Radiocommunications Regulations (General User Radio Licence for Ultra Wide Band Devices) Notice 2017

Pursuant to Regulation 9 of the Radiocommunications Regulations 2001 ("Regulations") made under section 116(1)(b) of the Radiocommunications Act 1989 ("Act"), and acting under delegated authority from the chief executive, I give the following notice.

Notice

1. Short title and commencement—(1) This notice is the Radiocommunications Regulations (General User Radio Licence for Ultra Wide Band Devices) Notice 2017.

(2) This notice comes into force on **30 January 2017**.

2. Licence—

(1) Licence Name: General User Radio Licence for Ultra Wide Band Devices.
(2) Licence: Any person may transmit radio waves using Ultra Wide Band (UWB) devices in accordance with the applicable terms, conditions and restrictions of this notice.
(3) Licence number: 256642
(4) Commencement date: **30 January 2017**.

3. Spectrum—

Low (MHz)	High (MHz)	Reference Frequency (MHz)	Maximum Power dBW e.i.r.p.	Remarks
0.009	1600.000	800.000	-80	Special condition 1
1600.000	2700.000	2150.000	-75	Special condition 2
2700.000	3400.000	3050.000	-66	Special conditions 3 and 7
3400.000	3800.000	3600.000	-70	Special conditions 4 and 7
3800.000	4200.000	4000.000	-60	Special conditions 3 and 7
4200.000	4800.000	4500.000	-60	Special conditions 3, 7, 8 and 9
4800.000	6000.000	5400.000	-60	Special condition 3
6000.000	8500.000	7250.000	-30	Special conditions 5, 8 and 9
8500.000	10600.000	9550.000	-55	Special condition 6
10600.000	100000.000	55300.000	-75	Special condition 2

4. Location—

(1) Transmit Location: All New Zealand.
(2) Receive Location: All New Zealand.

5. Special conditions—

1. The maximum permitted mean power spectral density is -90 dBm/MHz e.i.r.p.
2. The maximum permitted mean power spectral density is -85 dBm/MHz e.i.r.p.
3. The maximum permitted mean power spectral density is -70 dBm/MHz e.i.r.p.
4. The maximum permitted mean power spectral density is -80 dBm/MHz e.i.r.p.
5. The maximum permitted mean power spectral density is -41.3 dBm/MHz e.i.r.p.
6. The maximum permitted mean power spectral density is -65 dBm/MHz e.i.r.p.
7. Within the band 3.1 – 4.8 GHz, devices implementing low duty cycle mitigation techniques are permitted to operate with:
    1. a maximum permitted mean power spectral density of -41.3 dBm/MHz e.i.r.p.; and
    2. a maximum power of -30 dBW e.i.r.p.
8. Road and rail vehicles:

1. For devices installed in road and rail vehicles, where transmit power control is implemented:
    a. the maximum permitted mean power spectral density is -41.3 dBm/MHz e.i.r.p;
    b. the maximum power is -30 dBW e.i.r.p.; and
    c. the transmit power control must operate with a dynamic range of at least 12 dB below the maximum mean e.i.r.p. spectral density.
2. For devices installed in road and rail vehicles, where transmit power control is not implemented:
    a. the maximum permitted mean power spectral density is -53.3 dBm/MHz e.i.r.p.; and
    b. the maximum power is -42 dBW e.i.r.p.

9. Within the bands 4.2 – 4.8 GHz and 6.0 – 6.8 GHz, fixed outdoor transmitters installed in-ground are permitted for operation below the horizontal plane with:
    1. a maximum permitted mean power spectral density of -62 dBm/MHz e.i.r.p.; and
    2. a maximum power of -52 dBW e.i.r.p.

6. General conditions applying to all transmissions under this licence—

1. The frequency ranges, maximum power of transmissions within those frequencies ranges, and designated uses of frequencies are those prescribed in this licence. All transmissions in a given frequency range must comply with any special conditions relating to that frequency range.
2. The maximum power dBW e.i.r.p. is the highest mean radiated power measured in any direction and at any frequency within the defined range within a 50 MHz bandwidth centred on the frequency at which the highest mean radiated power occurs.
3. The maximum permitted mean power spectral density e.i.r.p. is the highest signal strength measured in any direction at any frequency within the defined range, where the mean e.i.r.p. spectral density is measured with a 1 MHz resolution bandwidth, an RMS detector and an averaging time of 1ms or less.
4. Transmissions are not permitted:
    1. on board any aircraft; or
    2. from any fixed outdoor transmitter or antenna except those devices permitted under section 5 part 9.
5. Transmitters must conform to technical standards as prescribed in notices under Regulation 32(1)(b) of the Regulations.
6. Frequency use is on a shared basis and the chief executive does not accept liability under any circumstances for any loss or damage of any kind occasioned by the unavailability of frequencies or interference to reception.
7. Should interference occur to services licensed pursuant to a radio licence or a spectrum licence, the chief executive reserves the right to require and ensure that any transmission or any emission pursuant to this General User Radio Licence change frequency, reduce power or cease operation.

7. Consequential revocation of licence—(1) The Radiocommunications Regulations (General User Radio Licence for Ultra Wide Band Devices) Notice 2015, dated 19 March 2015 and published in the *New Zealand Gazette*, 19 March 2015, Issue No. 26, Notice No. 2015-go1512, is revoked.

(2) Notwithstanding the revocation of the notice under subsection (1), every transmitter capable of making transmissions compliant with the requirements of that notice on the commencement date of this notice is deemed to be compliant with the requirements of this notice.

Dated at Wellington this 2nd day of February 2017.

JEFFREY DENNIS HICKS, Licensing Manager, Radio Spectrum Management, Ministry of Business, Innovation and Employment.

Explanatory note

This note is not part of the notice, but is intended to provide further information.

Low Duty Cycle (LDC): ETSI EN 302 065-1 V1.3.1 prescribes low duty cycle requirements in the context of UWB.

This notice is updated to permit the operation of in-ground UWB transmitter in an outdoor environment within the frequency bands 4.2 – 4.8 GHz and 6.0 – 6.8 GHz.

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