



# Australian Communications and Media Authority (Radiocommunications Licence Conditions—3.4 and 3.6 GHz Bands Interference Management) Direction 2018

*Australian Communications and Media Authority Act 2005*

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I, MITCH FIFIELD, Minister for Communications, give the following direction.

Dated 17 July 2018

MITCH FIFIELD  
Minister for Communications

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## 1 Name

This instrument is the *Australian Communications and Media Authority (Radiocommunications Licence Conditions—3.4 and 3.6 GHz Bands Interference Management) Direction 2018*.

## 2 Commencement

This instrument commences on the day after it is registered.

## 3 Authority

This instrument is made under subsection 14(1) of the *Australian Communications and Media Authority Act 2005*.

## 4 Interpretation

(1) In this instrument:

**3.4 GHz band** means the part of the spectrum from 3400 to 3575 MHz.

**3.4 GHz spectrum licence** means a spectrum licence that authorises the operation of a radiocommunications device in the 3.4 GHz band.

**Act** means the *Australian Communications and Media Authority Act 2005*.

**compatibility requirement** means the compatibility requirement set out in the *Radiocommunications Advisory Guidelines (Managing Interference to Spectrum Licensed Receivers — 3.4 GHz Band) 2015*, as in force from time to time.

Note: See Schedule 2 to the *Radiocommunications Advisory Guidelines (Managing Interference to Spectrum Licensed Receivers — 3.4 GHz Band) 2015*.

**Hierarchical Cell Identification Scheme** or **HCIS** means the Hierarchical Cell Identification Scheme used as part of the Australian Spectrum Map Grid 2012 document published by the ACMA on its website, as the document existed at the time this instrument was made.

**interference**, in relation to radiocommunications, has the same meaning as in the *Radiocommunications Act 1992*.

**PTS transmitter licence** means a transmitter licence of the PTS type.

**radiocommunications device** has the same meaning as in the *Radiocommunications Act 1992*.

**radio emission** has the same meaning as in the *Radiocommunications Act 1992*.

**relevant area** has the meaning given by section 8.

**relevant band** means the part of the spectrum from 3400 to 3700 MHz.

**special subframe configuration 6** means a special subframe configuration, as referred to in clause 4.2 of the technical specification, that is consistent with special subframe configuration 6, as referred to in Table 4.2-1 of the technical specification.

**spectrum** has the same meaning as in the *Radiocommunications Act 1992*.

**spectrum licence** has the same meaning as in the *Radiocommunications Act 1992*.

**technical specification** means the document entitled “LTE; Evolved Universal Terrestrial Radio Access (E-UTRA); Physical channels and modulation (3GPP TS 36.211 version 14.6.0 Release 14)” published by the European Telecommunications Standards Institute (ETSI), as it existed at the time this instrument was made.

**transmitter licence** has the same meaning as in the *Radiocommunications Act 1992*.

**type**, in relation to a transmitter licence, has the same meaning as in the *Radiocommunications Act 1992*.

**uplink-downlink configuration 2** means an uplink-downlink configuration, as referred to in clause 4.2 of the technical specification, that is consistent with

uplink-downlink configuration 2, as referred to in Table 4.2-2 of the technical specification.

Note: A number of expressions used in this instrument are defined in the Act, including the following:

- (a) ACMA;
- (b) radiocommunications.

- (2) In this direction, a reference to a part of the spectrum includes all frequencies that are greater than but not including the lower frequency, up to and including the higher frequency.

Note: This means the lower number in the reference to a part of the spectrum is not included in the part of the spectrum.

## 5 Direction—conditions of 3.4 GHz spectrum licences

- (1) I direct the ACMA to take all reasonable steps to ensure that a person (the *first person*) operating a radiocommunications device (the *first device*):

- (a) in the 3.4 GHz band; and
- (b) within the relevant area; and
- (c) under a spectrum licence; and
- (d) on or after 30 March 2020;

is required to manage interference between the radiocommunications of the first device and of other radiocommunications devices (*other devices*) operated:

- (e) in the relevant band; and
- (f) within the relevant area; and
- (g) under:
  - (i) other spectrum licences; or
  - (ii) PTS transmitter licences; and
- (h) on or after 30 March 2020;

where:

- (i) the level of interference to the first device or to any of the other devices exceeds the compatibility requirement; and
- (j) the first person and all of the persons operating the other devices have not agreed how to manage the interference;

by ensuring that:

- (k) the first device is either operated with a frame structure that uses both uplink-downlink configuration 2 and special subframe configuration 6, or the device is operated using a sequence and duration of radio emissions that is consistent with those configurations (disregarding any time at which the device is not making a radio emission); and
- (l) the timing of the frame structure or other sequence of radio emissions of the first device is synchronised with the timing of the frame structure or other sequence of radio emissions of each of the other devices (disregarding any device at a time it is not making a radio emission).

- (2) To give effect to subsection (1), I direct the ACMA to consider performing its functions and exercising its powers to ensure that each 3.4 GHz spectrum licence is subject to a condition to the effect referred to in that subsection.

- (3) I direct the ACMA to have regard to the following matters when performing functions or exercising powers in accordance with a direction in subsection (1) or (2), and to give significant weight to paragraph (a):
- (a) the impact that the requirement to manage interference in the manner mentioned in subsection (1) may have on:
    - (i) reducing interference to the radiocommunications carried on by the users of the relevant band; and
    - (ii) maximising the overall public benefit derived from using the relevant band by ensuring the efficient allocation and use of the relevant band; and
  - (b) any other matter that the ACMA considers relevant.

## 6 Direction—3.4 GHz PTS transmitter licence conditions determination

- (1) I direct the ACMA to:
- (a) determine, under paragraph 107(1)(f) of the *Radiocommunications Act 1992*, a condition to the effect referred to in subsection (2) in relation to the PTS type of transmitter licences; and
  - (b) to take all reasonable steps to ensure that such a condition is in force at all times on and after 30 March 2020.

- (2) The condition must require a person (the *first person*) operating a radiocommunications device (the *first device*):

- (a) in the 3.4 GHz band; and
- (b) within the relevant area; and
- (c) under a PTS transmitter licence; and
- (d) on or after 30 March 2020;

to manage interference between the radiocommunications of the first device and of other radiocommunications devices (*other devices*) operated:

- (e) in the relevant band; and
- (f) within the relevant area; and
- (g) under:
  - (i) spectrum licences; or
  - (ii) other PTS transmitter licences; and
- (h) on or after 30 March 2020;

where:

- (i) the level of interference to the first device or to any of the other devices exceeds the compatibility requirement; and
- (j) the first person and all of the persons operating the other devices have not agreed how to manage the interference;

by ensuring that:

- (k) the first device is either operated with a frame structure that uses both uplink-downlink configuration 2 and special subframe configuration 6, or the device operated using a sequence and duration of radio emissions that is consistent with those configurations (disregarding any times at which the device is not making a radio emission); and

- (l) the timing of the frame structure or other sequence of radio emissions of the first device is synchronised with the timing of the frame structure or

other sequence of radio emissions of each of the other devices  
(disregarding any device at a time it is not making a radio emission).

## 7 Consistency with the Radiocommunications Act etc.

A direction given in this instrument does not require the ACMA to perform a function or exercise a power under the *Radiocommunications Act 1992* in a manner that would be inconsistent with the requirements of that Act or any other law of the Commonwealth.

## 8 Relevant area

For the purposes of this instrument, the **relevant area** is the composite of the areas, described using identifiers from the Hierarchical Cell Identification Scheme, set out in column 1 of item 1 of the following table.

- Note 1: The HCIS is a naming convention for areas on the Australian Spectrum Map Grid 2012 (ASMG), which is a system used by the ACMA to define geographic areas for radiocommunications licensing. A document describing the ASMG and HCIS, as well as spatial datasets describing each HCIS area could, at the time this instrument was made, be found on the ACMA's website (<http://www.acma.gov.au>).
- Note 2: A tool to convert lists of HCIS area descriptions, such as the list contained in the below table, into Placemark files to allow these areas to be visualised using computer mapping software could, at the time this instrument was made, be found on the ACMA's website (<http://www.acma.gov.au>).

<b>Relevant area</b>	
<b>Item</b>	<b>Column 1</b>
<b>Areas forming the relevant area (HCIS Identifiers)</b>	
1	BV, CV, DV, IV, IW, JV, JW, KQ, KV, KW, LR, LV, LW, LX, LY, MS, MT, MU, MV, MW, NT, NU, AU9, AV9, AW3, BU7, BU8, BW1, BW2, BW3, BW5, BW6, CW1, CW2, CW3, CW4, DW1, DW2, DW3, EV1, EV2, EV3, EV4, EV5, EV6, EV7, FV1, FV2, FV3, FV4, FV5, GV1, GV2, GV3, GV6, HV1, HV2, HV3, HV4, HV5, HV6, HV8, HV9, HW3, HW6, JX1, JX2, JX3, JX5, JX6, KO1, KO4, KO5, KO7, KO8, KP1, KP2, KP4, KP5, KP6, KP7, KP8, KP9, KX1, KX2, KX3, KX4, KX5, KX6, KX8, KX9, KY2, KY3, KY6, LP4, LP7, LQ1, LQ2, LQ4, LQ5, LQ7, LQ8, LZ1, LZ2, LZ3, MR1, MR4, MR5, MR7, MR8, MR9, MX1, MX2, MX3, MX4, MX7, MY1, MY4, MY7, MZ1, NS4, NS7, NS8, NS9, NV1, NV2, NV3, NV4, NV5, NV7, NW1, AU6I, AU6J, AU6K, AU6L, AU6M, AU6N, AU6O, AU6P, BU4H, BU4I, BU4J, BU4K, BU4L, BU4M, BU4N, BU4O, BU4P, BU5E, BU5F, BU5G, BU5H, BU5I, BU5J, BU5K, BU5L, BU5M, BU5N, BU5O, BU5P, BU9A, BU9B, BU9E, BU9F, BU9I, BU9J, BU9M, BU9N