# Radiocommunications Regulations (General User Radio Licence for Short Range Devices) Notice 2022

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 Short Range Devices) Notice 2022.

(2) This notice comes into force on 1 **August 2022**.

**2. Licence—**

(1) Licence Name: General User Radio Licence for Short Range Devices (SRDs).

(2) Licence: Any person may transmit radio waves using Short Range Devices (SRDs), also known as Restricted Radiation Devices (RRDs), Low Interference Potential Devices (LIPDs), or Spread Spectrum Devices (SSDs), in accordance with the applicable terms, conditions and restrictions of this notice.

(3) Licence number: 296531

(4) Commencement date: **1 August 2022**

**3. Spectrum—**

| Low (MHz) | High (MHz) | Reference Frequency (MHz) | Maximum Power dBW e.i.r.p. | Remarks |
|---|---|---|---|---|
| 0.0090 | 0.0900 | 0.0495 | 9.0 | Special conditions 1, 8 and 25 |
| 0.0900 | 0.2050 | 0.1475 | –20.0 | Special conditions 1, 8 and 25 |
| 0.1190 | 0.1350 | 0.1270 | 3.0 | Special conditions 1, 8 and 25 |
| 0.1485 | 30.0000 | 15.07425 | –56.0 | Special conditions 8 and 21 |
| 0.3150 | 0.4300 | 0.3725 | –67.0 | Special conditions 1, 8 and 25 |
| 3.1550 | 3.4000 | 3.2775 | –50.0 | Special conditions 2 and 20 |
| 3.6400 | 4.0400 | 3.8400 | –76.0 | Special conditions 2 and 20 |
| 6.7650 | 6.7950 | 6.7800 | –20.0 | |
| 7.4000 | 8.8000 | 8.1000 | –54.0 | Special condition 19 |
| 10.4400 | 10.7600 | 10.6000 | –76.0 | Special conditions 2 and 20 |
| 13.5530 | 13.5670 | 13.5600 | –10.0 | |
| 13.5530 | 13.5670 | 13.5600 | –3.0 | Special condition 12 |
| 26.9500 | 27.3000 | 27.1250 | 0.0 | |
| 29.7000 | 30.0000 | 29.8500 | –10.0 | |
| 30.8000 | 31.5000 | 31.1500 | –10.0 | Special condition 3 |
| 35.5000 | 37.2000 | 36.3500 | –10.0 | |
| 40.6600 | 40.7000 | 40.6800 | 0.0 | |
| 40.8000 | 41.0000 | 40.9000 | –10.0 | |
| 49.8200 | 49.9000 | 49.8600 | –10.0 | |
| 49.8200 | 49.9800 | 49.9000 | –20.0 | |
| 72.0000 | 72.2500 | 72.1250 | –10.0 | Special condition 2 |
| 72.2500 | 72.5000 | 72.3750 | –10.0 | |
| 87.5000 | 108.0000 | 98.0000 | –50.0 | Special condition 4 |
| 107.0000 | 108.0000 | 107.5000 | –16.0 | |
| 160.1000 | 160.6000 | 160.3500 | –3.0 | |
| 173.0000 | 174.0000 | 173.5000 | –10.0 | |
| 235.0000 | 300.0000 | 267.5000 | –30.0 | Special condition 1 |
| 300.0000 | 322.0000 | 311.0000 | –20.0 | Special condition 1 |
| 402.0000 | 405.0000 | 403.5000 | -46.0 | Special condition 5 |
| 405.0000 | 406.0000 | 405.5000 | –46.0 | Special conditions 5 and 14 |
| 433.0500 | 434.7900 | 433.9200 | –16.0 | |
| 444.0000 | 444.9250 | 444.4625 | –16.0 | Special condition 5 |
| 458.5400 | 458.6100 | 458.5750 | –3.0 | |
| 466.8000 | 466.8500 | 466.8250 | –3.0 | |
| 470.0000 | 470.5000 | 470.2500 | –10.0 | Special condition 5 |

| | | | | |
|---|---|---|---|---|
| 471.0000 | 471.5000 | 471.2500 | –10.0 | |
| 502.0000 | 510.0000 | 506.0000 | –3.0 | Special condition 24 and 26 |
| 502.0000 | 694.0000 | 598.0000 | –50.0 | Special condition 6 |
| 819.0000 | 824.0000 | 821.0000 | –10.0 | |
| 864.0000 | 868.0000 | 866.0000 | 6.0 | Special condition 13 |
| 868.0000 | 870.0000 | 869.0000 | –27.0 | Special conditions 1 and 15 |
| 869.2000 | 869.2500 | 869.2250 | –20.0 | Special conditions 1 and 15 |
| 915.0000 | 928.0000 | 921.5000 | 0.0 | Special condition 23 |
| 920.0000 | 928.0000 | 924.0000 | 6.0 | Special conditions 13 and 23 |
| 1785.0000 | 1805.0000 | 1795.0000 | –17 | Special condition 24 and 29 |
| 1785.0000 | 1805.0000 | 1795.0000 | –13 | Special condition 24 and 29 |
| 2400.0000 | 2483.5000 | 2441.7500 | 6.0 | Special condition 13 |
| 2900.0000 | 3400.0000 | 3150.0000 | –10.0 | Special condition 7 |
| 5150.0000 | 5350.0000 | 5250.0000 | 0.0 | Special conditions 9 and 17 |
| 5250.0000 | 7000.0000 | 6125.0000 | –54.0 | Special condition 27 |
| 5470.0000 | 5725.0000 | 5597.5000 | 0.0 | Special conditions 9 and 18 |
| 5470.0000 | 5725.0000 | 5597.5000 | –10.0 | Special condition 7 |
| 5725.0000 | 5850.0000 | 5787.5000 | 23 | Special condition 28 |
| 5725.0000 | 5875.0000 | 5800.0000 | 6.0 | Special condition 13 |
| 5725.0000 | 5875.0000 | 5800.0000 | 3.0 | Special condition 10 |
| 5925.0000 | 6425.0000 | 6175.0000 | -6.0 | Special conditions 9 and 30 |
| 5925.0000 | 6425.0000 | 6175.0000 | -16.0 | Special conditions 9 and 31 |
| 8500.0000 | 10000.0000 | 9250.0000 | –10.0 | Special condition 7 |
| 8500.0000 | 10000.0000 | 9250.0000 | –54.0 | Special condition 27 |
| 10000.0000 | 10600.0000 | 10300.0000 | –16.0 | Special condition 7 |
| 15700.0000 | 17300.0000 | 16500.0000 | –10.0 | Special condition 7 |
| 24000.0000 | 24250.0000 | 24125.0000 | 0.0 | |
| 24050.0000 | 26500.0000 | 25275.0000 | –54.0 | Special condition 27 |
| 33400.0000 | 36000.0000 | 34700.0000 | –10.0 | Special condition 7 |
| 46700.0000 | 46900.0000 | 46800.0000 | –10.0 | Special condition 11 |
| 57000.0000 | 71000.0000 | 64000.0000 | 25.0 | Special condition 22 |
| 57000.0000 | 71000.0000 | 64000.0000 | 13.0 | |
| 75000.0000 | 85000.0000 | 80000.0000 | –54.0 | Special condition 27 |
| 76000.0000 | 81000.0000 | 78500.0000 | 25.0 | Special condition 11 |
| 122000.0000 | 123000.0000 | 122500.0000 | 0.0 | |
| 244000.0000 | 246000.0000 | 245000.0000 | 0.0 | |

**4. Location—**

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

**5. Special conditions—**

1. Use is limited to determination, telemetry or telecommand.

2. Use is limited to auditory aids.

3. Use is limited to model control.

4. Use is limited to audio senders.

5. Use is limited to biomedical telemetry.

6. Use is limited to audio/video senders.

7. Use is limited to radiolocation.

8. Use is limited to wireless power transfer systems and induction loop systems used for the detection of foreign objects.

9. Use is limited to wireless LAN (WLAN).

10. Use is limited to road transport and traffic telematics.

11. Use is limited to field disturbance sensors.

12. Use is limited to RFID systems.

13. Transmitters using e.i.r.p. greater than 0 dBW (1 W) must employ frequency hopping or digital modulation techniques.

14. In the band 405 – 406 MHz, the maximum permitted duty cycle is 0.1%.

15. In the band 868 – 870 MHz, the maximum power is -27 dBW (2 mW) e.i.r.p. and the maximum permitted duty cycle is 1%, except in the band 869.20 – 869.25 MHz, where the maximum power is –20 dBW (10 mW) e.i.r.p. and the maximum permitted duty cycle is 0.1%.

16. *(Deleted)*

17. In the band 5150 – 5350 MHz, the maximum power is 0 dBW (1 W) e.i.r.p. and the maximum permitted power spectral density is –13 dBW/MHz (17 dBm/Hz, 50 mW/MHz) e.i.r.p. In the band 5250 – 5350 MHz, Dynamic Frequency Selection and Transmitter Power Control shall be implemented. If Transmitter Power Control is not used, then the maximum power (e.i.r.p.) value shall be reduced by 3 dB. In the band 5150 – 5350 MHz, when operating above -7 dBW e.i.r.p. (200 mW) the following e.i.r.p. vertical radiation angle mask shall be complied with, where θ is the angle above the local horizontal plane (of the Earth):

| Maximum permitted mean power density | Elevation angle above horizontal |
|---|---|
| -13 dB(W/MHz) | for 0° ≤θ <8° |
| -13 – 0.716(θ - 8) dB(W/MHz) | for 8° ≤θ <40° |
| -35.9 – 1.22(θ - 40) dB(W/MHz) | for 40° ≤θ ≤45° |
| -42 dB(W/MHz) | for 45° <θ; |

18. In the band 5470 – 5725 MHz, the transmitter peak power must not exceed -6 dBW (250 mW). The maximum power is 0 dBW (1 W) e.i.r.p. and the maximum permitted power spectral density is -13 dBW/MHz (50 mW/MHz) e.i.r.p., provided Dynamic Frequency Selection and Transmitter Power Control are implemented. If Transmitter Power Control is not used, then the maximum power (e.i.r.p.) value must be reduced by 3 dB.

19. In the band 7.4 – 8.8 MHz, use is restricted to inductive systems where the magnetic field strength from devices must not exceed 9 dBμA/m at a distance of 10 metres.

20. In the band 3.155 – 3.400 MHz, the maximum permitted field strength is 13.5 dBμA/m measured in a 10 kHz bandwidth at a distance of 10 metres. In the bands 3.64 – 4.04 MHz and 10.44 – 10.76 MHz, the maximum permitted field strengths are -15 dBμA/m and -20 dBμA/m, respectively, both measured in a 10 kHz bandwidth at 10 metres.

21. In the band 0.1485 – 30 MHz, the magnetic field strength from devices must not exceed -15 dBμA/m measured in a 10 kHz bandwidth at a distance of 10 metres, and the magnetic field strength must also not exceed –15.5 dBμA/m while within the frequency range 0.521 – 1.612 MHz. Users should not operate these devices within 3 metres of an AM radio receiver intended for the reception of AM radio broadcasts within the frequency range 0.521 – 1.612 MHz.

22. In the band 57 – 71 GHz, for devices transmitting at 10 dBW e.i.r.p or less, the power spectral density must not exceed -7 dBW/MHz e.i.r.p. and the maximum transmit power must not exceed -3 dBW at the antenna port or ports. For devices transmitting greater than 10 dBW e.i.r.p., the power spectral density shall not exceed 8 dBW/MHz e.i.r.p and antennas with a gain greater than 30 dBi shall be used.

23. Transmissions must not exceed the following unwanted emission limits: -79 dBW (-49 dBm) e.i.r.p. within 800 – 915 MHz and -63 dBW (-33 dBm) e.i.r.p. within 928 MHz – 1 GHz. The reference bandwidth for emissions is 100 kHz. Outside the band 800 MHz – 1 GHz, the limits prescribed in the applicable standards of the Radiocommunications (Radio Standards) Notice apply. In the absence of applicable standards, the limits prescribed in Table 2 of the notice apply.

24. Use is limited to the purpose known as wireless microphones, in-ear monitors, or wireless audio transmitters.

25. In the band 0.009 – 0.090 MHz, the magnetic field strength from devices must not exceed 72 dBμA/m at a distance of 10 metres. In the band 0.090 – 0.205 MHz, the magnetic field strength from devices must not exceed 43 dBμA/m at a distance of 10 metres, except in the band 0.119 – 0.135 MHz, where the magnetic field strength from devices must not exceed 66 dBμA/m at a distance of 10 metres. In the band 0.315 – 0.430 MHz, the magnetic field strength from devices must not exceed -5 dBμA/m at a distance of 10 meters.

26. Analogue modulation schemes are permitted with a maximum necessary bandwidth of 300 kHz. Digital modulation schemes are permitted with a maximum necessary bandwidth of 200 kHz. Use of a power level above –20 dBW is only permitted when the user has first determined that the intended use will not affect the reception of television broadcasts in or adjacent to the proposed area of operation.

27. Use is limited to radiodetermination transmitters operated within shielded enclosures and installations must be inside the shielded enclosure. The maximum power -54 dBW e.i.r.p. applies at 3 metres as measured outside the shielded enclosure over a maximum of 50 MHz bandwidth. The emission leakage outside the shielded enclosure must not exceed the maximum permitted power spectral density -71.3 dBW/MHz (-41.3 dBm/MHz) e.i.r.p. at any time.

28. In the band 5725 – 5850 MHz, the transmitter peak power must not exceed 0 dBW (1 W) and the power spectral density must not exceed 17 dBm/MHz. The maximum power of any emission must not exceed 23 dBW (e.i.r.p.). Transmission is permitted from customer premise equipment with integrated antenna that is part of a point-to-multipoint system receiving from and transmitting to a central access point.

29. Emission of the transmitter needs to comply with below block edge mask (BEM). Maximum e.i.r.p. of -17 dBW per channel for handheld unit and -13 dBW per channel for body worn unit.

| | Frequency Range | Handheld unit (e.i.r.p.) |
|---|---|---|
| Out-of-block | < 1785 MHz | -17 dBm/200 kHz |

| | | |
|---|---|---|
| Restricted frequency range | 1785-1785.2 MHz | 4 dBm/200 kHz |
| | 1785.2-1803.6 MHz | 13 dBm/channel |
| | 1803.6-1804.8 MHz | 10 dBm/200 kHz, with a limit of 13dBm/channel |
| Restricted frequency range | 1804.8-1805 MHz | -14 dBm/200 kHz |
| Out-of-block | > 1805 MHz | -37 dBm/200 kHz |

| | Frequency Range | Body worn unit (e.i.r.p.) |
|---|---|---|
| Out-of-block | < 1785 MHz | -17 dBm/200 kHz |
| | 1785-1804.8 MHz | 17 dBm/channel |
| Restricted frequency range | 1804.8-1805 MHz | 0 dBm/200 kHz |
| Out-of-block | > 1805 MHz | -23 dBm/200 kHz |

30. In the band 5925 – 6425 MHz, the maximum power is -6 dBW (24 dBm, 250 mW ) e.i.r.p. and the maximum permitted power spectral density is -19 dBW/MHz (11 dBm/MHz, 12.6 mW/MHz) e.i.r.p. for low power devices. Transmitters must only be used indoors within a building or within an enclosed space having attenuation characteristics at least equivalent to those of a building.

31. In the band 5925 – 6425 MHz, the maximum power is -16 dBW (14 dBm, 25 mW ) e.i.r.p. and the maximum permitted power spectral density is -29 dBW/MHz (1 dBm/MHz, 1.26 mW/MHz) e.i.r.p. for very low power devices.

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

1. The frequency ranges, peak power of transmissions within those frequency 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. Transmitters, and persons supplying or using transmitters, must comply with the requirements of Regulations 32 – 37 of the Radiocommunications Regulations 2001.

3. 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.

4. 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.

5. Transmissions that are broadcasting, as defined in the Broadcasting Act 1989, are not permitted.

**7. Consequential revocation of licence —**

(1) The Radiocommunications Regulations (General User Radio Licence for Short Range Devices) Notice 2020, dated 6 November 2020 and published in the *New Zealand Gazette*, 6 November 2020, Notice No. 2020-go5045, and the Corrigendum, dated 26 November 2020 and published in the *New Zealand Gazette*, 26 November 2020, Notice No. 2020-go5414 are 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 1st day of August 2022.

FADIA MUDAFAR, National Manager, Radio Spectrum Management, Ministry of Business, Innovation and Employment.

**Explanatory Note**

This note is not part of the notice but is intended to indicate its general effect.

This notice includes the following amendments:

a. In the 5150 – 5350 MHz band, it is clarified that the use of Dynamic Frequency Selection (DFS) and of Transmit Power Control (TPC) is only to be applied to 5250 – 5350 MHz as well as the power level where the e.i.r.p vertical radiation applies.
b. The addition of 5925 – 6425 MHz for the use of WLAN in the Low Power Indoor (Special condition 30) and the Very Low Power applications (Special condition 31).
c. For 57 – 66 GHz (with Special condition 22), there is an extension in the frequency range to 57 – 71 GHz and modifications to Special condition 22, including the removal of the requirement for “Indoor-Only Systems” and increases the power permitted. This entry is comparable to European provisions.
d. For 57 – 64 GHz (with no Special condition) there is an extension in the frequency range to 57 – 71 GHz. This entry is comparable to provisions in the United States of America.