COMMISSION IMPLEMENTING DECISION (EU) 2025/105

of 22 January 2025

amending Decision 2006/771/EC updating harmonised technical conditions in the area of radio spectrum use for short-range devices and repealing Implementing Decision 2014/641/EU on harmonised technical conditions of radio spectrum use by wireless audio programme making and special events equipment in the Union

(notified under document C(2025) 192)

(Text with EEA relevance)

THE EUROPEAN COMMISSION,

Having regard to the Treaty on the Functioning of the European Union,

Having regard to Decision No 676/2002/EC of the European Parliament and of the Council of 7 March 2002 on a regulatory framework for radio spectrum policy in the European Community (Radio Spectrum Decision) ([1]), and in particular Article 4(3) thereof,

Whereas:

(1) Short-range devices are typically mass-market or portable radio equipment, or both, that can easily be carried and used across borders. Differences in spectrum access conditions risk creating harmful interference with other radio applications and services, prevent their free movement, and increase their production costs.

(2) Commission Decision 2006/771/EC ([2]) and Commission Implementing Decision (EU) 2018/1538 ([3]) constitute the regulatory framework for short-range devices, which supports innovation for a wide range of applications within the digital single market.

(3) Decision 2006/771/EC harmonises the technical conditions for spectrum use for a wide variety of short-range devices in application areas such as alarms, local communications, telecommand, medical implants and medical data gathering, intelligent transport systems and the 'Internet of Things' including radio-frequency identification ('RFID'). As a result, short-range devices that respect these harmonised technical conditions are subject to no more than a general authorisation under national law.

(4) Implementing Decision (EU) 2018/1538 also harmonises the technical conditions for spectrum use by short-range devices within the 874-874,4 and 915-919,4 MHz frequency bands. In these frequency bands, the sharing environment is different from the rest of the radio spectrum used by short-range devices and requires a specific regulatory regime. That Decision enables technically advanced RFID solutions as well as 'Internet of Things' applications based on networked short-range devices in data networks.

(5) New applications for short-range devices regularly emerge due to the growing importance of these devices for the economy and the rapid changes in technology and societal demands. Such applications require regular updates of harmonised technical conditions for spectrum use.

([1]) OJ L 108, 24.4.2002, p. 1, ELI: http://data.europa.eu/eli/dec/2002/676(1)/oj.

([2]) Commission Decision 2006/771/EC of 9 November 2006 on harmonisation of the radio spectrum for use by short-range devices (OJ L 312, 11.11.2006, p. 66, ELI: http://data.europa.eu/eli/dec/2006/771(2)/oj).

([3]) Commission Implementing Decision (EU) 2018/1538 of 11 October 2018 on the harmonisation of radio spectrum for use by short-range devices within the 874-876 and 915-921 MHz frequency bands (OJ L 257, 15.10.2018, p. 57, ELI: http://data.europa.eu/eli/dec_impl/2018/1538/oj).

(6) Based on the permanent mandate that the Commission has issued to the European Conference of Postal and Telecommunications Administrations ('the CEPT') in July 2006, pursuant to Article 4(2) of Decision No 676/2002/EC, the Annex to Decision 2006/771/EC should be updated in order to reflect technological and market developments in the area of short-range devices. That Annex has been amended eight times. The work carried out on the basis of the permanent mandate to the CEPT was also the basis for Implementing Decision (EU) 2018/1538 providing additional spectrum for short-range devices within the 874-874,4 and 915-919,4 MHz frequency ranges.

(7) On 21 October 2021, the Commission issued a guidance letter for the ninth update cycle. In response to the permanent mandate to the CEPT and in accordance with that guidance, the CEPT submitted Report 85 to the Commission on 8 March 2024. In addition to improvements of existing entries applicable to active medical implants, RFID, voice and video applications and assistive listening devices, the CEPT proposes to add new entries to the Annex to Decision 2006/771/EC. Those new entries enable the use of spectrum by ground-based Synthetic Aperture Radar ('SAR') systems and security scanners. The report should therefore form the technical basis for this Decision.

(8) In Report 85, the CEPT also proposed to include in the Annex to Decision 2006/771/EC technical conditions applicable to audio devices for programme making and special events ('audio PMSE devices') that use 32,3 MHz of harmonised spectrum in the 800 MHz and 1800 MHz frequency bands and recommended that Commission Implementing Decision 2014/641/EU ([4]) is repealed.

(9) The Commission, in its Communication of 26 September 2012 to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions ([5]), recognised cultural and creative industries as one of Europe's most dynamic economic sectors and an essential driver of cultural diversity in Europe. In particular, Article 8(5) of Decision No 243/2012/EU of the European Parliament and of the Council ([6]), stresses the importance of PMSE and requires Member States, in cooperation with the Commission, to seek to ensure the necessary frequency bands for such equipment, in accordance with the Union's objectives to improve the integration of the internal market and access to culture.

(10) The requirements for social and cultural events will often exceed the amount of 32,3 MHz available in the 800 MHz and 1 800 MHz frequency bands. Since the spectrum requirements for audio PMSE use vary significantly, there is a need to ensure at Union level the availability of at least 62,3 MHz of sustainable spectrum to meet recurring ordinary needs for users of audio PMSE devices.

(11) The additional amount of at least 30 MHz of spectrum to meet possible demand for audio PMSE applications at social and cultural events should be selected from tuning ranges to be decided by Member States, preferably in the 470-790 MHz spectrum range.

(12) Short-range devices operating within the conditions set out in this Decision should also comply with Directive 2014/53/EU of the European Parliament and of the Council ([7]).

(13) Decision 2006/771/EC should therefore be amended and Implementing Decision 2014/641/EU should be repealed accordingly.

(14) The measures provided for in this Decision are in accordance with the opinion of the Radio Spectrum Committee,

([4]) Commission Implementing Decision 2014/641/EU of 1 September 2014 on harmonised technical conditions of radio spectrum use by wireless audio programme making and special events equipment in the Union (OJ L 263, 3.9.2014, p. 29, ELI: http://data.europa.eu/eli/dec_impl/2014/641/oj).

([5]) Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions 'Promoting cultural and creative sectors for growth and jobs in the EU', COM(2012) 537 final.

([6]) Decision No 243/2012/EU of the European Parliament and of the Council of 14 March 2012 establishing a multiannual radio spectrum policy programme (OJ L 81, 21.3.2012, p. 7, ELI: http://data.europa.eu/eli/dec/2012/243(2)/oj).

([7]) Directive 2014/53/EU of the European Parliament and of the Council of 16 April 2014 on the harmonisation of the laws of the Member States relating to the making available on the market of radio equipment and repealing Directive 1999/5/EC (OJ L 153, 22.5.2014, p. 62, ELI: http://data.europa.eu/eli/dir/2014/53/oj).

HAS ADOPTED THIS DECISION:

Article 1

Decision 2006/771/EC is amended as follows:

(1) in Article 3, the following paragraph is added after paragraph 2:

‘2a. Member States shall designate and make available radio spectrum in addition to the spectrum harmonised by this Decision for audio PMSE devices, so that in complement to the bands identified in the Annex, an additional amount of at least 30 MHz can be used for audio PMSE devices, subject to user demand. Such use by audio PMSE devices shall be on a non-interference and non-protected basis with regard to users who have an individual right to use such spectrum.’;

(2) in Article 4a, the date ‘1 October 2022’ is replaced by the date ‘1 November 2025’;

(3) the Annex is replaced by the text set out in the Annex to this Decision.

Article 2

Implementing Decision 2014/641/EU is repealed with effect from 1 July 2025.

Article 3

This Decision is addressed to the Member States.

Done at Brussels, 22 January 2025.

For the Commission
Henna VIRKKUNEN
Executive Vice-President

ANNEX

‘*ANNEX*

Frequency bands with corresponding harmonised technical conditions and implementation deadlines for short-range devices

Table 1 defines the scope of different categories of short-range devices (defined in Article 2(3)) to which this Decision applies. Table 2 specifies different combinations of frequency band and category of short-range devices, and the harmonised technical conditions for spectrum access and implementation deadlines applicable thereto.

General technical conditions applicable to all bands and short-range devices that fall within the scope of this Decision:

— Member States shall allow adjacent frequency bands set out in Table 2 to be used as a single frequency band provided the specific conditions of each of these adjacent frequency bands are met.

— Member States shall allow the usage of spectrum up to the **transmit power, field strength or power density** set out in Table 2. Pursuant to Article 3(3), they may impose less restrictive conditions, that is to say allow the use of spectrum with higher transmit power, field strength or power density, provided it does not reduce or compromise the appropriate coexistence between short-range devices in bands harmonised by this Decision.

— Member States may only impose the **additional parameters** (channelling and/or channel access and occupation rules) set out in Table 2, and shall not add other parameters or spectrum access and mitigation requirements. Less restrictive conditions pursuant to Article 3(3), means that Member States may completely omit these additional parameters in a given cell or allow higher values, provided that the appropriate sharing environment in the harmonised band is not compromised.

— Member States may only impose the **other usage restrictions** set out in Table 2 and shall not add additional usage restrictions. Since less restrictive conditions may be applied pursuant to Article 3(3), Member States may omit one or all of these restrictions, provided that the appropriate sharing environment in the harmonised band is not compromised.

— Less restrictive conditions pursuant to Article 3(3) shall apply without prejudice to Directive 2014/53/EU.

For the purposes of this Annex, the following **duty cycle** definition applies:

“**duty cycle**” means 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 this technical annex, Tobs is a continuous one hour period and Fobs is the applicable frequency band in this technical annex. Less restrictive conditions within the meaning of Article 3(3), mean that Member States may allow a higher value for “duty cycle”.

Table 1

Categories of short-range devices pursuant to Article 2(3) and their scope

Category of short-range devices	Scope
Non-specific short-range devices (SRD)	Covers all kinds of radio devices, regardless of the application or their purpose, which fulfil the technical conditions as specified for a given frequency band. Typical uses include telemetry, telecommand, alarms, data transmissions in general and other applications.

Category of short-range devices	Scope
Active medical implant devices	Covers the radio part of active implantable medical devices that are intended to be fully or partially introduced, surgically or medically, into the human body or that of an animal, and where applicable their peripherals. Active implantable medical devices are defined in Council Directive 90/385/EEC ([1]).
Assistive listening devices (ALD)	Covers radio communications systems that allow persons with hearing impairment to increase their listening capability. Typical system installations include one or more radio transmitters and one or more radio receivers.
Audio Programme Making and Special Events (PMSE) devices	Covers radio devices used for transmission of analogue or digital audio signals between a limited number of transmitters and receivers, such as radio microphones, in-ear monitors or audio links, used mainly for the production of broadcast programmes or private or public social or cultural events.
Inductive devices	Covers radio devices that use magnetic fields with inductive loop systems for near field communications and determination applications. This typically includes devices for car immobilisation, animal identification, alarm systems, cable detection, waste management, personal identification, wireless voice links, access control, proximity and metal sensors, anti-theft systems as well as RF anti-theft induction systems, data transfer to hand-held devices, automatic article identification, wireless control systems and automatic road tolling.
Reliable alarm devices	Covers radio devices that use radio communication support for indicating an alert to a system or a person, as a main functionality, at a distant location when a problem or a specific situation occurs. Radio alarms include social alarms and alarms for security and safety.
Medical data acquisition devices	Covers the transmission of non-voice data to and from non-implantable medical devices in order to monitor, diagnose and treat patients in healthcare facilities or in their homes as prescribed by duly authorised healthcare professionals.
PMR446 devices	Covers hand portable equipment (without base station or repeater use) carried on a person or manually operated, which uses integral antennas only in order to maximise sharing and minimise interference. PMR 446 equipment operates in short-range peer-to-peer mode and shall not be used as a part of infrastructure network nor as a repeater.
Radio determination devices	Covers radio devices used for determining the position, velocity and/or other characteristics of an object, or for obtaining information relating to these parameters. Radio determination equipment typically conducts measurements to obtain such characteristics. Radio determination devices exclude any kind of point-to-point or point-to-multipoint radio communications.
Radio frequency identification (RFID) devices	Covers tag/interrogator based radio communications systems, consisting of (i) radio devices (tags) attached to animate or inanimate items; and (ii) transmitter/receiver units (interrogators) which activate the tags and receive data back. Typical applications include the tracking and identification of items, for instance for the purpose of electronic article surveillance (EAS), and collecting and transmitting data relating to the items to which tags are attached, which may be either battery-less, battery assisted or battery powered. The responses from a tag are validated by its interrogator and passed to its host system.

([1]) Council Directive 90/385/EEC of 20 June 1990 on the approximation of the laws of the Member States relating to active implantable medical devices (OJ L 189, 20.7.1990, p. 17).

Category of short-range devices	Scope
Transport and traffic telematics devices	Covers radio devices that are used in the fields of transport (road, rail, water or air, depending on the relevant technical restrictions), traffic management, navigation, mobility management and in intelligent transport systems (ITS). Typical applications include interfaces between different modes of transport, communication between vehicles (e.g. car to car), between vehicles and fixed locations (e.g. car to infrastructure) as well as communication from and to users.
Wideband data transmission devices	Covers radio devices that use wideband modulation techniques to access the spectrum. Typical uses include wireless access systems such as radio local area networks (WAS/RLAN) or wideband SRD in data networks.

Table 2

Frequency bands with corresponding harmonised technical conditions and implementation deadlines for short-range devices

Band No	Frequency band	Category of short-range devices	Transmit power limit / field strength limit / power density limit	Additional parameters (channelling and/or channel access and occupation rules)	Other usage restrictions	Implementation deadline
1	9-59,750 kHz	Inductive devices	72 dBµA/m at 10 metres			1 July 2014
90	9-148 kHz	Radio determination devices	46 dBµA/m at 10 metres at a reference of 100 Hz, outside the Nuclear Magnetic Resonance (NMR) device. Magnetic field strength descending 10 dB/decade above 100 Hz.		For enclosed Nuclear Magnetic Resonance (NMR) applications [j].	1 July 2022
2	9-315 kHz	Active medical implant devices	30 dBµA/m at 10 metres	Duty cycle ≤ 10 %		1 July 2014
3	59,750-60,250 kHz	Inductive devices	42 dBµA/m at 10 metres			1 July 2014
4	60,250-74,750 kHz	Inductive devices	72 dBµA/m at 10 metres			1 July 2014
5	74,750-75,250 kHz	Inductive devices	42 dBµA/m at 10 metres			1 July 2014

Band No	Frequency band	Category of short-range devices	Transmit power limit / field strength limit / power density limit	Additional parameters (channelling and/or channel access and occupation rules)	Other usage restrictions	Implementation deadline
6	75,250-77,250 kHz	Inductive devices	72 dBµA/m at 10 metres			1 July 2014
7	77,250-77,750 kHz	Inductive devices	42 dBµA/m at 10 metres			1 July 2014
8	77,750-90 kHz	Inductive devices	72 dBµA/m at 10 metres			1 July 2014
9	90-119 kHz	Inductive devices	42 dBµA/m at 10 metres			1 July 2014
10	119-128,6 kHz	Inductive devices	66 dBµA/m at 10 metres			1 July 2014
11	128,6-129,6 kHz	Inductive devices	42 dBµA/m at 10 metres			1 July 2014
12	129,6-135 kHz	Inductive devices	66 dBµA/m at 10 metres			1 July 2014
13	135-140 kHz	Inductive devices	42 dBµA/m at 10 metres			1 July 2014
14	140-148,5 kHz	Inductive devices	37,7 dBµA/m at 10 metres			1 July 2014
15	148,5-5 000 kHz [1]	Inductive devices	– 15 dBµA/m at 10 metres in any bandwidth of 10 kHz. Furthermore the total field strength is – 5 dBµA/m at 10 metres for systems operating at bandwidths larger than 10 kHz.			1 July 2014
91	148-5 000 kHz	Radio determination devices	– 15 dBµA/m at 10 metres outside the Nuclear Magnetic Resonance (NMR) device.		For enclosed Nuclear Magnetic Resonance (NMR) applications [j].	1 July 2022

Band No	Frequency band	Category of short-range devices	Transmit power limit / field strength limit / power density limit	Additional parameters (channelling and/or channel access and occupation rules)	Other usage restrictions	Implementation deadline
16	315-600 kHz	Active medical implant devices	– 5 dB µA/m at 10 metres	Duty cycle ≤ 10 %	This set of usage conditions is only available for animal implant devices.	1 July 2025
17	400-600 kHz	Radio Frequency Identification (RFID) devices	– 8 dBµA/m at 10 metres in any bandwidth of 10 kHz. Furthermore, the total field strength is – 5 dBµA/m at 10 metres for systems operating at bandwidths larger than 10 kHz.	Bandwidth ≥ 30 kHz		1 July 2025
85	442,2-450,0 kHz	Non-specific short-range devices	7 dBµA/m at 10 metres	Channel spacing ≥ 150 Hz	This set of usage conditions is only available for person detection and collision avoidance devices.	1 January 2020
18	456,9-457,1 kHz	Non-specific short-range devices	7 dBµA/m at 10 metres		This set of usage conditions is only available for emergency detections of buried victims and valuable items devices.	1 July 2014
19	984-7 484 kHz	Transport and Traffic Telematics devices	9 dBµA/m at 10 metres	Duty cycle ≤ 1 %	This set of usage conditions is only available for Eurobalise transmissions in the presence of trains using the 27 100-27 100 kHz band for telepowering pursuant to the conditions set for band 28.	1 July 2014
20	3 155-3 400 kHz	Inductive devices	13,5 dBµA/m at 10 metres			1 July 2014

Band No	Frequency band	Category of short-range devices	Transmit power limit / field strength limit / power density limit	Additional parameters (channelling and/or channel access and occupation rules)	Other usage restrictions	Implementation deadline
21	5 000-30 000 kHz [2]	Inductive devices	– 20 dBµA/m at 10 metres in any bandwidth of 10 kHz. Furthermore the total field strength is – 5 dBµA/m at 10 metres for systems operating at bandwidths larger than 10 kHz.			1 July 2014
92	5 000-30 000 kHz	Radio determination devices	– 5 dBµA/m at 10 metres outside the Nuclear Magnetic Resonance (NMR) device.		For enclosed Nuclear Magnetic Resonance (NMR) applications [j].	1 July 2022
22	6 765-6 795 kHz	Inductive devices	42 dBµA/m at 10 metres			1 July 2014
23	7 300-23 000 kHz	Transport and Traffic Telematics devices	– 7 dBµA/m at 10 metres	Antenna requirements apply [8].	This set of usage conditions is only available for Eurobalise transmissions in the presence of trains using the 27 100-27 100 kHz band for telepowering pursuant to the conditions set for band 28.	1 July 2014
24	7 400-8 800 kHz	Inductive devices	9 dBµA/m at 10 metres			1 July 2014
25	10 200-11 000 kHz	Inductive devices	9 dBµA/m at 10 metres			1 July 2014
26	12 500-20 000 kHz	Active medical implant devices	– 7 dBµA/m at 10 metres in any bandwidth of 10 kHz	Duty cycle ≤ 10 %	This set of usage conditions is only available for indoor use by animal implant devices.	1 July 2025
27a	13 553-13 567 kHz	Inductive devices	42 dBµA/m at 10 metres	Transmission mask and antenna requirements for all combined frequency segments apply [8], [9].		1 January 2020
27b	13 553-13 567 kHz	Radio Frequency Identification (RFID) devices	60 dBµA/m at 10 metres	Transmission mask and antenna requirements for all combined frequency segments apply [8], [9].		1 July 2014

Band No	Frequency band	Category of short-range devices	Transmit power limit / field strength limit / power density limit	Additional parameters (channelling and/or channel access and occupation rules)	Other usage restrictions	Implementation deadline
27c	13 553-13 567 kHz	Non-specific short-range devices	10 mW e.r.p.			1 July 2014
28	26 957-27 283 kHz	Non-specific short-range devices	10 mW e.r.p.			1 July 2014
29	26 990-27 000 kHz	Non-specific short-range devices	100 mW e.r.p.	Duty cycle ≤ 0,1 % Model control devices [d] may operate without duty cycle restrictions.		1 July 2014
30	27 040-27 050 kHz	Non-specific short-range devices	100 mW e.r.p.	Duty cycle ≤ 0,1 % Model control devices [d] may operate without duty cycle restrictions.		1 July 2014
31	27 090-27 100 kHz	Non-specific short-range devices	100 mW e.r.p.	Duty cycle ≤: 0,1 % Model control devices [d] may operate without duty cycle restrictions.		1 July 2014
32	27 140-27 150 kHz	Non-specific short-range devices	100 mW e.r.p.	Duty cycle ≤ 0,1 % Model control devices [d] may operate without duty cycle restrictions.		1 July 2014
33	27 190-27 200 kHz	Non-specific short-range devices	100 mW e.r.p.	Duty cycle ≤ 0,1 % Model control devices [d] may operate without duty cycle restrictions.		1 July 2014
34	30-37,5 MHz	Active medical implant devices	1 mW e.r.p.	Duty cycle ≤ 10 %	This set of usage conditions is only available for ultra-low power medical membrane implants for blood pressure measurements.	1 July 2014
93	30-130 MHz	Radio determination devices	– 36 dBm e.r.p. outside the Nuclear Magnetic Resonance (NMR) device.		For enclosed Nuclear Magnetic Resonance (NMR) applications [j].	1 July 2022

Band No	Frequency band	Category of short-range devices	Transmit power limit / field strength limit / power density limit	Additional parameters (channelling and/or channel access and occupation rules)	Other usage restrictions	Implementation deadline
35	40,66-40,7 MHz	Non-specific short-range devices	10 mW e.r.p.			1 January 2018
36	87,5-108 MHz	Non-specific short-range devices	50 nW e.r.p.	Bandwidth ≤ 200 kHz.	This set of usage conditions is only available for audio transmitters with analogue frequency modulation (FM).	1 July 2025
37a	169,4-169,475 MHz	Assistive Listening Devices (ALD)	500 mW e.r.p.			1 July 2025
37c	169,4-169,475 MHz	Non-specific short-range devices	500 mW e.r.p.	Duty cycle ≤ 1,0 % For metering devices [a], the duty cycle ≤ 10 %		1 July 2025
38	169,4-169,4875 MHz	Non-specific short-range devices	10 mW e.r.p.	Duty cycle ≤ 0,1 %		1 January 2020
39a	169,4875-169,5875 MHz	Assistive Listening Devices (ALD)	500 mW e.r.p.			1 July 2025
39b	169,4875-169,5875 MHz	Non-specific short-range devices	10 mW e.r.p.	Duty cycle ≤ 0,001 % Between 00:00h and 06:00h local time a duty cycle ≤ 0,1 % may be used.		1 January 2020
40	169,5875-169,8125 MHz	Non-specific short-range devices	10 mW e.r.p.	Duty cycle ≤ 0,1 %		1 January 2020
82	173,965-216 MHz	Assistive Listening Devices (ALD)	10 mW e.r.p.	On a tuning range basis [5]. A threshold of 35 dBµV/m is required to ensure the protection of a DAB receiver located at 1,5 metres from the ALD device, subject to DAB signal strength		1 July 2025

Band No	Frequency band	Category of short-range devices	Transmit power limit / field strength limit / power density limit	Additional parameters (channelling and/or channel access and occupation rules)	Other usage restrictions	Implementation deadline
				measurements taken around the ALD operating site. The ALD device should operate under all circumstances at least 300 kHz away from the channel edge of an occupied DAB channel. Requirements on techniques to access spectrum and mitigate interference apply [7].		
41	401-402 MHz	Active medical implant devices	25 µW e.r.p.	Bandwidth ≤ 100 kHz Requirements on techniques to access spectrum and mitigate interference apply [7]. Alternatively, a duty cycle limit of 0,1 % applies.	This set of usage conditions is only available for systems specifically designed for the purpose of providing non-voice digital communications between active implantable medical devices and/or body-worn devices and other devices external to the human body used for transferring non-time-critical individual patient-related physiological information.	1 July 2025
42	402-405 MHz	Active medical implant devices	25 µW e.r.p.	Bandwidth ≤ 300 kHz. Other techniques to access spectrum or mitigate interference, including bandwidths greater than 300 kHz, can be used provided they ensure compatible operation with the other users and in particular with meteorological radiosondes [7].		1 July 2025

Band No	Frequency band	Category of short-range devices	Transmit power limit / field strength limit / power density limit	Additional parameters (channelling and/or channel access and occupation rules)	Other usage restrictions	Implementation deadline
43	405-406 MHz	Active medical implant devices	25 µW e.r.p.	Bandwidth ≤ 100 kHz Requirements on techniques to access spectrum and mitigate interference apply [7]. Alternatively, a duty cycle limit of 0,1 % applies.	This set of usage conditions is only available for systems specifically designed for the purpose of providing non-voice digital communications between active implantable medical devices and/or body-worn devices and other devices external to the human body used for transferring non-time-critical individual patient-related physiological information.	1 July 2025
86	430-440 MHz	Medical data acquisition devices	– 50 dBm/100kHz e.r.p. power density but not exceeding a total power of – 40 dBm/10MHz (both limits are intended for measurement outside of the patient's body)		The set of usage conditions is only available for Ultra-Low Power Wireless Medical Capsule Endoscopy (ULP-WMCE) applications [h].	1 January 2020
44a	433,05-434,79 MHz	Non-specific short-range devices	1 mW e.r.p.			1 July 2025
44b	433,05-434,79 MHz	Non-specific short-range devices	10 mW e.r.p.	Duty cycle ≤ 10 %		1 January 2020
45c	434,04-434,79 MHz	Non-specific short-range devices	10 mW e.r.p.	Duty cycle ≤ 100 % subject to bandwidth ≤ 25 kHz.		1 July 2025
83	446,0-446,2 MHz	PMR446	500 mW e.r.p.	Requirements on techniques to access spectrum and mitigate interference apply [7].		1 January 2018
94	821,5-826 MHz	Audio PMSE devices	100 mW e.i.r.p. for body-worn devices 20 mW e.i.r.p. for other devices			1 July 2025
95	826-832 MHz	Audio PMSE devices	100 mW e.i.r.p.			1 July 2025

Band No	Frequency band	Category of short-range devices	Transmit power limit / field strength limit / power density limit	Additional parameters (channelling and/or channel access and occupation rules)	Other usage restrictions	Implementation deadline
87	862-863 MHz	Non-specific short-range devices	25 mW e.r.p.	Duty cycle ≤ 0,1 % Bandwidth ≤ 350 kHz		1 January 2020
46a	863-865 MHz	Non-specific short-range devices	25 mW e.r.p.	Requirements on techniques to access spectrum and mitigate interference apply [7]. Alternatively, a duty cycle ≤ 0,1 % applies.		1 January 2018
46b	863-865 MHz	Audio PMSE devices	10 mW e.r.p.		This set of usage conditions is also available for personal cordless audio devices.	1 July 2025
84	863-868 MHz	Wideband data transmission devices	25 mW e.r.p.	Requirements on techniques to access spectrum and mitigate interference apply [7]. Bandwidth > 600 kHz and ≤ 1 MHz Duty cycle ≤ 10 % for network access points [g] Duty cycle ≤ 2,8% otherwise	This set of usage conditions is only available for wideband SRD in data networks [g].	1 January 2018
47	865-868 MHz	Non-specific short-range devices	25 mW e.r.p.	Requirements on techniques to access spectrum and mitigate interference apply [7]. Alternatively, a duty cycle ≤ 1 % applies.		1 January 2020
47a	865-868 MHz [6]	Radio Frequency Identification (RFID) devices	Interrogator transmissions at 2 W e.r.p. only permitted within the channels centred at 865,7 MHz, 866,3 MHz, 866,9 MHz and 867,5 MHz RFID interrogator devices placed on the market before the repeal date of EC Decision	Requirements on techniques to access spectrum and mitigate interference apply [7]. Bandwidth ≤ 200 kHz		1 January 2018

Band No	Frequency band	Category of short-range devices	Transmit power limit / field strength limit / power density limit	Additional parameters (channelling and/or channel access and occupation rules)	Other usage restrictions	Implementation deadline
			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.			
47b	865-868 MHz	Non-specific short-range devices	500 mW e.r.p. 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, Adaptive Power Control (APC) required. Alternatively other mitigation technique with at least an equivalent level of spectrum compatibility.	Requirements on techniques to access spectrum and mitigate interference apply [7]. Bandwidth ≤ 200 kHz Duty cycle ≤ 10 % for network access points [g] Duty cycle ≤ 2,5 % otherwise	This set of usage conditions is only available for data networks [g].	1 January 2018
48	868-868,6 MHz	Non-specific short-range devices	25 mW e.r.p.	Requirements on techniques to access spectrum and mitigate interference apply [7]. Alternatively, a duty cycle ≤ 1 % applies.		1 January 2020
49	868,6-868,7 MHz	Reliable alarm devices	10 mW e.r.p.	Bandwidth ≤ 25 kHz. The whole frequency band may also be used as a single channel. Duty cycle ≤ 1 %		1 July 2025
50	868,7-869,2 MHz	Non-specific short-range devices	25 mW e.r.p.	Requirements on techniques to access spectrum and mitigate interference apply [7]. Alternatively, a duty cycle ≤ 0,1 % applies.		1 January 2020

Band No	Frequency band	Category of short-range devices	Transmit power limit / field strength limit / power density limit	Additional parameters (channelling and/or channel access and occupation rules)	Other usage restrictions	Implementation deadline
51	869,2-869,25 MHz	Reliable alarm devices	10 mW e.r.p.	Channel spacing: 25 kHz. Duty cycle ≤ 0,1 %	This set of usage conditions is only available for social alarm devices [b].	1 July 2014
52	869,25-869,3 MHz	Reliable alarm devices	10 mW e.r.p.	Bandwidth ≤ 25 kHz Duty cycle ≤ 0,1 %		1 July 2025
53	869,3-869,4 MHz	Reliable alarm devices	10 mW e.r.p.	Bandwidth ≤ 25 kHz Duty cycle ≤ 1 %		1 July 2025
54	869,4-869,65 MHz	Non-specific short-range devices	500 mW e.r.p.	Requirements on techniques to access spectrum and mitigate interference apply [7]. Alternatively, a duty cycle ≤ 10 % applies.		1 January 2020
55	869,65-869,7 MHz	Reliable alarm devices	25 mW e.r.p.	Bandwidth ≤ 25 kHz Duty cycle ≤ 10 %		1 July 2025
56a	869,7-870 MHz	Non-specific short-range devices	5 mW e.r.p.			1 July 2025
56b	869,7-870 MHz	Non-specific short-range devices	25 mW e.r.p.	Requirements on techniques to access spectrum and mitigate interference apply [7]. Alternatively, a duty cycle ≤ 1 % applies.		1 January 2020

Band No	Frequency band	Category of short-range devices	Transmit power limit / field strength limit / power density limit	Additional parameters (channelling and/or channel access and occupation rules)	Other usage restrictions	Implementation deadline
96	1 785-1 804,8 MHz	Audio PMSE devices	50 mW e.i.r.p. for body-worn devices or devices implementing Spectrum Scanning Procedure (SSP). 20 mW e.i.r.p. for other devices.			1 July 2025
57a	2 400-2 483,5 MHz	Non-specific short-range devices	10 mW e.i.r.p.			1 July 2014
57b	2 400-2 483,5 MHz	Radio determination devices	25 mW e.i.r.p.			1 July 2014
57c	2 400-2 483,5 MHz	Wideband data transmission devices	100 mW e.i.r.p. and 100 mW/100 kHz e.i.r.p. density applies when frequency hopping modulation is used. 10 mW/MHz e.i.r.p. density applies when other types of modulation are used.	Requirements on techniques to access spectrum and mitigate interference apply [7].		1 July 2014
58	2 446-2 454 MHz	Radio Frequency Identification (RFID) devices	500 mW e.i.r.p.	Requirements on techniques to access spectrum and mitigate interference apply [7].		1 July 2014
59	2 483,5-2 500 MHz	Active medical implant devices	10 mW e.i.r.p.	Requirements on techniques to access spectrum and mitigate interference apply [7]. Bandwidth ≤ 1 MHz. The whole frequency band	Peripheral master units are for indoor use only.	1 July 2025

Band No	Frequency band	Category of short-range devices	Transmit power limit / field strength limit / power density limit	Additional parameters (channelling and/or channel access and occupation rules)	Other usage restrictions	Implementation deadline
				may also be used dynamically as a single channel to maintain a communications session. Duty cycle ≤ 10 % for peripherals.		
59a	2 483,5-2 500 MHz	Medical data acquisition devices	1 mW e.i.r.p.	Requirements on techniques to access spectrum and mitigate interference apply [7]. Bandwidth ≤ 3 MHz. Duty cycle ≤ 10 %.	The set of usage conditions is only available for medical body area network system (MBANS) [f] for indoor use within healthcare facilities.	1 January 2018
59b	2 483,5-2 500 MHz	Medical data acquisition devices	10 mW e.i.r.p.	Requirements on techniques to access spectrum and mitigate interference apply [7]. Bandwidth ≤ 3 MHz. Duty cycle ≤ 2 %.	The set of usage conditions is only available for medical body area network system (MBANS) [f] for indoor use within the patient's home.	1 January 2018
60	4 500-7 000 MHz	Radio determination devices	24 dBm e.i.r.p. [3]	Requirements on techniques to access spectrum and mitigate interference apply [7].	This set of usage conditions is only available for Tank Level Probing Radar [c].	1 July 2014
61	5 725-5 875 MHz	Non-specific short-range devices	25 mW e.i.r.p.			1 July 2014
62	5 795-5 815 MHz	Transport and Traffic Telematics devices	2 W e.i.r.p.	Requirements on techniques to access spectrum and mitigate interference apply [7].	This set of usage conditions applies only to road tolling applications and smart tachograph, weight and dimension applications [i].	1 January 2020
88	5 855-5 865 MHz	Transport and Traffic Telematics devices	33 dBm e.i.r.p., 23 dBm/MHz e.i.r.p. density and a Transmit Power Control (TPC) able to reduce the total power from its maximum to 3 dBm e.i.r.p.	Requirements on techniques to access spectrum and mitigate interference apply [7].	This set of usage conditions is only available for vehicle-to-vehicle, vehicle-to-infrastructure and infrastructure-to-vehicle systems.	1 July 2025

Band No	Frequency band	Category of short-range devices	Transmit power limit / field strength limit / power density limit	Additional parameters (channelling and/or channel access and occupation rules)	Other usage restrictions	Implementation deadline
89	5 865-5 875 MHz	Transport and Traffic Telematics devices	33 dBm e.i.r.p., 23 dBm/MHz e.i.r.p. density and a Transmit Power Control (TPC) able to reduce the total power from its maximum to 3 dBm e.i.r.p.	Requirements on techniques to access spectrum and mitigate interference apply [7].	This set of usage conditions is only available for vehicle-to-vehicle, vehicle-to-infrastructure and infrastructure-to-vehicle systems.	1 July 2025
63	6 000-8 500 MHz	Radio determination devices	7 dBm/50 MHz peak e.i.r.p. and – 33 dBm/MHz mean e.i.r.p.	Automatic power control and antenna requirements as well as requirements on techniques to access spectrum and mitigate interference apply [7], [8] [10].	This set of usage conditions is only available for Level Probing Radar. Exclusion zones around radio astronomy sites shall apply.	1 July 2014
64	8 500-10 600 MHz	Radio determination devices	30 dBm e.i.r.p. [3]	Requirements on techniques to access spectrum and mitigate interference apply [7].	This set of usage conditions is only available for Tank Level Probing Radar [c].	1 July 2014
65	17,1-17,3 GHz	Radio determination devices	26 dBm e.i.r.p.	Requirements on techniques to access spectrum and mitigate interference apply [7].	This set of usage conditions is only available for ground-based SAR systems [k].	1 July 2025
66	24,05-24,075 GHz	Transport and Traffic Telematics devices	100 mW e.i.r.p.			1 July 2014
67	24,05-26,5 GHz	Radio determination devices	26 dBm/50 MHz peak e.i.r.p. and – 14 dBm/MHz mean e.i.r.p.	Automatic power control and antenna requirements as well as requirements on techniques to access spectrum and mitigate interference apply [7]. [8], [10]	This set of usage conditions is only available for Level Probing Radar. Exclusion zones around radio astronomy sites shall apply.	1 July 2014
68	24,05-27 GHz	Radio determination devices	43 dBm e.i.r.p. [3]	Requirements on techniques to access spectrum and mitigate interference apply [7].	This set of usage conditions is only available for Tank Level Probing Radar [c].	1 July 2014

Band No	Frequency band	Category of short-range devices	Transmit power limit / field strength limit / power density limit	Additional parameters (channelling and/or channel access and occupation rules)	Other usage restrictions	Implementation deadline
69a	24,075-24,15 GHz	Transport and Traffic Telematics devices	100 mW e.i.r.p.	Requirements on techniques to access spectrum and mitigate interference apply [7].	This set of usage conditions is only available for ground-based vehicle radars.	1 July 2014
69b	24,075-24,15 GHz	Transport and Traffic Telematics devices	0,1 mW e.i.r.p.			1 July 2014
70a	24,15-24,25 GHz	Non-specific short-range devices	100 mW e.i.r.p.			1 July 2014
70b	24,15-24,25 GHz	Transport and Traffic Telematics devices	100 mW e.i.r.p.			1 July 2014
74a	57-64 GHz	Non-specific short-range devices	100 mW e.i.r.p. and a maximum transmit power of 10 dBm			1 January 2020
74b	57-64 GHz	Radio determination devices	43 dBm e.i.r.p. [3]	Requirements on techniques to access spectrum and mitigate interference apply [7].	This set of usage conditions is only available for Tank Level Probing Radar [c].	1 July 2014
74c	57-64 GHz	Radio determination devices	35 dBm/50 MHz peak e.i.r.p. and – 2 dBm/MHz mean e.i.r.p.	Automatic power control and antenna requirements as well as requirements on techniques to access spectrum and mitigate interference apply [7] [8], [10].	This set of usage conditions is only available for Level Probing Radar.	1 July 2014
75	57-71 GHz	Wideband data transmission devices	40 dBm e.i.r.p. and 23 dBm/MHz e.i.r.p. density	Requirements on techniques to access spectrum and mitigate interference apply [7].	Fixed outdoor installations are excluded.	1 January 2020
75a	57-71 GHz	Wideband data transmission devices	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	Requirements on techniques to access spectrum and mitigate interference apply [7].		1 January 2020

Band No	Frequency band	Category of short-range devices	Transmit power limit / field strength limit / power density limit	Additional parameters (channelling and/or channel access and occupation rules)	Other usage restrictions	Implementation deadline
75b	57-71 GHz	Wideband data transmission devices	55 dBm e.i.r.p., 38 dBm/MHz e.i.r.p. density and a transmit antenna gain ≥ 30 dBi	Requirements on techniques to access spectrum and mitigate interference apply [7].	This set of usage conditions is only available for fixed outdoor installations.	1 January 2020
76	61-61,5 GHz	Non-specific short-range devices	100 mW e.i.r.p.			1 July 2014
77	63,72-65,88 GHz	Transport and Traffic Telematics devices	40 dBm e.i.r.p.	TTT devices placed on the market before the 1 January 2020 are "grandfathered", i.e. they are permitted to use the previous frequency range 63-64 GHz, and otherwise the same conditions apply.	This set of usage conditions is only available to vehicle-to-vehicle, vehicle-to-infrastructure and infrastructure-to-vehicle systems.	1 January 2020
97	69,8-79,9 GHz	Radio determination devices	7 dBm e.i.r.p.		This set of usage conditions is available for security scanners [l] operated indoors.	1 July 2025
78a	75-85 GHz	Radio determination devices	34 dBm/50 MHz peak e.i.r.p. and – 3 dBm/MHz mean e.i.r.p.	Automatic power control and antenna requirements as well as requirements on techniques to access spectrum and mitigate interference apply [7], [8], [10].	This set of usage conditions is only available for Level Probing Radar. Exclusion zones around radio astronomy sites shall apply.	1 July 2014
78b	75-85 GHz	Radio determination devices	43 dBm e.i.r.p. [3]	Requirements on techniques to access spectrum and mitigate interference apply [7].	This set of usage conditions is only available for Tank Level Probing Radar [c].	1 July 2014
79a	76-77 GHz	Transport and Traffic Telematics devices	55 dBm peak e.i.r.p. and 50 dBm mean e.i.r.p. and 23,5 dBm mean e.i.r.p. for pulse radars	Requirements on techniques to access spectrum and mitigate interference apply [7]. Fixed transportation infrastructure radars have to be of a scanning nature in order to limit the illumination time and	This set of usage conditions is only available for ground-based vehicle and infrastructure systems.	1 June 2020

Band No	Frequency band	Category of short-range devices	Transmit power limit / field strength limit / power density limit	Additional parameters (channelling and/or channel access and occupation rules)	Other usage restrictions	Implementation deadline
				ensure a minimum silent time to achieve coexistence with automotive radar systems.		
79b	76-77 GHz	Transport and Traffic Telematics devices	30 dBm peak e.i.r.p. and 3 dBm/MHz average e.i.r.p. density	Duty cycle ≤ 56 %/s	This set of usage conditions is only available for obstacle detection systems for rotorcraft use [4]. Exclusion zones around radio astronomy sites shall apply.	1 July 2025
98	76-77 GHz	Radio determination devices	48 dBm mean e.i.r.p. and 18 dBm/MHz mean e.i.r.p. density	Requirements on techniques to access spectrum and mitigate interference apply [7].	This set of usage conditions is only available for ground-based SAR systems [k]. Exclusion zones around radio astronomy sites shall apply.	1 July 2025
99	76,5-80,5 GHz	Radio determination devices	19 dBm peak e.i.r.p.	At least 23 dB out-of-band attenuation relative to the maximum allowed peak e.i.r.p. is required.	This set of usage conditions is only available for security scanners [l] operated indoors.	1 July 2025
80a	122-122,25 GHz	Non-specific short-range devices	10 dBm/250 MHz e.i.r.p. and – 48 dBm/MHz at 30° elevation			1 January 2018
80b	122,25-123 GHz	Non-specific short-range devices	100 mW e.i.r.p.			1 January 2018
81	244-246 GHz	Non-specific short-range devices	100 mW e.i.r.p.			1 July 2014

Applications and devices referred to in Table 2:

[a] "Metering devices" means radio devices that are part of bidirectional radio communications systems which allow remote monitoring, measuring and transmission of data in smart grid infrastructures, such as electricity, gas and water.

[b] "Social alarm devices" means radio communications systems that allow reliable communication in a given area for a person in distress to initiate a call for assistance. Typical uses of social alarms are to assist elderly or disabled people.

[c] "Tank Level Probing Radar" (TLPR) means a specific type of radiodetermination application, which is used for tank level measurements and is installed in metallic or reinforced concrete tanks, or similar structures made of material with comparable attenuation characteristics. The purpose of the tank is to contain a substance.

[d] "Model control devices" means a specific kind of telecommand and telemetry radio equipment that is used to remotely control the movement of models (principally miniature representations of vehicles) in the air, on land or over or under the water surface.

[f] Medical Body Area Network Systems (MBANSs) are used for medical data acquisition and are intended 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.

[g] 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.

[h] Wireless medical capsule endoscopy is used for medical data acquisition designed for use in medical doctor-patient scenarios with the aim of acquiring images of human digestive tract.

[i] Smart tachograph, weight and dimension applications are defined as remote enforcement of the tachograph in Appendix 14 of Commission Implementing Regulation (EU) 2016/799 ([2]) and for the weights and dimensions enforcement in Article 10d of Directive (EU) 2015/719 of the European Parliament and of the Council ([3]).

[j] 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.

[k] Ground-based Synthetic Aperture Radar (SAR) systems are intended for deformation monitoring of terrain and natural or man-made structures, performed by interferometry radar.

[l] Security scanners are a specific type of radio determination applications which are used to detect objects carried by a person or on a person's body for security screening purposes without making any physical contact.

Other technical requirements and clarifications referred to in Table 2:

[1] In band 20, higher field strengths and additional usage restrictions apply for inductive applications.

[2] In bands 22, 24, 25, 27a, and 28, higher field strengths and additional usage restrictions apply for inductive applications.

[3] The power limit applies inside a closed tank and corresponds to a spectral density of – 41,3 dBm/MHz e.i.r.p. outside a 500 litre test tank.

[4] Member States can specify exclusion zones or equivalent measures in which the obstacle detection application for rotorcraft use shall not be used for the protection of the radioastronomy service or other national use. Rotorcraft is defined as EASA CS-27 and CS-29 (resp. JAR-27 and JAR-29 for former certifications).

[5] Devices shall implement the whole frequency range on a tuning range basis.

[6] RFID tags respond at a very low power level (-20 dBm e.r.p.) in a frequency range around the RFID interrogator channels and shall comply with the essential requirements of Directive 2014/53/EU.

[7] Techniques to access spectrum and mitigate interference that provide an appropriate level of performance to comply with the essential requirements of Directive 2014/53/EU shall be used. If relevant techniques are described in harmonised standards or parts thereof the references of which have been published in the *Official Journal of the European Union* under Directive 2014/53/EU, performance at least equivalent to these techniques shall be ensured.

([2]) Commission Implementing Regulation (EU) 2016/799 of 18 March 2016 implementing Regulation (EU) No 165/2014 of the European Parliament and of the Council laying down the requirements for the construction, testing, installation, operation and repair of tachographs and their components (OJ L 139, 26.5.2016, p. 1).

([3]) Directive (EU) 2015/719 of the European Parliament and of the Council of 29 April 2015 amending Council Directive 96/53/EC laying down for certain road vehicles circulating within the Community the maximum authorised dimensions in national and international traffic and the maximum authorised weights in international traffic (OJ L 115, 6.5.2015, p. 1).

[8] Antenna requirements that provide an appropriate level of performance to comply with the essential requirements of Directive 2014/53/EU shall be used. If relevant restrictions are described in harmonised standards or parts thereof the references of which have been published in the *Official Journal of the European* Union under Directive 2014/53/EU, performance at least equivalent to these restrictions shall be ensured.

[9] Transmission mask that provides an appropriate level of performance to comply with the essential requirements of Directive 2014/53/EU shall be used. If relevant restrictions are described in harmonised standards or parts thereof the references of which have been published in the *Official Journal of the European Union* under Directive 2014/53/EU, performance at least equivalent to these restrictions shall be ensured.

[10] Automatic power control that provides an appropriate level of performance to comply with the essential requirements of Directive 2014/53/EU shall be used. If relevant restrictions are described in harmonised standards or parts thereof the references of which have been published in the *Official Journal of the European Union* under Directive 2014/53/EU, performance at least equivalent to these restrictions shall be ensured.'

ELI: http://data.europa.eu/eli/dec_impl/2025/105/oj