Radiocommunications (Electromagnetic Radiation — Human Exposure) Standard 2014

Radiocommunications Act 1992

The AUSTRALIAN COMMUNICATIONS AND MEDIA AUTHORITY makes this Standard under subsection 162(1) of the *Radiocommunications Act 1992*.

Dated *30th June 2014*

Chris Chapman
[signed]
Member

Richard Bean
[signed]
Member/~~General Manager~~

Australian Communications and Media Authority

1 Name of Standard

This Standard is the *Radiocommunications (Electromagnetic Radiation — Human Exposure) Standard 2014*.

2 Commencement

This Standard commences on the day after it is registered.

Note All legislative instruments and compilations are registered on the Federal Register of Legislative Instruments kept under the *Legislative Instruments Act 2003*. See http://www.comlaw.gov.au.

3 Revocation

The *Radiocommunications (Electromagnetic Radiation —Human Exposure) Standard 2003* [F2005B00258] is revoked.

4 Object of Standard

This Standard regulates the performance of particular radiocommunications transmitters to protect the health and safety of persons who may be exposed to electromagnetic radiation from such transmitters.

5 Definitions

(1) In this Standard:

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.

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

AS/NZS 2772.2 means the Australian Standard/New Zealand Standard *AS/NZS 2772.2:2011 Radiofrequency fields: Principles and methods of measurement and computation – 3 kHz to 300 GHz* published by Standards Australia.

Note AS 2772.2 may be obtained from the SAI Global Limited website http://www.saiglobal.com.

aware user device means a hand-held or body-worn radiocommunications transmitter that operates on a push-to-talk basis and is intended for use as:

(a) an ambulatory station; or

(b) a land mobile system station; or

(c) a maritime ship station; or

(d) a citizens band radio station; or

(e) an amateur station.

basic restrictions means the restrictions in Tables 2 and 6, including the notes to Tables 2 and 6, of section 2.3 of the ARPANSA Standard.

device means a mobile station that section 6 of this Standard applies to.

EN 62209-1 means *Human exposure to radio frequency fields from hand-held and body-mounted wireless communication devices — Human models, instrumentation, and procedures — Part 1: Procedure to determine the specific absorption rate (SAR) for hand-held devices used in close proximity to the ear (frequency range of 300 MHz to 3 GHz)*, published by the European Committee for Electrotechnical Standardisation (CENELEC).

Note EN 62209-1 is a European Union harmonised standard based on IEC 62209-1, a standard developed by Technical Committee TC106 of the International Electrotechnical Commission (IEC). Australia has active representation on TC106 through the participation of Standards Australia (http://www.standards.org.au/). EN 62209-1 may be obtained from the SAI Global Limited website http://www.saiglobal.com.

EN 62209-2 means *Human exposure to radio frequency fields from hand-held and body-mounted wireless communication devices — Human models, instrumentation, and procedures — Part 2: Procedure to determine the specific absorption rate (SAR) for wireless communication devices used in close proximity to the human body (frequency range of 30 MHz to 6 GHz)*, published by the European Committee for Electrotechnical Standardisation (CENELEC).

Note EN 62209-2 is a European Union harmonised standard based on IEC 62209-2, a standard developed by Technical Committee TC106 of the International Electrotechnical Commission (IEC). Australia has active representation on TC106 through the participation of Standards Australia (http://www.standards.org.au/). EN 62209-2 may be obtained from the SAI Global Limited website http://www,saiglobal.com.

human body means the head, neck and trunk but not the limbs.

IEC 62209-1 means *Human exposure to radio frequency fields from hand-held and body-mounted wireless communication devices — Human models, instrumentation, and procedures — Part 1: Procedure to determine the specific absorption rate (SAR) for hand-held devices used in close proximity to the ear (frequency range of 300 MHz to 3 GHz)*, published by the International Electrotechnical Commission (IEC).

Note IEC 62209-1 was developed by Technical Committee TC106 of the International Electrotechnical Commission (IEC). Australia has active representation on TC106 through the participation of Standards Australia (http://www.standards.org.au/). IEC 62209-1 may be obtained from the SAI Global Limited website http://www.saiglobal.com.

IEC 62209-2 means *Human exposure to radio frequency fields from hand-held and body-mounted wireless communication devices — Human models, instrumentation, and procedures — Part 2: Procedure to determine the specific absorption rate (SAR) for wireless communication devices used in close proximity to the human body (frequency range of 30 MHz to 6 GHz)*, published by the International Electrotechnical Commission (IEC).

Note IEC 62209-2 was developed by Technical Committee TC106 of the International Electrotechnical Commission (IEC). Australia has active representation on TC106 through the participation of Standards Australia (http://www.standards.org.au/). IEC 62209-2 may be obtained from the SAI Global Limited website http://www,saiglobal.com.

integral antenna means an antenna:

(a) permanently attached to equipment; or

(b) intended for direct attachment to a fixed connector on equipment, without the use of an external cable.

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

(a) in motion, whether on land, on water or in the air; or

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

Examples of a mobile station

1 A wireless modem operating in a laptop computer.

2 A hand–held cellular or PCS telephone with a radiating antenna in the handpiece.

non-aware user device means a device other than an aware user device.

normal position of use, of a device, means:

(a) the position specified in the measurement method applicable to the device under section 9, 10 or 11; or

(b) if paragraph (a) does not apply, the common use spatial orientation of the device with respect to the user; or

(c) if paragraphs (a) and (b) do not apply, the spatial orientation of the device with respect to the user recommended by the manufacturer.

old standard means the *Radiocommunications (Electromagnetic Radiation — Human Exposure) Standard 2003* as in force immediately before the commencement of this Standard.

reference levels means the reference levels in Tables 7 and 8, including the notes to Tables 7 and 8, of section 2.4 of the ARPANSA Standard.

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

simultaneous multi-band transmission mode, in relation to a device means an operating mode allowing the device to transmit on more than one frequency band simultaneously.

(2) A reference in this Standard to a publication or other document of:

(a) Standards Australia Limited; or

(b) the European Committee for Electrotechnical Standardisation; or

(c) the International Electrotechnical Commission;

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

(3) A term that is:

(a) used (but not defined) in this Standard; and

(b) defined in the Glossary of the ARPANSA Standard;

has the meaning given by that Glossary.

6 Application of Standard: general

(1) This Standard applies to a mobile station that:

(a) on or after the commencement of this Standard, is:

(i) manufactured or imported; or

(ii) altered or modified in a material respect; and

(b) is capable of operating in the frequency band 100kHz to 300GHz (inclusive); and

(c) has an integral antenna; and

(d) is not intended to be used as an Emergency Position Indicating Radio Beacon (EPIRB) or distress beacon.

(2) However, this Standard does not apply to a mobile station that is:

(a) used solely as equipment, or as part of a weapons system, used by the Defence Force; or

(b) used solely as equipment, or as part of a weapons system, used by the defence force of another country that is conducting operations with the Defence Force; or

(c) used solely for law enforcement activities by any of the following bodies:

(i) the Australian Federal Police;

(ii) the Australian Crime Commission;

(iii) the New South Wales Crime Commission;

(iv) the Independent Commission Against Corruption of New South Wales;

(v) the Police Integrity Commission of New South Wales;

(vi) the Crime and Misconduct Commission of Queensland;

(vii) the Independent Commissioner Against Corruption of South Australia;

(viii) the Corruption and Crime Commission of Western Australia; or

(d) used solely for law enforcement activities by a body that:

(i) is not mentioned in paragraph (c); and

(ii) is responsible for criminal law enforcement, and established by or under a law of the Commonwealth, a State or a Territory; or

(e) used solely for law enforcement activities by a body that:

(i) is not mentioned in paragraph (c); and

(ii) provides support for law enforcement in Australia; and

(iii) is responsible or accountable to the Australian Police Ministers' Council for the performance of that function; or

(f) an aware user device or non-aware user device that is not mentioned in subsection 9 (1), 10 (1) or 11 (1).

Note 1 Exemptions from the operation of the Act are also provided for in:

(a) the Act (subsections 24 (1) and (2) and section 25); and

(b) the *Radiocommunications Regulations 1993* (regulation 6).

The exemptions relate to activities of the Defence Force, the Australian Security Intelligence Service and the Australian Security Intelligence Organisation. Section 6 of this Standard is not intended to limit those exemptions.

Note 2 The application of this Standard to a device under this section 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.

7 Transitional arrangements for one year after commencement of the Standard

(1) If a device to which this Standard applies is manufactured or imported not later than 12 months after the commencement of this Standard, the device will be taken to comply with this Standard if it complies with the old standard.

(2) If a device to which this Standard applies has been altered or modified in a material respect at a time that is both:

(a) after its manufacture or, if it has been imported, after its importation; and

(b) not later than 12 months after the commencement of this Standard;

the device will be taken to comply with this Standard if it complies with the old standard.

(3) Despite the revocation of the old standard, the old standard applies to a device for the purposes of this section as if it had not been revoked.

Note 1 The continued application of this Standard to a device under this section 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.

Note 2 A device that was manufactured, imported, altered, modified or first offered for supply before the commencement of this Standard is equipment to which this Standard does not apply under section 6.

8 Performance standards

(1) For paragraph 162 (1) (a) of the Act, the standard for performance for an aware user device to which this Standard applies is that the device must not expose the user to electromagnetic radiation at a level greater than the basic restrictions for occupational exposure when the device is used in its normal position of use and in its normal mode of operation, measured using the measurement methods set out in section 9, 10 or 11.

(2) For paragraph 162 (1) (a) of the Act, the standard for performance for a non–aware user device to which this Standard applies is that the device must not expose the user to electromagnetic radiation at a level greater than the basic restrictions for general public exposure when the device is used in its normal position of use and in its normal mode of operation, measured using the measurement methods set out in section 9, 10 or 11.

(3) For the purpose of subsections (1) and (2), if a device is capable of operation in simultaneous multi-band transmission mode, ***normal mode of operation*** means operation in that mode.

9 Measurement methods for performance standards: aware user device or non-aware user device in close proximity to the human ear

(1) This section applies to an aware user device or non-aware user device to which this Standard applies that:

(a) is designed to be used or held with the radiating part of the aware user device or non-aware user device in close proximity to the human ear; and

(b) transmits on a frequency in the frequency band 300MHz to 3GHz (inclusive).

(2) Subject to subsection (2A), the measurement methods to determine if the aware user device or non-aware user device meets the standard for performance in subsection 8 (1) or 8 (2) are the measurement methods identified in EN 62209-1 or IEC 62209-1.

(2A) If IEC 62209-1 or EN 62209-1 does not include measurement methods for operation of a device in simultaneous multi-band transmission mode, a device to which this section applies that is capable of operation in that mode must be tested to determine if the device meets the applicable standard for performance in section 8 using the measurement methods described in IEC 62209-2 or EN 62209-2.

(3) A test report must comply with the requirements in EN 62209-1, EN 62209-2, IEC 62209-1 or IEC 62209-2 which contained the measurement methods identified as applicable in accordance with subsection (2) or (2A).

10 Measurement methods for performance standards: aware user device or non–aware user device 20cm or less from the human body

(1) This section applies to an aware user device or a non–aware user device to which this Standard applies that:

(a) is designed to be used or held with the radiating part of the aware user device or non-aware user device in close proximity to the human body but not more than 20cm from the human body; and

(b) transmits on a frequency in the frequency band 150MHz to 5.8GHz (inclusive); and

(c) is not mentioned in subsection 9 (1).

(2) The measurement methods to determine if the aware user device or non-aware user device meets the standard for performance in subsection 8 (1) or 8 (2) are the measurement methods identified in EN 62209-2 or IEC 62209-2.

(3) A test report must comply with the requirements in EN 62209-2 or IEC 62209-2 which contained the measurement methods identified in accordance with subsection (2).

11 Assessment methods for performance standards: aware user devices and non-aware user devices more than 20cm from the human body

(1) This section applies to an aware user device or a non-aware user device to which this Standard applies that:

(a) is designed to be used, or held, more than 20cm from the human body; and

(b) transmits in the frequency band 300kHz to 100GHz (inclusive).

(2) The RF field produced by an aware user device or a non-aware user device, at the position of the user with the device operated at the normal position of use, must be assessed in accordance with the requirements in AS/NZS 2772.2.

(3) An aware user device is taken to meet the standard for performance of subsection 8 (1) if the RF field assessed under subsection (2) is less than the relevant reference levels for occupational exposure.

(4) A non-aware user device is taken to meet the standard for performance of subsection 8 (2) if the RF field assessed is less than the relevant reference levels for general public exposure.