



Czech Telecommunication Office

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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/14/05.2020-7 for the use of radio frequencies and for the operation of devices in the 10 GHz frequency band.

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 fixed service used to transmit signals in 10 GHz frequency band (hereinafter the “station”) 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 Act.

Article 2 Specific conditions

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

- (1) Radio frequencies may be used by operator of the station without individual authorisation for the use of radio frequencies (hereinafter the “General Authorisation”);
- (2) Stations can be a part of the fixed point-to-point radio systems only;
- (3) The nominal frequency of the station in relation to occupied bandwidth is set as follows:

a) for the frequency range 10 301 MHz up to 10 420 MHz:

Occupied bandwidth	≤ 7 MHz	14 MHz	28 MHz	56 MHz
Nominal frequency of the centre of first channel	10 304,5 MHz	10 308 MHz	10 322 MHz	10 336 MHz

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.

Channel grid – shift from the first channel	$n \times 3,5$ MHz <i>for $n = 0$ to 32</i>	$n \times 7$ MHz <i>for $n = 0$ to 15</i>	$n \times 14$ MHz <i>for $n = 0$ to 6</i>	$n \times 28$ MHz <i>for $n = 0$ to 2</i>
Nominal frequency of the centre of last channel	10 416,5 MHz	10 413 MHz	10 406 MHz	10 392 MHz

b) for frequency range 10 476 MHz up to 10 588 MHz.

Occupied bandwidth	≤ 7 MHz	14 MHz	28 MHz	56 MHz
Nominal frequency of the centre of first channel	10 479,5 MHz	10 483 MHz	10 490 MHz	10 504 MHz
Channel grid – shift from the first channel	$n \times 3,5$ MHz <i>for $n = 0$ to 30</i>	$n \times 7$ MHz <i>for $n = 0$ to 14</i>	$n \times 14$ MHz <i>for $n = 0$ to 6</i>	$n \times 28$ MHz <i>for $n = 0$ to 2</i>
Nominal frequency of the centre of last channel	10 584,5 MHz	10 581 MHz	10 574 MHz	10 560 MHz

- (4) The frequency difference of used frequency shall not be greater than 10^{-4} .
- (5) The mean power³⁾ delivered by the station into antenna feeder shall not exceed 2 mW.
- (6) The harmonized standard for the station is ETSI EN 302 217.⁴⁾
- (7) The station shall be set to a fixed frequency; the function of the automatic change of the transmitting radio channel is prohibited.
- (8) The spectral power density at state border shall not exceed value of -122 dB (W/(m² . MHz));
- (9) The station shall use horizontal or vertical linear polarisation of the electric component of the electromagnetic field; this does not apply in case of the cross polarisation. Radiation of antenna at angles greater than 10° from axis of the radiation shall be suppressed to at least 20 dB;
- (10) The use of radio frequencies by the operator of the station has no protection from harmful interference caused by the use of radio frequencies within a primary radiocommunication service on the basis of individual authorization and in the same time it shall not cause harmful interference to users using radio frequencies in a primary radiocommunication service on the basis of individual authorization. Possible harmful interference between the stations of the operators using radio frequencies based on General Authorization is settled by natural persons and legal entities by mutual agreement. If agreement is not reached, the procedure under Section 100 of the Act applies;
- (11) The station may be neither electrically nor mechanically modified.

³⁾ Mean power is average power delivered by station under normal operational conditions into antenna feeder for sufficiently long period in comparison with the lowest modulation frequency.

⁴⁾ ETSI EN 302 217 – Fixed Radio Systems – Characteristics and requirements for point-to-point equipment and antennas.

Article 3
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.

Article 4
Repealing Provisions

This is to repeal General Authorisation No. VO-R/14/12.2012-17 for the use of radio frequencies and for operating devices in the 10 GHz band of 17 December 2012, published in Issue 22/2012 of the Telecommunications Bulletin.

Article 5
Effect

This General Authorisation comes into effect on 1 July 2020.

Explanatory Memorandum

To implement Sections 9 and 12 of the Act, the Office issues General Authorisation No. VO-R/14/05.2020-7 for the use of radio frequencies and for the operation of devices in the 10 GHz frequency band (hereinafter the "General Authorisation").

This General Authorisation is based on the principles set out in the Act, on the part of the radio spectrum utilisation plan No. PV-P/13/12.2012-16 for the 10-12.5 GHz frequency band and on the product harmonisation objectives of the European Union [Directive 2014/53/EU of the European Parliament and of the Council of 16 April 2014 on the harmonisation of the laws of the Member States relating to the making available on the market of radio equipment and repealing Directive 1999/5/EC (hereinafter the „RED“)]. The General Authorisation replaces the original General Authorisation repealed by Article 4 of this General Authorisation.

The General Authorisation is issued without effectivity limit. In case the facts underlying the General Authorisation will alter or a need to meet the commitments following the membership of the Czech Republic in international organisations, in the EU or for ensuring the state defence and security, will occur, the General Authorisation can be altered or repealed pursuant to the Act. In this connection, the Office draws attention to the fact, that using the radio frequencies based on this General Authorisation is a specific national utilisation, which can be subject to harmonisation any time in the future for other purpose than fixed point-to-point radio systems, which would mean termination of radio frequencies utilisation pursuant to this General Authorisation.

Article 2 contains specific conditions for the use of radio frequencies and for the operation of fixed radio equipment used to transmit signals in 10 GHz frequency band. These conditions follow from the RED directive, as well as requirements resulting from radio spectrum management.

With respect to the aim, defined in Point 3.8 of Action plan 2.0 to carrying out non-subsidy measures to support planning and deployment of the electronic communication networks approved by Government Resolution No. 778 of 4 November 2019, the Office extended the conditions of use of microwave bands enabling the occupied bandwidth of 56 MHz band in the 10.5 GHz band. The existing limit of the occupied bandwidth to 28 MHz value did not allow utilisation by technology with larger occupied bandwidth, which appears on the market due to the need to transmit larger amount of data and thus to ensure also the high-speed data transmission. In Article 2(3) the Office extended the maximum occupied bandwidth to 56 MHz (for channels with original indication 1a, 2a, 3, 3a, 7a, 8, 8a, 9, 9a), while the existing operation of stations with occupied bandwidth 14 MHz and 28 MHz remains preserved. Therefore, for better orientation, it stated frequencies of individual channels with information about the first and the last channel and the channel grid instead of previous table of frequencies (original Paragraph 2), which was combined with patterns for channel width of 7 MHz and 14 MHz (original Paragraph 3). At this occasion, the Office extended the use of channels of 7 MHz as well as of some interleaved channels. The Office also enabled larger flexibility for channels with 28 MHz width and newly reserved a channel pitch of 14 MHz for this channel width in the channel grid, i.e. the possibility to shift by a half of a channel width. The Office, when drafting and amending the channel grid, proceeded to prevent the change on existing utilisation (i.e. not to enforce the need to retune) and applied standard procedures for creating these grids in fixed service. Particularly, it enabled larger flexibility of channels utilisation so that for channels of 28 MHz and 58 MHz width it determined the possibility to shift by a half-channel.

The Article 3 sets down the conditions for operating equipment made available on the market before 1 April 2003.

The Article 4 repeals General Authorisation VO-R/14/12.2012-17.

The Article 5 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 16 April 2020 its draft Measure of General Nature laying down the General Authorisation No. VO-R/14/xx.2020-y for use of the radio frequencies and for the operation of devices in the 10 GHz frequency band, and the call for comments at the discussion site.

Within the public consultation, the Office received five comments from the stakeholders over a period of one month. The first comment required to limit the number of channels due to amateur radio service protection in the 10 to 10.4 GHz frequency range. This comment was not accepted since it would mean limiting connections operated under the existing General Authorisation. The amateur radiocommunication service is also only secondary service in the particular band.

Second comment required to amend the conditions for antenna systems. This comment was not accepted, especially because it would mean limiting connections operated under the existing General Authorisation. In practice, the Office did not notice any complaints on interference or ineffective utilisation of the spectrum with respect to conditions currently set for antenna systems or their unclarity.

Other three comments required implementation of connections registration, similar to the 60 GHz band. These comments were not accepted, because the subject of the consulted amendment to the General Authorisation is the need to promptly react on the needs of the high-capacity transmissions that can be carried out with the use of the width of the 56 MHz channel, and preparation and realisation of registration duty, including providing the technical means to its fulfilment, are a long-term process. Moreover, the suggested registration system for new connections only, required in two of these comments, would be chaotic and insufficient in practice, since it would not be possible to ensure the main benefit of the registration, which lies in prevention of mutual interference to already existing connections.

The wording and settlement of the comments, including the Explanatory Memorandum, is provided in the settlement table, published on the Office's website, in accordance with the Rules of the CTU for consultation.

On behalf of the Council of the Czech
Telecommunication Office

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