

RobotX 2022 Radio Communication Restrictions

Maritime RobotX Challenge 2022

www.robotx.org

For the Maritime RobotX Challenge in 2022, radio communication will be managed under the restrictions laid out in the Radio Communication Class Licences controlled by the Australian Communication and Media Authority (ACMA).

In Australia, Class Licences let you operate common radio equipment on shared frequencies without needing to get additional approval and alleviate the requirement to have specific qualifications. Each class licence tells you:

- What equipment you can use under the licence
- The permissible frequency range, and
- The rules for using it.

The relevant class licences have been summarised below. Whilst every attempt has been made to ensure the below details are correct, the authoritative sources are the class licences located in the links.

Class Licences

Intelligent Transport Systems Class Licence (SHF)

This class licence lets you operate an intelligent transport systems (ITS) station. ITS uses wireless technology for vehicles and traffic systems to communicate from:

- Vehicle to person
- Vehicle to vehicle
- Vehicle to structure

The following restrictions apply:

- SHF: 5855MHz to 5925MHz
- Radiated power does not exceed a maximum EIRP of 23dBm/MHz
- <https://www.acma.gov.au/licences/intelligent-transport-systems-class-licence>

Radio-Controlled Models Class License (HF/VHF)

This class licence lets you use radio equipment to control model planes, trains, cars, and boats. All users operate on shared frequencies.

The following restrictions apply:

- HF: 29MHz band (29.72MHz to 30MHz)
- VHF: 36 MHz band (36MHz to 36.6MHz)
- Maximum EIRP greater than 300 milliwatts and not exceeding 1 watt
- <https://www.acma.gov.au/licences/radio-controlled-models-class-licence>

Citizen-Band Radio Stations Class Licence (HF/UHF)

This class licence lets you use citizen band (CB) radios to communicate over short distances

The following restrictions apply:

- HF: 26.965MHz to 27.405MHz (inclusive)
- UHF: 476.4125MHz to 477.4125MHz (inclusive)
- <https://www.acma.gov.au/licences/citizen-band-radio-stations-class-licence>

Low Interference Potential Devices (LIPD) Class Licence (MF/VHF/UHF/SHF)

This class licence lets you use some short-range devices on shared frequencies. These include:

- Wi-Fi devices
- Telecommand for drones'
- Radars including automotive
- Ultra-wideband transmitters
- Infrared equipment
- Video sender transmitters

The following restrictions apply:

- <https://www.acma.gov.au/licences/low-interference-potential-devices-lipd-class-licence>

Radio Navigation Satellite Service Class Licence

This class licence lets you use radio navigation satellite service receivers. These are commonly called GPS (Global Positioning System) receivers.

The following restrictions apply:

- You can only receive RNSS signals on the frequencies listed in the class licence:
 - 1164 to 1215MHz
 - 1215 to 1240MHz
 - 1240 to 1300MHz
 - 1559 to 1610MHz
- <https://www.acma.gov.au/licences/radio-navigation-satellite-service-class-licence>