

Explanatory Statement

Radiocommunications Act 1992

Issued by the Australian Communications Authority

Radiocommunications (Spread Spectrum Devices) Class Licence 2002

Legislative Provisions

Subsection 132(1) of the *Radiocommunications Act 1992* (the Act) authorises the Australian Communications Authority (ACA) to issue class licences.

Section 133 of the Act provides that conditions may be included in class licences.

Section 135 of the Act provides for the ACA to revoke class licences, subject to a period of public consultation under subsection 136(2) of the Act.

Section 139 of the Act provides that a class licence is a disallowable instrument for the purposes of section 46A of the *Acts Interpretation Act 1901*.

Purpose

The *Radiocommunications (Spread Spectrum Devices) Class Licence 2002* (the 2002 Spread Spectrum Class Licence) revokes and replaces the Radiocommunications Class Licence (Spread Spectrum Devices) (the 1996 Spread Spectrum Class Licence). The 2002 Spread Spectrum Class Licence:

- includes a condition that devices operating under the class licence must comply with all the standards applicable to them;
- updates the technical requirement that devices operating under the class licence must comply with either the relevant Rule of the Federal Communications Commission (FCC) or a specified European Telecommunications Standards Institute (ETSI) standard. The FCC has updated its Rule and ETSI its standard;
- accommodates broadband frequency hopping spread spectrum devices in the 2.4 GHz (2463-2483.5 MHz) band;
- harmonises the maximum power limit across the 2.4 GHz band; and
- includes non material structural changes, in order for the class licence to comply with current drafting practices.

Background

Class licences are open, standing authorities that allow anyone to operate particular radiocommunications equipment provided that the operation and the device are in keeping with the conditions of the licence. The ACA may include in a class licence any condition that it sees fit, including conditions specifying:

- the frequencies at which operation of radiocommunications devices is authorised under the licence;

- other technical requirements governing operation of radiocommunications devices under the licence;
- the area within which operation of radiocommunications devices is authorised under the licence;
- the periods during which operation of radiocommunications devices is authorised under the licence; and
- that any radiocommunications devices operated under the licence must comply with all standards applicable to them.

Class licences avoid the need for individual apparatus licences, and minimise expense and administrative burden. They are considered by the ACA to be an appropriate means of managing the use of a segment of the radiofrequency spectrum where it is judged that there is a minimum risk of interference among radiocommunications services. Class licences do not need to be applied for and no fees are levied, for operation in accordance with the class licence.

Radiocommunications devices authorised under class licences are typically low power transmitters providing short range communications that do not require individual frequency coordination for interference management purposes. Examples of equipment covered by class licences include garage door openers, remote controls for models (ships, aircraft and cars), and citizen band radios.

The 1996 Spread Spectrum Class Licence authorises the operation of radiocommunications devices that employ direct sequence spread spectrum modulation techniques, frequency hopping spread spectrum modulation techniques, or both, to transmit information. Examples of applications known to be operated under the class licence are bar code readers, point of sale networks, radio local area networks and wireless private automatic branch exchanges.

Under the 1996 Spread Spectrum Class Licence, devices must be operated only:

- on a frequency band set out in the following table; and
- at the maximum Equivalent Isotropically Radiated Power (EIRP) associated with each frequency band in the table.

Frequency band	EIRP
915 MHz - 928 MHz	Not exceeding 1 watt
2400 MHz - 2463 MHz	Not exceeding 4 watt
2463 MHz - 2483.5 MHz	Not exceeding 200 milliwatts
5725 MHz - 5875 MHz	Not exceeding 1 watt

The driving reason to revoke the 1996 Spread Spectrum Class Licence was to include in the class licence a generic condition requiring that any radiocommunications device operated under the licence must comply with all the standards applicable to it. However, as the project proceeded, other reasons to update the provisions of the 1996 Spread Spectrum Class Licence emerged:

- it is a technical requirement of the 1996 Spread Spectrum Class Licence that devices operating under it must comply with either the relevant Rule of the FCC or an ETSI standard. The FCC has updated its Rule (twice) and ETSI its standard;
- there have been changes to the operating arrangements for Television Outside Broadcast (TOB) that affected the operation of spread spectrum devices in the 2.4 GHz band; and
- the perceived need to include an introductory note similar to the note that is included in the *Radiocommunications (Low Interference Potential Devices) Class Licence 2000*.

Non material structural changes have been made in order for the class licence to comply with current drafting practices.

Generic standards section

Under section 133 of the Act, the ACA may include in a class licence such conditions as it thinks fit, and this may include a condition that any radiocommunications device operated under the class licence must comply with all the standards applicable to it.

The opportunity has been taken to include a generic section in all class licences that requires devices operating under each of the class licences to comply with all standards applicable to them. Unlike the apparatus licence regime, standards are only applicable to devices authorised under a class licence if a standard is invoked¹ in the class licence. Traditionally, that has meant that a class licence needed amendment every time that a new standard was made or an existing standard was amended. Inevitably, given the need for class licence amendments to be drafted outside the ACA, and that variations to, and revocation of, class licences require a minimum period of public consultation (one month), the application of standards to devices authorised under class licences has lagged behind the making of those standards. The generic section will alleviate that problem, freeing the class licence regime from the onerous maintenance task of keeping pace with standards.

Updating technical requirements

Under section 133 of the Act, the ACA may also include in a class licence a condition specifying any other technical requirements about operation of radiocommunications devices under the class licence. In the 1996 Spread Spectrum Class Licence, operation of spread spectrum devices must comply with Rule 15.247, made by the FCC, or ETSI standard ETS 300 328.

In late 2000, the FCC made changes to Rule 15.247 in relation to the operating requirements for spread spectrum devices. The FCC made further changes to that Rule in October 2001. In addition, in December 2001, ETSI released a new version of the standard, ESTI EN 300 328-1

¹ *Standard* in this context means a standard made under section 162 of the *Radiocommunications Act 1992*. Technical requirements, including technical standards made under the *Telecommunications Act 1997*, will still require individual referencing, as is the case for devices authorised under the apparatus licence regime.

V1.3.1 (2001-12), for data transmission equipment operating in the 2.4 GHz (2400-2483.5 MHz) Industrial Scientific and Medical band using spread spectrum modulation techniques. Both the Rule and the standard have been assessed for applicability to Australian operating conditions.

Both the FCC Rule and the ETSI standard permit the operation of broadband frequency hopping spread spectrum devices in the frequency band 2.4 GHz. Those devices operate with a bandwidth of greater than 1 MHz and use fewer than 75 hopping frequencies. However, in order to parallel overseas arrangements and to ensure that existing spread spectrum devices are not significantly affected, the ACA has included in the class licence a condition that these broadband devices may only operate at a maximum EIRP limit of 500 milliwatts throughout the frequency band 2.4 GHz.

The new technical requirements have to be referenced in the class licence to apply to devices manufactured, imported or modified after the commencement date for the 2002 Spread Spectrum Class Licence. They support both narrowband and broadband spread spectrum devices. The old rules apply to spread spectrum devices manufactured, imported or modified after the commencement date for the 1996 Spread Spectrum Class Licence and before the commencement date for the 2002 Spread Spectrum Class Licence. The old rules support narrowband and broadband (other than frequency hopping) spread spectrum devices.

Changes to transmission power limits – 2.4 GHz

The arrangement in the 1996 Spread Spectrum Class Licence, where the band 2.4 GHz is restricted to an EIRP of 200 milliwatts, reflects a requirement to mitigate interference to the TOB² channel that shares the band. However, there has been a replanning of TOB services, expected to come into effect in early 2003, the outcome of which is that the EIRP limit can now be harmonised across the whole of the 2.4 GHz band. The change involves combining the two 2.4 GHz sub-bands in the 1996 Spread Spectrum Class Licence into one band, with a single EIRP limit of 4 watts for spread spectrum devices other than broadband frequency hopping spread spectrum devices. The EIRP limit for broadband frequency hopping devices is 500 milliwatts.

Compliance with current drafting practices

The 1996 Spread Spectrum Class Licence did not comply with current drafting practices. Because of that, and the extent of the proposed changes to the class licence, it was decided that it should be revoked and the 2002 Spread Spectrum Class Licence issued.

In addition, because of the trend to more commercial uses of spread spectrum devices (for example, for radio local area networks) it was decided to include a note at the beginning of the 2002 Spread Spectrum Class Licence, similar to that in the *Radiocommunications Class Licence (Low Interference Potential Devices) 2000*. The note provides information to operators of a spread spectrum device about what they may expect from the operation of their device in what is, essentially, the radiocommunications equivalent of a public park. Notes in class licences provide

² TOB operations primarily affected are used for Electronic News Gathering. From early 2003, these operations will not be afforded protection from interference caused by spread spectrum devices operating in accordance with the Spread Spectrum Class Licence.

information that the ACA considers to be important for operators and do not form part of the conditions of a class licence.

The Office of Regulation Review (ORR) has advised that a Regulation Impact Statement is not required for the revocation of the 1996 Spread Spectrum Class Licence and the issuing of the 2002 Spread Spectrum Class Licence (ORR ID: 2528 and 2002/3131). ORR noted that proposed amendments are of a minor and machinery nature and do not substantially alter existing arrangements.

Details of the class licence are set out in Attachment 1.

Notes on the Instrument

Part 1 Preliminary

Section 1 - Name of Class Licence

Section 1 provides that the instrument may be cited as the *Radiocommunications (Spread Spectrum Devices) Class Licence 2002*.

Section 2 – When Class Licence comes into force

Section 2 provides that the Class Licence comes into force on gazettal.

Section 3 - Interpretation

Subsection 3(1) defines terms used in the class licence that are not defined elsewhere. The note explains where other terms used in the class licence may be defined.

Subsection 3(2) provides that a reference to a document in the Class Licence includes a reference to it as in force, or existing, from time to time.

The boxed note provides information to operators of spread spectrum devices about what they may expect from the operation of those devices in what is, essentially, the radiocommunications equivalent of a public park.

Section 4 - Revocation

Section 4 provides for the revocation of the Radiocommunications Class Licence (Spread Spectrum Devices).

Part 2 Effect of Class Licence

Section 5 – Radiocommunications devices affected

Section 5 provides that a radiocommunications device may be authorised under this class licence only if it is a device that employs spread spectrum modulation techniques. Section 5 also provides that a device is not authorised under the class licence if it otherwise should have been licensed under an apparatus licence.

Section 6 – General conditions – interference

Section 6 provides that the operation of spread spectrum devices authorised under the class licence must not cause interference to a licensed radiocommunications device and must comply with certain footnotes in the *Australian Radiofrequency Spectrum Plan*.

Note 1 explains that a radiocommunications device authorised under the class licence will not be protected from interference from a radiocommunications service. Note 2 provides information about the contents of Footnotes AUS32 and 150 in the *Australian Radiofrequency Spectrum Plan*.

Section 7 – General conditions – frequency band 915-928 MHz

Section 7 provides that spread spectrum devices operating in this band must comply with a maximum power limit of 1 watt Equivalent Isotropically Radiated Power (EIRP). Section 7 also provides that operators of this spread spectrum device must comply with certain technical requirements, depending on the device compliance day of the device. ('Device compliance day' is defined in the class licence.)

Section 8 – General conditions – frequency band 2400-2483.5 MHz and operation not exceeding 500 milliwatts EIRP

Section 8 provides that broadband frequency hopping spread spectrum devices operating in this band must comply with a maximum power limit of 500 milliwatts EIRP. Section 8 also provides that operators of this type of spread spectrum device must comply with certain technical requirements if the device compliance day of the device is on or after the commencement date of the class licence. The note explains that this section relates to the operation of broadband frequency hopping spread spectrum devices (bandwidth greater than 1 MHz).

Section 9 – General conditions – frequency band 2400-2483.5 MHz and operation not exceeding 4 watts EIRP

Section 9 provides that spread spectrum devices, other than broadband frequency hopping spread spectrum devices, operating in this band must comply with a maximum power limit of 4 watts EIRP. Section 9 also provides that operators of this type of spread spectrum device must comply with certain technical requirements, depending on the device compliance day of the device. The note explains that this section relates to the operation of spread spectrum devices other than broadband frequency hopping spread spectrum devices.

Section 10 – General conditions – frequency band 5725-5875 MHz

Section 10 provides that spread spectrum devices operating in this band must comply with a maximum power limit of 1 watt EIRP. Section 10 also provides that operators of this spread spectrum device must comply with certain technical requirements, depending on the device compliance day of the device.

Section 11 – Standards

Section 11 provides that all spread spectrum devices authorised under the class licence must comply with all standards applicable to them from the date the class licence comes into force.

Note 1 explains that the ACA wishes to make it clear that if a standard mentioned in this section is amended or replaced by another standard after the device compliance day for the spread spectrum device to which the class licence applies, the spread spectrum device does not need to comply with the amended or replaced standard. Note 2 explains that the term 'standard' has a particular meaning under section 5 of the *Radiocommunications Act 1992*.