IARU Region 1 HF band plan

Effective 01 June 2016 edited by DK4VW

	FREQUENCY SEGMENT (kHz)	MAX BANDWIDTH (Hz)	PREFERRED MODE AND USAGE	
	135,7 - 137,8	200	CW	CW, QRSS, narrow band digital modes
	472 - 475	200	CW	CW, See NOTES
	475 - 479	(#)	Narrow band modes	CW, Digimodes See NOTES
1.8 MHz	1810 - 1838	200	CW	1836 kHz - CW QRP Centre of Activity
	1838 - 1840	500	Narrow band modes	
	1840 - 1843	2700	All modes (1)	Digimodes
	1843 - 2000	2700	All modes (1)	
3.5 MHz	3500 - 3510	200	CW	Priority for intercontinental operation
	3510 - 3560	200	CW	CW contest preferred 3555 kHz - CW QRS Centre of Activity
	3560 - 3570	200	CW	3560 kHz - CW QRP Centre of Activity
	3570 - 3580	200	Narrow band modes	Digimodes
	3580 - 3590	500	Narrow band modes	Digimodes
	3590 - 3600	500	Narrow band modes	Digimodes, automatically controlled data stations (unattended)
	3600 - 3620	2700	All modes (1)	Digimodes, automatically controlled data stations (unattended)
	3600 - 3650	2700	All modes (1)	SSB contest preferred 3630 kHz - Digital Voice Centre of Activity
	3650 - 3700	2700	All modes	3690 kHz - SSB QRP Centre of Activity
	3700 - 3775	2700	All modes	SSB contest preferred 3735 kHz - Image Centre of Activity 3760 kHz - R1 Emergency Centre of Activity
	3775 - 3800	2700	All modes	SSB contest preferred, Priority for intercontinental operation
5 MHz	5351.5 - 5354.0	200		CW, Narrow band modes see NOTES
	5354.0 - 5366.0	2700	All modes	USB recommended for voice operation (##) see NOTES
	5366.0 - 5366.5	20 (!)		Weak signal narrow band modes see NOTES
7 MHz	7000 - 7040	200	CW	7030 kHz - CW, QRP Centre of Activity
	7040 - 7047	500	Narrow band modes	Digimodes
	7047 - 7050	500	Narrow band modes	Digimodes, automatically controlled data stations (unattended)
	7050 - 7053	2700	All modes (1)	Digimodes, automatically controlled data stations (unattended)
	7053 - 7060	2700	All modes	Digimodes
	7060 -7100	2700	All modes	SSB contest preferred 7070 kHz - Digital Voice Centre of Activity 7090 kHz - SSB QRP Centre of Activity
	7100 - 7130	2700	All modes	7110 kHz - Region 1 Emergency Centre
	7130 - 7175	2700	All modes	SSB contest preferred 7165 kHz - Image Centre of Activity
	7175 - 7200	2700	All modes	SSB contest preferred, Priority for intercontinental Activity
10 MHz	10100 - 10130	200	CW	10116 kHz - CW QRP Centre of Activity
	10130 - 10150	500	Narrow band modes	Digimodes
14 MHz	14000 - 14060	200	CW	CW contest preferred, 14055 kHz - QRS Centre of Activity
	14060 - 14070	200	CW	14060 kHz CW QRP Centre of Activity
	14070 - 14089	500	Narrow band modes	Digimodes
	14089 - 14099	500	Narrow band modes	Digimodes, automatically controlled data stations (unattended)
	14099 - 14101		International Beacon Project	Beacons exclusively
	14101 - 14112	2700	All modes	Digimodes, automatically controlled data stations (unattended)
	14112 - 14125	2700	All modes	
	14125 - 14300	2700	All modes	SSB contest preferred 14130 kHz - Digital Voice Centre of Activity 14195 +/- 5 kHz - Priority for DX-peditions 14230 kHz - Image Centre of Activity 14285 kHz - SSB QRP Centre of Activity
	14300 - 14350	2700	All modes	14300 kHz - Global Emergency Centre of Activity

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18 MHz	18068 - 18095	200	CW	18086 kHz - CW QRP Centre of Activity
	18095 - 18105	500	Narrow band modes	Digimodes
	18105 - 18109	500	Narrow band modes	Digimodes, automatically controlled data stations (unattended)
	18109 - 18111		International Beacon Project	Beacons exclusively
	18111 - 18120	2700	All modes	Digimode, automatically controlled data stations (unattended)
	18120 - 18168	2700	All modes	18130 kHz - SSB QRP Centre of Activity 18150 kHz - Digital Voice Centre of Activity 18160 kHz - Emergency Centre of Activity
21 MHz	21000 - 21070	200	CW	21055 kHz - QRS Centre of Activity 21060 kHz - QRP Centre of Activity
	21070 - 21090	500	Narrow band modes	Digimodes
	21090 - 21110	500	Narrow band modes	Digimodes, automatically controlled data stations (unattended)
	21110 - 21120	2700	All modes	Digimodes, automatically controlled data stations (unattended), (not SSB)
	21120 - 21149	500	Narrow band modes	
	21149 - 21151		International Beacon Project	Beacons exclusively
	21151 - 21450	2700	All modes	21180 kHz - Digital Voice Centre of Activity 21285 kHz - SSB QRP Centre of Activity 21340 kHz - Image Centre of Activity 21360 kHz - Global Emergency Centre of Activity
24 MHz	24890 - 24915	200	CW	24906 kHz - CW QRP Centre of Activity
	24915 - 24925	500	Narrow band modes	Digimodes
	24925 - 24929	500	Narrow band modes	Digimodes, automatically controlled data stations (unattended)
	24929 - 24931		International Beacon Project	Beacons exclusively
	24931 - 24940	2700	All modes	Digimodes, automatically controlled data stations (unattended)
	24940 - 24990	2700	All modes	24950 kHz - Centre of Activity SSB QRP 24960 kHz - Digital Voice Centre of Activity
28 MHz	28000 - 28070	200	CW	28055 kHz - QRS Centre of Activity 28060 kHz - QRP Centre of Activity
	28070 - 28120	500	Narrow band modes	Digimodes
	28120 - 28150	500	Narrow band modes	Digimodes, automatically controlled data stations (unattended)
	28150 - 28190	500	Narrow band modes	
	28190 - 28199		International Beacon Project	Regional time shared beacons, exclusively
	28199 - 28201		International Beacon Project	Worldwide time shared beacons, exclusively
	28201 - 28225		International Beacon Project	Continuous duty beacons, exclusively
	28225 - 28300	2700	All modes	Beacons
	28300 -28320	2700	All modes	Digimodes, automatically controlled data stations (unattended)
	28320 - 29000	2700	All modes	28330 kHz - Digital Voice Centre of Activity 28360 kHz - SSB QRP Centre of Activity 28680 kHz - Image Centre of Activity
	29000 - 29100	6000	All modes	
	29100 - 29200	6000	All modes	FM simplex - 10 kHz channels
	29200 - 29300	6000	All modes	Digimodes, automatically controlled data stations (unattended)
	29300 - 29510	6000	Satellite Links	
	29510 - 29520		Guard Channel	
	29520 - 29590	6000	All modes	FM-Repeater input (RH1 - RH8)
	29600	6000	All modes	FM Calling channel
	29610	6000	All modes	FM Simplex-Repeater (parrot, input + output)
	29620 - 29700	6000	All modes	FM-Repeater output (RH1-RH8)

DEFINITIONS

All modes	CW, Phone and those other modes listed as Centres of Activity, plus AM (consideration should then be given to adjacent channel users)
Narrow band modes	All modes using up to 500 Hz bandwidth, including CW, RTTY, PSK etc.
Digimodes	Any digital mode within the appropriate bandwidth, e.g. RTTY, PSK, MT63 etc.
Image modes	Any analogue or digital image modes within the appropriate bandwidth, e.g. SSTV, FAX

NOTES

The frequencies in the bandplan are understood as “transmitted frequencies” (not those of the suppressed carrier!)

(1)	Lowest dial setting for LSB Voice mode: 1843, 3603, 7053 kHz
(#)	maximum bandwidth not specified, 500 Hz suggested
(##)	Highest dial setting for USB Voice mode on the 60m band: 5363 kHz

CW	CW QSOs are accepted across all bands, except within beacon segments. (DV05_C4_Rec_13)
Sideband usage	Sideband Usage: Below 10 MHz lower sideband (LSB) is recommended, and above 10 MHz use upper sideband (USB). The exception to this is on the 5 MHz band where USB is recommended.
AM	Amplitude modulation (AM) may be used in the telephony sub-bands providing consideration is given to adjacent channel users. (NRRL Davos 05).
OUT OF BAND:	To prevent any out of band transmission the maximum dial setting for USB (upper sideband) Voice mode should be 3 kHz below upper band edge on bands 20m to 10m.

630m band - 472 - 479 kHz:
Details shown in band plan above should be understood as "proposed usage" (VA14_C4_Rec_02)

If a frequency is to be selected, particular attention must be paid to still existing Non Directional Beacons (NDB) of the radionavigaton service!

60m band - 5351.5 - 5366.5 kHz
Details shown in band plan above should be understood as "proposed usage" (LA17_C4_REC_02)

It is strongly recommended that frequencies within WRC-15 allocation only be used if there are no other frequencies available at 5 MHz under domestic (ITU-R article 4.4) permissions.
Local nets and long rag chew QSOS should not use the WRC-15 allocation at 5 MHz but should instead make use of the 3.5 MHz, 5 MHz domestic, or 7 MHz bands where there is more spectrum available.

Contests

Contest activity shall not take place on the 5, 10, 18 and 24 MHz bands.

Non-contesting radio amateurs are recommended to use the contest-free HF bands (30, 17 and 12m) during the largest international contests. (DV05_C4_Rec_07)

Member societies are encouraged to publish contest operating segments clearly in the rules of their contest and that those segments are considered with due respect to the IARU band plans. (Rec SC11_C4_02).

The CW contest-preferred segment from 7000-7025 kHz has been withdrawn from the Region 1 band plan. Societies should (therefore) encourage contest organisers to include a rule that restricts contest activity to a limited frequency range within the CW allocation. The choice of the frequency segment is left to the disccretion of the contest organisers, but should take into account expected activity levels and show consideration for non-contest operation. (SC11_C4_Rec_05).

Unmanned transmitting stations

The term “automatically controlled data stations” includes Store and Forward stations.

Member Societies are reminded of the recommendation in the IARU Region 1 HF Band Plan ‘that any unmanned transmitting stations on HF shall only be activated under operator control, except for beacons agreed with the IARU Region 1 Beacon Coordinator’.

Unmanned transmitting stations, and operation involving unmanned transmitting stations, must adhere to the frequency and bandwidth limits of the band plan.
The operator connecting to an automatically controlled unmanned transmitting station is responsible for not causing interference.
This is particularly important in the 30 meter band where the amateur service only has secondary status.
Amateur radio operators may transmit messages via unmanned transmitting stations during coordinated emergency, and disaster preparedness exercises, limited to the duration of such exercises, using a bandwidth not exceeding 2 700 Hz.
Such communication should be announced regularly on the frequency, and radio amateurs not participating in the communication should cooperate by not transmitting on the frequency. (VA14_C4_Rec_06)

Remote controlled operation on HF

Remote controlled operation is defined to mean operation where a licensed operator controls an amateur radio station from a remote control terminal.
Where a station is operated remotely, the following conditions shall apply:
Remote operation must be permitted, or not objected to, by the Regulatory Authority of the country where the station is located.

1. The call sign to be used should be the call sign issued by the Regulatory Authority of the country in which the station is located. This applies irrespective of the location of the operator.
2. It should be noted that the CEPT T/R 61-01 agreement only applies to people using their own call sign, with the appropriate country prefix, when the operator is actually vising that country, not for operation.
3. Any further requirements regardingthe participationof remotely controlled stations in contests or award programms are a matter for the various contests or award program organisers. (SC11_C4_REC_07) , (VA14_C4_REC_04)

History

2005 Davos	Introduction of band plan by bandwidth.	Effective 1 January 2006
2008 Cavtat	Several modifications	Effective 29 March 2009
	CW segment extended from 7000-7035 kHz to 7000-7040 kHz. Narrow band modes, digimodes segment moved and extended from 7035-7038 kHz to 7040-7047 kHz.	
	Narrow band modes, digimodes, segment for automatically controlled stations (unattended) moved and extended from 7038-7040 kHz to 7047-7050 kHz.	
	All modes, digimodes, segment for automatically controlled stations (unattended) moved from 7040-7043 kHz to 7050-7053 kHz.	
	Introduction of all modes, digimodes segment 7053-7060 kHz.	
	Introduction of CW preferred contest segment 7000-7025 kHz.	
	Introduction of SSB preferred contest segments 7060-7100 kHz and 7130-7200 kHz	
	Introduction of Digital Voice Activity Centres: 3630 kHz, 7070 kHz, 14130 kHz, 18150 kHz, 21180 kHz, 24960 kHz, 28330 kHz.	
2011 Sun City	Several modifications	Effective 17 August 2011
	CW contest preferred segment 7000-7025 kHz withdrawn.	
	Segment 29100-29200 kHz changed from max. bandwidth 2700 Hz to max. 6000 Hz.	
	Introduction of new segment 29100-29200 kHz for FM simplex operation (10 kHz channels).	
	Removal of FM simplex channels 29520-29550 kHz and 29610-29650 kHz. Number of FM Repeater channels increased to eight; former FM simplex channels became new repeater input, respectively repeater output channels.	
	FM repeater channels renumbered, RH1 = 29520 kHz / 29620 kHz, RH8 = 29590 kHz / 29690 kHz	
	Introduction of FM Simplex Repeater 29610 kHz (parrot, input + output)	
2014 Varna	Several modifications	Effective 26 September 2014
	Change of max. bandwidth from 2700 Hz to max. 6000 Hz in segment 29000 - 29100 kHz.	
	Satellite segment 29300 - 29510 kHz: removal of downlink restriction	
2016 Vienna	Several modifications * * to be ratified at 2017 General Conference	Effective 01 June 2016
	Digimode segment with max. bandwidth of 500 Hz extended from 10130 kHz to 10150 kHz	
	Introduction of Digimode segment 3570 kHz - 3580 kHz with max. bandwidth of 200 Hz	

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	FREQUENCY SEGMENT (kHz)	MAX BANDWIDTH (Hz)	PREFERRED MODE AND USAGE	
50 MHz	50,000 - 50,100	500	Coordinated Beacon Project	000 - 010 Region 1, 010-020 Region 2, 020-030 Region 3
			Telegraphy	50,050 centre of activity 50,090 intercontinental centre of activity
	50,100 - 50,200	2700	SSB and Telegraphy	50,100-50,130: intercontental.Centre of activity: 50,110 50,130-50,200: international. Centre of activity: 50,150
	50,200 - 50,300	2700	SSB and Telegraphy	General use. 50,285: crossband
	50,300 - 50,400	2700	Narrow band modes, MGM	50.305 PSK Center of activity 50.310 - 320 EME center of activity 50.320 - 380 MS center of activity
	50,400 - 50,500	1000	MGM and Telegraphy	Beacons exclusive (50.401 MHz +/- 500Hz WSPR Beacons)
	50,500 - 52,000	12 KHz	all mode	50.510 SSTV 50.520 - 540 Simplex FM Internet Voice Gateways 50.550 Image working frequency 50.600 RTTY (FSK) 50.620 - 750 Digital communications 50.630 Digital Voice (DV) calling 51.210 - 390 FM/DV Repeater Inputs 51.410 - 590 FM/DV Simplex 51.510 FM calling frequency 51.810 - 51.990 FM repeaters output channels
	52,000 - 54,000	500 KHz	all mode	In those Region 1 countries where 52 - 54 MHz (or parts thereof) is allocated, its use should be planned on the basis of up to 4 x 500 kHz blocks which may be sub-divided to suit digital applications. Amateurs using digital transmission methods must also ensure that their transmissions do not spread beyond band edges.
70 MHz	70,000 - 70,090	1000	MGM and Telegraphy	Coordinated beacons
	70,090 - 70,100	1000	MGM and Telegraphy	Temporary and personal beacons 70.091 Personal WSPR beacons
	70,100 - 70,250	2700	SSB, Telegraphy, MGM	70.185 Crossband center of activity 70.200 Telegraphy/SSB calling 70.250 MS calling
	70,250 - 70,294	12 KHz	AM, FM	70.260 AM/FM calling 70.270 MGM centre of activity
	70,294 - 70,500	12 KHz	FM Channels 12,5 KHz spacing	70.3125 digital communications 70.3250 digital communications 70.4500 FM calling 70.4875 digital communications
144 MHz	144,000 -144,025	2700	all mode	sattelite downlink only
	144,025 -144,100	500	Telegraphy	144.050 Telagraphy calling 144.100 Random MS
	144,100 - 144,150	500	MGM and Telegraphy	144.110-144-160 EME MGM
	144,150 - 144,400	2700	SSB, Telegraphy, MGM	144.195-144.205 Random MS SSB 144.300 SSB Centre of activity
	144,400 - 144,490	500	MGM and Telegraphy	Beacons exclusive
	144,491 - 144,493	500	EMGM	Experimental MGM
	144,500 - 144,794	20 KHz	All mode	144.500 Image mode centre (SSTV, Fax,...) 144.600 Data Centre of activity (MGM, RTTY,..) 144.750 ATV Talk back
	144,794 - 144,9625	12 KHz	MGMDigital Communication	144.800 APRS 144.8125 DV internet voice gateway 144.8250 DV internet voice gateway 144.8375 DV internet voice gateway 144.8500 DV internet voice gateway 144.8625 DV internet voice gateway
	144,975 - 145,194	12 KHz	FM/Digital Voice	Repeater input exclusive
	145,194 - 145,206	12 KHz	FM/Digital Voice	Space Communication
	145,206 - 145,5625	12 KHz	FM/Digital Voice	145.2375 FM Internet Voice Gateway 145.2875 FM Internet Voice Gateway 145.3375 FM Internet Vocie Gatway 145.375 digital voice calling 145.500 FM calling
	145,575 - 145,7935	12 KHz	FM/Digital Voice	Repeater output exclusive
	145,794 - 145,806	12 KHz	FM/Digital Voice	Space Communication
	145,806 -146,000	12 KHz	All mode	Sattelite exclusive

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430 -440 MHz	430,000 - 432,975	20 KHz	all mode	430.025 - 430.375 FM repeater output (1.6 MHz shift) 430.400 - 43.575 digital communications 430.600 . 430.925 digital communications repeater channels 430.925 - 431.025 multimode channels 431.050 - 431.825 Repeater input channel freqs 7.6 MHz shift 431.625 - 431.975 Repeater input channels (1.6MHz shift)
	432,000 - 432,100	500	MGM &Telegraphy	432.000 - 432.500 EME 432.050 Telegraphy Centre of activity 432.088 PSK31 Centre of activity
	432,100 - 432,400	2700	MGM, Telegraphy &SSB	432.200 SSB centre of activity 432.350 Microwave talkback centre of acitivity 432.370 FSK441 centre of activity
	432,400 - 432,490	500	MGM &Telegraphy	Beacons Exclusive
	432,191 -432,193	500	EMGM	Experimental MGM
	432,500 - 432,975	12 KHz	all mode	432.500 New APRS frequency REPEATER INPUT REGION 1 STANDARD, 25 kHz spacing, 2 MHz shift(Channel freq 432.600 - 432.975MHz)
	433,000 -433,375	12 KHz	FM / Digital Voice repeaters	REPEATER INPUT REGION 1 STANDARD, 25 kHz spacing, 1.6 MHz shift
	433,400 - 433,575	12 KHz	FM / Digital Voice	433.400 SSTV (FM/AFSK) 433.450 Digital Voice calling 433.500 FM calling
	433,600 - 434,000	20 KHz	all mode	433.625 - 433.775 Digital communications channels 434.000 Centre frequency of digital experiments
	433,000 - 433,594	12 KHz	All mode - ATV	434.450 Digital communications channels
	433,594 - 433,981	12 KHz	All mode	
	435,000 -438,000	20 KHz	Sattelite service & ATV	ATV Repeater outputs are not permitted in the 435 MHz Band
	438,000 -440,000	20 KHz	All mode	438.025 - 438.175 Digital communication channels 438.200 - 438.525 Digital communication repeater channels 438.550 - 438.625 Multi mode 438.650 - 439.425 Repeater output channels (7.6 MHz shift) 439.800 - 439.975 Digital communication link channels
1240 -1300 MHz	1240,000 -1240,500	2700	all modes	Reserved for the future
	1240,500 - 1240,750	500	MGM & Telegraphy	Beacons (reserved for the future)
	1240,750 - 1241,000	20 Khz	FM/ Digital Voice	Reserved for the future
	1241,000 - 1243,250	20 Khz	all modes	1242.025 - 1242.250 repeater output 1242.275 - 1242.700 repeater output 1242.725 - 1243.250 Digital communications
	1243,250 - 1260,000	*	(D)ATV	1258.150 - 1259.350 Repeater output
	1260,000 - 1270,000	*	Sattelite service	
	1270,000 - 1272,000	20 Khz	all modes	1270.025 - 1270.700 Repeater input 1270.725 - 1271.250 Digital Communication
	1272,000 - 1290,994	*	(D)ATV	
	1290,994 - 1291,481	20 Khz	FM/ Digital Voice	Repeater Input 25 KHz spacing
	1291,494 - 1296,000	*	all modes	1293.150 - 1294.350 repeater input R20 - R68
	1296,000 - 1296,150	500	MGM & Telegraphy	1296.000 - 1296.025 Moonbounce 1296.138 PSK31 Centre of activity
	1296,150 - 1296,800	2700	MGM, Telegraphy & SSB	1296.200 Narrow band centre of activity 1296.400 - 1296.600 linear transponder input 1296.500 fax 1296.600 Narrowband data centre of activity (MGM,RTTY,...) 1296.600 - 1296.700 lineartransponder output 1296.741- 1296.743 experimental MGM (500Hz) 1296.750 - 1296.800 local beacons
	1296,800 - 1296,994	500	MGM & Telegraphy	Beacons exclusive
	1296,994 - 1297,481	20 Khz	FM/ Digital Voice	Repeater Output 25 KHz spacing
	1297,494 - 1297,981	20 Khz	FM/ Digital Voice	1297.500 SM20 1297.500 centre of FM acitivity 1297.725 digital voice calling frequency 1297.900 - 1297.975 Simplex FM internet gateways 1297.975 SM39
	1298,000 - 1299,000	20 Khz	all modes	General mixed analogue or digital use 25 KHz spacing channels 1298.025 RS1 1298.975 RS39

	1299,000 - 1299,750	150 KHz	all modes	Arranged as 5 x150kHz channels for high speed Digital Data (DD) usage: Centres: 1299.075, 1299.225, 1299.375, 1299.525, 1299.675 MHz (+/- 75kHz)
	1299,750 -1300,000	20 Khz	all modes	8x25kHz channels (available for FM/DV use) : Centres: 1299.775-1299.975

* Bandwidth limits according to national regulations.

2300 - 2450 MHz	2300,000 - 2320,000	20 KHz	all modes	2304 - 2306 Narrow band segment in countries where the 2320-2322 segment is not available 2308 - 2310 Narrow band segment in HB
	2320,000 - 2320,150	500	MGM & Telegraphy	2320.000-2320.025 EME
	2320,150 - 2320,800	2700	Telegraphy &SSB	2320.200 SSB centre of activity 2320.750-2320.800 Local Beacons (10W ERP max)
	2320,800 - 2321,000		MGM & Telegraphy	Beacons exclusive
	2321,000 - 2322,000	20 KHz	FM / Digital Voice	Voice simplex and repeaters
	2322,000 - 2400,000		all modes	2322.000-2355.000 ATV 2355.000-2365.000 Digital communications 2365.000-2370.000 Repeaters 2370.000-2392.000 ATV 2392.000-2400.000 Digital communications
	2400,000 - 2450,000		amatuer sattelite service	2400 - 2402 Narrow band segment in countries where the 2320-2322 segment is not available 2427.00 - 2443.00 ATV if no satellite uses this segment

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3400 -3475 MHz	3400,000 - 340,800	500	MGM & Telegraphy	3400.100 EME Centre of activity 3400.750 - 3400.800 Local beacons
	3400,800 - 3400,995	500	MGM & Telegraphy	Beacons only
	3401,000 - 3402,000	2700	all modes	
	3402,000 - 3410,000		all modes	sattelite downlinks
	3410,000 - 3475,000		all modes	
5650 - 5850 MHz	5650,000 - 5668,000	2700	all modes	Amateur Satellite service (uplink)
	5668,000 - 5670,000	2700	all modes	5668.200 Narrow band center of activity (a) Amateur Satellite Service (up-link)
	5670,000 -5700,000		MGM	
	5700,000 - 5720,000		ATV	
	5720,000 -5760,000		all modes	
	5760,000 - 5760,800	2700	all modes	5760.200 Narrow band center of activity 5760.750-5760.800 Local Beacon
	5760,800 -5760,990		MGM & Telegraphy	Beacons only
	5761,000 - 5762,000	2700	all modes	
	5762,000 - 5790,000		all modes	
	5790,000 - 5850,000		all modes	Amateur Satellite service (down link)
10 - 10,500 GHz	10000,000 - 10150,000		MGM	
	10150,000 - 10250,000		all modes	
	10250,000 - 10350,000		MGM	
	10350,000 - 10368,000		all modes	
	10368,000 - 10368,800	2700	all modes	10.3682 Narrow band center of activity 10368.750-10368.800 Local Beacon
	10368,800 -10368,990			Beacons only
	10369,000 - 10370,000	2700	all modes	
	10370,000 - 10450,000		all modes	
	10450,000 - 10500,000		all modes	10.450-10.452 Narrow band modes in countries where 10.368-10.370 is not available AMATEUR SATELLITE SERVICE
24 - 24,250 GHz	24000,000 - 24048,000		all modes	24.025 Wideband centre of activity
	24048,000 - 24048,800	2700	all modes	24.0482 Narrow band centre of activity AMATEUR SATELLITE SERVICE NARROW BAND MODES 24048.750-24048.800MHz Local Beacon
	24048,800 - 24048,995		all modes	Beacons only
	24049,000 - 24050,000	2700	all modes	Amateur Satellite service Narrow band modes
	24050,000 - 24250,000		all modes	

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	FREQUENCY SEGMENT (MHz)	MAX BANDWIDTH (Hz)	PREFERRED MODE AND USAGE	
47,0 - 47,2 GHz	47.000 - 47.088		all modes	
	47.088 - 47.090	2700	all modes	
	47.090 - 47.200		all modes	
75,5 - 81,5 GHz	75.500 - 76.000	2700	all modes	AMATEUR SATELLITE SERVICE (Preferred) 75976.200 MHz : Preferred Narrow band centre of activity
	76.000 - 77.500		all modes	76032.200 MHz :Narrow Band Centre of activity in some countries (not preferred)
	77.500 - 77.501	2700	all modes	77500.200 MHz: Preferred NB centre of activity in countries outside the CEPT area AMATEUR SATELLITE SERVICE
	77.501 - 78.000		all modes	preferred segment
	78.000 -81.500		all modes	Not preferred segment
122 - 123 GHz	122.250 - 122.251	2700	all mode	narrow band modes
	122.251 - 123.000		all mode	
134 - 141 GHz	134.000 - 134.928		all mode	AMATEUR SATELLITE SERVICE
	134.928 - 134.930	2700	all mode	134.930 Narrow band centre of activity
	134.930 - 136.000		all mode	
	136.000 - 141.000		all mode	Not preferred segment
241 -250 GHz	241.000 - 248.000		all mode	Not preferred segment
	248.000.-248,001		all mode	AMATEUR SATELLITE SERVICE & NARROW BAND MODES
	248.001 - 250.000		all mode	preferred segment