



# Radiocommunications Licence Conditions (Apparatus Licence) Determination 2003

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The AUSTRALIAN COMMUNICATIONS AUTHORITY makes this Determination under paragraph 107 (1) (f) of the *Radiocommunications Act 1992*.

Dated 27 February 2003

A.J SHAW  
Chair

R HORTON  
Deputy Chair

Australian Communications Authority

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## Part 1 Preliminary

### 1 Name of Determination

This Determination is the *Radiocommunications Licence Conditions (Apparatus Licence) Determination 2003*.

### 2 Commencement

This Determination commences on 1 March 2003.

### 3 Scope

- (1) This Determination sets out conditions to which a transmitter licence issued under section 100 or 100B of the Act is subject.
- (2) However, if a condition in this Determination is inconsistent with a condition specified in the licence, the condition specified in the licence applies.

### 4 Interpretation

- (1) In this Determination:

*Act* means the *Radiocommunications Act 1992*.

*ARPANSA standard* means the *Radiation Protection Standard for Maximum Exposure Levels to Radiofrequency Fields — 3 kHz to 300 GHz* published by the Australian Radiation Protection and Nuclear Safety Agency and assigned the number ISBN 0-0642-79400-6.

*Note* The ARPANSA standard may be obtained from the Australian Radiation Protection and Nuclear Safety Agency website <http://www.arpansa.gov.au>.

*AS 2772.2* means the Australian Standard *Radiofrequency radiation Part 2: Principles and methods of measurement — 300 kHz to 100 GHz* (AS 2772.2) published by Standards Australia.

*AS/NZS 2772.1* means the interim Australian/New Zealand Standard *Radiofrequency fields Part 1: Maximum Exposure levels — 3 kHz to 300 GHz* (AS/NZS 2772.1 (Int):1998) published by Standards Australia and assigned the number ISBN 0 7337 1892 2.

*far field*, of an antenna, means the region at distances from the antenna greater than the larger of:

- (a)  $2D^2/\lambda$ ; and
- (b)  $0.5 \lambda$ ;

where:

$\lambda$  is the wavelength of the RF field.

$D$  is the maximum lineal dimension of the antenna.

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**licence** means a transmitter licence.

**licensee** means the holder of a licence, including a person authorised by the licensee to operate a transmitter under the licence.

**member of the general public** means a person who is not an RF worker.

**mobile station** means a transmitter that is established for use:

- (a) in motion, on land, water or in the air; or
- (b) in a stationary position at unspecified points on land, water or in the air.

*Note* In this Determination the term **mobile station** is defined to mean a **transmitter** as set out in subsection 8 (2) of the Act. The term is a more limited definition to the term mobile station defined in the *Radiocommunications Regulations 1993*, and excludes radiocommunications receivers.

**NATA** means the National Association of Testing Authorities, Australia (ACN 004 379 748).

**NATA-accredited body** means a body accredited by NATA to assess or measure radiofrequency field strength levels in accordance with AS 2772.2.

**reference levels** means the reference levels mentioned in Table 7 and 8, and the notes to Table 7 and 8, of section 2.4 of the ARPANSA standard.

**RF field** means a physical field, which specifies the electric and magnetic states of a medium or free space, quantified by vectors representing the electric field strength and the magnetic field strength.

**RF worker** means a person who may be exposed to RF fields under controlled conditions, in the course of and intrinsic to the nature of their work.

**Standards Australia** means Standards Australia International Limited, (ABN 85 087 326 690).

*Note* For definitions of other expressions used in this Determination, see the Act, the *Radiocommunications Regulations 1993*; *Radiocommunications (Interpretation) Determination 2000* and the Glossary of the ARPANSA Standard.

- (2) A reference in this Determination to:

- (a) an instrument made under the Act; or
- (b) a document or publication by Standards Australia; or
- (c) a document or publication by the ACA;

includes a reference to the instrument, publication or other document as in force from time to time.

- (3) A term that is:

- (a) used (but not defined) in this Determination; and
  - (b) defined in the Glossary of the ARPANSA standard;
- has the meaning given by the Glossary.

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**Section 5****5      Revocation of *Radiocommunications Licence Conditions*  
(*Apparatus Licence*) *Determination No. 1 of 1997***

*Radiocommunications Licence Conditions (Apparatus Licence)*  
*Determination No. 1 of 1997* is revoked.

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## Part 2                      Operation of transmitters — general conditions

### 6                      Conditions

- (1) For paragraph 107 (1) (f) of the Act, each licence is subject to the conditions in Part 2 and 3 of this Determination relating to the operation of any transmitter under the licence by the licensee.

*Note* A licensee is required, when operating under an apparatus licence (see subsection 97 (4) of the Act), to comply with any licence conditions and any conditions on the licence made by the ACA. This Determination sets out conditions on the licence that ensure electromagnetic radiation (RF levels) emitted by a transmitter operated by the licensee do not exceed safe levels for general public exposure. The licensee is responsible for ensuring compliance with the requirements in this Determination.

- (2) However, Part 3 of this Determination does not apply in relation to the operation of a transmitter under a licence of a type mentioned in item 15 of Schedule 1 to the *Radiocommunications (Transmitter and Receiver Licences) Determination*, by a licensee.

*Note* Item 15 refers to a space licence.

- (3) However, Part 2 (except subsection (1) and section 7) and Part 3 of this Determination do not apply in relation to the operation of a mobile station that complies with the *Radiocommunications (Electromagnetic Radiation — Human Exposure) Standard 2003*.

- (4) However:

- (a) subsection (3) does not, before 1 March 2004, apply to the operation of a mobile station that:
- (i) complied, and continues to comply, with the requirements of the *Radiocommunications (Electromagnetic Radiation — Human Exposure) Standard 2001* as in force immediately before 1 March 2003; and
  - (ii) is not equipment to which paragraph 7 (a) of the *Radiocommunications (Electromagnetic Radiation — Human Exposure) Standard 2001* applies; and
- (b) the operation of the mobile station is taken to comply with Part 2 and 3 of this Determination; and
- (c) on or after 1 March 2004 the operation of the mobile station must comply with the *Radiocommunications (Electromagnetic Radiation — Human Exposure) Standard 2003*.

*Note 1* The continued application of section 8 of the *Radiocommunications (Electromagnetic Radiation — Human Exposure) Standard 2001* to a device mentioned in subsection (4) of this Standard is not relevant to the definition of **non-standard device** in section 9 of the Act because the status of the device (as standard or non-standard) was established when the device was last manufactured, imported, altered or modified.

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*Note 2* A mobile station for the *Radiocommunications (Electromagnetic Radiation — Human Exposure) Standard 2001*, is defined as **mobile and portable transmitting equipment**.

## 7 Permitted communications

The licensee must operate a transmitter only to communicate with a station or receiver with which the licensee is permitted by the terms of the licence to communicate, unless:

- (a) the transmission of a message is in relation to a distress or emergency situation; or
- (b) the licensee is authorised, in writing, by the ACA or an inspector to communicate with another station or receiver in relation to the investigation of interference.

*Note* In accordance with the requirements of footnote AUS 32 and footnote 150 to the Table of Allocations in the *Australian Radiofrequency Spectrum Plan*, receivers will not be afforded protection from interference that may be caused by industrial, scientific and medical (**ISM**) applications in the following ISM bands:

- (a) 13533 to 13567 kHz
- (b) 26957 to 27283 kHz
- (c) 40.66 to 40.70 MHz
- (d) 918 to 926 MHz
- (e) 2400 to 2500 MHz
- (f) 5725 to 5875 MHz
- (g) 24.00 to 24.25 GHz.

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## **Part 3                      Operation of transmitters — electromagnetic radiation requirements**

### **8                      Power flux density and field strengths**

- (1) The RF field produced by a transmitter operated under the licence must not exceed the reference levels for general public exposure at a place accessible to a member of the general public.
- (2) For subsection 9 (3) and paragraphs 10 (2) (a), 12 (1) (b) and 13 (1) (b), if the transmitter operates on a frequency of more than 10 MHz, only 1 of the following properties needs to be measured or calculated to show compliance with subsection (1) at places in the far field of the antenna:
  - (a) electric field strength;
  - (b) magnetic field strength;
  - (c) power flux density.
- (3) If a transmitter simultaneously transmits on multiple frequencies, the transmitter must meet the requirements specified in section 3 (Simultaneous exposure to multiple frequency fields) of the ARPANSA standard.

*Example for subsection (1)*

The following are examples of a type of place that is accessible to a member of the general public:

- a private residence
- a public park
- a building roof-top with a transmitter antenna located on the roof-top, where access is not restricted by the site manager or operator.

### **9                      Level 1 criteria**

- (1) This section applies to a transmitter (other than a mobile station):
  - (a) for which:
    - (i) the average total power supplied by the transmitter to all antennas fed by the transmitter is not more than 100 W; and
    - (ii) each antenna fed by the transmitter is installed so that it is inaccessible to a member of the general public; or
  - (b) for which:
    - (i) the bottom of the lowest antenna fed by the transmitter is at least 10 m above ground level; and
    - (ii) the average total equivalent isotropically radiated power of all antennas fed by the transmitter is not more than 3 200 W in any direction; or



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- (c) that is a point-to-point link operating at more than 1 GHz.

*Example for subparagraph (a) (ii)*

The following are examples of a type of place that is inaccessible to a member of the general public:

- the area around an antenna that is fenced and where entry is through a locked gate
  - the area around a tower where the tower cannot be climbed except by the use of an external aid.
- (2) This section applies to a mobile station for which the average total power supplied by the station to all antennas fed by the station is not more than 100 W.
- (3) The licensee must give information to the ACA, within 20 days after the date of a request by the ACA, showing that the licensee is complying with section 8 in relation to the transmitter.
- (4) If the licensee is unable to comply with a request under subsection (3) within the 20 days the licensee must:
- (a) advise the ACA in writing; and
  - (b) include evidence that the licensee is unable to comply; and
  - (c) propose a date by which the licensee will be able to comply.
- (5) Any advice provided under subsection (4) must be received by the ACA within 20 days of the original request for information.
- (6) The ACA must have regard to any written advice provided under subsection (4) before instituting regulatory action against the licensee for contravening subsection (3).
- (7) If the ACA elects not to take regulatory action mentioned in subsection (6) against the licensee, the ACA must advise the licensee of this as soon as practicable.

*Note* Regulatory action by the ACA against a licensee to suspend or cancel an apparatus licence under section 126 or 128 of the Act, is reviewable under section 285 of the Act.

## **10 Level 2 criteria**

- (1) This section applies to a transmitter to which section 9 does not apply.
- (2) After 31 May 2003, the licensee must:
- (a) be able to show that the licensee complies with section 8 in relation to the transmitter by:
    - (i) measuring RF fields in accordance with AS 2772.2; or
    - (ii) calculating RF fields using a model or method that is derived from the mathematical formulae mentioned in Appendix B to AS 2772.2; and

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- (b) keep records in accordance with section 15.

*Note for subparagraph (a) (ii)* Models or methods include:

- mathematical modelling
- computer software programs
- charts and graphs.

- (3) If the licensee spatially averages measurements taken for subparagraph (2) (a) (i), the licensee must do so in accordance with section 2.7 of the ARPANSA standard.

**11 Change to an installed transmitter**

- (1) If a transmitter to which section 9 applies is changed so that the requirements in section 9 no longer apply to it, the transmitter must be reassessed in accordance with section 10.
- (2) A change to the transmitter includes:
- (a) moving it to a different site; or
  - (b) altering the amount of power fed to its antennas; or
  - (c) changing the characteristics of any of its antennas, including:
    - (i) gain; or
    - (ii) size; or
    - (iii) height above the ground or other accessible surface; or
    - (iv) tilt; or
  - (d) altering its transmission designator.

**12 Multi-transmitter sites**

- (1) This section applies to a licensee that:
- (a) operates a transmitter on a site that has more than 1 transmitter; and
  - (b) keeps documentation that:
    - (i) includes the results of an assessment in accordance with subparagraph 10 (2) (a) (i) or 10 (2) (a) (ii); and
    - (ii) shows that the transmitters on the site, taken as a whole, comply with section 8.
- (2) If the licensee:
- (a) is requested to give the ACA documentation under subsection 9 (3); and
  - (b) gives the ACA all of the documentation the licensee keeps under paragraph 12 (1) (b);
- the licensee is taken to have complied with subsection 9 (3).

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- (3) A licensee that keeps documentation referred to in paragraph 12 (1) (b) is taken to have complied with paragraph 15 (1) (e).

*Note* Paragraph 15 (1) (e) deals with records containing results and methods of assessments under paragraph 10 (2) (a) or subsection 13 (1).

**13 Exception to ARPANSA standard — compliance documentation before 1 March 2003**

- (1) This section applies to a licensee that, before 1 March 2003, obtained documentation showing that:
- (a) the RF field produced by the transmitter operated under the licence does not exceed the exposure levels mentioned in section 6.3, 6.7 and 6.8 of AS/NZS 2772.1 at a place accessible to a member of the general public; and
  - (b) the RF field was:
    - (i) measured in accordance with AS 2772.2; or
    - (ii) calculated using a model or method that was derived from the mathematical formulae mentioned in Appendix B to AS 2772.2.
- (2) If the licensee:
- (a) is requested to give the ACA documentation under subsection 9 (3); and
  - (b) gives the ACA all of the documentation the licensee keeps under subsection (1);
- the licensee is taken to have complied with subsection 9 (3).
- (3) A licensee that:
- (a) operates a transmitter to which subsection 10 (1) applies; and
  - (b) keeps documentation obtained under subsection (1);
- is taken to have complied with paragraph 15 (1) (e).
- (4) If the licensee:
- (a) operates a transmitter on a site with more than 1 transmitter; and
  - (b) is requested to give the ACA documentation under subsection 9 (3); and
  - (c) gives the ACA documentation that:
    - (i) includes the results of an assessment in accordance with paragraph (1) (b); and
    - (ii) shows that the transmitters on the site, taken as a whole, do not exceed the exposure levels mentioned in section 6.3, 6.7 and 6.8 of the AS/NZS 2772.1 at a place accessible to a member of the general public;
- the licensee is taken to have complied with subsection 9 (3).

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- (5) A licensee that:
- (a) operates a transmitter on a site with more than 1 transmitter; and
  - (b) keeps documentation mentioned in paragraph (4) (c);
- is taken to have complied with paragraph 15 (1) (e).

## Part 4                      Records

### 14                      Application of Part 4

This Part applies after 31 May 2003 to a transmitter to which section 10 applies.

### 15                      Records

- (1) A licensee must keep the following records:
  - (a) a declaration of conformity, for the transmitter, that includes the information mentioned in subsection (2);
  - (b) if the licensee uses an agent under section 18 — a copy of the agency agreement;
  - (c) the name and qualifications of any person who has assessed the transmitter for compliance;
  - (d) the dates of any assessments;
  - (e) the results of any assessments obtained in accordance with paragraph 10 (2) (a) or subsection 13 (1), including any method of assessment;
  - (f) details of the transmitter including its power level, gain, size, tilt, manufacturer, model number and emission designator.
- (2) For paragraph (1) (a), the information is:
  - (a) the licensee's name, address, ACN (if any), ABN (if any) or ARBN (if any), ACA licence type and number; and
  - (b) details of the transmitter, including its location, antenna type and height above ground or other accessible surface; and
  - (c) a statement that the RF field produced by the transmitter meets the requirements of subsection 8 (1); and
  - (d) the name and position in the organisation of the person who signs the declaration.
- (3) The licensee must amend the declaration of conformity in accordance with any changes to the information included in it.
- (4) A record:
  - (a) must be kept for at least 12 months after the licence has expired; and
  - (b) must be available for inspection by the ACA at a place nominated by the ACA, or by a method nominated by the ACA, after consultation with the licensee; and
  - (c) must be kept in English; and
  - (d) may be a copy of an original record; and
  - (e) may be kept in electronic form.

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- (5) Without limiting paragraph (4) (b), the place may be:
  - (a) the licensee's street address, in Australia, provided on the licence application; or
  - (b) for a site on which more than 1 transmitter is located — at the street address of the transmitter.

**16 Provision of information to authorised officer**

- (1) The licensee must give information to the ACA about the licensee's compliance with this Determination:
  - (a) within 20 days after the date of a request by the ACA; and
  - (b) if the ACA has specified how the information is to be provided — in the specified way.
- (2) If the licensee is unable to comply with a request under subsection (1) within the 20 days the licensee must:
  - (a) advise the ACA in writing; and
  - (b) include evidence that the licensee is unable to comply; and
  - (c) propose a date by which the licensee will be able to comply.
- (3) Any advice provided under subsection (2) must be received by the ACA within 20 days of the original request for information.
- (4) The ACA must have regard to any written advice provided under subsection (2) before instituting regulatory action against the licensee for contravening subsection (1).
- (5) If the ACA elects not to take regulatory action mentioned in subsection (4) against the licensee, the ACA must advise the licensee of this as soon as practicable.
- (6) If the information is not provided electronically, the ACA must:
  - (a) give the licensee a receipt for the information; and
  - (b) must return the document to the licensee as soon as practicable within 60 days after receiving the information.

*Note* Regulatory action by the ACA against a licensee to suspend or cancel an apparatus licence under section 126 or 128 of the Act, is reviewable under section 285 of the Act.

**17 Dispute over reliability of evaluation provided in compliance documentation**

- (1) If a licensee and the ACA do not agree about whether a transmitter complies with section 8, the ACA may request the licensee:
  - (a) to have the transmitter assessed by a NATA-accredited body for compliance with section 8; and
  - (b) to obtain a report setting out whether or not the transmitter complies; and
  - (c) provide the report to the ACA.

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- (2) The licensee must comply with a request under subsection (1) within 30 days after the date of the request.
- (3) For this section, the licensee must pay all costs associated with providing the subsection (1) information to the ACA.

**18 Agents**

- (1) A licensee may use an agent:
  - (a) to ensure that a transmitter complies with this Determination; and
  - (b) to keep documents that the licensee is required to keep under this Determination.
- (2) If the licensee uses an agent, the licensee and the agent must keep a copy of the agency agreement for the same period that records must be kept under this Determination.