International Amateur Radio Union Region 1

Europe, Middle East, Africa and Northern Asia Founded 1950

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SUBJECT	**Region 1 HF Bandplan**		
Society	**Bandplan WG**	**Country:**	**Region 1**
Committee:	**C4**	**Paper number:**	**13**
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Introduction

This paper lays out the reasons and logic behind the proposed IARU Region 1 HF Band-plan

Background

A move to update the HF Bandplan was first proposed to the IARU Region1 HF Committee in 1992 by DARC. The proposal was introduced because of the number of new modes of emission that were appearing on the HF Bands and the requirement to define where these new modes should operate. In addition it was thought that the opportunity should be taken to examine the way the bandplans are established and to consider whether a new system based on mode bandwidth rather than the mode itself should be adopted. Although the principle has been discussed a number of times, especially during the Region 1 Conferences in Lillehammer and San Marino, it was only during the 2002 San Marino Conference that an interim band-plan, 02/SM/C4.3 rev 2 introducing an element of the bandwidth idea was introduced. A band-plan working group was set up to progress the subject although there was little input at first. DARC, OeVSV and RSGB published the interim band-plan in their magazines and favourable comments were received from society members in those countries.

During the meeting of HF Managers in Friedrichshafen in 2004 a larger working group was established in order to progress this work. A Yahoo reflector was also set up to enable working group members to exchange views and comments and most members took advantage of this facility. The following represents the majority view of those members who participated in the work of this group.

Considering

a) The existing IARU Region 1 bandplan is inflexible;

b) that since the last IARU Region 1 Conference and WRC-03 the number of amateurs using digitally based modes on HF has increased considerably. Not only more amateurs using computers with soundcards but also national administrations applying the new Article 25.5[1] of the Radio Regulations have encouraged this increase in numbers;

c) that there is continuous ongoing development of new data modes using narrower bandwidths and error correction techniques and it is impractical to put aside specific sub-bands for every mode;

d) that the differences between modes of emission and the bandwidths used are becoming less well defined;

e) that under the current trend towards deregulation by a number of national administrations, the national societies are becoming responsible for managing amateur service frequencies;

Recognising

a) that the traditional band plan of mode to frequency is well understood;

b) that under new licensing and examination regimes the opportunity exists to educate licensees with a new bandplan;

c) that since 2002 a number of IARU Region 1 societies have already successfully introduced the first stage of a bandwidth based band-plan;

d) that existing band-plans in other IARU Regions need to be considered;

e) that it is desirable that common terminology should be used throughout all IARU Regions

Recommends

That IARU Region 1 National Societies adopt the band-plan 05-DV-C4-xx-01 – and that document 02/SM/C4.3 rev 2 is therefore superseded.

Further recommends

That the Region 1 HF Band-plan as adopted at Tel-Aviv 1996 is suppressed.

[1] **25.5** § 3 1) Administrations shall determine whether or not a person seeking a licence to operate an amateur station shall demonstrate the ability to send and receive texts in Morse code signals. (W RC-03)

Proposed IARU REGION 1 HF BAND PLAN 2005 (05/xxC4.xx)

	FREQUENCY (kHz)	MAX BANDWIDTH (Hz)	PREFERRED MODE
	No rigid bandplan is proposed for 135 -137 kHz		
137 kHz Band:	135.7 - 136.0	200	CW, station tests, QRSS
	136.0 - 137.4	200	CW
	137.4 - 137.6	200	digimode, except CW
	137.6 - 137.8	200	CW, QRSS centre of activity 137.7 kHz
1.8 MHz Band:	1810 - 1838	200	CW
	1838 - 1840	500	All narrow band modes
	1840 - 1843	2700	All modes (1), digimode,
	1843 - 2000	2700	All modes, (1), digital voice (DV) centre of activity: 1930 kHz
3.5 MHz Band:	3500 - 3510	200	CW, priority for intercontinental operation
	3510 - 3560	200	CW, cw contest preferred, QRS centre of activity 3555 kHz
	3560 - 3580	200	CW, QRP centre of activity 3560 kHz
	3580 - 3590	500	All narrow band modes, digimode
	3590 - 3600	500	All narrow band modes, digimode, automatically controlled data stations (unattended)
	3600 - 3620	2700	All modes, (1), digimode, automatically controlled data station (unattended)
	3600 - 3650	2700	All modes, (1), ssb contest preferred, digital voice (DV) centre of activity 3630 kHz
	3650 - 3700	2700	All modes, QRP centre of activity 3690 kHz
	3700 - 3775	2700	All modes, ssb contest preferred, Image centre of activity 3735 kHz
	3775 - 3800	2700	All modes, priority for intercontinental operation
7 MHz Band:	7000 - 7035	200	CW, QRP centre of activity 7030 kHz
	7035 - 7038	500	All narrow band modes, digimode
	7038 - 7040	500	All narrow band modes, digimode, automatically controlled data stations (unattended)
	7040 - 7043	2700	All modes (1), digimode, automatically controlled data stations (unattended)
	7043 -7100	2700	All modes (1), Image centre of activity 7043 kHz
			digital voice (DV) centre of activity 7070kHz
	7100 - 7200	2700	All modes (2009: 200 Hz + 500 Hz segments below 7.1 Mhz will be extended)
10 MHz:	10100 - 10140	200	CW, QRP centre of activity 10106 kHz
	10140 - 10145	500	All narrow band modes, digimode
	10145 - 10150	500	All narrow band modes, automatically controlled data stations (unattended)

14 MHz Band:

14000 - 14060	200	CW, cw contest preferred, QRS centre of activity 14055 kHz
14060 - 14070	200	CW, QRP centre of activity 14060 kHz
14070 - 14089	500	All narrow band modes, digimode
14089 - 14099	500	All narrow band modes, digimode, automatically controlled data stations (unattended)
14099 - 14101		IBP, exclusively for beacons
14101 - 14112	2700	All modes, digimode, automatically controlled data stations (unattended)
14112 - 14125	2700	All modes
14125 - 14300	2700	All modes, ssb contest preferred, digital voice (DV) centre of activity 14130 kHz,
		Image centre of activity 14230 kHz
14300 - 14350	2700	All modes

18 MHz Band:

18068 - 18095	200	CW, QRP centre of activity 18096 kHz
18095 - 18105	500	All narrow band modes, digimode
18105 - 18109	500	All narrow band modes, digimode, automatically controlled data stations (unattended)
18109 - 18111		IBP, exclusively for beacons
18111 - 18120	2700	All modes, digimode, automatically controlled data stations (unattended)
18120 - 18168	2700	All modes, digital voice (DV) centre of activity 18130 kHz

21 MHz Band:

21000 - 21070	200	CW, QRS centre of activity 21055 kHz, QRP centre of activity 21060 kHz
21070 - 21090	500	All narrow band modes, digimode
21090 - 21110	500	All narrow band modes, digimode, automatically controlled data stations (unattended)
21110 - 21120	2700	All narrow band modes, digimode, automatically controlled data stations (unattended)
21120 - 21149	500	All narrow band modes
21149 - 21151		IBP, exclusively for beacons
21151 - 21450	2700	All modes, digital voice (DV) centre of activity 21180 kHz,
		Image centre of activity 21340 kHz

24 MHz Band:

24890 - 24915	200	CW, QRP centre of activity 24906 kHz
24915 - 24925	500	All narrow band modes, digimode
24925 - 24929	500	All narrow band modes, digimode, automatically controlled data stations (unattended)
24929 - 24931		IBP, exclusively for beacons
24931 - 24940	2700	All modes, digimode, automatically controlled data stations (unattended)
24940 - 24990	2700	All modes, digital voice (DV) centre of activity 24960 kHz

28 MHz Band:	28000 - 28070	200	CW, QRS centre of activity 28055 kHz, QRP centre of activity 28060 kHz
	28070 - 28120	500	All narrow band modes, digimode
	28120 - 28150	500	All narrow band modes, digimode, automatically controlled data stations (unattended)
	28150 - 28190	500	All narrow band modes
	28190 - 28199		IBP, regional time shared beacons
	28199 - 28201		IBP, worldwide time shared beacons
	28201 - 28225		IBP, continuous duty beacons
	28225 - 28300	2700	All modes, beacons
	28300 -28320	2700	All modes, digimode, automatically controlled data stations (unattended)
	28320 - 29200	2700	All modes, digital voice (DV) centre of activity 28330 kHz,
			QRP centre of activity 28360 kHz, Image centre of activity 28680 kHz
	29200 - 29300	6000	All modes, digimode, automatically controlled data stations (unattended)
	29300 - 29510	6000	Satellite-downlink
	29510 – 29520		Guard channel
	29520 – 29550	6000	All modes, FM simplex – 10 kHz channels
	29560 – 29590	6000	All modes, FM repeater input (RH1 – RH4)
	29600	6000	All modes, FM calling channel
	29610 – 29650	6000	All modes, FM simplex – 10 kHz channels
	29660 - 29700	6000	All modes, FM repeater outputs (RH1 – RH4)

Explanations

Max. 200 Hz	Emission bandwidths of less than 200 Hz
Max. 500 Hz	Emission bandwidths of less than 500 Hz
Max. 2700 Hz	Emission bandwidths of less than 2700 Hz
Max. 6000 Hz	Emission bandwidths of less than 6000 Hz
Narrow band modes	All modes up to 500 Hz bandwidth
1)	Lowest dial setting for LSB: 1843, 3603, 7043 kHz
All modes	Includes Amplitude Modulation. Consideration should be given to adjacent channel users.
Sideband usage	Below 10MHz use lower sideband (LSB), above 10MHz use upper Sideband (USB)

Notes

The use of Packet Radio is discouraged on the HF amateur bands below 29 MHz.

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

The “Image” mode includes FAX and SSTV. The term “automatically controlled data stations” includes Store and Forward stations.

Transmitting frequencies:

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

Unmanned transmitting stations:

IARU member societies are requested to limit this activity on the HF bands. It is recommended that any unmanned transmitting stations on HF shall only be activated under operator control except for IARU approved beacons or specially licensed experimental stations.

1.8 MHz band:

Those societies, which have a SSB allocation below 1840 kHz, may continue to use it, but they are requested to take all necessary steps with their licence administrations to adjust the phone allocations in accordance with the Region 1 Bandplan.

3.5 MHz band:

Intercontinental operations should be given priority in the segments 3.500-3.510 MHz and 3.775-3.800 MHz.

Where no DX traffic is involved, the contest segments should not include 3.500-3,510 MHz or 3.775-3.800 MHz. Member societies will be permitted to set other (lower) limits for national contests (within these limits).

Member societies should approach their national telecommunication authorities and ask them not to allocate frequencies to other than amateur stations in the band segment that IARU has assigned to intercontinental long distance traffic.

7 MHz band:

The band segment 7.035-7.045 MHz may be used for automatically controlled data stations (unattended) traffic in the area of Africa south from the equator during local daylight hours.

10 MHz band:

SSB may be used during emergencies involving the immediate safety of life and property and only by stations actually involved in the handling of emergency traffic.

The band segment 10,120 kHz to 10,140 kHz may be used for SSB transmissions in the area of Africa south of the equator during local daylight hours.

News bulletins on any mode should not be transmitted on the 10 MHz band.

28 MHz band:

Member societies should advise operators not to transmit on frequencies between 29.3 and 29.51 MHz to avoid interference to amateur satellite downlinks.

Experimentation with NBFM Packet Radio on 29 MHz band:

Preferred operating frequencies on each 10 kHz from 29.210 to 29.290 MHz included should be used. A deviation of ±2.5 kHz being used with 2.5 kHz as maximum modulation frequency.