

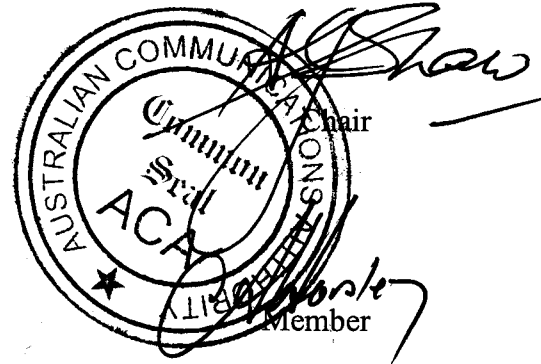


# Australian Radiofrequency Spectrum Plan

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The AUSTRALIAN COMMUNICATIONS AUTHORITY makes this Spectrum Plan under sections 30 and 34 of the *Radiocommunications Act 1992*.

Dated *5th December* 2001



Australian Communications Authority

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**Section 1**

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**1 Name of Spectrum Plan**

This Spectrum Plan is the *Australian Radiofrequency Spectrum Plan*.

**2 Commencement**

This Spectrum Plan commences on 1 January 2002.

**3 Definitions****(1) In this Spectrum Plan:**

*Act* means the *Radiocommunications Act 1992*.

**administration** means a government or public authority of a country that is responsible for giving effect to the obligations of the country as an ITU member.

*Note* The ACA is the Australian administration.

**aeronautical mobile (OR) service** means an aeronautical mobile service for communications, including those relating to flight coordination, primarily outside national or international civil air routes.

**aeronautical mobile (R) service** means an aeronautical mobile service that is reserved for communications relating to the safety and regularity of flight, primarily along national or international civil air routes.

**aeronautical mobile service** means any of the following mobile services:

- (a) a mobile service, between aeronautical stations and aircraft stations, in which:
  - (i) survival craft stations may participate; and
  - (ii) emergency position-indicating radiobeacon stations may participate on designated distress and emergency frequencies;
- (b) a mobile service, between aircraft stations, in which:
  - (i) survival craft stations may participate; and
  - (ii) emergency position-indicating radiobeacon stations may participate on designated distress and emergency frequencies.

**aeronautical mobile-satellite (OR) service** means an aeronautical mobile-satellite service for communications, including those relating to flight coordination, primarily outside national and international civil air routes.

**aeronautical mobile-satellite (R) service** means an aeronautical mobile-satellite service that is reserved for communications relating to the safety and regularity of flight, primarily along national or international civil air routes.

*Note* In the definitions of **aeronautical mobile (OR) service**, **aeronautical mobile (R) service**, **aeronautical mobile-satellite (OR) service** and **aeronautical mobile-satellite (R) service**, **(OR)** means off-route and **(R)** means route.

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***aeronautical mobile-satellite service*** means a mobile-satellite service in which:

- (a) mobile earth stations are located on aircraft; and
- (b) survival craft stations and emergency position-indicating radiobeacon stations may participate.

***aeronautical radionavigation service*** means a radionavigation service for the benefit and safe operation of aircraft.

***amateur-satellite service*** means a radiocommunication service using space stations on Earth satellites for an amateur service.

***amateur service*** means a radiocommunication service for self-training in, intercommunication using and technical investigation into, radiocommunications by individuals who:

- (a) are licensed under the Act to do so; and
- (b) do so solely with a personal aim; and
- (c) do not have a pecuniary interest in doing so.

***assignment*** means an identification by the ACA, or a person authorised by the ACA, of:

- (a) 1 or more frequencies as being suitable for use by a device, subject to particular conditions; or
- (b) 1 or more frequency channels as being suitable for use by a device, subject to particular conditions.

***atmospheric and ionospheric sounder*** means a station that uses radio waves to determine the physical characteristics of the atmosphere and the ionosphere.

***Australian footnote reference*** means the combination of the letters 'AUS' and a number, that refers to an item in Part 3.

***broadcasting-satellite service*** means a broadcasting service transmitted by means of 1 or more space stations.

***broadcasting service*** means a radiocommunication service that delivers radio programs or television programs to persons having equipment that may receive the service, but does not include the following services:

- (a) a service (including a teletext service) that transmits data only, with or without associated still images;
- (b) a service (including a teletext service) that transmits text only, with or without associated still images;
- (c) a service that makes programs available on demand on a point-to-point basis, including a dial-up service;
- (d) a service that the Minister determines by notice in the *Gazette* not to be a broadcasting service within the meaning of the *Broadcasting Services Act 1992*.

***communication*** includes communication:

- (a) between:
  - (i) persons; or
  - (ii) things; or

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- (iii) persons and things; and
- (b) in any form, or combination of forms, including the following:
  - (i) speech, music or other sounds;
  - (ii) data;
  - (iii) text;
  - (iv) visual images, whether or not animated;
  - (v) signals.

***earth exploration-satellite service:***

- (a) means a radiocommunication service (that may include links between space stations) between earth stations and 1 or more space stations:
  - (i) by which information relating to the characteristics of the Earth and its natural phenomena is obtained from active or passive sensors on Earth satellites; and
  - (ii) by which similar information is collected from airborne or Earth-based platforms; and
  - (iii) by which the information may be distributed to earth stations participating in the service; and
  - (iv) by which platform interrogation may be carried out; and
- (b) includes any feeder link necessary for the operation of the service.

***emergency position-indicating radiobeacon station*** means a station in the mobile service the emissions of which are intended to assist search and rescue operations.

***experimental station*** means a station (except an amateur station) that uses radio waves in experiments for the development of science or technique.

***feeder link*** means a radio link:

- (a) that involves an earth station at a particular fixed point, or at a fixed point within a particular area; and
- (b) that is for the use of a space radiocommunication service other than a fixed-satellite service; and
- (c) that is:
  - (i) from an earth station of the kind mentioned in paragraph (a) to a space station; or
  - (ii) from a space station to an earth station of the kind mentioned in paragraph (a).

***fixed-satellite service*** means a radiocommunication service, including any feeder link that is necessary for the operation of another space radiocommunication service, with the following characteristics:

- (a) the service is between earth stations at particular fixed points, or at fixed points within particular areas;
- (b) the service uses:
  - (i) 1 or more satellites; and
  - (ii) a satellite-to-satellite link (if any) that may use the inter-satellite service.

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***fixed service*** means a radiocommunication service between particular fixed points.

***frequency band*** includes part of a frequency band that is specified in column 2 of the Table.

***frequency channel*** means a sub-band that:

- (a) is in a frequency band; and
- (b) has a particular centre frequency.

***harmful interference*** means interference that:

- (a) endangers the functioning of a radionavigation service or other safety services that are operating in accordance with:
  - (i) the Radio Regulations; or
  - (ii) this Spectrum Plan; or
- (b) obstructs, repeatedly interrupts or seriously degrades a radiocommunication service that is operating in accordance with:
  - (i) the Radio Regulations; or
  - (ii) this Spectrum Plan.

***high altitude platform station*** means a station located on an object at an altitude of between 20 and 50 km, that is above a particular nominal place on the Earth's surface.

***industrial, scientific and medical (ISM) applications*** means the operation of a device or equipment that is designed to generate and apply locally radio frequency energy, except for telecommunications.

*Examples of equipment used in ISM applications for industrial, scientific, medical and domestic purposes*

- plastic welders
- chemical analysis equipment
- medical diathermy equipment
- microwave ovens.

***international footnote reference*** means a number, or the combination of a number and a letter, that refers to an item in Part 4.

***inter-satellite service*** means a radiocommunication service providing links between artificial satellites.

***ITU*** means the International Telecommunication Union.

***land mobile-satellite service*** means a mobile-satellite service in which mobile earth stations are located on land.

***land mobile service*** means a mobile service:

- (a) between base stations and land mobile stations; or
- (b) between land mobile stations.

***maritime mobile-satellite service*** means a mobile-satellite service in which:

- (a) mobile earth stations are located on ships; and
- (b) survival craft stations and emergency position-indicating radiobeacon stations may participate.

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**maritime mobile service** means any of the following mobile services:

- (a) a mobile service, between coast stations and ship stations, in which survival craft stations and emergency position-indicating radiobeacon stations may participate;
- (b) a mobile service, between ship stations, in which survival craft stations and emergency position-indicating radiobeacon stations may participate;
- (c) a mobile service, between associated on-board communications stations (whether or not the stations are operated on ships), in which survival craft stations and emergency position-indicating radiobeacon stations may participate.

**maritime radionavigation service** means a radionavigation service for the benefit and safe operation of ships.

**meteorological aids service** means a radiocommunication service for meteorological (including hydrological) observations and exploration.

**meteorological-satellite service** means an earth exploration-satellite service that is used for meteorological purposes.

**mobile-satellite service** means any of the following radiocommunications services, including any feeder link that is necessary for the operation of the service:

- (a) a radiocommunication service between 1 or more mobile earth stations and 1 or more space stations;
- (b) a radiocommunication service between space stations used by the service;
- (c) a radiocommunication service between mobile earth stations by means of 1 or more space stations.

**mobile service** means a radiocommunication service:

- (a) between mobile stations and land stations; or
- (b) between mobile stations.

**offshore area** has the same meaning as in the *Offshore Minerals Act 1994*.

**program**, in relation to a broadcasting service, means:

- (a) matter the primary purpose of which is to entertain, to educate or to inform an audience; or
- (b) advertising or sponsorship matter, whether or not of a commercial kind.

**public correspondence** means any telecommunication:

- (a) that is accepted for transmission by a station because the station is available for use by the public; or
- (b) that is accepted for transmission by a person or body because the person or body is obliged to accept the telecommunication from the public for transmission.

**radio astronomy** means astronomy based on the reception of radio waves of cosmic origin.

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**radio astronomy service** means a radiocommunication service that is used for radio astronomy.

**radiodetermination** means either or both of the following, carried out on the basis of the propagation properties of radio waves:

- (a) determining the position, velocity or other characteristics of an object;
- (b) obtaining information about those characteristics.

**radiodetermination-satellite service:**

- (a) means a radiocommunication service involving the use of 1 or more space stations for radiodetermination; and
- (b) includes any feeder link necessary for the operation of the service.

**radiodetermination service** means a radiocommunication service that is used for radiodetermination.

**radiolocation** means radiodetermination that is used for a purpose other than radionavigation.

**radiolocation-satellite service:**

- (a) means a radiodetermination-satellite service that is used for radiolocation; and
- (b) includes any feeder link necessary for the operation of the service.

**radiolocation service** means a radiodetermination service that is used for radiolocation.

**radionavigation** means radiodetermination used for navigation or obstruction warning.

**radionavigation-satellite service:**

- (a) means a radiodetermination-satellite service used for radionavigation; and
- (b) includes any feeder link necessary for the operation of the service.

**radionavigation service** means a radiodetermination service for radionavigation.

**Radio Regulations** means the document:

- (a) titled 'Radio Regulations, Edition of 2001'; and
- (b) published by the ITU.

*Note* The Radio Regulations published by the ITU are not regulations made by the Governor-General under the *Radiocommunications Act 1992*.

**radio waves** means electromagnetic waves of frequencies less than 420 THz that are propagated in space without an artificial guide.

**reflecting satellite** means a satellite that is intended to reflect radiocommunication signals.

**safety service** means a radiocommunication service used at any time for the safeguarding of human life or property.

**satellite** means a body that:

- (a) revolves around another body of preponderant mass; and
- (b) has a motion primarily and permanently determined by the force of attraction of the other body.

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**service** means a service mentioned in column 2 of the Table.

*Note* Any service mentioned in column 1 of the Table is specified in the Radio Regulations and may be defined differently to a service of the same name in column 2 of the Table.

**space operation service** means a radiocommunication service that operates only for purposes relating to the operation of spacecraft, in particular:

- (a) space tracking; and
- (b) space telemetry; and
- (c) space telecommand.

*Note* The functions mentioned above will normally be provided within the service in which the space station is operating.

**space radiocommunication** means radiocommunication using 1 or more space stations, reflecting satellites or other objects in space.

**space research service** means a radiocommunication service in which spacecraft or other objects in space are used for scientific or technological research.

**space station** means a station on an object that is beyond, is intended to go beyond or has been beyond the major portion of the Earth's atmosphere.

**specified service** means a service that uses the frequency band, mentioned in column 2 of the Table, that is allocated for the service.

**standard frequency and time signal-satellite service:**

- (a) means a standard frequency and time signal service that uses space stations on Earth satellites; and
- (b) includes any feeder link necessary for the operation of the service.

**standard frequency and time signal service** means a radiocommunication service that involves transmission of specified frequencies or time signals of a stated high precision for general reception.

**survival craft station** means a mobile station in the maritime mobile service or the aeronautical mobile service that is:

- (a) intended only for use for survival purposes; and
- (b) located on a lifeboat, life-raft or other survival equipment.

**Table** means the Table of Frequency Allocations in Part 2.

**telecommunications** means communications carried by electromagnetic energy that is guided, unguided, or both guided and unguided.

**terrestrial radiocommunication** means radiocommunication other than space radiocommunication or radio astronomy.

**tropospheric scatter system** means a system of communicating using radio waves that are propagated by scattering as a result of irregularities or discontinuities in the physical properties of the troposphere.

**unspecified service** means a service that uses a frequency band, mentioned in column 2 of the Table, that is not allocated for the service.

- (2) If an expression is defined in this Spectrum Plan, and different words are used to define the expression in the Radio Regulations, the expression is not



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taken to have a different meaning if the words used in both documents appear to express the same idea.

- (3) If an expression is not defined in this Spectrum Plan, the expression has the meaning given by:
  - (a) the *Radiocommunications Regulations 1993*; or
  - (b) if the expression is defined in the *Radiocommunications (Interpretation) Determination 2000* — that determination.
- (4) In this Spectrum Plan, a reference to a radiocommunication service means a radiocommunication service for terrestrial radiocommunication, unless another kind of radiocommunication is specified.
- (5) Notes to provisions of this Spectrum Plan, except the notes described as footnotes in Part 3 or 4, are included for information only and are not part of the Plan.

#### **4 Division of spectrum into frequency bands**

For section 30 of the Act, the spectrum is divided into the frequency bands set out in column 2 of the Table.

*Note* Column 1 of the Table is the Table of Frequency Allocations set out in the Radio Regulations, and is only included in the Table to allow for comparison with column 2.

#### **5 How the Table refers to services**

- (1) A primary service is described by an expression in column 2 of the Table that:
  - (a) is in upper case letters; and
  - (b) is not an Australian footnote reference or an international footnote reference.

*Example*

MOBILE.

- (2) If the expression is followed by words in lower case letters that describe a limitation, the primary service does not include the limitation.

*Example*

MOBILE except aeronautical mobile (R).

An aeronautical mobile (R) service is not part of the primary service.

- (3) A secondary service is described by an expression in column 2 of the Table that is in lower case letters, other than:
  - (a) a limitation to a primary service; and
  - (b) words in parentheses describing an operational restriction, as mentioned in subsection (5).

*Example*

Mobile.

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- (4) If the expression is followed by words in lower case letters that describe a limitation, the secondary service does not include the limitation.

*Example*

Mobile except aeronautical mobile (R).

An aeronautical mobile (R) service is not part of the secondary service.

*Note* Services are listed in the Table in an order consistent with the Radio Regulations. They are not listed to suggest any order of priority.

- (5) If a reference to a service in column 2 of the Table is immediately followed by words in parentheses describing an operational restriction, the service is taken to be restricted accordingly.

**6 Primary and secondary services — frequency band plans**

If a frequency band is specified, in column 2 of the Table, for a primary service, the frequency band may also be specified for a secondary service in a frequency band plan.

*Note* See sections 5, 7 and 12 for provisions about *primary service* and *secondary service*.

**7 Primary services — spectrum licences**

A service operating under a spectrum licence is taken to be a primary service unless the spectrum licence specifies that it is a secondary service.

**8 Use of frequency bands — general**

If a frequency band is part of a frequency band plan, the frequency band may be used only:

- (a) for the purpose specified in the frequency band plan; and
- (b) in a way mentioned in section 9 or 10.

*Note* A frequency band plan must not be inconsistent with the Spectrum Plan: see Act, subsection 32 (3).

**9 Use of frequency bands — spectrum licensing and class licensing**

- (1) A frequency band may be used for a service that:
  - (a) is operating in accordance with a spectrum licence; and
  - (b) is an unspecified service.
- (2) A frequency band may be used by a device that:
  - (a) is operating in accordance with a class licence; and
  - (b) is not consistent with a service specified in column 2 of the Table for the frequency band.

*Note* It is the policy of the ACA to engage in consultation before issuing a class licence mentioned in subsection 9 (2).

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**10 Use of frequency bands — other circumstances**

- (1) A frequency band may be used for an unspecified service if the unspecified service uses the frequency band to support a specified service.

*Example*

A station in the land mobile service may communicate with stations of the aeronautical mobile service in a frequency band used for the aeronautical mobile service if the purpose of the station in the land mobile service is to support the aeronautical mobile service.

- (2) If the major usage of a station (the *first station*) is for a specified service, the frequency band allocated for that service may be used for an unspecified service that is:
- (a) provided by the first station; or
  - (b) provided by another station and in support of a function of the first station.

*Example*

In column 2 of the Table, a frequency band is allocated to the meteorological-satellite service. A space station in the meteorological-satellite service uses that frequency band and receives meteorological information from buoys. This is the major usage of the station.

Under paragraph 10 (2) (a) the space station may also be used for radiodetermination of the positions of the buoys, although this would not be a specified service for the space station.

Under paragraph 10 (2) (b), the radiodetermination function of the space station could also be used to track an animal or vehicle carrying a transmitter. The use of this transmitter would also be permitted under paragraph 10 (2) (b).

- (3) If a frequency band may be used, in accordance with section 8, by a fixed service or a mobile service, the frequency band may also be used for a broadcasting service that is an unspecified service.

*Note* It is the intention of the ACA that a frequency band used, in accordance with subsection 10 (3), for a broadcasting service will be subject to the conditions that would apply to a specified service.

- (4) A frequency band may be used temporarily, or on a transitional basis, for an unspecified service, if the use of the band:
- (a) is consistent with planning or preparation for a revision of this Spectrum Plan or a frequency band plan; or
  - (b) would assist the implementation of a frequency band plan.
- (5) A frequency band may be used by an experimental station of a specified or unspecified service, subject to the requirement that the use of the frequency band must not cause harmful interference to a specified service for the frequency band.
- (6) A frequency band may be used by an atmospheric and ionospheric sounder of a specified or unspecified service, subject to the requirement that the use of the frequency band must not cause harmful interference to a specified service for the frequency band.
- (7) A frequency band may be used for an unspecified service if the use of the service is in the public interest for defence or national security.

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**11 Harmful interference — general**

- (1) If use of a frequency band by a service is subject to the requirement under this Spectrum Plan that the use does not cause harmful interference to another service, the first-mentioned service may not claim protection from harmful interference caused by the second-mentioned service.

*Note* This requirement appears in section 10 and some footnotes to the Table in Parts 3 and 4.

- (2) If use of a frequency band by a service is subject to the requirement under this Spectrum Plan that the service may not claim protection from harmful interference caused by another service, the first-mentioned service must not cause harmful interference to the second-mentioned service.
- (3) If a frequency band is used otherwise than in accordance with the Radio Regulations by a service, the use of the frequency band by the service must not cause harmful interference to a station outside Australia operating in accordance with the Radio Regulations.

*Note* As well as subsection 11 (3), the Radio Regulations set out requirements for the coordination or notification of services mentioned in those regulations.

- (4) If a frequency band is used otherwise than in accordance with the Radio Regulations by a service, the use of the frequency band by the service must not cause harmful interference to a transmitter or radiocommunications receiver, mentioned in subsection 23 (2) or (3) of the Act, operating in accordance with the Radio Regulations.

**12 Harmful interference — primary and secondary services**

- (1) This section applies to a secondary service that uses a frequency band.
- (2) The secondary service must not cause harmful interference to a primary service using the frequency band, including a primary service that starts to use the frequency band after the secondary service starts.
- (3) The secondary service must not cause harmful interference to a situation, or an activity, that is exempt, under Division 4 of Part 1.4 of the Act, from the operation of the Act.
- (4) The secondary service cannot claim protection from harmful interference caused by a primary service using the frequency band, including a primary service that starts to use the frequency band after the secondary service starts.
- (5) The secondary service may claim protection from harmful interference caused by another secondary service that:
  - (a) is using the frequency band; and
  - (b) was licensed after the first-mentioned secondary service.

*Note 1* A service to which this Spectrum Plan applies may not claim protection from harmful interference caused by a situation, or an activity, that is exempt, under Division 4 of Part 1.4 of the Act, from the operation of the Act.

*Note 2* Other levels of interference protection are, or may be, provided for under the Act.

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**Section 13****13 Interpretation of the Table**

- (1) For this Spectrum Plan, a frequency band is identified by the range of numbers that:
  - (a) is specified in a cell in column 2 of the Table; and
  - (b) immediately precedes the first reference in the cell to a service.
- (2) The range of numbers that identifies a frequency band is taken:
  - (a) to be expressed in kilohertz, megahertz or gigahertz, as the case requires; and
  - (b) to include the higher, but not the lower, number.

*Note* The units to be used with a frequency band specified in a cell are the SI units used with the frequency band shown at the head of the page of the Table on which the cell appears, that is, 'kHz', 'MHz' or 'GHz'. For example, '9-14' in column 2 of the Table:

- (a) is read as 'the 9-14 kilohertz frequency band'; and
  - (b) refers to radio frequencies that exceed 9 kilohertz but do not exceed 14 kilohertz.
- (3) If an Australian footnote reference appears in a cell immediately after the description of a service, the operation of the service is subject to the corresponding condition or restriction set out in Part 3.
  - (4) However, if an Australian footnote reference appears in a cell in another position, the use of a frequency band mentioned in the cell is subject to the corresponding condition or restriction set out in Part 3.
  - (5) If an international footnote reference appears in a cell immediately after the description of a service, the operation of the service is subject to the corresponding condition or restriction set out in Part 4.
  - (6) However, if an international footnote reference appears in a cell in another position, the use of a frequency band mentioned in the cell is subject to the corresponding condition or restriction set out in Part 4.

**14 Revocation of the previous spectrum plan**

The *Australian Radiofrequency Spectrum Plan* made on 17 December 1998 is revoked.