



Australian Government

Department of Defence

Chief Information Officer Group

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The Manager
Spectrum Planning Section
Australian Communications and Media Authority
PO Box 78,
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PROPOSED UPDATES TO AUSTRALIAN RADIOFREQUENCY SPECTRUM PLAN

References:

- A. Five Year Spectrum Outlook 2020-24, The ACMA's Spectrum Management Work Program–Consultation Draft
- B. Defence Response to Draft FYSO IFC 09-2020 – *BO767334*
- C. Defence Response to ACMA IFC 21-2016–AF654107

1. Defence appreciates that ACMA is seeking comments from interested stakeholders on the issues raised in Reference A or any other issues relevant to the update of the Australian Radiofrequency Spectrum Plan (ARSP).
2. Defence notes that review of the ARSP occurs every four years followed by the outcome of the World Radio Conference (WRC). In this instance, Defence is of the view that the WRC-19 outcome is duly reflected in the proposed amendments. However, it is also an appropriate juncture to make additional amendment proposals to reflect the needs of the stakeholders.
3. Therefore Defence would like ACMA to consider an additional set of amendments applicable to national security and defence of Australia. Note that some of these issues were also raised in Reference B and Reference C in 2016.
4. Intention of the proposed regulatory changes is the provision of long-term spectrum supportability of aeronautical mobile telemetry, aeronautical mobile systems, high capacity tactical communication networks and maritime mobile satellite systems. These are critical spectrum-dependent Defence capabilities.
5. The proposed amendments are given in Annex A. Justification for these amendments are provided in separate correspondence not available for public dissemination.

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6. My point of contact is Dr Tharaka Dissanayake on (02) 5130 1849 or via email tharaka.dissanayake@defence.gov.au

Yours sincerely

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Annex

A. Proposed ARSP Changes

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PROPOSED ARSP CHANGES

430–450 MHz

1. Introduce Fixed and mobile secondary with associated AUS101A footnotes in 430-440 MHz to align with existing provision in 440-450 MHz.
2. The entire 20 MHz bandwidth has historically been and continues to be important spectrum for military systems applications. This frequency range is utilised by Defence across all three domains (air, sea, land) with some extensive networks and therefore not limited to just Radiolocation applications. Defence continues to invest significant expenditure on RF systems utilising this band for Military-Off-The-Shelf (MOTS) solutions. In addition, the 430-450 MHz frequency band is considered an attractive frequency range for Land Mobile Radio (LMR) solutions for Defence due to unsuitability of occupying government 400 MHz LMR spectrum for applications that require dedicated channels generally not favoured by State Government Agencies for use outside of remote areas. Defence is not immune to pressures to acquire Commercial Off-The-Shelf (COTS) solutions for non-mission critical applications and the 430-450 MHz represents an attractive option for many COTS solutions. Current provisions under AUS95 does not enable Defence flexibility to access this spectrum for tactically deployable and non-tactical transportable applications across the country. As such exemptions of the Radiocommunications Act (s.26) continue to be utilised regularly in 430-440 MHz to enable alignment with uses in 440-450 MHz.

430 – 432 AMATEUR RADIOLOCATION 271 274 275 276 277	430 – 432 RADIOLOCATION Amateur 271 276 277 278 279	430 – 432 RADIOLOCATION AUS101A Amateur <u>Fixed AUS101A</u> <u>Mobile AUS101A</u> <u>AUS95</u>
432 – 438 AMATEUR RADIOLOCATION Earth exploration– satellite (active) 279A 138 271 276 277 280 281 282	432 – 438 RADIOLOCATION Amateur Earth exploration–satellite (active) 279A 271 276 277 278 279 281 282	432 – 438 RADIOLOCATION AUS101A Amateur Earth exploration– satellite (active) 279A <u>Fixed AUS101A</u> <u>Mobile AUS101A</u> 282 <u>AUS95</u>
438 – 440 AMATEUR RADIOLOCATION 271 274 275 276 277 283	438 – 440 RADIOLOCATION Amateur 271 276 277 278 279	438 – 440 RADIOLOCATION AUS101A <u>Fixed AUS101A</u> <u>Mobile AUS101A</u> Amateur <u>AUS95</u>

1 350–1 400 MHz

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3. Re-instatement of Defence AUS101 on band 1350 -1400 MHz per ARSP 2009. Requirements. This band is critical for Defence and utilised for a significant array of mobile applications. ARSP 2013 removed AUS1 from this band without appropriate consideration of the impact to Defence. Domestic IMT operators continue to display a lack of interest in this frequency band.

1 350 – 1 400 FIXED MOBILE RADIOLOCATION 149 338 338A 339	1 350 – 1 400 RADIOLOCATION 338A 149 334 339	1 350 – 1 400 RADIOLOCATION AUS100A Fixed Mobile 149 338A 339 AUS87 AUS103 <u>AUS 101</u>
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1 429-1 535 MHz

4. Defence requests ACMA provide certainty for Aeronautical Mobile Telemetry (AMT) operations in this band through methods available to it. No specified method within the ARSP for change has been identified at this point however AUS3 footnote is critical to be retained. The entire frequency range should be retained for AMT operations at select Defence Ranges and Bases.

5. Discussion should take place between ACMA and Defence to identify a suitable sub-segment of spectrum within this range for Defence to be provided with AUS101A footnote in this frequency range for mobile high capacity networking for domestic operational requirements.

2 200–2 290 MHz

6. Current frameworks for ACMA licensing in this frequency range do not support flexibility required for the wide array of Defence use of this spectrum both Defence unmanned systems and tactical land networks across the country to be used anywhere, and as such use of Exemptions to the Radiocommunications Act is unavoidable. Defence undertakes significant engineering effort to enable its applications in this frequency range without causing unacceptable interference to other users such as Electronic News gathering (ENG) and space systems receivers and prefers licensing solutions backed by recognition in the ARSP to better enable use of the spectrum by Defence.

7. Please refer to the separate Defence submission on proposed changes to the ARSP that is not intended for public correspondence.

1 785–1 805 MHz

8. Allocation for Defence use in the 1 785-1 805 MHz mid-band gap via AUS101 footnote. The large gap in Defence spectrum access between 1.3 GHz and 2.2 GHz poses repeated issues enabling radio equipment acquired overseas. As such this 20 MHz frequency segment is utilised by Defence as it largely remains underutilised by civilian systems.

1 710 – 1 930 FIXED MOBILE 384A 388A 388B	1 710 – 1 785930 FIXED MOBILE 384A 388A 149 341 385 386 388 AUS87 AUS103
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149 341 385 386 387 388	<u>1 785 – 1 805</u>
	<u>FIXED</u>
	<u>MOBILE 384A 388A</u>
	<u>149 341 385 386 388 AUS87 AUS103</u>
	<u>AUS 101</u>
	<u>1 805 – 1 930</u>
	<u>FIXED</u>
	<u>MOBILE 384A 388A</u>
	<u>149 341 385 386 388 AUS87 AUS103</u>

4 400–4 940 MHz

9. Designation of Defence band use (AUS101) in 4 800-4 940 MHz to recognise the criticality of Defence use of 4400-4940 MHz.

4 800 – 4 990	FIXED	4 800 – 4 940
	MOBILE 440A 441A 441B 442	
	Radio astronomy	
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149 339 443		4 800 – 4 940
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7 450 – 7 550	FIXED FIXED–SATELLITE (space-to-Earth) METEOROLOGICAL–SATELLITE (space-to-Earth) MOBILE except aeronautical mobile MARITIME MOBILE–SATELLITE (space-to-Earth) 461AA 461AB 461A	7 450 – 7 550 FIXED FIXED–SATELLITE (space-to-Earth) AUS100A METEOROLOGICAL–SATELLITE (space-to-Earth) MARITIME MOBILE–SATELLITE (space-to-Earth) <u>AUS100A</u> 461AA 461AB Mobile except aeronautical mobile 461A
7 550 – 7 750	FIXED FIXED–SATELLITE (space-to-Earth) MOBILE except aeronautical mobile MARITIME MOBILE–SATELLITE (space-to-Earth) 461AA 461AB	7 550 – 7 750 FIXED FIXED–SATELLITE (space-to-Earth) AUS100A MOBILE except aeronautical mobile MARITIME MOBILE–SATELLITE (space-to-Earth) <u>AUS100A</u> 461AA 461AB

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