



**Australian Government**  
**Department of Defence**  
Chief Information Officer Group

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Manager,  
Spectrum Licensing Policy,  
Australian Communications and Media Authority,  
PO Box 13112 Law Courts,  
Melbourne VIC 8010

## **ARRANGEMENTS FOR JAMMING DEVICES AND RADIOCOMMUNICATIONS DEVICE EXEMPTIONS**

### **References:**

- A. IFC 15/20 Review of Radiocommunications Prohibitions and Exemption Framework, Consultation Paper, May 2020
  - B. IFC 15/20 Radiocommunications Exemptions for Drone Jamming, Consultation Paper, May 2020
  - C. IFC 15/20 Radiocommunications Facilitating Trials of RNSS Repeater Devices in Road Tunnel Network, Consultation Paper, May 2020
  - D. 2020 Radiocommunications Reform-Consultation Paper, June 2020
1. Defence, as an organisation with years of experience in spectrum management for electronic warfare capabilities, intends to provide feedback and guidance that will support the successful implementation of the proposals in IFC 15/20 (References A–C).
  2. Defence’s position on prohibition and exemption framework is as follows:
    - a. Emissions from exempt devices/systems for the development, training and/or operations must be understood to minimise the risk of unintended harmful interference to systems other than those anticipated, in particular to safety of life systems and critical infrastructure.
    - b. Emissions from prohibited devices, like jammers, are inherently designed to deny access to spectrum that a communications device is currently trying to establish. By design, the emissions are not clean, and are rarely limited to the intended spectrum envelope. It is critical that manufacturers and operators become strongly aware of the actual emissions from these devices, and as such undertake appropriate engineering analysis to ensure that the unintended impacts are reduced, or understood.
    - c. Operation of devices/systems under exemptions should be generally coordinated and visible to relevant stakeholders when used in general locations, or during operations that may impact other users. Implementation arrangements may be made within existing forums of collaboration between law enforcement agencies to achieve this.
    - d. Exempt devices should be governed by a positive authorisation regime using measures such as licensing where possible. Other legislation such as those pertaining

to export control and customs will still need to be considered as required.

- e. The operators must be competent to manage equipment (spectrum certification of equipment) with sufficient training and are encouraged to seek assistance from those who have long-term experience in the use of prohibited devices.
- f. Exemption frameworks should be flexible enough to include differing resourcing approaches such as contracted workforce and visiting forces.
- g. The framework should support defence/law enforcement industry and innovation through changes to legislation as introduced in the form of equipment rules in Reference D. There currently exists a limitation on the ability for defence/national security industry to import, possess, demonstrate, maintain or manufacture devices that are considered prohibited under current legislation. Defence suggests that consideration to the extent possible be given to change the legislation to enable some or all of these industry opportunities, with consideration to national security and other lawful requirements.

### **Review of Prohibition and Exemption Framework (Reference A)**

3. One of the key objects of the prohibition regime is to limit the number of prohibited devices inside Australia. It must be recognised that many of these prohibited devices are in effect weapon systems in the concept of a radiocommunication device and as such need to be managed as a weapon. If a prohibited device is used in Australia, that use must only be achieving the intended public benefit, namely the security of the public and assets, and not be used for other purposes. When relaxing the prohibition for a broader community of users it is difficult to understand how the public good will be achieved and how the management of these devices as weapons systems will be undertaken.

4. Defence feels that the most appropriate framework should be determined after the evaluation of the levels of risk by law enforcement, Defence and industry. Defence asserts that there is a need to ensure that the original intentions of making certain devices prohibited will be validated, and considered before any framework is changed/proposed.

5. The proposed framework does not include a compliance regime and provisions to manage spurious and adjacent band interference. Defence's understanding of these types of devices is that with the unintentional emissions from them, there will be a raised risk to many public and government systems. There is a need to develop a specialist skill set to be able to assess the risk of any interference impact and to have confidence of achieving the desired objective prior to the operation of jamming devices during operations, training or test and evaluation (T&E), and this needs to be under an agreed technique with a level of transparency with the regulator. An engineering assessment with known assessors, supported by a scheme in a similar vein as the Accredited Persons scheme, should be considered. These accreditations need to focus on the specific skillset that will be able to understand the electronic warfare function of such systems and the ability to understand the emissions from such systems.

### **Counter UAS Exemption (Reference B)**

6. Defence noted that the ACMA has included a large number of frequencies in this exemption on the basis that devices authorised by Low Interference Potential Devices Class Licence are done so on “no protection” basis. This assumption is not necessarily true for some of the frequency ranges. Defence feels that this list of bands is significantly larger than what will be used for most commercial off the shelf systems, or military off the shelf systems. Hence Defence requests that this list be validated against the known threat list that has been nationally and internationally identified.

7. Given that these jammers do not conform strictly to the spectrum that is targeted, with both wider emissions and out of band emissions including harmonics and intermodulation products, the operation of such a jamming device, therefore, is likely to interfere with apparatus licensed devices that are afforded protection. Those apparatus licenced devices may also be providing security-critical services in parallel with a counter UAS operation. This can lead to a complex spectrum management scenario that needs to be handled using specialist tools and skills.

8. Counter UAS device emissions can cause regular disruptions to apparatus licensed devices at specific locations closer to training sites. Also it might cause regular disruptions to Class Licensed devices at specific locations near training sites. Defence is of the view that the exempt device user has the responsibility of mitigating such occurrences, in particular if it involves safety-of-life services. The regulatory framework mentioned in section 5 above should be applied to the use of these systems.

9. The proposed exemption being extended to Industry for the purposes of testing and maintenance will assist in the development of a domestic market. Consideration should also be given to extending the exemption to include national research and development, as well as the manufacture of these capabilities. Note that this opportunity for the Australian defence and national security industry, also needs to consider the challenges involved with respect to possession controls, spectrum regulation and weapons tracking.

### **RNSS Repeater Trials (Reference C)**

10. Defence understands that the current proposal is for trials only within tunnels. Defence does not support authorising RNSS repeaters by class licensing or purely under a Determination made under s.27. Operating those devices without recording in the Register of Radiocommunication Licensing (RRL) is high risk and will not support interference management and resolution. In particular, as tunnels are in capital cities near airports and critical infrastructure that depend on RNSS position, navigation and timing.

11. Defence is of the view that Apparatus licensing is the most suitable approach. Be it a new licence type or a scientific licence, all device locations must be accurately recorded in the RRL and prior to issuing licences outside a pre-determined set of criteria, the ACMA is requested to consult and coordinate with Defence, Airservices and other potentially impacted state or federal entities.

12. Defence is of the view that the ACMA must closely monitor compliance of device standards as well and engineering aspects of installing these devices. Prior to requesting licences the requester should provide all relevant engineering studies and evidence of compliance, and the licences must clearly indicate Cease Buzzer point of contact.

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13. My point of contact is Dr. Tharaka Dissanayake on 02 6144 5035 or [tharaka.dissanayake@defence.gov.au](mailto:tharaka.dissanayake@defence.gov.au).

Yours sincerely

**Glenn Odlum**

Principal Engineer Spectrum Planning and Engineering

Defence Spectrum Office

Chief Information Officer Group

Department of Defence

Tel: (02) 6144 4110

[glenn.odlum.@defence.gov.au](mailto:glenn.odlum.@defence.gov.au)

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