

# MODEL AERONAUTICAL ASSOCIATION OF AUSTRALIA



## 2.4 GHz EQUIPMENT POLICY

**MOP058**

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This Policy and/or Procedure forms part of the MAAA Manual of Procedures. This entire document is for the use of all classes of members of the MAAA in the conduct of activities associated with the MAAA and is not to be used for any other purpose, in whole or in part, without the written approval of the MAAA Executive.

Shading of text identifies changes to the previous version.

## **2.4 GHz EQUIPMENT POLICY**

### **1. INTRODUCTION**

This frequency band specified for this application in Australia covers the frequency range 2.4000 GHz to 2.4835 GHz.

### **2. DEFINITIONS**

<b>ACMA</b>	Australian Communications and Media Authority
<b>Affiliated Member</b>	A person properly affiliated with a Club that is properly affiliated to an MAAA Ordinary Member
<b>Class Licence</b>	Radiocommunications (Low Interference Potential Devices) Class Licence 2000
<b>C-Tick</b>	A mark attached to the unit by the manufacturer or importer indicating compliance to the mandatory Australian regulatory requirements
<b>EMR</b>	Electromagnetic Radiation
<b>EMC</b>	Electromagnetic Compatibility
<b>ETSI</b>	European Telecommunications Standards Institute Standard
<b>FCC</b>	United States Federal Communications Commission
<b>FCC ID</b>	A number assigned for Equipment Authorisation under various FCC Rules and regulations. An FCC ID label must be found on or within the unit to indicate authorisation.
<b>MAAA</b>	Model Aeronautical Association of Australia Inc
<b>MAAA Ordinary Member</b>	A State Association properly affiliated with the MAAA Inc

### **3. REQUIREMENTS**

- 3.1 Under this policy the MAAA requires that for Affiliated Members to operate on 2.4 GHz, all equipment shall comply with Australian legislation.
- 3.2 All equipment used for the control of model aircraft under this Policy shall conform to the requirements of the Radiocommunications Act 1992 which is administered by the Australian Communications and Media Authority (ACMA). This means that it shall conform to all technical requirements, including those for EMR/EMC, as defined in the AS/ANZ Standards and the relevant Class Licence, Radiocommunications (Low Interference Potential Devices) Class Licence 2000. This is available from the ACMA and is posted on their web site [www.acma.gov.au/Industry](http://www.acma.gov.au/Industry)  
<http://www.acma.gov.au/Industry/Spectrum/Radiocomms-licensing/Spectrum-licences>

- 3.3 These standards and the Class Licence are specific to Australia. The ACMA Short-range spread spectrum device fact sheet, available at <http://www.acma.gov.au/Industry/Spectrum/Radiocomms-licensing/Class-licences/shortrange-spreadspectrum-devices-fact-sheet>, states the ACMA also allows operation of equipment that complies with either provisions of section 15.247 of the Rules and Regulations of the US Federal Communications Commission (FCC), or the requirements of the European Telecommunications Standards Institute Standard ETSI 300 328.
- 3.4 For the user, the fact that an item of equipment has a C-Tick compliance mark applied indicates that the importer or manufacturer has made a declaration of conformity that the equipment complies with the mandatory obligations under the regulatory requirements, holding the appropriate test reports to the applicable standards. Without this compliance mark the Radiocommunications Act places the responsibility on the user to ensure that the equipment complies with the applicable standards. There are severe penalties for operation of equipment that does not comply with the applicable standards.
- 3.5 If equipment does not have a C-Tick compliance sticker and the user is relying on FCC or ETSI compliance marking, then the user must ensure that an FCC or ETSI label or other marking is affixed to the equipment in use and that this identifies the equipment as meeting the specific required standard as defined in 3.2.
- 3.6 The equipment shall be installed and used in accordance with the manufacturer's instructions. This shall include any restrictions on the suitability of specific items for particular applications as recommended by the manufacturers.

#### **4 2.4 GHz DOWNLINKS**

- 4.1 2.4 GHz is also used for downlinks from a model aircraft. In some cases these are invisible to the user and are an element of the binding and the normal data transmission system. In other cases they are used for the transmission of airborne data for the information of the pilot using add on elements of the basic radio system. They are also used for video camera images.
- 4.2 As in all cases when any electronics is added to an aircraft, a range check should be carried out before and after the equipment is added. This is to determine if there is any slowing of the servo response or any interference at maximum range and that there has been no reduction in the range. In the case of video downlinks, because both the video and the control system may operate on different specific frequencies every time, and these can depend on the RF environment at the time of switch on, this check should be repeated several times under different conditions. It is particularly important to included switching on the video link after the control system is operational.