Prague 30 August 2022
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Based on the result of a public consultation held 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 the decision of the Council of the Czech Telecommunication Office (hereinafter „the Office”) under Section 107(9)(b)(2) of the Act and to implement Section 16(2) of the Act, the Office as the competent administration authority under Section 108(1)(b) of the Act and Section 10 of the Act No. 500/2004 Coll., the Administrative Procedure Code, as amended, hereby issues this Measure of General Nature

Part No. PV-P/26/08.2022-19 of the Radio Spectrum Utilisation Plan for the frequency band 27.5–66 MHz.

Article 1
Introductory provision

This part of the Radio Spectrum Utilisation Plan sets down the technical parameters and conditions for the use of radio spectrum in the frequency band from 27.5 MHz to 66 MHz by radiocommunication services. This part of the Radio Spectrum Utilisation Plan is follow-up to the Common part of the Radio Spectrum Utilisation Plan.[1])

Part 1
General information on the frequency band

Article 2
Frequency band characteristics

(1) The radio frequencies (within the described range) up to 30 MHz are referred to as high frequencies, and higher frequencies as very high frequencies. The band is characterised by shared utilisation with narrowband civil and non-civil applications of the mobile radiocommunication service. With regard to specific physical characteristics of the electromagnetic waves propagation[2]) the frequencies in this band are also used by applications of the amateur service. Since the radio waves propagation in the high frequency bands highly depends on the current state of atmosphere, occasional and temporary long distance interference, or the problems with the stability of reception conditions may appear.

[1]) Common part of the Radio Spectrum Utilisation Plan No. PV/10.2005-35, as amended.
[2]) The quality of connection in the described bands depends particularly on ionosphere status, which is affected for example by daytime, season and solar activity period.

Also, the Short Range Devices using for its functioning both electromagnetic waves and also magnetic field only, are operated in the band.

(2) The allocation of frequency bands to the radiocommunication services in Chapter 5 of Part V of the Decree[3]) complies (with exceptions) with the European harmonisation target[4]) (hereinafter "ECA"). For the bands 39–39.5 MHz and 42–42.5 MHz, ECA lists a radiolocation service which is limited to oceanographic radars by footnote[5]) of Radio Regulations[6]) (hereinafter "RR"), but this application is not of practical importance at national level. At World Radiocommunication Conference WRC-19, the Czech Republic was included in the RR footnote,[7]) which changes the allocation of the 50–50.5 MHz band to amateur service on a secondary basis to the allocation on a primary basis.

(3) In accordance with RR footnote,[8]) the 40.66–40.70 MHz band (the centre frequency 40.86 MHz) can be utilised for industrial, scientific and medical purposes (ISM). Radiocommunication services operated in this band must tolerate harmful interference which may be caused by this utilisation. In accordance with the provision No. 15.13 of RR, the radiation level of ISM equipment operating in this band shall be kept as low as possible and shall not interfere outside the designated band.

(4) Information stated in this Article are further detailed in the Parts laying down the conditions for the band utilisation in individual radiocommunication services and bands, as described in this part.

Article 3
International obligations

(1) Provisions of the Radio Regulations, harmonisation documents of the European Commission (hereinafter "Commission") apply to the utilisation and coordination of radio frequencies, and in the bands above 29.7 MHz also provisions of HCM Agreement[9]) apply.

(2) Where there is stated in this part of the Radio Spectrum Utilisation Plan that a footnote of the RR applies, the text of a footnote of RR stated in Chapter V of Part III. of the Decree[3]) shall be applied.

Article 4
Information on Future Development

(1) The World Radiocommunication Conference ITU WRC-23 will discuss in Point 1.12 of the programme the possible allocation of the 44–46 MHz band to the Earth exploration-satellite service on a secondary basis. The band is suitable for monitoring groundwater status by radars mounted on satellites.

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[3]) Government Decree No. 105/2010 Coll., on the Frequency Band Allocation Plan (National Table of Frequency Allocation), as amended.
[4]) ERC Report 25: European Table of Frequency Allocations and Applications in the frequency range 8.3 kHz to 3000 GHz, rev. 2021.
[5]) Footnote 5.132A of RR.
[6]) Radio Regulations, International Telecommunication Union, Geneva, 2020.
[7]) Footnote 5.166A of RR.
[8]) Footnote 5.150 of RR.
[9]) HCM Agreement – Agreement between the Administrations of Austria, Belgium, the Czech Republic, Germany, France, Hungary, the Netherlands, Croatia, Italy, Liechtenstein, Lithuania, Luxembourg, Poland, Romania, the Slovak Republic, Slovenia and Switzerland on the co-ordination of frequencies between 29.7 MHz and 43.5 GHz for the fixed service and the land mobile service.

(2) The operation conditions of the Short Range Devices are updated periodically by the Electronic Communications Committee of CEPT (hereinafter “the ECC”) and by the Commission.

Part 2
Conditions for utilisation

Article 5
Short Range Devices

(1) The Short Range Devices using frequencies in the bands allocated to various radiocommunication services must not cause harmful interference to applications of radiocommunication services, and at the same time, they cannot claim protection from harmful interference by the stations of radiocommunication services.

(2) In accordance with Commission Decisions,[10]),[11]) ECC Decision[12]) and with ECC Recommendation,[13]) it is allowed to use the 27.5–66 band by the following Short Range Devices (SRD[14])):

a) the 27.5–30 MHz[15]) radio frequency range by equipment with inductive loop;

b) the radio frequency sub-bands 27.5–27.915 MHz[15]) and 36.4–38.5 MHz by equipment for wireless audio transmission;

c) the 30–37.5 MHz radio frequency range by Ultra Low Power medical membrane implants for measurement of blood pressure;

d) the whole radio frequency range described in this part by equipment for nuclear magnetic resonance (NMR);[16])

e) the 30–66 MHz[17]) radio frequency range by ultra-wideband radars designated for probing the structure of walls and Earth ground (GPR/WPR); and

f) the 40.66–40.7 MHz radio frequency sub-band by unspecified SRD, i.e. devices complying with the technical conditions for the relevant band regardless of their use or purpose.

(3) The specific conditions for the use of radio frequencies by SRD including the technical parameters are set down in the relevant General Authorisation.[18])

[10]) Commission Implementing Decision (EU) 2022/180 of 8 February 2022 amending Decision 2006/771/EC as regards the update of harmonised technical conditions in the area of radio spectrum use for short-range devices.
[11]) 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.
[12]) Decision ECC/DEC/(06)08 – The conditions for use of the radio spectrum by Ground-and Wall- Probing Radar (GPR/WPR) imaging systems.
[13]) Recommendation ERC/REC 70-03 relating to the use of Short Range Devices (SRD).
[14]) The abbreviation SRD stands for Short Range Devices.
[15]) A sub-band designated for the same purpose is adjacent to the sub-band from below.
[16]) The abbreviation NMR stands for Nuclear Magnetic Resonance (closed sensors where the investigated material/object is placed inside the NMR device).
[17]) The whole range is 30-230 MHz.
[18]) General Authorisation No. VO-R/10/07.2021-8 for the use of radio frequencies and for the operation of short range devices, as amended.

Article 6
Mobile service

(1) Within the mobile service and in accordance with RR provisions,[19]) utilisation of the bands allocated to the land mobile service and to the mobile except aeronautical mobile service is listed.

(2) It is possible to operate mobile networks and links in selected sub-bands of the 27.5–66 MHz band allocated to the mobile service for civil use. Unless otherwise provided, for newly established stations apply:

a) the sub-bands from the ranges 27.5–28 MHz, 29.7-41 MHz and 48.5–54 MHz are designated for simplex operation;

b) the sub-bands within 54–59/61–66 MHz range are designated for civil use for duplex operation . Duplex separation is 7 MHz, terminals are transmitting in the lower part 54–59 MHz, base stations are transmitting in the upper part 61–66 MHz;

c) for frequencies above 32.875 MHz, centre frequencies of radio channels of basic channel separation of 25 kHz are given by formula:

$$f_n \text{ [MHz]} = 32.875 + 0.025n,$$

where n is 0 up to 324 and 626 up to 1324;

the arrangement of the band proceeds from the ECC Recommendation;[20])

d) in accordance with RR footnote,[21]) users of the 37.5–38.25 MHz band are obligated to adopt all practicable measures to protect the radio astronomy service;

(3) Frequencies from the 27.5–27.995 MHz sub-band are used for local paging.[22]) The maximum occupied bandwidth is 10 kHz.

(4) Low power portable stations can be operated on common frequencies:

a) 27.905 MHz 27.915 MHz, 27.975 MHz, 27.985 MHz, 27.995 MHz, 57.225 MHz, 57.250 MHz, 57.275 MHz and 57.300 MHz for data transmission purposes; and

b) 34.050 MHz, 34.075 MHz, 34.150 MHz and 34.175 MHz for analogue and digital voice transmission. The detailed conditions for the use of radio frequencies including technical parameters are set down by the General Authorisation.[23])

(5) Until 31 December 2023, the 31.025–31.325/39.925–40.25 MHz duplex sub-bands may be utilised to operate analogue cordless telephones of CT0 standard. The detailed conditions for the use of radio frequencies including technical parameters are set down by the General Authorisation.[24])

[19]) Provision no. 1.24 and 1.26 of RR.
[20]) Recommendation CEPT/ERC T/R 25-08 - Planning criteria and cross-border coordination of frequencies for land mobile systems in the range 29.7-470 MHz.
[21]) Footnote 5.149 of RR.
[22]) Paging is a radio system providing transfer of messages between base station and mobile receivers; the system may be completed by return channel.
[23]) General Authorisation No. VO-R/16/08.2005-28 for the use of radio frequencies and for the operation of equipment jointly operated on predetermined frequencies in the 27 MHz to 450 MHz bands, as amended.
[24]) General Authorisation No. VO-R/17/08.2005-29 for the use of radio frequencies and for the operation of CT0-standard cordless telephones.

(6) The sub-bands 32.875–32.975 MHz and 56.525–58 MHz are utilised by simplex fixed links of remote control and signalisation, which are planned to be a mobile service and are compatible with applications in mobile service. Maximum e.r.p. is 1 W.

(7) Model airplane remote control stations may share the 34.995–35.225 MHz band in accordance with ECC Decision.[25]) Beyond this Decision, model airplane remote control stations may utilise frequencies from the 35.815-35.915 MHz band. Model remote control stations may share the 40.66–40.70 MHz band in accordance with the Decision.[26]) Beyond that Decision, model remote control stations may utilise frequencies from the 40.71-–40.99 MHz band. The detailed conditions for the use of radio frequencies including technical parameters are set down by the General Authorisation.[27])

(8) In the 39–39.2 MHz sub-band, systems using scatters from meteor trails[28]) may be operated in accordance with ECC Recommendation.[29])

(9) For the purpose of issuing an individual authorisation, the Office proceeds from the following parameters (unless otherwise provided in the previous paragraphs):

a) the minimum useful intensity of electromagnetic field in the 27.5–47 MHz sub-band is 8 dBμV/m, in the 47–66 MHz sub-band, it is 14 dBμV/m;

b) the permissible interfering intensity of electromagnetic field in the 27.5–47 MHz sub-band is 0 dBμV/m, in the47–66 MHz sub-band, it is 6 dBμV/m;

c) the planning max. effective antenna height is 35 m;

d) the planning base station antenna height is 10 m above terrain;

e) the planning antenna height of mobile station or of remote control and signalisation terminal[27]) is 3 m above terrain;

f) the nominal repetitive distance of frequency grid is 120 km;

g) the maximum operational range is 30 km;

h) in the case of nationwide use of the radio frequency, the area served is described by a centre with geographical coordinates 15 E 26 00 / 49 N 46 00 (WGS84 system[30])) and with 250 km radius;

i) the maximum e.r.p. in the 27.995 MHz sub-band is 5 W, in other sub-bands 10 W;

(j) the basic channel separation is 25 kHz, the additional separation is 12.5 kHz,[31]) the occupied bandwidth[32]) is max. 16 kHz for the 25 kHz channel separation and max. 11 kHz for additional the channel separation 12.5 kHz;

[25]) Decision ERC/DEC/(01)11 on harmonised frequencies, technical characteristics and exemption from individual licensing of Short Range Devices used for Flying Model control operating in the frequency band 34.995 - 35.225 MHz.
[26]) Decision ERC/DEC/(01)12 on harmonised frequencies, technical characteristics and exemption from individual licensing of Short Range Devices used for Model control operating on the frequencies 40.665, 40.675, 40.685 and 40.695 MHz.
[27]) General Authorisation No. VO-R/15/08.2005-27 for the use of radio frequencies and for the operation of equipment for remote control of models in the 13 MHz to 40 MHz bands, as amended.
[28]) Meteor Scatter Applications. A mode of radio propagation that utilises ionized meteor trails during entering the atmosphere for communication paths between radio stations.
[29]) Recommendation ERC/REC (00)04 – harmonised frequencies and free circulation and use for meteor scatter applications.
[30]) World Geodetic Reference System 1984, according to Section 2 of Government Order No. 430/2006 Coll., on the determination of geodetic reference systems and state mapping works binding on the national territory and the principles of their use, as amended by Government Order No. 81/2011 Coll., as amended.
[31]) The basic channel separation can be divided into two additional separations.
[32]) The definition is included in the provision 1.153 of RR.

(k) in case of retranslation, the higher frequency pertains to retranslation station transmitter;

(l) in case of retranslation, the individual authorisation holder is obliged to prevent, by suitable technical means, the inception of harmful interference which could happen by unpredictable atmospheric conditions affecting the electromagnetic waves propagation;

(m) for national coordination, the provisions of HCM Agreement[9]) are appropriately applied;

(n) in networks designated for remote control and signalization, fixed terminal transmitting radio equipment, which transmit with duty cycle[33]) below 1% and at the same time the duration of their one transmission will not exceed 1 second, shall be considered as a remote control and signalization terminal;

(o) the short data broadcasting designated to establish a radio connection for stations using voice communication (selective calling) is not considered as data transmission;

(p) the spatial separation of the stations utilising adjacent radio channels is 1 km.

(10) National and international frequency coordination is carried out by the Office.

Article 7
Fixed service

The bands 27.5–28 MHz and 46–47 MHz, allocated to the fixed service by RR, are not available in the Czech Republic for civil use. In case of need of fixed link placement, it shall be proceeded in compliance with conditions of the mobile service described in Article 6.

Article 8
Amateur and amateur-satellite service

(1) The amateur and amateur-satellite service applications may utilise the 28–29.7 MHz band in the category of a service on a primary basis.

(2) The amateur service applications may utilise the 50–50.5 MHz band in a category of a service on a secondary basis and in accordance with conditions set down in the footnotes of RR.[34]) When complying with the conditions set down in the footnote of RR,[7]) amateur service applications may utilise the 50–50.5 band also in a category of a service on a primary basis.

(3) When complying with the conditions set in the footnotes of the RR,[34]) amateur service applications may utilise the 50.5–52 MHz band in a category of a service on a secondary basis.

(4) The operation of amateur and amateur-satellite service equipment shall be governed by specific legislation.[35])

[33]) Duty cycle is per cent expression of total of all-time segments of transmitting on one carrier frequency during a set period in relation to this period.
[34]) Footnotes 5.166B, 5.166C and 5.169B of RR.
[35]) Government Decree No. 156/2005 Coll., on technical and operational conditions for amateur radiocommunication service.

Article 9
Radiolocation service

The radiolocation service can utilise the bands 46–47 MHz and 48,5–66 MHz within a category of a service on a secondary basis only for the operation of wind profiler radars.

Article 10
Radio astronomy service

(1) The radio astronomy service is a passive radiocommunication service based on the reception of radio waves of cosmic origin. With regard to low levels of received signals, the operation of the service depends on protection from interference from other radiocommunication services. In accordance with RR footnote,[21]) users of the 37.5–38.25 MHz band shall take all practicable measures to protect the radio astronomy service.

(2) The band is not utilised by this service in the Czech Republic, but the users of 37.5–38.25 MHz band must consider the possible utilisation of the radio astronomy service in neighbouring countries.

Article 11
Space research service

The space research service can utilise the bands 39.986–40.02 MHz and 40.98–41 MHz within a category of a service on a secondary basis.

Part 3
Final provisions

Article 12
Repealing provision

This is to repeal the Measure of General Nature, the Part of the Radio Spectrum Utilisation Plan No. PV-P/26/09.2010-10 for the 27.5–66 MHz frequency band of 14 September 2010.

Article 13
Effect

This part of the Radio Spectrum Utilisation Plan comes into effect on 1 October 2022.

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

Explanatory memorandum

To implement Section 16(2) of the Act, the Office issues the Measure of General Nature Part No. PV-P/26/08.2022-19 of the Radio Spectrum Utilisation Plan (hereinafter „the part of the plan") laying down the technical characteristics and conditions for the use of radio spectrum in the frequency band from 27.5 MHz to 66 MHz by radiocommunication services.

The part of the plan is based on the principles set out in the Act and in European legislation, especially in Directive (EU) 2018/1972 of the European Parliament and of the Council establishing the European Electronic Communications Code and Decision No. 676/2002/EC of the European Parliament and of the Council on a regulatory framework for radio spectrum policy in the European Community (Radio Spectrum Decision) as well as on principles determined in the Common part of the Radio Spectrum Utilisation Plan No. PV/10.2005-35.

The purpose of this part of the plan is to ensure the transparency of conditions for radio spectrum utilisation and the ability to anticipate the future decisions of the Office.

The reason for the new issue of this part of the plan is to update the conditions for the utilisation of the band according to the current issue of RR, European harmonisation documents and the National Table of Frequency Allocations. The modifications concern mainly the Short Range Devices, the conditions for the utilisation by mobile service applications, the setting of the termination date for the operation of analogue cordless telephones of CT0 standard, and the conditions for amateur service applications.

Article 2 summarizes the basic characteristics of the 27.5–66 MHz band, which has specific physical attributes of radio waves propagation. The band is utilised by narrowband mobile networks and links and part of the radio spectrum is also utilised by radio-amateur applications. The national conditions for the band's utilisation comply with the harmonisation target.

Article 3 sets the international obligations specifying the conditions for the use of frequencies mutually between states and radiocommunication services. In the case of this band, it means the Radio Regulations of the International Telecommunication Union and for part of the band also HCM Agreement on the coordination in the fixed and land mobile service. Harmonised rules for the European Union are regulated by Commission documents.

In Article 4, containing information on future development, a point of the programme for the World Radiocommunication Conference is listed under which the allocation of the 44–46 MHz band to the Earth exploration-satellite service will be considered. The Office does not foresee that the possible allocation to this service will affect the utilisation of the band at national level.

For reasons of clarity, the description of the bands utilised by Short Range Devices is set out in a separate Article 5. SRD shall not be operated under the terms of a particular radiocommunication service, shall not cause harmful interference to radiocommunication services, and shall not claim protection from interference by the stations of radiocommunication services. The utilisation of frequencies by Short Range Devices is subject to relevant general authorisation.

Article 6 sets out the conditions for mobile service, which includes narrowband simplex and duplex networks and links. To ensure compatibility, also fixed links in the band are planned within the mobile service. Paragraph 2 specifies the sub-bands for civil operation, the basic channel spacing of 25 kHz has been added for clarity, and the n-index range for designating the centre frequency of the radio channel has been refined to values for the civil use.

In paragraph 3, a sub-band for local paging is defined. In paragraph 4, setting the conditions for low power portable stations, the parameters are harmonised, and the reference is added to the specific conditions provided in relevant general authorisation.

Paragraph 5 sets a date of 31 December 2023 for the termination of operation of analogue cordless telephones of CT0 standard. The reason for the termination is the obsolescence of the technology and the minimal interest in its use.

Paragraph 6 sets the conditions for simplex fixed links of remote control and signalisation, which are fixed links but are included in the mobile service for planning reasons.

Paragraph 7 concerns model remote control stations and refers to specific conditions in relevant general authorisation.

Paragraph 8 defines the 39–39.2 MHz harmonised sub-band for applications allowing remote connections by reflections from meteor trails. Given the wave propagation conditions and the occurrence of reflections, these connections are usually of a short-term or unstable nature of operation.

Paragraph 9 sets the parameters which the Office follows when issuing individual authorisations for the use of radio frequencies in mobile radiocommunication service.

Article 7 on the conditions for the use of radio frequencies in a fixed service not currently in the civil use refers to the procedures provided in the mobile service for the case of need to place a fixed link in the band.

Article 8 sets the conditions for amateur and amateur-satellite services. The allocation of the 50–52 MHz band to the amateur service on a secondary basis in the ITU-R Region was decided by World Radiocommunication Conference WRC-19. For those countries where the conditions for the allocation of the 50–50.5 MHz band in a category of a service on a primary basis exist, the footnote 5.166A of RR was created containing the condition for the protection of existing services in this band. The Czech Republic got added in this footnote with other European states.

Articles 9 to 11 describe the radiolocation, radio astronomy and space research services, which are not currently utilised in the Czech Republic but may be utilised in neighbouring countries. This utilisation should be considered when utilising radio frequencies in the Czech Republic, as the Czech Republic also benefits from many European systems.

Article 13 sets the effect of this Measure of General Nature taking into account the implementation of Section 124 of the Act.

Based on Section 130 of the Act and in accordance with the Czech Telecommunication Office's Rules for conducting consultations at the discussion site, the Office published the draft of Measure of General Nature, Part of the Radio Spectrum Utilisation Plan No. PV-P/26/XX.2022-YY, and the call for comments at the discussion site on 13 July 2022. During the public consultation, the Office did not receive any comment on the draft part of the plan.

On Behalf of the Council of the
Czech Telecommunication Office

Hana Továrková
Chair of the Council
of the Czech Telecommunication Office
<signed>