

## Proposed amateur class licence and considerations for higher power operation

1. I do not see any reason why secondary user access to the 50-52 MHz band should not be granted to Standard amateurs as they have demonstrated a sufficient technical understanding which permits their operation on other bands.
2. I hold no view on the proposed policy on call sign transfer issue.
3. I have no issue with amateurs holding more than 1 callsign, but am of the opinion that a responsible limit should be set.
4. The benefits of your proposal not to limit the number of call signs is that personal identification of long-standing amateurs (such as myself) who hold more than 1 callsign is not diminished through releasing our existing callsigns that personally identify us to our many overseas compatriots.
5. I have no issue with the proposed call sign management arrangements.
6. There are no other existing voluntary registers that I use for station information but believe the ACMA should retain the call sign register as it clearly identifies amateur stations in Australia and assists in identifying stations class levels.
7. I don't anticipate any difficulties in operating my station in Conference of P & T Administrations signatory countries.
8. I am of the view that amateurs who have demonstrated a high level of knowledge (full call) should continue to be able to apply for scientific licences for EME and TEP. I currently hold a scientific licence and continue to experiment to gain a better understanding. I have submitted many scientific papers and articles which have contributed to a better understanding of our atmosphere.
9. Please see my response in question 8. Trans Equatorial Propagation (TEP) still defies current levels of knowledge and only through continual experimentation will a better understanding be obtained. I hold a 1.5kw permit and wish to continue contributing to international scientific bodies (ARRL & UKSMG and several amateur forums) my discoveries of coincidental modes of propagation.
10. I support the ACMA's decision to permit only Advanced amateurs being able to apply for other higher power use-cases.
11. As the holder of a 1.5kw permit, I know that field aligned particles and coincidental modes of propagation (sporadic E' layers and ionized Equatorial particle's) can only be understood better at the 1.5kw level. I have discovered coincidental propagation paths that were not possible at the 1kw level. Through software and equipment advancements and the ability to probe the atmosphere, none of my discoveries would have been found e.g.: bi-directional 90-degree refraction of VHF signals.
12. I do not see any requirement to operate above 1kw on the HF bands due to the varying conditions of atmospheric layers. I do see a requirement to operate at 1.5kw from 50Mhz and upwards due to difficulties associated with shorter wavelengths. Web-based reporting platforms which amateurs from all countries currently use has become a valuable tool in supporting my analysis of VHF propagation and paths.

13. Earth Moon Earth, sporadic E's and Trans Equatorial Propagation (TEP) are the use-cases that Advanced amateurs require a higher power permit if we are to continue contributing to the international scientific community.
14. A. Earth Moon Earth, sporadic E's and Trans Equatorial Propagation all require a higher power limit due to the limitations of using shorter wavelengths and the difficulties in obtaining consistent results which contribute to a better understanding of our atmosphere.
- B. The limitations of the current power limits are that they do not permit reliable observable results at VHF and above frequencies.
- C. 1.5kw is required at 50MHz and above to produce repetitive results. Only through obtaining repetitive results are scientific theories proven.
- D. A transmitter output of greater than 1kw using data modes (FT8/JT65/Q65) is required to obtain consistent results when probing the atmosphere. These data modes permit a deeper probing of atmospheric conditions.
- E. The current allocated bands of 50Mhz and upwards.
- F. A higher power level is required on an on-going basis if experimentation is to provide a better understanding of our atmosphere and its interaction with electromagnetic communications.
- G. The location of a station should comply with current EME regulations.
15. The operation of a higher power station should be limited through the evaluation of antenna height and distance to any habitable buildings, structures or areas which humans may use or pass through. As per my response in 14 F, an on-going basis is required if a better understanding of our atmosphere is to be gained.

Thank you for the opportunity to submit a response.

Regards

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Ex: Defence communications officer of 26 years and ASIO officer of 5 years.