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Prague, 17 December 2019
Ref.: ČTÚ-43 165/2019-613

Czech Telecommunication Office (hereinafter “the Office”) under Section 108(1)(b) of the Act 127/2005 Coll., on electronic communications and on amendment to certain related acts (the Electronic Communications Act), as amended (hereinafter “the Act”), in compliance with the Act No. 500/2004 Coll., the Administrative Procedure Code, as amended, on the basis of results of public consultations under Section 130 and on the basis of the Office Council’s decision under Section 107(9)(b) and in order to implement Sections 9 and 12 of the Act, the Office hereby issues this Measure of General Nature

**General Authorisation No. VO-R/10/12.2019-9
for the use of radio frequencies and for the operation of Short Range Devices.**

**Article 1
Introductory provisions**

The apparatus operating conditions^{1),2)} relating to the use of radio frequencies and to the operation of transmitting radio equipment of Short Range Devices³⁾ type (hereinafter the “device”) by natural persons or legal entities (hereinafter the “user”) are laid down in the Act and in this General Authorisation under Section 10(1) of the Act⁴⁾.

**Article 2
Common specific conditions**

The specific conditions related to Section 10(1)(m) are as follows:

(1) The user can use radio frequencies and operate the device without an individual authorisation for the use of the radio frequencies under conditions defined in Articles 3 to 15 for individual types of the devices.

(2) The devices may be operated only with a built-in antenna or an antenna prescribed by the manufacturer⁵⁾. The devices shall not be operated with additional high-frequency power amplifiers and/or with frequency converters.

(3) The devices are operated on shared frequencies.

(4) The devices shall not cause harmful interference to the stations of radiocommunication

¹⁾ Sections 73 and 74 of the Act.

²⁾ European harmonized standards referred to in particular articles of this General Authorisation, applied under Act No. 90/2016 Coll., on conformity assessment of products when made available on the market, and Government Order No. 426/2016 Coll., on the assessment of conformity of radio equipment when made available on the market.

³⁾ The term Short Range Device (SRD) is used for an apparatus typically with low level of harmful interference due to low transmitting power and thus communicating in short range. The use of radio frequencies by Short Range Devices is not considered as radiocommunication service in the meaning of Chapter 1, Section III. (Radiocommunication services) of the Frequency Band Allocations Plan (National Table of Frequency Allocations) of 29 November 2017, Appendix to the Decree No. 105/2010 Coll., as amended.

⁴⁾ This General Authorisation is based on the harmonisation documents of the European Commission and the European Conference of Postal and Telecommunications Administrations (CEPT) listed in Annex 1.

⁵⁾ Section 3(d) of the Act No. 90/2016 Coll., on conformity assessment of products when made available on the market.

services which use the radio frequencies according to the Frequency Band Allocations Plan and have no protection from the harmful interference caused by these stations. They also have no protection from the harmful interference caused by other devices which have already been put into operation. Interference issues, if any, are settled by a mutual agreement of users.

(5) The devices may be neither electrically nor mechanically modified.

(6) Unless indicated otherwise, the values of the radiated power, alternatively of the magnetic field intensity or spectral density, occupied bandwidth and duty cycle specified in this General Authorisation are the maximal values and shall not be exceeded in any operating mode of the equipment. Nevertheless, lower values can be used.

(7) In case the occupied bandwidth is not defined for the given category of device and indicated frequency band, the entire stated frequency band can be used for transfer of signals. In case that the duty cycle⁶⁾ for given category of device and indicated frequency band is not defined, the duty cycle up to 100% can be used.

(8) The adjacent frequency bands stated in this General Authorisation can be used as a single frequency band under condition that the specific conditions valid for all these adjacent bands are fulfilled.

Article 3

Specific conditions for non-specified Short Range Devices

(1) According to this Article, all kinds of devices which fulfil the technical conditions as specified for a given frequency band can be operated regardless of their use or purpose. The typical uses include, for example, telemetry, tele-command, alarms or data transmission in general.

(2) The technical parameters of the devices are:

Ref.	Frequency band	Radiated power, or magnetic field intensity	Occupied bandwidth	Duty cycle ⁶⁾	Other conditions according to Paragraph	Harmonized standard (ČSN ETSI EN)
<i>a</i>	13.553–13.567 MHz	10 mW e.r.p.			9	300 330 ⁷⁾
<i>b</i>	26.957–27.283 MHz	10 mW e.r.p.			9	300 220 ⁸⁾
<i>b1</i>	26.995; 27.045; 27.095; 27.145; 27.195 MHz	100 mW e.r.p.	10 kHz	0.1 %	9	300 220 ⁸⁾
<i>c</i>	40.66–40.7 MHz	10 mW e.r.p.			9	
<i>d</i>	138.2–138.45 MHz	10 mW e.r.p.		1.0 %		
<i>e</i>	169.4–169.475 MHz	500 mW e.r.p.	50 kHz	1.0 %		
<i>e1</i>	169.4–169.4875 MHz	10 mW e.r.p.		Paragraph 7 or 0.1 %	7	

⁶⁾ Duty cycle is the ratio of time when the device transmits actively in any one-hour period, unless it is indicated otherwise in the relevant article. Detailed definition of duty cycle can be found in ERC-REC 70-03⁴⁾ and in harmonised standards²⁾.

⁷⁾ ČSN ETSI EN 300 330 – Electromagnetic compatibility and Radio spectrum Matters (ERM) – Short Range Devices (SRD) – Radio equipment in the frequency range of 9 kHz to 25 MHz and inductive loop systems in the frequency range of 9 kHz to 30 MHz.

⁸⁾ ČSN ETSI EN 300 220 – Electromagnetic compatibility and Radio spectrum Matters (ERM) – Short Range Devices (SRD) – Radio equipment to be used in the 25 MHz to 1 000 MHz frequency range with power levels ranging up to 500 mW.

e2	169.4875– 169.5875 MHz	10 mW e.r.p.		Paragraph 7 or during 6:00–24:00 0.001 % and during 0:00–6:00 0.1 %	7	300 220 ⁸⁾
e3	169 5875– 169.8125 MHz	10 mW e.r.p.		Paragraph 7 or 0.1 %	7	
f	433.05– 434.79 MHz	10 mW e.r.p.		10 %	3, 9	300 220 ⁸⁾
f1	433.05– 434.79 MHz	1 mW e.r.p.; for wideband channels of width > 250 kHz power spectral density is limited to –13 dBm/10 kHz			3, 8	
f2	433.04– 434.79 MHz	10 mW e.r.p.	25 kHz		3, 8	
g	863.0–870.0 MHz	25 mW e.r.p.	see Paragraph 4	Paragraph 4, 7 or 0.1 % ⁹⁾	3, 4, 7, 8 (FHSS ¹⁰⁾)	
g1	862,0–863,0 MHz	25 mW e.r.p.	350 kHz	0,1 %	3, 8	
g2	863.0–870.0 MHz	25 mW e.r.p.; spectral density is limited to –4.5 dBm/100 kHz (see Paragraph 5)		Paragraph 5, 7 or 0.1 % ⁹⁾	3, 5, 7, 8 (DHSS ¹⁰⁾ – see Paragraph 5)	
g3	863.0–870.0 MHz	25 mW e.r.p.	see Paragraph 6	Paragraph 6, 7 or ≤ 0.1 % ⁹⁾	3, 6, 7, 8	
g4	863,0–870,0 MHz	25 mW e.r.p.		Paragraph. 7 or 1,0 % ⁹⁾	3, 7	
g5	868.0–868.6 MHz	25 mW e.r.p.		Paragraph 7 or 1.0 % ⁹⁾	3, 7, 8	
g6	868.7–869.2 MHz	25 mW e.r.p.		Paragraph 7 or 0.1 % ⁹⁾	3, 7, 8	
g7	869.4–869.65 MHz	500 mW e.r.p.	25 kHz ¹¹⁾	Paragraph 7 or 10 % ⁹⁾	3, 7, 8	
g8	869.7–870.0 MHz	5 mW e.r.p.			3, 7, 8	
g9	869.7–870.0 MHz	25 mW e.r.p.		Paragraph 7 or 0.1 % ⁹⁾	3, 7, 8	
h1	870–875.8 MHz	25 mW e.r.p.	600 kHz	1 %	3, 8	
h2	870–876 MHz	25 mW e.r.p.	200 kHz	0.1 %	3, 8	
i1	915–921 MHz	25 mW e.r.p.	200 kHz	0.1 %	3, 8	
i2	915.2–920.8 MHz	25 mW e.i.r.p., see Paragraph 10	600 kHz, see Paragraph 10	1 %	3, 8, 10	

⁹⁾ The duty cycle is not limited when using LBT technology, (Listen Before Talk - transmission only on request based on reception).

¹⁰⁾ Frequency Hopping Spread Spectrum, FHSS; Direct Sequence Spread Spectrum, DSSS.

¹¹⁾ The entire frequency band can also be used as one channel for the transmission of high-speed data.

<i>j</i>	2400–2483.5 MHz	25 mW e.i.r.p.			9	300 440 ¹²⁾
<i>k</i>	5725–5875 MHz	25 mW e.i.r.p.			9	
<i>l</i>	24.0–24.25 GHz	100 mW e.i.r.p.			9	
<i>m</i>	57–64 GHz	100 mW e.i.r.p., transmitting output power 10 dBm			9	305 550 ¹³⁾
<i>m1</i>	61.0–61.5 GHz	100 mW e.i.r.p.			9	
<i>n</i>	122–123 GHz	100 mW e.i.r.p.			9	
<i>o</i>	244–246 GHz	100 mW e.i.r.p.			9	

(3) The devices in the frequency bands *f*, *f1*, *f2*, *g*, *g1* to *g9* shall not be used for the transmission of analogue audio signals except for the transmission of voice. The devices in the frequency bands *f1*, *f2*, *g6* can be used for the transmission of voice, subject to implementation of advanced techniques mitigating interference.

(4) In the frequency band *g*, the devices with FHSS modulation with the occupied band width of ≤ 100 kHz can be operated, whereas occupied band width of 100 kHz enabling partial division to 50 kHz or 25 kHz is preferred. Duty cycle applies to the entire transmission in given band and it can be increased up to 1 % for devices operated only in the 865–868 MHz frequency band.

(5) In the frequency band *g2*, it is allowed to operate:

- the devices with DSSS modulation or other wideband modulation except FHSS without restriction of occupied bandwidth; for these devices the spectral power density is limited to -4.5 dBm/100 kHz in case of using the entire frequency band, to +6.2 dBm/100 kHz in case of using only the 865–868 MHz frequency sub-band and to +0.8 dBm/100 kHz in case of using only the 865–870 MHz;
- the narrowband devices with the occupied bandwidth ≤ 100 kHz. Duty cycle applies to the entire transmission in the given band and it can be increased up to 1 % for the devices operated only in the 865–868 MHz frequency sub-band.

(6) In the frequency band *g3*, the narrowband devices with the occupied bandwidth of ≤ 100 kHz can be operated, whereas the occupied bandwidth of 100 kHz enabling partial division to 50 kHz or 25 kHz is preferred.

(7) In the frequency bands *e1*, *e2*, *e3*, *g*, *g2* to *g9*, the techniques for access to the spectrum and to mitigate interference, which provide at least an equal effect as the techniques described in harmonized standards²⁾, shall be used; or it is possible to use the indicated maximum values of the duty cycle.

(8) Transmission of digital video information is not allowed in the bands *f1*, *f2*, *f6*. The transmission of analogue video information is not allowed in the bands *g* to *i2*.

(9) The frequency bands *a*, *b*, *c*, *f*, *j*, *k*, *l*, *m*, *n*, *o* may be used also for industrial, scientific and medical purpose (the so-called ISM bands), i.e. the use of radio frequencies for purposes other than information transmission – e.g. technological heating, lighting, cooking, scientific experiments etc. The harmful interference, which thus arises, shall be minimized.

(10) In the frequency band *i2*, the channels with mean frequencies of 916.3 MHz,

¹²⁾ ČSN ETSI EN 300 440 – Electromagnetic compatibility and Radio spectrum Matters (ERM) – Short Range Devices (SRD) – Radio equipment to be used in the 1 GHz to 40 GHz frequency range.

¹³⁾ ČSN ETSI EN 305 550 – Electromagnetic compatibility and Radio spectrum Matters (ERM) – Short Range Devices (SRD) – Radio equipment to be used in the 40 GHz to 246 GHz frequency range.

917.5 MHz, 918.7 MHz and 919.9 MHz can be used with parameters: max. e.r.p. = 100 mW, the occupied bandwidth ≤ 400 kHz.

Article 4

Specific conditions for Transport and Traffic Telematics (TTT¹⁴)

(1) This Article relates only to devices used in the area of railway transport or in road, shipping or air transport depending on relevant technical restrictions and also the devices for traffic management, navigation, mobility management and in intelligent transportation systems (ITS). They are used typically as interface among different modes of transport, for communication between vehicles (e.g. communication car-to-car), communication between vehicles and fixed placements (e.g. car-to-infrastructure) and for communication between system and users as well.

(2) The technical parameters of the devices are:

Ref.	Frequency band	Radiated power	Other conditions	Harmonized standard (ČSN ETSI EN)
a	984–7484 kHz	9 dBμA/m at the distance of 10 m	railway devices of EUROBALISE system; transmission only after reception of signal from train; spectral mask according to ČSN ETSI EN 302 608 ¹⁵)	302 608 ¹⁵)
b	7.3–23.0 MHz	–7 dBμA/m at the distance of 10 m	railway devices of EUROLOOP system; transmission only in presence of train	302 609 ¹⁶)
c	27.09–27.1 MHz	42 dBμA/m at the distance of 10 m	railway devices of EUROBALISE, EUROLOOP system; spectral mask according to ČSN ETSI EN 302 608 ¹⁶)	302 608 ¹⁶)
d	2447.0; 2448.5; 2450.0; 2451.5; 2453.0 MHz	500 mW e.i.r.p.	railways device of AVI system; transmission only in presence of train	300 761 ¹⁷)
e1	5.795–5.805 GHz	2 W or 8 W e.i.r.p. ¹⁸)	transmission into vehicles, in particular for toll systems, occupied bandwidth 5 MHz or 10 MHz ¹⁹)	300 674 ²⁰)
e2	5.805–5.815 GHz	2 W or 8 W e.i.r.p. ¹⁸)	occupied bandwidth 5 MHz or 10 MHz ¹⁹)	300 674 ²⁰)
e3	5,855–5,875 GHz	33 dBm e.i.r.p., 23 dBm/MHz density e.i.r.p. and range of Transmit	car-to-car, car-to-infrastructure and infrastructure-to-car systems	302 571 ²¹)

¹⁴) Transport and Traffic Telematics, TTT.

¹⁵) ČSN ETSI EN 302 608 – Electromagnetic compatibility and Radio spectrum Matters (ERM) – Short Range Devices (SRD) – Radio equipment for Eurobalise railway systems.

¹⁶) ČSN ETSI EN 302 609 – Electromagnetic compatibility and Radio spectrum Matters (ERM) – Short range devices (SRD) – Radio equipment for Euroloop railway systems.

¹⁷) ČSN ETSI EN 300 761 – Electromagnetic compatibility and Radio spectrum Matters (ERM) – Short Range Devices (SRD) Automatic vehicle identification (AVI) for railways operating in the 2,45 GHz frequency range.

¹⁸) The data transmission at 1 Mbit/s with power of 8 W is allowed pursuant to the standard²⁰). The data transmission at 500 kbit/s downlink and 250 kbit/s uplink with power of 2 W is allowed pursuant to the standard²²).

¹⁹) For channel spacing of 5 MHz, the following channels are recommended: 5797.5 MHz, 5802.5 MHz, 5807.5 MHz and 5812.5 MHz; for channel spacing of 10 MHz, the following channels are recommended: 5800 MHz and 5810 MHz.

²⁰) ČSN ETSI EN 300 674 – Electromagnetic compatibility and Radio spectrum Matters (ERM) – Road Transport and Traffic Telematics (RTTT) – Dedicated Short Range Communications (DSRC) transmission equipment (500 kbit/s / 250 kbit/s) operating in the 5.8 GHz Industrial, Scientific and Medical (ISM) band.

²¹) ČSN ETSI EN 302 571 – Intelligent Transport Systems (ITS) – Radiocommunications equipment operating in the 5 855 MHz to 5 925 MHz frequency band.

		Power Control (TPC) 30 dB	only; see Paragraph 4	
e4	5.875–5.905 GHz	2 W e.i.r.p. see Paragraph 5; the spectral density is limited to 23 dBm/MHz	see Paragraph 4	302 571 ²¹⁾
f1	24.05–24.075 GHz	100 mW e.i.r.p.		302 858 ²²⁾
f2	24.075–24.15 GHz	0.1 mW e.i.r.p.		
f3	24.075–24.15 GHz	100 mW e.i.r.p. see Paragraph 5	automotive radars; see Paragraph 4	
f4	24.15–24.25 GHz	100 mW e.i.r.p.		
f5	21.65–24.25 GHz	see Paragraph 3	only automotive radars in vehicles registered in the EU member states, before 30 June 2013; see Paragraph 3	302 288 ²³⁾
f6	24.25–24.495 GHz	20 dBm e.i.r.p. see Paragraph 6	automotive radars; see Paragraphs 4 and 5	302 288 ²³⁾
f7	24.25–26.65 GHz	see Paragraph 3	only automotive radars in vehicles registered in EU member states before 31 December 2017; see Paragraph 3	
g	63–64 GHz	40 dBm e.i.r.p.	car-to-car, car-to-infrastructure and infrastructure-to-car systems; only devices made available on the market before 1 January 2020	302 686 ²⁴⁾
g1	63,72–65,88 GHz	40 dBm e.i.r.p.	car-to-car, car-to-infrastructure and infrastructure-to-car systems	302 686 ²⁴⁾
h1	76–77 GHz	55 dBm e.i.r.p. (peak power) and 50 dBm e.i.r.p. (mean power); 23.5 dBm e.i.r.p. (mean power) for pulse radars	land automotive systems and infrastructure systems	301 091 ²⁵⁾
h2	76–77 GHz	30 dBm e.i.r.p. (peak power) and mean spectral power density 3 dBm/MHz	obstacle detection systems for rotorcraft use ²⁶⁾ ; duty cycle ≤ 56 % during 1 second	303 360 ²⁷⁾
i	77–81 GHz	55 dBm e.i.r.p. (peak power); spectral power density –3 dBm/MHz, outside vehicle –9 dBm/MHz	land automotive systems	302 264 ²⁸⁾

²²⁾ ČSN ETSI EN 302 858 – Electromagnetic compatibility and Radio spectrum Matters (ERM) – Road Transport and Traffic Telematics (RTTT) – Automotive radar equipment operating in the 24,05 GHz up to 24,25 GHz or 24,50 GHz frequency range.

²³⁾ ČSN ETSI EN 302 288 – Electromagnetic compatibility and Radio spectrum Matters (ERM) – Short Range Devices – Road Transport and Traffic Telematics (RTTT) – Short range radar equipment operating in the 24 GHz range.

²⁴⁾ ČSN ETSI EN 302 686 – Intelligent Transport Systems (ITS) – Radiocommunications equipment operating in the 63 GHz to 64 GHz frequency band.

²⁵⁾ ČSN ETSI EN 301 091 – Electromagnetic compatibility and Radio spectrum Matters (ERM) – Short Range Devices – Road Transport and Traffic Telematics (RTTT) – Radar equipment operating in the 76 GHz to 77 GHz range.

²⁶⁾ Rotorcrafts are defined by international aviation regulations as EASA CS-27 and CS-29 (or JAR-27 and JAR-29 for previous certificate).

²⁷⁾ ČSN ETSI EN 303 360 - Short Range Devices; Transport and Traffic Telematics (TTT); Radar equipment operating in the 76 GHz to 77 GHz range

²⁸⁾ ČSN ETSI EN 302 264 – Electromagnetic compatibility and Radio spectrum Matters (ERM) – Short Range Devices – Road Transport and Traffic Telematics (RTTT) – Short Range Radar equipment operating in the 77 GHz to 81 GHz band.

(3) The frequency bands *f5* and *f7* are used as follows: for the ultra-wide band (UWB) short range automotive radar equipment with the maximum mean power density of -41.3 dBm/MHz of effective isotropic radiated power (e.i.r.p.) and with the peak power density of 0 dBm/50 MHz e.i.r.p., except for frequencies lower than 22 GHz, where the maximum mean density is limited to -61.3 dBm/MHz e.i.r.p. The radio spectrum in the 24.05 – 24.25 GHz frequency band is defined for the narrowband transmission mode/component consisting of an unmodulated carrier wave with the maximum peak power of 20 dBm/MHz e.i.r.p. and with a duty cycle not exceeding 10% for transmission with the peak level higher than -10 dBm e.i.r.p. The transmission in the 23.6 – 24.0 GHz frequency band under the angle of 30° or more from the horizontal level shall be attenuated at least by 25 dB for vehicle short range radar equipment made available on the market before the year 2010 and at least by 30 dB for the equipment made available on the market later on .

(4) In the bands *e3*, *e4*, *f3* and *f6*, the mitigation techniques which provide at least an equal effect as the techniques described in harmonized standards²⁾ shall be used.

(5) In the band *f6*, the maximal duty cycles and ranges of the frequency modulation apply pursuant to harmonized standards²⁾. The radiated power is limited as follows: 20 dBm e.i.r.p. (the radars oriented in the direction of driving, duty cycle 5.6% /s/25 MHz); 16 dBm e.i.r.p. (the radars oriented against the direction of driving, duty cycle 2.3% /s/25 MHz); -11 dBm e.i.r.p. (other radars in the sub-band 24.25 – 24.495 GHz, duty cycle 0.25% /s/25 MHz); -8 dBm e.i.r.p. (other radars in the sub-band 24.495 – 24.5 GHz, duty cycle 1.5% /s/25 MHz).

Article 5

Specific conditions for tracking and data collection equipment

(1) According to this Article, devices used for tracking and detection of persons and items including emergency detection of buried victims and valuable items and for remote meter readings²⁹⁾ and data collection can be operated only. The Paragraph 3 applies to the data transfer into 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 authorised healthcare professionals. Frequencies for data networks for tracking and data collection are indicated in Article 15.

(2) The technical parameters of the devices for tracking and data collection are:

Ref.	Frequency band	Radiated power, or magnetic field intensity	Other conditions	Harmonized standard (ČSN ETSI EN)
<i>a</i>	442.2–450 kHz	7 dB μ A/m /10 m	devices for detection of people and collision avoidance	300 330 ⁷⁾
<i>b</i>	456.9–457.1 kHz	7 dB μ A/m /10 m	devices designated only for emergency detection of buried victims and valuable items	300 718 ³⁰⁾
<i>c</i>	169.4–169.475 MHz	500 mW e.i.r.p.	meter readings only ²⁹⁾ ; occupied bandwidth 50 kHz, duty cycle ⁶⁾ 10 %	300 220 ⁸⁾

²⁹⁾ The term „meter readings“ is understood as the radio devices, parts of two-way radiocommunication systems, which enable remote monitoring, measurement and data transfer in the framework of intelligent networks infrastructure, e.g. networks for distribution of electricity, gas and water.

³⁰⁾ ČSN ETSI EN 300 718 – Electromagnetic Compatibility and Radio Spectrum Matters (ERM) – Avalanche Beacons; Transmitter-receiver systems.

(3) The technical parameters of the devices for medical data collection are:

Ref.	Frequency band	Radiated power, or magnetic field intensity	Other conditions	Harmonized standard (ČSN ETSI EN)
<i>d</i>	430–440 MHz	–50 dBm/100 kHz ³¹⁾ e.i.r.p. and simultaneously –40 dBm/10 MHz ³⁰⁾	UPL-WMCE devices only ³²⁾	
<i>e1</i>	2483.5–2500 MHz	10 mW e.i.r.p.	MBANS devices only ³³⁾ ; duty cycle ⁶⁾ < 2 % see Paragraphs 3, 4	303 203 ³⁴⁾
<i>e2</i>	2483.5–2500 MHz	1 mW e.i.r.p.	MBANS devices only ³³⁾ ; duty cycle ⁶⁾ < 10 % see Paragraphs 3, 4	

(3) The frequency bands *e1*, *e2* are designated for MBANS³³⁾ operated inside buildings (indoor use), modulated bandwidth is ≤ 3 MHz. The frequency band *e1* is designated for the operation of MBANS³³⁾ devices in health-care facilities, the frequency band *e2* is designated for the operation of MBANS³³⁾ devices in flats of the patients.

(4) In the frequency bands *e1* and *e2* the devices shall use the techniques of access to the spectrum and mitigation of interference, which provide at least an equal effect as the techniques described in harmonized standards²⁾.

Article 6

Specific conditions for radiodetermination equipment

(1) According to this Article, devices used for determining of the position, velocity and/or other characteristics of an object, or for obtaining of information relating to these parameters by means of the propagation of radio waves can be operated only. This Article does not apply to devices using point-to-point or point-to-multipoint communications³⁵⁾.

(2) The technical parameters of the devices for radiodetermination are:

Ref.	Frequency band	Radiated power, or magnetic field intensity	Other conditions	Harmonized standard (ČSN ETSI EN)
<i>a</i>	9200–9975 MHz	25 mW e.i.r.p.		300 440 ¹²⁾
<i>b</i>	13.4–14.0 GHz	25 mW e.i.r.p.		
<i>c</i>	17.1–17.3 GHz	+26 dBm e.i.r.p.	see Paragraph 5	

³¹⁾ The value is measured outside of the patient's body.

³²⁾ Ultra-Low Power Wireless Medical Capsule Endoscopy, ULP-WMCE.

³³⁾ Medical Body Area Network Systems, MBANS – the radio network in proximity of patient's body used for data collection from sensors, which monitor his/her vital functions including transferring this data for monitoring or processing.

³⁴⁾ ČSN ETSI EN 303 203 – Electromagnetic compatibility and Radio spectrum Matters (ERM) – Short Range Devices (SRD) – Medical Body Area Network Systems (MBANS) operating in the 2483.5 MHz to 2500 MHz range.

³⁵⁾ See Annex 6 of Recommendation ERC/REC 70-03 – Relating to the use of Short Range Devices (SRD), as amended.

(3) Technical parameters of the tanks level probing radars are:

Ref.	Frequency band	Radiated power, or magnetic field intensity	Other conditions according to paragraph	Harmonized standard (ČSN ETSI EN)
<i>g</i>	4.5–7.0 GHz	+24 dBm e.i.r.p.	5, 6	302 372 ³⁶⁾
<i>h</i>	6.0–8.5 GHz	7 dBm/50 MHz peak e.i.r.p. and –33 dBm/MHz mean e.i.r.p.	5	302 729 ³⁷⁾
<i>i</i>	8.5–10.6 GHz	+30 dBm e.i.r.p.	5, 6	302 372 ³⁶⁾
<i>j1</i>	24.05–26.5 GHz	26 dBm/50 MHz peak e.i.r.p. and –14 dBm/MHz mean e.i.r.p.	5	302 729 ³⁷⁾
<i>j2</i>	24.05–27 GHz	43 dBm e.i.r.p.	6	302 372 ³⁶⁾
<i>k1</i>	57–64 GHz	35 dBm/50 MHz peak e.i.r.p. and –2 dBm/MHz mean e.i.r.p.	6	302 729 ³⁷⁾
<i>k2</i>	57–64 GHz	43 dBm e.i.r.p.	6	302 372 ³⁶⁾
<i>l1</i>	75–85 GHz	34 dBm/50 MHz peak e.i.r.p. and –3 dBm/MHz mean e.i.r.p.	6	302 729 ³⁷⁾
<i>l2</i>	75–85 GHz	43 dBm e.i.r.p.	6	302 372 ³⁶⁾

(4) Technical parameters of the ultra-wideband radars designated for imaging of the structure of walls and Earth's surface (GPR/WPR) are:

Ref.	Frequency band	Maximum spectral density e.i.r.p.	Max. peak radiated power	Harmonized standard (ČSN ETSI EN)
<i>m</i>	30–230 MHz	–65 dBm/MHz	–44.5 dBm/120 kHz (e.r.p.)	302 066 ³⁸⁾
<i>n</i>	230–1000 MHz	–60 dBm/MHz	–37.5 dBm/120 kHz (e.r.p.)	
<i>o</i>	1000–1600 MHz	in the sub-bands 1164–1215 MHz and 1559–1610 MHz: –75 dBm/kHz; in other sub-bands: –65 dBm/MHz	–30 dBm/MHz (e.i.r.p.)	
<i>p</i>	1600–3400 MHz	–51.3 dBm/MHz	–30 dBm/MHz (e.i.r.p.)	
<i>q</i>	3400–5000 MHz	–41.3 dBm/MHz	–30 dBm/MHz (e.i.r.p.)	
<i>r</i>	5000–6000 MHz	–51.3 dBm/MHz	–30 dBm/MHz (e.i.r.p.)	
<i>s</i>	> 6000 MHz	–65 dBm/MHz	–30 dBm/MHz (e.i.r.p.)	

³⁶⁾ ČSN ETSI EN 302 372 – Electromagnetic compatibility and Radio spectrum Matters (ERM) – Short Range Devices (SRD) – Equipment for Detection and Movement – Tanks Level Probing Radar (TLPR) operating in the frequency bands 5.8 GHz, 10 GHz, 25 GHz, 61 GHz and 77 GHz.

³⁷⁾ ČSN ETSI EN 302 729 – Electromagnetic compatibility and Radio spectrum Matters (ERM) – Short Range Devices (SRD) – Level Probing Radar (LPR) equipment operating in the frequency ranges 6 GHz to 8.5 GHz, 24.05 GHz to 26.5 GHz, 57 GHz to 64 GHz, 75 GHz to 85 GHz.

³⁸⁾ ČSN ETSI EN 302 066 – Electromagnetic compatibility and Radio spectrum Matters (ERM) – Short Range Devices (SRD) – Ground- and Wall- Probing Radar applications (GPR/WPR).

(5) In the frequency bands *c* and *g* to *l2*, the techniques of access to the spectrum and mitigation of interference, which provide at least an equal effect as the techniques described in harmonized standards²⁾ shall be used.

(6) The frequency bands *g*, *i*, *j2*, *k2*, *l2* are reserved only for tank level probing radars³⁹⁾ placed in metal, or ferro-concrete tanks, or similar constructions produced of material, which has comparable attenuation characteristics. The indicated maximal power value is valid for devices placed inside closed tank and corresponds to spectral density – 41.3 dBm/MHz e.i.r.p. outside of a testing tank with 500 litres volume.

Article 7

Specific conditions for alarms

(1) This Article relates only to devices using radio communication for indicating an alarm at the distant place (alarm systems), or social alarm systems which enable reliable communication for persons in distress. It covers devices with low duty cycle and high reliability which, thanks to the rules setting low total use of spectrum, can provide highly reliable access to the spectrum and transfers in shared bands.

(2) The technical parameters of the devices are:

Ref.	Frequency band	Radiated power	Occupied bandwidth	Duty cycle ⁶⁾	Harmonized standard (ČSN ETSI EN)
<i>a1</i>	169.48125 MHz	500 mW e.r.p.	12.5 kHz	1 % (it does not apply to the social alarm systems)	300 220 ⁸⁾
<i>a2</i>	169.59375 MHz	500 mW e.r.p.	12.5 kHz		
<i>b</i>	868.6–868.7 MHz	10 mW e.r.p.	25 kHz ¹¹⁾	1 %	
<i>c</i>	869.2–869.25 MHz	10 mW e.r.p.	25 kHz	0.1 %	
<i>d</i>	869.25–869.3 MHz	10 mW e.r.p.	25 kHz	0.1 %	
<i>e</i>	869.3–869.4 MHz	10 mW e.r.p.	25 kHz	1 %	
<i>f</i>	869.65–869.7 MHz	25 mW e.r.p.	25 kHz	10 %	

(3) The frequency band *c* is reserved only for devices which are part of the social alarm⁴⁰⁾ systems.

Article 8

Specific conditions for equipment for telecommand of cranes, forest machines and other machinery

(1) This Article applies only to devices for telecommand of cranes, forest machines, industrial scales, railway sidings and for similar use.

(2) The technical parameters of the devices are as follows:

Ref.	Frequency band	Radiated power	Occupied bandwidth	Harmonized standard (ČSN ETSI EN)
<i>a</i>	172.525 MHz; 172.575 MHz; 173.650 MHz; 173.950 MHz	100 mW e.r.p.	12.5 kHz	300 220 ⁸⁾

³⁹⁾ Tank Level Probing Radar, TLPR.

⁴⁰⁾ The term “social alarm” is understood as the radiocommunication system which allows reliable communication for a person in distress in confined area to initiate a call for help. The typical use of social alarm includes help to elderly or disabled persons.

b	430.0–430.45 MHz			
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Article 9

Specific conditions for equipment with inductive loop

(1) This Article relates only to devices using magnetic field and devices with inductive loop for short range communication. Typical use of these devices include car immobilizers, animal identification, alarm systems with inductive loop, cable detection, waste management, personal identification, wireless voice links, access control, proximity sensors, anti-theft systems including radio frequency anti-theft induction systems, data transfer to handheld devices, automatic article identification, wireless control systems and automatic road tolling.

(2) Only the inductive loop can be used as an external antenna.

(3) The radio emission of the device with inductive loop in immediate vicinity of the inductive loop is not considered as interference in the sense of the Act.

(4) The technical parameters of the devices are:

Ref.	Frequency band	Magnetic field intensity	Other conditions	Harmonized standard (ČSN ETSI EN)
a	< 9 kHz	82 dB μ A/m at the distance of 10 m	<i>to be specified</i>	303 348 ⁴¹⁾ 303 447 ⁴²⁾ 303 454 ⁴³⁾ 303 660 ⁴⁴⁾
b	9–90 kHz	72 dB μ A/m at the distance of 10 m ⁷⁾		300 330 ⁷⁾ 303 447 ⁴²⁾ 303 454 ⁴³⁾
c	90–119 kHz	42 dB μ A/m at the distance of 10 m		
d	119–135 kHz	66 dB μ A/m at the distance of 10 m		
d1	135–140 kHz	42 dB μ A/m at the distance of 10 m		
d2	140–148.5 kHz	37.7 dB μ A/m at the distance of 10 m		300 330 ⁷⁾
e	148.5–1600 kHz	–5 dB μ A/m at the distance of 10 m		300 330 ⁷⁾ 302 536 ⁴⁵⁾
f	1600–5000 kHz	–15 dB μ A/m at the distance of 10 m	see Paragraph 7	300 330 ⁷⁾
f1	1900–2100 kHz	5 dB μ A/m at the distance of 10 m		300 330 ⁷⁾
f2	3155–3400 kHz	13.5 dB μ A/m at the distance of 10 m		
g	5–30 MHz	–20 dB μ A/m at the distance of 10 m	see Paragraph 7	
h	6765–6795 kHz	42 dB μ A/m at the distance of 10 m	see Paragraph 8	

⁴¹⁾ ČSN ETSI EN 303 348 – Induction loop systems intended to assist the hearing impaired in the frequency range 10 Hz to 9 kHz.

⁴²⁾ ČSN ETSI EN 303 447 – Short Range Devices (SRD) – Inductive loop systems for robotic mowers in the frequency range 0 Hz to 148,5 kHz.

⁴³⁾ ČSN ETSI EN 303 454 – Short Range Devices (SRD) – Metal and object detection sensors in the frequency range 1 kHz to 148,5 kHz.

⁴⁴⁾ ČSN ETSI EN 303 454 (draft) – Radio equipment in frequency range below 9 kHz.

⁴⁵⁾ ČSN ETSI EN 302 536 – Electromagnetic compatibility and Radio spectrum Matters (ERM) – Short Range Devices (SRD) – Radio equipment in the frequency range 315 kHz to 600 kHz.

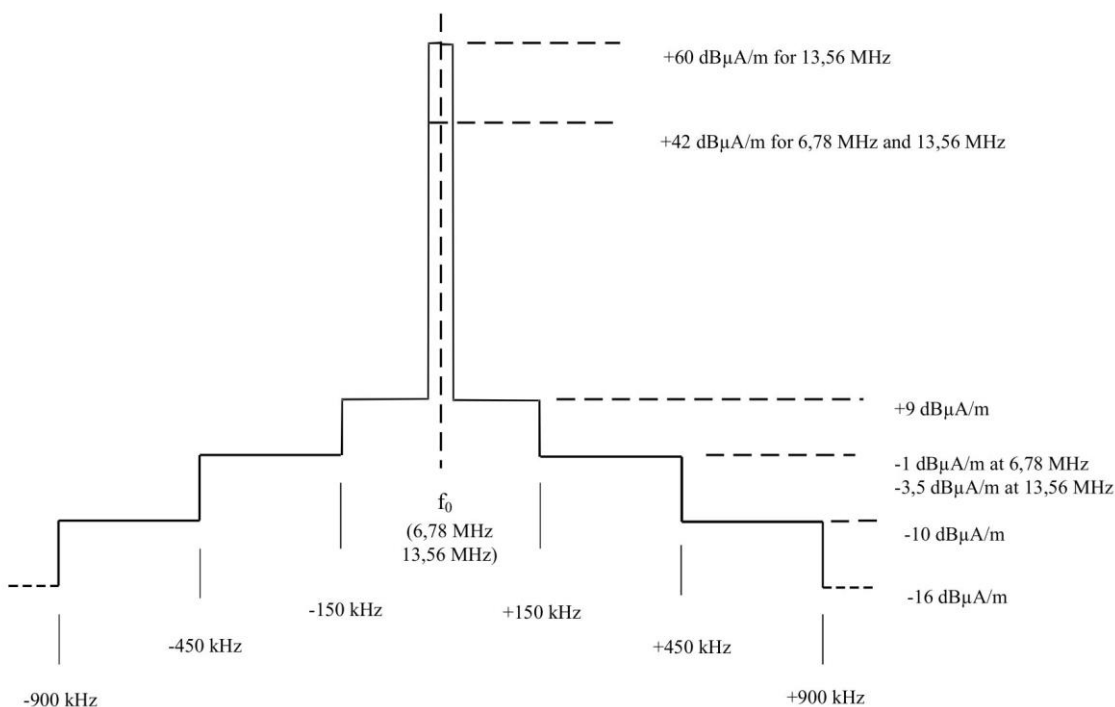
<i>i</i>	7400–8800 kHz	9 dB μ A/m at the distance of 10 m		
<i>j</i>	10.2–11.0 MHz	9 dB μ A/m at the distance of 10 m		300 330 ⁷⁾
<i>k</i>	13.553–13.567 MHz	42 dB μ A/m at the distance of 10 m	see Paragraph 8	300 330 ⁷⁾
<i>k1</i>	13.553–13.567 MHz	60 dB μ A/m at the distance of 10 m	only devices of Electronic Article Surveillance ⁴⁷⁾ ; see Paragraph 8	302 291 ⁴⁶⁾

(5) The occupied bandwidth is not prescribed; the entire band can be used.

(6) For devices with built-in loop antenna, or with loop antenna prescribed by the manufacturer with an area of 0.05 m² to 0.16 m² the indicated magnetic field strength value shall be reduced by $10 \times \log(\text{area}/0.16 \text{ m}^2)$; if the area of the loop antenna is smaller than 0.05 m², the magnetic field intensity shall be reduced by 10 dB.

(7) In the frequency bands *f*, *g*, the indicated maximum magnetic field strength relates to the width of the 10 kHz frequency segment. For devices operated in a segment wider than 10 kHz, the total maximum intensity while maintaining the above stated condition shall be $-5 \text{ dB}\mu\text{A/m}$ at the distance of 10 m⁷⁾.

(8) The devices transmitting in the frequency bands *h*, *k*, *k1* can radiate in the sub-bands 5.88–7.68 MHz and 12.66–14.46 MHz with magnetic field intensity values at the distance of 10 m⁷⁾ as follows:



Article 10 Specific conditions for wireless audio transmission

(1) This Article, relates only to wireless devices for audio transmission which includes e.g. wireless microphones for professional and consumer usage, wireless loudspeakers, wireless headphones, earpieces (assistive listening devices, i.e. radiocommunication systems which

⁴⁶⁾ ČSN ETSI EN 302 291 – Electromagnetic Compatibility and Radio spectrum Matters (ERM) – Short Range Devices (SRD) – Close Range Inductive Data Communication equipment operating at 13.56 MHz.

⁴⁷⁾ Electronic Article Surveillance, EAS.

enhance perception of hearing to the hearing-impaired persons), fishing digital receivers, communication means in vehicles or connection links used at concerts. These devices are using radio frequencies with high duty cycle / continuous transmission and rely on low latency.

(2) The technical parameters of the devices are:

Ref.	Frequency band	Radiated power	Occupied bandwidth	Other conditions	Harmonized standard (ČSN ETSI EN)
<i>a</i>	27.415–27.915 MHz	10 mW e.r.p.	50 kHz		300 422 ⁴⁸⁾ 301 357 ⁴⁹⁾
<i>b1</i>	36.4–36.65 MHz	10 mW e.r.p.	50 kHz		
<i>b2</i>	36.65–38.0 MHz	2 mW e.r.p.	50 kHz	microphones for hearing-impaired and earpieces only	
<i>b3</i>	38.0–38.5 MHz	10 mW e.r.p.	200 kHz		
<i>c</i>	87.5–108 MHz	50 nW e.r.p.	200 kHz		
<i>d1</i>	169.4–169.475 MHz	500 mW e.r.p.	50 kHz	microphones for hearing-impaired and earpieces only	300 422 ⁴⁸⁾ 301 357 ⁴⁹⁾
<i>d2</i>	169.4875–169.5875 MHz	500 mW e.r.p.	50 kHz	microphones for hearing-impaired and earpieces only	
<i>e1</i>	173.3 MHz	50 mW e.r.p.	75 kHz	microphones for hearing-impaired and earpieces only	
<i>e2</i>	173.965–174.015 MHz	2 mW e.r.p.	50 kHz	microphones for hearing-impaired and earpieces only	
<i>f</i>	174–216 MHz	50 mW e.r.p.		see Paragraph 3	
<i>g</i>	470–694 MHz	50 mW e.r.p.		see Paragraph 3	
<i>h</i>	694–786 MHz	50 mW e.r.p.		before 29 June 2020 only; see Paragraph 3	
<i>i</i>	786–789 MHz	12 mW e.r.p.			
<i>j1</i>	823–826 MHz	20 mW e.i.r.p.; microphones carried on body 50 mW e.i.r.p.		see Paragraph 4	
<i>j2</i>	826–832 MHz	100 mW e.i.r.p.		see Paragraph 4	
<i>k</i>	863–865 MHz	10 mW e.r.p.			
<i>k1</i>	864.8–865 MHz	10 mW e.r.p.	50 kHz	narrow band audio devices ⁵⁰⁾	300 220 ⁸⁾
<i>l</i>	1785–1804.8 MHz	20 mW e.i.r.p.; microphones carried on body 50 mW e.i.r.p.		see Paragraph 4	300 422 ⁴⁸⁾ 300 357 ⁴⁹⁾

(3) The frequency bands *f*, *g*, *h* are preferentially reserved for television broadcasting.

⁴⁸⁾ ČSN ETSI EN 300 422 – Electromagnetic compatibility and Radio spectrum Matters (ERM) – Wireless microphones operated in the 25 MHz to 3 GHz frequency range.

⁴⁹⁾ ČSN ETSI EN 301 357 – Electromagnetic compatibility and Radio spectrum Matters (ERM) – Cordless audio devices in the range 25 MHz to 2000 MHz.

⁵⁰⁾ The “narrow band audio devices” are understood as baby monitors, door systems etc.

Wireless microphones in these bands shall not cause interference to the reception of television signal and they cannot claim protection from interference caused by the television signal.

(4) The conditions for range of spectral block edge masks⁵¹⁾ valid for devices ensuring programme making and special events⁵²⁾ in duplex separation for FDD⁵³⁾ mode in the framework of the bands *j1, j2, l* are defined in Commission Implementing Decision No. 2014/641/EU of 1 September 2014 on harmonized technical conditions of radio spectrum use by wireless audio programme making and special events equipment (PSME) in the Union.

Article 11

Specific conditions for radiofrequency identification equipment

(1) This Article relates only to devices for radiofrequency identification (Radio Frequency Identification, RFID) which are radiocommunication systems tag- and interrogator-based radio communications systems consisting of radio devices (tags) attached to animate or inanimate items and of transmitter / receiver units (interrogators) which activate the tags and receive data back. Typical use of these devices includes tracking and identification of items, e.g. for Electronic Article Surveillance⁴⁷⁾, and collecting and transmitting data relating to items equipped with labels to which the tags are attached, which may be either battery-less, battery assisted, or battery powered. The responses from the tag are validated by its interrogator and passed to its host system.

(2) The technical parameters of the devices are:

Ref.	Frequency band	Radiated power / Magnetic field intensity	Occupied bandwidth	Duty cycle ⁶⁾	Other conditions as per Paragraph	Harmonized standard (ČSN ETSI EN)
<i>a</i>	400–600 kHz	-8 dB μ A/m at the distance of 10 m				300 330 ⁷⁾
<i>b</i>	13.553–13.567 MHz	60 dB μ A/m at the distance of 10 m				
<i>b1</i>	11.81–14.46 MHz	see Paragraph 3			3	
<i>c</i>	865–868 MHz	2 W e.i.r.p.	200 kHz		4, 5, 6, 9	302 208 ⁵⁴⁾
<i>c1</i>	865–868 MHz	100 mW e.r.p.	200 kHz	see Paragraph 5	7, 8, 9	
<i>c2</i>	865.6–867.6 MHz	2 W e.r.p.	200 kHz		7, 8, 9	
<i>c3</i>	867.6–868 MHz	500 mW e.r.p.	200 kHz		7, 8, 9	
<i>d</i>	916.3 MHz, 917.5 MHz, 918.7 MHz	4 W e.r.p.	400 kHz		6, 9	
<i>e1</i>	2446–2454 MHz	500 mW e.i.r.p.				300 440 ¹²⁾ 300 761 ¹⁷⁾
<i>e2</i>	2446–2454 MHz	4 W e.i.r.p.		15 % in any period of 200 ms	10	300 440 ¹²⁾

(3) The spectral mask according to ČSN EN 300 330 applies for devices in the frequency

⁵¹⁾ Block edge mask, BEM.

⁵²⁾ Programme making and special events, PMSE.

⁵³⁾ Frequency-Division Duplexing, FDD – the duplex with frequency division.

⁵⁴⁾ ČSN ETSI EN 302 208 – Electromagnetic compatibility and Radio spectrum Matters (ERM) – Radio Frequency Identification Equipment operating in the band 865 MHz to 868 MHz with power levels up to 2 W.

band *b*. This allows to use also frequencies from the band *b1* with output limits according to this mask.

(4) Transmission of interrogators in band *c* with 2 W e.r.p is allowed only in four channels with mean frequencies 865.7 MHz, 866.3 MHz and 867.5 MHz.

(5) The maximal time of continuous transmission of the interrogator on one channel in frequency band *c* must not exceed 4 s and the time between two transmission periods on the same channel must be at least 100 ms.

(6) Transmission in frequency band *c* and *d* is possible only if necessary, to make a needed operation, i.e. provided there are RFID labels (tags) present.

(7) Only equipment made available on the market in the EU member states before 1 January 2018 shall be operated in frequency bands *c1* – *c3*.

(8) There are 15 channels specified in frequency bands *c1* – *c3* whose means are set by the formula: 864.9 MHz + (0.2 MHz × the channel number). The device can be operated in more partial frequency bands (*c1* to *c3*).

(9) In frequency bands *c*, *c1*, *c2*, *c3*, *d*, the techniques of access to spectrum and interference mitigation described in European standards²⁾ shall be used.

(10) The frequency band *e2* is reserved for use inside buildings. At the same time it shall be ensured that at the distance of 10 m from the outer edge of the building, any transmission shall not exceed the equivalent of the electromagnetic field intensity that would be recorded for a device with a radiated power of 500 mW e.i.r.p. located outside the building, if it was measured at the same distance. In case of a complex of buildings (e.g. shops in a shopping mall), the condition of electromagnetic field intensity shall be fulfilled at the distance of 10 m from the border of an area belonging to one user. The device shall use the technology of frequency hopping⁵⁵⁾ for interference mitigation.

Article 12

Specific conditions for medical implants

(1) According to this Article, it is possible to operate only active medical implants. This category of devices includes the radio part of active implantable medical devices which are intended for complete, or partial implanting to human or animal body by surgical intervention, or by medication, and alternatively peripheral part of these devices.

(2) The technical parameters of the devices are:

Ref.	Frequency band	Radiated power / Magnetic field intensity	Duty cycle ⁶⁾	Occupied bandwidth	Other conditions	Harmonized standard (ČSN ETSI EN)
<i>a</i>	9–315 kHz	30 dBμA/m /10 m	10 %	–		302 195 ⁵⁶⁾
<i>b</i>	315–600 kHz	–5 dBμA/m /10 m	10 %	–	for veterinary implants only ⁵⁷⁾	302 536 ⁴⁵⁾
<i>c</i>	12.5–20 MHz	–7 dBμA/m /10 m in a bandwidth of 10 kHz	10 %	–	for veterinary implants only ⁵⁷⁾ ; for transmission inside of buildings only	300 330 ⁷⁾

⁵⁵⁾ Frequency Hopping Spread Spectrum (FHSS).

⁵⁶⁾ ČSN ETSI EN 302 195 – Electromagnetic compatibility and Radio spectrum Matters (ERM) – Radio equipment in the frequency range 9 kHz to 315 kHz for Ultra Low Power Active Medical Implants (ULP-AMI) and accessories.

⁵⁷⁾ The transmission devices, placed inside the animal body, which transmit data for the purpose of doing diagnostic functions and/or medical treatment.

<i>d</i>	30.0–37.5 MHz	1 mW e.r.p.	10 %	–	for Ultra Low Power medical membrane implants for measurement of blood pressure ⁵⁸⁾	302 510 ⁵⁹⁾
<i>e1</i>	401–402 MHz	25 µW e.r.p.	see Paragraph 3	25 kHz		301 839 ⁶⁰⁾ 302 537 ⁶¹⁾
<i>e2</i>	402–405 MHz	25 µW e.r.p.		25 kHz, see Paragraph 4	for active implantable medical means only ⁵⁸⁾	
<i>e3</i>	405–406 MHz	25 µW e.r.p.	see Paragraph 3	25 kHz		
<i>f</i>	2483.5–2500 MHz	10 mW e.i.r.p.	10 %	1 MHz	for active implantable medical means only ⁵⁸⁾ ; see Paragraph 5	301 559 ⁶²⁾

(3) The frequency bands *e1*, *e3* are intended only for data transfer devices among active implantable medical devices⁵⁶⁾ and / or devices carried on body and other devices placed outside of the human body and used to transfer individual physiologic data about a patient which are not seen as critical in terms of time. Individual transmitters can combine the adjacent channels for enlargement of the bandwidth up to 100 kHz. The techniques of access to the spectrum and of interference mitigation, which provide at least equivalent effect as the techniques described in the harmonised standards²⁾, shall be used. Alternatively, a duty cycle ≤ 0.1 % may also be used.

(4) In the frequency band *e2*, the individual transmitters can combine the adjacent channels for enlargement of the bandwidth up to 300 kHz. There can be used other techniques of access to the spectrum or interference mitigation including bandwidths greater than 300 kHz, on condition that they provide at least equivalent effect as the techniques described in harmonised standards²⁾ for ensuring compatible operation with other users, particularly with meteorological radiosondes.

(5) In the frequency band *f*, the master peripheral units can be used only inside buildings. During their operation, the techniques of access to the spectrum and interference mitigation which provide at least equivalent effect as the techniques described in harmonised standards²⁾ shall be used. The entire frequency band may be dynamically used also as one channel for high speed data transfer.

Article 13

Specific conditions for remote control of acoustic information equipment for blind persons

(1) This Article relates only to the command devices for remote control of acoustic information devices for blind persons which serve for remote control of small stationary acoustic orientation beacons or of small digital voice beacons located at orientation points in cities, which are important for blind persons e.g. at entrances to the underground, hospitals, social care facilities, at bus stops and railway stations, at airports or to activate the information systems located in the means of public transport.

(2) The technical parameters of the devices are:

⁵⁸⁾ In the framework of the Active Implantable Medical Devices definition in the Council Directive 90/385/EEC, as amended.

⁵⁹⁾ ČSN ETSI EN 302 510 – Electromagnetic compatibility and Radio spectrum Matters (ERM) – Radio equipment in the frequency range 30 MHz to 37.5 MHz for Ultra Low Power Active Medical Membrane Implants and Accessories.

⁶⁰⁾ ČSN ETSI EN 301 839 – Electromagnetic compatibility and Radio spectrum Matters (ERM) – Ultra Low Power Active Medical Membrane Implants (ULP-AMI) and Peripherals operating in the frequency range 402 to 405 MHz.

⁶¹⁾ ČSN ETSI EN 302 537 – Electromagnetic compatibility and Radio spectrum Matters (ERM) – Short Range Devices (SRD) – Low Power Active Medical Data Service Systems operating in the frequency range 401 MHz to 402 MHz and 405 MHz to 406 MHz.

⁶²⁾ ČSN ETSI EN 301 559 – Electromagnetic compatibility and Radio spectrum Matters (ERM) – Short Range Devices (SRD) – Low Power Active Medical Implants (LP-AMI) operating in the frequency range 2483.5 MHz to 2500 MHz.

Ref.	Frequency	Radiated power	Occupied bandwidth	Command duration	Harmonized standard (ČSN ETSI EN)
a	86.79 MHz	10 mW e.r.p.	20 kHz	maximum 100 ms	300 220 ⁸⁾

Article 14

Specific conditions for equipment using Ultra Wide Band technology

(1) This Article relates only to the devices using ultra-wideband technology (UWB). This means the devices where an integral part or accessory includes a technology for short range radio communication which incorporates intentional generation and transmission of high-frequency energy spread over a frequency range wider than 50 MHz, which may overlap several frequency bands allocated to different radiocommunication services.

(2) The technical parameters of devices for general use of ultra-wideband technologies⁶³⁾, devices for location tracking⁶⁴⁾, devices built in road and rail vehicles⁶⁵⁾, and devices on board aircraft are:

Ref.	Frequency band	Maximum mean e.i.r.p. density / 1 MHz	Maximum peak e.i.r.p. density / 50 MHz	Other conditions	Harmonized standard (ČSN ETSI EN)
a	≤ 1600 MHz	-90 dBm	-50 dBm		302 065-1 ⁶³⁾ 302 065-2 ⁶⁴⁾ 302 065-3 ⁶⁵⁾
b	1600-2700 MHz	-85 dBm	-45 dBm		
c	2700-3400 MHz	-70 dBm	-36 dBm	see Paragraph 4	
d	3400-3800 MHz	-80 dBm	-40 dBm	see Paragraph 4	
e	3800-4200 MHz	-70 dBm	-30 dBm	see Paragraph 4	
f	4200-4800 MHz	-70 dBm	-30 dBm	see Paragraph 4	
g	4800-6000 MHz	-70 dBm	-30 dBm		
h1	6000-8500 MHz	- 41.3 dBm	0 dBm	except devices in road and rail vehicles; see Paragraphs 4, 5, 6	
h2	6000-8500 MHz	- 53.3 dBm	-13.3 dBm	except devices in road and rail vehicles; see Paragraph 4	
i	8.5-10.6 GHz	-65 dBm	-25 dBm	see Paragraph 4	
j	≥ 10.6 GHz	-85 dBm	-45 dBm		

(3) The technical parameters of material structure sensing devices, including a device to

⁶³⁾ ČSN ETSI EN 302 065 – Electromagnetic compatibility and Radio spectrum Matters (ERM) – Ultra Wide Band technology (UWB) for communications purposes – Harmonised EN covering the essential requirements of article 3.2 of the R&TTE Directive – Part 1: Requirements for Generic UWB applications.

⁶⁴⁾ ČSN ETSI EN 302 065 – Electromagnetic compatibility and Radio spectrum Matters (ERM) – Ultra Wide Band technology (UWB) for communications purposes – Harmonised EN covering the essential requirements of article 3.2 of the R&TTE Directive – Part 2: Requirements for UWB location tracking.

⁶⁵⁾ ČSN ETSI EN 302 065 – Electromagnetic compatibility and Radio spectrum Matters (ERM) – Ultra Wide Band technology (UWB) for communications purposes – Harmonised EN covering the essential requirements of article 3.2 of the R&TTE Directive – Part 3: Requirements for UWB devices for ground based vehicular applications.

analyse building materials, shall comply with the conditions of Article 5 of Annex to Commission Decision No. 2019/785/EU⁴).

(4) The devices can also broadcast with the maximum mean e.i.r.p. density – 41.3 dBm/MHz and the maximum peak e.i.r.p. density 0 dBm measured in range of 50 MHz width, if they use additional techniques of interference mitigation which are described in relevant harmonized standards, and in the sub-bands of radio spectrum specified in table:

	Mitigating interference technique			
	LDC ⁶⁶⁾	DAA ⁶⁷⁾	TPC ⁶⁸⁾	TPC ⁶⁸⁾ + DAA ⁶⁷⁾
equipment for general use of ultra-wide band technologies	3100–4800 MHz	3100–4800 MHz 8500–9000 MHz	—	—
equipment for location tracking	—	8500–9000 MHz	—	—
equipment built into road and rail vehicles under fulfilment of limit in exterior according to standard ⁶³⁾	3100–4800 MHz 6000–8500 MHz	—	6000–8500 MHz	3100–4800 MHz 8500–9000 MHz

(5) The devices on board aircraft can transmit in the sub-band 6650–6675.2 MHz only with the maximum mean e.i.r.p. density –62.3 dBm/MHz and the maximum peak e.i.r.p. density –21 dBm measured in range of 50 MHz width.

(6) The devices on board aircraft shall limit the radiated power in the sub-band 7.25–7.9 GHz in accordance with Commission Decision No. 2014/702/EU⁴).

Article 15

Specific conditions for Short Range Devices in data networks

(1) According to this Article, the Short Range Devices can be operated only within data networks under the control of network access points if these devices are an integral part of the network⁶⁹⁾.

(2) The technical parameters of the devices are:

Ref.	Frequency band	Radiated power	Occupied bandwidth	Duty cycle ⁶⁾		Other conditions	Harmonized standard
				for network access points	for other cases		
a1	863,0–868,0 MHz	25 mW e.r.p.	1 MHz	10 %	2.8 %		304 220 ⁷⁰⁾
a2	865,6–865,8 MHz 866,2–866,4 MHz 866,8–867,0 MHz 867,4–867,6 MHz	500 mW e.r.p.	200 kHz	10 %	2.5 %	for data monitoring and collecting only; see Paragraph 4	303 659 ⁷¹⁾
a2	870–874,4 MHz	500 mW e.r.p.	200 kHz	10 %	2.5 %	for data monitoring and collecting only; see Paragraphs 4, 5	303 204 ⁷²⁾

⁶⁶⁾ Low duty cycle, based on standard 302 065–1⁶³⁾, 302 065–3⁶⁵⁾.

⁶⁷⁾ Detect and avoid, based on standard 302 065–1⁶³⁾, 302 065–2⁶⁴⁾, 302 065–3⁶⁵⁾.

⁶⁸⁾ Transmit power control, based on standard 302 065–3⁶⁵⁾.

⁶⁹⁾ A network access point in data network is a fixed terrestrial Short Range Device that acts as a connection point for the other Short Range Devices in data network to the service platforms located outside of the data network. The data network refers to several Short Range Devices, including the network access point, as network components and to the wireless connection between them.

⁷⁰⁾ ETSI EN 304 220 (draft) – Wideband data transmission SRD operating in the frequency range 25 MHz to 1 000 MHz.

⁷¹⁾ ETSI EN 303 659 (draft) – Short Range Devices (SRD) in Data Networks – Radio equipment to be used in the frequency ranges 865-868 MHz and 915-919.4 MHz.

⁷²⁾ ČSN ETSI EN 303 204 – Electromagnetic compatibility and Radio spectrum Matters (ERM) – Network Based Short Range Devices (SRD) – Radio equipment to be used in the 870 MHz to 876 MHz frequency range with power levels ranging up to 500 mW

a3	915,8–919,4 MHz	25 mW e.r.p.	1 MHz	10 %	2.8 %	see Paragraphs 4, 5	303 659 ⁷¹⁾ 304 220 ⁷⁰⁾
b1	917,3–917,7 MHz 918,5–918,9 MHz	500 mW e.r.p.	200 kHz	10 %	2.5 %	for data monitoring and collecting only; see Paragraphs 4, 5	303 659 ⁷¹⁾

(3) The operated devices shall use techniques for access to the spectrum and interference mitigation which provide at least an equal effect to the techniques described in harmonized standards²⁾; alternatively, the operation with indicated maximum duty cycle can be used.

(4) In the frequency bands *a2*, *a3*, *b1*, *b2*, the adaptive power control⁷³⁾, which is able to decrease the power to ≤ 5 mW, is required, alternatively, other technique of interference mitigation which provides at least an equivalent level of spectrum compatibility shall be used.

(5) In frequency bands *a3*, *b1*, *b2*, all mobile terminals must be under control of the network.

Article 16 Final provision

(1) As an equipment complying with requirements of the Government Order No. 426/2016 Coll., on the assessment of conformity of radio equipment when made available on the market, is considered also any equipment which the Office decided to approve or to recognize the radio equipment pursuant to Section 10 of the Act No. 151/2000 Coll., on Telecommunications and on Amendment to Other Acts, as amended, provided that such equipment was made available on the market before 1 April 2003.

(2) The use of radio frequencies by TTT devices in range 63 – 63.72 GHz of frequency band *g* according to Article 4(2) must be finished as of 1 January 2020 except using devices made available on the market in the EU member states before this date.

(3) The use of radio frequencies by RFID devices in frequency bands *c1*, *c2*, *c3* pursuant to Article 11(2) is possible only for devices made available on the market in the EU member states before 1 January 2018.

Article 17 Repealing Provisions

This is to repeal General Authorisation No. VO-R/10/01.2019-1 for the use of radio frequencies and for operating Short Range Devices of 22 January 2019, published in Issue 1/2019 of the Telecommunications Bulletin.

Article 18 Effect

This General Authorisation comes into effect on 15 January 2020.

⁷³⁾ Adaptive Power Control, APC.

Explanatory Memorandum

To implement Sections 9 and 12 of the Act, the Office issues General Authorisation No. VO-R/10/12.2019-9 for the use of radio frequencies and for the operation of Short Range Devices (hereinafter the “General Authorisation”).

This General Authorisation is based on the principles set out in the Act and on the frequency plans and harmonisation objectives of the European Union, and it replaces General Authorisation No. VO-R/10/1.2019-1, repealed by Article 17 of this General Authorisation.

Article 2 contains the specific conditions of operation of Short Range Devices which are specified for individual categories of equipment and for individual frequency bands of radio frequencies in Articles 3 to 15. These conditions are based on harmonization documents of the European Commission and the European Conference of Postal and Telecommunication Administrations (CEPT), listed in Appendix 1, as well as on requirements resulting from radio spectrum management, or, more precisely, from requirements for ensuring the use of the radio spectrum without interference.

After publication of General Authorisation No. VO-R/10/1.2019-1, the European Commission issued the Commission Implementing Decision 2019/1345/EU of 2 August 2019 amending Decision 2006/771/ES, updating harmonised technical conditions in the area of radio spectrum use for short-range devices (hereinafter “EC Decision”). The European Radiocommunications Committee issued updated version of the Recommendation CEPT/ERC/REC 70-03 – Relating to the use of Short Range Devices (hereinafter only the “ERC Recommendation”) on 7 June 2019. Moreover, other CEPT Decisions and Recommendations and series of harmonised standards were updated as well.

In order to implement these documents, the Office carried out the following changes in this General Authorisation pursuant to Section 12 of the Act compared to General Authorisation No. VO-R/10/1.2019-1:

1. In the Article 3(2), the new frequency bands *g1*, *g4* were amended in accordance with the EC Decision and ERC Recommendation.
2. In the Article 3(2), the power values in bands *a*, *m* were modified in accordance with EC Decision and the ERC Recommendation.
3. In the Article 4(2), the use of band 63 – 64 GHz was modified in accordance with the EC Decision.
4. In the 9(4) the use of < 9 kHz band was modified in accordance with the ERC Recommendation.
5. In the Article 11(2), the band *c* was amended and the band *c1* – *c3* was limited for use of devices made available on the market before the date set out, thus harmonizing the conditions of RFID devices operation in band 865 – 868 MHz with the EC Decision and the ERC Recommendation.
6. In the Article 15, new bands for Short Range Devices in data networks for data monitoring and collecting were amended in accordance with the EC Decision.
7. Formal modifications were made, particularly make some details compliant with the EC Decision and the ERC Recommendation, as well as to update the citation standards, to re-number frequency bands, and to correct formal errors.

The Article 16 sets down the possibility of operating equipment made available on the market before 1 April 2003 and limitations in some frequency bands.

The Article 17 repeals General Authorisation VO-R/10/1.2019-1.

The Article 18 sets down the effect of this General Authorisation pursuant to Section 124(2) of the Act.

Based on the Section 130 of the Act and in accordance with the Rules of the CTU for consultation at the discussion site (hereinafter "Rules"), the Office published on 23 October 2019 its draft Measure of General Nature laying down the General Authorisation No. VO-R/10/xx.2019-y for use of the radio frequencies and for the operation of Short Range Devices, and the call for comments at the discussion site.

Within the public consultation, the Office received comments from two subjects over a period of one month, raised in accordance with Article 6(2) of the Rules. The comments addressed modification of conditions in Articles 11 and 15 and formal adjustments of the General Authorisation. The reading of these comments and their settlement is introduced in the settlement at the discussion site.

Beyond these comments the Office received two statements and discussion contributions. Both these statements were presented by foreign subjects and were expressing their support to drafted modifications of the General Authorisation.

On behalf of the Council of the Czech
Telecommunication Office

Jaromír Novák
Chairman of the Council
of the Czech Telecommunication Office
<signed>

The General Authorisation is based on these harmonisation documents:

1. European Commission documents

No.	Name	Article of General Authorisation
2014/53/EU	Directive of the European Parliament and of the Council of 16 April 2014 on the harmonization of the laws of the Member States relating to the making available on the market of radio equipment and repealing Directive 1999/5/EC.	3–14
2008/671/EC	Commission Decision of 5 August 2008 on the harmonized use of radio spectrum in the 5875–5905 MHz frequency band for safety-related applications of Intelligent Transport Systems (ITS).	4
2017/2077/EU	Commission Implementing Decision of 10 November 2017 amending Decision 2005/50/EC on the harmonization of the 24 GHz range radio spectrum band for the time limited use by automotive short range radar equipment in the Community, as amended Commission Decision 2011/485/EU.	4
2019/1345/EU	Commission Implementing Decision (EU) 2019/1345 of 2 August 2019 amending Decision 2006/771/EC updating harmonised technical conditions in the area of radio spectrum use for short-range devices.	3–7, 9–12, 15
2014/641/EU	Commission Implementing Decision of 1 September 2014 on harmonized technical conditions of radio spectrum use by wireless audio programme making and special events equipment (PMSE) in the Union.	10
2019/785/EU	Commission Implementing Decision (EU) 2019/785 of 14 May 2019 on the harmonisation of radio spectrum for equipment using ultra-wideband technology in the Union and repealing Decision 2007/131/EC	14
2018/1538/EU	Commission Implementing Decision of 11 October 2018 on harmonization of radio spectrum use for use by short-range devices within the 874–876 and 915–921 MHz frequency bands.	11, 15

2. European Conference of Postal and Telecommunications Administrations (CEPT) documents

No.	Name	Article of General Authorisation
ERC/REC 70-03	Recommendation - Relating to the use of Short Range Devices (SRD), version of 7 June 2019.	3–7, 9–12, 14, 15
ERC/DEC/(01)17	Decision amended on 9 December 2011, on harmonized frequencies, technical characteristics and exemption from individual licensing of Ultra Low Power Active Medical Implant (ULP-AMI) communication systems operating in the frequency band 401-406 MHz on a secondary basis.	12
ECC/DEC/(04)03	Decision on the frequency band 77-81 GHz to be designated for the use of for the use of Automotive Short Range Radars (SRR).	4
ECC/DEC/(04)10	Decision amended on 1 June 2012, on the frequency bands to be designated for the temporary introduction of Automotive Range Radars (SRR).	4
ECC/DEC/(11)09	Recommendation amended on 22 May 2015, on UWB Location Tracking Systems TYPE 2 (LT2).	14
ECC/DEC/(05)02	Decision amended on 5 July 2019, on the use of the band 169.4-169.8125 MHz.	3, 5, 7, 10
ECC/DEC/(06)04	Decision amended on 8 March 2019, on the harmonized conditions for devices using Ultra-Wideband (UWB) technology in bands below 10.6 GHz.	14
ECC/DEC/(06)08	Decision amended on 26 October 2019, on the conditions for use of the radio spectrum by Ground-and Wall-Probing Radar (GPR/WPR) imaging systems.	6
ECC/DEC/(12)03	Decision on the harmonized conditions for UWB applications onboard aircraft.	14
ECC/DEC/(11)02	Decision amended on 5 July 2019, on industrial Level Probing Radars (LPR) operating in frequency bands 6-8.5 GHz, 24.05-26.5 GHz, 57-	6

	64 GHz and 75-85 GHz.	
ECC/DEC/(07)01	Decision amended on 8 March 2019, on Specific Material Sensing devices using UWB technology.	14
ECC/DEC/(09)01	Decision amended on 5 July 2019, on harmonized use of the 63.72 – 65.88 GHz frequency band for Intelligent Transport Systems (ITS).	4
ECC/DEC/(16)01	Decision on the harmonized frequency band 76–77 GHz, technical characteristics, exemption from individual licensing and free carriage and use of obstacle detection radars for rotorcraft use.	