



Република Србија
регулаторна агенција за електронске
комуникације и поштанске услуге
Београд

БРОЈ: 01-3491-821/15
ДАТУМ: 01.12.2015

TECHNICAL ARRANGEMENT

**BETWEEN THE NATIONAL FREQUENCY MANAGEMENT
AUTHORITIES OF**

**Austria, Croatia, Hungary, Serbia,
The Slovak Republic and Slovenia**

ON BORDER COORDINATION

FOR TERRESTRIAL SYSTEMS CAPABLE OF PROVIDING ELECTRONIC COMMUNICATIONS SERVICES

**IN THE FREQUENCY BAND
3400-3800 MHz**

Geneva, 24. November 2015

M. Kraljević

01.12.2015 Tlu

1 INTRODUCTION

The aim of this Technical Arrangement is to lay down the principles, the technical provisions and administrative procedure necessary to regulate the common deployment of terrestrial systems capable of providing electronic communications services that may use different technologies in the band 3400-3800 MHz in border areas.

In the framework of article 6 of ITU Radio Regulations, of bi- or multilateral agreements, arrangements or protocols dealing with frequency coordination in general (e.g. the "HCM Agreement"), the Federal Ministry for Transport, Innovation and Technology [BMVIT] (Austria), the Croatian Regulatory Authority for Network Industries [HAKOM] (Croatia), the National Media and Infocommunications Authority [NMHH] (Hungary), Regulatory Agency for Electronic Communications and Postal Services (RATEL) (Republic of Serbia), Regulatory Authority for Electronic Communications and Postal Services [RU] (The Slovak Republic) and Agency for Communication Networks and Services of the Republic of Slovenia [AKOS] (Slovenia), (hereinafter called Signatory Authorities) **concluded this Technical Arrangement concerning the usage of the frequencies for terrestrial systems capable of providing electronic communications services in the band 3400-3800 MHz in border areas.**

The Signatory Authorities have agreed on the following coordination procedures and rules regarding border areas detailed in the sections below.

2 PRINCIPLES OF FREQUENCY PLANNING AND FREQUENCY USAGE IN BORDER AREAS

2.1 Relevant regulations

From regulatory point of view, the following deliverables play an important role in the regulation of border coordination in the band 3400-3800 MHz:

- COMMISSION DECISION (2008/411/EC) of 21 May 2008 on
the harmonisation of the 3400-3800 MHz frequency band for terrestrial systems capable of providing electronic communications services in the Community (*notified under document number C(2008) 1873*);
- COMMISSION IMPLEMENTING DECISION (2014/276/EU) of 2 May 2014 on
amending Decision 2008/411/EC on the harmonisation of the 3400-3800 MHz frequency band for terrestrial systems capable of providing electronic communications services in the Community (*notified under document C(2014) 2798*);
- ECC Decision (ECC/DEC/(11)06) approved on 09 December 2011, amended on 14 March 2014 on
harmonised conditions for mobile/fixed communications networks (MFCN) operating in the bands 3400-3600 MHz and 3600-3800 MHz;
- ECC RECOMMENDATION (ECC/REC/(15)01) approved on 13 February 2015 on

cross-border coordination for mobile/fixed communications networks (MFCN) in the frequency bands: 1452-1492 MHz, 3400-3600 MHz and 3600-3800 MHz.

2.2 Regulated bands

Within this Technical Arrangement, the band 3400-3600 MHz has been regulated concerning the FDD and TDD utilisation (except the FDD usage in the sub-bands 3400-3410 MHz, 3490-3510 MHz and 3590-3600 MHz) and TDD utilisation in the band 3600-3800 MHz.

If FDD operation is required in the sub-band 3400-3410 MHz and or 3490-3510 MHz and or 3600-3800 MHz, a separate bi- or multilateral Technical Arrangement between administrations concerned or an Operator Arrangement between operators concerned should be concluded¹.

2.3 Access to the frequency spectrum in general

One of the most important aims of this Technical Arrangement is to give simple procedure and rules so that networks in border areas may be deployed easily ensuring proper access to the frequency spectrum. From this point of view, the coordination principle applied in this Technical Arrangement is that each country concerned has the same access to the frequency spectrum, i.e. they may use all the frequencies in the whole band 3400-3800 MHz.

Nevertheless, this kind of frequency usage in the border area is only viable if the field strength thresholds given in this Technical Arrangement are kept and accurate radio wave propagation methods are used for the calculations, as well as, radio parameters of the systems are coordinated between neighbouring operators.

To apply the principle outlined above, the same interference field strength level is allowed for a domestic network and its opposite network in the neighbouring country, ensuring equitable access to the frequency spectrum for the operators in the neighbouring countries.

As a consequence of the above, traditional frequency coordination would disturb the balance in the border area. Therefore, traditional frequency coordination will not be performed according to this Technical Arrangement. If higher field strength values are required, a so-called "Operator Arrangement" may be concluded (see section 6).

2.4 Coordination procedure

In general, neither coordination nor notification of stations is required, except in cases of harmful interference.

Operators may diverge from the regulation given in this Technical Arrangement subject to the so-called Operator Arrangement (see section 6).

¹ Excluding the sub-band 3400-3410 MHz in Austria, Croatia, Hungary and Slovenia, since it cannot be assigned either for FDD or TDD systems in order that the radar systems operating in the lower adjacent band be protected from the out of band emission produced by MFCN systems.

3 GENERAL TECHNICAL PROVISIONS

In this section the general technical provisions are given while section 4 describes in detail the additional technical provisions for the values of interference field strength that shall be kept in border areas.

3.1 Band arrangement

In accordance with the COMMISSION IMPLEMENTING DECISION (2014/276/EU) of 2 May 2014 in the frequency band 3400-3600 MHz the preferred duplex mode of operation is Time Division Duplex (TDD), but Frequency Division Duplex (FDD) may also be used under certain circumstances. In the frequency band 3600-3800 MHz the duplex mode of operation is TDD.

The assigned blocks shall be in multiple of 5 MHz. The first lower block edge is at the frequency of 3400 MHz in case of TDD operation and 3410 MHz in case of FDD operation.

3.2 FDD systems

Although the preferred duplex mode of operation is TDD in the frequency band 3400-3600 MHz, FDD systems may also be used. The duplex spacing for FDD operation shall be 100 MHz with terminal station transmission in the uplink band (3410-3490 MHz) and base station transmission in the downlink band (3510-3590 MHz). Only these frequency ranges may be used for FDD operation with regulations laid down in this Technical Arrangement.

3.3 TDD systems

The whole band 3400-3800 MHz may be used for TDD systems.

3.4 Radio parameters

Parameters of mobile and base stations such as in-band power and Block Edge Mask (BEM) shall comply with the requirements given in COMMISSION IMPLEMENTING DECISION (2014/276/EU) of 2 May 2014.

In the case of LTE it is required to share the preferential physical-layer cell identities (PCI) according to ECC Recommendation ECC/REC/(15)01. The allocation of codes is given in Annex 1 to this Technical Arrangement.

In addition, it is also desirable for the operators to coordinate radio parameters of their systems to minimise the deteriorating effects of uplink interference in line with Annex 5 of the above-mentioned Recommendation.

4 TECHNICAL PROVISIONS RELATED TO FIELD STRENGTH THRESHOLDS

4.1 Basic rules

Field strength thresholds given in section 4.2 and 4.3 refer to a reference frequency block of 5 MHz. The field strength thresholds shall be modified according to the value of the bandwidth and the aggregated power correction factors given below. The modified field strength thresholds shall be applied to each individual station.

a) Bandwidth correction factor

If the nominal channel spacing of a system is not equal to 5 MHz, the value of the bandwidth correction factor according to the following equation shall be added to the field strength thresholds given in section 4.2 and 4.3:

$$10 * \log (Cs/5 \text{ MHz}) \quad (\text{dB})$$

where:

Cs: nominal channel spacing (MHz).

b) Aggregated power correction factor

If there is more than one transmission in a respective reference frequency block, the field strength thresholds shall be decreased by the value of the aggregated power correction factor according to the following equation in each antenna sector.

$$10 * \log n \quad (\text{dB})$$

where:

n: the number of the transmitters or transmissions in the respective antenna sectors.

If a transmission with nominal channel spacing falls into a respective reference frequency block (even if partly), it shall be included in the value of "n".

4.2 Frequency utilisation in the case of FDD systems are operated

If a country operates FDD systems in the band 3410-3490/3510-3590 MHz two cases may come up: FDD or TDD systems are used in the neighbouring country in the same band.

4.2.1 FDD systems are operated in the neighbouring country

Base stations of FDD systems used in the frequency band 3410-3490/3510-3590 MHz may be operated if the mean field strength of each cell produced by the base station does not exceed the value of 67 dB μ V/m/5MHz at a height of 3 m above ground level at the border line, and does not exceed the value of 49 dB μ V/m/5MHz at a height of 3 m above ground level at a line of 6 km beyond the border inside the neighbouring country.

4.2.2 TDD systems are operated in the neighbouring country

Base stations of FDD systems used in the frequency band 3410-3490/3510-3590 MHz may be operated if the mean field strength of each cell produced by the base station does not exceed the value of 32 dB μ V/m/5MHz at a height of 3 m above ground level at the border line.

4.3 Frequency utilisation in the case of TDD systems are operated

If a country operates TDD systems in the band 3400-3600/3600-3800 MHz two cases may come up: FDD or TDD systems used in the neighbouring country in the same bands.

4.3.1 FDD systems are operated in the neighbouring country

Base stations of TDD systems used in the frequency band 3410-3490/3510-3590 MHz may be operated if the mean field strength of each cell produced by the base station does not exceed the value of 32 dB μ V/m/5MHz at a height of 3 m above ground level at the border line.

4.3.2 TDD systems are operated in the neighbouring country

If both of the countries operate TDD systems in the band 3400-3600/3600-3800 MHz the networks can be synchronised or non-synchronised.

a. Non-synchronised TDD network is operated

Base stations of non-synchronised TDD networks used in the band 3400-3600 MHz and 3600-3800 MHz may be operated if the mean field strength of each cell produced by the base station does not exceed the value of 32 dB μ V/m/5 MHz at the border line at a height of 3 m above ground level.

b. Synchronised TDD network is operated in the neighbouring country

Base stations of synchronised TDD networks used in the band 3400-3600 MHz and 3600-3800 MHz may be operated if the mean field strength of each cell produced by the base station does not exceed the value of 67 dB μ V/m/5MHz at a height of 3 m above ground level at the border line, and does not exceed the value of 49 dB μ V/m/5MHz at a height of 3 m above ground level at a line of 6 km beyond the border inside the neighbouring country.

5 HARMFUL INTERFERENCE

Concerning interference calculations a two-step procedure is described below.

As the first step, in the case of harmful interference, the characteristics of stations including the necessary geographical separation shall be adjusted based upon following line calculations:

Field strength line calculations shall be carried out between the base and/or terminal stations and the receiver points of the border line and 6 km line regarding thresholds values in section 4.2 and 4.3, and depending on radio service (fixed and/or mobile) the relevant propagation models included in the Harmonised Calculation Method (HCM) shall be used. ITU-R P.1546-5 model² shall be used until the frequency band 3400-3800 MHz is included in the HCM for the land mobile service. In case of exclusion of the band from HCM for fixed service, the ITU-R P.452-13 shall be applied for fixed service systems. Time probability in all calculations is 10 %.

As the second step, if harmful interference is still suffered despite the above adjustment, measurements shall be carried out according to international/mutually agreed procedures.

6 OPERATOR ARRANGEMENTS

6.1 Operator Arrangements in general

To further improve the compatibility of terrestrial systems capable of providing electronic communications services, and to enhance the efficient use of frequency spectrum and coverage in border areas, operators may conclude so-called additional Operator Arrangements with regard to the following elements for example:

- preferential code division arrangements;
- carrier frequencies (e.g. with LTE);
- synchronisation of networks concerned.

Such Operator Arrangements are subject to prior consent of the Signatory Authorities concerned (see also Section 7).

6.2 Simplified Operator Arrangements

In some cases detailed below, operators may conclude special Operator Arrangements called "Simplified Operator Arrangements" to enhance the efficient use of the frequency spectrum and the coverage, and also to speed up the coordination procedure. This means that certain deviations from this Technical Arrangement are permitted with subsequent notification and approval of the Signatory Authorities concerned.

Simplified Operator Arrangements may only be concluded for rules and threshold values for synchronised TDD networks.

² Extrapolated field strength values related to the frequency 3000 MHz should be taken into account for the calculation in this band

It is required to get the consent of all the operators concerned in the given border areas.

The Simplified Operator Arrangement shall contain the common frequency bands and the border areas affected where the higher threshold values will be applied and shall be forwarded to the administrations concerned within one month.

7 ADMINISTRATIVE PROCEDURE

In general, neither coordination nor notification of stations is required. However, in the case of harmful interference, the data necessary to evaluate and treat the harmful interference given in Annex 3 of the ECC Recommendation ECC/REC/(15)01 shall be exchanged between Signatory Authorities concerned.

The information about bringing the frequency bands into use by the operators is available in EFIS (www.efis.dk, according to ECC/DEC/(01)03).

Operators concerned may agree to deviate from this administrative procedure by mutual consent in an "Operator Arrangement".

8 STATUS OF EXISTING STATIONS

Stations being not in line with the provisions of COMMISSION IMPLEMENTING DECISION (2014/276/EU) of 2 May 2014 that are in operation according to the existing licences listed in the Annex 2 of this Technical Arrangement shall be protected until the national regulation of the country concerned permits the operation of these stations. Administrations signing this Technical arrangement shall be informed within 15 days by the administration of the country in which the status of these stations has changed.

In order to ensure the protection of the stations of the neighbouring country listed in the Annex 2 of this Technical Arrangement, stations operated in line with the provisions of COMMISSION IMPLEMENTING DECISION (2014/276/EU) of 2 May 2014 may produce a spectral power flux density (pfd) not exceeding $-122\text{dBW}/(\text{MHz}\cdot\text{m}^2)$ at the border to the neighbouring country.

The use of the stations of the neighbouring country to be protected listed in the Annex 2 of this Technical Arrangement should be in line with the provisions laid down in the bi- or multilateral agreements, arrangements or protocols relevant to these stations.

In case of harmful interference the calculation of the interfering spectral pfd shall be based on the Recommendation ITU-R P.452-12 for free space propagation taking into account an additional statistical loss of 15 dB for the calculation to consider the influence of topography and morphology. In case of multiple interferers at a point of the interference contour the resulting interfering signal shall be derived by summing up the contributing pfd values.

In cases of harmful interference the Administrations affected shall inform each other and endeavour to achieve a mutually satisfactory solution.

9 REVISION OF THE TECHNICAL ARRANGEMENT

With the consent of the other Signatory Authorities, this Technical Arrangement may be reviewed or modified at the request of one or more Signatory Authorities where such modifications become necessary in the light of administrative, regulatory or technical developments, or if practical experience or the operation of terrestrial systems capable of providing electronic communications services require.

10 WITHDRAWAL FROM THE ARRANGEMENT

Any Authority may withdraw from this Technical Arrangement by the end of a calendar month by giving notice of its intention at least six months in advance. A declaration to that effect shall be addressed to all other Signatory Authorities.

11 LANGUAGE OF THE ARRANGEMENT

This Technical Arrangement has been concluded in English.

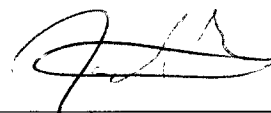
One original version of this Technical Arrangement is handed over to each Signatory Authorities and a copy is submitted to the Managing Administration of the HCM Agreement.

12 DATE OF ENTRY INTO FORCE

This Technical Arrangement will enter into force on 2015.

Done at Geneva, 2015.

For Austria
BMVIT



(Franz ZIEGELWANGER)

For Croatia
HAKOM



(Ivančica SAKAL)

For Hungary
NMHH



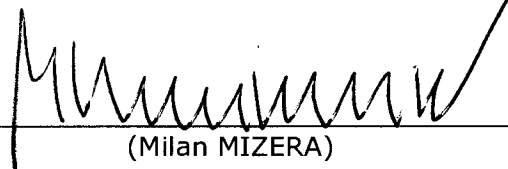
(Péter VÁRI)

For Serbia
RATEL



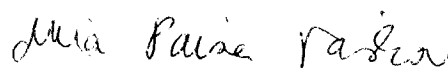
(Zoran BRANKOVIĆ)

For the Slovak Republic
RU



(Milan MIZERA)

For Slovenia
AKOS



(Meta PAVŠEK TAŠKOV)

Annex 1

PREFERENTIAL PHYSICAL-LAYER CELL IDENTITIES (PCI) FOR LTE

PCI coordination is only needed when channel centre frequencies are aligned independent of the channel bandwidth.

ETSI TS 136 211 defines 168 “unique physical-layer cell-identity groups” in §6.11, numbered 0...167, hereafter called “PCI groups”. Within each PCI group there are three separate PCIs giving 504 PCIs in total.

Administrations should agree on a repartition of these 504 PCIs on an equitable basis when channel centre frequencies are aligned as shown in the Table below. It has to be noted that dividing the PCI groups or PCIs is equivalent. Each country should only use their own preferential PCIs close to the border and can use all PCIs away from the border. This transition distance between “close to the border” and “away from the border” should be agreed between neighbouring countries.

Administrations may wish to define different field strength levels (than those defined in this Technical Arrangement) for non-preferential PCIs.

As shown in the table below, the PCIs should be divided into 6 sub-sets containing each one sixth of the available PCIs. Each country is allocated three sets (half of the PCIs) in a bilateral case and two sets (one third of the PCIs) in a trilateral case.

Four types of countries are defined in a way such that no country will use the same code set as any one of its neighbours. The following lists describe the distribution of European countries:

Type country 1: BEL, CVA, CYP, CZE, DNK, E, FIN, GRC, IRL, ISL, LTU, MCO, SMR, SUI, SVN, UKR, AZE, SRB.

Type country 2: AND, BIH, BLR, BUL, D, EST, G, HNG, I, MDA, RUS (Exclave), GEO.

Type country 3: ALB, AUT, F, HOL, HRV, POL, POR, ROU, RUS, S, MLT.

Type country 4: LIE, LUX, LVA, MKD, MNE, NOR, SVK, TUR.

(Note: Country type map can be found in the figure below).

For each type of country, the following tables and figure describe the sharing of the PCIs with its neighbouring countries, with the following conventions of writing:

	Preferential PCI
	non-preferential PCI

The 504 physical-layer cell-identities should be divided into the following 6 sub-sets when the carrier frequencies are aligned in border areas:

PCI	Set A	Set B	Set C	Set D	Set E	Set F	PCI	Set A	Set B	Set C	Set D	Set E	Set F
Country 1	0..83	84..167	168..251	252..335	336..419	420..503	Country 2	0..83	84..167	168..251	252..335	336..419	420..503
Border 1-2	█	█				█	Border 2-1			█	█	█	
Zone 1-2-3	█	█					Zone 2-3-1			█	█		
Border 1-3	█	█	█				Border 2-3		█				
Zone 1-2-4	█					█	Zone 2-1-4						
Border 1-4	█		█			█	Border 2-4						█
Zone 1-3-4	█						Zone 2-3-4			█	█		

PCI	Set A	Set B	Set C	Set D	Set E	Set F	PCI	Set A	Set B	Set C	Set D	Set E	Set F
Country 3	0..83	84..167	168..251	252..335	336..419	420..503	Country 4	0..83	84..167	168..251	252..335	336..419	420..503
Border 3-2	█					█	Border 4-1		█		█	█	
Zone 3-1-2							Zone 4-1-2					█	
Border 3-1				█			Border 4-2	█				█	
Zone 3-1-4							Zone 4-2-3						
Border 3-4			█				Border 4-3				█		
Zone 3-2-4							Zone 4-3-1						

Notes

- 1) All PCIs are available in areas away from the border.
- 2) In certain specific cases (e.g. AUT/HRV) where the distance between two countries of the same type number is very small (< few 10s km), it may be necessary to address the situation in bilateral /multilateral coordination agreements as necessary, and may include further subdivision of the allocated codes in certain areas.



Figure 1: Country type map

Annex 2

EXISTING STATIONS TO BE PROTECTED IN SLOVENIA

Admini- stration	Name of station	Frequency range	Longitude	Latitude	Height above the ground	Protection in accordance with Budapest 2005/or Bratislava 2002 needed till:
SVN	Šmarjetna gora_	3410-3431 /3510- 3531 MHz	'014E3367	46N2438	633	23. 05. 2021
SVN	Dobrča Zadnja vas 30	3410-3431 /3510- 3531 MHz	'014E2458	46N3762	1664	23. 05. 2021
SVN	Ambrož pod Krvavcem 31	3410-3431 /3510- 3531 MHz	'014E5291	46N2961	1675	23. 05. 2021
SVN	Lubnik_1 Vincarje 23	3410-3431 /3510- 3531 MHz	'014E2613	46N1710	1020	23. 05. 2021
SVN	Ravni pod stolom_	3410-3431 /3510- 3531 MHz	'014E1385	46N4280	1294	23. 05. 2021
SVN	Vogel_1 Ukanc 180	3410-3431 /3510- 3531 MHz	'013E8409	46N2638	1506	23. 05. 2021
SVN	Trstelj-RTV	3410-3431 /3510- 3531 MHz	'013E7033	45N8580	643	23. 05. 2021
SVN	HE2- Gradnikove brigade 33	3410-3431 /3510- 3531 MHz	'013E6473	45N9614	105	23. 05. 2021
SVN	Mozirje	3410-3431 /3510- 3531 MHz	,014E5636	46N1704	720	27. 10. 2021
SVN	Nazarje	3410-3431 /3510- 3531 MHz	014 E 5705	46N1911	344	27. 10. 2021
SVN	G. Radgona	3410-3431 /3510- 3531 MHz	015E5917	46N4059	267	27. 10. 2021
SVN	Cankova	3410-3431 /3510- 3531 MHz	016E0123	46N4307	216	27. 10. 2021

EXISTING STATIONS TO BE PROTECTED IN CROATIA

Location	Longitude	Latitude	Lower edge of frequency block	Upper edge of frequency block	EIRP (dBm)
Mohokos R1	016E2211	46N2700	3410,0/ 3510,0	3448,5 / 3548,5	38
Čakovec (Trg Republike 6)	016E2626	46N2327	3410,0/ 3510,0	3448,5 / 3548,5	38
BS VARAŽDIN, Stanka Vraza 4 (vodotoranj)	016E2022	46N1825	3410,0/ 3510,0	3448,5 / 3548,5	38
BS MOHOKOS R1	016E2211	46N2700	3410,0/ 3510,0	3448,5 / 3548,5	43
BS ČAKOVEC, Trg republike 6	016E2626	46N2326	3410,0/ 3510,0	3448,5 / 3548,5	38
BS DONJI KRALJEVEC (radio M)	016E3935	46N2219	3410,0/ 3510,0	3448,5 / 3548,5	38

EXISTING STATIONS TO BE PROTECTED IN HUNGARY

The latest expiry date of licence of the stations is July 26, 2016

Tx (MHz)	Rx (MHz)	Longitude	Latitude	Location	Tx (MHz)	Rx (MHz)	Longitude	Latitude	Location	Tx (MHz)	Rx (MHz)	Longitude	Latitude	Location
3429.25	3529.25	19 E 04 01	47 N 31 09	Budapest	3532.75	3432.75	20 E 07 51	46 N 15 49	Szeged	3439.75	3539.75	19 E 02 03	47 N 35 12	Budapest
3429.25	3529.25	19 E 02 40	47 N 28 03	Budapest	3532.75	3432.75	19 E 03 28	47 N 29 36	Budapest	3439.75	3539.75	19 E 03 08	47 N 29 03	Budapest
3429.25	3529.25	19 E 08 20	47 N 30 55	Budapest	3532.75	3432.75	20 E 07 51	46 N 15 49	Szeged	3439.75	3539.75	19 E 02 03	47 N 35 12	Budapest
3429.25	3529.25	19 E 02 44	47 N 35 02	Budapest	3532.75	3432.75	19 E 01 47	47 N 32 52	Budapest	3439.75	3539.75	19 E 00 53	47 N 29 24	Budapest
3429.25	3529.25	19 E 03 45	47 N 30 37	Budapest	3532.75	3432.75	17 E 38 16	47 N 41 14	Győr	3529.25	3429.25	19 E 05 49	47 N 31 29	Budapest
3429.25	3529.25	19 E 02 40	47 N 28 03	Budapest	3532.75	3432.75	18 E 57 29	47 N 30 36	Budapest	3529.25	3429.25	19 E 02 09	47 N 27 55	Budapest
3429.25	3529.25	19 E 02 44	47 N 35 02	Budapest	3536.25	3436.25	19 E 05 49	47 N 31 29	Budapest	3529.25	3429.25	19 E 05 30	47 N 28 46	Budapest
3432.75	3532.75	21 E 37 32	47 N 31 16	Budapest	3536.25	3436.25	19 E 02 09	47 N 27 55	Budapest	3529.25	3429.25	19 E 03 07	47 N 35 45	Budapest
3432.75	3532.75	21 E 37 56	47 N 33 52	Budapest	3536.25	3436.25	19 E 05 30	47 N 28 46	Budapest	3529.25	3429.25	19 E 03 18	47 N 30 40	Budapest
3432.75	3532.75	19 E 01 60	47 N 33 15	Budapest	3536.25	3436.25	19 E 03 07	47 N 35 45	Budapest	3529.25	3429.25	19 E 02 09	47 N 27 55	Budapest
3432.75	3532.75	19 E 05 27	47 N 26 56	Budapest	3536.25	3436.25	19 E 03 18	47 N 30 40	Budapest	3529.25	3429.25	19 E 03 07	47 N 35 45	Budapest
3432.75	3532.75	18 E 13 17	46 N 04 08	Pécs	3536.25	3436.25	19 E 02 09	47 N 27 55	Budapest	3532.75	3432.75	21 E 37 37	47 N 31 15	Debrecen
3432.75	3532.75	18 E 13 05	46 N 03 12	Pécs	3536.25	3436.25	19 E 03 07	47 N 35 45	Budapest	3532.75	3432.75	19 E 01 47	47 N 32 52	Budapest
3432.75	3532.75	20 E 08 55	46 N 15 39	Szeged	3539.75	3439.75	19 E 00 27	47 N 24 28	Budapest	3532.75	3432.75	19 E 00 27	47 N 24 28	Budapest
3432.75	3532.75	19 E 02 00	47 N 30 29	Budapest	3539.75	3439.75	19 E 01 47	47 N 32 52	Budapest	3532.75	3432.75	18 E 13 40	46 N 02 25	Pécs
3432.75	3532.75	19 E 03 13	47 N 31 24	Budapest	3539.75	3439.75	19 E 03 28	47 N 29 36	Budapest	3532.75	3432.75	18 E 13 40	46 N 02 25	Pécs
3432.75	3532.75	20 E 06 42	46 N 15 39	Szeged	3539.75	3439.75	19 E 01 47	47 N 32 52	Budapest	3532.75	3432.75	18 E 57 29	47 N 30 36	Budapest
3432.75	3532.75	20 E 08 53	46 N 15 09	Szeged	3539.75	3439.75	18 E 57 29	47 N 30 36	Budapest	3413.5	3413.5	18 E 11 60	46 N 04 09	Pécs
3432.75	3532.75	17 E 38 58	47 N 41 14	Győr	3410.875	3510.875	18 E 53 14	47 N 26 27	Törökbálint	3413.5	3413.5	18 E 24 31	47 N 33 46	Tatabánya
3432.75	3532.75	19 E 01 60	47 N 33 15	Budapest	3410.875	3510.875	18 E 59 03	47 N 31 31	Budapest	3413.5	3413.5	20 E 18 48	46 N 24 15	Hódmezővásárhely
3432.75	3532.75	17 E 38 08	47 N 41 09	Győr	3410.875	3510.875	19 E 03 10	47 N 28 03	Budapest	3414.375	3514.375	19 E 01 43	47 N 28 41	Budapest
3432.75	3532.75	17 E 38 08	47 N 41 09	Győr	3410.875	3510.875	19 E 03 13	47 N 29 29	Budapest	3414.375	3514.375	19 E 04 55	47 N 27 52	Budapest
3432.75	3532.75	19 E 02 00	47 N 30 29	Budapest	3410.875	3510.875	19 E 03 31	47 N 31 18	Budapest	3414.375	3514.375	19 E 04 58	47 N 31 45	Budapest
3436.25	3536.25	19 E 06 19	47 N 31 08	Budapest	3410.875	3510.875	19 E 56 24	47 N 46 17	Gyöngyös	3416.125	3516.125	16 E 33 56	47 N 41 23	Sopron
3436.25	3536.25	19 E 02 21	47 N 28 28	Budapest	3412.625	3512.625	16 E 36 60	47 N 13 26	Szombathely	3416.125	3516.125	16 E 36 33	47 N 40 07	Sopron
3436.25	3536.25	19 E 06 16	47 N 27 28	Budapest	3412.625	3512.625	16 E 38 24	47 N 14 39	Szombathely	3416.125	3516.125	17 E 39 31	47 N 41 11	Győr
3436.25	3536.25	19 E 03 38	47 N 34 42	Budapest	3412.625	3512.625	17 E 38 07	47 N 41 06	Győr	3416.125	3516.125	19 E 03 00	47 N 29 49	Budapest
3436.25	3536.25	19 E 03 08	47 N 30 51	Budapest	3412.625	3512.625	19 E 03 12	47 N 27 46	Budapest	3416.125	3516.125	19 E 03 52	47 N 31 54	Budapest
3436.25	3536.25	19 E 02 21	47 N 28 28	Budapest	3412.625	3512.625	19 E 04 44	47 N 30 44	Budapest	3416.125	3516.125	20 E 22 36	47 N 54 03	Eger
3436.25	3536.25	19 E 03 38	47 N 34 42	Budapest	3412.625	3512.625	20 E 22 56	47 N 53 54	Eger	3416.125	3516.125	21 E 35 40	47 N 32 32	Debrecen
3439.75	3539.75	19 E 01 29	47 N 24 32	Budapest	3412.625	3512.625	21 E 37 53	47 N 33 45	Debrecen	3416.125	3516.125	21 E 35 50	47 N 32 34	Debrecen

Tx(MHz)	Rx(MHz)	Longitude	Latitude	Location	Tx(MHz)	Rx(MHz)	Longitude	Latitude	Location	Tx(MHz)	Rx(MHz)	Longitude	Latitude	Location
3417.875	3517.875	19 E 05 56	47 N 28 30	Budapest	3482.625	3582.625	19 E 03 56	47 N 29 09	Budapest	3491.375	3591.375	19 E 00 40	47 N 30 59	Budapest
3417.875	3517.875	19 E 07 33	47 N 34 15	Budapest	3482.625	3582.625	19 E 04 40	47 N 29 31	Budapest	3491.375	3591.375	19 E 01 47	47 N 30 17	Budapest
3417.875	3517.875	19 E 10 01	47 N 30 56	Budapest	3482.625	3582.625	19 E 08 31	47 N 30 13	Budapest	3491.375	3591.375	19 E 02 17	47 N 28 27	Budapest
3419.625	3519.625	19 E 02 54	47 N 30 00	Budapest	3483.5	3483.5	17 E 38 34	47 N 41 20	Győr	3491.375	3591.375	19 E 03 22	47 N 31 36	Budapest
3419.625	3519.625	19 E 06 31	47 N 29 46	Budapest	3483.5	3483.5	20 E 36 18	46 N 34 00	Orosháza	3493.125	3593.125	16 E 59 56	46 N 27 28	Nagykanizsa
3419.625	3519.625	19 E 09 22	47 N 29 52	Budapest	3483.5	3483.5	20 E 40 47	46 N 33 51	Orosháza	3493.125	3593.125	17 E 38 07	47 N 41 04	Győr
3420.5	3420.5	18 E 11 32	46 N 04 07	Pécs	3483.5	3483.5	21 E 41 33	47 N 57 26	Nyíregyháza	3493.125	3593.125	18 E 10 45	46 N 03 49	Pécs
3420.5	3420.5	18 E 23 53	47 N 35 07	Tatabánya	3484.375	3584.375	19 E 00 58	47 N 30 36	Budapest	3493.125	3593.125	18 E 18 44	47 N 28 25	Oroszlány
3420.5	3420.5	20 E 20 24	46 N 25 29	Hódmezővásárhely	3484.375	3584.375	19 E 01 32	47 N 28 44	Budapest	3493.125	3593.125	19 E 02 28	47 N 28 23	Budapest
3421.375	3521.375	19 E 01 25	47 N 29 36	Budapest	3484.375	3584.375	19 E 05 44	47 N 28 40	Budapest	3493.125	3593.125	19 E 03 36	47 N 29 41	Budapest
3421.375	3521.375	19 E 04 29	47 N 28 55	Budapest	3484.375	3584.375	19 E 08 05	47 N 33 08	Budapest	3493.125	3593.125	19 E 05 05	47 N 28 14	Budapest
3421.375	3521.375	19 E 04 51	47 N 29 56	Budapest	3486.125	3586.125	19 E 02 10	47 N 30 56	Budapest	3493.125	3593.125	19 E 07 29	47 N 30 31	Budapest
3421.375	3521.375	19 E 05 22	47 N 32 27	Budapest	3486.125	3586.125	19 E 03 20	47 N 30 40	Budapest	3513.5	3513.5	18 E 14 35	46 N 04 34	Pécs
3423.125	3523.125	19 E 02 14	47 N 31 30	Budapest	3486.125	3586.125	19 E 03 36	47 N 29 41	Budapest	3513.5	3513.5	20 E 19 08	46 N 25 25	Hódmezővásárhely
3423.125	3523.125	19 E 02 45	47 N 32 47	Budapest	3486.125	3586.125	19 E 03 55	47 N 28 56	Budapest	3520.5	3520.5	18 E 12 39	46 N 03 37	Pécs
3423.125	3523.125	19 E 02 59	47 N 34 52	Budapest	3486.125	3586.125	19 E 08 46	47 N 31 55	Budapest	3520.5	3520.5	18 E 23 10	47 N 34 27	Tatabánya
3423.125	3523.125	19 E 14 22	47 N 29 41	Budapest	3487.875	3587.875	16 E 49 42	46 N 49 25	Zalaegerszeg	3520.5	3520.5	20 E 20 51	46 N 24 44	Hódmezővásárhely
3423.125	3523.125	21 E 36 24	47 N 31 45	Debrecen	3487.875	3587.875	18 E 11 15	47 N 22 18	Mór	3583.5	3583.5	17 E 37 31	47 N 40 24	Győr
3480.875	3580.875	18 E 11 20	47 N 22 18	Mór	3487.875	3587.875	19 E 03 31	47 N 29 33	Budapest	3583.5	3583.5	18 E 56 50	47 N 27 17	Budaörs
3480.875	3580.875	19 E 04 05	47 N 32 13	Budapest	3487.875	3587.875	19 E 04 29	47 N 30 40	Budapest	3583.5	3583.5	19 E 03 36	47 N 25 28	Budapest
3480.875	3580.875	19 E 06 13	47 N 27 30	Budapest	3487.875	3587.875	19 E 07 56	47 N 28 23	Budapest	3583.5	3583.5	19 E 03 36	47 N 36 41	Budakalász
3480.875	3580.875	19 E 55 50	47 N 44 29	Gyöngyös	3487.875	3587.875	20 E 08 47	46 N 14 55	Szeged	3583.5	3583.5	19 E 14 29	47 N 28 57	Budapest
3480.875	3580.875	21 E 43 54	47 N 57 20	Nyíregyháza	3489.625	3589.625	18 E 26 22	47 N 33 17	Tatabánya	3583.5	3583.5	20 E 22 56	47 N 53 54	Eger
3416.125	3516.125	21 E 41 33	47 N 57 26	Nyíregyháza	3489.625	3586.625	19 E 04 43	47 N 26 32	Budapest	3583.5	3583.5	20 E 39 21	46 N 34 08	Orosháza
3416.125	3516.125	21 E 43 05	47 N 57 33	Nyíregyháza	3489.625	3586.625	19 E 07 20	47 N 30 57	Budapest	3583.5	3583.5	20 E 39 32	46 N 33 32	Orosháza
3417.875	3517.875	19 E 01 08	47 N 29 39	Budapest	3490.5	3490.5	16 E 39 10	47 N 14 22	Szombathely	3583.5	3583.5	20 E 47 23	48 N 06 45	Miskolc
3417.875	3517.875	19 E 02 54	47 N 30 33	Budapest	3490.5	3490.5	17 E 37 51	47 N 40 36	Győr	3583.5	3583.5	21 E 41 44	47 N 56 49	Nyíregyháza
3417.875	3517.875	19 E 02 59	47 N 29 40	Budapest	3490.5	3490.5	18 E 56 23	47 N 27 13	Budaörs	3590.5	3590.5	16 E 39 10	47 N 14 22	Szombathely
3482.625	3582.625	18 E 25 40	47 N 32 44	Tatabánya	3490.5	3490.5	20 E 40 07	46 N 33 04	Orosháza	3590.5	3590.5	17 E 39 22	47 N 40 57	Győr
3482.625	3582.625	19 E 00 37	47 N 29 47	Budapest	3490.5	3490.5	20 E 40 32	46 N 34 02	Orosháza	3590.5	3590.5	18 E 53 60	47 N 27 28	Budaörs
3482.625	3582.625	19 E 03 16	47 N 30 14	Budapest	3490.5	3490.5	21 E 37 59	47 N 32 23	Debrecen	3590.5	3590.5	20 E 22 35	47 N 54 10	Eger

Tx(MHz)	Rx(MHz)	Longitude	Latitude	Location	Tx(MHz)	Rx(MHz)	Longitude	Latitude	Location	Tx(MHz)	Rx(MHz)	Longitude	Latitude	Location
3590.5	3590.5	20 E 47 19	48 N 07 13	Miskolc	3571.25	3471.25	20 E 08 43	46 N 16 16	Szeged	3590.5	3590.5	20 E 41 32	46 N 34 44	Orosháza
3590.5	3590.5	21 E 36 24	47 N 31 45	Debrecen	3471.25	3571.25	20 E 12 20	46 N 15 41	Szeged	3571.25	3471.25	18 E 35 36	47 N 23 04	Vértesacsca
3590.5	3590.5	21 E 43 05	47 N 57 33	Nyíregyháza	3574.75	3474.75	20 E 08 43	46 N 16 16	Szeged	3471.25	3571.25	18 E 35 13	47 N 22 05	Vértesacsca
3564.25	3464.25	20 E 08 43	46 N 16 16	Szeged	3474.75	3574.75	20 E 08 48	46 N 15 19	Szeged	3574.75	3474.75	18 E 35 36	47 N 23 04	Vértesacsca
3464.25	3564.25	20 E 14 14	46 N 13 01	Szeged	3574.75	3474.75	19 E 20 47	47 N 35 54	Gödöllő	3474.75	3574.75	18 E 34 19	47 N 22 01	Vértesacsca
3567.75	3467.75	20 E 08 43	46 N 16 16	Szeged	3474.75	3574.75	19 E 19 48	47 N 36 56	Gödöllő	3550.250	3450.250	19 E 00 05	47 N 33 00	Budapest
3467.75	3567.75	20 E 08 43	46 N 14 51	Szeged	3564.25	3464.25	19 E 08 23	47 N 46 25	Vác	3450.250	3550.250	19 E 07 41	47 N 38 19	Dunakeszi
3571.25	3471.25	20 E 08 43	46 N 16 16	Szeged	3464.25	3564.25	19 E 06 11	47 N 48 28	Vác	3557.250	3457.250	18 E 58 45	47 N 29 30	Budapest
3471.25	3571.25	20 E 06 55	46 N 15 15	Szeged	3571.25	3471.25	19 E 08 23	47 N 46 25	Vác	3457.250	3557.250	19 E 00 53	47 N 31 20	Budapest
3564.25	3464.25	20 E 08 43	46 N 16 16	Szeged	3471.25	3571.25	19 E 09 46	47 N 46 12	Vác	3557.250	3457.250	21 E 09 33	48 N 16 10	Abaújszántó
3464.25	3564.25	20 E 05 48	46 N 16 29	Szeged	3574.75	3474.75	19 E 08 23	47 N 46 25	Vác	3457.250	3557.250	21 E 14 06	48 N 20 21	Boldogkőváralja
3574.75	3474.75	20 E 08 43	46 N 16 16	Szeged	3474.75	3574.75	19 E 08 23	47 N 46 25	Vác	3546.750	3446.750	19 E 18 08	48 N 04 12	Balassagyarmat
3474.75	3574.75	20 E 10 49	46 N 17 53	Szeged	3564.25	3464.25	18 E 22 54	47 N 23 30	Gánt	3446.750	3546.750	19 E 17 37	48 N 04 39	Balassagyarmat
3571.25	3471.25	20 E 08 43	46 N 16 16	Szeged	3464.25	3564.25	18 E 23 24	47 N 23 31	Gánt	3553.750	3453.750	21 E 02 24	46 N 41 17	Békéscsaba
3471.25	3571.25	20 E 12 20	46 N 15 41	Szeged	3571.25	3471.25	18 E 22 54	47 N 23 30	Gánt	3453.750	3553.750	21 E 07 57	46 N 46 20	Békés
3574.75	3474.75	18 E 35 36	47 N 23 04	Vértesacsca	3471.25	3571.25	18 E 23 05	47 N 23 16	Gánt	3557.250	3457.250	19 E 00 05	47 N 33 00	Budapest
3474.75	3574.75	18 E 34 19	47 N 22 02	Vértesacsca	3564.25	3464.25	18 E 32 41	47 N 30 24	Nagyegyháza	3457.250	3557.250	19 E 05 22	47 N 33 38	Budapest
3567.75	3467.75	18 E 32 41	47 N 30 24	Nagyegyháza	3464.25	3564.25	18 E 32 23	47 N 31 19	Nagyegyháza	3546.750	3446.750	19 E 00 05	47 N 33 00	Budapest
3467.75	3567.75	18 E 34 01	47 N 29 39	Óbarok	3567.75	3467.75	18 E 32 41	47 N 30 24	Nagyegyháza	3446.750	3546.750	19 E 02 17	47 N 31 50	Budapest
3574.75	3474.75	18 E 32 41	47 N 30 24	Nagyegyháza	3467.75	3567.75	18 E 34 01	47 N 29 39	Óbarok	3553.750	3453.750	18 E 57 23	47 N 30 42	Budapest
3474.75	3574.75	18 E 34 25	47 N 29 26	Óbarok	3574.75	3474.75	18 E 32 41	47 N 30 24	Nagyegyháza	3453.750	3553.750	18 E 55 43	47 N 30 41	Budakeszi
3564.25	3464.25	20 E 08 43	46 N 16 16	Szeged	3474.75	3574.75	18 E 34 25	47 N 29 26	Óbarok	3550.250	3450.250	18 E 06 48	47 N 44 39	Komárom
3464.25	3564.25	20 E 14 14	46 N 13 01	Szeged	3564.25	3464.25	18 E 35 36	47 N 23 04	Vértesacsca	3450.250	3550.250	18 E 07 00	47 N 44 41	Komárom
3567.75	3467.75	20 E 08 43	46 N 16 16	Szeged	3464.25	3564.25	18 E 35 01	47 N 22 22	Vértesacsca	3546.700	3446.700	18 E 06 48	47 N 44 39	Komárom
3467.75	3567.75	20 E 08 43	46 N 14 51	Szeged	3567.75	3467.75	18 E 35 36	47 N 23 04	Vértesacsca	3446.700	3546.700	18 E 10 03	47 N 44 07	Komárom
3571.25	3471.25	20 E 08 43	46 N 16 16	Szeged	3467.75	3567.75	18 E 34 50	47 N 22 26	Vértesacsca	3553.750	3453.750	18 E 58 45	47 N 29 30	Budapest
3471.25	3571.25	20 E 06 55	46 N 15 15	Szeged	3571.25	3471.25	18 E 35 36	47 N 23 04	Vértesacsca	3453.750	3553.750	19 E 01 06	47 N 24 28	Budapest
3564.25	3464.25	20 E 08 43	46 N 16 16	Szeged	3471.25	3571.25	18 E 35 13	47 N 22 05	Vértesacsca	3557.250	3457.250	18 E 58 45	47 N 29 30	Budapest
3464.25	3564.25	20 E 05 48	46 N 16 29	Szeged	3574.75	3474.75	18 E 35 36	47 N 23 04	Vértesacsca	3557.250	3457.250	19 E 04 11	47 N 31 58	Budapest
3574.75	3474.75	20 E 08 43	46 N 16 16	Szeged	3474.75	3574.75	18 E 34 19	47 N 22 02	Vértesacsca	3457.250	3557.250	18 E 59 10	47 N 30 22	Budapest
3474.75	3574.75	20 E 10 49	46 N 17 53	Szeged	3564.25	3464.25	18 E 35 36	47 N 23 04	Vértesacsca	3553.750	3453.750	19 E 07 32	47 N 28 07	Budapest

Tx(MHz)	Rx(MHz)	Longitude	Latitude	Location	Tx(MHz)	Rx(MHz)	Longitude	Latitude	Location	Tx(MHz)	Rx(MHz)	Longitude	Latitude	Location
3464.25	3564.25	18 E 35 01	47 N 22 22	Vértesacsca	3557.250	3457.250	21 E 40 16	47 N 41 44	Téglás	3445.875	3545.875	21 E 17 01	48 N 23 26	Fony
3567.75	3467.75	18 E 35 36	47 N 23 04	Vértesacsca	3457.250	3557.250	21 E 45 01	47 N 43 59	Bököny	3545.875	3445.875	21 E 24 44	47 N 19 39	Földes
3467.75	3567.75	18 E 34 50	47 N 22 26	Vértesacsca	3545.875	3445.875	22 E 32 43	48 N 09 26	Beregsurány	3445.875	3545.875	21 E 18 12	47 N 18 57	Tetétlen
3453.750	3553.750	19 E 07 45	47 N 29 00	Budapest	3445.875	3545.875	22 E 33 11	48 N 09 41	Beregsurány	3557.250	3457.250	18 E 29 38	47 N 40 34	Gerecse
3557.250	3457.250	19 E 07 32	47 N 28 07	Budapest	3550.250	3450.250	18 E 32 38	46 N 17 47	Bonyhád	3457.250	3557.250	18 E 30 37	47 N 36 38	Tarján
3457.250	3557.250	19 E 08 32	47 N 27 29	Budapest	3450.250	3550.250	18 E 31 53	46 N 17 33	Bonyhád	3553.750	3453.750	18 E 29 38	47 N 40 34	Gerecse
3550.250	3450.250	19 E 07 32	47 N 28 07	Budapest	3557.250	3457.250	21 E 02 24	46 N 41 17	Békéscsaba	3453.750	3553.750	18 E 30 37	47 N 36 38	Tarján
3450.250	3550.250	19 E 05 40	47 N 27 13	Budapest	3457.250	3557.250	21 E 06 20	46 N 40 10	Békéscsaba	3546.750	3446.750	18 E 29 38	47 N 40 34	Gerecse
3546.750	3446.750	18 E 57 48	46 N 10 27	Baja	3550.250	3450.250	21 E 02 24	46 N 41 17	Békéscsaba	3446.750	3546.750	18 E 30 37	47 N 36 38	Tarján
3446.750	3546.750	18 E 58 32	46 N 10 43	Baja	3450.250	3550.250	20 E 51 28	46 N 38 01	Csorvás	3545.875	3445.875	17 E 40 06	47 N 39 38	Győr
3553.750	3453.750	21 E 50 22	47 N 52 40	Nagykálló	3551.125	3451.125	22 E 27 32	48 N 09 40	Csaroda	3445.875	3545.875	17 E 44 19	47 N 37 19	Töltéstava
3453.750	3553.750	21 E 50 51	47 N 52 30	Nagykálló	3451.125	3551.125	22 E 33 11	48 N 09 41	Beregsurány	3550.250	3450.250	17 E 40 06	47 N 39 38	Győr
3546.750	3446.750	16 E 34 06	47 N 39 44	Sopron	3547.625	3447.625	22 E 27 32	48 N 09 40	Csaroda	3450.250	3550.250	17 E 38 01	47 N 43 13	Győr
3446.750	3546.750	16 E 35 12	47 N 41 14	Sopron	3447.625	3547.625	22 E 18 46	48 N 11 13	Tiszaszalka	3550.250	3450.250	19 E 55 21	47 N 46 24	Gyöngyös
3551.125	3451.125	18 E 44 54	46 N 07 30	Báta	3553.750	3453.750	21 E 37 36	47 N 31 15	Debrecen	3450.250	3550.250	19 E 55 25	47 N 46 47	Gyöngyös
3451.125	3551.125	18 E 57 14	46 N 10 56	Baja	3453.750	3553.750	21 E 37 35	47 N 32 47	Debrecen	3557.250	3457.250	21 E 23 21	47 N 26 56	Hajdúszoboszló
3550.250	3450.250	18 E 29 38	47 N 40 34	Gerecse	3550.250	3450.250	21 E 37 36	47 N 31 15	Debrecen	3457.250	3557.250	21 E 13 41	47 N 23 18	Kaba
3450.250	3550.250	17 E 58 36	47 N 38 37	Bábolna	3450.250	3550.250	21 E 39 01	47 N 32 47	Debrecen	3549.375	3449.375	16 E 39 05	46 N 57 26	Hegyhátsál
3557.250	3457.250	17 E 40 06	47 N 39 38	Győr	3546.750	3446.750	21 E 37 36	47 N 31 15	Debrecen	3449.375	3549.375	16 E 33 14	47 N 03 56	Nagykölked
3457.250	3557.250	17 E 37 54	47 N 41 01	Győr	3446.750	3546.750	21 E 39 01	47 N 30 50	Debrecen	3545.875	3445.875	16 E 39 05	46 N 57 26	Hegyhátsál
3546.750	3446.750	22 E 03 50	48 N 14 08	Kisvárd	3550.250	3450.250	18 E 44 33	47 N 44 59	Dorog	3445.875	3545.875	16 E 25 22	46 N 56 27	Rábagyarmat
3446.750	3546.750	22 E 04 50	48 N 12 43	Kisvárd	3450.250	3550.250	18 E 44 24	47 N 47 35	Esztergom	3550.250	3450.250	20 E 19 04	46 N 25 24	Hódmezővásárhely
3553.750	3453.750	20 E 00 31	47 N 52 21	Kékes	3550.250	3450.250	22 E 35 11	47 N 59 53	Fehérgyarmat	3450.250	3550.250	20 E 19 13	46 N 25 03	Hódmezővásárhely
3550.250	3450.250	20 E 46 31	48 N 05 57	Miskolc	3450.250	3550.250	22 E 23 43	48 N 02 37	Panyola	3550.250	3450.250	19 E 47 22	48 N 09 24	Karancs
3450.250	3550.250	20 E 48 26	48 N 09 22	Szirmabesenyő	3546.750	3446.750	22 E 35 11	47 N 59 53	Fehérgyarmat	3450.250	3550.250	19 E 48 14	48 N 05 48	Salgótarján
3546.750	3446.750	20 E 39 44	46 N 33 48	Orosháza	3446.750	3546.750	22 E 43 47	47 N 59 09	Csaholc	3553.750	3453.750	20 E 37 55	48 N 14 55	Kazincbarcika
3446.750	3546.750	20 E 37 24	46 N 29 07	Kardoskút	3557.250	3457.250	22 E 35 11	47 N 59 53	Fehérgyarmat	3453.750	3553.750	20 E 37 12	48 N 14 59	Kazincbarcika
3557.250	3457.250	20 E 08 42	46 N 16 15	Szeged	3457.250	3557.250	22 E 37 25	48 N 05 09	Szatmárcseke	3550.250	3450.250	19 E 28 17	46 N 26 00	Kiskunhalas
3457.250	3557.250	20 E 08 47	46 N 15 06	Szeged	3553.750	3453.750	22 E 35 11	47 N 59 53	Fehérgyarmat	3450.250	3550.250	19 E 28 28	46 N 25 50	Kiskunhalas
3550.250	3450.250	18 E 24 31	47 N 35 12	Tatabánya	3453.750	3553.750	22 E 37 22	47 N 51 56	Pátyod	3557.250	3457.250	22 E 03 50	48 N 14 08	Kisvárd
3450.250	3550.250	18 E 24 14	47 N 34 36	Tatabánya	3545.875	3445.875	21 E 14 13	48 N 21 16	Fony	3457.250	3557.250	22 E 00 18	48 N 15 19	Kékcse

Tx(MHz)	Rx(MHz)	Longitude	Latitude	Location	Tx(MHz)	Rx(MHz)	Longitude	Latitude	Location	Tx(MHz)	Rx(MHz)	Longitude	Latitude	Location
3553.750	3453.750	22 E 03 50	48 N 14 08	Kisvárd	3553.750	3453.750	16 E 59 56	46 N 27 49	Nagykanizsa	3457.250	3557.250	19 E 47 05	48 N 04 09	Salgótarján
3453.750	3553.750	22 E 09 12	48 N 14 16	Jéke	3453.750	3553.750	16 E 59 02	46 N 27 18	Nagykanizsa	3546.750	3446.750	19 E 48 12	48 N 06 30	Salgótarján
3547.625	3447.625	21 E 29 37	47 N 01 06	Komádi	3553.750	3453.750	21 E 42 58	47 N 56 51	Nyíregyháza	3446.750	3546.750	19 E 48 33	48 N 06 20	Salgótarján
3447.625	3547.625	21 E 26 01	47 N 08 01	Zsáka	3453.750	3553.750	21 E 42 49	47 N 57 29	Nyíregyháza	3550.250	3450.250	18 E 19 55	45 N 52 47	Siklós
3551.125	3451.125	21 E 29 37	47 N 01 06	Komádi	3557.250	3457.250	21 E 42 58	47 N 56 51	Nyíregyháza	3450.250	3550.250	18 E 19 50	45 N 48 34	Egyházasharaszti
3451.125	3551.125	21 E 21 31	46 N 59 15	Újiráz	3457.250	3557.250	21 E 44 00	47 N 53 58	Nyíregyháza	3557.250	3457.250	19 E 23 20	46 N 35 22	Soltvadkert
3557.250	3457.250	21 E 29 37	47 N 01 06	Komádi	3553.750	3453.750	16 E 32 14	47 N 13 43	Ondód	3457.250	3557.250	19 E 23 36	46 N 34 42	Soltvadkert
3457.250	3557.250	21 E 33 48	47 N 01 51	Magyarhomorog	3453.750	3553.750	16 E 39 43	47 N 12 02	Szombathely	3546.750	3446.750	20 E 08 42	46 N 16 15	Szeged
3551.125	3451.125	20 E 00 31	47 N 52 21	Kékes	3557.250	3457.250	16 E 32 14	47 N 13 43	Ondód	3446.750	3546.750	20 E 08 42	46 N 15 08	Szeged
3451.125	3551.125	20 E 01 19	47 N 56 32	Bodony	3457.250	3557.250	16 E 35 09	47 N 19 33	Szombathely	3450.250	3550.250	20 E 09 09	46 N 15 20	Szeged
3546.750	3446.750	20 E 00 31	47 N 52 21	Kékes	3550.250	3450.250	20 E 39 44	46 N 33 48	Orosháza	3450.250	3550.250	20 E 09 09	46 N 15 20	Szeged
3446.750	3546.750	19 E 55 58	47 N 49 45	Gyöngyössolymos	3450.250	3550.250	20 E 40 11	46 N 33 37	Orosháza	3553.750	3453.750	20 E 09 05	46 N 13 57	Újszeged
3457.250	3557.250	17 E 36 14	47 N 21 36	Csót	3553.750	3453.750	20 E 39 44	46 N 33 48	Orosháza	3453.750	3553.750	19 E 58 59	46 N 10 33	Röszke
3557.250	3457.250	16 E 46 37	46 N 28 17	Letenye	3453.750	3553.750	20 E 40 11	46 N 33 37	Orosháza	3546.750	3446.750	18 E 41 41	46 N 21 40	Szekszárd
3457.250	3557.250	16 E 44 00	46 N 26 05	Letenye	3549.375	3449.375	19 E 41 51	47 N 55 13	Pásztó	3446.750	3546.750	18 E 42 09	46 N 20 54	Szekszárd
3557.250	3457.250	21 E 52 29	47 N 22 46	Létavértes	3449.375	3549.375	19 E 42 32	47 N 55 43	Pásztó	3550.250	3450.250	18 E 41 36	46 N 20 48	Szekszárd
3457.250	3557.250	21 E 58 10	47 N 22 46	Létavértes	3545.875	3445.875	19 E 41 51	47 N 55 13	Pásztó	3450.250	3550.250	18 E 43 08	46 N 21 18	Szekszárd
3557.250	3457.250	20 E 46 31	48 N 05 57	Miskolc	3445.875	3545.875	19 E 41 48	47 N 51 52	Szurdokpüspöki	3547.625	3447.625	17 E 47 04	46 N 03 00	Szigetvár
3457.250	3557.250	20 E 46 45	48 N 06 10	Miskolc	3553.750	3453.750	18 E 13 12	46 N 05 56	Pécs	3447.625	3547.625	17 E 42 00	46 N 04 25	Merenye
3546.750	3446.750	20 E 46 31	48 N 05 57	Miskolc	3453.750	3553.750	18 E 13 35	46 N 02 53	Pécs	3549.375	3449.375	17 E 47 04	46 N 03 00	Szigetvár
3446.750	3546.750	20 E 47 19	48 N 06 11	Miskolc	3546.750	3446.750	18 E 13 12	46 N 05 56	Pécs	3449.375	3549.375	18 E 01 29	45 N 59 36	Gerde
3545.875	3445.875	17 E 15 17	47 N 51 47	Mosonmagyaróvár	3446.750	3546.750	18 E 20 16	46 N 10 38	Hosszúhetény	3553.750	3453.750	16 E 55 33	47 N 15 47	Sárvár
3445.875	3545.875	17 E 10 10	47 N 51 02	Mosonszolnok	3557.250	3457.250	18 E 13 12	46 N 05 56	Pécs	3453.750	3553.750	16 E 55 14	47 N 15 34	Sárvár
3553.750	3453.750	17 E 15 17	47 N 51 47	Mosonmagyaróvár	3457.250	3557.250	18 E 12 07	45 N 57 48	Szilvás	3557.250	3457.250	21 E 37 54	48 N 24 06	Sátoraljaújhely
3453.750	3553.750	17 E 15 16	47 N 51 58	Mosonmagyaróvár	3550.250	3450.250	18 E 13 12	46 N 05 56	Pécs	3457.250	3557.250	21 E 41 20	48 N 20 37	Alsóberecki
3557.250	3457.250	17 E 17 47	47 N 50 21	Mosonmagyaróvár	3450.250	3550.250	18 E 16 18	46 N 05 10	Pécs	3546.750	3446.750	18 E 24 31	47 N 35 12	Tatabánya
3457.250	3557.250	17 E 16 13	47 N 52 32	Mosonmagyaróvár	3553.750	3453.750	18 E 13 12	46 N 05 56	Pécs	3446.750	3546.750	18 E 21 47	47 N 38 51	Baj
3545.875	3445.875	22 E 16 56	48 N 17 02	Mátyus	3453.750	3553.750	18 E 20 16	46 N 10 38	Hosszúhetény	3545.875	3445.875	21 E 22 54	48 N 07 13	Tokaj
3445.875	3545.875	22 E 15 59	48 N 19 22	Lónya	3553.750	3453.750	17 E 20 14	47 N 27 28	Rábaszentandrás	3445.875	3545.875	21 E 20 32	48 N 10 16	Bodrogkeresztúr
3549.375	3449.375	22 E 16 56	48 N 17 02	Mátyus	3453.750	3553.750	17 E 16 17	47 N 19 41	Szergény	3553.750	3453.750	21 E 22 54	48 N 07 13	Tokaj
3449.375	3549.375	22 E 18 13	48 N 15 32	Tiszakerecseny	3557.250	3457.250	19 E 48 12	48 N 06 30	Salgótarján	3453.750	3553.750	21 E 27 23	48 N 02 31	Tiszaeszlár

Tx(MHz)	Rx(MHz)	Longitude	Latitude	Location
3550.250	3450.250	21 E 22 54	48 N 07 13	Tokaj
3450.250	3550.250	21 E 30 51	48 N 01 09	Bashalom
3557.250	3457.250	21 E 22 54	48 N 07 13	Tokaj
3457.250	3557.250	21 E 12 25	48 N 08 54	Szerencs
3557.250	3457.250	22 E 18 08	48 N 07 55	Vásárosnamény
3457.250	3557.250	22 E 18 53	48 N 07 43	Vásárosnamény
3453.750	3553.750	22 E 18 49	48 N 11 11	Tiszaszalka
3453.750	3553.750	22 E 18 49	48 N 11 11	Tiszaszalka
3546.750	3446.750	16 E 33 00	46 N 43 01	Zalabaksa
3446.750	3546.750	16 E 28 31	46 N 36 59	Rédics
3551.125	3451.125	17 E 01 07	46 N 33 46	Újudvar
3451.125	3551.125	16 E 56 01	46 N 30 51	Hosszúvölgy
3553.750	3453.750	18 E 44 54	46 N 07 30	Báta
3453.750	3553.750	18 E 56 11	45 N 55 53	Hercegszántó
3557.250	3457.250	19 E 08 56	46 N 11 49	Csávoly
3457.250	3557.250	18 E 57 21	46 N 10 59	Baja
3557.250	3457.250	20 E 39 44	46 N 33 48	Orosháza
3457.250	3557.250	20 E 37 24	46 N 29 07	Kardoskút
3550.250	3450.250	18 E 58 45	47 N 29 30	Budapest
3450.250	3550.250	19 E 04 21	47 N 29 35	Budapest
3553.750	3453.750	16 E 34 06	47 N 39 44	Sopron
3453.750	3553.750	16 E 35 33	47 N 41 02	Sopron

EXISTING STATIONS TO BE PROTECTED IN THE SLOVAK REPUBLIC

Location	Longitude	Latitude	Tx (MHz)	Rx (MHz)
Fíľakovo	19E4919	48N1628	3511.75	3411.75
Bánovce nad Ondavou	21E4949	48N4034	3576.5	3476.5
Bánovce nad Ondavou	21E4949	48N4034	3585.25	3485.25
Bánovce nad Ondavou	21E4949	48N4034	3518.75	3418.75
Bratislava	16E5900	48N1339	3511.75	3411.75
Bratislava	17E0221	48N1104	3518.75	3418.75
Bratislava	17E0221	48N1104	3515.25	3415.25
Bratislava	16E5844	48N1226	3583.5	3583.5
Bratislava	16E5844	48N1226	3576.5	3576.5
Bratislava	16E5844	48N1227	3515.25	3415.25
Bratislava	17E1321	48N0727	3513.5	3513.5
Bratislava	17E0828	48N0908	3574.75	3474.75
Bratislava	17E0828	48N0908	3578.25	3478.25
Čierna nad Tisou	22E0500	48N2451	3511.75	3411.75
Čiž	20E1648	48N1846	3511.75	3411.75
Dunajská Lužná	17E1541	48N0454	3513.5	3513.5
Dunajská Lužná	17E1541	48N0454	3583.5	3583.5
Dunajská Lužná	17E1541	48N0454	3520.5	3520.5
Dunajská Streda	17E3559	47N5939	3581.25	3481.25
Dunajská Streda	17E3559	47N5939	3574.75	3474.75
Dunajská Streda	17E3559	47N5939	3511.75	3411.75
Dunajská Streda	17E3559	47N5939	3515.25	3415.25
Ďurkovce	19E1042	48N0759	3476.5	3476.5
Figa	20E1549	48N2416	3515.25	3415.25
Figa	20E1549	48N2416	3515.25	3415.25
Glabušovce	19E2722	48N0920	3513.5	3513.5
Hodejovec	20E0101	48N1658	3413.5	3413.5
Hurbanovo	18E1153	47N5243	3518.75	3418.75
Chrastince	19E1501	48N0528	3511.75	3411.75
k.ú Mýtne Ludany	18E3822	48N1048	3415.25	3515.25
k.ú Mýtne Ludany	18E3822	48N1048	3481.75	3581.75
k.ú. Mýtne Ludany	18E3822	48N1048	3585.25	3485.25
k.ú. Mýtne Ludany	18E3822	48N1048	3518.75	3418.75
k.ú. Stredné Plachtince	19E1521	48N1359	3413.5	3413.5
Koláre	19E1452	48N0411	3511.75	3411.75
Kolárovo	17E5937	47N5459	3518.75	3418.75
Komárno	18E0741	47N4516	3518.75	3418.75
Komárno	18E0711	47N4529	3581.75	3481.75
Komárno	18E0711	47N4529	3513.5	3413.5

Location	Longitude	Latitude	Tx (MHz)	Rx (MHz)
Kosihy nad Ipľom	19E1033	48N0432	3511.75	3411.75
Košice	21E1342	48N4427	3522.25	3422.25
Košice	21E1342	48N4427	3518.75	3418.75
Košice	21E1342	48N4427	3511.75	3411.75
Košice	21E1534	48N4208	3511.75	3411.75
Košice - Čaňa	21E1816	48N3644	3511.75	3411.75
Košice - Čaňa	21E1816	48N3644	3515.25	3415.25
Košice-Šaca	21E1030	48N3748	3511.75	3411.75
Kováčovce	19E2704	48N0620	3476.5	3476.5
Kováčovce	19E2704	48N0620	3513.5	3513.5
Kováčovce	19E2726	48N0530	3511.75	3411.75
Leváre	20E1528	48N3040	3413.5	3413.5
Levice	18E3554	48N1300	3585.25	3485.25
Levice	18E3626	48N1302	3515.25	3415.25
Levice	18E3626	48N1302	3511.75	3411.75
Levkuška	20E1536	48N2736	3576.5	3576.5
Ľuboreč	19E3023	48N1706	3513.5	3513.5
Lučenec	19E4001	48N1959	3578.25	3478.25
Lučenec	19E3952	48N1942	3511.75	3411.75
Lučenec	19E3952	48N1942	3518.75	3418.75
Malé Straciny	19E2449	48N1238	3413.5	3413.5
Malé Zlievce	19E2716	48N1046	3513.5	3513.5
Marcelová	18E1554	47N4756	3511.75	3411.75
Martin	18E5513	49N0422	3511.75	3411.75
Martin	18E5514	49N0423	3518.75	3418.75
Martin	18E5513	49N0423	3518.75	3418.75
Medovarce	18E5955	48N1340	3413.5	3413.5
Moldava nad Bodvou	20E5959	48N3709	3511.75	3411.75
Mučín	19E4332	48N1358	3513.5	3513.5
Nižný Medzev	20E5327	48N4212	3511.75	3411.75
Nová Ves	19E2153	48N1006	3476.5	3476.5
Nové Zámky	18E0938	47N5908	3511.75	3411.75
Nové Zámky	18E0943	47N5926	3515.25	3415.25
Poltár	19E4740	48N2552	3511.75	3411.75
Rašice	20E1419	48N2812	3413.5	3413.5
Rimavská Sobota	20E0051	48N2302	3574.75	3474.75
Rimavská Sobota	20E0051	48N2302	3511.75	3411.75
Rožňava	20E3223	48N3909	3511.75	3411.75
Rožňava	20E3223	48N3909	3511.75	3411.75

Location	Longitude	Latitude	Tx (MHz)	Rx (MHz)
Rykynčice	18E5738	48N1203	3576.5	3576.5
Sečianky	19E0428	48N0552	3413.5	3413.5
Seřany	19E1127	48N0932	3413.5	3413.5
Sitno	18E5234	48N2407	3476.5	3476.5
Sobrance	22E1044	48N4443	3522.25	3422.25
Sobrance	22E1044	48N4443	3581.75	3481.75
Stupava	17E0149	48N1614	3522.25	3422.25
Šamorín	17E1903	48N0128	3518.75	3418.75
Šivetice	20E1616	48N3538	3511.75	3411.75
Španie Pole	20E0746	48N3156	3511.75	3411.75
Španie Pole	20E0746	48N3156	3515.25	3415.25
Štúrovo	18E4245	47N4732	3511.75	3411.75
Trebušovce	19E1151	48N0654	3511.75	3411.75
Truská Voľa nad Popradom	20E5614	49N1752	3413.5	3413.5
Tuhár	19E3012	48N2543	3413.5	3413.5
Tupá	18E5530	48N0648	3511.75	3411.75
Tupá	18E5530	48N0648	3515.25	3415.25
TVP Konrádovce	19E5457	48N1750	3576.5	3576.5
TVP Konrádovce	19E5457	48N1750	3476.5	3476.5
TVP Opava	19E1022	48N1121	3576.5	3576.5
TVP Opava	19E1022	48N1121	3513.5	3513.5
TVP Rimavská Sobota	20E0731	48N2437	3513.5	3513.5
TVP Veľký Lom	19E2238	48N1937	3576.5	3576.5
Veľké Kapušany	22E0426	48N3314	3511.75	3411.75
Veľké Straciny	19E2344	48N1147	3476.5	3476.5
Veľký Krtíš	19E2105	48N1233	3511.75	3411.75
Vinica	19E0710	48N0547	3518.75	3418.75
Vinica	19E0709	48N0547	3515.25	3415.25
Vrbovka	19E2430	48N0526	3511.75	3411.75
Zombor	19E2655	48N0810	3513.5	3513.5
Želiezovce	18E3942	48N0305	3518.75	3418.75

EXISTING STATIONS TO BE PROTECTED IN AUSTRIA

The expiry date of licence of the stations is 31th December 2019

Tx / Rx (MHz)	Coordinates		Name of Station	Bandwidth	ERP (dBW)	a.s.l. (m)	Height of Antenna (m)
	Longitude	Latitude					
3.443.00	016E1550,00	48N1246,00	RUNDSTAB SATZBERG	10M0	25	360	6
3.526.00	016E1738,00	48N1614,00	N-KL-HEKFS-01	10M0	11	521	32
3.562.00	016E1937,00	48N0828,00	ROM-RUND	10M0	25	200	8
3.545.00	016E2043,00	48N1005,00	TT-01	10M0	31	225	110
3.445.00	016E2126,00	48N1054,00	RIST-01	10M0	31	198	60
3.450.25	014E3257,00	48N0054,00	N-AM-PLAFS-01	3M50	12	745	35
3.475.50	014E4017,00	48N0240,00	N-AM-SEIM81-01	5M00	12	339	38
3.412.50	014E4347,00	47N5938,00	N-WY-WYM105-01	5M00	12	443	39
3.428.50	014E4347,00	47N5938,00	N-WY-WYM105-02	5M00	12	443	39
3.481.00	014E5918,00	48N4543,00	N-GD-GMDUW-01	5M00	12	506	39
3.528.50	014E5918,00	48N4543,00	N-GD-GMDUW-02	5M00	12	506	39
3.589.00	015E0634,00	47N5914,00	N-SB-BUCFM-01	10M0	20	870	35
3.491.50	015E0634,00	47N5914,00	N-SB-BUCFM-02	5M00	12	870	29
3.481.00	015E1041,00	48N3556,00	N-ZT-ZWEUW-01	5M00	12	569	43
3.478.00	015E1050,00	48N1109,00	N-ME-ERLKW-01	10M0	14	221	45
3.425.00	015E1634,00	48N4825,00	N-WT-JASUW-01	10M0	14	510	40
3.489.00	015E1650,00	48N3149,00	N-ZT-LOSBM-01	10M0	14	792	45
3.475.50	015E1912,00	48N0422,00	N-ME-KIRNB-01	5M00	6	330	12
3.523.00	015E2038,00	48N2021,00	N-KR-JAUFM-01	5M00	12	952	45
3.528.50	015E2038,00	48N2021,00	N-KR-JAUFM-02	5M00	12	952	45
3.512.50	015E2038,00	48N2021,00	N-KR-JAUFM-03	5M00	12	952	45
3.415.00	015E2100,00	48N4736,00	N-WT-FRAF-01	10M0	22	681	50
3.515.00	015E2100,00	48N4736,00	N-WT-FRAF-02	10M0	22	681	50
3.445.00	015E2828,00	48N4015,00	WINKL-RUND	10M0	25	467	40
3.591.50	015E2911,00	48N2539,00	N-KR-SANFS-01	5M00	12	705	20
3.415.00	015E2933,00	48N1540,00	N-SP-LAUFS-01	10M0	12	577	33
3.475.50	015E3027,00	48N2328,00	N-KR-ROSWN-01	5M00	12	244	10
3.491.50	015E3027,00	48N2328,00	N-KR-ROSWN-02	5M00	12	244	10
3.581.00	015E3227,00	48N3546,00	N-HO-SLEOFM-01	5M00	12	576	43
3.412.50	015E3227,00	48N3546,00	N-HO-SLEOFM-02	5M00	12	576	43
3.475.50	015E3227,00	48N3546,00	N-HO-SLEOFM-03	5M00	12	576	43
3.412.50	015E3308,00	48N0628,00	N-PL-LUBWN-01	5M00	12	376	12
3.425.00	015E3623,00	48N1156,00	N-SP-UWWFM-01	10M0	20	291	32
3.445.00	015E3649,00	48N1206,00	STPOEL-RUND	10M0	25	281	40
3.586.50	015E3747,00	48N0755,00	N-SP-M44HS-01	5M00	12	305	29
3.575.50	015E3747,00	48N0755,00	N-SP-M44HS-02	5M00	12	305	29
3.589.00	015E3913,00	48N0244,00	N-LF-WISHS-01	10M0	6	369	20
3.489.00	015E3924,00	48N1821,00	N-PL-STDWR-01	10M0	22	379	25
3.478.00	015E3924,00	48N1821,00	N-PL-STDWR-02	10M0	14	379	25
3.545.00	015E4010,00	48N4435,00	HOETZELSD-RUND	10M0	25	500	40
3.545.00	015E4009,00	48N3958,00	HORN-RUND	10M0	25	308	40

Tx / Rx (MHz)	Coordinates		Name of Station	Bandwidth	ERP (dBW)	a.s.l. (m)	Height of Antenna (m)
	Longitude	Latitude					
3.415.00	015E4231,00	48N2337,00	N-KS-THEKW_01	10M0	20	193	122
3.425.00	015E4231,00	48N2337,00	N-KS-THEKW_02	10M0	20	193	122
3.515.00	015E4231,00	48N2337,00	N-KS-THEKW_03	10M0	20	193	122
3.545.00	015E4356,00	48N4126,00	SIG-RUND	10M0	25	438	43
3.445.00	015E4423,00	48N3607,00	HARM-RUND	10M0	25	426	50
3.415.00	015E4734,00	48N0836,00	N-PL-NEL09-01	10M0	12	360	9
3.415.00	015E4954,00	48N3948,00	N-HO-EGGUW-01	10M0	14	327	30
3.478.00	015E5248,00	48N2541,00	N-KR-KIRUW-01	10M0	14	185	45
3.415.00	015E5525,00	48N1932,00	N-TU-DUEKW_01	10M0	20	182	200
3.425.00	015E5525,00	48N1932,00	N-TU-DUEKW_02	10M0	20	182	200
3.515.00	015E5525,00	48N1932,00	N-TU-DUEKW_03	10M0	20	182	200
3.445.00	015E5652,00	48N3608,00	SITZ-RUND	10M0	25	254	35
3.491.50	015E5707,00	47N4001,00	N-NK-ENZRHS-01	5M00	12	464	32
3.478.00	015E5715,00	48N4527,00	N-HL-RETUW-01	10M0	14	248	24
3.591.50	016E0227,00	48N1850,00	N-TU-UWWFM-01	5M00	6	180	43
3.585.25	016E0259,00	48N4151,00	N-HL-PEIUW-01	3M50	14.1	228	43
3.545.00	016E0308,00	48N3834,00	GUNTERSD-RUND	10M0	25	249	40
3.478.00	016E0353,00	48N2905,00	N-HL-HABFM-01	10M0	22	413	45
3.489.00	016E0353,00	48N2905,00	N-HL-HABFM-02	10M0	22	413	45
3.578.00	016E0353,00	48N2905,00	N-HL-HABFM-03	10M0	22	413	45
3.455.00	016E0414,00	48N4235,00	HAUGSD-RUND	10M0	25	197	40
3.545.00	016E0424,00	48N3355,00	HOLLA-RUND	10M0	25	224	45
3.489.00	016E0431,00	47N3712,00	N-ED-EDLFS-01	10M0	11	895	30
3.415.00	016E0623,00	47N4332,00	N-NK-HWAKW-01	10M0	22	357	70
3.515.00	016E0623,00	47N4332,00	N-NK-HWAKW-02	10M0	22	357	70
3.545.00	016E0626,00	48N2328,00	HAUS-RUND	10M0	25	177	48
3.445.00	016E0640,00	48N1328,00	TROPP-01	10M0	31	528	30
3.415.00	016E0732,00	47N3639,00	N-ED-EDLBZL-01	10M0	11	411	15
3.445.00	016E1031,00	48N2554,00	SIERN-D-RUND	10M0	25	188	40
3.443.00	016E1040,00	47N4210,00	WEISSJ-01	10M0	31	547	30
3.565.00	016E1040,00	47N4210,00	WEISSJ-02	10M0	31	547	30
3.445.00	016E1311,00	48N3740,00	DUERNLEIS-RUND	10M0	25	213	40
3.555.00	016E1315,00	48N2255,00	STOCK-RUND	10M0	25	172	40
3.455.00	016E1435,00	47N5317,00	FEDOFAB-01	10M0	31	277	44
3.445.00	016E1436,00	47N4950,00	WRNEU-01	10M0	31	270	45
3.555.00	016E1436,00	47N4950,00	WRNEU-02	10M0	31	270	45
3.415.00	016E1439,00	48N0008,00	N-BN-BADBL-01	10M0	14	227	49
3.478.00	016E1439,00	48N0008,00	N-BN-BADBL-02	10M0	22	227	49
3.425.00	016E1439,00	48N0008,00	N-BN-BADBL-03	10M0	22	227	49
3.415.00	016E1611,00	47N4858,00	N-WN-WRNNL-01	10M0	20	264	50
3.425.00	016E1611,00	47N4858,00	N-WN-WRNNL-02	10M0	20	264	50
3.515.00	016E1611,00	47N4858,00	N-WN-WRNNL-03	10M0	20	264	50
3.455.00	016E1719,00	48N0031,00	TRAI-01	10M0	31	207	45
3.555.00	016E1719,00	48N0031,00	TRAI-02	10M0	31	207	45

Tx / Rx (MHz)	Coordinates		Name of Station	Bandwidth	ERP (dBW)	a.s.l. (m)	Height of Antenna (m)
	Longitude	Latitude					
3.483.50	014E5655,79	46N4747,03	Koralpe	21M0	25	1890	8
3.565.00	016E1719,00	48N0031,00	TRAIS-03	10M0	31	207	45
3.460.00	016E1749,00	47N5057,00	EGDO-02	10M0	31	251	66
3.445.00	016E1749,00	47N5057,00	EGDO-01	10M0	31	251	66
3.545.00	016E1828,00	47N5727,00	FEDO-OFFICE_RUND	10M0	25	226	10
3.425.00	016E1840,00	48N0540,00	N-MD-MAEDI-01	10M0	20	205	35
3.515.00	016E1840,00	48N0540,00	N-MD-MAEDI-02	10M0	20	205	35
3.545.00	016E1935,00	48N0241,00	GUNTR-01	10M0	31	185	50
3.478.00	016E2023,00	48N1955,00	N-KO-KORKW-01	10M0	22	166	70
3.578.00	016E2023,00	48N1955,00	N-KO-KORKW-02	10M0	22	166	70
3.415.00	016E2047,00	48N2033,00	N-KO-BISWA-01	10M0	14	166	36
3.455.00	016E2254,00	48N2329,00	RUECKERSD-RUND	10M0	25	179	40
3.445.00	016E2425,00	47N5753,00	EBREICH-01	10M0	31	193	50
3.445.00	016E2647,00	48N0503,00	HIM-01	10M0	31	176	48
3.545.00	016E2647,00	48N0503,00	HIM-02	10M0	31	176	48
3.545.00	016E2903,00	47N1740,00	GERAS-01	10M0	31	279	46
3.555.00	016E2903,00	47N1740,00	GERAS-02	10M0	31	279	46
3.489.00	016E3020,00	48N2140,00	N-GF-EIBUW-01	10M0	14	172	40
3.425.00	016E3105,00	48N2953,00	N-MI-NBAFM-01	10M0	14	299	42
3.415.00	016E3405,00	48N1816,00	N-GF-DWANL-01	10M0	16	163	43
3.425.00	016E3405,00	48N1816,00	N-GF-DWANL-02	10M0	16	163	43
3.515.00	016E3405,00	48N1816,00	N-GF-DWANL-03	10M0	20	163	43
3.415.00	016E3408,00	47N5844,00	N-BL-WASUW-01	10M0	14	180	45
3.445.00	016E3612,00	47N5837,00	MANN-01	10M0	31	192	48
3.425.00	016E3654,00	48N0356,00	N-BL-EDFUW-01	10M0	14	170	30
3.591.50	016E4059,00	48N1927,00	N-GF-STRAWA-01	5M00	6	167	10
3.491.50	016E4250,00	48N2039,00	N-GF-UWFM-01	5M00	12	161	41
3.475.50	016E4250,00	48N2039,00	N-GF-UWFM-02	5M00	12	161	39
3.415.00	016E4402,00	48N0053,00	N-BL-WIFFM-01	10M0	22	158	50
3.515.00	016E4402,00	48N0053,00	N-BL-WIFFM-02	10M0	14	158	50
3.415.00	016E4449,00	48N3512,00	N-MI-STBFM-01	10M0	14	314	30
3.515.00	016E4449,00	48N3512,00	N-MI-STBFM-02	10M0	22	314	30
3.478.00	016E5419,00	48N1400,00	N-GF-GROFM-01	10M0	12	169	30
3.415.00	016E0926,00	46N5845,00	B-JE-HENN-01	10M0	19	359	32
3.478.00	016E1819,00	47N4154,00	B-MA-HEU-01	10M0	20	723	38
3.443.00	016E1924,00	47N1410,00	B-OW-GPRLH-01	10M0	20	306	40
3.515.00	016E1924,00	47N1410,00	B-OW-GPRLH-01	10M0	20	306	40
3.415.00	016E2315,00	47N2040,00	B-OW-HIRSCH-01	10M0	19	848	39
3.425.00	016E2315,00	47N2040,00	B-OW-HIRSCH-02	10M0	19	848	30
3.415.00	016E2341,00	47N4341,00	B-MA-PIEL-01	10M0	20	300	15
3.526.00	016E2341,00	47N4341,00	B-MA-PIEL-02	10M0	20	300	15
3.445.00	016E2343,00	47N4950,00	RUNDSTAB M3	10M0	25	272	19
3.589.00	016E2834,00	47N5231,00	N-EU-SONFM-01	10M0	19	473	30
3.425.00	016E3247,00	47N5039,00	B-EU-EISDI-01	10M0	20	156	39

Tx / Rx (MHz)	Coordinates Longitude Latitude	Name of Station	Bandwidth	ERP (dBW)	a.s.l. (m)	Height of Antenna (m)
3.515.00	016E3247,00 47N5039,00	B-EU-EISDI-02	10M0	13	156	39
3.425.00	016E5015,00 47N5744,00	B-ND-NEUW-01	10M0	20	179	35
3.490.00	015E0030,00 47N0323,00	Göbritz	10M0	7	977	5
3.480.00	015E0531,00 47N0347,00	Köflich	10M0	8.7	442	50
3.480.00	015E0737,00 47N0413,00	Bärbach	10M0	8.7	424	15
3.480.00	015E0851,00 46N5440,00	Rosenkogel	10M0	7	1140	5
3.585.00	015E1055,00 47N0129,00	Voitsberg	20M0	15	550	5
3.480.00	015E1055,00 47N0129,00	Voitsberg	10M0	8.7	550	5
3.490.00	015E1408,00 47N0306,00	Stallhofen	10M0	7	454	8
3.490.00	015E1657,00 47N0238,00	Neureiteregg	10M0	7	449	5
3.585.00	015E2020,00 47N0647,00	Judendorf	20M0	15	431	12
3.480.00	015E2020,00 47N0647,00	Judendorf	10M0	8.7	431	12
3.580.00	015E2020,00 47N0647,00	Judendorf	10M0	8.7	431	12
3.585.00	015E2255,00 47N1232,00	Taschen	20M0	15	842	8
3.485.00	015E2255,00 47N1232,00	Taschen	10M0	7	842	8
3.585.00	015E2804,00 47N1155,00	Schöckl	20M0	21	1423	12
3.490.00	015E2804,00 47N1155,00	Schöckl	10M0	7	1423	12
3.480.00	015E2943,00 46N5219,00	Bockberg	10M0	7	436	8
3.590.00	015E4620,00 47N2339,00	Wildwiesen	10M0	7	1248	30
3.585.00	015E4633,00 46N5944,00	Studenzen	20M0	15	306	60
3.480.00	015E4633,00 46N5944,00	Studenzen	10M0	7	306	60
3.485.00	015E4801,00 46N5806,00	Berndorf	20M0	15	302	30
3.585.00	015E5557,00 46N5043,00	Stradner Kogel	20M0	8.7	609	30
3.480.00	015E5557,00 46N5043,00	Stradner Kogel	10M0	7	609	30
3.483.50	012E5906,00 46N4047,50	Kötschach	21M0	21.8	946	14
3.483.50	013E0148,80 46N4428,30	Gröfelhof	21M0	16	619	12
3.483.50	013E0258,08 46N3839,46	Dellach	21M0	21.8	899	12
3.583.50	013E0258,08 46N3839,46	Dellach	21M0	22	899	12
3.483.50	013E0258,08 46N3839,46	Dellach	21M0	25	899	12
3.583.50	013E0914,90 46N4327,20	Greifenburg	21M0	21.8	978	6
3.483.50	013E0914,90 46N4327,20	Greifenburg	21M0	22	978	6
3.483.50	013E1357,10 46N4106,60	Weißbrach	21M0	21.8	1067	10
3.483.50	013E1633,20 46N3612,70	Schlanitzen	21M0	21.8	850	20
3.483.50	013E1633,20 46N3612,70	Schlanitzen	21M0	22	850	20
3.483.50	013E1817,40 46N4212,60	Weissensee	21M0	21.8	1252	5
3.583.50	013E2218,20 46N3735,10	Hermagor	21M0	16	592	30
3.583.50	013E2647,90 46N3749,30	Pressuggen	21M0	16	575	10
3.583.50	013E2730,73 46N4533,47	Goldack	21M0	21.8	2130	8
3.483.50	013E2730,73 46N4533,47	Goldack	21M0	22	2130	8
3.583.50	013E3137,80 46N5015,00	Treffling	21M0	22	792	8
3.483.50	013E3327,70 46N4411,80	Goldack	21M0	21.8	1096	16
3.583.50	013E3633,00 46N3729,00	Bleiberg-Kreuth	21M0	18	984	13

Tx / Rx (MHz)	Coordinates		Name of Station	Bandwidth	ERP (dBW)	a.s.l. (m)	Height of Antenna (m)
	Longitude	Latitude					
3.583.50	013E3701,60	46N4511,70	Insberg	21M0	21.8	839	10
3.483.50	013E3701,60	46N4511,70	Insberg	21M0	25	839	10
3.483.50	013E3920,00	46N3326,00	Hohenthurn	21M0	16	676	12
3.520.00	013E4015,51	46N3611,57	Dobratsch	20M0	21.8	2137	8
3.445.00	013E4015,51	46N3611,57	Dobratsch	20M0	21.8	2137	8
3.545.00	013E4015,51	46N3611,57	Dobratsch	20M0	21.8	2137	8
3.420.00	013E4015,51	46N3611,57	Dobratsch	20M0	21.8	2137	8
3.565.00	013E4015,51	46N3611,57	Dobratsch	20M0	21.8	2137	8
3.483.50	013E4015,51	46N3611,57	Dobratsch	20M0	30	2137	8
3.483.50	013E4245,90	46N4825,00	Radenthein	21M0	21.8	1002	10
3.483.50	013E4334,70	46N3128,40	Arnoldstein	21M0	21.8	1345	15
3.583.50	013E4334,70	46N3128,40	Arnoldstein	21M0	21.8	1345	15
3.483.50	013E4429,90	46N5012,50	Bad Kleinkirchheim	21M0	21.8	1968	8
3.583.50	013E4429,90	46N5012,50	Bad Kleinkirchheim	21M0	21.8	1968	8
3.483.50	013E4429,90	46N5012,50	Bad Kleinkirchheim	21M0	22	1968	8
3.483.50	013E4737,00	46N4723,00	Bad Kleinkirchheim	21M0	21.8	1758	15
3.483.50	013E4737,00	46N4723,00	Bad Kleinkirchheim	21M0	21.8	1758	15
3.583.50	013E4806,00	46N4841,00	Bad Kleinkirchheim	21M0	16	1084	10
3.483.50	013E5131,00	46N3312,00	Finkenstein	21M0	21.8	608	6
3.483.50	013E5303,77	46N3636,95	TPV/Villach	21M0	21.8	490	28
3.483.50	013E5449,00	46N4143,10	Gerlitzten	21M0	21.8	1902	15
3.483.50	013E5450,50	46N4133,44	Gerlitzten	21M0	21.8	1881	15
3.483.50	013E5523,27	46N4139,58	Gerlitzten	21M0	25	1769	20
3.483.50	013E5523,27	46N4139,58	Gerlitzten	21M0	21.8	1769	20
3.483.50	013E5827,40	46N3315,70	Ledenitzen	21M0	21.8	620	10
3.583.50	014E0003,70	46N4100,00	Ossiach	21M0	16	516	14
3.483.50	014E0432,60	46N3511,90	Kathreinkogel	21M0	22	1292	8
3.583.50	014E0841,00	46N3632,00	Pyramidenkogel	21M0	22	834	80
3.483.50	014E0841,00	46N3632,00	Pyramidenkogel	21M0	21.8	834	80
3.483.50	014E0841,00	46N3632,00	Pyramidenkogel	21M0	21.8	834	80
3.483.50	014E0947,90	46N4619,00	Simonhöhe	21M0	25	1333	10
3.583.50	014E0947,90	46N4619,00	Simonhöhe	21M0	16	1333	10
3.483.50	014E3210,70	46N3810,30	Tainach	21M0	16	439	8
3.483.50	014E4107,50	46N5715,70	Hohenwart	21M0	21.8	1814	6
3.483.50	014E4107,50	46N5715,70	Hohenwart	21M0	21.8	1814	6
3.483.50	014E4618,00	46N3105,00	Petzen	21M0	21.8	1629	8
3.583.50	014E4618,00	46N3105,00	Petzen	21M0	30	1629	8
3.483.50	014E5619,30	46N4841,20	Koralpe	21M0	21.8	1487	40
3.583.50	014E5633,50	46N5753,70	Koralpe	21M0	21.8	1080	12
3.483.50	014E5633,50	46N5753,70	Koralpe	21M0	21.8	1080	12