Wireless Institute of Australia

National Technical Advisory Committee

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BAND PLAN REPORT - January 2015

Comments or suggestions re the band plans were received as follows:
630 metres - 6 comments
6 metre band - 3 comments
2 metre and 70 cm bands - 1 comment.

The 630 metre band plan is ready for updating. The 6 metre plan is ready to proceed but it should be held until the future status of 50 - 52 MHz is confirmed by ACMA later this year.

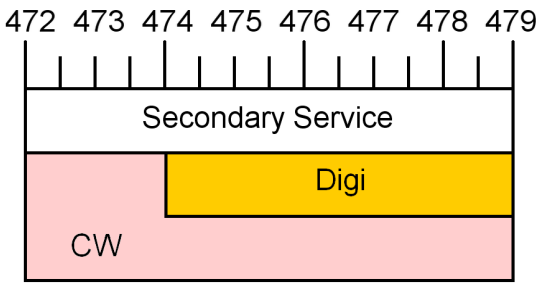
The 2 metre plan is evolving with the reallocation of spectrum around 145 MHz. Further changes can be made in the future. For 70 cm, there is as yet no solution to the LIPD problem.

1. 630 Metre Band

Comments or proposals were received from Kevin Dalton VK4WA, Phil Dwyer VK3ELV, Steve Ireland VK6VZ, Ron Cook VK3AFW, David Wescombe-Down VK5BUG, and Noel Ferguson VK3FI.

The main problem is the question of how to provide for SSB activity. Use of SSB up to 2.1 kHz bandwidth is permitted by the ACMA, but it cannot be used on this band without impinging on frequencies used for other modes. It is not appropriate for band plans to recommend operations that will inevitably lead to clashes. It is proposed to add an advisory note mentioning frequencies that have been suggested for SSB use, and the recommendation that operators need to be flexible and tolerant.

The proposed updated version is below. Further changes will occur as patterns of actvity and favoured modes develop.



ACMA licence conditions for this band permit the use of any mode with a maximum bandwidth of 2.1 kHz.

The following frequencies are based on current CW and digital activity in IARU Region I, and are recommended for DX activity.

CW	472.500 kHz - recommended centre frequency for international DX
WSPR	474.2 kHz USB dial frequency (occupied bandwidth 475.6 - 475.8 kHz)
ROS	476.0 kHz USB dial frequency (occupied bandwidth 477.4 - 477.6 kHz)
QRSS	476.175 kHz USB dial frequency (occupied bandwidth 477.175 - 477.185 kHz). (Some activity also on 478.9 kHz)
WSJTX	477.0 kHz USB dial frequency (occupied bandwidth 478.0 - 478.5 kHz)
Opera	477.0 kHz USB dial frequency (occupied bandwidth 478.5 - 478.8 kHz)

SSB operation is also permitted, with a maximum occupied bandwidth of 2.1 kHz. However it is not possible to run SSB without overlapping frequencies that are used for CW or digital modes. Users of this band will need to

exercise tolerance and restraint. One suggested approach is that SSB operators voluntarily restrict their activities to daylight hours.

The two SSB frequencies listed below are possible options that have been suggested. The frequencies given assume the use of LSB mode and an audio bandwidth of 300 - 2400 Hz.

SSB 479.3 kHz LSB dial frequency (occupied bandwidth 476.9 - 479.0 kHz).
476.0 kHz LSB dial frequency (occupied bandwidth 473.6 - 475.7 kHz).

Related material:
http://www.wia.org.au/members/bandplans/data/
630m BAND PLAN REPORT 2014-0922.pdf
Discussion of band plan options (Sept 2014)

2. 40 Metre Band

During 2014 tne WIA received complaints about the frequency used for an ARV news broadcast. This drew attention to a provision in the 40 metre band plan recommending the use of 7130 - 7150 kHz for news broadcasts. This provision was made some years ago for the purpose of keeping the lower end of the band as clear as possible. Now that broadcasters no longer have use of frequencies below 7200 kHz, this provision is no longer required and actually has a restrictive effect, so it should be removed.

3. 6 Metre Band

Comments or proposals received: from Roger Harrison VK2ZRH regarding frequencies for Chirp beacons; from Peter Cossins VK3BFG (TAC ATV advisor) re possible use of 6 metres for digital ATV; and from Rex Moncur VK7MO (TAC advisor on digital DX modes) re occupied bandwidths of various modes. .

The review also takes into account recent decisions on future beacon development made by IARU Region I.

The proposed changes are as follows:

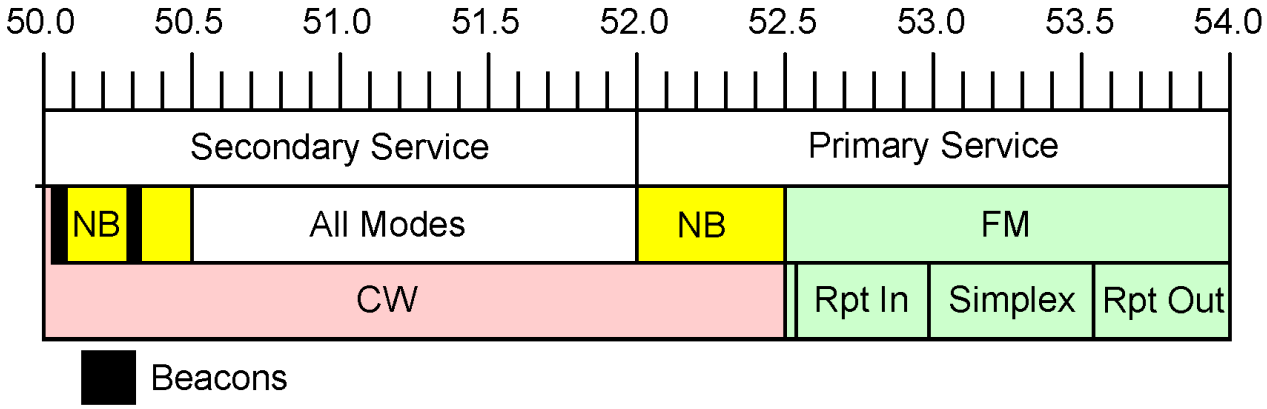
50.000 - 50.030 MHz -	Reserved for future international Synchronised Beacon Project
50.240 - 50.280 MHz -	Recommended for Chirp beacons with bandwidths 2 - 20 kHz.
50.320 - 50.400 MHz -	Reserved for upward expansion of the beacon segment.
50.400 - 50.500 MHz -	Reserved for propagation studies: Guard band for proposed new Region I beacon segment. Recommended for Chirp beacons with 20 - 100 kHz bandwidth.
50.500 -52.000 MHz -	Still tagged “All Modes” for maximum future flexibility. Possible use of all or part when the availability of the full 50 - 54 MHz band is confirmed. Digital ATV may be possible in this segment provided the occupied bandwidth limits in the LCD are increased.

Provision can also be made for changes above 52 MHz, now that all 52 MHz beacons have ceased operation:

52.325 - 52.500 MHz -	Reserved for possible expansion of repeater input segment.
53.325 - 53.500 MHz -	Currently voice simplex; reserved for possible use as repeater outputs.

It should be noted that major changes to the band plan must be kept on hold until ACMA confirms that the Amateur Service will regain the full use of the entire 50 - 54 MHz band. This is expected later in 2015.

Proposed updated band plan wording is overleaf. Changes are in blue type.



50.000 - 50.500	NARROW BAND MODES	(Note 1)
50.000 - 50.100	CW only	
50.000 - 50.030	Reserved - International Synchronised Beacon Project	
50.030 - 50.080	International beacons	(Note 2)
50.080 - 50.100	International DX window	
50.100 - 50.150	CW / SSB: International DX only	
50.110	International DX calling frequency	
50.150 - 50.280	CW / SSB: DX or local	
50.200	Australian calling frequency	
50.220 - 50.240	Digital DX modes	
50.240 - 50.280	Recommended for Chirp beacons with 2 - 20 kHz bandwidth	
50.280 - 50.300	Beacons (VK1,2,3,4,7)	(Note 2)
50.300 - 50.320	Beacons (VK5,6,8,9,0)	(Note 2)
50.320 - 50.400	Reserved - future beacons	
50.400 - 50.500	Reserved - guard band for Region I beacon segment	
	Reserved - Chirp beacons with 20 - 100 kHz bandwidth	
50.500 - 52.000	ALL MODES	
52.000 - 52.500	NARROW BAND MODES	(Note 1)
52.100	SSB Calling frequency	
52.325 - 52.500	Reserved - possible future repeater inputs	
53.325 - 53.500	Reserved - possible future repeater outputs	
52.525 - 53.975	SIMPLEX AND REPEATERS	(Notes 3,4)
52.525	International FM simplex calling frequency	
52.550 - 52.975	Repeater inputs	
53.000 - 53.525	Simplex	
53.050	Recommended APRS channel	
53.150	National WICEN frequency	
53.300	National ARDF frequency	
53.325 - 53.500	Reserved for possible future use as repeater outputs.	
53.525	Simplex: voice	
53.550 - 53.975	Repeater outputs	

Note 1: Narrow Band Modes

This segment is reserved for modes such as CW, digital modes and SSB with bandwidths up to 4 kHz. Weak signal operation has absolute priority. International practice is to keep the segment below 50.150 MHz clear at all times for international DX operation, and to use 50.150 MHz and above for contacts within the country or region. Calling frequencies should be used only to make initial contact and then vacated as soon as possible. The calling frequencies are 50.110 MHz for international DX only, and 50.200 MHz for all other operation.

The following spot frequencies are recommended for digital DX operation using SSB-based modes:
50.220 Weak signal modes with bandwidths below 100 Hz, e.g. PSK and slow CW
50.225 Weak signal modes with bandwidths up to 750 Hz, e.g. MFSK, JT65 and similar
50.230 High speed meteor scatter modes with bandwidths up to 3 kHz, e.g. FSK441

Note 2: Beacons

The segment 50.000 - 50.080 MHz is reserved for international beacons. All 52 MHz beacons have now closed and migrated to 50 MHz. To reduce overcrowding in the lower end of the band, the following frequencies have been adopted for Australian beacons:
For call areas VK1, VK2, VK3, VK4, and VK7: 50.280 - 50.299 MHz.
For call areas VK5, VK6, VK8, VK9 and VK0: 50.300 - 50.320 MHz.
Frequencies up to 50.400 MHz have been reserved for future beacons.
The beacon segments should be kept clear of other transmissions. Note however that the internationally accepted frequency for stations using WSPR mode is 50.293 MHz (indicated dial frequency using USB). This corresponds to the WSPR signal actually occupying 50.2944 - 50.2946 MHz.

Note 3: FM Simplex

Channel spacing is 25 kHz. Channels reserved for special purposes should be kept clear of other operation.

Note 4: Repeaters

The repeater split is 1 MHz (negative offset) and the channel spacing is 25 kHz. Six repeater channels are reserved for re-use in the following call areas:

52.750 / 53.750 - VK5/8	52.800 / 53.800 - VK6
52.825 / 53.825 - VK7	52.850 / 53.850 - VK2
52.900 / 53.900 - VK3	52.950 / 53.950 - VK4

The remaining channels are available for use in any call area.
Repeater channels are co-ordinated nationally to reduce the possibility of interstate sporadic E interference.

Related material:
http://www.wia.org.au/members/bandplans/data/
6 METRE BAND PLAN CHANGES 2014.pdf
Brief explanation of proposed band plan changes (June 2014)

4. 2 Metre and 70 cm Bands

Comments and proposals were received from Grant Willis VK5GR, in a series of three articles published in Amateur Radio magazine. No other comments have been received.

On 2 metres, the current plan is the result of a very recent review. In 2011 the Board asked the TAC to consider options for increasing spectrum efficiency, and the feasibility of changing the FM band segments from 25 kHz to 12.5 kHz raster. The result was a plan developed by Peter Mill VK3APO which involves reallocating part of the original Packet Radio segment around 145 MHz. This plan was first circulated for comment in 2012, and published again in the 2013, 2014 and 2015 Call Books. The Board approved the plan and it is being implemented. The plan will be further developed by reallocating more of the former Packet Radio segment for all mode use.

On the 70 cm band, there is a spectrum shortage brought about by interference to repeater inputs from LIPD devices. There are very few options for relocation of repeaters, and all of them would require the use of yet more different offsets, while still keeping the existing ones. This would pose major problems for users because available radios do not have the ability to switch between so many offsets. In any case the WIA has no authority to require existing repeaters to move, even if it paid the very considerable costs. And use of alternative frequencies above 440 MHz is not permitted by ACMA. So at this time, there is no obvious solution to the LIPD problem.

Related material:
http://www.wia.org.au/members/bandplans/data/
WIA TAC 2 Metre Band Plan Revision 2012.pdf
This is the detailed discussion of the current plan as published in 2012. It supplies a great amount of detail that is not repeated in this paper.

5. General

No comments or proposals were received for any other band.

Other related issues:

- The frequency allocation guidelines for beacons were revised in March 2014 to address issues raised by Kevin Johnston VK4UH.
- Comments by Will McGhie VK6UU were considered, however they relate to repeater licensing and are therefore in the purview of the National Repeater Coordinator.

6. Current Band Plans

The “Band Plans Update” web page contains a copy of the full current band plans, most recently updated in August 2014:
http://www.wia.org.au/members/bandplans/data/
Australian Band Plans 140820.pdf

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