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On the basis of public consultation under Section 130 of the Act No. 127/2005 Coll., on electronic communications and on amendment to certain related acts (The Electronic Communications Act), as amended (hereinafter “the Act”) and under of the Act No. 500/2004 Coll., the Administrative Procedure Code, as amended, and on the basis of the decision of the Council of the Czech Telecommunication Office (hereinafter “the Office”) under Section 107(9)(b)(2) of the Act and in order to implement Sections 9 and 12 of the Act, the Office as the appropriate state administration body under Section 108(1)(b) of the Act hereby issues this Measure of General Nature

General Authorization No. VO-R/10/01.2019-1
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 Authorization 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 authorization for the use of the radio frequencies under conditions defined for particular types of the devices in articles 3 up to 15.

(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

¹⁾ Sections 73 and 74 of the Act.

²⁾ European harmonized standards referred to in particular articles of this General Authorization, applied on the basis of the Act No. 90/2016 Coll., on the assessment of conformity of stated products when delivered to the market, and Government Order No. 426/2016 Coll., on the assessment of conformity of radio equipment when delivered to 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 communication at short range. The use of radio frequencies by short range devices is not considered as radiocommunication service in meaning of chapter 1, paragraph III. (Radiocommunication services) of Plan of the Frequency Band Allocations (National Table of Frequency Allocations) of 2 April 2010, Appendix to the Decree No. 105/2010 Coll.

⁴⁾ This General Authorization 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 the assessment of conformity of stated products when delivered to the market.

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 services which use the radio frequencies according to Plan of the Frequency Band Allocations 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 specified otherwise, the values of the technical parameters specified in this General Authorization are the limit values and shall not be exceeded in any operating mode of the equipment.

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

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

Article 3

Specific conditions for non-specified Short Range Devices

(1) On the basis of the Article 3 all kinds of devices which fulfill the technical conditions as specified for a given frequency band can be operated, regardless of the application or the purpose. The typical uses include for example telemetry, tele-command, alarms or transmission of data in general.

(2) The technical parameters of the devices are:

Ref.	Frequency band	Radiated power, or magnetic field intensity	Occupied band width	Duty cycle ⁶⁾	Other conditions according to paragraph	Harmonized standard (ČSN ETSI EN)
<i>a</i>	13.553–13.567 MHz	42 dB μ A/m /10 m			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	$\leq 0.1 \%$	9	300 220 ⁸⁾

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

⁷⁾ ČSN ETSI EN 300 330 – Electromagnetic Compatibility and Radio Spectrum Matters (ERM) – Short range devices (SRD) – radio equipment operating in the frequency range of 9 kHz to 25 MHz and systems with inductive loop in a frequency range of 9 kHz up to 30 MHz.

⁸⁾ ČSN ETSI EN 300 220 – Electromagnetic Compatibility and Radio Spectrum Matters (ERM) – Short range devices (SRD) – radio equipment operating in the frequency range of 25 MHz up to 1000 MHz with power levels ranging up to 500 mW.

c	40.66–40.7 MHz	10 mW e.r.p.			9	
d	138.2–138.45 MHz	10 mW e.r.p.		≤ 1.0 %		
e	169.4–169.475 MHz	500 mW e.r.p.	50 kHz	≤ 1.0 %		
e1	169.4–169.4875 MHz	10 mW e.r.p.		paragraph 7 or ≤ 0.1 %	7	
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	
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	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)	300 220 ⁸⁾
g2	863.0–870.0 MHz	25 mW e.r.p.	see paragraph 6	paragraph 6, 7 or ≤ 0.1 % ⁹⁾	6, 7, 8	
g3	868.0–868.6 MHz	25 mW e.r.p.		paragraph 7 or ≤ 1.0 % ⁹⁾	7, 8	
g4	868.7–869.2 MHz	25 mW e.r.p.		paragraph 7 or ≤ 0.1 % ⁹⁾	7, 8	
g5	869.4–869.65 MHz	500 mW e.r.p.	25 kHz ¹¹⁾	paragraph 7 or ≤ 10 % ⁹⁾	3, 7, 8	
g6	869.7–870.0 MHz	5 mW e.r.p.			3, 8	
g7	869.7–870.0 MHz	25 mW e.r.p.		paragraph 7 or ≤ 0.1 % ⁹⁾	3, 7, 8	

⁹⁾ The duty cycle is not limited when using LBT technology, (Listen Before Talk - transmission only on request based on a 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>h1</i>	870–875.8 MHz	25 mW e.i.r.p.	≤ 600 kHz	≤ 1 %	3, 8	
<i>h2</i>	870–876 MHz	25 mW e.i.r.p.	≤ 200 kHz	≤ 0.1 %	3, 8	
<i>i1</i>	915–921 MHz	25 mW e.i.r.p.	≤ 200 kHz	≤ 0.1 %	3, 8	
<i>i2</i>	915.2–920.8 MHz	25 mW e.i.r.p., see paragraph 10	≤ 600 kHz, see paragraph 10	≤ 1 %	3, 8, 10	
<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	300 440 ¹²⁾
<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 and power spectral density 13 dBm/MHz e.i.r.p.			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* up to *g7* shall not be used for the transmission of analogue audio signals with the exception of the transmission of voice. The devices in the frequency bands *f1*, *f2*, *g4* 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 relates to entire transmitting in given band and for devices operated only in the frequency band 865–868 MHz can be increased up to 1 %.

(5) In the frequency band *g1*, it is allowed to operate:

- the devices with DSSS modulation or other wideband modulation except FHSS without restriction of occupied band width; 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 only using the 865–868 MHz frequency sub-band and to +0.8 dBm/100 kHz in case of only using the 865–870 MHz;
- the narrowband devices with the occupied band width ≤ 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 in the frequency sub-band 865–868 MHz only.

(6) In the frequency band *g2* the narrowband devices with the occupied band width of ≤ 100 kHz can be operated whereas the occupied band width of 100 kHz enabling partial division to 50 kHz or 25 kHz is preferred.

¹²⁾ ČSN ETSI EN 300 440 – Electromagnetic Compatibility and Radio Spectrum Matters (ERM) – Short range devices (SRD) – Radio equipment to be used in the frequency range of 1 GHz up to 40 GHz.

¹³⁾ ČSN ETSI EN 305 550 – Electromagnetic Compatibility and Radio Spectrum Matters (ERM) – Short range devices (SRD) – Radio equipment to be used in the frequency range of 40 GHz up to 246 GHz.

(7) In the frequency bands *e1*, *e2*, *e3*, *g*, *g1* up to *g7*, the techniques for access to the spectrum and to mitigate interference which provides at very least an equal effect as the techniques described in the harmonized standards shall be used²⁾; or it is possible to use the specified 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* up to *i2*.

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

(10) In the frequency band *i2*, the channels with center frequencies of 916.3 MHz, 917.5 MHz, 918.7 MHz and 919.9 MHz can be used with parameters: max. e.r.p. = 100 mW, the occupied band width ≤ 400 kHz.

Article 4

Specific conditions for Transport and Traffic Telematics (TTT¹⁴⁾)

(1) On the basis of the Article 4 the devices used in the area of railway transport or in road, ship or aircraft transport depending on relevant technical restrictions and also the devices for traffic management, navigation, mobility management and in intelligent transportation systems (ITS) can be operated only. 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)
<i>a</i>	984–7484 kHz	9 dBμA/m at a distance 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⁾
<i>b</i>	7.3–23.0 MHz	–7 dBμA/m at a distance 10 m	railway devices of EUROLOOP system; transmission only in presence of train	302 609 ¹⁶⁾
<i>c</i>	27.09–27.1 MHz	42 dBμA/m at a distance 10 m	railway devices of EUROBALISE, EUROLOOP system; spectral mask according to ČSN ETSI EN 302 608 ¹⁵⁾ S	302 608 ¹⁵⁾
<i>d</i>	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⁾

¹⁴⁾ Abbreviation TTT stands for Transport and traffic telematics.

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 for railways (AVI) operating in the 2.45 GHz frequency range.

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 band width 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 band width 5 MHz or 10 MHz ²⁰⁾	300 674 ²¹⁾
e3	5.875–5.905 GHz	2 W e.i.r.p. as per paragraph 5; the spectral density is limited to 23 dBm/MHz	as per 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.		302 858 ²²⁾
f3	24.075–24.15 GHz	100 mW e.i.r.p. as per 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 member states of European Union, until 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 paragraph 4 and 5	302 288 ²³⁾
f7	24.25–26.65 GHz	see paragraph 3	only automotive radars in vehicles registered in member states of European Union until 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	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	

¹⁸⁾ The transmission of data at 1 Mbit/s with power of 8 W is allowed in accordance with the standard²⁰⁾. The transmission of data at 500 kbit/s downlink and 250 kbit/s uplink with power of 2 W is allowed in accordance with 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) – Transmission equipment for Dedicated short range communications (DSRC) (500 kbit/s / 250 kbit/s), operating in the Industrial, scientific and medical (ISM) band of 5.8 GHz;

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

²²⁾ ČSN ETSI EN 302 858 – Electromagnetic compatibility and Radio Spectrum Matters (ERM) – Road Transport and Traffic Telematics (RTTT) – Short range radar equipment operating in the 24.05 GHz up to 24.25 GHz frequency range for automotive applications.

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 band.

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

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 band 76 GHz up to 77 GHz.

²⁶⁾ The rotor aircraft is defined in the international aeronautical regulations termed as EASA CS-27 and CS-29 (more precisely

<i>i</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 ²⁷⁾
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(3) The frequency bands *f5* and *f7* are used as follows: for the ultra-wide band (UWB) short range automotive radar equipment with a maximum mean power density of –41.3 dBm/MHz of effective isotropically radiated power (e.i.r.p.) and with a 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 a maximum peak power of 20 dBm/MHz e.i.r.p. and with a duty cycle not exceeding 10 % for transmission with 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 plane shall be attenuated by at least 25 dB for vehicle short range radar equipment placed to the market before the year 2010 and for the equipment placed to the market later on by at least 30 dB.

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

(5) In the band *f6*, the maximal duty cycles and ranges of the frequency modulation apply in accordance with 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 %/second/25 MHz); 16 dBm e.i.r.p. (the radars oriented against the direction of driving, duty cycle ≤ 2.3 %/second/25 MHz); –11 dBm e.i.r.p. (other radars in the sub-band 24.25–24.495 GHz, duty cycle ≤ 0.25 %/second/25 MHz); –8 dBm e.i.r.p. (other radars in the sub-band 24.495–24.5 GHz, duty cycle ≤ 1.5 %/second/25 MHz).

Article 5

Specific conditions for tracking and data acquisition equipment

(1) On the basis of the Article 5, the devices used for tracking and detection of persons and items including emergency detection of buried victims and valuable items and for remote meter readings²⁸⁾ and data acquisition 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.

(2) The technical parameters of the devices for tracking and data acquisition 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⁾

JAR-27 and JAR-29 for former certificates).

²⁷⁾ 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 band 77 GHz up to 81 GHz band.

²⁸⁾ The term „meter readings“ is understood as the radio devices which are parts of two-way radiocommunication systems which enable remote monitoring, measurement and data transfer in the framework of infrastructure of intelligent networks, e.g. networks for distribution of electricity, gas and water.

b	456.9–457.1 kHz	7 dB μ A/m /10 m	devices which are designated only for emergency detection of buried victims and valuable items	300 718 ²⁹⁾
c	169.4–169.475 MHz	500 mW e.r.p.	meter readings only ²⁸⁾ ; occupied band width 50 kHz, duty cycle ⁶⁾ \leq 10 %	300 220 (Chyba! Záložka není definována.)

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

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

(3) The frequency bands e1, e2 are designated for MBANS³²⁾ operated inside buildings (indoor use), modulated bandwidth \leq 3 MHz. The frequency band e1 is designated for the operation of MBANS³²⁾ devices in health-care facilities, the frequency band e2 is designated for the operation of MBANS³²⁾ 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 the same protection level as the techniques described in the harmonized standards²⁾.

Article 6

Specific conditions for radiodetermination equipment

(1) On the basis of the Article 6, the 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. The Article 6 does not apply to devices using point-to-point or point-to-multipoint communications³⁴⁾.

(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)
a	9200–9975 MHz	25 mW e.i.r.p.		300 440 ¹²⁾
b	13.4–14.0 GHz	25 mW e.i.r.p.		

²⁹⁾ ČSN ETSI EN 300 718 – Electromagnetic Compatibility and Radio Spectrum Matters (ERM) – Avalanche Beacons; Transmitter-receiver systems.

³⁰⁾ The value is measured outside of the patient's body.

³¹⁾ Abbreviation UPL-WMCE stands for Ultra-Low Power Wireless Medical Capsule Endoscopy.

³²⁾ Abbreviation MBANS stands for Medical Body Area Network Systems which mean the radio network in proximity of patient's body used for data collection from sensors which monitor his/her vital functions including of transfer this data for monitoring or processing.

³³⁾ ČSN ETSI EN 303 203 – Electromagnetic Compatibility and Radio Spectrum Matters (ERM) – Short range devices –Medical Body Area Network Systems (MBANS) operating in the 2483.5 MHz up to 2500 MHz range.

³⁴⁾ See Annex 6 of Recommendation ERC/REC 70-03 – Relating to the use of Short Range Devices (SRD), as amended.

c	17.1–17.3 GHz	+26 dBm e.i.r.p.	see paragraph 5	
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(3) Technical parameters of the tank level probing radars are:

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

(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)
m	30–230 MHz	–65 dBm/MHz	–44.5 dBm/120 kHz (e.r.p.)	302 066 ³⁷⁾
n	230–1000 MHz	–60 dBm/MHz	–37.5 dBm/120 kHz (e.r.p.)	
o	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.)	
p	1600–3400 MHz	–51.3 dBm/MHz	–30 dBm/MHz (e.i.r.p.)	

³⁵⁾ ČSN ETSI EN 302 372 – Electromagnetic compatibility and radio spectrum (ERM) – Short range devices (SRD) – Equipment for detection and movements – Tank level probing radar (TLPR) operating in the frequency bands 5.8 GHz, 10 GHz, 25 GHz, 61 GHz and 77 GHz.

³⁶⁾ ČSN ETSI EN 302 729 – Electromagnetic compatibility and radio spectrum (ERM) – Short range devices (SRD) – Level Probing Radar (LPR) equipment operating in the frequency ranges 6 GHz to 8.5 GHz, 24.05 GHz up to 26.5 GHz, 57 GHz up to 64 GHz, 75 GHz up to 85 GHz.

³⁷⁾ ČSN ETSI EN 302 066 – Electromagnetic compatibility and radio spectrum (ERM) – Short range devices (SRD) – Ground and Wall Probing Radar applications (GPR/WPR).

<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.)	

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

(6) The frequency bands *g*, *i*, *j2*, *k2*, *l2* are reserved only for tank level probing radars³⁸⁾ placed in metal or ferroconcrete tanks or similar constructions produced of material which has comparable attenuation characteristics. The stated maximal value of the power is valid for devices placed inside closed tank and corresponds to spectral density – 41.3 dBm/MHz e.i.r.p. outside of testing tank with volume of 500 liters.

Article 7 Specific conditions for alarms

(1) On the basis of the Article 7, the devices used for radio communication for indication of the alarm at a distance place (alarm systems) or systems for call for help which enable reliable communication for persons which are in distress can be operated only. It covers devices with low duty cycle and high reliability in view of the rules, which set low total use of spectrum to 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 systems for social alarms)	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 social alarms³⁹⁾ systems.

³⁸⁾ Abbreviation TLPR stands for Tank Level Probing Radar.

³⁹⁾ As social alarms are understood the radiocommunication systems which allow reliable communication for a person in distress in confined area to initiate a call for assistance. The typical use of equipment for call for assistance includes help to the elderly or the disabled.

Article 8

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

(1) On the basis of the Article 8, the devices for telecommand of cranes, forest machines, industrial scales, railway sidings and for similar use can be operated only.

(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⁾
<i>b</i>	430.0–430.45 MHz			

Article 9

Specific conditions for equipment with inductive loop

(1) On the basis of the Article 9, the devices which use magnetic field and devices with inductive loop for near field range communication can be operated only. 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) The inductive loop can be used only 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 within the meaning of the Act.

(4) The technical parameters of the devices are:

Ref.	Frequency band	Magnetic field intensity	Other conditions	Harmonized standard (ČSN ETSI EN)
<i>a</i>	< 9 kHz	<i>to be specified</i>	<i>to be specified</i>	303 348 ⁴⁰⁾
<i>b</i>	9–90 kHz	72 dB μ A/m at a distance of 10 m ⁷⁾		300 330 ⁷⁾
<i>c</i>	90–119 kHz	42 dB μ A/m at a distance of 10 m		
<i>d</i>	119–135 kHz	66 dB μ A/m at a distance of 10 m		
<i>d1</i>	135–140 kHz	42 dB μ A/m at a distance of 10 m		
<i>d2</i>	140–148.5 kHz	37.7 dB μ A/m at a distance of 10 m		
<i>e</i>	148.5–1600 kHz	–5 dB μ A/m at a distance of 10 m		300 330 ⁷⁾ 302 536 ⁴¹⁾

⁴⁰⁾ ČSN ETSI EN 303 348 – Induction loop systems intended to assist the hearing impaired in the frequency range 10 Hz to 9 kHz.

⁴¹⁾ ČSN ETSI EN 302 536 – Electromagnetic compatibility and Radio Spectrum Matters (ERM) – Short range devices – Radio equipment operating in the frequency range 315 kHz up to 600 kHz.

<i>f</i>	1600–5000 kHz	–15 dB μ A/m at a distance of 10 m	see paragraph 7	300 330 ⁷⁾
<i>f1</i>	1900–2100 kHz	5 dB μ A/m at a distance of 10 m		300 330 ⁷⁾
<i>f2</i>	3155–3400 kHz	13.5 dB μ A/m at a distance of 10 m		
<i>g</i>	5–30 MHz	–20 dB μ A/m at a distance of 10 m	see paragraph 7	300 330 ⁷⁾
<i>h</i>	6765–6795 kHz	42 dB μ A/m at a distance of 10 m	see paragraph 8	
<i>i</i>	7400–8800 kHz	9 dB μ A/m at a distance of 10 m		
<i>j</i>	10.2–11.0 MHz	9 dB μ A/m at a distance of 10 m		
<i>k</i>	13.553–13.567 MHz	42 dB μ A/m at a distance of 10 m	see paragraph 8	300 330 ⁷⁾
<i>k1</i>	13.553–13.567 MHz	60 dB μ A/m at a distance of 10 m	only devices of Electronic Article Surveillance ⁴³⁾ ; see paragraph 8	302 291 ⁴²⁾

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

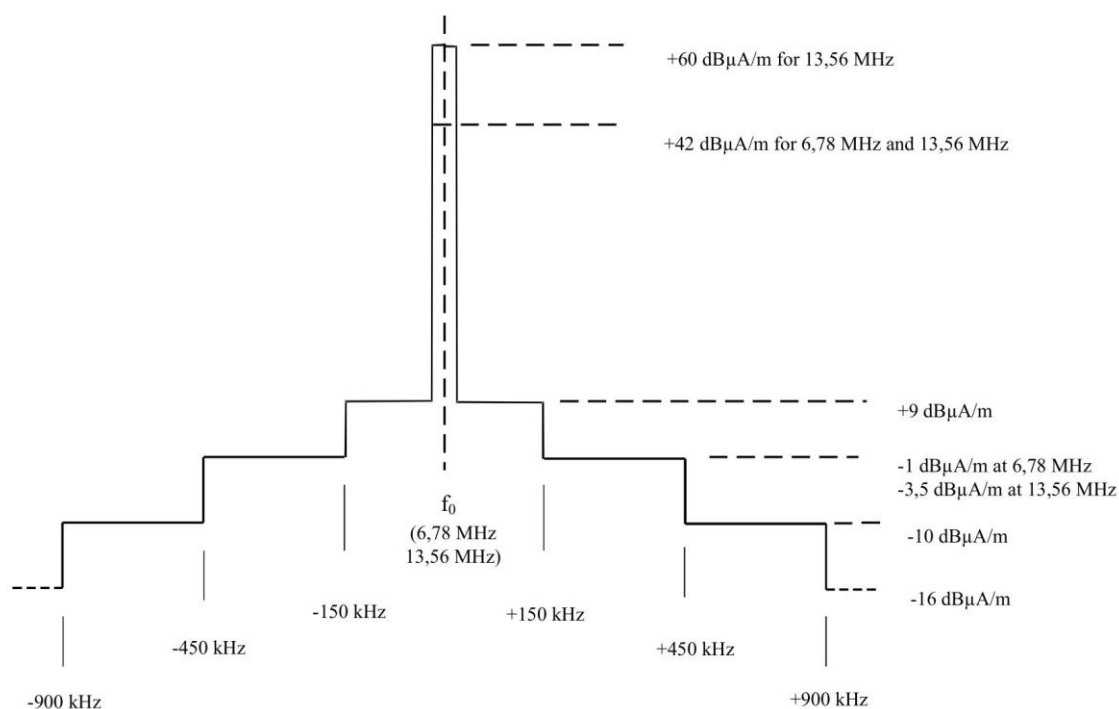
(6) For devices with the built-in or by the manufacturer prescribed loop antenna with an area of 0.05 m² to 0.16 m², the indicated magnetic field strength value shall be reduced by $10 \times \log(\text{area}/0.16 \text{ m}^2)$; if the area of the loop antenna is smaller than 0.05 m², the magnetic field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

(7) In the frequency bands *f*, *g*, the specified 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 of the above condition shall be –5 dB μ A/m at a 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 the values of magnetic field intensity at a distance of 10 m⁷⁾ as follows:

⁴²⁾ 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.

⁴³⁾ Abbreviation EAS stands for Electronic Article Surveillance.



Article 10 Specific conditions for wireless audio transmission

(1) On the basis of the Article 10, there can be operated only the wireless devices for audio transmission which includes for example wireless microphones for professional and consumer usage, wireless loudspeakers, wireless headphones, earpieces (assistive listening devices, i.e. radiocommunication systems which enhance perception of hearing to the hearing-impaired persons), assistive listening devices, communication means (e.g. in vehicles) or connection links used at concerts. These devices are high duty cycle / continuous transmission devices which 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)
a	27.415–27.915 MHz	10 mW e.r.p.	50 kHz		300 422 ⁴⁴⁾ 301 357 ⁴⁵⁾
b1	36.4–36.65 MHz	10 mW e.r.p.	50 kHz		
b2	36.65–38.0 MHz	2 mW e.r.p.	50 kHz	microphones for hearing-impaired and earpieces only	
b3	38.0–38.5 MHz	10 mW e.r.p.	200 kHz		
c	87.5–108 MHz	50 nW e.r.p.	200 kHz		
d1	169.4–169.475 MHz	500 mW e.r.p.	50 kHz	microphones for hearing-impaired and earpieces only	300 422 ⁴⁴⁾ 301 357 ⁴⁵⁾

⁴⁴⁾ ČSN ETSI EN 300 422 – Electromagnetic compatibility and Radio spectrum Matters (ERM) – Radio microphones operated in the 25 MHz up to 3 GHz frequency range.

⁴⁵⁾ ČSN ETSI EN 301 357 – Electromagnetic compatibility and Radio spectrum Matters (ERM) – Cordless audio devices in the range 25 MHz up to 2000 MHz.

<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.		until 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.; for body worn microphones 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 ⁴⁶⁾	300 220 Chyba! Záložka není definována.)
<i>l</i>	1785–1804.8 MHz	20 mW e.i.r.p.; for body worn microphones 50 mW e.i.r.p.		see paragraph 4	300 422 ⁴⁴⁾ 300 357 ⁴⁵⁾

(3) The frequency bands *f*, *g*, *h* are preferentially reserved for television broadcasting. Wireless microphones in these bands shall not cause interference to the reception of television signal and not claim protection from interference of the television signal.

(4) The conditions for range of spectral block edge masks⁴⁷⁾ valid for devices ensuring news programs and programme making and special events⁴⁸⁾, in duplex separation for FDD⁴⁹⁾ 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 (PMSE) in the Union.

Article 11

Specific conditions for radiofrequency identification equipment

(1) On the basis of the Article 11, there can be operated only the devices for radiofrequency identification (Radio Frequency Identification, RFID) which are the radiocommunication systems with tag / interrogator based radio communications systems consisting of the 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 the tracking and identification of items, such as for

⁴⁶⁾ As narrow band audio devices are understood baby phone, door systems etc.

⁴⁷⁾ Block edge mask, BEM.

⁴⁸⁾ Programme making and special events, PMSE.

⁴⁹⁾ Abbreviation FDD stands for Frequency-Division Duplexing, the duplex with frequency division.

Electronic Article Surveillance⁴³⁾, and collecting and transmitting data relating to the items equipped with the labels 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.

(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 a distance of 10 m				300 330 ⁷⁾
<i>b</i>	13.553–13.567 MHz	60 dB μ A/m at a distance of 10 m				
<i>b1</i>	11.81–14.46 MHz	see paragraph 3			3	
<i>c1</i>	865–868 MHz	100 mW e.r.p.	200 kHz	LBT ⁵⁰⁾	4	302 208 ⁵¹⁾
<i>c2</i>	865.6–867.6 MHz	2 W e.r.p.	200 kHz	LBT ⁵⁰⁾	4	
<i>c3</i>	867.6–868 MHz	500 mW e.r.p.	200 kHz	LBT ⁵⁰⁾	4	
<i>d</i>	916.3 MHz, 917.5 MHz, 918.7 MHz	4 W e.r.p.	400 kHz	LBT ⁴⁹⁾		
<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.		$\leq 15\%$ in any periods of 200 ms	5	300 440 ¹²⁾

(3) For the devices in the frequency band *b*, the spectral mask according to ČSN EN 300 330 applies. This allows to use also frequencies from the band *b1* with output limits according to this mask.

(4) In the range of 865–868 MHz (the bands *c1* up to *c3*) there are determined 15 channels whose centers are set by the formula: 864.9 MHz + (0.2 MHz \times the channel number). The device can be operated in more partial frequency bands (*c1* up to *c3*).

(5) The frequency band *e2* is only reserved for use inside buildings. Specific conditions shall be provided for such use: at a 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 the 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 the area belonging to one user. The device shall use for suppression of interferences the technology of frequency hopping⁵²⁾.

⁵⁰⁾ From character of device and requirements of harmonised standard ČSN ETSI EN 302 208 results that devices operate in regime Listen Before Talk (LBT) – transmitting only upon request on the basis of receipt.

⁵¹⁾ ČSN ETSI EN 302 208 – Electromagnetic compatibility and radio spectrum (ERM) – Radio frequency identification equipment operating in the band 865 MHz to 868 MHz with power levels up to 2 W.

⁵²⁾ Frequency Hopping Spread Spectrum (FHSS).

Article 12
Specific conditions for medical implants

(1) On the basis of the Article 12, the active medical implants can be operated only. 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)
a	9–315 kHz	30 dB μ A/m /10 m	$\leq 10 \%$	–		302 195 ⁵³⁾
b	315–600 kHz	–5 dB μ A/m /10 m	$\leq 10 \%$	–	for veterinary implants only ⁵⁴⁾	302 536 ⁴¹⁾
c	12.5–20 MHz	–7 dB μ A/m /10 m in a bandwidth of 10 kHz	$\leq 10 \%$	–	for veterinary implants only ⁵⁴⁾ ; for transmission inside of buildings only	300 330 ⁷⁾
d	30.0–37.5 MHz	1 mW e.r.p.	$\leq 10 \%$	–	for Ultra Low Power medical membrane implants for measurement of blood pressure ⁵⁵⁾	302 510 ⁵⁶⁾
e1	401–402 MHz	25 μ W e.r.p.	see paragraph 3	25 kHz		301 839 ⁵⁷⁾ 302 537 ⁵⁸⁾
e2	402–405 MHz	25 μ W e.r.p.		25 kHz, see paragraph 4	for active implantable medical means only ⁵⁵⁾	
e3	405–406 MHz	25 μ W e.r.p.	see paragraph 3	25 kHz		
f	2483.5–2500 MHz	10 mW e.i.r.p.	$\leq 10 \%$	1 MHz	for active implantable medical means only ⁵⁵⁾ ; see paragraph 5	301 559 ⁵⁹⁾

(3) The frequency bands e1, e3 are only intended for data transfer devices among active implantable medical devices⁵⁵⁾ and / or body worn devices and other devices placed outside of the human body and used for transfer from viewpoint of time of uncritical individual physiologic data on patient. Particular transmitters can combine the adjacent channels for enlargement of the bandwidth up to 100 kHz. There shall be used techniques to access spectrum and mitigate interference that provide at least equivalent effect as the techniques described in the harmonised standards²⁾. Alternatively a duty cycle $\leq 0.1 \%$ may also be used.

⁵³⁾ ČSN ETSI EN 302 195 – Electromagnetic compatibility and radio spectrum (ERM) – Radio equipment in the frequency range 9 kHz up to 315 kHz for Ultra low power active medical implants (ULP-AMI) and accessories.

⁵⁴⁾ The transmission devices, placed inside the animal body, which transmit data for the purpose of doing diagnostic functions and/or medical treatment.

⁵⁵⁾ In the framework of the definition of the active implantable medical devices in Council Directive 90/385/EEC, as amended.

⁵⁶⁾ ČSN ETSI EN 302 510 – Electromagnetic compatibility and radio spectrum (ERM) – Radio equipment in the frequency range 30 MHz to 37.5 MHz for Ultra low power active medical membrane implants and accessories.

⁵⁷⁾ ČSN ETSI EN 301 839 – Electromagnetic compatibility and radio spectrum (ERM) – Ultra low power active medical implants (ULP-AMI) and peripherals operating in the frequency range 402 up to 405 MHz.

⁵⁸⁾ ČSN ETSI EN 302 537 – Electromagnetic compatibility and radio spectrum (ERM) – Short range devices (SRD) – Ultra low power medical data service systems operating in the frequency range 401 MHz to 402 MHz and 405 MHz up to 406 MHz.

⁵⁹⁾ ČSN ETSI EN 301 559 – Electromagnetic compatibility and radio spectrum (ERM) – Short range devices (SRD) – Low power active medical implants (LP-AMI) operating in the frequency range 2483.5 MHz up to 2500 MHz.

(4) In the frequency band e2, the particular transmitters can combine the adjacent channels for enlargement of the bandwidth up to 300 kHz. There can be used other techniques to access spectrum or mitigate interference including bandwidths which are greater than 300 kHz on condition that they provide at least equivalent effect as the techniques described in the harmonised standards²⁾ for ensuring of 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 to access spectrum and mitigate interference that provide at least equivalent effect as the techniques described in the harmonised standards²⁾ shall be used as well. The entire frequency band may be dynamically used also as one channel for data high speed transfer.

Article 13

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

(1) On the basis of the Article 13, the command devices for remote control of acoustic information devices for the blind can be operated only; they serve for remote control of stationary acoustic orientation small beacons or digital voice small beacons located at orientation points in cities, which are important for the blind e.g. at entrances to metro, 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:

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 Chyba! Zložka není definována.

Article 14

Specific conditions for equipment using Ultra Wide Band technology

(1) On the basis of the Article 14, the devices which use ultra-wideband technology (UWB) can be operated only. By this are meant the devices of which integral part or accessory includes the technology for short range radio communication which incorporates intentional generation and transmitting of the high-frequency energy spread over a frequency range to be wider than 50 MHz which may overlap several frequency bands assigned to different radiocommunication services.

(2) The technical parameters of the devices for general usage of ultra-wideband technologies⁶⁰⁾, the devices for location tracking⁶¹⁾, the devices built in road and rail vehicles⁶²⁾

⁶⁰⁾ ČSN ETSI EN 302 065 – Electromagnetic compatibility and Radio spectrum Matters (ERM) – Ultra Wideband technology (UWB) for communication purposes – Harmonised EN covering the essential requirements of article 3.2 of the R&TTE Directive – Part 1: Requirements for Generic UWB applications.

⁶¹⁾ ČSN ETSI EN 302 065 – Electromagnetic compatibility and Radio spectrum Matters (ERM) – Ultra Wideband technology (UWB) for communication purposes – Harmonised EN covering the essential requirements of article 3.2 of the R&TTE Directive – Part 2: Requirements for UWB location tracking.

⁶²⁾ ČSN ETSI EN 302 065 – Electromagnetic compatibility and Radio spectrum Matters (ERM) – Ultra Wideband technology (UWB) for communication 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.

and the devices on board of planes, 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 ⁶⁰⁾ 302 065-2 ⁶¹⁾ 302 065-3 ⁶²⁾
b	1600-2700 MHz	-85 dBm	-45 dBm		
c	2700-3400 MHz	-70 dBm	-36 dBm	see paragraph 5	
d	3400-3800 MHz	-80 dBm	-40 dBm	see paragraph 5	
e	3800-4200 MHz	-70 dBm	-30 dBm	see paragraph 5	
f	4200-4800 MHz	-70 dBm	-30 dBm	see paragraph 5	
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 5, 6, 7	
h2	6000-8500 MHz	- 53.3 dBm	-13.3 dBm	except devices in road and rail vehicles; see paragraph 5	
i	8.5-10.6 GHz	-65 dBm	-25 dBm	see paragraph 5	
j	≥ 10.6 GHz	-85 dBm	-45 dBm		

(3) The technical parameters of material structure sensing devices shall comply with the conditions of item 5.1 of Commission Decision No. 2017/1438/EU⁴⁾.

(4) The technical parameters of building material analysis (BMA devices) shall comply with the conditions of item 5.2 of Commission Decision No. 2017/1438/EU⁴⁾.

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

Mitigating interference technique	LDC ⁶³⁾	DAA ⁶⁴⁾	TPC ⁶⁵⁾	TPC ⁶⁵⁾ + DAA ⁶⁴⁾
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 ⁶⁰⁾	3100-4800 MHz 6000-8500 MHz	—	6000-8500 MHz	3100-4800 MHz 8500-9000 MHz

(6) The devices on board of planes can transmit in the sub-band 6650-6675.2 MHz only with maximum mean e.i.r.p. density -62.3 dBm/MHz and maximum peak e.i.r.p. density

⁶³⁾ Low duty cycle, on the basis of standard 302 065-1⁵⁹⁾, 302 065-3⁶¹⁾.

⁶⁴⁾ Detect and avoid, on the basis of standard 302 065-1⁵⁹⁾, 302 065-2⁶⁰⁾, 302 065-3⁶¹⁾.

⁶⁵⁾ Transmit power control, on the basis of standard 302 065-3⁶¹⁾.

–21 dBm measured in range of width 50 MHz.

(7) The devices on board of planes shall limit 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) On the basis of the article 15, the short range devices can be operated only within the data networks under the control of network access points as long as these devices are an integral part of the network⁶⁶).

(2) The technical parameters of the devices are:

Ref.	Frequency band	Radiated power	Occupied bandwidth	Duty cycle ⁶⁾ for network access points	Duty cycle ⁶⁾ for other cases	Harmonized standard
a1	863–868 MHz	25 mW e.r.p.	≤ 1 MHz	≤ 10 %	≤ 2.8 %	<i>(to be specified)</i>
a2	874–874.4 MHz	500 mW e.r.p.; see paragraph 4	≤ 200 kHz	≤ 10 %	≤ 2.5 %	
b1	917.3–917.7 MHz		≤ 200 kHz	≤ 10 %	≤ 2.5 %	
b2	917.4–919.4 MHz	25 mW e.r.p.	≤ 1 MHz	≤ 10 %	≤ 2.8 %	
b3	918.5–918.9 MHz	500 mW e.r.p.; see paragraph 4	≤ 200 kHz	≤ 10 %	≤ 2.5 %	

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

(4) In the frequency bands a2, b1, b3 the adaptive power control⁶⁷ is required, alternatively, the use of other mitigation techniques which provides at least equivalent levels of spectrum compatibility.

Article 16

Final provision

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

⁶⁶⁾ 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.

⁶⁷⁾ Adaptive Power Control, APC.

This is an unofficial translation. The legally binding text is the original Czech version.

Article 17

Repealing Provisions

This is to repeal General Authorisation No. VO-R/10/12.2017-10 for the use of radio frequencies and for operating short range devices of 19 December 2017, published in Issue 1/2018 of the Telecommunications Bulletin.

Article 18

Effect

This General Authorisation comes into effect on 1 February 2019.

Explanatory Memorandum

To implement Sections 9 and 12 of the Act, the Office issues General Authorisation No. VO-R/10/01.2019-1 for the use of radio frequencies and operation of short range devices (hereinafter the “General Authorisation”).

This General Authorisation is based on the principles set out in the Act and also on the frequency plans and harmonisation objectives of the European Union, and it replaces General Authorisation No. VO-R/10/12.2017-10, repealed by Article 17 of the General Authorisation.

Article 2 contains the factual conditions of operation of short range devices which are specified for particular categories of equipment and for particular frequency bands of radio frequencies in Articles 3 to 15. These conditions are based on harmonization documents of European Commission and European Conference of Postal and Telecommunication Administrations (CEPT) listed in Appendix 1 as well as from requirements resulting from exercising radio spectrum administration or more precisely from requirements for ensuring the use of radio spectrum without interference.

After publication of the General Authorisation No. VO-R/10/12.2017-10, the European Commission issued the Commission Implementing Decision 2018/1538/EU on harmonisation of the radio spectrum for use by short range devices within 874–876 and 915–921 MHz frequency bands (hereinafter only the “EC Decision”). European Radiocommunications Committee issued updated version of Recommendation CEPT/ERC/REC 70-03 – Relating to the use of Short Range Devices (hereinafter only the “ERC Recommendation”) on 5 October 2018. 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 the sense of Section 12 of the Act in the General Authorisation in comparison with General Authorisation No. VO-R/10/12.2017-10:

1. In Article 3(2), the band 6765–6795 kHz which was duplication the band *h* pursuant to Article 9(4) was deleted. Thus, the conditions of use of the band are not changed.
2. In Article 3(2), the new frequency bands *h1*, *h2*, *i1*, *i2* in accordance with ERC Recommendation were added and it enables new utilisation of this frequency sub-band which was not used until now.
3. In Article 3, paragraph 4 up to 6, the terminology was modified in accordance with changes which were carried out within publication of General Authorisation VO-R/10/12.2017-10.
4. In Article 4(2), the new band *h2* was added in accordance with EC Decision.
5. In accordance with ERC Recommendation, in Article 5 the table was divided into collection of data for medical and other purposes, and the band 442.2–450 kHz for devices determined for detection of persons and collision avoidance was added.
6. In accordance with ERC Recommendation, in Article 10 for bands *j1* and *j2*, the condition about the maximum occupied bandwidth was deleted.
7. In Article 11(2), new band *d* for RFID with frequencies in the sub-band 915–921 MHz was added in accordance with EC Decision.
8. In Article 15, new bands for short range devices in data networks were added in accordance with EC Decision and in connection with this fact the name of Article was changed.
9. Formal modifications were implemented, in particular for the purpose of introducing the classification of equipment in compliance with EC Decision as well as for update of citation of standards and correction of formal errors.

Article 16 sets down possibility of the operation of equipment placed to the market before 1 April 2003.

Article 17 repeals General Authorization VO-R/10/12.2017-10.

This is an unofficial translation. The legally binding text is the original Czech version.

Article 18 sets down the effect of General Authorisation in accordance with Section 124(2) of the Act.

On the basis of Section 130 of the Act and according to the Czech Telecommunication Office's Rules for Conducting Consultations at the Discussion Site, the Office published on 28 November 2018, the draft of the Measure of General Nature laying down the General Authorization No. VO-R/10/xx.2018-y for use of the radio frequencies and for the operation of Short Range Devices, and the call for comments at the Discussion Site.

In the framework of the public consultation during one month, the Office received comment from one subject. The comment addresses putting the conditions for frequency bands *a2*, *b1*, *b3* in Article 15 into conformity with Commission Implementing Decision 2018/1538/EU. The reading of this comment and its settlement is introduced in the table of settlement of comments at Discussion Site.

On behalf of the Council of the Czech
Telecommunication Office

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

General Authorisation is based on the 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
2017/1483/EU	Commission Implementing Decision (EU) 2017/1483 of 8 August 2017 amending Decision 2006/771/EC on harmonisation of the radio spectrum for use by short range devices and repealing Decision 2006/804/EC.	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
2017/1438/EU	Commission Implementing Decision of 4 August 2017 amending Decision 2007/131/EC on allowing the use of the radio spectrum for equipment using ultra-wideband technology in a harmonized manner in the Community.	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 5 October 2018.	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 - UWB Location Tracking Systems TYPE 2 (LT2).	14
ECC/DEC/(05)02	Decision modified on 8 November 2013, on the use of the band 169.4-169.8125 MHz.	3, 5, 7, 10
ECC/DEC/(06)04	Decision modified on 9 December 2011, on the harmonized conditions for devices using Ultra-Wideband (UWB) technology in	14

	bands below 10.6 GHz.	
ECC/DEC/(06)08	Decision 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 on industrial Level Probing Radars (LPR) operating in frequency bands 6-8.5 GHz, 24.05-26.5 GHz, 57-64 GHz and 75-85 GHz.	6
ECC/DEC/(07)01	Decision of 18 November 2016, on Specific Material Sensing devices using UWB technology.	14
ECC/DEC/(09)01	Decision of 13 March 2009, amended on 4 March 2016, on harmonized use of the 63–64 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.	