

Response to the Five Year Spectrum Outlook for 2022-27 Re Amateur Radio

The Manager
Spectrum Licensing Policy Section
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This submission addresses an invitation to comment on ACMA's proposal on page 64 of the Consultation document, viz

"We are aware that many amateurs continue to be interested in operating their stations at higher power limits. We are supportive of further investigating the licensing and technical framework and, potentially new accreditation arrangements that could facilitate higher power limits."

I can understand why, after the Amateur fraternity is moved onto a Class Licence, the ACMA is going to be in a more comfortable position with regards to approving output powers above the current 400W pX applying to the Advanced grade licence. Without discussing those reasons, I would like to submit my views on changes to power limits for the three licence grades. The Consultation does not restrict the review to any one particular grade, however there is a general consensus that an upward revision of power limit is warranted cross all grades.

Foundation Licence

This grade was introduced in October 2004 with a maximum power output of 10W pX. The concept of such an entry level licence was strongly influenced by the UK Foundation Licence, particularly in determining the power limit. One of the concerns at the outset was the very low power setting, particularly for a country very much greater in area than the UK. There can be no reasonable comparison between two very unlike geographical entities.

In comparing maximum permissible power outputs in other countries with an entry grade licence, the levels (excluding the UK) typically start at 50W pX and rise to 200W pX in the USA in the HF bands. The current Australian 10W pX limit is at a distinct disadvantage in today's urban RF noise environment on the HF and VHF bands. I would think 50W pX is a more appropriate power limit for new entrants, bearing in mind their limited knowledge of the ARPANSA EME limits.

Standard Licence

This grade is one which evolved from the Novice Licence and provides a step up in both band privileges and power in comparison to the Foundation Licence. International usage classifies this licence grade as an intermediate level licence, with permitted power outputs

ranging from a conservative 50W pX in the UK to 1500W pX in the USA where it is known as the General Licence. In Australia there is considerable overlap of radio theory content with the Advanced Licence and the Regulations knowledge component is exactly the same.

In keeping with the principle of a tiered licencing system, should the Foundation Licence be granted a higher power output, then the Standard Licence should also be increased to 200W pX. I think a 3dB increase above the current 100 W pX limit does not create any additional safety issues concerning managing compliance with the ARPANSA electromagnetic emissions (EME) prevailing now.

Advanced Licence

The current Advanced Licence has a maximum power output of 400W pX, and together with the UK and a number of its former colonies, this represents the lowest ranking of permissible power output for the high grade licence.

An examination of other country's permissible power output for the highest licence grade ranges from 400W pX to 3000W pX. Broadly speaking, many administrations favour power outputs in the range 1kW to 1.5kW pX. In our immediate region, New Zealand and Indonesia have set a 1kW pX limit.

I support a 1kW pX maximum permissible power output for the Advanced Licence in Australia, and to be implemented without necessitating a separate permit. There has been an improved awareness of EME requirements – now incorporated into the licence examination syllabus. The licensee should be able to satisfactorily assess the station's compliance with the ARPANSA EME limits using available software such as the VK3UM calculator. My enquiries of the New Zealand experience since that country granted a limit of 1kW pX has revealed not one instance of interference or non-compliance being notified to their regulator. New Zealand Amateurs must also verify that their station complies with the same ARPANSA EME limits. If it works for New Zealand It will work for Australia.

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