



16 July 2020

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ACMA: IFC 15/2020
AMSA: D20/153698

Arrangements for jamming devices and radiocommunications device exemptions

To whom it may concern

The Australian Maritime Safety Authority (AMSA) thanks the Australian Communications and Media Authority (ACMA) for this opportunity to comment on *Arrangements for jamming devices and radiocommunications device exemptions - consultation 15/2020*.

Radiocommunications and the devices that rely on it are crucial for protecting life at sea, on land and in the air. Our comments focus on three areas: the frequencies of the Global Maritime Distress and Safety System (GMDSS), use of drones in search and rescue and maritime assistance, and maritime use of the radionavigation-satellite service.

The point of contact within AMSA for any further enquiries is Stuart Shepard, Senior Advisor, Maritime Communications, on +61 2 6279 5703 or stuart.shepard@amsa.gov.au.

Yours sincerely

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Annex A

Introduction

Use of radiofrequency spectrum by search and rescue (SAR) and the maritime community varies widely, with AMSA responsible for aspects related to SOLAS (International Convention for the Safety of Life at Sea, 1974) vessels, the Global Maritime Distress and Safety System (GMDSS), the Convention on International Civil Aviation¹, COSPAS-SARSAT and the domestic commercial vessel fleet. In addition, AMSA contributes to, and often leads internationally, on maritime radiocommunication matters related to recreational vessels.

Radiocommunication is crucial for protecting life at sea and in the air. This may include a range of systems/services including:

- satellite navigation and augmentation systems
- 406 MHz distress beacons (incorporating ELT, PLB and EPIRB)
- mobile telecommunication networks
- HF and VHF communication systems
- satellite telecommunication networks
- radiodetermination
- automatic identification system (AIS)

We have identified three areas where protection of spectrum and limiting the ability for persons to cause interference are a priority for the maritime industry, maritime and aviation search and rescue services.

The frequencies of the GMDSS

The GMDSS, as a component of SOLAS, ensures that vessels can automatically transmit and receive maritime safety information to ensure safety of navigation, and inform SAR authorities of distress situations.

Protection of the GMDSS frequencies are provided in Article No. **31.2** of the International Telecommunication Union (ITU) Radio Regulations, stating that “*any emission causing harmful interference to distress and safety communications on any of the discrete frequencies identified in Appendix 15 is prohibited*”. Section 192 of the *Radiocommunication Act 1992* (the Act), reflects the intent of Article No. **31.2**.

¹ AMSA is responsible for the aviation SAR service.

AMSA is not aware that equipment is being designed or imported with the intentional purpose to cause interference to GMDSS frequencies in Australia. AMSA is of the view that the risk of interference to GMDSS frequencies from transmitters located in Australia is low.

There are examples of interference being caused to GMDSS frequencies in Australia from transmitters located outside Australia, particularly for frequencies operating below 30 MHz. AMSA and its service provider have reported these cases to the ACMA.

Given the low risk of interference being derived in Australia, recognition in the exemption and prohibition framework is not required.

Use of drones in search and rescue and maritime assistance

AMSA provides SAR service to anyone in distress, no matter where they are in the Australian SAR region. This is a statutory function under the *Australian Maritime Safety Authority Act 1990*, and is provided for vessels at sea and aircraft. SAR services for those in distress on land are provided by AMSA in response to requests from State and Territory Police under the *Inter-Governmental Agreement (IGA) on National Search and Rescue Response Arrangements*.

AMSA also provides a maritime assistance capability, in accordance with IMO resolution A.950(23), which includes, *inter alia*, pollution response based on reports on incidents involving the discharge or possible discharge of harmful substances.

Our interest is in efforts to improve search and rescue capability including the use of drones deployed from our fixed-wing aircraft and to assess vessel damage or marine pollution. This enables personnel to get a close-up view via video in difficult terrain, poor flight conditions or to provide provisions that cannot be dropped from the air.

Whilst the operation of drones by SAR personnel provides an advantage in search and rescue, there are opportunities for drones to be utilised by third parties that could endanger operations involving aircraft. For example, if a drone were identified in an area of search activity, aircraft involved would likely be grounded until the drone is removed.

AMSA does not have any concerns with the content of the draft *Radiocommunications (Police Forces – Disruption of Unmanned Aircraft) Exemption Determination 2020*, and considers the power of police under subsections 7(1) and (3) to disrupt or disable a drone for the purposes of the promotion of safety would extend to a situation in which a drone was a hazard during a search and rescue or maritime assistance scenario. An intervention of this kind would mean search and rescue activity could be resumed in a more timely matter, improving the chance of a successful scenario.

Where AMSA was itself using drones in the course of a SAR operation, it would ensure that the relevant police force was kept informed of AMSA's operational activities to avoid any risk of the powers being used against AMSA assets.

Maritime use of the radionavigation-satellite service

The International Maritime Organization (IMO) recognises² global navigation satellite systems (GNSS) for inclusion in a World Wide Radionavigation System (WWRNS). Global Positioning System (GPS), GLONASS (Global Navigation Satellite System), BeiDou Satellite Navigation System (BDS) and Galileo (Galileo Global Navigation Satellite System) are the four systems that meet the functional requirements of the WWRNS.

Specific and prolonged denial of these services jeopardises maritime safety, particularly when integrated in onboard radiocommunication systems (including GMDSS and shipborne AIS). Further, these systems provide a geo-location capability in 406 MHz beacons, marking and timing information for AIS aids to navigation and provide timing information for some of AMSA's communication systems.

AMSA and the Australian maritime industry are contributing to the work of Geoscience Australia to implement a space-based augmentation system (SBAS) in Australia. In addition, AMSA is participating in an international correspondence group seeking to develop a modular performance standard for shipborne GNSS receivers, including guidance on incorporation of SBAS. The incorporation of SBAS in marine GNSS receivers will add an integrity layer that is not currently available.

AMSA continues to support a legislative regime that prohibits the possession, supply and operation of devices designed to cause interference to the frequencies of systems recognised by the IMO in the WWRNS.

² See IMO resolution A.915(22), SN.1/Circ.329 and SN.1/Circ.334.