/ERC Deliverable	ETSI ENs	Notes
m	24.05-24.25 GHz	100 mW e.i.r.p.	No requirement	Not specified		EN 300 440	The frequency band 24.0-24.25 GHz is identified with the same emission parameters in Annex 1 band m
n1	100 Hz-148 kHz	46 dBµA/m at 10 m distance at 100 Hz outside the NMR device	No requirement	Not specified		To be defined	For enclosed Nuclear Magnetic Resonance (NMR) applications. Magnetic field strength descending 10dB/ decade above 100 Hz
n2	148-5000 kHz	-15 dBµA/m at 10 m distance outside the NMR device	No requirement	Not specified		To be defined	For enclosed Nuclear Magnetic Resonance (NMR) applications
n3	5000 kHz-30 MHz	-5 dBµA/m at 10 m distance outside the NMR device	No requirement	Not specified		To be defined	For enclosed Nuclear Magnetic Resonance (NMR) applications
n4	30-130 MHz	-36 dBm e.r.p. outside the NMR device	No requirement	Not specified		To be defined	For enclosed Nuclear Magnetic Resonance (NMR) applications
o	76-77 GHz	*	*	*	ECC/DEC/(21)02	EN 303 661	For High Definition Ground Based Synthetic Aperture Radar (HD-GBSAR) Use is not possible in specific areas of some European countries due to exclusion zones implementation around Radio Astronomy Service (RAS) observatories in case of free line of sight. RAS exclusion zones and DAA are required only in case of outdoor use of HD-GBSAR. * See detailed requirements in related ECC Decision
p	116-260 GHz	*	*	*	ECC/DEC/(22)03	EN 305 550	For specific radiodetermination applications as Generic indoor surveillance radar, Radiodetermination systems for industry automation (RDI), Level probing radar (LPR), Contour determination and acquisition radar (CDR), Tank level probing radar (TLPR), Exterior vehicular radar (EVR), In-cabin vehicular radar (IVR) and Radiodetermination systems for industry automation in shielded environments (RDI-S). * See detailed requirements in related ECC Decision
q	69.8-79.9 GHz	7 dBm e.i.r.p.	No requirement	Not specified		EN 303 940	For security scanners operated indoors

Frequency Band		Power / Magnetic Field	Spectrum access and mitigation requirements	Modulation / occupied bandwidth	ECC/ERC Deliverable	ETSI ENs	Notes
r1	76.5-80.5 GHz	19 dBm peak e.i.r.p. (Note 1)	No requirement	Not specified		EN 303 940	For security scanners operated indoors
r2	76.5-80.5 GHz	19 dBm peak e.i.r.p. (Note 1) 19 dBm mean e.i.r.p. (Note 2)	≤ 10.4% duty cycle in any 100 ms	≥ 1.5 GHz		To be defined	For security scanners operated outdoors

Note 1: At least 23 dB out-of-band attenuation relative to the maximum allowed peak e.i.r.p. is required.
Note 2: Measured with 1 MHz RBW and averaged over Ton

Additional Information

Technical parameters also referred to in the harmonised standard
No information

Frequency issues
Sub-bands n1) to n4):
Enclosed NMR sensors are devices where the material/object under investigation is put inside the enclosure of the NMR device.
NMR techniques use nuclear magnetic resonance excitation and magnetic field strength response of a material/object under test to get information about material properties based on resonance frequency responses of isotopes of atoms. Nuclear magnetic resonance imaging and magnetic resonance tomography systems are not included in this scope.

Sub-band r2)
For security scanners operated outdoors, use is not permitted in specific areas of some European countries due to separation distances around Radio Astronomy Service (RAS) observatories as set out in the Addendum to ECC Report 344.

ANNEX 7: ALARMS

Scope of Annex

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

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

Alarms in sub-bands a), c), d), e);

Social Alarms in sub-band b).

Table 7: Regulatory parameters

	Frequency Band	Power / Magnetic Field	Spectrum access and mitigation requirements	Modulation / occupied bandwidth	ECC/ERC Deliverable	ETSI ENs	Notes
a	868.6-868.7 MHz	10 mW e.r.p.	≤ 1.0 % duty cycle	≤ 25 kHz		EN 300 220, EN 303 406	The whole frequency band may also be used as a single channel
b	869.2-869.25 MHz	10 mW e.r.p.	≤ 0.1 % duty cycle	channel spacing = 25 kHz		EN 300 220	Social Alarms
c	869.25-869.3 MHz	10 mW e.r.p.	≤ 0.1 % duty cycle	≤ 25 kHz		EN 300 220, EN 303 406	
d	869.3-869.4 MHz	10 mW e.r.p.	≤ 1.0 % duty cycle	≤ 25 kHz		EN 300 220, EN 303 406	
e	869.65-869.7 MHz	25 mW e.r.p.	≤ 10 % duty cycle	≤ 25 kHz		EN 300 220, EN 303 406	

Additional Information

Technical parameters also referred to in the harmonised standard
No information

Frequency issues
Sub-band b)
Social alarms are covered by a specific subset of ETSI EN 300 220.

ANNEX 8: MODEL CONTROL

Scope of Annex

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

Table 8: Regulatory parameters

	Frequency Band	Power / Magnetic Field	Spectrum access and mitigation requirements	Modulation / occupied bandwidth	ECC/ERC Deliverable	ETSI ENs	Notes
a1	26990-27000 kHz	100 mW e.r.p.	No requirement	≤ 10 kHz		EN 300 220	
a2	27040-27050 kHz	100 mW e.r.p.	No requirement	≤ 10 kHz		EN 300 220	
a3	27090-27100 kHz	100 mW e.r.p.	No requirement	≤ 10 kHz		EN 300 220	
a4	27140-27150 kHz	100 mW e.r.p.	No requirement	≤ 10 kHz		EN 300 220	
a5	27190-27200 kHz	100 mW e.r.p.	No requirement	≤ 10 kHz		EN 300 220	
b	34.995-35.225 MHz	100 mW e.r.p.	No requirement	≤ 10 kHz	ERC/DEC/(01)11	EN 300 220	Only for flying model control
c1	40.66-40.67 MHz	100 mW e.r.p.	No requirement	≤ 10 kHz	ERC/DEC/(01)12	EN 300 220	
c2	40.67-40.68 MHz	100 mW e.r.p.	No requirement	≤ 10 kHz	ERC/DEC/(01)12	EN 300 220	
c3	40.68-40.69 MHz	100 mW e.r.p.	No requirement	≤ 10 kHz	ERC/DEC/(01)12	EN 300 220	
c4	40.69-40.7 MHz	100 mW e.r.p.	No requirement	≤ 10 kHz	ERC/DEC/(01)12	EN 300 220	

Additional Information

Technical parameters also referred to in the harmonised standard
No information

Frequency issues
No information

ANNEX 9: INDUCTIVE APPLICATIONS

Scope of Annex

This annex covers frequency bands and regulatory as well as informative parameters recommended for inductive loop systems, which use magnetic fields for near field communication and determination applications. This includes for example: • car immobilisers, • radio frequency identification (RFID) applications including for example automatic article identification, asset tracking, alarm systems, waste management, personal identification, access control, proximity sensors, antitheft systems, location systems, Near Field Communications (NFC) applications e.g. used for data transfer to handheld devices, anti-theft systems including RF anti- theft induction systems (e.g. EAS), • metal and proximity sensors, • wireless control systems, • animal identification, • cable detection, • wireless voice links, • cochlear implant systems • automatic road tolling.

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

Table 9: Regulatory parameters

Frequency Band		Power / Magnetic Field	Spectrum access and mitigation requirements	Modulation / occupied bandwidth	ECC/ERC Deliverable	ETSI ENs	Notes
a0	100 Hz-9 kHz	82 dBµA/m at 10 m	No requirement	Not specified		EN 303 447, EN 303 454	Antenna size of < 1/20 λ (see note 1)
a1	9-90 kHz	72 dBµA/m at 10 m - The limit is reduced according to Table 9bis	No requirement	Not specified		EN 300 330, EN 303 447, EN 303 454	In case of external antennas only loop coil antennas may be employed. Magnetic field strength level descending 3 dB/octave above 30 kHz
a2	90-119 kHz	42 dBµA/m at 10 m	No requirement	Not specified		EN 300 330, EN 303 447, EN 303 454	In case of external antennas only loop coil antennas may be employed
a3	119-135 kHz	66 dBµA/m at 10 m - The limit is reduced according to Table 9bis	No requirement	See note 2		EN 300 330, EN 303 447, EN 303 454	In case of external antennas only loop coil antennas may be employed. Magnetic field strength level descending 3 dB/octave above 119 kHz
b	135-140 kHz	42 dBµA/m at 10 m	No requirement	Not specified		EN 300 330, EN 303 447, EN 303 454	In case of external antennas only loop coil antennas may be employed
c	140-148.5 kHz	37.7 dBµA/m at 10 m	No requirement	Not specified		EN 300 330, EN 303 447, EN 303 454	In case of external antennas only loop coil antennas may be employed
d	400-600 kHz	-5 dBµA/m at 10 m in total -8 dBµA/m at 10 m per 10 kHz	No requirement	≥ 30kHz		EN 300 330	For RFID only. In case of external antennas only loop coil antennas may be employed.

Frequency Band		Power / Magnetic Field	Spectrum access and mitigation requirements	Modulation / occupied bandwidth	ECC/ERC Deliverable	ETSI ENs	Notes
e	3155-3400 kHz	13.5 dBµA/m at 10 m	No requirement	Not specified		EN 300 330	In case of external antennas only loop coil antennas may be employed
f	6765-6795 kHz	42 dBµA/m at 10 m	No requirement	Not specified		EN 300 330	
g	7400-8800 kHz	9 dBµA/m at 10 m	No requirement	Not specified		EN 300 330	
h	10200-11000 kHz	9 dBµA/m at 10 m	No requirement	Not specified		EN 300 330	
i	13553-13567 kHz	42 dBµA/m at 10 m	No requirement	See note 3		EN 300 330	
j	13553-13567 kHz	60 dBµA/m at 10 m	No requirement	See note 3	ECC Report 208	EN 300 330	For Radio Frequency Identification (RFID) only
k1	148.5-5000 kHz	-5 dBµA/m at 10 m in total -15 dBµA/m at 10 m per 10 kHz (see also Table 9bis)	No requirement	Not specified		EN 300 330, EN 300 422	In case of external antennas only loop coil antennas may be employed.
k2	5000 kHz-30 MHz	-5 dBµA/m at 10 m in total -20 dBµA/m at 10 m per 10 kHz	No requirement	Not specified		EN 300 330, EN 300 422	In case of external antennas only loop coil antennas may be employed.

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

Stations	Frequency	Protection bandwidth	Maximum field strength at 10 m	Location
MSF	60 kHz	+/-250Hz	42 dBµA/m	United Kingdom
HBG	75 kHz	+/-250Hz	42 dBµA/m	Switzerland
DCF77	77.5 kHz	+/-250Hz	42 dBµA/m	Germany
DCF49	129.1 kHz	+/-500Hz	42 dBµA/m	Germany
ALS162	162 kHz	+/-250Hz	-15 dBµA/m	France

Additional Information

Technical parameters also referred to in the harmonised standard

Note 1: Sub-band a0):

The antenna size is described by the distance between those two points on the antenna that have the largest distance between them (e.g. for a rectangle shaped antenna the largest diagonal; for a circular shaped antenna the diameter).

Sub-bands a1) and a3):

In case of loop antennas used within bands a1) and a3) integral or dedicated within an area between 0.05 m² and 0.16 m², the field strength is reduced by 10 x log (area/0.16 m²); for an antenna area less than 0.05 m² the field strength is reduced by 10 dB.

Note 2: Sub-band a3):

Radio Frequency Identification (RFID) 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.

Note 3: Sub-bands i) and j):
Devices operating in the 13.56 MHz band shall meet the transmission mask and antenna requirements for all combined frequency segments, including the limits in the sub-bands k1) and k2), as described in harmonised standard EN 300 330. This will permit the simultaneous use of the sub-bands i) or j) together with the limits of the sub-bands k1) and k2).

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

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.

Sub-band a0):
Some administrations do not regulate use below 9 kHz, but the provided limits allow usage on a non-interfering basis. See national implementation status (Appendix 1).

ANNEX 10: RADIO MICROPHONE APPLICATIONS INCLUDING ASSISTIVE LISTENING DEVICES (ALD), PERSONAL CORDLESS AUDIO DEVICES

Scope of Annex

This annex covers frequency bands and regulatory as well as informative parameters recommended for radio microphones, both hand-held and body-worn, (also referred to as wireless microphones or cordless microphones), in-ear monitors, Assistive Listening Devices (ALD) (also referred to as aids for the hearing impaired) and personal cordless audio devices. Whenever this Annex refers to radio microphones this also includes in-ear monitors.

Radio microphones are small, low power (typically 50 mW or less) transmitters designed to be worn on the body, or hand-held, for the transmission of sound. The receivers are tailored to specific uses and may range from small and portable to rack mounted modules as part of a multichannel system. Assistive Listening Devices (ALD) are specific radio microphone applications which capture an acoustic signal that is transmitted by radio to the hearing aid receivers.

It also covers Band II low power FM transmitters operating in the FM Broadcast band 87.5 MHz to 108 MHz which are used for the provision of an RF link between a personal audio device, including mobile phone, and the in-car or home entertainment system.

Assistive Listening Systems (ALS) are for use by the hearing impaired in public spaces such as airports, railway stations, churches and theatres, where the transmitter is connected to the audio programme or public address system and the Assistive Listening Devices (ALD) receiver is worn by hearing-impaired users, or integrated into users' hearing aids.

Frequency band limits for radio microphones should be regarded as tuning ranges within which a device can be designated to operate. In most cases, Appendix 2 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: • Assistive Listening Devices (ALD): sub-bands c1), c2), d) and g); • Radio microphones: sub-bands a1), e), f1), f3), f4), f5), f6), g),h1), h2), h3) and j); • Personal cordless audio devices: sub-band g); • Band II low power FM transmitters: sub-band a2); • Assistive Listening Systems (ALS): sub-band i); • Inductive loop systems intended to assist the hearing impaired: sub-bands a0).

Table 10: Regulatory parameters

Frequency Band		Power / Magnetic Field	Spectrum access and mitigation requirements	Modulation / occupied bandwidth	ECC/ERC Deliverable	ETSI ENs	Notes
a0	100 Hz-9 kHz	120 dBµA/m at 10 m	No requirement	Not specified		EN 303 348	Inductive loop systems intended to assist the hearing impaired. Antenna size of < 1/20 λ (see note 3)
a1	29.7-47 MHz	10 mW e.r.p.	No requirement	≤ 50 kHz		EN 300 422	Radio microphones. On a tuning range basis. Individual licence may be required
a2	87.5-108 MHz	50 nW e.r.p.	No requirement	≤ 200 kHz		EN 301 357	Band II low power FM transmitters (see note 4)
c1	169.4-169.475 MHz	500 mW e.r.p.	No requirement	Not specified	ECC/DEC/(05)02	EN 300 422	Assistive Listening Device (ALD)

Frequency Band		Power / Magnetic Field	Spectrum access and mitigation requirements	Modulation / occupied bandwidth	ECC/ERC Deliverable	ETSI ENs	Notes
c2	169.4875-169.5875 MHz	500 mW e.r.p.	No requirement	Not specified	ECC/DEC/(05)02	EN 300 422	Assistive Listening Device (ALD)
d	173.965-216 MHz	10 mW e.r.p.	See Notes 1 and 2	Not specified	ECC Report 230	EN 300 422	Assistive Listening Device (ALD). On a tuning range basis. Individual licence may be required
e	174-216 MHz	100 mW e.i.r.p.	No requirement	Not specified		EN 300 422	Radio microphones. On a tuning range basis. Individual licence may be required
f1	470-694 MHz	100 mW e.i.r.p.	No requirement	Not specified		EN 300 422	Radio microphones. On a tuning range basis. Individual licence may be required
f3	821.5-826 MHz	20 mW e.i.r.p. / 100 mW e.i.r.p.	No requirement	Not specified		EN 300 422	Radio microphones. Individual licence may be required. 100 mW restricted to body-worn equipment
f4	826-832 MHz	100 mW e.i.r.p.	No requirement	Not specified		EN 300 422	Radio microphones. Individual licence may be required
f5	694-703 MHz	100 mW e.i.r.p.	No requirement	Not specified		EN 300 422	Radio microphones. On a tuning range basis. Individual licence may be required
f6	733-757.5 MHz	20 mW e.i.r.p. / 100 mW e.i.r.p.	No requirement	Not specified		EN 300 422	Radio microphones. On a tuning range basis. Individual licence may be required. 100 mW restricted to body-worn equipment
g	863-865 MHz	10 mW e.r.p.	No requirement	Not specified		EN 301 357, EN 300 422	Radio microphones and personal cordless audio devices. The frequency band is also identified in Annex 1
h1	1350-1400 MHz	20 mW e.i.r.p. / 50 mW e.i.r.p.	No requirement	Not specified		EN 300 422	Radio microphones. Individual licence may be required. 50 mW restricted to body-worn equipment or equipment implementing Spectrum Scanning Procedure (SSP)
h2	1492-1518 MHz	50 mW e.i.r.p	No requirement	Not specified		EN 300 422	Radio microphones. On a tuning range basis. Individual licence required. Restricted to indoor use

Frequency Band		Power / Magnetic Field	Spectrum access and mitigation requirements	Modulation / occupied bandwidth	ECC/ERC Deliverable	ETSI ENs	Notes
h3	1518-1525 MHz	50 mW e.i.r.p.	No requirement	Not specified		EN 300 422	Radio microphones. On a tuning range basis. Individual licence required. Restricted to indoor use
i	1656.5-1660.5 MHz	2 mW/ 600 kHz e.i.r.p	No requirement	Not specified	ECC Report 270	EN 300 422	Assistive Listening Systems. Individual licence may be required. See conditions in ECC Report 270, annex 4
j	1785-1805 MHz	20 mW e.i.r.p. / 50 mW e.i.r.p.	No requirement	Not specified		EN 300 422	Radio microphones. Individual licence may be required. 50 mW restricted to body-worn equipment or equipment implementing Spectrum Scanning Procedure (SSP)

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

Additional Information

Technical parameters also referred to in the harmonised standard
Note 3: Sub-band a0):
The antenna size is described by the distance between those two points on the antenna that have the largest distance between them (e.g. for a rectangle shaped antenna the largest diagonal; for a circular shaped antenna the diameter).

Note 4: Sub-band a2):
The user interface of these devices 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. Low power FM transmitters should be designed so that when audio signals are not present, there should be no transmission of an RF carrier and the device must implement a transmission time out facility. Pilot tones that ensure continuity of transmission are not permitted.

Frequency issues
Sub-band d):
ECC Report 230 provides information on Assistive Listening Devices (ALD) frequency issues in the frequency band 174-216 MHz including an example for an on-site measurement procedure. It should be noted that Assistive Listening Devices (ALD) applications may need to move in frequency if changes in the use of the broadcast radio service take place.

Sub-band h2):
This frequency band is identified for the introduction of mobile/fixed communication networks supplemental downlink (MFCN SDL) in ECC/DEC/(17)06. National administrations may authorise radio microphones in the band as long as they will not have introduced mobile/fixed communication networks (MFCN).

ANNEX 11: RADIO FREQUENCY IDENTIFICATION APPLICATIONS

Scope of Annex

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

Table 11: Regulatory parameters

Frequency Band		Power / Magnetic Field	Spectrum access and mitigation requirements	Modulation / occupied bandwidth	ECC/ERC Deliverable	ETSI ENs	Notes
a	865-868 MHz	2 W e.r.p. (note 1)	(note 4)	≤ 200 kHz		EN 302 208	Operation only when necessary to perform the intended operation, i.e. when RFID tags are expected to be present. The frequency band is also identified in Annexes 1, 2 and 3.
b	915-919.4 MHz	4 W e.r.p. (note 2)	No requirement	≤ 400 kHz		EN 302 208	(note 5) Operation only when necessary to perform the intended operation, i.e. when RFID tags are expected to be present. The frequency band is also identified in Annexes 1, 2 and 3.
c1	2446-2454 MHz	≤ 500 mW e.i.r.p.	No requirement	Not specified		EN 300 440	
c2	2446-2454 MHz	> 500 mW to 4 W e.i.r.p	≤ 15% duty cycle FHSS techniques should be used	Not specified		EN 300 440	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)

Note 1: Interrogator transmissions in sub-band a) at 2 W e.r.p. are only permitted within the four channels centred at 865.7 MHz, 866.3 MHz, 866.9 MHz and 867.5 MHz; each with a maximum bandwidth of 200 kHz. RFID tags respond at a very low power level (-20 dBm e.r.p.) in a frequency range around the RFID interrogator channels.

Note 2: Interrogator transmissions in sub-band b) at 4 W e.r.p, are only permitted within the three channels centred at 916.3 MHz, 917.5 MHz and 918.7 MHz; each with a maximum bandwidth of 400 kHz. RFID tags respond at a very low power level (-10 dBm e.r.p.) in a frequency range around the RFID interrogator channels.

Note 3: not used

Note 4: The maximum period of continuous interrogator transmission on a channel shall not exceed 4s and the period between consecutive transmissions of an interrogator on the same channel shall be at least 100ms in order to ensure most efficient use of available channels for the general benefit of all users.

Note 5: In some countries, usage may be limited such that installation and operation are performed only by professional users and individual authorisation may be required, e.g. to administer geographical sharing and/ or the application of mitigation techniques to ensure protection of radio services.

Additional Information

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 302 208.

Sub-band c2):
In addition, antenna beamwidth limits shall be observed as described in the standard EN 300 440.

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

Frequency issues
Sub-band b):
Use of all or part of the sub-band b) may be limited or not authorised in some countries that use all or part of this sub-band for defence/governmental systems. Further, some countries use the sub-band 918-921 MHz as extended GSM-R frequency band; therefore geographical restrictions may apply. See Appendices 1 and 2 for national implementation concerning extended GSM-R and defence/governmental services.

National rules, such as local coordination, may also be needed in order to avoid interference to radio services operating in the adjacent bands.

Sub-band c2):
To assist enforcement authorities any emissions from an RFID device when measured outside of the building at a distance of 10 metres shall not exceed the field strength from a 500 mW RFID device mounted outside the building when measured at the same distance. Where a building consists of a number of premises, such as shops within a shopping arcade or Mall then the measurements shall be referenced to the boundary of the user’s premises within the building.

ANNEX 12: ACTIVE MEDICAL IMPLANTS AND THEIR ASSOCIATED PERIPHERALS

Scope of Annex

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

Table 12: Regulatory parameters

Frequency Band		Power / Magnetic Field	Spectrum access and mitigation requirements	Modulation / occupied bandwidth	ECC/ERC Deliverable	ETSI ENs	Notes
a	9-315 kHz	30 dBµA/m at 10 m	≤ 10% duty cycle	Not specified		EN 302 195	For Ultra Low Power Active Medical Implants (ULP-AMI) using inductive loop techniques for telemetry purposes
b	30-37.5 MHz	1 mW e.r.p.	≤ 10% duty cycle	Not specified		EN 302 510	For Ultra Low Power Medical Membrane Implants (ULP-MMI) for blood pressure measurements
c	2483.5-2500 MHz	10 dBm e.i.r.p.	LBT+AFA ≤ 10% duty cycle for peripherals	≤ 1 MHz		EN 301 559	For Low Power Active Medical Implants (LP-AMI). The whole frequency band may also be used dynamically as a single channel to maintain a communications session. Peripheral units are for indoor use only. The frequency band is also identified in Annexes 12 and 13.
d1	401-402 MHz	*	*	*	ERC/DEC/(01)17	EN 302 537	For Ultra Low Power Active Medical Implant (ULP-AMI) communication systems. * See detailed requirements in the related ERC Decision
d2	402-405 MHz	*	*	*	ERC/DEC/(01)17	EN 301 839	For Ultra Low Power Active Medical Implant (ULP-AMI) communication systems. * See detailed requirements in the related ERC Decision
d3	405-406 MHz	*	*	*	ERC/DEC/(01)17	EN 302 537	For Ultra Low Power Active Medical Implant (ULP-AMI) communication systems. * See detailed requirements in the related ERC Decision

Frequency Band		Power / Magnetic Field	Spectrum access and mitigation requirements	Modulation / occupied bandwidth	ECC/ERC Deliverable	ETSI ENs	Notes
e	315-600 kHz	-5 dBµA/m at 10 m	≤ 10% duty cycle	Not specified		EN 302 536	For animal implants. The frequency band is also identified in Annex 9.
f	12500-20000 kHz	-7 dBµA/m at 10 m per 10 kHz	≤ 10% duty cycle	Not specified		EN 300 330	For Ultra Low Power active Animal Implants Devices (ULP-AID), limited to indoor use only. The frequency band is also identified in Annex 9.
g	42-56 MHz	0.01 mW e.r.p.	No requirements	14 MHz		EN 300 422	For Low Power Hearing Implant (LP HI) systems including cochlear implant systems
h	2000-3000 kHz	10 dBµA/m at 10 m	No requirements	Not Specified		EN 304 661 (in development)	For Low Power Hearing Implant (LP HI) systems including cochlear implant systems
i	3900-5900 kHz	10 dBµA/m at 10 m	No requirements	Not Specified		EN 304 661 (in development)	For Low Power Hearing Implant (LP HI) systems including cochlear implant systems

Additional Information

Technical parameters also referred to in the harmonised standard
Sub-band f):
The transmission mask of ULP-AID is defined as follows: 3 dB bandwidth 300 kHz, 10 dB bandwidth 800 kHz, 20 dB bandwidth 2 MHz.

Frequency issues
Sub-band g):
The specific subset of ETSI EN 300 422 for Cochlear Implants is in development.

ANNEX 13: MEDICAL DATA ACQUISITION

Scope of Annex

This annex covers frequency bands and regulatory as well as informative parameters recommended for medical data acquisition applications. They cover transmission of non-voice data to and from non-implantable medical devices for the purpose of monitoring, diagnosing and treating patients in healthcare facilities or patient's home, as prescribed by duly authorised healthcare professionals, including:

- Ultra-Low Power Wireless Medical Capsule Endoscopy (ULP-WMCE) application designed for use in medical doctor-patient scenarios with the aim of acquiring images of human digestive tract;
- Medical Body Area Network System (MBANS) for low-power wireless networking of a plurality of body-worn sensors and/or actuators as well as of a hub device placed on/ around the human body.

Active Medical Implants and their associated peripherals are included in Annex 12 of this Recommendation.

Table 13: Regulatory parameters

Frequency Band		Power / Magnetic Field	Spectrum access and mitigation requirements	Modulation / occupied bandwidth	ECC/ERC Deliverable	ETSI ENs	Notes
a	430-440 MHz	-50 dBm/100 kHz max e.r.p. density but not exceeding a total power of -40 dBm/10 MHz (both limits are intended for measurement outside of the patient's body)	No requirement	≤ 10 MHz		EN 303 520	Ultra-Low Power Wireless Medical Capsule Endoscopy (ULP-WMCE)
b1	2483.5-2500 MHz	1 mW e.i.r.p.	Adequate spectrum sharing mechanisms (e.g. Listen-Before-Talk and Adaptive Frequency Agility) shall be implemented by the equipment and ≤ 10% duty cycle	≤ 3 MHz		EN 303 203	Medical Body Area Network Systems (MBANS), indoor only within healthcare facilities. The frequency band is also identified in Annex 12

Frequency Band		Power / Magnetic Field	Spectrum access and mitigation requirements	Modulation / occupied bandwidth	ECC/ERC Deliverable	ETSI ENs	Notes
b2	2483.5-2500 MHz	10 mW e.i.r.p.	Adequate spectrum sharing mechanisms (e.g. Listen-Before-Talk and Adaptive Frequency Agility) shall be implemented by the equipment and ≤ 2% duty cycle	≤ 3 MHz		EN 303 203	Medical Body Area Network Systems (MBANS), indoor only within the patient's home. The frequency band is also identified in Annex 12

Additional Information

Technical parameters also referred to in the harmonised standard
No information

Frequency issues
Sub-bands b1) and b2):
Medical Body Area Network Systems (MBANS) equipment shall implement a spectrum access mechanism as described in the applicable harmonised European standard EN 303 203 or an equivalent spectrum access mechanism. Based on the assumptions used in ECC Report 201, the modulation bandwidth for MBANS shall not exceed 3 MHz.

ANNEX A: INFORMATIVE ANNEX COVERING THE APPLICATIONS OPERATING UNDER GENERAL AUTHORISATION REGIME WHICH ARE NOT COVERED BY THE ANNEXES 1 TO 13 OF THIS RECOMMENDATION

Scope of Annex

This annex covers information about terrestrial applications which are not included in Annexes 1 to 13 and for which frequency ranges are designated in ERC/ECC Decisions, and which are authorised by CEPT administrations under general authorisation (license-exempt regulation). The regulatory status of these radio applications, which may be different to the regulatory status of SRD, are defined by the relevant ERC/ECC Decisions.

Related national implementation information and national restrictions are provided within the Appendices 1 and 2.

These applications are authorised under a general authorisation regime (exempted from individual licensing) and therefore protection of individual radio stations/radio equipment cannot be ensured. This is also the case for the applications covered by Annexes 1 to 13. With regard to potential new future applications, sharing and compatibility analysis for all of the concerned services and applications are to be studied and will look at the potential for interference in both directions in order to give a clear view on any future sharing environment. The regulatory status of both, the relevant radio application for which a spectrum designation already exists in a frequency band and the potential new radio application, needs to be taken into account. Such new equipment in a frequency band should implement an adequate spectrum sharing mechanism, since there is non-exclusive access to spectrum, in order to facilitate sharing between the various technologies and applications in the respective frequency band. Such new applications should only be allowed to operate when the mandatory features required in the respective ERC/ECC Decision are implemented, or any other mechanism providing a similar level of mitigation.

Table 14: Regulatory parameters

Frequency Band		Power / Magnetic Field	Spectrum access and mitigation requirements	Modulation / occupied bandwidth	ECC/ERC Deliverable	ETSI ENs	Notes
a	26960-27410 kHz	*	*	*	ECC/DEC/(11)03	EN 300 433	For Citizens' Band (CB) radio equipment. * See detailed requirements in the related ECC Decision
c	446-446.2 MHz	*	*	*	ECC/DEC/(15)05	EN 303 405	For analogue and digital PMR 446 applications. * See detailed requirements in the related ECC Decision
d	1880-1900 MHz	*	*	*	ERC/DEC/(94)03 ERC/DEC/(98)22	EN 301 406	For DECT (Digital European Cordless Telecommunications) systems. * See detailed requirements in the related ERC Decisions
e1	5150-5350 MHz	*	*	*	ECC/DEC/(04)08	EN 301 893	For Wireless Access Systems including Radio Local Area Networks (WAS/RLANs). * See detailed requirements in the related ECC Decision

Frequency Band		Power / Magnetic Field	Spectrum access and mitigation requirements	Modulation / occupied bandwidth	ECC/ERC Deliverable	ETSI ENs	Notes
e2	5470-5725 MHz	*	*	*	ECC/DEC/(04)08	EN 301 893	For Wireless Access Systems including Radio Local Area Networks (WAS/RLANs). * See detailed requirements in the related ECC Decision
f	5875-5935 MHz	*	*	*	ECC/DEC/(08)01	EN 302 571	For Intelligent Transportation Systems (traffic safety applications). * See detailed requirements in the related ECC Decision
g	63.72-65.88 GHz	*	*	*	ECC/DEC/(09)01	EN 302 686	For Intelligent Transportation Systems
h	77-81 GHz	*	*	*	ECC/DEC/(04)03	EN 302 264	For Automotive Short Range Radars. * See detailed requirements in the related ECC Decision
i	5945-6425 MHz	*	*	*	ECC/DEC/(20)01	EN 303 687	For Wireless Access Systems including Radio Local Area Networks (WAS/RLAN)

Additional Information

Technical parameters also referred to in the harmonised standard
No information

Frequency issues
No Information

ANNEX B: INFORMATIVE ANNEX COVERING REFERENCES TO LEGACY BANDS THAT HAVE BEEN REMOVED FROM OR ALTERED IN THE MAIN ANNEXES OF ERC/REC 70-03

Scope of Annex

This annex covers information about entries previously contained in the Annexes 1 to 13 of ERC Recommendation 70-03 and that have been subsequently removed, but are still in use and/or covered by national regulations within CEPT countries. Until the entries in this Annex are withdrawn, CEPT administrations may continue to authorise the use of these bands on a national level but they should refrain from introducing new SRD uses in these bands. Related national implementation information and national restrictions are provided within the Appendices 1 and 3. This annex does not provide the full overview of the evolution.

Entries have been transferred to this annex as they have been removed, for various reasons, from the main annexes. These reasons are:

- lack of demand: devices are still in use in some CEPT countries;
- change of recommended band: CEPT no longer recommends the use of this band, but it is still in use in some CEPT countries.

Table 15: Regulatory parameters

Name	Former annex and row	Frequency Band	Power / Magnetic Field	Spectrum access and mitigation requirements	Modulation / occupied bandwidth	Historical Notes	ETSI ENs	Date of entry in Annex B	Reason entry was moved to Annex B
b	**ANNEX 10 b**	169.4-174 MHz	10 mW e.r.p.	No requirement	Not specified	Assistive Listening Device (ALD). On a tuning range basis	EN 300 422	14/02/2025	Lack of demand, See also entry in Edition of October 2006
a1	**ANNEX 11 a1**	865-865.6 MHz	100 mW e.r.p.	No requirement	≤ 200 kHz	(note 3)	EN 302 208	14/02/2025	Change of recommended band since May 2016, See also entry in Edition of October 2004
a2	**ANNEX 11 a2**	865.6-867.6 MHz	2 W e.r.p.	No requirement	≤ 200 kHz	(note 3)	EN 302 208	14/02/2025	Change of recommended band since May 2016, See also entry in Edition of October 2004
a3	**ANNEX 11 a3**	867.6-868 MHz	500 mW e.r.p.	No requirement	≤ 200 kHz	(note 3)	EN 302 208	14/02/2025	Change of recommended band since May 2016, See also entry in Edition of October 2004

Name	Former annex and row	Frequency Band	Power / Magnetic Field	Spectrum access and mitigation requirements	Modulation / occupied bandwidth	Historical Notes	ETSI ENs	Date of entry in Annex B	Reason entry was moved to Annex B
c2	**ANNEX 2 c2**	874.4-875.6 MHz (partly)	500 mW e.r.p.	≤ 10% duty cycle for network access points ≤ 2.5% duty cycle otherwise Adaptive Power Control (APC) required (note 2)	≤ 200 kHz	Data networks (notes 3, 4 and 5). All nomadic and mobile devices within the data network shall be controlled by a master network access point (NAP). APC is able to reduce the equipment's ERP from its maximum to ≤ 5 mW.	EN 303 204	14/02/2025	Change of recommended band, See also entry in Edition of February 2014
h2	**ANNEX 1 h2**	874.4-876 MHz (partly)	25 mW e.r.p.	≤ 1% duty cycle. For ER-GSM protection (873-876 MHz, where applicable): the duty cycle is limited to ≤ 0.01% and to a maximum transmit on time of 5 ms/1 s	≤ 600 kHz	For new implementations, administrations are encouraged to follow the technical conditions for SRD in data networks (see Annex 2).	EN 300 220	14/02/2025	Change of recommended band. See also entry in Edition of February 2019
h3	**ANNEX 1 h3**	919.4-921 MHz (partly)	25 mW e.r.p. except within the RFID channel identified in note 6 where 100 mW e.r.p. applies	≤ 1% duty cycle. For ER-GSM protection (918-921 MHz, where applicable): the duty cycle is limited to ≤ 0.01% and to a maximum transmit on time of 5ms/1s	≤ 600 kHz except within the RFID channel identified in note 6 where ≤ 400 kHz applies	For new implementations, administrations are encouraged to follow the technical conditions for SRD in data networks (see Annex 2).	EN 300 220	14/02/2025	Change of recommended band. See also entry in Edition of February 2019
b	**ANNEX 11 b**	919.7-920.1 MHz (partly)	4 W e.r.p. (note 7)	No requirement	≤ 400 kHz	(note 5) Operation only when necessary to perform the intended operation, i.e. when RFID tags are expected to be present.	EN 302 208	14/02/2025	Change of recommended band. See also entry in Edition of February 2014

Note 1: RFID interrogator devices placed on the market before the repeal date of EC Decision 2006/804/EC are 'grandfathered', i.e. they are continuously permitted to be used in line with the provisions set out in EC Decision 2006/804/EC before the repeal date.
Note 2: Alternatively, other mitigation techniques which achieve at least an equivalent level of spectrum compatibility.
Note 3: A network access point in a data network is a fixed terrestrial short range device that acts as a connection point for the other short range devices in the data network to service platforms located outside of that data network. The term data network refers to several short range devices, including the network access point, as network components and to the wireless connections between them.
Note 4: Individual authorisation or additional mitigation techniques (e.g. LBT) may be applied to NAP in areas with a high number of NAP.
Note 5: In some countries, usage may be limited such that installation and operation are performed only by professional users and individual authorisation may be required, e.g. to administer geographical sharing and/ or the application of mitigation techniques to ensure protection of radio services.

Note 6: The available channel centre frequency is 919.9 MHz. The channel bandwidth is 400 kHz.
Note 7: RFID tags respond at a very low power level (-10 dBm e.r.p.) in a frequency range around the RFID interrogator channel.

Additional Information

Technical parameters also referred to in the harmonised standard
Sub-bands c):
EN 303 204 includes for network access points the requirement to implement LBT.

Frequency issues
Sub-bands c) to f):
Use of all or part of sub-bands c) to f) may be limited or not authorised for SRD in data networks in some countries where the sub-bands are used for defence / governmental systems. Further, some countries use the sub-bands 873-876 MHz and 918-921 MHz as extended GSM-R frequency bands; therefore restrictions (e.g. geographical) may apply.

RMR has been harmonised in 874.4-880 MHz / 919.4-925 MHz. CEPT administrations should refrain from introducing new SRD uses in 874.4-876 MHz and 919.4-921 MHz.

National rules, such as local coordination, may also be needed in order to avoid interference to radio services operating in the adjacent bands.

Sub-bands d) and e):
Access to the frequency bands 874.4-876 MHz / 919.4-921 MHz by non-specific SRD applications may require additional interference mitigation measures to be implemented such as transmission timing limitations, as set out in ECC Report 200.

CEPT administrations wishing to implement new provisions for SRD are encouraged to consider national alignment with the technical conditions for SRD in data networks, as set out in Decision 2018/1538/EU as amended, where all devices within the data network shall be under the control of a network access point (see Annex 2).

Sub-bands b1) to 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.

APPENDIX 1: NATIONAL IMPLEMENTATION

Administrations who do not prevent the use of SRD operating below 9 kHz with the regulatory parameters given in ERC Recommendation 70-03 Annex 9a0 and Annex 10a0, but do not have an authorisation regime for apparatus operating below 9 kHz, may select the implementation status “R” Not Regulated.

The CEPT country codes can be seen under https://www.cept.org/cept/cept-country-codes.

Annexes to ERC/REC 70-03	ALB	AND	AUT	AZE	BEL	BIH	BUL	CVA	CYP	CZE	D	DNK	E	EST	F	FIN	G	GEO	GRC	HNG	HOL	HRV	I	IRL	ISL	LIE	LTU	LUX	LVA	MCO	MDA	MKD	MLT	MNE	NOR	POL	POR	ROU	S	SMR	SRB	SUI	SVK	SVN	TUR	UKR
ANNEX 1: NON-SPECIFIC SHORT RANGE DEVICES																																															
Annex a: 13553-13567 kHz	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Annex b: 26957-27283 kHz	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Annex c1: 26990-27000 kHz	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N
Annex c2: 27040-27050 kHz	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N
Annex c3: 27090-27100 kHz	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N
Annex c4: 27140-27150 kHz	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N
Annex c5: 27190-27200 kHz	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N
Annex d: 40.66-40.7 MHz	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N
Annex e: 138.2-138.45 MHz	Y	N	Y	N	N	Y	Y	N	Y	Y	N	Y	N	Y	N	Y	Y	Y	Y	N	N	Y	Y	Y	Y	N	Y	Y	N	N	Y	Y	Y	Y	Y	N	Y	Y	N	N	Y	N	Y	N	Y	Y	N
Annex f1: 169.4-169.475 MHz ECC/DEC/(05)02	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	L	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	U
Annex f2: 169.4-169.4875 MHz ECC/DEC/(05)02	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N
Annex f3: 169.4875-169.5875 MHz ECC/DEC/(05)02	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N
Annex f4: 169.5875-169.8125 MHz ECC/DEC/(05)02	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N
Annex g1: 433.05-434.79 MHz	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Annex g2: 433.05-434.79 MHz	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	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Annex g3: 434.04-434.79 MHz	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	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Annex h0: 862-863 MHz	Y	?	Y	N	Y	?	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	Y	Y	Y	Y	?
Annex h1.0: 863-870 MHz	Y	Y	Y	N	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	L	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	L	?	Y	Y	Y	Y	Y	Y
Annex h1.2: 863-870 MHz	Y	Y	Y	N	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	L	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	L	?	Y	Y	Y	Y	Y	Y
Annex h1.3: 863-865 MHz	?	?	Y	N	Y	?	Y	?	?	Y	Y	Y	Y	Y	Y	Y	Y	?	Y	?	?	Y	Y	Y	Y	Y	Y	Y	P	Y	?	Y	Y	N	?	Y	?	Y	Y	Y	?	Y	Y	Y	?	Y	?
Annex h1.4: 865-868 MHz	?	?	Y	N	Y	N	Y	?	?	Y	Y	Y	Y	Y	Y	Y	Y	?	Y	?	?	L	?	Y	Y	Y	Y	Y	P	Y	?	Y	Y	N	Y	Y	?	Y	Y	Y	?	Y	Y	Y	?	Y	?
Annex h1.5: 868-868.6 MHz	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	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	?	Y	Y	Y	Y	Y
Annex h1.6: 868.7-869.2 MHz	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	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	?	Y	Y	Y	Y	N
Annex h1.7: 869.4-869.65 MHz	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	L	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	?	Y	Y	Y	Y	N
Annex h1.8: 869.7-870 MHz	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	L	Y	Y	Y	Y	Y	Y	Y	?	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	?	Y	Y	Y	Y	N
Annex h1.9: 869.7-870 MHz	?	?	Y	N	Y	N	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	?	Y	?
Annex h2: 870-874.4 MHz	Y	N	Y	N	L	N	Y	?	?	Y	N	Y	Y	Y	N	L	Y	Y	Y	Y	N	Y	Y	Y	Y	L	L	Y	N	?	Y	Y	N	Y	Y	?	Y	N	Y	?	L	L	Y	Y	N	N
Annex h3: 915-919.4 MHz	Y	N	Y	N	L	N	Y	?	?	L	N	Y	Y	Y	N	N	Y	Y	Y	Y	N	Y	?	Y	Y	L	L	Y	N	?	Y	Y	N	Y	Y	?	Y	L	Y	?	L	L	Y	Y	N	N
Highlighted yellow: ? = no info / see remarks	Highlighted yellow: N = not implemented / see remarks				Y = implemented								L = limited implementation / see remarks										P = planned							U = under study								NR = not regulated *)										

Annexes to ERC/REC 70-03	ALB	AND	AUT	AZE	BEL	BIH	BUL	CVA	CYP	CZE	D	DNK	E	EST	F	FIN	G	GEO	GRC	HNG	HOL	HRV	I	IRL	ISL	LIE	LTU	LUX	LVA	MCO	MDA	MKD	MLT	MNE	NOR	POL	POR	ROU	S	SMR	SRB	SUI	SVK	SVN	TUR	UKR
Annex i: 2400-2483.5 MHz	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Annex j: 5725-5875 MHz	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Annex k1: 3100-4800 MHz ECC/DEC/(06)04	?	?	Y	N	Y	Y	Y	?	Y	Y	L	Y	Y	Y	L	Y	P	Y	?	Y	Y	Y	?	Y	Y	Y	?	Y	N	?	Y	Y	Y	Y	Y	?	U	Y	Y	Y	Y	Y	Y	?	?	?
Annex k2: 6000-9000 MHz ECC/DEC/(06)04	?	?	Y	N	Y	Y	Y	?	Y	Y	L	Y	Y	Y	L	Y	P	Y	?	Y	Y	Y	?	Y	Y	Y	?	Y	N	?	Y	Y	Y	Y	Y	?	U	Y	Y	Y	Y	Y	Y	?	?	?
Annex l: 6000-8500 MHz ECC/DEC/(12)03	Y	N	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	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	N	N
Annex m: 24-24.25 GHz	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	L	Y	L	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	L	?	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Annex n1: 57-64 GHz	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	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	N
Annex n2: 61-61.5 GHz	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	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 o1: 122-122.25 GHz	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	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 o2: 122.25-123 GHz	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	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 p: 244-246 GHz	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	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 2: TRACKING, TRACING AND DATA ACQUISITION																																														
Annex a1: 442.2-450 kHz	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	Y	N	Y	Y	?	Y	Y	Y		Y	Y	Y	Y	Y	
Annex a2: 456.9-457.1 kHz	Y	Y	Y	N	Y	Y	Y		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	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
Annex b: 169.4-169.475 MHz ECC/DEC/(05)02	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	L	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	U
Annex c1: 865-868 MHz	Y		Y	N	Y	Y	Y		Y	Y	Y	Y	Y	Y	Y	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	
Annex c2: 870-874.4 MHz	Y	N	Y	N	L	Y	Y		Y	Y	N	Y	Y	Y	L	Y	Y	Y		Y	P	U	U	Y	Y	L	L	Y	N	Y	Y	Y	?	Y	Y	P	L	L	Y		L	L	Y	Y	N	N
Annex c3: 917.3-918.9 MHz			Y	N	Y	N	Y		?	Y	N	Y	Y	Y	Y	Y	Y	Y			N	Y	L	?	Y	L	Y	U	N	?	Y	Y	Y	Y	Y	?	Y	Y	Y		?	L	Y	Y	N	
Annex c4: 915-919.4 MHz			Y	N	L	N	Y		?	L	N	?	Y	Y	L	Y	L	Y			N	Y	?	?	Y	L	L	U	N	?	Y	Y	?	Y	Y	?	L	L	Y		?	L	Y	Y	N	
Annex d: 5725-5875 MHz	Y		L	N	Y	Y	Y		Y	Y	N	Y	Y	Y	N	N	N	Y			P	N	Y	?	Y	N	N	Y	N	?	Y	Y	N	Y	N	?	N	Y	N		Y	N	Y	Y	N	
ANNEX 3: WIDEBAND DATA TRANSMISSION SYSTEMS																																													
Annex a1: 863-868 MHz	Y		Y	N	Y	Y	Y		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	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 a2: 915.8-919.4 MHz			Y	N	Y	N	L			Y	N	Y	N	Y	L	L	L	?			N	Y	L	Y	Y	U	L	U	N		Y	Y	?	Y	Y		Y	L	Y		N	U	Y	Y	L	
Annex b: 2400-2483.5 MHz	Y	Y	Y	L	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	L	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	L
Annex c1: 57-71 GHz	Y	Y	Y	N	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	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N
Annex c2: 57-71 GHz ECC Report 288			Y	N	Y	N	Y			Y	Y	Y	Y	Y	Y	Y	Y	Y			P	Y	Y	Y	Y	Y	Y	U	Y		N	Y	Y	Y	Y		Y	Y	Y		N	Y	Y	Y	Y	
Annex c3: 57-71 GHz ECC Report 288			Y	N	Y	N	Y			Y	Y	Y	Y	Y	Y	Y	Y	Y			P	Y	Y	Y	Y	Y	Y	U	Y		N	Y	Y	Y	Y		Y	Y	Y		N	Y	Y	Y	Y	
Annex d: 1910-1920 MHz															P																																
ANNEX 4: RAILWAY APPLICATIONS																																														
Annex a: 984-7484 kHz	Y	Y	Y	N	Y	N	Y		Y	Y	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	Y	Y	Y	N
Annex b: 7300-23000 kHz	Y	Y	Y	N	Y	N	Y		Y	Y	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	Y	Y	Y	N
Annex c: 27090-27100 kHz	Y	Y	Y	N	Y	N	Y		Y	Y	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	Y	Y	Y	N
Annex d: 76-77 GHz	Y	Y	Y	N	Y	N	Y		Y	Y	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	Y	Y	Y	N
ANNEX 5: TRANSPORT AND TRAFFIC TELEMATICS (TTT)																																													
Annex a: 5795-5805 MHz	Y	Y	Y	N	Y	Y	Y		Y	Y	Y	Y	Y	Y	Y	Y	L	L	Y	Y	Y	L	Y	Y	Y	L	Y	Y	L		Y	Y	Y	Y	L	Y	Y	Y	Y	Y	L	Y	Y	Y	N
Annex b: 5805-5815 MHz	Y	Y	Y	N	Y	Y	Y		Y	Y	Y	Y	Y	Y	Y	Y	L	L	Y	Y	Y	L	Y	Y	Y	L	Y	Y	L	Y	Y	Y	Y	Y	L	Y	Y	Y	Y	Y	L	Y	Y	?	N
Annex c1: 21.65-26.65 GHz ECC/DEC/(04)10	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	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	N

Highlighted yellow: ? = no info / see remarks

Highlighted yellow: N = not implemented / see remarks

Y = implemented

L = limited implementation / see remarks

P = planned

U = under study

NR = not regulated *)

Annexes to ERC/REC 70-03	ALB	AND	AUT	AZE	BEL	BIH	BUL	CVA	CYP	CZE	D	DNK	E	EST	F	FIN	G	GEO	GRC	HNG	HOL	HRV	I	IRL	ISL	LIE	LTU	LUX	LVA	MCO	MDA	MKD	MLT	MNE	NOR	POL	POR	ROU	S	SMR	SRB	SUI	SVK	SVN	TUR	UKR
Annex c2: 24.25-26.65 GHz **ECC/DEC/(04)10**	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N
Annex d1: 24.05-24.075 GHz	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Annex d2: 24.075-24.15 GHz	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Annex d3: 24.075-24.15 GHz	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Annex d4: 24.075-24.15 GHz	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Annex d5: 24.15-24.25 GHz	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Annex e1: 76-77 GHz **ECC Report 262**	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	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 e2: 76-77 GHz **ECC/DEC/(16)01**	Y		Y	N	Y	Y	Y		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y		Y	Y	Y	Y	Y	Y	Y	Y	Y	U	Y	Y	Y	Y	Y	
Annex f: 5855-5875 MHz **ECC/REC/(08)01**			Y	N	Y	N				Y	Y	Y	N	Y	P	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	
ANNEX 6: RADIODETERMINATION APPLICATIONS																																													
Annex a: 30 MHz-12.4 GHz **ECC/DEC/(06)08**	Y	U	L	N	U	Y	Y	N	U	Y	Y	Y	Y	Y	L	Y	Y	N	N	Y	Y	Y	N	Y	Y	Y	U	Y	N		Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	N	N
Annex b: 2200-8500 MHz **ECC/DEC/(07)01**	Y	L	Y	N	Y	Y	Y	?	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	L	Y	Y	Y	L	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	L	Y	Y	Y	N	N
Annex c: 2400-2483.5 MHz	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	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 d: 3100-4800 MHz **ECC/REC/(11)09**	Y	Y	U	N	Y	Y	N		?	Y	N	Y	Y	Y	N	N	Y	N	?	Y	N	N	Y	N	Y	U	N	Y	N		N	Y	?	Y	N		U	Y	Y	?	Y	U	Y	Y	N	
Annex e: 3100-4800 MHz **ECC/REC/(11)10**	Y	Y	U	N	U	Y	N		?	Y	N	Y	Y	Y	N	N	Y	N	?	Y	N	N	?	N	Y	U	N	Y	N		N	Y	?	Y	N		U	Y	Y	?	Y	U	Y	Y	N	
Annex f1: 4500-7000 MHz	Y	Y	Y	N	Y	Y	Y	?	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	U
Annex f2: 8500 MHz-10.6 GHz	Y	Y	Y	Y	Y	Y	Y	?	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	U
Annex f3: 24.05-27 GHz	Y	Y	Y	Y	Y	Y	Y		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	L
Annex f4: 57-64 GHz	Y	Y	Y	Y	Y	Y	Y		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	U
Annex f5: 75-85 GHz	Y	Y	Y	Y	Y	Y	Y		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	L
Annex g1: 6000-8500 MHz **ECC/DEC/(11)02**	Y	Y	Y	N	Y	Y	Y		Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	L	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	U	Y	Y	N
Annex g2: 24.05-26.5 GHz **ECC/DEC/(11)02**	Y	Y	Y	N	Y	Y	Y		Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	L	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	U	Y	Y	N
Annex g3: 57-64 GHz **ECC/DEC/(11)02**	Y	Y	Y	N	Y	Y	Y		Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	L	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	U	Y	Y	N
Annex g4: 75-85 GHz **ECC/DEC/(11)02**	Y	Y	Y	N	Y	Y	Y		Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	L	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	U	Y	Y	N
Annex h: 9200-9500 MHz	Y	N	Y	N	Y	Y	Y		Y	Y	Y	Y	Y	Y	N	N	L	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y		Y	Y	Y	Y	Y	Y	Y	Y	N	N	Y	Y	Y	Y	Y	U
Annex i: 9500-9975 MHz	Y	N	Y	N	Y	Y	Y		Y	Y	N	Y	Y	Y	L	Y	L	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y		Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	N	Y	Y	U
Annex j: 10.5-10.6 GHz	Y	Y	Y	N	Y	Y	Y		Y	N	Y	Y	Y	N	L	L	L	Y	Y	L	Y	Y	Y	L	Y	Y	Y	L	Y		Y	Y	Y	Y	Y	Y	Y	Y	L	Y	Y	Y	Y	Y	Y	L
Annex k: 13.4-14 GHz	Y	N	Y	N	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	Y	Y	N	Y	Y	Y	N	Y	Y	U
Annex l: 17.1-17.3 GHz	Y	Y	Y	N	Y	Y	Y		Y	Y	Y	Y	Y	Y	Y	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	N
Annex m: 24.05-24.25 GHz	Y	Y	Y	N	Y	Y	Y		Y	Y	Y	Y	Y	Y	L	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	Y	Y	N	Y
Annex n1: 100 Hz-148 kHz			Y	N	Y	N	N		?	Y	Y	Y	N	Y	L	Y	?	L	?	?	P	Y	Y	?	Y	Y	?	U	L		Y	Y	?	Y	Y		Y	Y	U		?	Y	Y	Y	Y	
Annex n2: 148-5000 kHz			Y	N	Y	N	N		?	Y	Y	Y	N	Y	Y	Y	?	L	?	?	P	Y	Y	?	Y	Y	Y	U	Y		Y	Y	Y	Y	Y		Y	Y	U		?	Y	Y	Y	Y	
Annex n3: 5000 kHz-30 MHz			Y	N	Y	N	N		?	Y	Y	Y	N	Y	Y	Y	?	L	?	?	P	Y	Y	?	Y	Y	?	U	Y		Y	Y	Y	Y	Y		Y	Y	U		?	Y	Y	Y	Y	
Annex n4: 30-130 MHz			Y	N	Y	N	N		?	Y	Y	Y	N	Y	Y	Y	?	L	?	?	P	Y	Y	?	Y	Y	?	U	Y		Y	Y	Y	Y	Y		Y	Y	U		?	Y	Y	Y	Y	
Annex o: 76-77 GHz **ECC/DEC/(21)02**			U	N	U	Y	?		P	Y	Y	Y	N	Y	Y	Y	P	Y	?	P	P	N	Y	Y	Y	Y	?	U	Y		Y	Y	N	Y	Y		U	P	Y		Y	Y	Y	Y	?	
Annex p: 116-260 GHz **ECC/DEC/(22)03**			U	N		Y			U	P	Y	L	Y	Y	P	N	P	Y	?		P	N		Y	Y	U	U	U	N		Y	Y	N	Y	U		U	N	?		?	U	Y		N	
Annex q: 69.8-79.9 GHz			U	N		?			?	Y	Y	Y	?	Y	P	Y	Y	Y	?		P	N		?	Y	Y	?	U	Y		N	Y	Y	Y	U		?	P	?		?	Y	U		?	

Highlighted yellow: ? = no info / see remarks	Highlighted yellow: N = not implemented / see remarks	Y = implemented	L = limited implementation / see remarks	P = planned	U = under study	NR = not regulated *)
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Annexes to ERC/REC 70-03	ALB	AND	AUT	AZE	BEL	BIH	BUL	CVA	CYP	CZE	D	DNK	E	EST	F	FIN	G	GEO	GRC	HNG	HOL	HRV	I	IRL	ISL	LIE	LTU	LUX	LVA	MCO	MDA	MKD	MLT	MNE	NOR	POL	POR	ROU	S	SMR	SRB	SUI	SVK	SVN	TUR	UKR
Annex r1: 76.5-80.5 GHz			U	N		?			?	Y	Y	Y	?	Y	P	Y	Y	Y	?		P	N		?	Y	U	?	U	Y		N	Y	Y	Y	U		U	P	?		?	U	U		?	
Annex r2: 76.5-80.5 GHz			U			?					U	N					P								?	U	?					U		Y			U					U				?	
ANNEX 7: ALARMS																																															
Annex a: 868.6-868.7 MHz	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	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 b: 869.2-869.25 MHz	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	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 c: 869.25-869.3 MHz	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N
Annex d: 869.3-869.4 MHz	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N
Annex e: 869.65-869.7 MHz	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	U
ANNEX 8: MODEL CONTROL																																														
Annex a1: 26990-27000 kHz	Y	Y	Y	N	Y	Y	Y		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	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 a2: 27040-27050 kHz	Y	Y	Y	N	Y	Y	Y		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	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 a3: 27090-27100 kHz	Y	Y	Y	N	Y	Y	Y		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	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 a4: 27140-27150 kHz	Y	Y	Y	N	Y	Y	Y		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	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 a5: 27190-27200 kHz	Y	Y	Y	N	Y	Y	Y		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	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 b: 34.995-35.225 MHz ERC/DEC/(01)11	Y	Y	Y	N	Y	Y	Y		Y	Y	Y	Y	L	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	Y	Y	Y	Y	Y	Y
Annex c1: 40.66-40.67 MHz ERC/DEC/(01)12	Y	Y	Y	N	Y	Y	Y		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	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 c2: 40.67-40.68 MHz ERC/DEC/(01)12	Y	Y	Y	N	Y	Y	Y		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	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 c3: 40.68-40.69 MHz ERC/DEC/(01)12	Y	Y	Y	N	Y	Y	Y		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	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 c4: 40.69-40.7 MHz ERC/DEC/(01)12	Y	Y	Y	N	Y	Y	Y		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	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 a0: 100 Hz-9 kHz			U	N	Y	N	NR		Y	Y	NR	Y	L	Y	Y	Y	?	Y			P	N	Y	Y	Y	U	Y	P	Y		Y	Y	L	Y	Y	P	Y	Y	NR		Y	U	Y	Y	N	
Annex a1: 9-90 kHz	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	L	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	L
Annex a2: 90-119 kHz	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Annex a3: 119-135 kHz	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Annex b: 135-140 kHz	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	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 c: 140-148.5 kHz	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	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 d: 400-600 kHz	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	U
Annex e: 3155-3400 kHz	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	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 f: 6765-6795 kHz	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	?	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N
Annex g: 7400-8800 kHz	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	?	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N
Annex h: 10200-11000 kHz	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	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 i: 13553-13567 kHz	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N
Annex j: 13553-13567 kHz ECC Report 208	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	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
Annex k1: 148.5-5000 kHz	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	U
Annex k2: 5000 kHz-30 MHz	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N
ANNEX 10: RADIO MICROPHONE APPLICATIONS INCLUDING ASSISTIVE LISTENING DEVICES (ALD), PERSONAL CORDLESS AUDIO DEVICES																																														
Annex a0: 100 Hz-9 kHz			U	N	Y	N	NR		L	Y	NR	Y	N	Y	Y	Y	?	Y			P	N	Y	?	Y	U	Y	P	Y		Y	Y	?	Y	Y	P	Y	Y	NR		Y	U	Y	Y	N	

Highlighted yellow: ? = no info / see remarks	Highlighted yellow: N = not implemented / see remarks	Y = implemented	L = limited implementation / see remarks
P = planned	U = under study	NR = not regulated *)	

Annexes to ERC/REC 70-03	ALB	AND	AUT	AZE	BEL	BIH	BUL	CVA	CYP	CZE	D	DNK	E	EST	F	FIN	G	GEO	GRC	HNG	HOL	HRV	I	IRL	ISL	LIE	LTU	LUX	LVA	MCO	MDA	MKD	MLT	MNE	NOR	POL	POR	ROU	S	SMR	SRB	SUI	SVK	SVN	TUR	UKR
Annex a1: 29.7-47 MHz	Y	L	L	L	Y	Y	Y		Y	L	L	Y	L	L	L	L	N	L	L	L	Y	N	L	Y	Y	L	L	L	N	Y	Y	Y	L	Y	L	Y	N	L	L	L	Y	L	Y	Y	Y	L
Annex a2: 87.5-108 MHz	Y	Y	Y	N	Y	Y	Y		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	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
Annex c1: 169.4-169.475 MHz ECC/DEC/(05)02	Y	Y	Y	N	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	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	U
Annex c2: 169.4875-169.5875 MHz ECC/DEC/(05)02	Y	Y	Y	N	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	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	U
Annex d: 173.965-216 MHz ECC Report 230	Y		Y	N	Y	?	Y		Y	Y	Y	Y	L	Y	Y	L	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	?	
Annex e: 174-216 MHz	Y	L	Y	L	Y	Y	Y		Y	Y	Y	L	L	Y	Y	L	Y	Y	Y	Y	Y	N	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	L	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	L
Annex f1: 470-694 MHz	Y	Y	Y	L	Y	Y	L		Y	Y	L	Y	L	Y	Y	L	Y	Y	L	Y	Y	N	L	Y	Y	L	L	Y	Y	Y	Y	Y	L	Y	L	L	L	Y	Y	L	Y	L	Y	Y	L	L
Annex f3: 821.5-826 MHz	Y	Y	L	L	Y	Y	Y		Y	L	Y	Y	Y	Y	L	Y	Y	L	Y	Y	Y	L	Y	Y	Y	Y	L	Y	Y	N	Y	Y	Y	Y	Y	L	Y	L	L	Y	L	Y	Y	Y	N	N
Annex f4: 826-832 MHz	Y	Y	Y	L	Y	Y	Y		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	L	Y	Y	N	Y	Y	Y	Y	Y	L	Y	Y	L	Y	Y	Y	Y	Y	N	N
Annex f5: 694-703 MHz			L	N						N	L	?		N	P	N	P	Y			?	N			?	N	?	N	N		N	Y	N	Y	L		U	N			Y	N	N			
Annex f6: 733-757.5 MHz			L	N						L	L	?		N	P	N	P	Y			?	N			?	N	?	N	N		N	Y	N	Y	U		U	N			Y	N	N			
Annex g: 863-865 MHz	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	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Annex h1: 1350-1400 MHz	Y		L	L	N	Y	Y		?	N	Y	?	N	N	P	N	P	Y	N		?	N	?	Y	N	Y	N	N	Y	N	Y	Y	N	Y	N	?	N	N	?		Y	Y	N	Y	N	
Annex h2: 1492-1518 MHz	Y	N	Y	N	N	Y	Y		N	N	Y	N	N	N	N	N	L	Y	N	N	Y	N	Y	Y	N	N	L	Y	N	N	N	Y	N	Y	N	N	N	N	N	N	Y	N	N	Y	N	N
Annex h3: 1518-1525 MHz	Y		Y	Y	N	Y	Y		?	N	L	N	N	N	P	L	Y	Y	N	N	Y	N	?	N	N	N	L	N	N	N	Y	Y	N	Y	N	N	N	N	?		Y	N	N	Y	N	
Annex i: 1656.5-1660.5 MHz ECC Report 270	Y		U	N	N	N	Y		?	N	N	Y	N	N	N	N	P	Y			N	N	?	Y	N	U	?	N	Y		Y	Y	?	Y	N	?	N	Y	?		Y	U	Y	Y	N	
Annex j: 1785-1805 MHz	Y	Y	Y	L	Y	Y	Y		Y	Y	Y	Y	Y	Y	Y	Y	Y	L	Y	Y	Y	L	Y	Y	Y	Y	L	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	U
ANNEX 11: RADIO FREQUENCY IDENTIFICATION APPLICATIONS																																														
Annex a: 865-868 MHz	Y	Y	Y	N	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	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	U
Annex b: 915-919.4 MHz	Y	N	Y	N	L	N	Y		Y	Y	N	Y	Y	Y	Y	Y	Y	Y	N	Y	N	Y	L	Y	Y	L	L	L	Y		Y	Y	Y	Y	Y	N	L	L	Y	N	Y	L	Y	Y	Y	U
Annex c1: 2446-2454 MHz	Y	Y	Y	N	Y	Y	Y		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	U
Annex c2: 2446-2454 MHz	Y	Y	Y	N	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	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	U
ANNEX 12: ACTIVE MEDICAL IMPLANTS AND THEIR ASSOCIATED PERIPHERALS																																													
Annex a: 9-315 kHz	Y	Y	Y	N	Y	Y	Y		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	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 b: 30-37.5 MHz	Y	Y	Y	N	Y	Y	Y		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	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 c: 2483.5-2500 MHz	Y	Y	Y	N	Y	Y	Y		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N
Annex d1: 401-402 MHz ERC/DEC/(01)17			Y	N	Y	Y			Y	Y	Y	Y	Y	Y	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 d2: 402-405 MHz ERC/DEC/(01)17			Y	N						Y	Y	Y		Y	Y	Y	Y	Y							?	Y		Y	Y		Y	Y	?	Y			Y	Y				Y				
Annex d3: 405-406 MHz ERC/DEC/(01)17			Y	N						Y	Y	Y		Y	Y	Y	Y	Y							?	Y		Y	Y		Y	Y	?	Y			Y	Y				Y				
Annex e: 315-600 kHz			Y	N	Y				?	Y	Y	Y		Y	P	Y	Y	Y			Y	U		?	Y	Y		Y	Y		N	Y	Y	Y	U		N	P	?		Y	Y	Y	Y		
Annex f: 12500-20000 kHz			Y	N	Y				?	Y	Y	Y		Y	P	Y	Y	Y			Y	U		Y	Y	Y		Y	Y		N	Y	Y	Y	U		N	P	?		Y	Y	Y	Y		
Annex g: 42-56 MHz			?							?	P	?			P		P								?	?					Y	U		U			U					?				
Annex h: 2000-3000 kHz																																														
Annex i: 3900-5900 kHz																																														
ANNEX 13: MEDICAL DATA ACQUISITION																																														
Annex a: 430-440 MHz	Y		Y	N	Y	Y	Y			Y	Y	Y		Y	Y	Y	Y	Y			P	Y	Y	?	?	Y	Y	P	Y		Y	Y		Y	Y		Y	Y	Y		Y	Y	Y	Y	Y	
Annex b1: 2483.5-2500 MHz	Y		Y	N	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	Y	Y	Y	Y		Y	Y	Y	Y	Y	N

Highlighted yellow: ? = no info / see remarks

Highlighted yellow: N = not implemented / see remarks

Y = implemented

L = limited implementation / see remarks

P = planned

U = under study

NR = not regulated *)

Annexes to ERC/REC 70-03	ALB	AND	AUT	AZE	BEL	BIH	BUL	CVA	CYP	CZE	D	DNK	E	EST	F	FIN	G	GEO	GRC	HNG	HOL	HRV	I	IRL	ISL	LIE	LTU	LUX	LVA	MCO	MDA	MKD	MLT	MNE	NOR	POL	POR	ROU	S	SMR	SRB	SUI	SVK	SVN	TUR	UKR
Annex b2: 2483.5-2500 MHz	Y		Y	N	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	Y	Y	Y		Y	Y	Y	Y	Y	N
ANNEX A: INFORMATIVE ANNEX COVERING THE APPLICATIONS OPERATING UNDER GENERAL AUTHORISATION REGIME WHICH ARE NOT COVERED BY THE ANNEXES 1 TO 13 OF THIS RECOMMENDATION																																													
Annex a: 26960-27410 kHz **ECC/DEC/(11)03**	Y	Y	Y	L	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	L	Y	L	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	L
Annex c: 446-446.2 MHz **ECC/DEC/(15)05**	Y	Y	Y	N	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	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	L	L
Annex d: 1880-1900 MHz **ERC/DEC/(94)03** **ERC/DEC/(98)22**	Y	Y	Y	Y	Y	Y	Y	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	Y	Y	Y	Y	Y	Y	Y
Annex e1: 5150-5350 MHz **ECC/DEC/(04)08**	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Annex e2: 5470-5725 MHz **ECC/DEC/(04)08**	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Annex f: 5875-5935 MHz **ECC/DEC/(08)01**			Y	N	P	Y			P	Y	Y	Y	Y	Y	L	Y	Y	Y			P	Y		P	Y	L	U	P	Y		Y	Y	L	Y	P		U	Y	?			L	Y	Y	P	
Annex g: 63.72-65.88 GHz **ECC/DEC/(09)01**	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	P
Annex h: 77-81 GHz **ECC/DEC/(04)03**	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Annex i: 5945-6425 MHz **ECC/DEC/(20)01**			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		U	Y	Y		?	Y	Y	Y	P	
ANNEX B: INFORMATIVE ANNEX COVERING REFERENCES TO LEGACY BANDS THAT HAVE BEEN REMOVED FROM OR ALTERED IN THE MAIN ANNEXES OF ERC/REC 70-03																																													
Highlighted yellow: ? = no info / see remarks	Highlighted yellow: N = not implemented / see remarks	Y = implemented	L = limited implementation / see remarks	P = planned	U = under study	NR = not regulated *)																																								

APPENDIX 2: NATIONAL RESTRICTIONS

Appendix 2 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:
a. Implemented: If the Appendix entry is blank then Recommendation 70-03 has been fully implemented.
b. Limited implementation: A short explanation can be provided. If under study or planned, then a date should be given.
c. Not implemented: A short explanation can be provided. If under study or planned, then a date should be given.
d. No information: No information has yet been provided by the administration.

Frequency Band	Country	Implementation	Reason/remarks
All annexes	Albania		Frequencies covered by ERC/REC 70-03 are implemented through the notes of the National Frequency Table, for each band mentioned in 70-03
	Germany		Clarification of the terms contained in the table reference to the German Telecommunications Act of 22 June 2004: The use of frequencies or frequency bands for the operation of transmitting equipment requires "frequency assignment". There are two types of frequency assignments: individual frequency assignments are granted upon application and correspond to "individual license required" within the meaning of ERC/REC 70-03; general frequency assignments are granted ex officio by administrative act, published in the Federal Network Agency's Official Gazette and correspond to "individual license not required" within the meaning of ERC/REC 70-03
	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 devices 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 RE Directive.
	Lithuania		Radio frequencies may be used without an individual authorization if the relevant radio frequency or radio frequency band is included in the Electronic Communication Resources regulation, approved by Decision No. TN-339 of 3 June 2025 of the Communications Regulatory Authority.

Frequency Band	Country	Implementation	Reason/remarks
	Moldova		Telecommunication equipment and cables are imported commercialized only on basis of conformity certificates issued by the Telecommunication Products Certification Body of Moldova and must be marked in Moldova. It is not permitted to utilise non-certificated and non-marked telecommunication equipment and cables. Subject to the above all SRD frequency bands with technical parameters indicated in ERC REC 70-03 are permitted on secondary basis. In accordance with Law of Telecommunications of Republic of Moldova. Decision Nr. 126 dated 02.06.2009 of the Administrative Council of the National Regulatory Agency for electronic Communications and Information Technology of the Republic of Moldova, owners of short range radiocommunication devices have the right to use several categories of frequencies in compliance with the ERC/REC 70-03 without obtaining a license for the use of radio frequencies/channels or a technical permit
	Norway		The Regulations do not apply to frequencies in the range of 2 GH–32 GHz in the geographic area within a 20 km radius of the centre of Ny-Ålesund at Svalbard. All licence exempt use prohibited in this area within this frequency band.
	Sweden		The following applies for usage of 915 - 919.4 MHz (annex 11b): Usage are based on licenses, and all usages which follow the conditions according to the EU 2018/1538 are guaranteed to get licenses.
	Türkiye		Pursuant to the By-law on Radio Devices and Systems Exempt from Frequency Assignment published in the Official Gazette no. 30608 and dated 27/11/2018 the “Technical Criteria regarding Radio Devices and Systems Exempt from Frequency Assignment” is published on ICTA’s website and is being updated periodically. (https://www.btk.gov.tr/uploads/regulations/frekans-tahsisinden-muaf-telsiz-cihaz-sistemleri-olcutler.pdf).
ANNEX 1: NON-SPECIFIC SHORT RANGE DEVICES Band D 40.66-40.7 MHz	Ireland	implemented	This frequency band is also identified in Table 8.
ANNEX 1: NON-SPECIFIC SHORT RANGE DEVICES Band E 138.2-138.45 MHz	France	not implemented / see remarks	Military use
	Germany	not implemented / see remarks	not available
	Hungary	not implemented / see remarks	Aeronautical mobile applications operate in the band
	Italy	implemented	Military application
	Latvia	not implemented / see remarks	Exclusive defence systems

Frequency Band	Country	Implementation	Reason/remarks
	Netherlands	not implemented / see remarks	Exclusive defence systems
	Poland	not implemented / see remarks	Military application
	Slovakia	implemented	In general authorisation for N-SRD (2022)
	Spain	not implemented / see remarks	Military applications. See national note UN-19 in the NTAF
	Switzerland	not implemented / see remarks	Exclusive defence systems
ANNEX 1: NON-SPECIFIC SHORT RANGE DEVICES Band F1 169.4-169.475 MHz	Ireland	implemented	For metering devices, the duty cycle limit is 10,0%
ANNEX 1: NON-SPECIFIC SHORT RANGE DEVICES Band G1 433.05-434.79 MHz	Portugal	implemented	Analogue audio applications other than voice are excluded. Analogue video applications are excluded
ANNEX 1: NON-SPECIFIC SHORT RANGE DEVICES Band G2 433.05-434.79 MHz	Ireland	implemented	Voice applications are allowed with a maximum bandwidth of 25 kHz, with a spectrum access technique such as LBT or equivalent and a maximum transmit period of 1 minute for each transmission. Other audio/video applications are excluded.
ANNEX 1: NON-SPECIFIC SHORT RANGE DEVICES Band H1.0 863-870 MHz (notes 2 and 6)	Ireland	implemented	Frequency bands for alarms are excluded.
ANNEX 1: NON-SPECIFIC SHORT RANGE DEVICES Band H1.2 863-870 MHz (notes 2 and 6)	Ireland	implemented	Frequency bands for alarms are excluded.
ANNEX 1: NON-SPECIFIC SHORT RANGE DEVICES Band H1.3 863-865 MHz (note 6)	Ireland	implemented	Requirements on techniques to access spectrum and mitigate interference apply.

Frequency Band	Country	Implementation	Reason/remarks
ANNEX 1: NON-SPECIFIC SHORT RANGE DEVICES Band H1.4 865-868 MHz (note 6)	Ireland	implemented	Requirements on techniques to access spectrum and mitigate interference apply.
ANNEX 1: NON-SPECIFIC SHORT RANGE DEVICES Band H1.5 868-868.6 MHz (note 6)	Ireland	implemented	Requirements on techniques to access spectrum and mitigate interference apply.
ANNEX 1: NON-SPECIFIC SHORT RANGE DEVICES Band H1.6 868.7-869.2 MHz (note 6)	Ireland	implemented	Requirements on techniques to access spectrum and mitigate interference apply.
ANNEX 1: NON-SPECIFIC SHORT RANGE DEVICES Band H1.7 869.4-869.65 MHz (note 6)	Ireland	implemented	Requirements on techniques to access spectrum and mitigate interference apply.
ANNEX 1: NON-SPECIFIC SHORT RANGE DEVICES Band H1.8 869.7-870 MHz (note 6)	Ireland	implemented	Voice applications are allowed with a maximum bandwidth of 25 kHz, with a spectrum access technique such as LBT or equivalent and a maximum transmit period of 1 minute for each transmission. Other audio/voice applications are excluded.
ANNEX 1: NON-SPECIFIC SHORT RANGE DEVICES Band H1.9 869.7-870 MHz (note 6)	Ireland	implemented	Requirements on techniques to access spectrum and mitigate interference apply.
ANNEX 1: NON-SPECIFIC SHORT RANGE DEVICES Band H2 870-874.4 MHz	Belgium	limited implementation / see remarks	870-873 MHz
	Finland	limited implementation / see remarks	Limited to 870-873 MHz
	Germany	not implemented / see remarks	not available
	Hungary	implemented	With ER-GSM protection

Frequency Band	Country	Implementation	Reason/remarks
	Liechtenstein	limited implementation / see remarks	limited to 870-873 MHz. (ER-GSM protection)
	Spain	implemented	See national note UN-40 in the NTAF
	Sweden	implemented	Usage are based on licenses and the license will be granted based on current PTS regulations and EU Commission Decision (EU 2025/650).
	Switzerland	limited implementation / see remarks	Limited to 870 - 873 MHz. (ER-GSM protection)
	United Kingdom	implemented	The Additional restrictions to protect ER-GSM apply in the UK
ANNEX 1: NON-SPECIFIC SHORT RANGE DEVICES Band H3 915-919.4 MHz	Belgium	limited implementation / see remarks	915-918MHz
	Czech Republic	limited implementation / see remarks	Implemented in the 915.2-919.4 MHz band. In the 915-915.2 MHz range, duty cycle is limited to 0.1%. See General Authorisation VO-R/10/07.2021-8, art. 3, bands i1, i2.
	Germany	not implemented / see remarks	not available
	Hungary	implemented	With ER-GSM protection
	Liechtenstein	limited implementation / see remarks	"25 mW limited to 915.2 - 918 MHz: ER-GSM protection. (100 mW 400 kHz BW limted to center freq. 916.3 and 917.5 MHz.)"
	Romania	limited implementation / see remarks	Implementation limited to 917.4-919.4 MHz
	Spain	implemented	See national note UN-40 in the NTAF
	Sweden	implemented	Usage are based on licenses and the license will be granted based on current PTS regulations and EU Commission Decision (EU 2025/650).
	Switzerland	limited implementation / see remarks	25 mW limited to 915.2 - 918 MHz. (ER-GSM protection.) (100 mW 400 kHz BW limted to center freq. 916.3 and 917.5 MHz.)
	United Kingdom	implemented	The Additional restrictions to protect ER-GSM apply in the UK
ANNEX 1: NON-SPECIFIC SHORT RANGE DEVICES Band K1 3100-4800 MHz	Bulgaria	implemented	According to Commission implementing decision (EU) 2019/785
	France	limited implementation / see remarks	Limited to former ECC/DEC/(06)04 of 2019. Pending Arcep decision.
	Germany	limited implementation / see remarks	2007/131/EC is implemented as Vfg. 135/2019. It will updated in accordance with the upcoming new EC Harmonisation of UWB.

Frequency Band	Country	Implementation	Reason/remarks
	Hungary	implemented	Waiting for EU harmonisation. Version of 8 March 2019 of ECC/DEC/(06)04 implemented by Decree No. 7/2015 (XI.13.)NMHH on the national frequency allocation and the rules of using frequency bands.
	Latvia	not implemented / see remarks	(this decision is included in Annex 4 ((Information on Compliance to International Provisions of Utilization of Radiofrequency Spectrum) of the Regulations issued by the Cabinet of Ministers (https://m.likumi.lv/doc.php?id=338729), but it s not included in Annex 1 (Radio Frequency Allocation Table).
	Montenegro	implemented	Implemented through reference in the National Frequency Allocation Table and in the Rulebook on radio-frequencies and the condition under they can be used without individual authorisation
	Slovakia	implemented	In general authorisation for UWB (2023)
	Spain	implemented	Implemented through reference in the NTFA
ANNEX 1: NON-SPECIFIC SHORT RANGE DEVICES **Band K2** **6000-9000 MHz**	Bulgaria	implemented	According to Commission implementing decision (EU) 2019/785
	France	limited implementation / see remarks	Limited to former ECC/DEC/(06)04 of 2019. Pending Arcep decision.
	Germany	limited implementation / see remarks	2007/131/EC is implemented as Vfg. 135/2019. It will updated in accordance with the upcoming new EC Harmonisation of UWB.
	Hungary	implemented	Waiting for EU harmonisation. Version of 8 March 2019 of ECC/DEC/(06)04 implemented by Decree No. 7/2015 (XI.13.)NMHH on the national frequency allocation and the rules of using frequency bands.
	Latvia	not implemented / see remarks	(this decision is included in Annex 4 ((Information on Compliance to International Provisions of Utilization of Radiofrequency Spectrum) of the Regulations issued by the Cabinet of Ministers (https://m.likumi.lv/doc.php?id=338729), but it s not included in Annex 1 (Radio Frequency Allocation Table).
	Montenegro	implemented	Implemented through reference in the National Frequency Allocation Table and in the Rulebook on radio-frequencies and the condition under they can be used without individual authorisation
	Slovakia	implemented	In general authorisation for UWB (2023)
	Spain	implemented	Implemented through reference in the NTFA

Frequency Band	Country	Implementation	Reason/remarks
	Ukraine	no info / see remarks	Under study for 3.1-4.8 GHz
ANNEX 1: NON-SPECIFIC SHORT RANGE DEVICES Band M 24-24.25 GHz	France	limited implementation / see remarks	Limited to 0.1 mW e.i.r.p. in 24.10-24.15 GHz
	United Kingdom	limited implementation / see remarks	Only 24.150-24.250 GHz to protect police speed meters
ANNEX 2: TRACKING, TRACING AND DATA ACQUISITION Band A1 442.2-450 kHz	Belgium	implemented	Non specific short rage device as in 2019/1345
	Slovakia	implemented	In general authorisation for N-SRD (2022)
ANNEX 2: TRACKING, TRACING AND DATA ACQUISITION Band A2 456.9-457.1 kHz	Ukraine	limited implementation / see remarks	The maximal strength of magnetic field is 7 dBµA/m on distance of 10 m from a construction where the radiator is placed
ANNEX 2: TRACKING, TRACING AND DATA ACQUISITION Band B 169.4-169.475 MHz	Slovakia	implemented	169.4-169.475 MHz meter reading devices.
ANNEX 2: TRACKING, TRACING AND DATA ACQUISITION Band C1 865-868 MHz (note 4)	Serbia	limited implementation / see remarks	Broadcasting is permitted only within the following RF bands: 865.6-865.8 MHz, 866.2-866.4 MHz, 866.8-867.0 MHz and 867.4-867.6 MHz.
ANNEX 2: TRACKING, TRACING AND DATA ACQUISITION Band C2 870-874.4 MHz	Belgium	limited implementation / see remarks	(870-873 MHz)
	France	limited implementation / see remarks	Limited to 874-874.4 MHz
	Germany	not implemented / see remarks	not available
	Hungary	implemented	With ER-GSM protection
	Italy	under study	870-874 MHz: NOT IMPLEMENTED 874-874.4 MHz: UNDER STUDY (according to footnote 6 of decision (EU)2018/1538)
	Liechtenstein	limited implementation / see remarks	Limited to 870-873 MHz. (ER-GSM Protection)
	Portugal	limited implementation / see remarks	Available from 874 to 874.4 MHz as defined in EU Decision 2018/1538
	Romania	limited implementation / see remarks	Implementation limited to 874.0-874.4 MHz

Frequency Band	Country	Implementation	Reason/remarks
	Slovakia	implemented	874 – 874,4 MHz In general authorisation for N-SRD (2022)
	Spain	implemented	See national note UN-40 in the NTAF
	Sweden	implemented	Usage are based on licenses and the license will be granted based on current PTS regulations and EU Commission Decision (EU 2025/650).
	Switzerland	limited implementation / see remarks	Limited to 870-873 MHz. (ER-GSM Protection)
ANNEX 2: TRACKING, TRACING AND DATA ACQUISITION Band C3 917.3-918.9 MHz (Note 6)	Belgium	implemented	Non specific short range device as in 2018/1538
	Finland	implemented	Non-specific SRD for data networks as in the Commission decision (EU) 2018/1538
	Italy	limited implementation / see remarks	Implemented only band 917,4-919,4 MHz
	Liechtenstein	limited implementation / see remarks	Limited to 917.3 - 917.7 MHz. (ER-GSM protection)
	Slovakia	implemented	In general authorisation for N-SRD (2022)
	Spain	implemented	See national note UN-40 in the NTAF
	Sweden	implemented	Usage are based on licenses and the license will be granted based on current PTS regulations and EU Commission Decision (EU 2025/650).
	Switzerland	limited implementation / see remarks	Limited to 917.3 - 917.7 MHz. (ER-GSM protection)
ANNEX 2: TRACKING, TRACING AND DATA ACQUISITION Band C4 915-919.4 MHz	Belgium	limited implementation / see remarks	(915-918 MHz)
	Czech Republic	limited implementation / see remarks	Limited to 915.8-919.4 MHz.
	Denmark	no info / see remarks	Included in Annex 1, h.3
	France	limited implementation / see remarks	Limited to 917.4-919.4 MHz Will be extended down to 916.1 MHz
	Liechtenstein	limited implementation / see remarks	Limited to 915 - 918 MHz. (ER-GSM protection)
	Portugal	limited implementation / see remarks	Available from 917.4 to 919.4 MHz as defined in EU Decision 2018/1538
	Romania	limited implementation / see remarks	Implementation limited to 917.4-919.4 MHz
	Slovakia	implemented	917,4 – 919,4 MHz In general authorisation for broadband net. (2022)
	Spain	implemented	See national note UN-40 in the NTAF

Frequency Band	Country	Implementation	Reason/remarks
	Sweden	implemented	Usage are based on licenses and the license will be granted based on current PTS regulations and EU Commission Decision (EU 2025/650).
	Switzerland	limited implementation / see remarks	Limited to 915 - 918 MHz. (ER-GSM protection)
ANNEX 2: TRACKING, TRACING AND DATA ACQUISITION Band D 5725-5875 MHz	Austria	limited implementation / see remarks	only in 5815 - 5850 MHz and light licencing regime apply
	Romania	implemented	Implemented through reference in the NTFA
ANNEX 3: WIDEBAND DATA TRANSMISSION SYSTEMS Band A1 863-868 MHz	Ireland	implemented	Requirements on techniques to access spectrum and mitigate interference apply.
	Spain	implemented	NTAF UN-111
ANNEX 3: WIDEBAND DATA TRANSMISSION SYSTEMS Band A2 915.8-919.4 MHz	Bulgaria	limited implementation / see remarks	Limited to 917.4-919.4 MHz.
	Finland	limited implementation / see remarks	Limited to 917,4-919,4 MHz
	France	limited implementation / see remarks	Limited to 917.4-919.4 MHz Will be extended down to 916.4 MHz
	Italy	limited implementation / see remarks	Implemented only in band 917,4-919,4 MHz
	Romania	limited implementation / see remarks	Implementation limited to 917.4-919.4 MHz
	Spain	not implemented / see remarks	See national note UN-40 in the NTAF
	Sweden	implemented	Usage are based on licenses and the license will be granted based on current PTS regulations and EU Commission Decision (EU 2025/650).
ANNEX 3: WIDEBAND DATA TRANSMISSION SYSTEMS Band B 2400-2483.5 MHz	Azerbaijan	limited implementation / see remarks	No license needed if used indoor and power not exceeding 30 mW
	Italy	implemented	The public use is subject to general authorisation by the respective service provider
	San Marino	implemented	The public use is subject to general authorisation by the respective service provider
	Spain	implemented	NTAF UN-85
	Ukraine	limited implementation / see remarks	e.i.r.p. =100 mW with built-in antenna with amplification factor up to 6 dBi

Frequency Band	Country	Implementation	Reason/remarks
ANNEX 3: WIDEBAND DATA TRANSMISSION SYSTEMS Band C1 57-71 GHz	Bosnia and Herzegovina	limited implementation / see remarks	57-66>GHz
	Spain	implemented	See national note UN-164 in the NTAF
ANNEX 3: WIDEBAND DATA TRANSMISSION SYSTEMS Band C2 57-71 GHz	Czech Republic	implemented	Fixed outdoor installations in the 57-66 GHz band need to be registered through a web portal. See General Authorisation No. VO-R/12/11.2021-11
	Spain	implemented	See national note UN-164 in the NTAF
ANNEX 3: WIDEBAND DATA TRANSMISSION SYSTEMS Band C3 57-71 GHz	Czech Republic	implemented	Fixed outdoor installations in the 57-66 GHz band need to be registered through a web portal. See General Authorisation No. VO-R/12/11.2021-11
	Spain	implemented	See national note UN-164 in the NTAF
ANNEX 4: RAILWAY APPLICATIONS Band A 984-7484 kHz	Iceland	not implemented / see remarks	No railways
	Spain	implemented	See national note UN-120 in the NTAF
ANNEX 4: RAILWAY APPLICATIONS Band B 7300-23000 kHz	Iceland	not implemented / see remarks	No railways
	Spain	implemented	See national note UN-120 in the NTAF
ANNEX 4: RAILWAY APPLICATIONS Band C 27090-27100 kHz	Iceland	not implemented / see remarks	No railways
	Spain	implemented	See national note UN-120 in the NTAF
ANNEX 4: RAILWAY APPLICATIONS Band D 76-77 GHz	Iceland	not implemented / see remarks	No railways
	Spain	implemented	See national note UN-120 in the NTAF
ANNEX 5: TRANSPORT AND TRAFFIC TELEMATICS (TTT) Band A 5795-5805 MHz	Ireland	implemented	8W system not implemented
	Liechtenstein	limited implementation / see remarks	Annex has two power levels. Lower level with 2 W e.i.r.p. is implemented.
	Malta	implemented	Power limited to 2 W e.i.r.p. as per the lower limit of the Annex
	Norway	limited implementation / see remarks	Limited to 2 W e.i.r.p. for License exempt

Frequency Band	Country	Implementation	Reason/remarks
	Spain	implemented	NTAF UN-87
	Switzerland	limited implementation / see remarks	Annex has two power levels. Lower level with 2 W e.i.r.p. is implemented to protect defence systems
	United Kingdom	limited implementation / see remarks	2 Watts only permitted
ANNEX 5: TRANSPORT AND TRAFFIC TELEMATICS (TTT) Band B 5805-5815 MHz	Liechtenstein	limited implementation / see remarks	Annex has two power levels. Lower level with 2 W e.i.r.p. is implemented. For road toll systems only.
	Malta	implemented	Power limited to 2 W e.i.r.p. as per the lower limit of the Annex
	Norway	limited implementation / see remarks	Limited to 2 W e.i.r.p. for License exempt
	Spain	implemented	NTAF UN-87
	Switzerland	limited implementation / see remarks	Annex has two power levels. Lower level with 2 W e.i.r.p. is implemented. For road toll systems only
	United Kingdom	limited implementation / see remarks	2 Watts only permitted
ANNEX 5: TRANSPORT AND TRAFFIC TELEMATICS (TTT) Band C1 21.65-26.65 GHz	Spain	implemented	NTAF UN-133
ANNEX 5: TRANSPORT AND TRAFFIC TELEMATICS (TTT) Band C2 24.25-26.65 GHz	Spain	implemented	NTAF UN-133
ANNEX 5: TRANSPORT AND TRAFFIC TELEMATICS (TTT) Band D1 24.05-24.075 GHz	Spain	implemented	NTAF UN-87
ANNEX 5: TRANSPORT AND TRAFFIC TELEMATICS (TTT) Band D2 24.075-24.15 GHz	Liechtenstein	implemented	100 mW and no dwell time restrictions
	Spain	implemented	NTAF UN-87
	Switzerland	implemented	100 mW and no dwell time restrictions

Frequency Band	Country	Implementation	Reason/remarks
ANNEX 5: TRANSPORT AND TRAFFIC TELEMATICS (TTT) Band D3 24.075-24.15 GHz	Liechtenstein	implemented	100 mW and no dwell time restrictions
	Spain	implemented	NTAF UN-87
	Switzerland	implemented	100 mW and no dwell time restrictions
ANNEX 5: TRANSPORT AND TRAFFIC TELEMATICS (TTT) Band D4 24.075-24.15 GHz	Liechtenstein	implemented	100 mW and no dwell time restrictions
	Spain	implemented	NTAF UN-87
	Switzerland	implemented	100 mW and no dwell time restrictions
ANNEX 5: TRANSPORT AND TRAFFIC TELEMATICS (TTT) Band D5 24.15-24.25 GHz	Spain	implemented	NTAF UN-87
ANNEX 5: TRANSPORT AND TRAFFIC TELEMATICS (TTT) Band E1 76-77 GHz	Bosnia and Herzegovina	implemented	Also 77-81 GHz as per ECC/DEC(04)03 and 2004/545/EC
	Ireland	implemented	Fixed transportation infrastructure radars have to be of a scanning nature in order to limit the illumination time and ensure a minimum silent time to achieve coexistence with automotive radar systems.
	Spain	implemented	NTAF UN-87
ANNEX 5: TRANSPORT AND TRAFFIC TELEMATICS (TTT) Band E2 76-77 GHz	France	implemented	Exclusion zone around Nançay observatory
	Spain	implemented	NTAF UN-87
ANNEX 5: TRANSPORT AND TRAFFIC TELEMATICS (TTT) Band F 5855-5875 MHz	Germany	implemented	Implemented with general allocation Vfg. 47/2021
	Ireland	implemented	This set of usage conditions is only available to vehicle-vehicle, vehicle-to-infrastructure and infrastructure-to-vehicle systems.
	Montenegro	implemented	Implemented through reference in the National Frequency Allocation Table
	Spain	not implemented / see remarks	ITS systems allocated in 5875-5935 MHz band, according to NTAF note UN-144

Frequency Band	Country	Implementation	Reason/remarks
ANNEX 6: RADIODETERMINATION APPLICATIONS Band A 30 MHz-12.4 GHz	France	limited implementation / see remarks	Individual licence required in zones defined in Arcep Decision n°2011-1487
	Germany	implemented	Upon a licence application, the conditions stipulated in the Decision (06)08 will be applied for Wall-Probing Radar (WPR). Ground-Probing Radar's (GPR) are permitted with general allocation Vfg. 22/2017.
	Sweden	implemented	Upon a licence application, the conditions stipulated in the Decision (06)08 will be applied
	United Kingdom	implemented	Devices are limited to GPR only. Full implementation planned
ANNEX 6: RADIODETERMINATION APPLICATIONS Band B 2200-8500 MHz	Austria	implemented	Implementation according to Sub-class 57c
	Bulgaria	implemented	According to Commission implementing decision (EU) 2019/785
	Cyprus	implemented	The EC Decision 2019/785/EU was adopted
	Czech Republic	implemented	General Authorisation VO-R/10/07.2021-8
	Denmark	implemented	Implementation per 30 September 2007 through reference in the national table of frequency allocations and executive order (at present No 10208 of 20 September 2007)
	Estonia	implemented	Implemented through reference in "The Estonian radio frequency allocation plan"
	Germany	implemented	with general allocation Vfg. No. 135/2019
	Hungary	implemented	Decree No. 7/2015 (XI.13.)NMHH on the national frequency allocation and the rules of using frequency bands.
	Lithuania	limited implementation / see remarks	only parameters set in 2009/343/EC are allowed
	Luxembourg	implemented	Through references in Luxembourg's national table of frequency allocations
	Malta	implemented	Implemented through Decision No. MCA/D/22-4662 (Schedule 21).
	Netherlands	implemented	Exemption from individual licensing is implemented in the relevant executive order
	San Marino	limited implementation / see remarks	According to Commission Decision 2009/343/EC
	Slovakia	implemented	Material Sensing Devices.
	Sweden	implemented	Implemented through the National Frequency Allocation Table and PTS Licence Exemption Regulations

Frequency Band	Country	Implementation	Reason/remarks
ANNEX 6: RADIODETERMINATION APPLICATIONS Band C 2400-2483.5 MHz	Ukraine	implemented	e.i.r.p. =100 mW
ANNEX 6: RADIODETERMINATION APPLICATIONS Band D 3100-4800 MHz	Bosnia and Herzegovina	implemented	Implemented through reference in the NTFA
	Romania	implemented	Implemented through reference in the NTFA
ANNEX 6: RADIODETERMINATION APPLICATIONS Band E 3100-4800 MHz	Bosnia and Herzegovina	implemented	Implemented through reference in the NTFA
	Romania	implemented	Implemented through reference in the NTFA
ANNEX 6: RADIODETERMINATION APPLICATIONS Band F3 24.05-27 GHz	Ukraine	limited implementation / see remarks	Limited to 24.05-24.25 GHz
ANNEX 6: RADIODETERMINATION APPLICATIONS Band F5 75-85 GHz	Ukraine	limited implementation / see remarks	76-77 GHz with average e.i.r.p. 23.5 dBm
ANNEX 6: RADIODETERMINATION APPLICATIONS Band G1 6000-8500 MHz	Malta	implemented	In line with Commission Implementing Decision (EU)2006/771/EC as amended
	United Kingdom	implemented	Exclusion Zones to protect RAS sites apply. See ECC/DEC/(11)02
ANNEX 6: RADIODETERMINATION APPLICATIONS Band G2 24.05-26.5 GHz	France	implemented	Exclusion zone around Nançay observatory
	Malta	implemented	In line with Commission Implementing Decision (EU)2006/771/EC as amended
	United Kingdom	implemented	Exclusion Zones to protect RAS sites apply. See ECC/DEC/(11)02

Frequency Band	Country	Implementation	Reason/remarks
ANNEX 6: RADIODETERMINATION APPLICATIONS Band G3 57-64 GHz	Malta	implemented	In line with Commission Implementing Decision (EU)2006/771/EC as amended
ANNEX 6: RADIODETERMINATION APPLICATIONS Band G4 75-85 GHz	France	implemented	Exclusion zone around Nançay observatory
	Malta	implemented	In line with Commission Implementing Decision (EU)2006/771/EC as amended
ANNEX 6: RADIODETERMINATION APPLICATIONS Band H 9200-9500 MHz	United Kingdom	limited implementation / see remarks	May be used for Radar Level Gauges only
ANNEX 6: RADIODETERMINATION APPLICATIONS Band I 9500-9975 MHz	France	limited implementation / see remarks	Limited to 9880-9920 MHz. Arcep's decision to be published.
	Germany	not implemented / see remarks	Defence systems
	Italy	implemented	Implemented through the decree of Ministry of the Economic Development of 31 August 2022 and published in the Italian Official Gazette No. 214 dated 13 September 2022
	Slovakia	not implemented / see remarks	Defence systems
	United Kingdom	limited implementation / see remarks	May be used for Radar Level Gauges only
ANNEX 6: RADIODETERMINATION APPLICATIONS Band J 10.5-10.6 GHz	Estonia	not implemented / see remarks	FWA
	Finland	limited implementation / see remarks	For new equipment - power limited to 25 mW e.i.r.p. Duty Cycle 10%, limited to indoor use only. See Finnish Transport and Communications Agency Regulation 15.
	France	limited implementation / see remarks	Limited to 10.57-10.61 GHz and 20 mW e.i.r.p. Individual autorisation
	Hungary	limited implementation / see remarks	e.i.r.p. 25 mW. ENG/OB systems are protected
	Ireland	limited implementation / see remarks	Max power limitation of 25 mW to protect Fixed Wireless Access Local Area Service operating in the 10.5 GHz band

Frequency Band	Country	Implementation	Reason/remarks
	Luxembourg	limited implementation / see remarks	Limited to 25 mW, to avoid interference with other services
	Sweden	limited implementation / see remarks	Limited to 10.51-10.58 GHz
	Türkiye	implemented	Fixed Service and radiolocation
	Ukraine	limited implementation / see remarks	Limited to 10.51-10.54 GHz
	United Kingdom	limited implementation / see remarks	Limited to 10.575-10.600 GHz. Band may also be used for Radar Level Gauges
ANNEX 6: RADIODETERMINATION APPLICATIONS Band K 13.4-14 GHz	Spain	not implemented / see remarks	Due to lack of demand
ANNEX 6: RADIODETERMINATION APPLICATIONS Band L 17.1-17.3 GHz	Georgia	implemented	Lack of demand
	Serbia	limited implementation / see remarks	Specific requirements related to the antenna diagram and the application of the DAA technique are defined in the Serbian standard.
ANNEX 6: RADIODETERMINATION APPLICATIONS Band M 24.05-24.25 GHz	France	limited implementation / see remarks	No restriction for fixed installations. Otherwise limited to 0.1 mW e.i.r.p. in 24.10-24.15 GHz. FMCW modulation: limited to 20 mW mean e.i.r.p. and 50 mW peak e.i.r.p. with a minimum frequency sweep speed of 5 MHz/ms.
	United Kingdom	limited implementation / see remarks	To protect police speed meters devices operating in 24.05-24.15 GHz must employ a minimum sweep rate of 2 MHz/mS
ANNEX 6: RADIODETERMINATION APPLICATIONS Band N1 100 Hz-148 kHz	France	limited implementation / see remarks	Limited to 9-148 kHz
	Romania	implemented	Implemented through reference in the NTFA
ANNEX 6: RADIODETERMINATION APPLICATIONS Band N2 148-5000 kHz	Romania	implemented	Implemented through reference in the NTFA

Frequency Band	Country	Implementation	Reason/remarks
ANNEX 6: RADIODETERMINATION APPLICATIONS Band N3 5000 kHz-30 MHz	Romania	implemented	Implemented through reference in the NTFA
ANNEX 6: RADIODETERMINATION APPLICATIONS Band N4 30-130 MHz	Romania	implemented	Implemented through reference in the NTFA
ANNEX 6: RADIODETERMINATION APPLICATIONS Band O 76-77 GHz	Bosnia and Herzegovina	implemented	Implemented through reference in the NTFA
	Hungary	planned	Waiting for EU harmonisation.
ANNEX 6: RADIODETERMINATION APPLICATIONS Band P 116-260 GHz	Bosnia and Herzegovina	implemented	Implemented through reference in the NTFA
	Denmark	limited implementation / see remarks	Refer to Danish national frequency plan for exact bands.
	Slovakia	implemented	General authorization from 2023.
	Spain	implemented	Implemented through reference in the NTFA
ANNEX 7: ALARMS Band A 868.6-868.7 MHz	Spain	implemented	NTAF UN-39
ANNEX 7: ALARMS Band B 869.2-869.25 MHz	Spain	implemented	NTAF UN-39
ANNEX 7: ALARMS Band C 869.25-869.3 MHz	Spain	implemented	NTAF UN-39
ANNEX 7: ALARMS Band D 869.3-869.4 MHz	Spain	implemented	NTAF UN-39

Frequency Band	Country	Implementation	Reason/remarks
ANNEX 7: ALARMS **Band E** **869.65-869.7 MHz**	Spain	implemented	NTAF UN-39
ANNEX 8: MODEL CONTROL **Band A1** **26990-27000 kHz**	Spain	implemented	NTAF UN-4
ANNEX 8: MODEL CONTROL **Band A2** **27040-27050 kHz**	Spain	implemented	NTAF UN-4
ANNEX 8: MODEL CONTROL **Band A3** **27090-27100 kHz**	Spain	implemented	NTAF UN-4
ANNEX 8: MODEL CONTROL **Band A4** **27140-27150 kHz**	Spain	implemented	NTAF UN-4
ANNEX 8: MODEL CONTROL **Band A5** **27190-27200 kHz**	Spain	implemented	NTAF UN-4
ANNEX 8: MODEL CONTROL **Band B** **34.995-35.225 MHz**	France	limited implementation / see remarks	Limited to 34.995-35.055 MHz and to flying models
	Germany	implemented	Limited to 35.005-35.205 MHz. Emergency services
	Spain	limited implementation / see remarks	35.025-35.205 MHz NTAF UN-10
ANNEX 8: MODEL CONTROL **Band C1** **40.66-40.67 MHz**	Spain	implemented	NTAF UN-11
ANNEX 8: MODEL CONTROL **Band C2** **40.67-40.68 MHz**	Spain	implemented	NTAF UN-11
ANNEX 8: MODEL CONTROL **Band C3** **40.68-40.69 MHz**	Spain	implemented	NTAF UN-11

Frequency Band	Country	Implementation	Reason/remarks
ANNEX 8: MODEL CONTROL Band C4 40.69-40.7 MHz	Spain	implemented	NTAF UN-11
ANNEX 9: INDUCTIVE APPLICATIONS Band A0 100 Hz-9 kHz	Germany	not regulated *)	In the German Telecommunications Act "radio spectrum" is defined between 9 kHz and 3000 GHz. This means that in Germany spectrum below 9 kHz may be used without any requirement for a frequency authorisation (neither an individual nor a general authorisation).
	Malta	limited implementation / see remarks	In the 9-148 kHz band in accordance with 2006/771/EC
	Spain	limited implementation / see remarks	Application in the band 8.3-9 kHz according NTAF note UN-114
	Sweden	not regulated *)	The Swedish Telecommunication Act (lagen (2003:389) om elektronisk kommunikation) defines radio waves as electromagnetic waves of frequencies from 9 kHz to 3 000 GHz, propagated in space without artificial guide. Therefore, frequencies below 9 kHz are not regulated by the Telecommunication Act and, thus, are not subject to any regulations/restrictions (licence/authorisation or technical parameters).
ANNEX 9: INDUCTIVE APPLICATIONS Band A1 9-90 kHz	Latvia	limited implementation / see remarks	9-59,75 kHz
	Spain	implemented	NTAF note UN-114
	Ukraine	limited implementation / see remarks	The maximal strength of magnetic field on the distance of 10 m from a construction where the radiator is placed in the band 9-59.75 kHz is 72 dBµA/m, in the band 59.75-60.25 kHz is 42 dBµA/m, in the band 60.250-70 kHz is 69 dBµA/m, in the band 70-119 kHz is 42 dBµA/m
ANNEX 9: INDUCTIVE APPLICATIONS Band A2 90-119 kHz	Spain	implemented	NTAF note UN-114
ANNEX 9: INDUCTIVE APPLICATIONS Band A3 119-135 kHz	Spain	implemented	NTAF note UN-114
ANNEX 9: INDUCTIVE APPLICATIONS Band B 135-140 kHz	Spain	implemented	NTAF note UN-114

Frequency Band	Country	Implementation	Reason/remarks
ANNEX 9: INDUCTIVE APPLICATIONS Band C 140-148.5 kHz	Spain	implemented	NTAF note UN-114
ANNEX 9: INDUCTIVE APPLICATIONS Band D 400-600 kHz	Ireland	implemented	The maximum field strength is specified in a bandwidth of 10 kHz The maximum allowed is -5 dBµA/m at bandwidths larger than 10 kHz measured at the centre frequency, whilst keeping the density limit (-8 dBµA/m in a bandwidth of 10 kHz.) These systems should operate with a minimum operating bandwidth of 30 kHz.
	Spain	implemented	NTAF note UN-114
ANNEX 9: INDUCTIVE APPLICATIONS Band E 3155-3400 kHz	Spain	implemented	NTAF note UN-114
ANNEX 9: INDUCTIVE APPLICATIONS Band F 6765-6795 kHz	Spain	implemented	NTAF note UN-114
ANNEX 9: INDUCTIVE APPLICATIONS Band G 7400-8800 kHz	Spain	implemented	Frequency band 7350-8800 kHz NTAF note UN-114
ANNEX 9: INDUCTIVE APPLICATIONS Band H 10200-11000 kHz	Spain	implemented	NTAF note UN-114
ANNEX 9: INDUCTIVE APPLICATIONS Band I 13553-13567 kHz	Bosnia and Herzegovina	implemented	also 26957-27283 kHz, restricted at 42 dBµA/m at 10m
	Spain	implemented	NTAF note UN-114
ANNEX 9: INDUCTIVE APPLICATIONS Band J 13553-13567 kHz	Spain	implemented	NTAF note UN-114
	Ukraine	limited implementation / see remarks	The maximal strength of magnetic field on the distance of 10 m from a construction where the radiator is placed is 42 dBµA/m

Frequency Band	Country	Implementation	Reason/remarks
ANNEX 9: INDUCTIVE APPLICATIONS Band K1 148.5-5000 kHz	Ireland	implemented	The maximum field strength is specified in a bandwidth of 10 kHz. The maximum allowed field strength is-5dBµA/m at 10 m for systems operating at bandwidths larger than 10 kHz whilst keeping the density limit limit (-15 dBµA/m at 10m) Frequency band also identified in Table 6
	Spain	implemented	NTAF note UN-114
ANNEX 9: INDUCTIVE APPLICATIONS Band K2 5000 kHz-30 MHz	Spain	implemented	NTAF note UN-114
ANNEX 10: RADIO MICROPHONE APPLICATIONS INCLUDING ASSISTIVE LISTENING DEVICES (ALD), PERSONAL CORDLESS AUDIO DEVICES Band A0 100 Hz-9 kHz	Germany	not regulated *)	In the German Telecommunications Act "radio spectrum" is defined between 9 kHz and 3000 GHz. This means that in Germany spectrum below 9 kHz may be used without any requirement for a frequency authorisation (neither an individual nor a general authorisation).
	Sweden	not regulated *)	The Swedish Telecommunication Act (lagen (2003:389) om elektronisk kommunikation) defines radio waves as electromagnetic waves of frequencies from 9 kHz to 3 000 GHz, propagated in space without artificial guide. Therefore, frequencies below 9 kHz are not regulated by the Telecommunication Act and, thus, are not subject to any regulations/restrictions (licence/authorisation or technical parameters).
ANNEX 10: RADIO MICROPHONE APPLICATIONS INCLUDING ASSISTIVE LISTENING DEVICES (ALD), PERSONAL CORDLESS AUDIO DEVICES Band A1 29.7-47 MHz	Austria	limited implementation / see remarks	Only the frequencies 36.8, 36.85, 37.45, 37.50-37.55 MHz for narrow band and 36.7-37.1-44.55-45.0 MHz for broadband radio microphones are available
	Azerbaijan	limited implementation / see remarks	Whole band available, individual licence required
	Croatia	not implemented / see remarks	Defence systems
	Czech Republic	limited implementation / see remarks	Only four sub-bands allowed: 27.415-27.915 MHz 10 mW e.r.p. channel max 50 kHz. 36.4-36.65 MHz 10 mW e.r.p. channel max 50 kHz. 36.65-38.0 MHz 2 mW e.r.p. channel max 50 kHz. 38.0-38.5 MHz 10 mW e.r.p. channel max 200 kHz
	Estonia	limited implementation / see remarks	Only 37.6-38.6 MHz, max. 10 mW e.i.r.p., ch. BW 50 kHz. See Regulation of Ministry of Communication and Economical Affairs 07.10.2011 No 96. Usage of other parts of this band for PMR, control and governmental use.
	Finland	limited implementation / see remarks	only 31.1, 32.1, 32.9, 33.5, 36.7, 37.1 and 42.4-43.6 MHz with max 200 kHz channels

Frequency Band	Country	Implementation	Reason/remarks
	France	limited implementation / see remarks	Three channels of 200 kHz available centred at 32.8 MHz, 36.4 MHz and 39.2 MHz. + Under a temporary individual authorisation regime: two channels of 150 kHz available at 31.6 MHz and 31.8 MHz + one channel of 75 kHz at 38.9 MHz.
	Georgia	limited implementation / see remarks	Limited parts of the band available, individual licence required
	Germany	limited implementation / see remarks	to 32.4-38.2 MHz. Permitted channel spacing 10 kHz below 36 MHz and 40 kHz above 36 MHz
	Greece	limited implementation / see remarks	Limited to 30.00 MHz, 30.50 MHz, 31.00 MHz, 35.00 MHz, 36.50 MHz, 36.70 MHz, 37.00 MHz, 37.10 MHz, 37.50 MHz
	Hungary	limited implementation / see remarks	Limited to 34.9-38.5 MHz band is allocated
	Ireland	implemented	The frequency bands 30.3 - 30.5 MHz, 32.15 - 32.45 MHz and 41.015 - 47.00 MHz are harmonised military bands in Europe.
	Italy	limited implementation / see remarks	Military application
	Liechtenstein	limited implementation / see remarks	Limited to 10 channels in the band 31.4-39.6 MHz.
	Lithuania	limited implementation / see remarks	only 30.01-30.3 MHz, 30.5-32.15 MHz, and 32.45-37.5 MHz are allowed
	Luxembourg	limited implementation / see remarks	Excluding the use of the band 34.995-35.225 MHz
	Malta	limited implementation / see remarks	Limited to 29.7-34.9 and 37.5-40.98 MHz
	Norway	limited implementation / see remarks	Limited to 41.0-43.6 MHz max channel spacing 10 kHz. Max 100 mW e.r.p. AM not allowed
	Portugal	not implemented / see remarks	Defence systems
	Romania	limited implementation / see remarks	Only sub-bands: 29.7-30.3 MHz; 30.5-32.15 MHz; 32.45- 33.1 MHz; 33.6-34.975 MHz; 37.5- 40.02 MHz; 40.66- 41.015 MHz; 44.5- 45.2 MHz are allowed
	Slovakia	implemented	29.7 - 47 MHz band available under a general authorization. Future a1 availability under study.
	Spain	limited implementation / see remarks	Limited to 31.500, 31.750, 37.850, 38.300 and 38.550 MHz
	Sweden	limited implementation / see remarks	Limited to 41.0-43.6 MHz - Land Mobile
	Switzerland	limited implementation / see remarks	Limited to 10 channels in the band 31.4-39.6 MHz. Main use by defence systems.

Frequency Band	Country	Implementation	Reason/remarks
	Ukraine	limited implementation / see remarks	In the band 30.01-47 MHz maximal transmitter power is 10 mW
ANNEX 10: RADIO MICROPHONE APPLICATIONS INCLUDING ASSISTIVE LISTENING DEVICES (ALD), PERSONAL CORDLESS AUDIO DEVICES Band A2 87.5-108 MHz	Spain	implemented	NTAF UN-17
	Ukraine	limited implementation / see remarks	Limited to 87.5-92 MHz; 100-108 MHz; (e.i.r.p. =50*10-9W); 89.9-90.2 MHz (the maximal transmitter power is 10 mW)
ANNEX 10: RADIO MICROPHONE APPLICATIONS INCLUDING ASSISTIVE LISTENING DEVICES (ALD), PERSONAL CORDLESS AUDIO DEVICES Band C1 169.4-169.475 MHz	Spain	implemented	NTAF UN-138
ANNEX 10: RADIO MICROPHONE APPLICATIONS INCLUDING ASSISTIVE LISTENING DEVICES (ALD), PERSONAL CORDLESS AUDIO DEVICES Band C2 169.4875-169.5875 MHz	Ireland	implemented	Aids for the hearing impaired (Personal Hearing Aid System) - exclusive use. The frequency band is identified in Table 1.
	Spain	implemented	NTAF UN-138
ANNEX 10: RADIO MICROPHONE APPLICATIONS INCLUDING ASSISTIVE LISTENING DEVICES (ALD), PERSONAL CORDLESS AUDIO DEVICES Band D 173.965-216 MHz	Austria	implemented	light licensing regime
	Finland	limited implementation / see remarks	Limited to 173.965–195 MHz.
	Slovakia	implemented	General authorisation (2022)
	Spain	limited implementation / see remarks	Limited 174.050-174.500 MHz

Frequency Band	Country	Implementation	Reason/remarks
ANNEX 10: RADIO MICROPHONE APPLICATIONS INCLUDING ASSISTIVE LISTENING DEVICES (ALD), PERSONAL CORDLESS AUDIO DEVICES Band E 174-216 MHz	Austria	implemented	light licensing regime
	Azerbaijan	limited implementation / see remarks	Whole band available, individual licence required
	Denmark	limited implementation / see remarks	Tuning range
	Finland	limited implementation / see remarks	Limited to 174–195 MHz.
	France	implemented	For professional users. 174-223 MHz available.
	Georgia	implemented	Limited parts of the band available, individual licence required
	Malta	limited implementation / see remarks	Only parts available, individual licence required
	Portugal	implemented	The upper limit is up to 223 MHz
	Slovakia	implemented	General authorisation (2022)
	Spain	limited implementation / see remarks	Limited to 174.100, 174.300, 175.500, 176.300, 179.300, 188.100, 188.500, 189.100, 191.900 and 194.500 MHz NTAF UN-95, UN-127
	Ukraine	limited implementation / see remarks	Under condition of not causing interference to other stations working in this band. In bands of 174.4-174.6 MHz and 174.9-175.1 MHz the maximal transmitter power is 10 mW
	United Kingdom	implemented	The tuning range in the UK is 173.7 to 175.1 MHz
ANNEX 10: RADIO MICROPHONE APPLICATIONS INCLUDING ASSISTIVE LISTENING DEVICES (ALD), PERSONAL CORDLESS AUDIO DEVICES Band F1 470-694 MHz	Austria	implemented	light licensing regime
	Azerbaijan	limited implementation / see remarks	Whole band available, individual licence required
	Bulgaria	limited implementation / see remarks	Limited to 470-694 MHz; 723-753 MHz; 778-786 MHz
	Finland	limited implementation / see remarks	Limited to 470-694 MHz. Regional restrictions.
	France	implemented	For professional users.
	Germany	limited implementation / see remarks	470MHz - 608MHz and 614MHz - 694MHz according to general allocation "Vfg. 34/2020 geändert durch Vfg. 99/2022".
	Greece	limited implementation / see remarks	10 mW e.r.p. max
	Liechtenstein	limited implementation / see remarks	Limited to 470 - 694 MHz.

Frequency Band	Country	Implementation	Reason/remarks
	Lithuania	limited implementation / see remarks	Band is due to refarming for the implementation of IMT700. Individual registrations required
	Norway	limited implementation / see remarks	Limited to 494-694 MHz. License exempt with web-page showing available channels at location.
	Poland	limited implementation / see remarks	Radio Microphones and Assistive Listening Devices are allowed in the whole band 470-862 MHz until introduction of MFCN networks in Poland. After that frequency band will be limited to the band 470-786 MHz. Individual licensing under study
	Portugal	limited implementation / see remarks	Limited to 470-694 MHz; 694-703 MHz; 733-758 MHz.
	Slovakia	implemented	General authorisation (2022)
	Spain	limited implementation / see remarks	Limited 470-694 MHz NTAF UN-36
	Switzerland	limited implementation / see remarks	Limited to 470 - 694 MHz.
ANNEX 10: RADIO MICROPHONE APPLICATIONS INCLUDING ASSISTIVE LISTENING DEVICES (ALD), PERSONAL CORDLESS AUDIO DEVICES **Band F3** **821.5-826 MHz**	Austria	limited implementation / see remarks	limited frequency range: 823-826 MHz
	Azerbaijan	limited implementation / see remarks	Whole band available, individual licence required
	France	limited implementation / see remarks	For professional users. Limited to 823-826 MHz.
	Georgia	limited implementation / see remarks	Limited parts of the band available
	Lithuania	limited implementation / see remarks	In all 470-862 MHz band 50 mW e.r.p. Only for radio microphones. Individual registrations required
	Poland	limited implementation / see remarks	With technical parameters for the “old” band E. Full implementation and individual licensing under study
	Romania	limited implementation / see remarks	Implementation limited to 823-826 MHz
	Serbia	limited implementation / see remarks	Within range 823MHz - 826MHz
	Slovakia	implemented	823 - 826 MHz
	Spain	implemented	NTAF UN-151

Frequency Band	Country	Implementation	Reason/remarks
	Sweden	limited implementation / see remarks	Licence exemption10 mW e.r.p. handheld equipment Licence exemption 50 mW e.r.p.bodyworn equipment
ANNEX 10: RADIO MICROPHONE APPLICATIONS INCLUDING ASSISTIVE LISTENING DEVICES (ALD), PERSONAL CORDLESS AUDIO DEVICES Band F4 826-832 MHz	Azerbaijan	limited implementation / see remarks	Whole band available, individual licence required
	France	implemented	For professional users
	Georgia	implemented	Limited parts of the band available
	Lithuania	limited implementation / see remarks	In all 470-862 MHz band 50 mW e.r.p. Only for radio microphones. Individual registrations required
	Poland	limited implementation / see remarks	With technical parameters for the “old” band E. Full implementation and individual licensing under study
	Spain	implemented	NTAF UN-151
	Sweden	limited implementation / see remarks	Licence exemption 50 mW e.r.p.
ANNEX 10: RADIO MICROPHONE APPLICATIONS INCLUDING ASSISTIVE LISTENING DEVICES (ALD), PERSONAL CORDLESS AUDIO DEVICES Band F5 694-703 MHz	Austria	limited implementation / see remarks	max. 12mW e.r.p. light licensing regime
	France	planned	Limited to 694-698 MHz.
	Germany	limited implementation / see remarks	694MHz - 698MHz according to general allocation "Vfg. 34/2020 geändert durch Vfg. 99/2022".
	Luxembourg	not implemented / see remarks	The frequency band 694-790 MHz is allocated to the mobile service, espacially to mobile communication networks.
	Norway	limited implementation / see remarks	Limited to 733-758 MHz. License exempt with web-page showing available channels at location.
ANNEX 10: RADIO MICROPHONE APPLICATIONS INCLUDING ASSISTIVE LISTENING DEVICES (ALD), PERSONAL CORDLESS AUDIO DEVICES Band F6 733-757.5 MHz	Austria	limited implementation / see remarks	max. 50 mW e.r.p. light licensing regime
	Czech Republic	limited implementation / see remarks	Maximum 50 mW e.r.p., which applies to all devices incl. body-worn equipment.
	France	planned	Limited to 736-752.5 MHz.
	Germany	limited implementation / see remarks	736MHz - 753MHz according to general allocation Vfg. 100/2022.
	Luxembourg	not implemented / see remarks	The frequency band 694-790 MHz is allocated to the mobile service, espacially to mobile communication networks.

Frequency Band	Country	Implementation	Reason/remarks
ANNEX 10: RADIO MICROPHONE APPLICATIONS INCLUDING ASSISTIVE LISTENING DEVICES (ALD), PERSONAL CORDLESS AUDIO DEVICES Band G 863-865 MHz	Azerbaijan	limited implementation / see remarks	Whole band available, individual licence required
	Georgia	implemented	Limited parts of the band available
	Spain	implemented	NTAF UN-118
ANNEX 10: RADIO MICROPHONE APPLICATIONS INCLUDING ASSISTIVE LISTENING DEVICES (ALD), PERSONAL CORDLESS AUDIO DEVICES Band H1 1350-1400 MHz	Austria	limited implementation / see remarks	light licensing regime, for events only
	Azerbaijan	limited implementation / see remarks	Whole band available, individual licence required
	France	planned	Under temporary individual autorisation regime. Coordination is required.
	Germany	implemented	according to general allocation Vfg. 6/2022
	Latvia	implemented	Individual license required
	Liechtenstein	implemented	indoor only
	Luxembourg	not implemented / see remarks	Used by fixed service and defense systems
	Switzerland	implemented	indoor only
ANNEX 10: RADIO MICROPHONE APPLICATIONS INCLUDING ASSISTIVE LISTENING DEVICES (ALD), PERSONAL CORDLESS AUDIO DEVICES Band H2 1492-1518 MHz	Austria	implemented	light licensing regime, Usage currently allowed until end of 2024
	Lithuania	limited implementation / see remarks	Individual registrations required
	Netherlands	implemented	Licence required
	United Kingdom	limited implementation / see remarks	Limited PMSE operation allowed in 1517-1518 MHz subject to individual authorisation
ANNEX 10: RADIO MICROPHONE APPLICATIONS INCLUDING ASSISTIVE LISTENING DEVICES (ALD), PERSONAL CORDLESS AUDIO DEVICES Band H3 1518-1525 MHz	Austria	implemented	light licensing regime
	Finland	limited implementation / see remarks	1519.2 - 1524.8 MHz, Sound program transmission, Fixed radio links and mobile transmitters for one-way sound program transmission
	France	planned	Under temporary individual autorisation regime. Indoor only.
	Germany	limited implementation / see remarks	via Individual licence;
	Lithuania	limited implementation / see remarks	Individual registrations required
	Netherlands	implemented	Licence required

Frequency Band	Country	Implementation	Reason/remarks
ANNEX 10: RADIO MICROPHONE APPLICATIONS INCLUDING ASSISTIVE LISTENING DEVICES (ALD), PERSONAL CORDLESS AUDIO DEVICES Band I 1656.5-1660.5 MHz	Slovakia	implemented	General authorisation (2022)
ANNEX 10: RADIO MICROPHONE APPLICATIONS INCLUDING ASSISTIVE LISTENING DEVICES (ALD), PERSONAL CORDLESS AUDIO DEVICES Band J 1785-1805 MHz	Azerbaijan	limited implementation / see remarks	Whole band available, individual licence required
	France	implemented	For professional users. Limited to 1785-1804.8 MHz.
	Georgia	limited implementation / see remarks	Limited parts of the band available
	Ireland	implemented	All-island WAPECS in Operation
	Latvia	implemented	Within the band 1785-1804.8 MHz
	Lithuania	limited implementation / see remarks	Individual registrations required
	Netherlands	implemented	max 50 mW e.r.p. Channel spacing 600 kHz
	Norway	implemented	Licence exempt
	Slovakia	implemented	Fixed Service
	Spain	implemented	NTAF UN-119
	United Kingdom	implemented	Individual licence required
ANNEX 11: RADIO FREQUENCY IDENTIFICATION APPLICATIONS Band A 865-868 MHz	Spain	implemented	NTAF UN-135
ANNEX 11: RADIO FREQUENCY IDENTIFICATION APPLICATIONS Band B 915-919.4 MHz	Belgium	limited implementation / see remarks	915-918 MHz
	France	implemented	Individual registration required
	Hungary	implemented	With ER-GSM protection
	Italy	limited implementation / see remarks	Implementation limited to band 916,1-918,9 MHz

Frequency Band	Country	Implementation	Reason/remarks
	Latvia	implemented	Implemented through reference in the NTFA
	Liechtenstein	limited implementation / see remarks	Limited to the 2 channels below 918 MHz: ER-GSM protection
	Luxembourg	limited implementation / see remarks	916.1-918.9 MHz, since 24 February 2020, according to EC Decision 2018/1538/EU
	Malta	implemented	Interrogator transmissions at 4 W e.r.p. only permitted at the centre frequencies 916.3 MHz, 917.5 MHz, 918.7 MHz
	Portugal	limited implementation / see remarks	Available from 915 to 918.9 MHz.
	Romania	limited implementation / see remarks	Interrogator transmissions at 4 W e.r.p, are only permitted within the three channels centred at 916.3 MHz, 917.5 MHz and 918.7 MHz
	Spain	implemented	NTAF UN-40
	Sweden	implemented	Usage are based on licenses and the license for RFID will be granted based on current PTS regulations and EU Commission Decision (EU 2025/650).
	Switzerland	limited implementation / see remarks	Limited to the 2 channels below 918 MHz: ER-GSM protection.
	United Kingdom	implemented	The Additional restrictions to protect ER-GSM apply in the UK
ANNEX 11: RADIO FREQUENCY IDENTIFICATION APPLICATIONS Band C1 2446-2454 MHz	Spain	implemented	NTAF UN-129
ANNEX 11: RADIO FREQUENCY IDENTIFICATION APPLICATIONS Band C2 2446-2454 MHz	Spain	implemented	NTAF UN-129
ANNEX 12: ACTIVE MEDICAL IMPLANTS AND THEIR ASSOCIATED PERIPHERALS Band A 9-315 kHz	Spain	implemented	NTAF UN-117
ANNEX 12: ACTIVE MEDICAL IMPLANTS AND THEIR ASSOCIATED PERIPHERALS Band B 30-37.5 MHz	Spain	implemented	NTAF UN-117

Frequency Band	Country	Implementation	Reason/remarks
ANNEX 12: ACTIVE MEDICAL IMPLANTS AND THEIR ASSOCIATED PERIPHERALS Band C 2483.5-2500 MHz	Spain	implemented	NTAF UN-117
ANNEX 12: ACTIVE MEDICAL IMPLANTS AND THEIR ASSOCIATED PERIPHERALS Band D1 401-402 MHz	Spain	implemented	NTAF UN-117
ANNEX 12: ACTIVE MEDICAL IMPLANTS AND THEIR ASSOCIATED PERIPHERALS Band F 12500-20000 kHz	Ireland	implemented	The transmission mask of ULP-AID is defined as follows: 3 dB Bandwidth 300 kHz 10 dB Bandwidth 800 kHz 20 dB Bandwidth 2 MHz
ANNEX A: INFORMATIVE ANNEX COVERING THE APPLICATIONS OPERATING UNDER GENERAL AUTHORISATION REGIME WHICH ARE NOT COVERED BY THE ANNEXES 1 TO 13 OF THIS RECOMMENDATION Band A 26960-27410 kHz	Estonia	implemented	Implemented through reference in "The Estonian radio frequency allocation plan" and "Conditions for use of radio frequencies and technical requirements for radio equipment exempted from frequency authorisation"
	France	limited implementation / see remarks	Arrêté du 31 mars 1992 Limited to 4 W
	Lithuania	implemented	Implemented by the Order No. 1V-661 of the Director of the Communications Regulatory Authority of 25 May 2012 on the amendment of Order No. 1V-893 of the Director of the Communications Regulatory Authority of 9 September 2010 on Approval of the List of Frequencies (channels), which may be used without an individual authorization
	Netherlands	implemented	In The Netherlands CB Radio is currently allowed on the basis of "non-interference, non protection". SRDs operate in the same band. So, both have the same rights
	Poland	implemented	5 kHz channel centre frequency offset
	Romania	limited implementation / see remarks	See RO-IR CB
	United Kingdom	limited implementation / see remarks	Only angle modulation with up to 4W

Frequency Band	Country	Implementation	Reason/remarks
ANNEX A: INFORMATIVE ANNEX COVERING THE APPLICATIONS OPERATING UNDER GENERAL AUTHORISATION REGIME WHICH ARE NOT COVERED BY THE ANNEXES 1 TO 13 OF THIS RECOMMENDATION Band C 446-446.2 MHz	Bosnia and Herzegovina	limited implementation / see remarks	Analogue: 446.0-446.1 MHz. Digital: 446.1-446.2 MHz
	Czech Republic	implemented	General Authorisation VO-R/3/6.2016-9
	Türkiye	limited implementation / see remarks	Analogue: 446.0-446.1 MHz. Digital: 446.1-446.2 MHz
	Ukraine	limited implementation / see remarks	Analogue: only 446.0-446.1 MHz
ANNEX A: INFORMATIVE ANNEX COVERING THE APPLICATIONS OPERATING UNDER GENERAL AUTHORISATION REGIME WHICH ARE NOT COVERED BY THE ANNEXES 1 TO 13 OF THIS RECOMMENDATION Band D 1880-1900 MHz	Belgium	implemented	DECT equipment with a radiated output power of up to 250 mW e.i.r.p. has been exempted from individual licensing
	Cyprus	implemented	DECT equipment with a radiated output power of up to 250 mW e.i.r.p. has been exempted from individual licensing
	Czech Republic	implemented	DECT equipment with a radiated output power of up to 250 mW e.i.r.p. has been exempted from individual licensing
	Germany	implemented	DECT equipment with a radiated output power of up to 250 mW e.i.r.p. has been exempted from individual licensing
	Liechtenstein	implemented	DECT equipment with a radiated output power of up to 250 mW e.i.r.p. has been exempted from individual licensing
	Malta	limited implementation / see remarks	DECT equipment with a radiated output power of up to 250 mW e.i.r.p. is exempted from individual licensing
	Netherlands	implemented	DECT equipment with a radiated output power of up to 250 mW e.i.r.p. has been exempted from individual licensing
	Norway	implemented	DECT equipment with a radiated output power of up to 250 mW e.i.r.p. has been exempted from individual licensing
	Romania	implemented	DECT equipment with a radiated output power of up to 250 mW e.i.r.p. has been exempted from individual licensing
	Slovakia	implemented	DECT equipment with a radiated output power of up to 250 mW e.i.r.p. has been exempted from individual licensing
	Spain	implemented	DECT equipment with a radiated output power of up to 250 mW e.i.r.p. has been exempted from individual licensing

Frequency Band	Country	Implementation	Reason/remarks
	Switzerland	implemented	DECT equipment with a radiated output power of up to 250 mW e.i.r.p. has been exempted from individual licensing
	United Kingdom	implemented	DECT equipment with a radiated output power of up to 250 mW e.i.r.p. has been exempted from individual licensing
ANNEX A: INFORMATIVE ANNEX COVERING THE APPLICATIONS OPERATING UNDER GENERAL AUTHORISATION REGIME WHICH ARE NOT COVERED BY THE ANNEXES 1 TO 13 OF THIS RECOMMENDATION Band E1 5150-5350 MHz	Azerbaijan	implemented	No licence needed if used indoor and power not exceeding 30 mW
	Cyprus	implemented	The EC Decisions 2005/513/EC and 2007/90/EC were adopted
	Czech Republic	implemented	General Authorisation VO-R/12/11.2021-11
	Estonia	implemented	Implemented through reference in "The Estonian radio frequency allocation plan"
	Netherlands	implemented	Exemption from individual licensing is implemented in the relevant executive order
ANNEX A: INFORMATIVE ANNEX COVERING THE APPLICATIONS OPERATING UNDER GENERAL AUTHORISATION REGIME WHICH ARE NOT COVERED BY THE ANNEXES 1 TO 13 OF THIS RECOMMENDATION Band E2 5470-5725 MHz	Azerbaijan	implemented	No licence needed if used indoor and power not exceeding 30 mW
	Cyprus	implemented	The EC Decisions 2005/513/EC and 2007/90/EC were adopted
	Czech Republic	implemented	General Authorisation VO-R/12/11.2021-11
	Estonia	implemented	Implemented through reference in "The Estonian radio frequency allocation plan"
	Netherlands	implemented	Exemption from individual licensing is implemented in the relevant executive order
	Slovenia	implemented	Implemented on bases of EC Implementing decision (EU) 2022/179
ANNEX A: INFORMATIVE ANNEX COVERING THE APPLICATIONS OPERATING UNDER GENERAL AUTHORISATION REGIME WHICH ARE NOT COVERED BY THE ANNEXES 1 TO 13 OF THIS RECOMMENDATION Band F 5875-5935 MHz	Belgium	planned	planned for end of year 2026
	Bosnia and Herzegovina	implemented	Implemented through reference in the NTFA
	Cyprus	planned	The EC Decision 2020/1426/EU was adopted. We are awaiting the publication of the amending Decision of the European Commission, which will incorporate the changes introduced by the amended ECC Decision
	Finland	implemented	5875 - 5925 MHz only
	France	limited implementation / see remarks	CBTC: individual authorisation. Road ITS: limited to 5875-5905 MHz as per ECC/DEC/(08)01 of 2008.
	Germany	implemented	5875 - 5915 MHz via general allocation „Vfg. 48 / 2021, zuletzt geändert durch Vfg. 102 / 2025“. 5915 - 5935 MHz via individual license.

Frequency Band	Country	Implementation	Reason/remarks
	Ireland	planned	In current alignment with Commission Implementing Decision (EU) 2020/1426
	Liechtenstein	limited implementation / see remarks	Only 5875-5925 MHz is available in Liechtenstein.
	Malta	limited implementation / see remarks	Limited to the 5875-5925 MHz band. Urban Rail ITS is not available since no railways operate in Malta.
	Netherlands	planned	Planned for Q3 2026
	Romania	implemented	RO-IR ITS
	Slovenia	implemented	Implemented on bases of EC Implementing decision (EU) 2020/1426
	Switzerland	limited implementation / see remarks	Only 5875-5925 MHz is available in Switzerland.
	Türkiye	planned	5875 - 5925 MHz only
ANNEX A: INFORMATIVE ANNEX COVERING THE APPLICATIONS OPERATING UNDER GENERAL AUTHORISATION REGIME WHICH ARE NOT COVERED BY THE ANNEXES 1 TO 13 OF THIS RECOMMENDATION Band G 63.72-65.88 GHz	Czech Republic	implemented	General Authorisation VO-R/10/07.2021-8
	Estonia	implemented	Implemented through reference in "The Estonian radio frequency allocation plan"0
	Italy	implemented	Implemented by the decree of Ministry of the Economic Development of 27 May 2015 and published in the Italian Official Gazette No. 143 dated 23 June 2015
	Romania	implemented	RO-IR SRD-04
ANNEX A: INFORMATIVE ANNEX COVERING THE APPLICATIONS OPERATING UNDER GENERAL AUTHORISATION REGIME WHICH ARE NOT COVERED BY THE ANNEXES 1 TO 13 OF THIS RECOMMENDATION Band H 77-81 GHz	Czech Republic	implemented	General Authorisation VO-R/10/07.2021-8

Frequency Band	Country	Implementation	Reason/remarks
ANNEX A: INFORMATIVE ANNEX COVERING THE APPLICATIONS OPERATING UNDER GENERAL AUTHORISATION REGIME WHICH ARE NOT COVERED BY THE ANNEXES 1 TO 13 OF THIS RECOMMENDATION **Band I** **5945-6425 MHz**	Bosnia and Herzegovina	implemented	Implemented through reference in the NTFA
	Cyprus	implemented	The EC Decision 2025/913/EU was adopted
	Czech Republic	implemented	General Authorisation VO-R/12/11.2021-11
	Estonia	implemented	Implemented through reference in The Estonian radio frequency allocation plan
	Italy	no info / see remarks	Implemented through the decree of Ministry of the Economic Development of 31 August 2022 and published in the Italian Official Gazette No. 214 dated 13 September 2022
	Malta	limited implementation / see remarks	Partly, in line with Commission Implementing Decision (EU)2021/1067 as amended
	Netherlands	implemented	Implemented on bases of EC Implementing decision 2021/1067
	Romania	implemented	RO-IR RLAN
	Slovakia	implemented	The EC Decision EU/2021/1067 was implemented. The technical conditions are set out in the general authorization VPR-01/2022 since 20 September 2022
	Slovenia	implemented	Implemented on bases of EC Implementing decision (EU) 2021/1067
	Spain	implemented	Implemented through reference in the NTFA
	Sweden	implemented	The EC Decision 2021/1067/EU was implemented.

APPENDIX 3: LIST OF ABBREVIATIONS

Table 16: List of abbreviations as used in this document

AFA	Adaptive Frequency Agility
CEPT	European Conference of Postal and Telecommunications Administrations
DFS	Dynamic Frequency Selection
ECC	Electronic Communications Committee
ECO	European Communications Office
EFIS	ECO Frequency Information System
ER-GSM	Extended spectrum for GSM for Railways
ERC	European Radiocommunications Committee
ETSI	European Telecommunications Standard Institute
FHSS	Frequency Hopping Spread Spectrum
LBT	Listen Before Talk
PMR	Professional Mobile Radio / Private Mobile Radio
RFID	Radio Frequency Identification
SRD	Short Range Devices

APPENDIX 4: DUTY CYCLE CATEGORIES

For the purposes of this Recommendation the duty cycle is defined as the ratio, expressed as a percentage, of Σ(Ton)/(Tobs) where Ton is the 'on' time of a single transmitter device and Tobs is the observation period. Ton is measured in an observation frequency band (Fobs). Unless otherwise specified in the relevant Annex, Tobs is a continuous one hour period and Fobs is the applicable frequency band in the Annex of this Recommendation.

For pre-programmed devices the maximum transmitter 'on' time limits are given in Table 17. These limits are advisory with a view to facilitating sharing between systems in the same frequency band.

Table 17: Duty Cycle Categories (when specified over one hour)

Name	Transmitting time / Full cycle	Maximum transmitter "on" time (seconds)	Explanation
Very Low	≤0.1%	0.72	For example, 5 transmissions of 0.72 seconds within one hour
Low	≤1.0%	3.6	For example, 100 transmissions of 360 milliseconds within one hour
High	≤10%	36	For example, 100 transmissions of 3.6 seconds within one hour
Very High	Up to 100%	-	Typically continuous transmission but also those with a duty cycle greater than 10%

DOCUMENT HISTORY

Table 18: Document History

Text	Page	Edition
ERC Recommendation 70-03	1	October 2026
ANNEX 1: NON-SPECIFIC SHORT RANGE DEVICES	7	October 2025
ANNEX 2: TRACKING, TRACING AND DATA ACQUISITION	12	October 2025
ANNEX 3: WIDEBAND DATA TRANSMISSION SYSTEMS	15	June 2026
ANNEX 4: RAILWAY APPLICATIONS	17	October 2025
ANNEX 5: TRANSPORT AND TRAFFIC TELEMATICS (TTT)	19	October 2025
ANNEX 6: RADIODETERMINATION APPLICATIONS	22	June 2026
ANNEX 7: ALARMS	26	October 2025
ANNEX 8: MODEL CONTROL	27	June 2026
ANNEX 9: INDUCTIVE APPLICATIONS	28	February 2026
ANNEX 10: RADIO MICROPHONE APPLICATIONS INCLUDING ASSISTIVE LISTENING DEVICES (ALD), PERSONAL CORDLESS AUDIO DEVICES	31	October 2025
ANNEX 11: RADIO FREQUENCY IDENTIFICATION APPLICATIONS	34	October 2025
ANNEX 12: ACTIVE MEDICAL IMPLANTS AND THEIR ASSOCIATED PERIPHERALS	36	October 2026
ANNEX 13: MEDICAL DATA ACQUISITION	38	October 2025
ANNEX A: INFORMATIVE ANNEX COVERING THE APPLICATIONS OPERATING UNDER GENERAL AUTHORISATION REGIME WHICH ARE NOT COVERED BY THE ANNEXES 1 TO 13 OF THIS RECOMMENDATION	40	October 2025
ANNEX B: INFORMATIVE ANNEX COVERING REFERENCES TO LEGACY BANDS THAT HAVE BEEN REMOVED FROM OR ALTERED IN THE MAIN ANNEXES OF ERC/REC 70-03	42	October 2025
APPENDIX 1: NATIONAL IMPLEMENTATION	45	October 2026
APPENDIX 2: NATIONAL RESTRICTIONS	51	October 2026
APPENDIX 3: LIST OF ABBREVIATIONS	85	June 2026
APPENDIX 4: DUTY CYCLE CATEGORIES	86	October 2025