



THE WIRELESS INSTITUTE OF AUSTRALIA

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National Society of Radio Amateurs

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Draft Australian Radiofrequency Spectrum Plan

1. Introduction

The Wireless Institute of Australia (WIA) is the national organisation of Australian radio amateurs; it is the peak amateur radio body representing their interests nationally and internationally. The WIA represents the interests of the Australian amateur radio community through formal liaison with the ACMA and, as necessary, other organisations and government bodies.

The WIA welcomes the opportunity to provide comment on the draft Australian Radiofrequency Spectrum Plan (ARSP).

The WIA notes that one “typo” has occurred in Part 1 paragraph 9, section (2) (b) - repetition of the words “not consistent with”.

2. The 135.7 – 137.8 kHz Band

Of particular interest to amateurs in Australia is the proposed access arrangement to the segment 135.7 – 137.8 kHz for the Amateur Service.

A review of the ACMA Register of the Radiocommunications Licences reveals only two assignments in this band segment; one on 135.125 kHz with a Land Mobile System Licence (which is inconsistent with the Spectrum Plan) to GMH at Elizabeth SA, and one on 136.750 kHz with a Scientific Licence to the Brisbane Amateur Radio Club. The licence held by GMH would appear to be an “in premises” service with a radiated power 0.2 pZ watts.

The WIA is of the view that the likelihood of interference between these existing users and the amateur service is very small. In the unlikely event of interference, the issues can be resolved by way of a special condition(s) on the affected licences.

The WIA also draws attention to the fact that at WRC-07 the decision was influenced by concerns from ITU Region 1 (apparently over potential interference to the Broadcast Service in the nearby segment 148.5 to 255 kHz) and by objections from a small number of Region 3 and middle-eastern administrations apparently seeking to protect the operation of non-radiocommunications industrial uses of the band. Consequently a notional maximum radiated power limit of 1 watt (eirp) was imposed.

The WIA notes that there are no broadcasting services in the low frequency region within ITU Region 3.

Among other administrations in Region 3, New Zealand has already granted access to a low frequency band segment for the Amateur Service within that country. See <http://www.rsm.govt.nz/cms/licensing/types-of-licence/general-user-licences/amateur-radio-operators> . The licence condition in respect to amateur radio operators, in addition to the extended frequency range of 130 to 190 kHz, allows a maximum radiated power of 5 watts (e.i.r.p.) for this spectrum segment. The WIA notes that the proposed amendments to the ARSP for the Amateur Service insert the international footnote 67A that limits the maximum radiated power to 1 watt (e.i.r.p.).

Noting the different radiated power levels, the WIA requests that in order to harmonise arrangements for similar services between Australia and New Zealand that the Australian Amateur Service be granted a maximum radiated power of 5 watts (e.i.r.p.), bearing in mind the previous comments in respect to existing identified spectrum users.

The WIA also notes that antenna systems that amateur will employ will be relatively inefficient based on studies conducted 17 years ago under the Experimental Licence arrangements. The best theoretical efficiency that was obtained with a typical top loaded short vertical antenna was 0.7%, and the best practical efficiency gained was in the order of 0.38%. Accordingly, interference issues are not likely to occur as a consequence of a higher power level, and as noted previously, the ACMA has existing powers to deal with these situations on a case by case basis.

In respect to the implementation arrangements, which requires amendment to the *Licence Conditions (Amateur Station) Determination No.1 of 1997* (the Amateur LCD), the WIA suggests that the proposed segment be restricted to Advanced level licence holders. The WIA recognises that potential emissions modes are going to be restricted to narrow emission modes due to the very high antenna “Q” factor that will restrict the effective bandwidths as a result, though no change to the amateur LCD in respect of emission modes is proposed.

The WIA wishes to be consulted in the amendment(s) to the Amateur LCD to help ensure that there are no un-intended consequences of the drafting.

3. The band 7100 – 7200 kHz

The WIA notes that within the band 7100-7200 kHz, the draft ARSP retains the existing primary allocation for the broadcasting service and the existing Australian secondary allocation to the amateur service.

This arrangement is entirely consistent with the Australian position taken to WRC-03, but is inconsistent with the Region 3 allocation in the band. It is noted that the proposed ARSP text for this band segment includes reference to International Footnotes 141B, 141C and 142. The WIA understands that the intention of these footnotes (in both the ITU Radio Regulations and the ARSP) is to retain broadcasting access to the 7100-7200 kHz band until 29 March 2009, and that the band segment would then become available to the Fixed and Mobile services in Australia on a primary basis.

It is noted that amateur service use of this band segment is subject to Australian Footnote AUS-12, however, given the changes to the ITU-RR Table of Allocations and the changes proposed, this footnote should be amended to apply to the band 7200 – 7300 kHz.

The ITU Region-3 Table of Allocations assigns the band 7100-7200 kHz to the amateur service as primary user, with footnote 141B providing for Fixed and Mobile use as an additional allocation in Australia (and a number of other countries). This additional allocation does not displace the amateur service, but provides for shared occupancy by amateur, fixed and mobile services under conditions to be established by each administration. Continued broadcasting service use of this band until 29 March 2009 is authorised under the terms of footnote 141C.

The amateur service acknowledges and supports the fixed and mobile access to the band 7100-7200 kHz for defence and national security purposes. It is suggested that the appropriate priority between all three (amateur, fixed, mobile) services, together with maximum alignment with the ITU Region-3 Table of Allocations, can be achieved by co-primary allocation with the addition of an appropriate AUS footnote in the ARSP.

The WIA therefore proposes that the ARSP listing for the 7100-7200 kHz band segment be amended to the following format:

BROADCASTING 141C
FIXED, MOBILE 141B
AMATEUR AUS-NN.

AUS-NN: This band is designated to be used principally for the purposes of defence and national security. The amateur service shall not cause harmful interference to, nor claim protection against interference from, fixed or mobile service stations operating within Australia.

In making this proposal the WIA has included Broadcasting as a co-primary allocation, relying on international Footnote 141C to identify the end date of the allocation (29 March 2009). Given the timing, it may be more appropriate and avoid the risk of confusion to remove Broadcasting from the table now.

The suggested formulation recognises the existing actual sharing situation within the band, achieves maximum alignment with the ITU Region-3 Table of Allocations (particularly if Broadcasting is removed) and provides protection for the important Defence uses of the band.

4. Conclusion

The WIA offers no other response to the other amendments to the ARSP document.

The WIA is available to discuss any aspect of its submission and can be contacted via the following email address: president@wia.org.au .

2 October 2008

For The Wireless Institute of Australia

A handwritten signature in black ink, reading "Michael J. Owen". The signature is written in a cursive style with a long, sweeping underline.

Michael Owen
President