



## **Radiocommunications (Low Interference Potential Devices) Class Licence 2000**

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The AUSTRALIAN COMMUNICATIONS AUTHORITY makes this Class Licence under sections 132 and 135 of the *Radiocommunications Act 1992*.

Dated 29 June 2000

Chair

Deputy Chair

Australian Communications Authority

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## Contents

	Page
1 Name of Class Licence	2
2 Commencement	2
3 Revocation	2
4 Class Licence	3
<b>Schedule 1 Transmitters</b>	<b>5</b>

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### 1 Name of Class Licence

This Class Licence is the *Radiocommunications (Low Interference Potential Devices) Class Licence 2000*.

### 2 Commencement

This Class Licence commences on gazettal.

### 3 Revocation

The following instruments are revoked:

- (a) the *Radiocommunications Class Licence (Low Interference Potential Devices) 1997*<sup>1</sup>;
- (b) the *Radiocommunications Class Licence (Low Interference Potential Devices) Variation 1998 (No. 1)*<sup>2</sup>.

**NOTE**

A radiocommunications device supported under this Class Licence can be expected to be operating in radiofrequency spectrum also used by other radiocommunications devices (that is, it shares the spectrum with them). Devices supported under this Class Licence are typically used for communications over short distances.

By placing appropriate limits on parameters such as device type, radiated power levels and frequencies of operation, the interference potential of a low interference potential device (**LIPD**) may be held to a sufficiently low level that enables sharing the spectrum with other radiocommunications devices on an uncoordinated basis in most circumstances.

It is recognised that interference arising from the operation of a LIPD is still possible, although under less likely circumstances. As an aid to interference resolution in those circumstances, it is a condition of the operation of a device under this Class Licence that the device not cause interference to other radiocommunications devices; as well, a device will not be afforded protection from interference caused by other radiocommunications services (see paragraph 4 (1) (b) and Note 1 after section 4 of this Class Licence).

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**NOTE** (continued)

Should interference occur, the onus is on the user of a LIPD to take measures to resolve that interference, for example, by re-tuning or ceasing to operate the LIPD. Some LIPDs are designed so that they are able to be re-tuned, to assist the user in avoiding interference locally.

Some of the frequency bands mentioned in this Class Licence cover bands designated for industrial, scientific and medical (*ISM*) applications. ISM applications generate radio frequency energy and use it locally for non-radiocommunications applications (eg. microwave ovens). Radiocommunications services operating in ISM-designated bands may experience interference from ISM applications. In accordance with the internationally-recognised arrangements for interference resolution that apply in such bands, this Class Licence notes that radiocommunications devices operating in ISM-designated bands are not afforded protection from interference that may be caused by ISM applications (see Note 2 after section 4 of this Class Licence).

LIPDs are sometimes used for radio applications with commercial or safety of life implications. Users of such applications are encouraged to have particular regard to the suitability of operating under this Class Licence for their radiocommunications needs.

Manufacturers and suppliers of radiocommunications products able to be supported under this Class Licence are encouraged to have regard to the information in this note when forming advice about the suitability of their products for the intended application of the products by customers.

### **3A Definitions**

***device compliance day***, for a device, means the most recent of the following days:

- (a) if the device was manufactured in Australia — the day it was manufactured; and
- (b) if the device was manufactured overseas and imported — the day it was imported; and
- (c) if the device was altered or modified in a material respect — the day it was altered or modified.

***low interference potential device*** means a radiocommunications device that complies with the conditions set out in this Class Licence.

*Note* For the definition of other expressions used in this Class Licence, see the *Radiocommunications Act 1992*, and the *Radiocommunications (Interpretation) Determination 2000*.

### **4 Class Licence**

- (1) This Class Licence authorises a person to operate a transmitter included in a class of transmitters mentioned in an item in Schedule 1, subject to the following conditions:
  - (a) the transmitter must be operated:
    - (i) on a frequency, or within a range of frequencies, mentioned in the item; and
    - (ii) at a radiated power that does not exceed the maximum EIRP mentioned in the item; and

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- (iii) within the limitations (if any) mentioned in the item;
  - (b) the transmitter's operation must not cause interference to the operation of radiocommunications services.
- (2) The frequency, or range of frequencies, and the maximum EIRP mentioned in an item in Schedule 1 must be construed in accordance with the interpretative provisions (if any) mentioned in the item.

*Note 1* A low interference potential device will not be afforded protection from interference caused by other radiocommunications devices. A low interference potential device operated under this Class Licence is generally not expected to suffer interference. However, an individual low interference potential device may experience, from other radiocommunications devices, interference arising from the particular circumstances of the device's operation.

*Note 2* In accordance with the requirements of footnote AUS 32 and footnote 150 to the Table of Allocations in the Australian Radiofrequency Spectrum Plan, a low interference potential device will not be afforded protection from interference that may be caused by ISM applications in the ISM bands 13.553 MHz – 13.567 MHz, 26.957 MHz – 27.283 MHz, 40.66 MHz – 40.70 MHz, 918 MHz – 926 MHz, 2 400 MHz – 2 500 MHz, 5 725 MHz – 5 875 MHz and 24 000 MHz – 24 250 MHz.

## 5 Standards

- (1) Each of the following radiocommunications devices must comply with the *Radiocommunications (Electromagnetic Radiation — Human Exposure) Standard 1999*:
- (a) a handset, for a cellular mobile telephone service, that has a device compliance day on or after 22 November 2000;
  - (b) a handset, for a cordless telephone service, that has a device compliance day on or after 22 November 2000;
  - (c) a land station (*cradle*) that:
    - (i) is used in a cordless telephone service; and
    - (ii) has a device compliance day on or after 22 November 2000.
- (2) In addition, if the device compliance day for a device authorised under this class licence is on or after the date of commencement of the *Radiocommunications (Low Interference Potential Devices) Class Licence Variation 2001 (No.1)*, the device must comply with any standard applicable to the device on its device compliance day, as in force on that day.

*Note 1* The Australian Communications Authority wishes to make it clear that if a standard mentioned in subsection (2) is amended or replaced by another standard after the device compliance day for the device, the device need not comply with the new or amended standard.

*Note 2* Section 5 of the *Radiocommunications Act 1992* provides that **standard** means a standard made under section 162 of that Act.

# Schedule 1 Transmitters

(section 4)

Item	Class of transmitter	Permitted operating frequency band (MHz) (lower limit exclusive, upper limit inclusive)	Maximum EIRP	Limitations
1	All transmitters	0.000–0.014	200 $\mu$ W	
2	All transmitters	0.014–0.01995	50 $\mu$ W	
3	All transmitters	0.02005–0.07	7.5 $\mu$ W	
4	All transmitters	0.07–0.16	3 $\mu$ W	
5	All transmitters	1. 0.16–0.285 2. 0.325–0.415	500 nW	
6	All transmitters	3.025–3.155	7.5 nW	
7	All transmitters	3.5–3.7	30 pW	
8	All transmitters	1. 3.7–3.95 2. 4.438–4.65	7.5 nW	
9	All transmitters	13.553–13.567	100 mW	
10	All transmitters	24–24.89	10 mW	
11	All transmitters	26.957–27.283	1 W	<ol style="list-style-type: none"> <li>1. Separation of the operating frequency from the centre frequency of any adjacent citizen band radio channel must be at least 5 kHz.</li> <li>2. The emission bandwidth must not exceed 10 kHz.</li> </ol>

<b>Item</b>	<b>Class of transmitter</b>	<b>Permitted operating frequency band (MHz) (lower limit exclusive, upper limit inclusive)</b>	<b>Maximum EIRP</b>	<b>Limitations</b>
12	All transmitters	1. 29.7–29.72 2. 30–30.0625 3. 30.3125–31 4. 36.6–37 5. 39–39.7625 6. 40.25–40.66	100 mW	
13	All transmitters	40.66–41	1 W	
14	All transmitters	54–56	2.5 mW	
15	All transmitters	1. 70–70.24375 2. 77.29375–77.49375 3. 150.7875–152.49375 4. 173.29375–174	100 mW	
16	All transmitters	1. 225–242 2. 244–267 3. 273–303.95 4. 304.05–328.6 5. 335.4–399.9	10 $\mu$ W	
17	All transmitters	433.05–434.79	25 mW	
18	All transmitters	915–928	3 mW	
19	All transmitters	2400–2463	10 mW	
20	All transmitters	1. 10500–10550 2. 24000–24250	100 mW	

<b>Item</b>	<b>Class of transmitter</b>	<b>Permitted operating frequency band (MHz) (lower limit exclusive, upper limit inclusive)</b>	<b>Maximum EIRP</b>	<b>Limitations</b>
21	Wireless audio transmitters and auditory assistance transmitters	88–108	10 $\mu$ W	<ol style="list-style-type: none"> <li>1. Emission must be frequency modulated and have a maximum bandwidth of 180 kHz.</li> <li>2. Transmission in a radio channel must not originate in the licence area of a radio broadcasting station (including a repeater or translator station) operating in the same channel.</li> </ol>

Item	Class of transmitter	Permitted operating frequency band (MHz) (lower limit exclusive, upper limit inclusive)	Maximum EIRP	Limitations
22	Wireless audio transmitters	<ol style="list-style-type: none"> <li>1. 174–230</li> <li>2. 520–820</li> </ol>	3 mW	<ol style="list-style-type: none"> <li>1. The emission must be frequency modulated and have a maximum bandwidth of 330 kHz.</li> <li>2. Transmission in a TV channel must not originate in the licence area of a TV broadcasting station (including a repeater or translator station) operating in the same channel.</li> <li>3. When in an unused TV channel, but in the licence area of a TV broadcasting station (including a repeater or translator station) operating in an adjacent TV channel, the channel centre frequency of the wireless audio transmitter must be at least 200 kHz above the upper edge of the adjacent TV channel, or 400 kHz below the lower edge of the adjacent TV channel</li> </ol>
23	Biomedical telemetry transmitters	174–230	10 $\mu$ W	



Item	Class of transmitter	Permitted operating frequency band (MHz) (lower limit exclusive, upper limit inclusive)	Maximum EIRP	Limitations
24	Biomedical telemetry transmitters	520–668	3 mW	Transmission in a TV channel must not originate in the licence area of an analogue TV broadcasting station (including a repeater or translator station) operating in the same channel.
25	Telecommand or telemetry transmitters	472.0125–472.1125	100 mW	
26	Telecommand or telemetry transmitters	1. 2400–2450 2. 5725–5795 3. 5815–5875	1 W	
27	Telecommand or telemetry transmitters	5795–5815	2 W	
28	Auditory assistance transmitters	3.155–3.4, with a carrier frequency of: (a) 3.175 MHz; or (b) 3.225 MHz; or (c) 3.275 MHz; or (d) 3.325 MHz.	60 $\mu$ W	
29	Auditory assistance transmitters	1. 41–42, with a carrier frequency of: (a) 41.55 MHz; or (b) 41.65 MHz; or (c) 41.75 MHz; or (d) 41.85 MHz; or (e) 41.95 MHz.  2. 43–44, with a carrier frequency of: (a) 43.05 MHz; or (b) 43.15 MHz; or (c) 43.25 MHz; or (d) 43.35 MHz; or (e) 43.45 MHz.	1.3 mW	

Item	Class of transmitter	Permitted operating frequency band (MHz) (lower limit exclusive, upper limit inclusive)	Maximum EIRP	Limitations
30	Radiofrequency identification transmitters	1. 1.77–2.17 2. 2.93–3.58 3. 7.2–10.01	100 pW	
31	Radiofrequency identification transmitters	1. 13.553–13.567 2. 918–926 3. 2400–2450 4. 5725–5795 5. 5815–5875 6. 24000–24250	1 W	
32	Radiofrequency identification transmitters	5795–5815	2 W	
33	Alarm transmitters (including security and personal safety transmitters)	303.60–304.05	100 µW	
34	Home detention monitoring equipment	314.075–314.325	200 µW	In a 10 second period, a single transmission must not exceed 10 milliseconds.
35	Radiodetermination transmitters	24000–24250	1 W	
36	Radiodetermination transmitters	60000–61000	20 mW	

Item	Class of transmitter	Permitted operating frequency band (MHz) (lower limit exclusive, upper limit inclusive)	Maximum EIRP	Limitations
37	Transmitters used for underground communications	1. 31–32 2. 33–34 3. 35–36 4. 37–38 5. 42–43 6. 44–45 7. 70.24375–74.8 8. 75.2–77.29375 9. 77.49375–84.69375 10. 149.25–149.9 11. 150.05–151.39375 12. 152.49375–156 13. 157.45–160.6 14. 160.975–161.475 15. 162.05–173.29375 16. 403–406 17. 406.1–420 18. 450–500.99375 19. 504.99375–510.99375 20. 514.99375–520	3.5 nW	The maximum EIRP applies at an above-ground opening associated with the underground communications.
38	Transmitters used for underground communications	1. 0.5265–1.605 2. 87.5–108	10 $\mu$ W	The maximum EIRP applies at an above-ground opening associated with the underground communications.
39	Aquatic animal tracking transmitters	48–49	10 mW	
40	Radiodetermination transmitters operated in radiofrequency-shielded enclosures	24050–26050	75 nW	The maximum EIRP applies outside the shielded enclosure.
41	Personal alarm transmitters	27.500–27.510	100 $\mu$ W	

Item	Class of transmitter	Permitted operating frequency band (MHz) (lower limit exclusive, upper limit inclusive)	Maximum EIRP	Limitations
42	Transmitters used with personal alarm transmitters operating in the frequency band 27.500–27.510 MHz	27.500–27.510	500 mW	Each transmission must not exceed 4 seconds over a 60 second period.
43	Alarm transmitters	344.8–345.2	1 mW	<p>The average EIRP must not exceed 100 <math>\mu</math>W:</p> <p>(a) if the length of a pulse train does not exceed 0.1 second — in the length of one complete pulse train; or</p> <p>(b) if the length of a pulse train exceeds 0.1 second — in the 0.1 second period during which the EIRP is at its maximum value; or</p> <p>(c) if a transmitter operates for more than 0.1 second — in the 0.1 second period during which the EIRP is at its maximum value.</p>
44	Radio Local Area Network transmitters used indoors	5150–5350	200 mW (averaged over the entire transmission burst)	<ol style="list-style-type: none"> <li>1. If the emission bandwidth is 1 MHz or greater, the radiated power spectral density in any 1 MHz is limited to 10 mW per MHz.</li> <li>2. If the emission bandwidth is less than 1 MHz, the radiated power spectral density in any 4 kHz is limited to 40 <math>\mu</math>W per 4 kHz.</li> </ol>

Item	Class of transmitter	Permitted operating frequency band (MHz) (lower limit exclusive, upper limit inclusive)	Maximum EIRP	Limitations
45	Radio Local Area Network transmitters	5725–5825	1 W (averaged over the entire transmission burst)	<ol style="list-style-type: none"> <li>1. If the emission bandwidth is 1 MHz or greater, the radiated power spectral density in any 1 MHz is limited to 50 mW per MHz.</li> <li>2. If the emission bandwidth is less than 1 MHz, the radiated power spectral density in any 4 kHz is limited to 200 µW per 4 kHz.</li> </ol>
46	Radiodetermination transmitters	5725–5875	1 mW	
47	Radiodetermination transmitters	76000–77000	25 W	

### Notes

1. Made by the Acting Spectrum Manager, on behalf of the Spectrum Management Agency, on 13 June 1997 and published in the *Commonwealth of Australia Gazette* on 25 June 1997.
2. Issued by the Australian Communications Authority on 21 December 1998 and published in the *Commonwealth of Australia Gazette* on 24 December 1998.

### Table of Amendments

Radiocommunications (Low Interference Potential Devices) Class Licence 2000 is varied by:

- (a) *Radiocommunications (Low Interference Potential Devices) Class Licence Variation 2000 (No. 1)* issued by the Australian Communications Authority on 16 November 2000 (published in the *Commonwealth of Australia Gazette* on 22 November 2000); and

(b) *Radiocommunications (Low Interference Potential Devices) Class Licence Variation 2001 (No. 1)* issued by the Australian Communications Authority on 20 September 2001 (published in the *Commonwealth of Australia Gazette* on 26 September 2001).