

EXPLANATORY STATEMENT

Approved by the Australian Communications and Media Authority

Radiocommunications Act 1992

Radiocommunications (Science and Research) Class Licence 2023

Authority

The Australian Communications and Media Authority (**the ACMA**) has made the *Radiocommunications (Science and Research) Class Licence 2023* (**the instrument**) under section 132 of the *Radiocommunications Act 1992* (**the Act**).

Section 132 of the Act provides that the ACMA may, by legislative instrument, issue class licences which authorise any person to operate a radiocommunication device of a specified kind, or for a specified purpose, or of a specified kind for a specified purpose. In accordance with section 133 of the Act, the ACMA may include in a class licence such conditions as it thinks fit.

Under section 137 of the Act, the ACMA must not issue a class licence that is inconsistent with the *Australian Radiofrequency Spectrum Plan 2021* (**spectrum plan**) or a frequency band plan. Subsection 9(2) of the spectrum plan provides that any frequency band specified in the spectrum plan may be used by a device that operates in accordance with a class licence, which includes the instrument. The ACMA has made the *Radiocommunications (Science and Research) Frequency Band Plans Amendment Instrument 2023 (No. 1)*, to ensure that the instrument is consistent with relevant frequency band plans.

Under section 138 of the Act, before issuing a class licence that authorises the operation of radiocommunications devices at frequencies that are within a part of the spectrum covered by a spectrum licence or a marketing plan, the ACMA must be satisfied that:

- issuing the class licence would not result in unacceptable levels of interference to the operation of radiocommunications devices operated, or likely to be operated, under spectrum licences;
- issuing the class licence would be in the public interest.

The ACMA is satisfied of these matters in relation to the instrument.

Section 138 of the Act also provides that, before issuing such a class licence, the ACMA must consult with all licensees of spectrum licences who may be affected by the proposed class licence. The ACMA consulted with all such licensees.

Purpose and operation of the instrument

The instrument's purpose is to authorise the operation of radiocommunication devices for general scientific purposes (scientific stations), namely:

- research into radiocommunications;
- investigation of radiocommunications;
- instruction in radiocommunications;
- demonstration of equipment;
- testing of equipment;
- trials of new radiocommunications technology;
- radio propagation path testing;
- repair and maintenance of the station.

Operation of a radiocommunications device is not authorised by a class licence if it is not in accordance with the class licence (subsection 132(3) of the Act). Under section 46 of the Act, it is an offence, and subject to a civil penalty, to operate a radiocommunications device otherwise than as authorised by a spectrum licence, apparatus licence or a class licence. The Act prescribes the following maximum penalties for the offence:

- if the radiocommunications device is a radiocommunications transmitter, and the offender is an individual – imprisonment for 2 years;
- if the radiocommunications device is a radiocommunications transmitter, and the offender is not an individual – 1,500 penalty units (which is \$469,500 based on the current penalty unit amount of \$313);
- if the radiocommunications device is not a radiocommunications transmitter – 20 penalty units (\$6,260).

The Act prescribes the following maximum civil penalties:

- if the radiocommunications device is a radiocommunications transmitter – 300 penalty units (\$93,900);
- if the radiocommunications device is not a radiocommunications transmitter – 20 penalty units (\$6,260).

It is an offence, and subject to a civil penalty, to possess a radiocommunications device for the purpose of operating the device otherwise than as authorised by a spectrum licence, apparatus licence or class licence (section 47 of the Act). The Act prescribes the same penalties for this offence and civil penalty contravention as for the offence and civil penalty contravention in section 46.

ACMA's review of scientific licensing arrangements

To date, all scientific stations have been authorised under apparatus licences issued under section 100 of the Act, namely, scientific licences. The *Radiocommunications Licence Conditions (Scientific Licence) Determination 2015 (the scientific LCD)* imposed common conditions on scientific licences, which broadly set out the activities for which a scientific station may be used.

Scientific licences have been issued either on a non-assigned basis or an assigned basis. Non-assigned scientific licences authorise operation of scientific stations for a specific set of use cases, on shared frequencies specified in the scientific LCD, and subject to other conditions in the scientific LCD. The scientific LCD imposed conditions that effectively authorise three specific non-assigned use cases:

- land and mobile – operation of scientific stations on specified high frequency, very high frequency and ultra high frequency bands;
- ultra-wideband (UWB) – operation of low-power scientific stations for short-range, high-bandwidth communications on any frequency band up to the 10.6 GHz, and in the 22 GHz to 26.5 GHz frequency band;
- ‘controlled emissions’ – operation of any device on any frequency band, provided that all transmissions and electromagnetic energy (EME) emissions are confined to a radiofrequency screened room or shielded enclosure, or dissipated into a dummy load.

Assigned scientific licences authorise the operation of scientific stations at frequencies and locations specified in the licence, and typically have bespoke technical and operational conditions included on each individual licence. Some examples of use cases for assigned licences include trials of new technologies, Global Positioning System retransmission technologies and satellite communications.

The ACMA conducted a review of the scientific licensing framework to assess whether it reflected the best licensing arrangements and efficiently and effectively manages spectrum, consistent with the

ACMA's spectrum management functions. The review identified an opportunity to replace the non-assigned scientific licence with a class licence, to allow licensees to continue conducting the same activities as under the non-assigned scientific framework, while reducing the financial burden on licensees and administrative burden on the ACMA involved in the regular renewal of individual licences.

The ACMA made the instrument following consideration of all relevant issues and concerns raised in the submissions to the review. The instrument largely replicates the provisions of the scientific LCD that applied to non-assigned scientific licences, to authorise persons to operate certain radiocommunications devices for a range of specified scientific purposes, including operation of radiocommunications devices at frequencies in any part of the spectrum (that is, the range of frequencies within which radiocommunications are capable of being made) under specified conditions.

Although operation of a radiocommunications device in accordance with the instrument will ensure a person complies with sections 46 and 47 of the Act, there may be other provisions of the Act that prevent a person operating the device, or that require a person to do some other thing before operating the device (such as obtaining a permit under the *Radiocommunications Equipment (General) Rules 2021* made under the Act).

The ACMA has repealed the scientific LCD, and made the *Radiocommunications Licence Conditions (Scientific Licence) Determination 2023*, which imposes conditions on those scientific licences issued on an assigned basis.

A provision-by-provision description of the instrument is set out in the notes at **Attachment A**.

The instrument is a disallowable legislative instrument for the purposes of the *Legislation Act 2003 (the LA)*.

The instrument is subject to the sunset provisions in Part 4 of Chapter 3 of the LA.

Documents incorporated by reference

Section 314A of the Act provides that an instrument under the Act may make provision in relation to a matter by applying, adopting or incorporating (with or without modifications) matters contained in any Act or any other instrument or writing as in force or existing at a particular time or from time to time.

The instrument incorporates by reference the *Radiation Protection Standard for Limiting Exposure to Radiofrequency Fields – 100 kHz to 300 GHz (2021) (the ARPANSA Standard)*, published by the Australian Radiation Protection and Nuclear Safety Agency, as in existence from time to time. The ARPANSA Standard is available, free of charge, from the Australian Radiation Protection and Nuclear Safety Agency website (www.arpansa.gov.au).

The following Acts and legislative instruments are referred to in the instrument, but are not incorporated by reference:

- the Act;
- the *Acts Interpretation Act 1901*;
- the *Australian Communications and Media Authority Act 2005*;
- the LA;
- the *Radiocommunications (Science and Research) Frequency Band Plans Amendment Instrument (No. 1) 2023*.

These Commonwealth Acts and instruments are available, free of charge, from the Federal Register of Legislation (www.legislation.gov.au).

Consultation

Before the instrument was made, the ACMA was satisfied that consultation was undertaken to the extent appropriate and reasonably practicable, in accordance with section 17 of the LA.

Between 5 December 2022 and 28 February 2023, the ACMA consulted on a review of scientific licensing arrangements. The review was aimed at ensuring the ACMA's scientific licensing arrangements encourage spectrum users to develop, trial and assess new and innovative radiocommunications technologies and services.

As part of the review, the ACMA published a consultation paper and a draft of the instrument on its website. The consultation paper invited comments on the ACMA's proposal to implement class licensing arrangements for scientific purposes, as set out in the draft instrument.

The ACMA received seven submissions. These were from the Australian Mobile Telecommunications Association, Boeing Australia, Free TV, NBN Co, Optus, Radio Amateur Society of Australia and Telstra.

The submissions broadly supported the ACMA's proposal to issue a class licence that would authorise scientific stations previously authorised by non-assigned scientific licences.

With respect to section 137 of the Act, the ACMA indicated in the consultation paper that the draft instrument included a condition that prevented the operation of radiocommunications devices in the frequency bands and areas covered by frequency band plans that were inconsistent with the draft instrument. Although subsection 9(2) of the spectrum plan ensures that the instrument is not inconsistent with the spectrum plan, there remained a number of frequency band plans that were inconsistent with the draft instrument: the *Radiocommunications 1.5 GHz Frequency Band Plan 2015*, the *Radiocommunications (Mobile-Satellite Service) (1980–2010 MHz and 2170–2200 MHz) Frequency Band Plan 2022*, and the *Radiocommunications (Television Outside Broadcasting) (2010–2110 MHz and 2200–2300 MHz) Frequency Band Plan 2022* (collectively, **the relevant frequency band plans**).

However, the consultation also proposed that the relevant frequency band plans would be amended to remove the inconsistency, allowing the instrument to authorise the operation of radiocommunications devices in the frequency bands and areas covered by the relevant frequency band plans.

The submissions did not offer any views on the proposal to amend the relevant frequency band plans, and they have been amended as proposed.

For the purposes of section 138 of the Act, the ACMA notified all spectrum licensees of the consultation paper and draft instrument, and invited them to make submissions.

Regulatory impact assessment

The ACMA consulted with the Office of Impact Analysis (**the OIA**) (formerly the Office of Best Practice Regulation (**OBPR**)) on the requirement for a Regulation Impact Statement (**RIS**). The OIA advised that the instrument does not warrant the preparation of a RIS because the proposed regulatory change to transition non-assigned scientific licences to a class licence is minor and machinery in nature and therefore no further regulatory impact analysis is required – OBPR reference number 22-03565.

Statement of compatibility with human rights

Subsection 9(1) of the *Human Rights (Parliamentary Scrutiny) Act 2011* requires the rule-maker in relation to a legislative instrument to which section 42 (disallowance) of the LA applies to cause a statement of compatibility with human rights to be prepared in respect of that legislative instrument.

The statement of compatibility set out below has been prepared to meet that requirement.

Overview of the instrument

The ACMA has made the instrument under section 132 of the Act. The Instrument authorises the operation of radiocommunication devices for:

- research into radiocommunications;
- investigation of radiocommunications;
- instruction in radiocommunications;
- demonstration of equipment;
- testing of equipment;
- trials of new radiocommunications technology;
- radio propagation path testing;
- repair and maintenance of the station.

The instrument imposes conditions on the operation of devices for these purposes, to prevent that operation from causing interference to radiocommunications.

The instrument replaces the need for some persons to be issued transmitter licences to facilitate experimental and innovative uses of spectrum, product development, testing, and trials of radiocommunications equipment. The instrument increases opportunities for innovative and experimental spectrum use, without impeding the ability of others to use of the spectrum.

Human rights implications

The ACMA has assessed whether the instrument is compatible with human rights, being the rights and freedoms recognised or declared by the international instruments listed in subsection 3(1) of the *Human Rights (Parliamentary Scrutiny) Act 2011* as they apply to Australia.

Having considered the likely impact of the instrument and the nature of the applicable rights and freedoms, the ACMA has formed the view that the instrument does not engage any of those rights or freedoms.

Conclusion

The instrument is compatible with human rights as it does not raise any human rights issues.

Notes to the *Radiocommunications (Science and Research) Class Licence 2023*

Section 1 Name

This section provides for the instrument to be cited as the *Radiocommunications (Science and Research) Class Licence 2023*.

Section 2 Commencement

This section provides for the instrument to commence either at the start of the day after the day it is registered on the Federal Register of Legislation, or immediately after the *Radiocommunications (Science and Research) Frequency Band Plans Amendment Instrument (No. 1) 2023* commences, whichever is later. The *Radiocommunications (Science and Research) Frequency Band Plans Amendment Instrument (No. 1) 2023* needs to commence first, so that the instrument is consistent with the relevant frequency band plans.

Section 3 Authority

This section identifies the provision of the Act that authorises the making of the instrument, namely section 132 of the Act.

Section 4 Purpose of instrument

This section outlines the purpose of the instrument, which is to authorise the operation of radiocommunications devices for *bona fide*:

- scientific or technological research;
- education;
- demonstrations;
- tests; or
- repair and maintenance of those devices.

Section 5 Interpretation

This section defines a number of key terms used throughout the instrument.

A number of other expressions used in the instrument are defined in the Act or in an instrument made under subsection 64(1) of the ACMA Act.

Section 6 References to other instruments

This section provides that in the instrument, unless the contrary intention appears:

- a reference to any other legislative instrument is a reference to that other legislative instrument as in force from time to time; and
- a reference to any other kind of instrument or writing is a reference to that other instrument or writing as in force, or existing, from time to time.

Section 7 Class licence

This section authorises a person to operate a station (being an installation or thing that is, or includes, either or both one or more radiocommunications transmitters and one or more radiocommunications receivers), subject to the conditions in the instrument.

Section 8 Condition – purpose

This section imposes a condition that a person must not operate a station under the instrument unless it is operated primarily to perform one or more of the following purposes:

- research into radiocommunications;
- investigation of radiocommunications;
- instruction in radiocommunications;
- demonstration of equipment;
- testing of equipment;
- trials of new radiocommunications technology;
- radio propagation path testing;
- repair and maintenance of the station.

Section 9 Condition – identification

Subsection 9(1) imposes a condition that a person must not operate, under the instrument, a station that is, or includes, at least one radiocommunications transmitter, unless it is in accordance with subsection (2) or (3). Essentially, a person must identify the station when transmission occurs, unless the transmission is incapable of being used to identify the station.

A person operates a station in accordance with subsection (2) if they transmit sufficient information about the location and nature of the station at the start of each transmission, or at the start of each series of transmissions, for the purposes of identifying the station.

A person operates a station in accordance with subsection (3) if they transmit inaudible information, or use a mode of transmission such that it is not practicable to identify the station in manner set out in subsection (2).

Section 10 Condition – controlled emissions, or uncontrolled emissions on permitted frequencies

Subsection 10(1) imposes a condition that a person must operate a station under the instrument in accordance with one or more of subsections (2), (3), (4), (5) or (6).

A person operates a station in accordance with subsection (2) if all EME emissions from the station are dissipated into a dummy load. This will mean that the station cannot cause interference to other radiocommunications.

A person operates a station in accordance with subsection (3) if:

- the station is operated in a screened room or a shielded enclosure; and
- the signal level of the radio emissions caused by the station at each point of the external surface of the screened room or shielded enclosure is not greater than the mean level of ambient radiofrequency noise in the place the screened room or shielded enclosure is located.

This will mean that the station cannot cause interference to other radiocommunications.

Subsections 10(4) and (5) apply only in relation to the operation of land stations (stations at a fixed point on land) and mobile stations (stations used while in motion, or in a stationary position at a point that is not fixed), respectively.

A person operates a land station in accordance with subsection (4) if the transmitters and receivers that constitute the land station are operated on frequencies specified in Schedule 1, in accordance with any conditions specified in Schedule 1 for operation on those frequencies.

A person operates a mobile station in accordance with subsection (5) if the transmitters and receivers that constitute the mobile station are operated on frequencies specified in Schedule 1, in accordance with any conditions specified in Schedule 1 for operation on those frequencies.

In effect, these two subsections mean that a person may operate land stations and mobile stations to communicate with each other on the specified frequencies.

Subsection 10(6) only applies in relation to the operation of an ultra-wideband station (a station with an emission bandwidth that is at least 500 MHz, or at least 20% of the centre frequency). A person operates a station in accordance with subsection (6) if the station is operated on a frequency specified in Schedule 2, in accordance with any conditions specified in Schedule 2 for operation on that frequency.

Section 11 Condition – harmful interference

Section 11 imposes a condition that a person must not operate a station under the instrument if its operation causes harmful interference to radiocommunications.

Section 12 Condition – public exposure limits

Section 12 imposes a condition that limits the amount of EME that a station, or a group of stations, can emit. A person must not operate a station, or a group of stations, under the instrument in a place accessible by the public if the EME emitted is more than the general public exposure limits specified in the ARPANSA Standard.

Schedule 1 – Permitted frequencies and additional conditions for land stations and mobile stations

In accordance with subsections 10(4) and (5) of the instrument, Schedule 1 sets out the permitted frequencies that land and mobile stations may be operated on, subject to the conditions in column 4 of the Schedule.

Schedule 2 – Permitted frequencies and additional conditions for ultra wideband stations

In accordance with subsection 10(6) of the instrument, Table 1 of Schedule 2 sets out the permitted frequencies that ultra wideband stations may be operated on, subject to the conditions in that Table.

Some of the conditions in Table 1 relate to a maximum field strength of emissions caused by ultra wideband stations.

Table 2 of the Schedule sets the maximum field strength of emissions for the purposes of those conditions.