



Radiocommunications (Low Interference Potential Devices) Class Licence 2000

as amended

made under sections 132 and 135 of the

Radiocommunications Act 1992

This compilation was prepared on 4 January 2008
taking into account amendments up to *Radiocommunications (Low Interference Potential Devices) Class Licence Variation 2007 (No. 1)*

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1 Name of Class Licence [see Note 1]

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

2 Commencement [see Note 1]

This Class Licence commences on gazettal.

3 Revocation

The following instruments are revoked:

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

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).

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.

Some applications of LIPDs require that a device meet additional physical or technical requirements outside the scope of this Class Licence. The use, marketing and supply of such devices in Australia may be dependant on the approval of the appropriate regulatory body, such as the Therapeutic Goods Administration or State Government Authorities.

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

Act means the *Radiocommunications Act 1992*.

coverage area, for a broadcasting station, means the area surrounding the associated television transmitter within the boundary described by the following field strength limits:

- (a) UHF Band IV: 62 dBuV/metre except rural towns where the limit is 64 dBuV/metre;
- (b) UHF Band V: 67 dBuV/metre.

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.

infrared device means a radiocommunications device having a radio emission in the frequency range 187.5 THz to 420 THz.

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

nominated distance of a specified Australian radio-astronomy site, means:

- (a) within 10 km of Parkes Observatory located near Parkes (Latitude 32° 59' 59.8657" S Longitude 148° 15' 44.3591" E); or
- (b) within 10 km of Paul Wild Observatory located near Narrabri (Latitude 30° 18' 52.048" S Longitude 149° 32' 56.327" E); or
- (c) within 3 km of the Canberra Deep Space Communications Complex (Latitude 35° 23' 54" S Longitude 148° 58' 40" E); or
- (d) within 10 km of the Radio Astronomy Park in Western Australia (Latitude 26° 37' 13.4" S Longitude 117° 30' 40" E).

Note For the definition of other expressions used in this Class Licence, see the Act 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
 - (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.

Note 3 Australia/New Zealand Standard AS/NZS 2211.10:2004 details the requirements that are necessary to protect persons from radiation from laser devices, many of which are authorised by this Class Licence.

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:
- (a) on or after the date of commencement of the *Radiocommunications (Low Interference Potential Devices) Class Licence Variation 2001 (No. 1)*; or

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(b) in relation to an infrared device — on or after 13 February 2002;
the device must comply with any standard applicable to the device on its
device compliance day, as in force on that day.

Note 1 ACMA confirms 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 Act 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 μ W	
2	All transmitters	0.014–0.01995	50 μ W	
3	All transmitters	0.02005–0.07	7.5 μ W	
4	All transmitters	0.07–0.16	3 μ 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"> 1. Separation of the operating frequency from the centre frequency of any adjacent citizen band radio channel must be at least 5 kHz. 2. The emission bandwidth must not exceed 10 kHz.
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	

Item	Class of transmitter	Permitted operating frequency band (MHz) (lower limit exclusive, upper limit inclusive)	Maximum EIRP	Limitations
16	All transmitters	1. 225–242 2. 244–267 3. 273–303.95 4. 304.05–328.6 5. 335.4–399.9	10 µW	
17	All transmitters	433.05–434.79	25 mW	
18	All transmitters	915–928	3 mW	
19	All transmitters	2400–2483.5	10 mW	
19A	All transmitters	5725–5875	25 mW	
20	All transmitters	1. 10500–10550 2. 24000–24250	100 mW	
21	Wireless audio transmitters and auditory assistance transmitters	88–108	10 µW	<ol style="list-style-type: none"> 1. Emission must be frequency modulated and have a maximum bandwidth of 180 kHz. 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.
22	Wireless audio transmitters	174–230	3 mW	<ol style="list-style-type: none"> 1. Emission must be frequency modulated and have a maximum bandwidth of 330 kHz. 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.

Item	Class of transmitter	Permitted operating frequency band (MHz) (lower limit exclusive, upper limit inclusive)	Maximum EIRP	Limitations
22A	Wireless audio transmitters	520–820	100 mW	<p>3. When transmitting in an unused TV channel, and in the coverage 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.</p> <p>1. Emission must be frequency modulated and have a maximum bandwidth of 330 kHz.</p> <p>2. Transmission in a broadcasting services bands channel must not originate in the coverage area of a broadcasting station or a datacasting service station (including a repeater or translator station) operating in the same channel.</p> <p>3. The origin of a transmission in a broadcasting services bands channel must be such that the resulting field strength at the nearest boundary of the coverage area of a broadcasting station or a datacasting service station using the channel does not exceed 30 dBuV/m.</p>

Item	Class of transmitter	Permitted operating frequency band (MHz) (lower limit exclusive, upper limit inclusive)	Maximum EIRP	Limitations
				4. When transmitting in an unused broadcasting services bands channel, and in the coverage area of a broadcasting station or a datacasting service station (including a repeater or translator station) operating in an adjacent channel, the channel centre frequency of the wireless audio transmitter must be at least 400 kHz above the upper edge of the adjacent channel, or 400 kHz below the lower edge of the adjacent channel.
23	Biomedical telemetry transmitters	174–230	10 μ W	
24	Biomedical telemetry transmitters	520–668	11 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	

Item	Class of transmitter	Permitted operating frequency band (MHz) (lower limit exclusive, upper limit inclusive)	Maximum EIRP	Limitations
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 μ 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	
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 μ W	
34	Home detention monitoring equipment	314.075–314.325	200 μ W	In a 10 second period, a single transmission must not exceed 10 milliseconds.
35	Radiodetermination transmitters	24000–24250	1 W	

Item	Class of transmitter	Permitted operating frequency band (MHz) (lower limit exclusive, upper limit inclusive)	Maximum EIRP	Limitations
36	Radiodetermination transmitters	60000–61000	20 mW	
37	Transmitters used for underground communications	<ol style="list-style-type: none"> 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	<ol style="list-style-type: none"> 1. 0.5265–1.605 2. 87.5–108 3. 174–230 4. 519–820 	10 µW	<ol style="list-style-type: none"> 1. The maximum EIRP applies to emissions from an above-ground opening associated with the underground environment. 2. For the augmentation of an above-ground broadcasting service and datacasting service in underground tunnels.
39	Aquatic animal tracking transmitters	48–49	10 mW	

Item	Class of transmitter	Permitted operating frequency band (MHz) (lower limit exclusive, upper limit inclusive)	Maximum EIRP	Limitations
40	Radiodetermination transmitters operated in radiofrequency-shielded enclosures	<ol style="list-style-type: none"> 1. 5250–7000 2. 8500–10600 3. 24050–26500 4. 75000–85000 	75 nW	<ol style="list-style-type: none"> 1. The maximum EIRP applies outside the shielded room enclosure. 2. The transmitter must meet the requirements of European Telecommunications Standards Institute (<i>ETSI</i>) Standard 302 372-1 as existing from time to time.
41	Personal alarm transmitters	27.500–27.510	100 μ W	
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 μW:</p> <ol style="list-style-type: none"> (a) if the length of a pulse train does not exceed 0.1 second — in the length of one complete pulse train; or (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 (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.

Item	Class of transmitter	Permitted operating frequency band (MHz) (lower limit exclusive, upper limit inclusive)	Maximum EIRP	Limitations
44	Radio Local Area Network transmitters used indoors	5150–5250	200 mW (averaged over the entire transmission burst)	<ol style="list-style-type: none"> 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. 2. If the emission bandwidth is less than 1 MHz, the radiated power spectral density in any 4 kHz is limited to 40 µW per 4 kHz.
44A	Radio Local Area Network transmitters used indoors	5250–5350	200 mW (averaged over the entire transmission burst)	<ol style="list-style-type: none"> 1. If the emission bandwidth is 1 MHz or greater, the spectral density in any 1 MHz is limited to 10 mW EIRP per MHz. 2. If the emission bandwidth is less than 1 MHz, the spectral density in any 4 kHz is limited to 40 µW EIRP per 4 kHz. 3. From 1 January 2006 devices operated for the first time must use Dynamic Frequency Selection (DFS) and Transmit Power Control (TPC). If TPC is not used then the maximum EIRP is limited to 100 mW.
45	Digital modulation transmitters	915–928	1 W	<ol style="list-style-type: none"> 1. The radiated peak power spectral density in any 3 kHz is limited to 25 mW per 3 kHz. 2. The minimum 6 dB bandwidth must be at least 500 kHz.

Item	Class of transmitter	Permitted operating frequency band (MHz) (lower limit exclusive, upper limit inclusive)	Maximum EIRP	Limitations
45A	Digital modulation transmitters	2400–2483.5	4 W	<ol style="list-style-type: none"> The radiated peak power spectral density in any 3 kHz is limited to 25 mW per 3 kHz. The minimum 6 dB bandwidth must be at least 500 kHz.
45B	Digital modulation transmitters	5725–5850	4 W	<ol style="list-style-type: none"> The radiated peak power spectral density in any 3 kHz is limited to 25 mW per 3 kHz. The minimum 6 dB bandwidth must be at least 500 kHz.
46	Radio Local Area Network transmitters	<ol style="list-style-type: none"> 5470–5600 5650–5725 	1 W (averaged over the entire transmission burst)	<ol style="list-style-type: none"> The maximum radiated mean power density must not exceed 50 mW/MHz EIRP in any 1 MHz band. Must use Dynamic Frequency Selection (DFS) and Transmit Power Control (TPC). If TPC is not implemented, then the maximum EIRP is limited to 500 mW.
47	Radiodetermination transmitters	5725–5875	1 mW	
48	Radiodetermination transmitters	76000–77000	25 W	
49	Medical implant communications systems transmitters	401–406	25 μ W (averaged over the transmission burst within a reference bandwidth of 300 kHz)	<ol style="list-style-type: none"> The maximum EIRP applies outside the body. Systems must have a minimum of nine channels selectable by the system controller and spread across the whole band. Implanted transmitters must only transmit under external control, except for medical implant events. Systems must utilise a listen-before-transmit protocol.

Item	Class of transmitter	Permitted operating frequency band (MHz) (lower limit exclusive, upper limit inclusive)	Maximum EIRP	Limitations
	<i>Note 1</i> The systems and associated medical implant communications systems transmitters mentioned in item 49 are devices that require marketing approval by the Therapeutic Goods Administration.			
	<i>Note 2</i> A medical implant event is an occurrence or lack of occurrence, recognised by a medical implant device or a health care professional, that requires the immediate transmission of data by the medical implant communications systems transmitter to protect the safety or wellbeing of the person that the medical implant device has been implanted.			
50	Medical implant telemetry systems transmitters	1. 401–402 2. 403.560–403.760 3. 405–406	100 nW	The maximum EIRP applies outside the body.
	<i>Note</i> The systems and associated medical implant devices mentioned in item 50 are devices that require marketing approval by the Therapeutic Goods Administration.			
51	Data communications transmitters used outdoors	59000–63000	150 W	1. Transmitters are limited to land and maritime deployments. 2. Maximum transmitter power must be 20 mW or less. 3. Spurious emissions outside the band must be less than -30dBm/MHz.
51A	Data communications transmitters used indoors	57000–66000	20 W	4. For outdoor use only. 1. Maximum transmitter power must be 20 mW or less. 2. Spurious emissions outside the band must be less than -30dBm/MHz.
52	Frequency hopping transmitters	915–928	1 W	A minimum of 20 hopping frequencies must be used.
53	Frequency hopping transmitters	2400–2483.5	500 mW	A minimum of 15 hopping frequencies must be used.
54	Frequency hopping transmitters	2400–2483.5	4 W	A minimum of 75 hopping frequencies must be used.
55	Frequency hopping transmitters	5725–5850	4 W	A minimum of 75 hopping frequencies must be used.
56	Ultra-wideband short-range vehicle radar systems	22000–26500	See limitations	1. The maximum radiated average power density is -41.3 dBm/MHz EIRP.

Item	Class of transmitter	Permitted operating frequency band (MHz) (lower limit exclusive, upper limit inclusive)	Maximum EIRP	Limitations
57	Infrared transmitters	187.5 THz–420 THz	125 mW (output power)	<ol style="list-style-type: none"> 2. The maximum broadband radiated peak power density is 0 dBm/50 MHz EIRP. 3. Must meet the requirements of ETSI 302-288-1 as it applies from time to time. 4. Must not be operated within a nominated distance of a specified Australian radio-astronomy site.

Table of Instruments**Notes to the *Radiocommunications (Low Interference Potential Devices) Class Licence 2000*****Note 1**

The *Radiocommunications (Low Interference Potential Devices) Class Licence 2000* (in force under sections 132 and 135 of the *Radiocommunications Act 1992*) as shown in this compilation is amended as indicated in the Tables below.

Under the *Legislative Instruments Act 2003*, which came into force on 1 January 2005, it is a requirement for all non-exempt legislative instruments to be registered on the Federal Register of Legislative Instruments.

Table of Instruments

Title	Date of notification in Gazette or FRLI registration	Date of commencement	Application, saving or transitional provisions
<i>Radiocommunications (Low Interference Potential Devices) Class Licence 2000</i>	5 July 2000 (see Gazette 2000, No. GN26)	5 July 2003	
<i>Radiocommunications (Low Interference Potential Devices) Class Licence Variation 2000 (No. 1)</i>	22 Nov 2000 (see Gazette 2000, No. GN46)	22 Nov 2000	—
<i>Radiocommunications (Low Interference Potential Devices) Class Licence Variation 2001 (No. 1)</i>	26 Sept 2001 (see Gazette 2001, No. GN38)	26 Sept 2001	—
<i>Radiocommunications (Low Interference Potential Devices) Class Licence Variation 2003 (No. 1)</i>	6 Aug 2003 (see Gazette 2003, No. GN31)	6 Aug 2003	—
<i>Radiocommunications (Low Interference Potential Devices) Class Licence Variation 2005 (No. 1)</i>	23 Aug 2005 (see F2005L02339)	24 Aug 2005	—
<i>Radiocommunications (Low Interference Potential Devices) Class Licence Variation 2006 (No. 1)</i>	25 July 2006 (see F2006L02420)	26 July 2006	—
<i>Radiocommunications (Low Interference Potential Devices) Class Licence Variation 2007 (No. 1)</i>	3 Jan 2008 (see F2008L00007)	4 Jan 2008	—

Table of Amendments**Table of Amendments**

ad. = added or inserted am. = amended rep. = repealed rs. = repealed and substituted

Provision affected	How affected
Note to s. 3.....	am. 2000 No. 1; 2001 No. 1 rs. 2005 No. 1
S. 3A.....	ad. 2001 No. 1 am. 2006 No. 1; 2007 No.1
Note 1 to s. 3A.....	rep. 2007 No. 1
Note to s. 3A.....	ad. 2007 No. 1
Notes 1 and 2 to s. 4 (2).....	rep. 2001 No. 1
Note 3 to s. 4 (2) Renumbered Note 1.....	2001 No. 1
Note 4 to s. 4 (2) Renumbered Note 2.....	2001 No. 1
Note 3 to s. 4.....	ad. 2007 No. 1
Heading to s. 5.....	rs. 2001 No. 1
S. 5.....	ad. 2000 No. 1 am. 2001 No. 1; 2007 No.1
Schedule 1	
Schedule 1.....	am. 2000 No. 1 rs. 2001 No. 1 am. 2003 No. 1; 2005 No. 1; 2006 No. 1; 2007 No. 1