

Radiocommunications Licence Condition (Area-Wide Licence) Amendment Determination 2022 (No. 1)

The Australian Communications and Media Authority makes the following instrument under subsection 110A(2) of the *Radiocommunications Act 1992*.

Dated:

Member

Member/General Manager

Australian Communications and Media Authority

1 Name

This is the *Radiocommunications Licence Conditions (Area-Wide Licence) Amendment* *Determination 2022 (No. 1)*.

2 Commencement

This instrument commences on the day after the day it is registered on the Federal Register of Legislation.

Note: The Federal Register of Legislation may be accessed free of charge at [www.legislation.gov.au](http://www.legislation.gov.au).

3 Authority

This instrument is made under subsection 110A(2) of the *Radiocommunications Act 1992.*

4 Amendments

The instrument that is specified in Schedule 1 is amended as set out in the applicable items in that Schedule.

Schedule 1—Amendments

Radiocommunications Licence Conditions (Area-Wide Licence) Determination 2020 (F2020L00070)

1 After section 3

Insert:

Note: Paragraph 107(1)(f) of the Act was repealed by the *Radiocommunications Legislation Amendment (Reform and Modernisation) Act 2020*. This Determination has effect as if it had been made under subsection 110A(2) of the Act: see item 24 of Schedule 5 to the *Radiocommunications Legislation Amendment (Reform and Modernisation) Act 2020*.

2 Section 5, definition of *26 GHz band spectrum licence*

Repeal the definition.

3 Section 5

Insert:

***AAS*** means an antenna system where the amplitude and/or phase between antenna elements is continually adjusted, resulting in an antenna pattern that varies in response to short term changes in the radio environment.

Note: AAS stands for active antenna system.

***antenna port*** means an input connector for an antenna system.

4 Section 5, definition of *indoor transmitter*

Repeal the definition.

5 Section 5, definition of *low risk transmitter*

Repeal the definition.

6 Section 5

Insert:

***RALI MS 47*** means the Radiocommunications Assignment and Licensing Instruction No. MS 47 published by the ACMA.

Note: All Radiocommunications Assignment and Licensing Instructions made by the ACMA are available, free of charge, from the ACMA’s website at [www.acma.gov.au](http://www.acma.gov.au).

***Register Determination*** means:

(a) the *Radiocommunications (Register of Radiocommunications Licences) Determination 2017*; or

(b) if another instrument replaces that determination – the other instrument.

7 Section 5, definition of *uplink-downlink configuration*

Repeal the definition.

8 Section 6

Repeal the section, substitute:

**6 Conditions**

For subsection 110A(2) of the Act:

(a) every area-wide licence is subject to the condition in section 7; and

(b) every area-wide licence that authorises the operation of radiocommunications transmitters in any part of the frequency range 24.7 GHz–30 GHz is subject to the conditions specified in Schedule 1; and

(c) every area-wide licence that authorises the operation of radiocommunications transmitters in any part of the frequency range 3.4 GHz–4 GHz is subject to the conditions specified in Schedule 4.

9 Schedule 1, before clause 1

Insert:

**1A Interpretation**

In this Schedule:

***26 GHz band spectrum licence*** means a spectrum licence that authorises the operation of radiocommunications devices in any part of the frequency range 25.1 GHz–27.5 GHz.

***indoor transmitter*** means a radiocommunications transmitter that:

(a) is in an enclosed space; and

(b) has, at every point that is 2 metres from the outside surface of the enclosed space, a power flux density that:

(i) if the transmitter transmits within the frequency range 27 GHz–27.5 GHz and is located inside an inner-footprint area – is less than or equal to -9 dBW/m2 per occupied bandwidth; or

(ii) if the transmitter transmits within the frequency range 27.5 GHz–30 GHz – is less than or equal to -9 dBW/m2 per occupied bandwidth; or

(iii) in any other case – is less than or equal to -7 dBW/m2 per occupied bandwidth.

***low risk transmitter***: see subclause 4(2).

***uplink-downlink configuration*** means an uplink-downlink configuration that is consistent with the uplink-downlink configuration set out in Appendix A of RALI MS 46.

10 Schedule 1, subparagraph 4(1)(a)(i)

Omit ‘*Radiocommunications (Register of Radiocommunications Licences) Determination 2017* (***Register Determination***)’, substitute ‘Register Determination’.

11 After Schedule 3

Insert:

# **Schedule 4—Conditions for radiocommunications transmitters authorised to operate in the frequency range 3.4 GHz–4 GHz**

(paragraph 6(c))

## **1 Interpretation**

In this Schedule:

***3.4 GHz band guidelines*** means:

(a) the *Radiocommunications Advisory Guidelines (Managing Interference to Spectrum Licensed Receivers – 3.4 GHz Band) 2015*; or

(b) if another instrument replaces those guidelines – the other instrument.

***3.4 GHz band spectrum licence*** means a spectrum licence that authorises the operation of radiocommunications devices in any part of the frequency range 3.4 GHz–3.7 GHz.

***3GPP TS 36.211*** means “LTE; Evolved Universal Terrestrial Radio Access (E-UTRA); Physical channels and modulation (3GPP TS 36.211)”, published by the European Telecommunications Standards Institute.

Note: 3GPP TS 36.211 is available, free of charge, from the European Telecommunication Standards Institute’s website at <https://portal.etsi.org>.

***low risk transmitter***:see subclause 3(2).

***uplink-downlink configuration*** means an uplink-downlink configuration that is consistent with both:

(a) uplink-downlink configuration 2 in Table 4.2-2 of 3GPP TS 36.211; and

(b) special subframe configuration 6 in Table 4.2-1 of 3GPP TS 36.211.

## **2 Maximum total radiated power - transmitters**

A licensee must not operate a radiocommunications transmitter under an area-wide licence at a total radiated power greater than 48 dBm/5 MHz.

## **3 Recording devices in the Register**

(1) A licensee must not operate a radiocommunications transmitter under an area-wide licence (***the relevant licence***) unless:

(a) the following details in relation to the transmitter have been entered in the Register:

(i) the details about the use of spectrum by the transmitter set out in subsection 10(4) of the Register Determination;

(ii) the details about the transmitter set out in subsection 10(5) of the Register Determination;

(iii) the details about the antenna for the transmitter set out in subsection 10(6) of the Register Determination;

(iv) the details about the site where the transmitter is located set out in subsection 10(7) of the Register Determination; and

(b) the transmitter complies with the details in relation to it that have been entered in the Register.

Note: Subclause (1) is a condition of the kind referred to in subsections 10(4A), (5A), (6A) and (7A) of the Register Determination. The Register Determination is available, free of charge, from the Federal Register of Legislation at [www.legislation.gov.au](http://www.legislation.gov.au).

(2) Subclause (1) does not apply in relation to a radiocommunications transmitter (***low risk transmitter***) that operates with a maximum total radiated power that is less than or equal to 28 dBm per occupied bandwidth.

Note: A low risk transmitter must still comply with the total radiated power limit in the condition in clause 2, and with other applicable conditions in this Determination.

(3) Subclause (1) does not require the entry in the Register of details in relation to a radiocommunications transmitter if the operation of the transmitter would not comply with a condition of the relevant licence (other than the condition in subclause (1)).

## **4 Compliance with RALI MS 47**

A licensee must not operate a radiocommunications transmitter under an area-wide licence if the operation of the transmitter would be inconsistent with any requirement in RALI MS 47 in relation to one or more of the following matters:

(a) coordination of a radiocommunications transmitter with radiocommunications receivers included in the Register before the transmitter was first operated;

(b) coordination of a radiocommunications transmitter with any other radiocommunications devices;

(c) the permitted location of the device boundary for a radiocommunications transmitter.

Note 1: For paragraph (c), the ‘device boundary’ for a radiocommunications transmitter in RALI MS 47 is a measurement of certain power levels at points surrounding the transmitter.

Note 2: All Radiocommunications Assignment and Licensing Instructions made by the ACMA are available, free of charge, from the ACMA’s website at [www.acma.gov.au](http://www.acma.gov.au).

## **5 Synchronisation requirement**

(1) If:

(a) interference occurs between:

(i) a radiocommunications transmitter (the ***first device***) operated under an area-wide licence (the ***first licence***); and

(ii) one or more radiocommunications devices (the ***other devices***) operated under another area-wide licence or a 3.4 GHz spectrum licence (the ***other licence***); and

(b) the level of interference to the first device or to one or more of the other devices exceeds the compatibility requirement set out in Schedule 2 to the 3.4 GHz band guidelines; and

(c) either the licensee of the first licence or the licensee of the other licence wishes to resolve the interference; and

(d) no agreement between the licensee and each person operating one or more of the other devices can be reached on how to manage the interference;

then, by the end of the day specified in subclause (2), the licensee of the first licence is required to manage the interference by:

(e) either:

(i) operating the first device with the 3.4 GHz band uplink-downlink configuration; or

(ii) operating the first device using a sequence and duration of radio emissions that is consistent with that configuration (disregarding any time at which the device is not making a radio emission); and

(f) synchronising the timing of the 3.4 GHz band uplink-downlink configuration or other sequence of radio emissions of the first device with the timing of the uplink-downlink configuration or other sequence of radio emissions of each of the other devices (disregarding any device at a time at which the device is not making a radio emission).

(2) For the purposes of subclause (1), the later of the following days is specified:

(a) the day occurring 14 days after the day the interference was first reported in writing to the licensee of the first licence;

(b) if an alternative day is agreed with the licensee of the other licence – that alternative day.

Note 1: This condition applies equally to all area-wide licences which authorise the operation of radiocommunications devices in any part of the frequency range 3.4 GHz–4 GHz. For example, if interference occurs between two radiocommunications devices operated under two area-wide licences, each licensee must comply with this condition.

Note 2: The 3.4 GHz band guidelines are available, free of charge, from the Federal Register of Legislation at [www.legislation.gov.au](http://www.legislation.gov.au).

## **6 Co-sited radiocommunications devices**

(1) If:

(a) interference occurs between:

(i) a radiocommunications transmitter (the ***first device***) operated under an area-wide licence (the ***first licence***); and

(ii) a radiocommunications device (the ***other device***) operated under a spectrum licence or another apparatus licence (the ***other licence***);

when the measured separation between the phase centre of the antenna used with each device is less than 500 metres; and

(b) that interference is not the result of operation of:

(i) the first device in a manner that does not comply with the conditions of the first licence; or

(ii) the other device in a manner that does not comply with the conditions of the other licence; and

(c) either the licensee of the first licence or the licensee of the other licence wishes to resolve the interference;

the licensee of the first licence must manage the interference with either:

(d) the licensee of the other licence; or

(e) if a site manager is responsible for managing interference at the location of the other device – that site manager.

Note: This condition applies equally to all area-wide licences which authorise the operation of radiocommunications devices in any part of the frequency range 3.4 GHz–4 GHz. For example, if interference occurs between two radiocommunications devices operated under two area-wide licences, each licensee must comply with this condition.

## **7 Responsibility to manage interference**

The licensee of an area-wide licence must manage interference between:

(a) radiocommunications devices operated under the licence; and

(b) radiocommunications devices operated under any other licence held by the licensee or operated by the licensee under a class licence.

## **8 Harmful interference**

The licensee of an area-wide licence must ensure that the operation of a low-risk transmitter does not cause harmful interference to a radiocommunications device operated under a spectrum licence or an apparatus licence held by another person.

## **9 Unwanted emissions**

*Unwanted emission limits – application*

(1) The licensee of an area-wide licence must not operate a radiocommunications transmitter that is not a low risk transmitter if its unwanted emissions exceed the limits in subclauses (3), (4), (6) or (7).

(2) The licensee of an area-wide licence must not operate a radiocommunications transmitter that is a low risk transmitter if its unwanted emissions exceed the limits in subclauses (5), (6) or (7).

*Radiocommunications transmitters other than low risk transmitters*

(3) For radiocommunications transmitters without AAS, the unwanted emission limit in Table 1, measured over the specified bandwidth, applies at frequencies:

(a) outside the upper or lower frequency limits specified in the licence; and

(b) offset from the upper and lower frequency limits set out in the licence;

where:

***foffset*** means the frequency offset from the upper or lower frequency limits set out in the licence. The closest -3dB point of the specified bandwidth to the upper and lower frequency limits set out in the licence is placed at foffset.

Note: This subclause does not apply to low risk transmitters – see subclause (1).

**Table 1: Unwanted emission limit – radiocommunications transmitters without AAS that are not low risk transmitters**

| Column 1 | Column 2 | Column 3 |
| --- | --- | --- |
| Frequency range (*foffset*) | Mean power per antenna port (dBm) | Specified bandwidth |
| 0 MHz ≤ *foffset* < 5 MHz | -7 – (7/5) *foffset* (MHz) | 100 kHz |
| 5 MHz ≤ *foffset* < 10 MHz | -14 | 100 kHz |
| *foffset* ≥ 10 MHz | -15 | 1 MHz |

(4) For radiocommunications transmitters with AAS, the unwanted emission limit in Table  2, measured over the specified bandwidth, applies at frequencies:

(a) outside the upper or lower frequency limits specified in the licence; and

(b) offset from the upper and lower frequency limits set out in the licence;

where:

***foffset*** means the frequency offset from the upper or lower frequency limits set out in the licence. The closest -3dB point of the specified bandwidth to the upper and lower frequency limits set out in the licence is placed at foffset.

Note: This subclause does not apply to low risk transmitters – see subclause (1).

**Table 2: Unwanted emission limit – radiocommunications transmitters with AAS that are not low risk transmitters**

| Column 1 | Column 2 | Column 3 |
| --- | --- | --- |
| Frequency range (*foffset*) | Total radiated power (dBm) | Specified bandwidth |
| 0 MHz ≤ *foffset* < 5 MHz | 2 – (7/5) *foffset* (MHz) | 100 kHz |
| 5 MHz ≤ *foffset* < 10 MHz | -5 | 100 kHz |
| *foffset* ≥ 10 MHz | -6 | 1 MHz |

*Radiocommunications transmitters that are low risk transmitters*

(5) For low risk transmitters, the unwanted emission limit in Table 3, measured over the specific bandwidth, applies at frequencies:

(a) outside the upper or lower frequency limits specified in the licence; and

(b) offset from the upper and lower frequency limits set out in the licence;

where:

***foffset*** means the frequency offset from the upper or lower frequency limits set out in the licence. The closest -3dB point of the specified bandwidth to the upper and lower frequency limits set out in the licence is placed at foffset.

Note: This subclause only applies to low risk transmitters – see subclause (2).

**Table 3: Unwanted emission limit – radiocommunications transmitters that are low risk transmitters**

| Column 1 | Column 2 | Column 3 |
| --- | --- | --- |
| Frequency range (*foffset*) | Total radiated power (dBm) | Specified bandwidth |
| 0 MHz ≤ *foffset* < 1 MHz | -15 | 30 kHz |
| 1 MHz ≤ *foffset* < 5 MHz | -10 | 1 MHz |
| 5 MHz ≤ *foffset* < 100 MHz | -13 | 1 MHz |
| *foffset* ≥ 100 MHz | -25 | 1 MHz |

*All radiocommunications transmitters*

(6) For radiocommunications transmitters without AAS, the unwanted emission limit in Table 4, measured over the specified bandwidth, applies at frequencies:

(a) for low risk transmitters – outside the 3295 MHz to 4105 MHz frequency band; or

(b) otherwise – outside the 3360 MHz to 4240 MHz frequency band;

where:

***f*** means the frequency of the unwanted emission.

Note: This subclause applies to all radiocommunications transmitters without AAS – see subclauses (1) and (2).

**Table 4: Unwanted emission limit – radiocommunications transmitters without AAS, outside certain bands**

| Column 1 | Column 2 | Column 3 |
| --- | --- | --- |
| Frequency range (*f*) | Mean power per antenna port (dBm) | Specified bandwidth |
| 9 kHz ≤ *f* < 150 kHz | -36 | 1 kHz |
| 150 kHz ≤ *f* < 30 MHz | -36 | 10 kHz |
| 30 MHz ≤ *f* < 1 GHz | -36 | 100 kHz |
| 1 GHz ≤ *f* < 19 GHz | -30 | 1 MHz |

(7) For radiocommunications transmitters with AAS, the unwanted emission limit in Table 5, measured over the specified bandwidth, applies at frequencies:

(a) for low risk transmitters – outside the 3295 MHz to 4105 MHz frequency band; or

(b) otherwise – outside the 3360 MHz to 4240 MHz frequency band;

where:

***f*** means the frequency of the unwanted emission.

Note: This subclause applies to all radiocommunications transmitters with AAS – see subclauses (1) and (2).

**Table 5: Unwanted emission limit – radiocommunications transmitters with AAS, outside certain bands**

| Column 1 | Column 2 | Column 3 |
| --- | --- | --- |
| Frequency range (*f*) | Total radiated power (dBm) | Specified bandwidth |
| 9 kHz ≤ *f* < 150 kHz | -27 | 1 kHz |
| 150 kHz ≤ *f* < 30 MHz | -27 | 10 kHz |
| 30 MHz ≤ *f* < 1 GHz | -27 | 100 kHz |
| 1 GHz ≤ *f* < 19 GHz | -21 | 1 MHz |