

**الخطة الوطنية لتوزيع وتخصيص
الطيف الترددي**

**National Spectrum Allocations
& Assignment Plan**

Spectrum Management Unit
ISO 9001:2008 and ISO 27001:2005 Certified
Edition 2011



His Majesty Sultan Qaboos Bin Said

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Replacement

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Terms and Definitions

1. Terms and definitions

- **Telecommunication:** Any transmission, emission or reception of signs, signals, writings, images and sounds or intelligence of any nature by wire, radio, optical or other electromagnetic systems (CS).
- **Radio:** A general term applied to the use of radio waves.
- **Radio waves or hertzian waves:** Electromagnetic waves of frequencies arbitrarily lower than 3 000 GHz, propagated in space without artificial guide.
- **Radiocommunication:** Telecommunication by means of radio waves (CS) (CV).
- **Terrestrial radiocommunication:** Any radiocommunication other than space radiocommunication or radio astronomy.
- **Space radiocommunication:** Any radiocommunication involving the use of one or more space stations or the use of one or more reflecting satellites or other objects in space.
- **Radio determination:** The determination of the position, velocity and/or other characteristics of an object, or the obtaining of information relating to these parameters, by means of the propagation properties of radio waves.
- **Radionavigation:** Radiodetermination used for the purposes of navigation, including obstruction warning.
- **Radiolocation:** Radiodetermination used for purposes other than those of radionavigation.
- **Radio direction-finding:** Radiodetermination using the reception of radio waves for the purpose of determining the direction of a station or object.
- **Radio astronomy:** Astronomy based on the reception of radio waves of cosmic origin.
- **Coordinated Universal Time (UTC):** Time scale, based on the second (SI), as defined in ITU-R Recommendation ITU-R TF.460-5.

For most practical purposes associated with the Radio Regulations, UTC is equivalent to mean solar time at the prime meridian (0° longitude), formerly expressed in GMT.

- **Industrial, scientific and medical (ISM) applications (of radio frequency energy):** Operation of equipment or appliances designed to generate and use locally radio frequency energy for industrial, scientific, medical, domestic or similar purposes, excluding applications in the field of telecommunications.

1.1 Specific terms related to frequency management

- **Allocation (of a frequency band):** Entry in the Table of Frequency Allocations of a given frequency band for the purpose of its use by one or more terrestrial or space radiocommunication services or the radio astronomy service under specified conditions. This term shall also be applied to the frequency band concerned.
- **Allotment (of a radio frequency or radio frequency channel):** Entry of a designated frequency channel in an agreed plan, adopted by a competent conference, for use by one or more administrations for a terrestrial or space radiocommunication service in one or more identified countries or geographical areas and under specified conditions.
- **Assignment (of a radio frequency or radio frequency channel):** Authorization given by an administration for a radio station to use a radio frequency or radio frequency channel under specified conditions.

1.2 Radio services

- **Radiocommunication service:** A service as defined in this Section involving the transmission, *emission* and/or reception of *radio waves* for specific *telecommunication* purposes.

In these Regulations, unless otherwise stated, any radiocommunication service relates to *terrestrial radiocommunication*.

- **Fixed service:** A *radiocommunication service* between specified fixed points.
- **Fixed-satellite service:** A *radiocommunication service* between *earth stations* at given positions, when one or more *satellites* are used; the given position may be a specified fixed point or any fixed point within specified areas; in some cases this service includes satellite-to-satellite links, which may also be operated in the *inter-satellite service*; the fixed-satellite service may also include *feeder links* for other *space radiocommunication services*.
- **Inter-satellite service:** A *radiocommunication service* providing links between artificial *satellites*.
- **Space operation service:** A *radiocommunication service* concerned exclusively with the operation of *spacecraft*, in particular *space tracking*, *space telemetry* and *space telecommand*.

These functions will normally be provided within the service in which the space station is operating.

- *Mobile service:* A radiocommunication service between *mobile* and *land stations*, or between *mobile stations* (CV).
- *Mobile-satellite service:* A radiocommunication service:
 - between *mobile earth stations* and one or more *space stations*, or between *space stations* used by this service; or
 - between *mobile earth stations* by means of one or more *space stations*.

This service may also include *feeder links* necessary for its operation.

- *Land mobile service:* A *mobile service* between *base stations* and *land mobile stations*, or between *land mobile stations*.
- *Land mobile-satellite Service:* A *mobile-satellite service* in which *mobile earth stations* are located on land.
- *Maritime mobile service:* A *mobile service* between *coast stations* and *ship stations*, or between *ship stations*, or between associated *on-board communication stations*; *survival craft stations* and *emergency position-indicating radiobeacon stations* may also participate in this service.
- *Maritime mobile-satellite service:* A *mobile-satellite service* in which *mobile earth stations* are located on board ships; *survival craft stations* and *emergency position-indicating radiobeacon stations* may also participate in this service.
- *Port operations service:* A *maritime mobile service* in or near a port, between *coast stations* and *ship stations*, or between *ship stations*, in which messages are restricted to those relating to the operational handling, the movement and the safety of ships and, in emergency, to the safety of persons.

Messages, which are of a public correspondence nature, shall be excluded from this service.

- *Ship movement service:* A *safety service* in the *maritime mobile service* other than a *port operations service*, between *coast stations* and *ship stations*, or between *ship stations*, in which messages are restricted to those relating to the movement of ships.

Messages, which are of a public correspondence nature, shall be excluded from this service.

- *Aeronautical mobile service:* A *mobile service* between *aeronautical stations* and *aircraft stations*, or between *aircraft stations*, in which *survival craft stations* may participate; *emergency position-indicating radiobeacon stations* may also participate in this service on designated distress and emergency frequencies.
- *Aeronautical mobile (R)* service:* An *aeronautical mobile service* reserved for communications relating to safety and regularity of flight, primarily along national or international civil air routes.
- *Aeronautical mobile (OR)** service:* An *aeronautical mobile service* intended for communications, including those relating to flight coordination, primarily outside national or international civil air routes.
- *Aeronautical mobile-satellite service:* A *mobile-satellite service* in which *mobile earth stations* are located on board aircraft; *survival craft stations* and *emergency position-indicating radiobeacon stations* may also participate in this service.
- *Aeronautical mobile-satellite (R)* service:* An *aeronautical mobile-satellite service* reserved for communications relating to safety and regularity of flights, primarily along national or international civil air routes.
- *Aeronautical mobile-satellite (OR)** service:* An *aeronautical mobile-satellite service* intended for communications, including those relating to flight coordination, primarily outside national and international civil air routes.
- *Broadcasting service:* A *radiocommunication service* in which the transmissions are intended for direct reception by the general public. This service may include sound transmissions, *television* transmissions, or other types of transmission (CS).
- *Broadcasting-satellite service:* A *radiocommunication service* in which signals transmitted or retransmitted by *space stations* are intended for direct reception by the general public.

In the broadcasting-satellite service, the term “direct reception” shall encompass both *individual reception* and *community reception*.

- *Radiodetermination service:* A *radiocommunication service* for the purpose of *radiodetermination*.
- *Radiodetermination-satellite service:* A *radiocommunication service* for the purpose of *radiodetermination* involving the use of one or more *space stations*.

This service may also include *feeder links* necessary for its own operation.

* (R): route.

** (OR): off-route.

- *Radionavigation service*: A radiodetermination service for the purpose of *radionavigation*.
- *Radionavigation-satellite service*: A radiodetermination-satellite service used for the purpose of *radionavigation*.

This service may also include *feeder links* necessary for its operation.

- *Maritime radionavigation service*: A *radionavigation service* intended for the benefit and for the safe operation of ships.
- *Maritime radionavigation-satellite service*: A *radionavigation-satellite service* in which *earth stations* are located on board ships.
- *Aeronautical radionavigation service*: A *radionavigation service* intended for the benefit and for the safe operation of aircraft.
- *Aeronautical radionavigation-satellite service*: A *radionavigation-satellite service* in which *earth stations* are located on board aircraft.
- *Radiolocation service*: A radiodetermination service for the purpose of *radiolocation*.
- *Radiolocation-satellite service*: A radiodetermination-satellite service used for the purpose of *radiolocation*.

This service may also include the *feeder links* necessary for its operation.

- *Meteorological aids service*: A radiocommunication service used for meteorological, including hydrological, observations and exploration.
- *Earth exploration-satellite service*: A radiocommunication service between *earth stations* and one or more *space stations*, which may include links between *space stations*, in which:
 - information relating to the characteristics of the Earth and its natural phenomena, including data relating to the state of the environment, is obtained from active sensors or passive sensors on Earth satellites;
 - similar information is collected from airborne or Earth-based platforms;
 - such information may be distributed to earth stations within the system concerned;
 - platform interrogation may be included.

This service may also include *feeder links* necessary for its operation.

- *Meteorological-satellite service*: An *earth exploration-satellite service* for meteorological purposes.
- *Standard frequency and time signal service*: A radiocommunication service for scientific, technical, and other purposes, providing the transmission of specified frequencies, time signals, or both, of stated high precision, intended for general reception.
- *Standard frequency and time signal-satellite service*: A radiocommunication service using *space stations* on earth *satellites* for the same purposes as those of the *standard frequency and time signal service*.

This service may also include *feeder links* necessary for its operation.

- *Space research service*: A radiocommunication service in which *spacecraft* or other objects in space are used for scientific or technological research purposes.
- *Amateur service*: A radiocommunication service for the purpose of self-training, intercommunication and technical investigations carried out by amateurs, that is, by duly authorized persons interested in radio technique solely with a personal aim and without pecuniary interest.
- *Amateur-satellite service*: A radiocommunication service using *space stations* on earth *satellites* for the same purposes as those of the *amateur service*.
- *Radio astronomy service*: A service involving the use of *radio astronomy*.
- *Safety service*: Any radiocommunication service used permanently or temporarily for the safeguarding of human life and property.
- *Special service*: A radiocommunication service, not otherwise defined in this Section, carried on exclusively for specific needs of general utility and not open to *public correspondence*.

1.3 Radio stations and systems

- *Station*: One or more transmitters or receivers or a combination of transmitters and receivers, including the accessory equipment, necessary at one location for carrying on a *radiocommunication service*, or the *radio astronomy service*.

Each station shall be classified by the service in which it operates permanently or temporarily.

- *Terrestrial station:* A station effecting terrestrial radiocommunication.
 - In these Regulations, unless otherwise stated, any *station* is a terrestrial station.
- *Earth station:* A station located either on the Earth's surface or within the major portion of the Earth's atmosphere and intended for communication:
 - with one or more *space stations*; or
 - with one or more *stations* of the same kind by means of one or more reflecting *satellites* or other objects in space.
- *Space station:* A station located on an object which is beyond, is intended to go beyond, or has been beyond, the major portion of the Earth's atmosphere.
- *Survival craft station:* A mobile station in the *maritime mobile service* or the *aeronautical mobile service* intended solely for survival purposes and located on any lifeboat, life-raft or other survival equipment.
- *Fixed station:* A station in the *fixed service*.
- *High altitude platform station:* A station located on an object at an altitude of 20 to 50 km and at a specified, nominal, fixed point relative to the Earth.
- *Mobile station:* A station in the *mobile service* intended to be used while in motion or during halts at unspecified points.
- *Mobile earth station:* An earth station in the *mobile-satellite service* intended to be used while in motion or during halts at unspecified points.
- *Land station:* A station in the *mobile service* not intended to be used while in motion.
- *Land earth station:* An earth station in the *fixed-satellite service* or, in some cases, in the *mobile-satellite service*, located at a specified fixed point or within a specified area on land to provide a *feeder link* for the *mobile-satellite service*.
- *Base station:* A land station in the *land mobile service*.
- *Base earth station:* An earth station in the *fixed-satellite service* or, in some cases, in the *land mobile-satellite service*, located at a specified fixed point or within a specified area on land to provide a *feeder link* for the *land mobile-satellite service*.
- *Land mobile station:* A mobile station in the *land mobile service* capable of surface movement within the geographical limits of a country or continent.
- *Land mobile earth station:* A mobile earth station in the *land mobile-satellite service* capable of surface movement within the geographical limits of a country or continent.
- *Coast station:* A land station in the *maritime mobile service*.
- *Coast earth station:* An earth station in the *fixed-satellite service* or, in some cases, in the *maritime mobile-satellite service*, located at a specified fixed point on land to provide a *feeder link* for the *maritime mobile-satellite service*.
- *Ship station:* A mobile station in the *maritime mobile service* located on board a vessel, which is not permanently moored, other than a *survival craft station*.
- *Ship earth station:* A mobile earth station in the *maritime mobile-satellite service* located on board ship.
- *On-board communication station:* A low-powered mobile station in the *maritime mobile service* intended for use for internal communications on board a ship, or between a ship and its lifeboats and life-rafts during lifeboat drills or operations, or for communication within a group of vessels being towed or pushed, as well as for line handling and mooring instructions.
- *Port station:* A coast station in the *port operations service*.
- *Aeronautical station:* A land station in the *aeronautical mobile service*.

In certain instances, an aeronautical station may be located, for example, on board ship or on a platform at sea.

- *Aeronautical earth station:* An earth station in the *fixed-satellite service*, or, in some cases, in the *aeronautical mobile-satellite service*, located at a specified fixed point on land to provide a *feeder link* for the *aeronautical mobile-satellite service*.
- *Aircraft station:* A mobile station in the *aeronautical mobile service*, other than a *survival craft station*, located on board an aircraft.
- *Aircraft earth station:* A mobile earth station in the *aeronautical mobile-satellite service* located on board an aircraft.

- *Broadcasting station*: A station in the *broadcasting service*.
- *Radiodetermination Station*: A station in the *radiodetermination service*.
- *Radionavigation mobile station*: A station in the *radionavigation service* intended to be used while in motion or during halts at unspecified points.
- *Radionavigation land station*: A station in the *radionavigation service* not intended to be used while in motion.
- *Radiolocation mobile station*: A station in the *radiolocation service* intended to be used while in motion or during halts at unspecified points.
- *Radiolocation land station*: A station in the *radiolocation service* not intended to be used while in motion.
- *Radio direction-finding station*: A *radiodetermination station* using *radio direction-finding*.
- *Radiobeacon station*: A station in the *radionavigation service* the *emissions* of which are intended to enable a *mobile station* to determine its bearing or direction in relation to the radiobeacon station.
- *Emergency position-indicating radiobeacon station*: A station in the *mobile service* the *emissions* of which are intended to facilitate search and rescue operations.
- *Satellite emergency position-indicating radiobeacon*: An *earth station* in the *mobile-satellite service* the *emissions* of which are intended to facilitate search and rescue operations.
- *Standard frequency and time signal station*: A station in the *standard frequency and time signal service*.
- *Amateur station*: A station in the *amateur service*.
- *Radio astronomy station*: A station in the *radio astronomy service*.
- *Experimental station*: A station utilizing *radio waves* in experiments with a view to the development of science or technique.

This definition does not include *amateur stations*.

- *Ship's emergency transmitter*: A ship's transmitter to be used exclusively on a distress frequency for distress, urgency, or safety purposes.
- *Radar*: A *radiodetermination* system based on the comparison of reference signals with radio signals reflected, or retransmitted, from the position to be determined.
- *Primary radar*: A *radiodetermination* system based on the comparison of reference signals with radio signals reflected from the position to be determined.
- *Secondary radar*: A *radiodetermination* system based on the comparison of reference signals with radio signals retransmitted from the position to be determined.
- *Radar beacon (racon)*: A transmitter-receiver associated with a fixed navigational mark which, when triggered by a *radar*, automatically returns a distinctive signal which can appear on the display of the triggering *radar*, providing range, bearing and identification information.
- *Instrument landing system (ILS)*: A *radionavigation* system which provides aircraft with horizontal and vertical guidance just before and during landing and, at certain fixed points, indicates the distance to the reference point of landing.
- *Instrument landing system localizer*: A system of horizontal guidance embodied in the *instrument landing system* which indicates the horizontal deviation of the aircraft from its optimum path of descent along the axis of the runway.
- *Instrument landing system glide path*: A system of vertical guidance embodied in the *instrument landing system* which indicates the vertical deviation of the aircraft from its optimum path of descent.
- *Marker beacon*: A transmitter in the *aeronautical radionavigation service*, which radiates vertically a distinctive pattern for providing position information to aircraft.
- *Radio altimeter*: *Radionavigation* equipment, on board an aircraft or *spacecraft*, used to determine the height of the aircraft or the *spacecraft* above the Earth's surface or another surface.
- *Radiosonde*: An automatic radio transmitter in the *meteorological aids service* usually carried on an aircraft, free balloon, kite or parachute, and which transmits meteorological data.
- *Adaptive system*: A radiocommunication system, which varies its radio characteristics according to channel quality.
- *Space system*: Any group of cooperating *earth stations* and/or *space stations* employing *space*

radiocommunication for specific purposes.

- *Satellite system*: A *space system* using one or more artificial earth *satellites*.
- *Satellite network*: A *satellite system* or a part of a *satellite system*, consisting of only one *satellite* and the cooperating *earth stations*.
- *Satellite link*: A radio link between a transmitting *earth station* and a receiving *earth station* through one *satellite*.

A satellite link comprises one up-link and one down-link.

- *Multi-satellite link*: A radio link between a transmitting *earth station* and a receiving *earth station* through two or more *satellites*, without any intermediate *earth station*.

A multi-satellite link comprises one up-link, one or more satellite-to-satellite links and one down-link.

- *Feeder link*: A radio link from an *earth station* at a given location to a *space station*, or vice versa, conveying information for a *space radiocommunication service* other than for the *fixed-satellite service*. The given location may be at a specified fixed point, or at any fixed point within specified areas.

1.4 Operational terms

- *Public correspondence*: Any *telecommunication*, which the offices and *stations* must, by reason of their being at the disposal of the public, accept for transmission (CS).
- *Telegraphy*¹: A form of *telecommunication* in which the transmitted information is intended to be recorded on arrival as a graphic document; the transmitted information may sometimes be presented in an alternative form or may be stored for subsequent use (CS 1016).
- *Telegram*: Written matter intended to be transmitted by *telegraphy* for delivery to the addressee. This term also includes *radiotelegrams* unless otherwise specified (CS).

In this definition, the term *telegraphy* has the same general meaning as defined in the Convention.

- *Radio telegram*: A *telegram*, originating in or intended for a *mobile station* or a *mobile earth station* transmitted on all or part of its route over the *radiocommunication* channels of the *mobile service* or of the *mobile-satellite service*.
- *Radiotelex call*: A telex call, originating in or intended for a *mobile station* or a *mobile earth station*, transmitted on all or part of its route over the *radiocommunication* channels of the *mobile service* or the *mobile-satellite service*.
- *Frequency-shift telegraphy*: *Telegraphy* by frequency modulation in which the telegraph signal shifts the frequency of the carrier between predetermined values.
- *Facsimile*: A form of *telegraphy* for the transmission of fixed images, with or without half-tones, with a view to their reproduction in a permanent form.
- *Telephony*: A form of *telecommunication* primarily intended for the exchange of information in the form of speech (CS 1017).
- *Radiotelephone call*: A telephone call, originating in or intended for a *mobile station* or a *mobile earth station*, transmitted on all or part of its route over the *radiocommunication* channels of the *mobile service* or of the *mobile-satellite service*.
- *Simplex operation*: Operating method in which transmission is made possible alternately in each direction of a *telecommunication* channel, for example, by means of manual control².
- *Duplex operation*: Operating method in which transmission is possible simultaneously in both directions of a *telecommunication* channel².
- *Semi-duplex operation*: A method, which is *simplex operation* at one end of the circuit and *duplex operation* at the other².
- *Television*: A form of *telecommunication* for the transmission of transient images of fixed or moving objects.
- *Individual reception* (in the broadcasting-satellite service): The reception of *emissions* from a *space station* in the *broadcasting-satellite service* by simple domestic installations and in particular those possessing small antennae.
- *Community reception* (in the broadcasting-satellite service): The reception of *emissions* from a *space station* in the *broadcasting-satellite service* by receiving equipment, which in some cases may be complex and have antennae larger than those used for *individual reception*, and intended for use:

¹ A graphic document records information in a permanent form and is capable of being filed and consulted; it may take the form of written or printed matter or of a fixed image.

² In general, *duplex operation* and *semi-duplex operation* require two frequencies in *radiocommunication*; *simplex operation* may use either one or two.

- by a group of the general public at one location; or
- through a distribution system covering a limited area.
- *Telemetry*: The use of *telecommunication* for automatically indicating or recording measurements at a distance from the measuring instrument.
- *Radiotelemetry*: *Telemetry* by means of *radio waves*.
- *Space Telemetry*: The use of *telemetry* for the transmission from a *space station* of results of measurements made in a *spacecraft*, including those relating to the functioning of the *spacecraft*.
- *Telecommand*: The use of *telecommunication* for the transmission of signals to initiate, modify or terminate functions of equipment at a distance.
- *Space telecommand*: The use of *radiocommunication* for the transmission of signals to a *space station* to initiate, modify or terminate functions of equipment on an associated space object, including the *space station*.
- *Space tracking*: Determination of the *orbit*, velocity or instantaneous position of an object in space by means of *radiodetermination*, excluding *primary radar*, for the purpose of following the movement of the object.

1.5 Characteristics of emissions and radio equipment

- *Radiation*: The outward flow of energy from any source in the form of *radio waves*.
- *Emission*: *Radiation* produced, or the production of *radiation*, by a radio transmitting *station*.
For example, the energy radiated by the local oscillator of a radio receiver would not be an emission but a *radiation*.
- *Class of emission*: The set of characteristics of an *emission*, designated by standard symbols, e.g. type of modulation of the main carrier, modulating signal, type of information to be transmitted, and also, if appropriate, any additional signal characteristics. The element of class of emission described in the Appendix 1 to this handbook.
- *Single-sideband emission*: An amplitude modulated *emission* with one sideband only.
- *Full carrier single-sideband emission*: A *single-sideband emission* without reduction of the carrier.
- *Reduced carrier single-sideband emission*: A *single-sideband emission* in which the degree of carrier suppression enables the carrier to be reconstituted and to be used for demodulation.
- *Suppressed carrier single-sideband emission*: A *single-sideband emission* in which the carrier is virtually suppressed and not intended to be used for demodulation.
- *Out-of-band emission**: *Emission* on a frequency or frequencies immediately outside the *necessary bandwidth* which results from the modulation process, but excluding *spurious emissions*.
- *Spurious emission*: *Emission* on a frequency or frequencies which are outside the *necessary bandwidth* and the level of which may be reduced without affecting the corresponding transmission of information. Spurious emissions include harmonic *emissions*, parasitic *emissions*, intermodulation products and frequency conversion products, but exclude *out-of-band emissions*.
- *Unwanted emissions*: Consist of *spurious emissions* and *out-of-band emissions*.
- *Assigned frequency band*: The frequency band within which the *emission* of a *station* is authorized; the width of the band equals the *necessary bandwidth* plus twice the absolute value of the *frequency tolerance*. Where *space stations* are concerned, the assigned frequency band includes twice the maximum Doppler shift that may occur in relation to any point of the Earth's surface.
- *Assigned frequency*: The center of the frequency band assigned to a *station*.
- *Characteristic frequency*: A frequency, which can be easily identified and measured in a given *emission*.

A carrier frequency may, for example, be designated as the characteristic frequency.

- *Reference frequency*: A frequency having a fixed and specified position with respect to the *assigned frequency*. The displacement of this frequency with respect to the *assigned frequency* has the same absolute value and sign that the displacement of the *characteristic frequency* has with respect to the center of the frequency band occupied by the *emission*.
- *Frequency tolerance*: The maximum permissible departure by the center frequency of the frequency band occupied by an *emission* from the *assigned frequency* or, by the *characteristic frequency* of an *emission* from the *reference frequency*. Table of frequency tolerance presented in Appendix 2 to this Handbook.

The frequency tolerance is expressed in parts in 10^6 or in hertz.

- **Necessary bandwidth:** For a given *class of emission*, the width of the frequency band which is just sufficient to ensure the transmission of information at the rate and with the quality required under specified conditions.
- **Occupied bandwidth:** The width of a frequency band such that, below the lower and above the upper frequency limits, the *mean powers* emitted are each equal to a specified percentage $\beta/2$ of the total *mean power* of a given *emission*.

Unless otherwise specified in an ITU-R Recommendation for the appropriate *class of emission*, the value of $\beta/2$ should be taken as 0.5%.

- **Right-hand (clockwise) polarized wave:** An elliptically-or circularly-polarized wave, in which the electric field vector, observed in any fixed plane, normal to the direction of propagation, whilst looking in the direction of propagation, rotates with time in a right-hand or clockwise direction.
- **Left-hand (anticlockwise) polarized wave:** An elliptically-or circularly-polarized wave, in which the electric field vector, observed in any fixed plane, normal to the direction of propagation, whilst looking in the direction of propagation, rotates with time in a left-hand or anticlockwise direction.
- **Power:** Whenever the power of a radio transmitter, etc. is referred to it shall be expressed in one of the following forms, according to the class of *emission*, using the arbitrary symbols indicated:
 - *peak envelope power* (PX or pX);
 - *mean power* (PY or pY);
 - *carrier power* (PZ or pZ).

For different *classes of emission*, the relationships between *peak envelope power*, *mean power* and *carrier power*, under the conditions of normal operation and of no modulation, are contained in ITU-R Recommendations which may be used as a guide.

For use in formulae, the symbol *p* denotes power expressed in watts and the symbol *P* denotes power expressed in decibels relative to a reference level.

- **Peak envelope power (of a radio transmitter):** The average power supplied to the antenna transmission line by a transmitter during one radio frequency cycle at the crest of the modulation envelope taken under normal operating conditions.
- **Mean power (of a radio transmitter):** The average power supplied to the antenna transmission line by a transmitter during an interval of time sufficiently long compared with the lowest frequency encountered in the modulation taken under normal operating conditions.
- **Carrier power (of a radio transmitter):** The average power supplied to the antenna transmission line by a transmitter during one radio frequency cycle taken under the condition of no modulation.
- **Gain of an antenna:** The ratio, usually expressed in decibels, of the power required at the input of a loss-free reference antenna to the power supplied to the input of the given antenna to produce, in a given direction, the same field strength or the same power flux-density at the same distance. When not specified otherwise, the gain refers to the direction of maximum *radiation*. The gain may be considered for a specified polarization.

Depending on the choice of the reference antenna a distinction is made between:

- absolute or isotropic gain (G_i), when the reference antenna is an isotropic antenna isolated in space;
 - gain relative to a half-wave dipole (G_d), when the reference antenna is a half-wave dipole isolated in space whose equatorial plane contains the given direction;
 - gain relative to a short vertical antenna (G_v), when the reference antenna is a linear conductor, much shorter than one quarter of the wavelength, normal to the surface of a perfectly conducting plane which contains the given direction.
- **Equivalent isotropically radiated power (e.i.r.p.):** The product of the power supplied to the antenna and the antenna gain in a given direction relative to an isotropic antenna (*absolute or isotropic gain*).
 - **Effective radiated power (e.r.p.) (in a given direction):** The product of the power supplied to the antenna and its *gain relative to a half-wave dipole* in a given direction.
 - **Effective monopole radiated power (e.m.r.p.) (in a given direction):** The product of the power supplied to the antenna and its *gain relative to a short vertical antenna* in a given direction.
 - **Troposphere scatter:** The propagation of *radio waves* by scattering as a result of irregularities or discontinuities in the physical properties of the troposphere.
 - **Ionospheric scatter:** The propagation of *radio waves* by scattering as a result of irregularities or discontinuities in the ionization of the ionosphere.

1.6 Frequency sharing

- **Interference:** The effect of unwanted energy due to one or a combination of *emissions, radiations*, or inductions upon reception in a *radiocommunication* system, manifested by any performance degradation, misinterpretation, or loss of information which could be extracted in the absence of such unwanted energy.
- **Permissible interference³:** Observed or predicted *interference* which complies with quantitative *interference* and sharing criteria contained in these Regulations or in ITU-R Recommendations or in special agreements as provided for in these Regulations.
- **Accepted interference³:** *Interference* at a higher level than that defined as *permissible interference* and which has been agreed upon between two or more administrations without prejudice to other administrations.
- **Harmful interference:** *Interference* which endangers the functioning of a *radionavigation service* or of other *safety services* or seriously degrades, obstructs, or repeatedly interrupts a *radiocommunication service* operating in accordance with Radio Regulations (CS).
- **Protection ratio (R.F.):** The minimum value of the wanted-to-unwanted signal ratio, usually expressed in decibels, at the receiver input, determined under specified conditions such that a specified reception quality of the wanted signal is achieved at the receiver output.
- **Coordination area:** When determining the need for coordination, the area surrounding an *earth station* sharing the same frequency band with *terrestrial stations*, or surrounding a transmitting *earth station* sharing the same bidirectionally allocated frequency band with receiving *earth stations*, beyond which the level of *permissible interference* will not be exceeded and coordination is therefore not required.
- **Coordination contour:** The line enclosing the *coordination area*.
- **Coordination distance:** When determining the need for coordination, the distance on a given azimuth from an *earth station* sharing the same frequency band with *terrestrial stations*, or from a transmitting *earth station* sharing the same bidirectionally allocated frequency band with receiving *earth stations*, beyond which the level of *permissible interference* will not be exceeded and coordination is therefore not required.
- **Equivalent satellite link noise temperature:** The noise temperature referred to the output of the receiving antenna of the *earth station* corresponding to the radio frequency noise power which produces the total observed noise at the output of the *satellite link* excluding noise due to *interference* coming from *satellite links* using other *satellites* and from terrestrial systems.
- **Effective boresight area** (of a steerable satellite beam): An area on the surface of the Earth within which the boresight of a *steerable satellite beam* is intended to be pointed.
There may be more than one unconnected effective boresight area to which a single *steerable satellite beam* is intended to be pointed.
- **Effective antenna gain contour** (of a steerable satellite beam): An envelope of antenna gain contours resulting from moving the boresight of a *steerable satellite beam* along the limits of the *effective boresight area*.

1.7 Technical terms relating to space

- **Deep space:** Space at distances from the Earth equal to, or greater than, 2×10^6 km.
- **Spacecraft:** A man-made vehicle which is intended to go beyond the major portion of the Earth's atmosphere.
- **Satellite:** A body which revolves around another body of preponderant mass and which has a motion primarily and permanently determined by the force of attraction of that other body.
- **Active satellite:** A *satellite* carrying a *station* intended to transmit or retransmit radiocommunication signals.
- **Reflecting satellite:** A *satellite* intended to reflect radiocommunication signals.
- **Active sensor:** A measuring instrument in the *earth exploration-satellite service* or in the *space research service* by means of which information is obtained by transmission and reception of *radio waves*.
- **Passive sensor:** A measuring instrument in the *earth exploration-satellite service* or in the *space research service* by means of which information is obtained by reception of *radio waves* of natural origin.
- **Orbit:** The path, relative to a specified frame of reference, described by the center of mass of a *satellite* or other object in space subjected primarily to natural forces, mainly the force of gravity.

³ The terms "permissible interference" and "accepted interference" are used in the coordination of frequency assignments between administrations.

- *Inclination of an orbit* (of an earth satellite): The angle determined by the plane containing the *orbit* and the plane of the Earth's equator measured in degrees between 0° and 180° and in counter-clockwise direction from the Earth's equatorial plane at the ascending node of the *orbit*.
- *Period* (of a satellite): The time elapsing between two consecutive passages of a *satellite* through a characteristic point on its *orbit*.
- *Altitude of the apogee or of the perigee*: The altitude of the apogee or perigee above a specified reference surface serving to represent the surface of the Earth.
- *Geosynchronous satellite*: An earth *satellite* whose period of revolution is equal to the period of rotation of the Earth about its axis.
- *Geostationary satellite*: A *geosynchronous satellite* whose circular and direct *orbit* lies in the plane of the Earth's equator and which thus remains fixed relative to the Earth; by extension, a *satellite* which remains approximately fixed relative to the Earth.
- *Geostationary-satellite orbit*: The *orbit* of a *geosynchronous satellite* whose circular and direct *orbit* lies in the plane of the Earth's equator.
- *Steerable satellite beam*: A *satellite* antenna beam that can be re-pointed.

1.8 Additional definitions

- *Electromagnetic Wave polarization*: The orientation of electric field wave vector respect to a given direction.
- *Monitoring station*: An equipped station for doing measurement and investigation of received electromagnetic wave characteristics and authority.
- *National spectrum allocation chart*: A painted strips of nationally employed radio frequency allocation plan on a 70^{cm}×100^{cm} (or A0) sized paper sheet, which presents frequencies of edges of the allocated sub-bands, priority of allocations, type of radiocommunication services to which the frequency bands are allocated and informative notes. This chart may be updated in after the each World Radiocommunication Conference (WRC).
- *Short Range Device*: The term "Short Range Device" (SRD) is intended to cover the radio transmitters which provide either unidirectional or bi-directional communication and which have low capability of causing interference to other radio equipment. SRDs use either integral, dedicated or external antennas and all modes of modulation can be permitted subject to relevant standards. Due to the many different services provided by these devices, no description can be exhaustive; however, the following categories are amongst those covered:
 - Telecommand and Telecontrol
 - Telemetry
 - Alarms
 - Speech and Video.

ITU-R SM.1538 recommendation is a comprehensive reference to the utilized SRD applications world wide.

- *LORAN*: Is a long range radio navigation systems used by ships or crafts to obtain a position fix. The system is based on the difference in transit time required for pulsed radio signals to arrive at the LORAN receiver from multiple synchronized omnidirectional transmitters. The receiving set provides a direct reading, in microsecond, of the time difference is measured between signals
- *MSI*: In the maritime mobile service, these frequencies are used exclusively for the transmission of maritime safety information (MSI) (including meteorological and navigational warnings and urgent information) by coast stations to ships, by means of narrow-band direct-printing telegraphy.
- *NAVTEX*: The NAVTEX system is used for the automatic broadcast of localized Maritime Safety Information (MSI) using Radio Telex (also known as Narrow Band Direct Printing, or NBDP). The system mainly operates in the Medium Frequency radio band just above and below the old 500 kHz Morse Distress frequency. System range is generally 300 or so nautical miles from the transmitter. The NAVTEX system is designed to be used in GMDSS Sea Area A2, and is utilized mainly by those countries with relatively small areas of coastline and/or sea areas to cover. Major areas of NAVTEX coverage include the Mediterranean Sea, the North Sea, coastal areas around Japan and areas around the North American continent.
- *DME (DISTANCE MEASURING EQUIPMENT)*: A system in the band 960-1 215 MHz in which the aircraft interrogator transmits a series of coded pulses which are received at the ground transponder and retransmitted on a new frequency 50 μs later. By timing the period from transmission of the interrogating pulse to the reception of the transponder reply, a measure is obtained of the distance of the aircraft from the transponder. Usually associated with ILS, MLS or VOR facility. When associated with a VOR, the

DME facility is co-located with the VOR facility.

- **SSR (SECONDARY SURVEILLANCE RADAR):** The SSR system is used as an aid to air traffic services and it consists of two components: a ground interrogator and an airborne transponder. The ground interrogator can operate in different modes (A, B, C, D). Mode A is used to initiate a response from the aircraft transponder for identification and tracking; Mode C is used to initiate automatic pressure altitude transmission. The interrogation and control transmissions are in the ground to air direction on the centre frequency 1 030 MHz. The reply transmission, in the air to ground direction, is on the centre frequency 1 090 MHz. The transponder antenna system, installed onboard aircraft has an omnidirectional antenna pattern in the horizontal plane. The SSR system is intended to provide service under all weather conditions at all bearings and at all distances between 1.85 km and 370 km, and at all operational altitudes up to at least 30 480 m above mean sea level between at least the angles of elevation of 0.5° and 45°.
- **MLS (MICROWAVE LANDING SYSTEMS):** MLS is a precision approach and landing guidance system that provides position information and various ground-to-air data. The position information is provided in a wide coverage sector and is determined by an azimuth angle measurement, an elevation angle measurement and a range (distance) measurement. The MLS equipment operates on a frequency pairing basis with the DME equipment. Radiators in a linear array are fed sequentially from a microwave power source which produces a Time Referenced Scanning Beam (TRSB), that is equivalent to the source moving along a linear track. An aircraft will receive the signal with a Doppler shift which depends on the component of the apparent velocity of the source towards the aircraft, and is proportional to the cosine of the angle between the aircraft and the line of the transmitting array. To eliminate effects of frequency drift and Doppler shift due to the movement of the aircraft, the same r.f. signal is simultaneously radiated from an antenna. Azimuth guidance is obtained from a horizontal transmitting array, while a vertical array gives guidance in the elevation plane. A measure of the distance to touchdown is obtained using a Precision DME in a frequency paired relationship with the MLS. The sharing criteria between MLS and radionavigation-satellite service is available in ITU-R M.1582
- **GLONASS:** The Global Navigation Satellite System (GLONASS) is based on a constellation of active satellites which continuously transmit coded signals in two frequency bands (1602.5625 - 1615.5 MHz and 1246.4375 - 1256.5 MHz), which can be received by users anywhere on the Earth's surface to identify their position and velocity in real time based on ranging measurements. The system is a counterpart to the United States Global Positioning System (GPS) and both systems share the same principles in the data transmission and positioning methods. GLONASS is managed for the Russian Federation Government by the Russian Space Forces and the system is operated by the Coordination Scientific Information Center (KNITs) of the Ministry of Defense of the Russian Federation. The operational space segment of GLONASS consists of 21 satellites in 3 orbital planes, with 3 on-orbit spares. The three orbital planes are separated 120 degrees, and the satellites within the same orbit plane by 45 degrees. Each satellite operates in circular 19,100 km orbits at an inclination angle of 64.8 degrees and each satellite completes an orbit in approximately 11 hours 15 minutes. ITU-R recommendation M.1317 provides characteristics of GLONASS radionavigation system.
- **GPS:** The Navigation System with Timing And Ranging (NAVSTAR) Global Positioning System (GPS) was conceived as a ranging system from known positions of satellites in space to unknown positions on land, sea, in air and space. The GPS constellation consists of 24 satellites in 6 orbital planes with 4 satellites in each plane. The ascending nodes of the orbital planes are separated by 60 degrees and the planes are inclined 55 degrees. Each GPS satellite is in an approximately circular, semi-synchronous (20,200 km altitude) orbit. The orbits of the GPS satellites are available by broadcast - superimposed on the GPS pseudorandom noise codes (PRN), or after post-processing to get precise ephemerides, they are available from organizations such as the Jet Propulsion Lab (JPL) or the International Geodetic Service (IGS) among others. The GPS receivers convert the satellite's signals into position, velocity, and time estimates for navigation, positioning, time dissemination, or geodesy. Each GPS satellite transmits data on two frequencies, L1 (1575.42 MHz) and L2 (1227.60 MHz). ITU-R recommendation M.1088 provides the characteristics of GPS radionavigation system.

2

National Frequency Allocations Table

2.1 Introduction

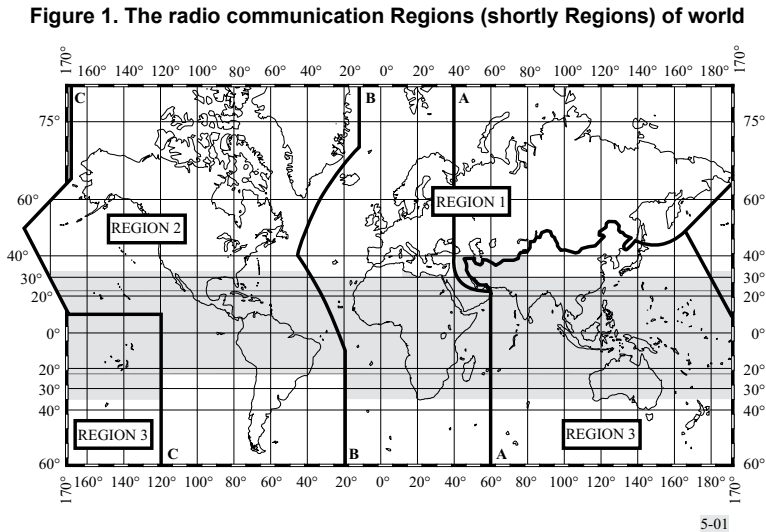
Table of frequency allocations presented herewith constitutes the document for regulation of the frequency allocations and the frequency utilization in the Sultanate of Oman by legal and physical entities which engaged in ordering, development and purchasing radio-electronic installations (REI) or in planning frequency use by the existing REI. The Table, however, does not present any right for a frequency band use (or a specific frequency) for development, production, import and operation of the REI without issue of duly completed authorization by Telecommunications Regulatory Authority (TRA) which is empowered for this duty by the Government of the Sultanate of Oman.

The content of frequency allocation table and accompanied regulations are always under the optimization of the Telecommunications Regulatory Authority for embracing the increasing demands of radio telecommunication sector, as far as compatible with national Telecommunication Act, international trends and existing applications.

2.2 Description of the Table

Regions and areas

For the allocation of frequencies the world has been divided into three Regions¹ as shown on the following map and described after map:



The shaded part represents the Tropical Zones. Different Regions and Tropical Zones are distinguished in accordance to the following definitions in detail:

- **Region 1:** Region 1 includes the area limited on the east by line A (lines A, B and C are defined below) and on the west by line B, excluding any of the territory of the Islamic Republic of Iran which lies between these limits. It also includes the whole of the territory of Armenia, Azerbaijan, the Russian Federation, Georgia, Kazakhstan, Mongolia, Uzbekistan, Kyrgyzstan, Tajikistan, Turkmenistan, Turkey and Ukraine and the area to the north of Russian Federation which lies between lines A and C.
- **Region 2:** Region 2 includes the area limited on the east by line B and on the west by line C.
- **Region 3:** Region 3 includes the area limited on the east by line C and on the west by line A, except any of the territory of Armenia, Azerbaijan, the Russian Federation, Georgia, Kazakhstan, Mongolia, Uzbekistan, Kyrgyzstan, Tajikistan, Turkmenistan, Turkey and Ukraine and the area to the north of Russian Federation. It also includes that part of the territory of the Islamic Republic of Iran lying outside of those limits.
- **Tropical Zone:** The whole of that area in Region 2 between the Tropics of Cancer and Capricorn, the whole of that area in Regions 1 and 3 contained between the parallels 30° North and 35° South with the addition of i) the area contained between the meridians 40° East and 80° East of Greenwich and the parallels 30° North and 40° North; and ii) that part of Libyan Arab Jamahiriya north of parallel 30° North. In Region 2, the Tropical Zone may be extended to parallel 33° North, subject to special agreements

¹ It should be noted that where the words "regions" or "regional" are without a capital "R" in these Regulations, they do not relate to the three Regions here defined for purposes of frequency allocation.

between the countries concerned in that Region.

The lines A, B and C are defined as follows:

- **Line A:** Line A extends from the North Pole along meridian 40° East of Greenwich to parallel 40° North; thence by great circle arc to the intersection of meridian 60° East and the Tropic of Cancer; thence along the meridian 60° East to the South Pole.
- **Line B:** Line B extends from the North Pole along meridian 10° West of Greenwich to its intersection with parallel 72° North; thence by great circle arc to the intersection of meridian 50° West and parallel 40° North; thence by great circle arc to the intersection of meridian 20° West and parallel 10° South; thence along meridian 20° West to the South Pole.
- **Line C:** Line C extends from the North Pole by great circle arc to the intersection of parallel 65° 30' North with the international boundary in Bering Strait; thence by great circle arc to the intersection of meridian 165° East of Greenwich and parallel 50° North; thence by great circle arc to the intersection of meridian 170° West and parallel 10° North; thence along parallel 10° North to its intersection with meridian 120° West; thence along meridian 120° West to the South Pole.

For the purposes of these Regulations, the term “African Broadcasting Area” means a) African countries, parts of countries, territories and groups of territories situated between the parallels 40° South and 30° North; b) islands in the Indian Ocean west of meridian 60° East of Greenwich, situated between the parallel 40° South and the great circle arc joining the points 45° East, 11° 30' North and 60° East, 15° North; and c) islands in the Atlantic Ocean east of line B (as defined above) of these Regulations, situated between the parallels 40° South and 30° North. Television-signal broadcasting in this region is governed by Geneva-89 regional agreement which includes the territory of Oman.

The “European Broadcasting Area” is bounded on the west by the western boundary of Region 1, on the east by the meridian 40° East of Greenwich and on the south by the parallel 30° North so as to include the northern part of Saudi Arabia and that part of those countries bordering the Mediterranean within these limits. In addition, Armenia, Azerbaijan, Georgia and those parts of the territories of Iraq, Jordan, Syrian Arab Republic, Turkey and Ukraine lying outside the above limits are included in the European Broadcasting Area.

The “European Maritime Area” is bounded to the north by a line extending along parallel 72° North from its intersection with meridian 55° East of Greenwich to its intersection with meridian 5° West, then along meridian 5° West to its intersection with parallel 67° North, thence along parallel 67° North to its intersection with meridian 32° West; to the west by a line extending along meridian 32° West to its intersection with parallel 30° North; to the south by a line extending along parallel 30° North to its intersection with meridian 43° East; to the east by a line extending along meridian 43° East to its intersection with parallel 60° North, thence along parallel 60° North to its intersection with meridian 55° East and thence along meridian 55° East to its intersection with parallel 72° North.

A sub-Region is an area consisting of two or more countries in the same Region.

Categories of services and allocations

Primary and secondary services:

Where, in a box of the Table in Section 3.3 of this chapter, a band is indicated as allocated to more than one service, either on a worldwide or Regional basis, such services are listed in the following order:

- a) services the names of which are printed in “capitals” (example: FIXED); these are called “primary” services. Where a band is indicated in a footnote of the Table as allocated to a service “on a primary basis”, in an area smaller than a Region, or in a particular country, this is a primary service only in that area or country.
- b) services the names of which are printed in “normal characters” (example: Mobile); these are called “secondary” services. Stations of a secondary service shall not cause harmful interference to stations of primary services to which frequencies are already assigned or to which frequencies may be assigned at a later date. Moreover, Stations of a secondary service cannot claim protection from harmful interference from stations of a primary service to which frequencies are already assigned or may be assigned at a later date. However they can claim protection, from harmful interference from stations of the same or other secondary service(s) to which frequencies may be assigned at a later date. Where a band is indicated in a footnote of the Table as allocated to a service “on a secondary basis” in an area smaller than a Region, or in a particular country, this is a secondary service

Additional allocations:

Where a band is indicated in a footnote of the Table as “also allocated” to a service in an area smaller than a Region, or in a particular country, this is an “additional” allocation, i.e. an allocation which is added in this area or in this country to the service or services which are indicated in the Table. If the footnote does not include any restriction on the service or services concerned apart from the restriction to operate only in a particular area or country, stations of this service or these services shall have equality of right to operate with stations of the other

primary service or services indicated in the Table.

Alternative allocations:

Where a band is indicated in a footnote of the Table as “allocated” to one or more services in an area smaller than a Region, or in a particular country, this is an “alternative” allocation, i.e. an allocation which replaces, in this area or in this country, the allocation indicated in the Table. If the footnote does not include any restriction on stations of the service or services concerned, apart from the restriction to operate only in a particular area or country, these stations of such a service or services shall have an equality of right to operate with stations of the primary service or services, indicated in the Table, to which the band is allocated in other areas or countries.

Miscellaneous provisions

Where it is indicated in these Regulations that a service or stations in a service may operate in a specific frequency band subject to not causing harmful interference to another service or to another station in the same service, this means also that the service which is subject to not causing harmful interference cannot claim protection from harmful interference caused by the other service or other station in the same service. Vice versa, where it is indicated in these Regulations that a service or stations in a service may operate in a specific frequency band subject to not claiming protection from another service or from another station in the same service, this means also that the service which is subject to not claiming protection shall not cause harmful interference to the other service or other station in the same service.

Except if otherwise specified in a footnote, the term “fixed service”, where appearing in Section 3.3 of this chapter, does not include systems using ionospheric scatter propagation.

Table columns

The heading of the Table in Section 3.3 of this chapter includes four columns, three left columns correspond to one of the Regions (Section 3.2.1) and the fourth columns presents national frequency allocations. Where an allocation occupies the whole three left columns of the Table or only one or two of these three columns, this is a worldwide allocation or a Regional allocation, respectively. The frequency band referred to in each allocation is indicated in the left-hand top corner of the part of the Table concerned. The order of radio communication service listing in each band does not indicate relative priority within each category (Section 3.2.2). In the case where there is a parenthetical addition to an allocation in the Table, that service allocation is restricted to the type of operation so indicated.

Column four not only indicates the frequency bands, but also identifies the category of users allowed to utilize it in the territory of Oman. One of following categories is assigned for each frequency band:

- MILITARY: Frequency bands provided exclusively for the use of stations for the national security purpose;
- CIVIL: Frequency bands provided exclusively for the use of stations for those purpose except security;
- SHARED: Frequency band provided for the shared use of both Military and Civil user categories.

The footnote references which appear in the three left columns of Table below the allocated service or services apply to more than one of the allocated services, or to the whole of the allocation concerned. If the footnote references appear to the right of the name of a service, it is applicable only to that particular service. In certain cases, the names of countries appearing in the footnotes have been simplified in order to shorten the text. Furthermore, applicable Region one footnotes under each frequency band analyzed and the most relevant ones referenced under the corresponding bands in the fourth column. The text of each footnote (international and national) is provided after the Table.

Assignment of the operational frequencies to be used by the civil and military REI in the corresponding civil, military or shared bands as well as designating the frequency bands (specific frequencies) for development of new (or modernized) REI is the duty of the Telecommunications Regulatory Authority (TRA) of the Sultanate of Oman.

2.3 Table of Frequency Allocations

9 117.6 kHz

ALLOCATION TO SERVICES			
REGION 1	REGION 2	REGION 3	SULTANATE OF OMAN
Below 9	(Not allocated) 5.53 5.54		Below 9 (Not allocated)
9-14	RADIONAVIGATION		9-14 (SHARED) RADIONAVIGATION
14-19.95	FIXED MARITIME MOBILE 5.57 5.55 5.56		14-19.95 (SHARED) FIXED MARITIME MOBILE 5.57 5.56
19.95-20.05	STANDARD FREQUENCY AND TIME SIGNAL (20 kHz)		19.95-20.05 (SHARED) STANDARD FREQUENCY AND TIME SIGNAL (20 kHz)
20.05-70	FIXED MARITIME MOBILE 5.57 5.56 5.58		20.05-70 (SHARED) FIXED MARITIME MOBILE 5.57 5.56
70-72 RADIONAVIGATION 5.60	70-90 FIXED MARITIME MOBILE 5.57 MARITIME RADIO- NAVIGATION 5.60 Radiolocation 5.61	70-72 RADIONAVIGATION 5.60 Fixed Maritime mobile 5.57 5.59	70-72 (SHARED) RADIONAVIGATION 5.60
72-84 FIXED MARITIME MOBILE 5.57 RADIONAVIGATION 5.60 5.56		72-84 FIXED MARITIME MOBILE 5.57 RADIONAVIGATION 5.60	72-84 (SHARED) FIXED MARITIME MOBILE 5.57 RADIONAVIGATION 5.60 5.56
84-86 RADIONAVIGATION 5.60		84-86 RADIONAVIGATION 5.60 Fixed Maritime mobile 5.57 5.59	84-86 (SHARED) RADIONAVIGATION 5.60
86-90 FIXED MARITIME MOBILE 5.57 RADIONAVIGATION 5.56		86-90 FIXED MARITIME MOBILE 5.57 RADIONAVIGATION 5.60	86-90 (SHARED) FIXED MARITIME MOBILE 5.57 RADIONAVIGATION 5.56
90-110	RADIONAVIGATION 5.62 Fixed 5.64		90-110 (SHARED) RADIONAVIGATION 5.62 Fixed 5.64
110-112 FIXED MARITIME MOBILE RADIONAVIGATION 5.64	110-130 FIXED MARITIME MOBILE MARITIME RADIO- NAVIGATION 5.60 Radiolocation 5.61 5.64	110-112 FIXED MARITIME MOBILE RADIONAVIGATION 5.60 5.64	110-112 (SHARED) FIXED MARITIME MOBILE RADIONAVIGATION 5.64
112-115 RADIONAVIGATION 5.60		112-117.6 RADIONAVIGATION 5.60 Fixed Maritime mobile	112-115 (SHARED) RADIONAVIGATION 5.60
115-117.6 RADIONAVIGATION 5.60 Fixed Maritime mobile 5.64 5.66		5.64 5.65	115-117.6 (SHARED) RADIONAVIGATION 5.60 Fixed Maritime mobile 5.64

117.6 – 405 kHz

ALLOCATION TO SERVICES			
REGION 1	REGION 2	REGION 3	SULTANATE OF OMAN
117.6-126 FIXED MARITIME MOBILE RADIONAVIGATION 5.60 5.64		117.6-126 FIXED MARITIME MOBILE RADIONAVIGATION 5.60 5.64	117.6-126 (SHARED) FIXED MARITIME MOBILE RADIONAVIGATION 5.60 5.64
126-129 RADIONAVIGATION 5.60		126-129 RADIONAVIGATION 5.60 Fixed Maritime mobile 5.64 5.65	126-129 (SHARED) RADIONAVIGATION 5.60
129-130 FIXED MARITIME MOBILE RADIONAVIGATION 5.60 5.64		129-130 FIXED MARITIME MOBILE RADIONAVIGATION 5.60 5.64	129-130 (SHARED) FIXED MARITIME MOBILE RADIONAVIGATION 5.60 5.64
130-135.7 FIXED MARITIME MOBILE 5.64 5.67	130-135.7 FIXED MARITIME MOBILE 5.64	130-135.7 FIXED MARITIME MOBILE RADIONAVIGATION 5.64	130-135.7 (SHARED) FIXED MARITIME MOBILE 5.64
135.7-137.8 FIXED MARITIME MOBILE Amateur 5.67A 5.64 5.67 5.67B	135.7-137.8 FIXED MARITIME MOBILE Amateur 5.67A 5.64	135.7-137.8 FIXED MARITIME MOBILE RADIONAVIGATION Amateur 5.67A 5.64 5.67B	135.7-137.8 (SHARED) FIXED MARITIME MOBILE Amateur 5.67A 5.64
137.8-148.5 FIXED MARITIME MOBILE 5.64 5.67	137.8-160 FIXED MARITIME MOBILE	137.8-160 FIXED MARITIME MOBILE RADIONAVIGATION	137.8-148.5 (SHARED) FIXED MARITIME MOBILE 5.64
148.5-255 BROADCASTING 5.68 5.69 5.70	5.64	5.64	148.5-200 (CIVIL) BROADCASTING
	160-190 FIXED	160-190 FIXED Aeronautical radionavigation	
	190-200 AERONAUTICAL RADIONAVIGATION		
	200-275 AERONAUTICAL RADIONAVIGATION Aeronautical mobile	200-285 AERONAUTICAL RADIONAVIGATION Aeronautical mobile	
255-283.5 BROADCASTING AERONAUTICAL RADIONAVIGATION 5.70 5.71	275-285 AERONAUTICAL RADIONAVIGATION Aeronautical mobile Maritime radionavigation (radiobeacons)		200-255 (SHARED) AERONAUTICAL RADIONAVIGATION
	285-315 AERONAUTICAL RADIONAVIGATION MARITIME RADIONAVIGATION (radiobeacons) 5.73 5.72 5.74	285-315 AERONAUTICAL RADIONAVIGATION MARITIME RADIONAVIGATION (radiobeacons) 5.73	255-283.5 (SHARED) AERONAUTICAL RADIONAVIGATION
283.5-315 AERONAUTICAL RADIONAVIGATION MARITIME RADIONAVIGATION (radiobeacons) 5.73 5.72 5.74			283.5-315 (SHARED) AERONAUTICAL RADIONAVIGATION MARITIME RADIONAVIGATION (radiobeacons) 5.73 5.74
315-325 AERONAUTICAL RADIONAVIGATION Maritime radionavigation (radiobeacons) 5.73 5.72 5.75	315-325 MARITIME RADIONAVIGATION (radiobeacons) 5.73 Aeronautical radionavigation	315-325 AERONAUTICAL RADIONAVIGATION MARITIME RADIONAVIGATION (radiobeacons) 5.73	315-325 (SHARED) AERONAUTICAL RADIONAVIGATION Maritime radionavigation (radiobeacons) 5.73
325-405 AERONAUTICAL RADIONAVIGATION 5.72	325-335 AERONAUTICAL RADIONAVIGATION Aeronautical mobile Maritime radionavigation (radiobeacons)	325-405 AERONAUTICAL RADIONAVIGATION Aeronautical mobile	325-405 (SHARED) AERONAUTICAL RADIONAVIGATION
	335-405 AERONAUTICAL RADIONAVIGATION Aeronautical mobile		

405 – 1 800 kHz

ALLOCATION TO SERVICES			
REGION 1	REGION 2	REGION 3	SULTANATE OF OMAN
405-415 RADIONAVIGATION 5.76 5.72	405-415 RADIONAVIGATION 5.76 Aeronautical mobile		405-415 (SHARED) RADIONAVIGATION 5.76
415-435 MARITIME MOBILE 5.79 AERONAUTICAL RADIONAVIGATION 5.72	415-495 MARITIME MOBILE 5.79 5.79A Aeronautical radionavigation 5.80 5.77 5.78 5.82		415-435 (SHARED) MARITIME MOBILE 5.79 AERONAUTICAL RADIONAVIGATION
435-495 MARITIME MOBILE 5.79 5.79A Aeronautical radionavigation 5.72 5.82		435-495 (SHARED) MARITIME MOBILE 5.79 5.79A Aeronautical radionavigation 5.82	
495-505	MOBILE 5.82A 5.82B		495-505 (SHARED) MOBILE 5.82A 5.82B
505-526.5 MARITIME MOBILE 5.79 5.79A 5.84 AERONAUTICAL RADIONAVIGATION 5.72	505-510 MARITIME MOBILE 5.79	505-526.5 MARITIME MOBILE 5.79 5.79A 5.84 AERONAUTICAL RADIONAVIGATION Aeronautical mobile Land mobile	505-526.5 (SHARED) MARITIME MOBILE 5.79 5.79A 5.84 AERONAUTICAL RADIONAVIGATION
	510-525 MOBILE 5.79A 5.84 AERONAUTICAL RADIONAVIGATION		
526.5-1 606.5 BROADCASTING 5.87 5.87A	525-535	526.5-535 BROADCASTING Mobile 5.88	526.5-1 606.5 (CIVIL) BROADCASTING
	BROADCASTING 5.86 AERONAUTICAL RADIONAVIGATION	535-1 606.5 BROADCASTING	
1 606.5-1 625 FIXED MARITIME MOBILE 5.90 LAND MOBILE 5.92	1 605-1 625 BROADCASTING 5.89 5.90	1 606.5-1 800 FIXED MOBILE RADIOLOCATION RADIONAVIGATION 5.91	1 606.5-1 625 (SHARED) FIXED MARITIME MOBILE 5.90 LAND MOBILE
1 625-1 635 RADIOLOCATION 5.93	1 625-1 705 FIXED MOBILE		1 625-1 635 (SHARED) RADIOLOCATION
1 635-1 800 FIXED MARITIME MOBILE 5.90 LAND MOBILE 5.92 5.96	BROADCASTING 5.89 Radiolocation 5.90		1 635-1 800 (SHARED) FIXED MARITIME MOBILE 5.90 LAND MOBILE 5.92
	1 705-1 800 FIXED MOBILE RADIOLOCATION AERONAUTICAL RADIONAVIGATION		

1 800 – 2 501 kHz

ALLOCATION TO SERVICES			
REGION 1	REGION 2	REGION 3	SULTANATE OF OMAN
1 800-1 810 RADIOLOCATION 5.93	1 800-1 850 AMATEUR	1 800-2 000 AMATEUR FIXED MOBILE except aeronautical mobile RADIONAVIGATION Radiolocation	1 800-1 810 (SHARED) RADIOLOCATION
1 810-1 850 AMATEUR 5.98 5.99 5.100 5.101			1 810-1 850 (CIVIL) AMATEUR
1 850-2 000 FIXED MOBILE except aeronautical mobile 5.92 5.96 5.103	1 850-2 000 AMATEUR FIXED MOBILE except aeronautical mobile RADIOLOCATION RADIONAVIGATION 5.102		5.97
2 000-2 025 FIXED MOBILE except aeronautical mobile (R) 5.92 5.103	2 000-2 065 FIXED MOBILE		2 000-2 025 (SHARED) FIXED MOBILE except aeronautical mobile (R) 5.92 5.103
2 025-2 045 FIXED MOBILE except aeronautical mobile (R) Meteorological aids 5.104 5.92 5.103			2 025-2 045 (SHARED) FIXED MOBILE except aeronautical mobile (R) Meteorological aids 5.104 5.92 5.103
2 045-2 160 FIXED MARITIME MOBILE LAND MOBILE 5.92	2 065-2 107 MARITIME MOBILE 5.105 5.106		2 045-2 160 (SHARED) FIXED MARITIME MOBILE LAND MOBILE 5.92
2 160-2 170 RADIOLOCATION 5.93 5.107	2 107-2 170 FIXED MOBILE		2 160-2 170 (SHARED) RADIOLOCATION
2 170-2 173.5	MARITIME MOBILE		2 170-2 173.5 (SHARED) MARITIME MOBILE
2 173.5-2 190.5	MOBILE (distress and calling) 5.108 5.109 5.110 5.111		2 173.5-2 190.5 (SHARED) MOBILE (distress and calling) 5.108 5.109 5.110 5.111
2 190.5-2 194	MARITIME MOBILE	2 190.5-2 194 (SHARED) MARITIME MOBILE	
2 194-2 300 FIXED MOBILE except aeronautical mobile (R) 5.92 5.103 5.112	2 194-2 300 FIXED MOBILE 5.112	2 194-2 300 (SHARED) FIXED MOBILE except aeronautical mobile (R) 5.92 5.103	
2 300-2 498 FIXED MOBILE except aeronautical mobile (R) BROADCASTING 5.113 5.103	2 300-2 495 FIXED MOBILE BROADCASTING 5.113	2 300-2 498 (SHARED) FIXED MOBILE except aeronautical mobile (R) BROADCASTING 5.113 5.103	
2 498-2 501 STANDARD FREQUENCY AND TIME SIGNAL (2 500 kHz)	2 495-2 501 STANDARD FREQUENCY AND TIME SIGNAL (2 500 kHz)		
		2 498-2 501 (SHARED) STANDARD FREQUENCY AND TIME SIGNAL (2 500 kHz)	

2 501 – 3 950 kHz

ALLOCATION TO SERVICES			
REGION 1	REGION 2	REGION 3	SULTANATE OF OMAN
2 501-2 502	STANDARD FREQUENCY AND TIME SIGNAL Space Research		2 501-2 502 (SHARED) STANDARD FREQUENCY AND TIME SIGNAL Space Research
2 502-2 625 FIXED MOBILE except aeronautical mobile (R) 5.92 5.103 5.114	2 502-2 505 STANDARD FREQUENCY AND TIME SIGNAL		2 502-2 625 (SHARED) FIXED MOBILE except aeronautical mobile (R) 5.92 5.103
	2 505-2 850 FIXED MOBILE		
2 625-2 650 MARITIME MOBILE MARITIME RADIONAVIGATION 5.92			2 625-2 650 (SHARED) MARITIME MOBILE MARITIME RADIONAVIGATION 5.92
2 650-2 850 FIXED MOBILE except aeronautical mobile (R) 5.92 5.103			2 650-2 850 (SHARED) FIXED MOBILE except aeronautical mobile (R) 5.92 5.103
2 850-3 025	AERONAUTICAL MOBILE (R) 5.111 5.115		2 850-3 025 (SHARED) AERONAUTICAL MOBILE (R) 5.111 5.115
3 025-3 155	AERONAUTICAL MOBILE (OR)		3 025-3 155 (SHARED) AERONAUTICAL MOBILE (OR)
3 155-3 200	FIXED MOBILE except aeronautical mobile (R) 5.116 5.117		3 155-3 200 (SHARED) FIXED MOBILE except aeronautical mobile (R) 5.116
	FIXED MOBILE except aeronautical mobile (R) BROADCASTING 5.113 5.116		
3 200-3 230	FIXED MOBILE except aeronautical mobile (R) BROADCASTING 5.113 5.116		3 200-3 230 (SHARED) FIXED MOBILE except aeronautical mobile (R) BROADCASTING 5.113 5.116
	FIXED MOBILE except aeronautical mobile BROADCASTING 5.113 5.116 5.118		
3 230-3 400	FIXED MOBILE except aeronautical mobile BROADCASTING 5.113 5.116 5.118		3 230-3 400 (SHARED) FIXED MOBILE except aeronautical mobile BROADCASTING 5.113 5.116
	AERONAUTICAL MOBILE (R)		
3 400-3 500	AERONAUTICAL MOBILE (R)		3 400-3 500 (SHARED) AERONAUTICAL MOBILE (R)
3 500-3 800 AMATEUR FIXED MOBILE except aeronautical mobile 5.92	3 500-3 750 AMATEUR 5.119	3 500-3 900 AMATEUR FIXED MOBILE	3 500-3 800 (SHARED) AMATEUR FIXED MOBILE except aeronautical mobile 5.92
	3 750-4 000 AMATEUR FIXED MOBILE except aeronautical mobile (R)		
3 800-3 900 FIXED AERONAUTICAL MOBILE (OR) LAND MOBILE			3 800-3 900 (SHARED) FIXED AERONAUTICAL MOBILE (OR) LAND MOBILE
3 900-3 950 AERONAUTICAL MOBILE (OR) 5.123		3 900-3 950 AERONAUTICAL MOBILE BROADCASTING	3 900-3 950 (SHARED) AERONAUTICAL MOBILE (OR)
	5.122 5.125		

3 950 – 5 730 kHz

ALLOCATION TO SERVICES			
REGION 1	REGION 2	REGION 3	SULTANATE OF OMAN
3 950-4 000 FIXED BROADCASTING		3 950-4 000 FIXED BROADCASTING 5.126	3 950-4 000 (SHARED) FIXED BROADCASTING
4 000-4 063	FIXED MARITIME MOBILE 5.127 5.126		4 000-4 063 (SHARED) FIXED MARITIME MOBILE 5.127
4 063-4 438	MARITIME MOBILE 5.79A 5.109 5.110 5.130 5.131 5.132 5.128		4 063-4 438 (SHARED) MARITIME MOBILE 5.79A 5.109 5.110 5.130 5.131 5.132
4 438-4 650 FIXED MOBILE except aeronautical mobile (R)		4 438-4 650 FIXED MOBILE except aeronautical mobile	4 438-4 650 (SHARED) FIXED MOBILE except aeronautical mobile (R)
4 650-4 700	AERONAUTICAL MOBILE (R)		4 650-4 700 (SHARED) AERONAUTICAL MOBILE (R)
4 700-4 750	AERONAUTICAL MOBILE (OR)		4 700-4 750 (SHARED) AERONAUTICAL MOBILE (OR)
4 750-4 850 FIXED AERONAUTICAL MOBILE (OR) LAND MOBILE BROADCASTING 5.113	4 750-4 850 FIXED MOBILE except aeronautical mobile (R) BROADCASTING 5.113	4 750-4 850 FIXED BROADCASTING 5.113 Land mobile	4 750-4 850 (SHARED) FIXED AERONAUTICAL MOBILE (OR) LAND MOBILE BROADCASTING 5.113
4 850-4 995	FIXED LAND MOBILE BROADCASTING 5.113		4 850-4 995 (SHARED) FIXED LAND MOBILE BROADCASTING 5.113
4 995-5 003	STANDARD FREQUENCY AND TIME SIGNAL (5 000 kHz)		4 995-5 003 (SHARED) STANDARD FREQUENCY AND TIME SIGNAL (5 000 kHz)
5 003-5 005	STANDARD FREQUENCY AND TIME SIGNAL Space research		5 003-5 005 (SHARED) STANDARD FREQUENCY AND TIME SIGNAL Space research
5 005-5 060	FIXED BROADCASTING 5.113		5 005-5 060 (SHARED) FIXED BROADCASTING 5.113
5 060-5 250	FIXED Mobile except aeronautical mobile 5.133		5 060-5 250 (SHARED) FIXED Mobile except aeronautical mobile
5 250-5 450	FIXED MOBILE except aeronautical mobile		5 250-5 450 (SHARED) FIXED MOBILE except aeronautical mobile
5 450-5 480 FIXED AERONAUTICAL MOBILE (OR) LAND MOBILE	5 450-5 480 AERONAUTICAL MOBILE (R)	5 450-5 480 FIXED AERONAUTICAL MOBILE (OR) LAND MOBILE	5 450-5 480 (SHARED) FIXED AERONAUTICAL MOBILE (OR) LAND MOBILE
5 480-5 680	AERONAUTICAL MOBILE (R) 5.111 5.115		5 480-5 680 (SHARED) AERONAUTICAL MOBILE (R) 5.111 5.115
5 680-5 730	AERONAUTICAL MOBILE (OR) 5.111 5.115		5 680-5 730 (SHARED) AERONAUTICAL MOBILE (OR) 5.111 5.115

5 730 – 8 195 kHz

ALLOCATION TO SERVICES			
REGION 1	REGION 2	REGION 3	SULTANATE OF OMAN
5 730-5 900 FIXED LAND MOBILE	5 730-5 900 FIXED MOBILE except aeronautical mobile (R)	5 730-5 900 FIXED Mobile except aeronautical mobile (R)	5 730-5 900 (SHARED) FIXED LAND MOBILE
5 900-5 950	BROADCASTING 5.134 5.136		5 900-5 950 (CIVIL) BROADCASTING 5.134 5.136
5 950-6 200	BROADCASTING		5 950-6 200 (CIVIL) BROADCASTING
6 200-6 525	MARITIME MOBILE 5.109 5.110 5.130 5.132 5.137		6 200-6 525 (SHARED) MARITIME MOBILE 5.109 5.110 5.130 5.132 5.137
6 525-6 685	AERONAUTICAL MOBILE (R)		6 525-6 685 (CIVIL) AERONAUTICAL MOBILE (R)
6 685-6 765	AERONAUTICAL MOBILE (OR)		6 685-6 765 (SHARED) AERONAUTICAL MOBILE (OR)
6 765-7 000	FIXED MOBILE except aeronautical mobile (R) 5.138 5.138A 5.139		6 765-7 000 (SHARED) FIXED MOBILE except aeronautical mobile (R) 5.138A Land mobile 5.138A 5.138
7 000-7 100	AMATEUR AMATEUR-SATELLITE 5.140 5.141 5.141A		7 000-7 100 (CIVIL) AMATEUR AMATEUR-SATELLITE
7 100-7 200	AMATEUR 5.141A 5.141B 5.141C 5.142		7 100-7 200 (CIVIL) AMATEUR FIXED 5.141B MOBILE except aeronautical mobile (R) 5.141B 5.141C 5.142
7 200-7 300 BROADCASTING	7 200-7 300 AMATEUR 5.142	7 200-7 300 BROADCASTING	7 200-7 300 (CIVIL) BROADCASTING
7 300-7 400	BROADCASTING 5.134 5.143 5.143A 5.143B 5.143C 5.143D		7 300-7 350 (CIVIL) BROADCASTING 5.134 5.143 5.143B 7 350-7 400 (CIVIL) BROADCASTING 5.134 FIXED 5.143C 5.143 5.143B
7 400-7 450 BROADCASTING 5.143B 5.143C	7 400-7 450 FIXED MOBILE except aeronautical mobile (R)	7 400-7 450 BROADCASTING 5.143A 5.143C	7 400-7 450 (CIVIL) BROADCASTING FIXED 5.143C 5.143B
7 450-8 100	FIXED MOBILE except aeronautical mobile (R) 5.143E 5.144		7 450-8 100 (SHARED) FIXED MOBILE except aeronautical mobile (R) 5.143E
8 100-8 195	FIXED MARITIME MOBILE		8 100-8 195 (SHARED) FIXED MARITIME MOBILE

8 195 – 12 230 kHz

ALLOCATION TO SERVICES			
REGION 1	REGION 2	REGION 3	SULTANATE OF OMAN
8 195-8 815	MARITIME MOBILE 5.109 5.110 5.132 5.145 5.111		8 195-8 815 (SHARED) MARITIME MOBILE 5.109 5.110 5.132 5.145 5.111
8 815-8 965	AERONAUTICAL MOBILE (R)		8 815-8 965 (CIVIL) AERONAUTICAL MOBILE (R)
8 965-9 040	AERONAUTICAL MOBILE (OR)		8 965-9 040 (MILITARY) AERONAUTICAL MOBILE (OR)
9 040-9 400	FIXED		9 040-9 400 (SHARED) FIXED
9 400-9 500	BROADCASTING 5.134 5.146		9 400-9 500 (CIVIL) BROADCASTING 5.134 5.146
9 500-9 900	BROADCASTING 5.147		9 500-9 900 (CIVIL) BROADCASTING 5.147
9 900-9 995	FIXED		9 900-9 995 (SHARED) FIXED
9 995-10 003	STANDARD FREQUENCY AND TIME SIGNAL (10 000 kHz) 5.111		9 995-10 003 (SHARED) STANDARD FREQUENCY AND TIME SIGNAL (10 000 kHz) 5.111
10 003-10 005	STANDARD FREQUENCY AND TIME SIGNAL Space research 5.111		10 003-10 005 (SHARED) STANDARD FREQUENCY AND TIME SIGNAL Space research 5.111
10 005-10 100	AERONAUTICAL MOBILE (R) 5.111		10 005-10 100 (CIVIL) AERONAUTICAL MOBILE (R) 5.111
10 100-10 150	FIXED Amateur		10 100-10 150 (SHARED) FIXED Amateur
10 150-11 175	FIXED Mobile except aeronautical mobile (R)		10 150-11 175 (SHARED) FIXED Mobile except aeronautical mobile (R)
11 175-11 275	AERONAUTICAL MOBILE (OR)		11 175-11 275 (SHARED) AERONAUTICAL MOBILE (OR)
11 275-11 400	AERONAUTICAL MOBILE (R)		11 275-11 400 (SHARED) AERONAUTICAL MOBILE (R)
11 400-11 600	FIXED		11 400-11 600 (SHARED) FIXED
11 600-11 650	BROADCASTING 5.134 5.146		11 600-11 650 (CIVIL) BROADCASTING 5.134 5.146
11 650-12 050	BROADCASTING 5.147		11 650-12 050 (CIVIL) BROADCASTING 5.147
12 050-12 100	BROADCASTING 5.134 5.146		12 050-12 100 (CIVIL) BROADCASTING 5.134 5.146
12 100-12 230	FIXED		12 100-12 230 (SHARED) FIXED

12 230 – 16 360 kHz

ALLOCATION TO SERVICES			
REGION 1	REGION 2	REGION 3	SULTANATE OF OMAN
12 230-13 200	MARITIME MOBILE	5.109 5.110 5.132 5.145	12 230-13 200 (SHARED) MARITIME MOBILE 5.109 5.110 5.132 5.145
13 200-13 260	AERONAUTICAL MOBILE (OR)		13 200-13 260 (SHARED) AERONAUTICAL MOBILE (OR)
13 260-13 360	AERONAUTICAL MOBILE (R)		13 260-13 360 (SHARED) AERONAUTICAL MOBILE (R)
13 360-13 410	FIXED RADIO ASTRONOMY 5.149		13 360-13 410 (SHARED) FIXED RADIO ASTRONOMY 5.149
13 410-13 570	FIXED Mobile except aeronautical mobile (R) 5.150		13 410-13 570 (SHARED) FIXED Mobile except aeronautical mobile (R) 5.150
13 570-13 600	BROADCASTING	5.134 5.151	13 570-13 600 (CIVIL) BROADCASTING 5.134 5.151
13 600-13 800	BROADCASTING		13 600-13 800 (CIVIL) BROADCASTING
13 800-13 870	BROADCASTING	5.134 5.151	13 800-13 870 (CIVIL) BROADCASTING 5.134 5.151
13 870-14 000	FIXED Mobile except aeronautical mobile (R)		13 870-14 000 (SHARED) FIXED Mobile except aeronautical mobile (R)
14 000-14 250	AMATEUR AMATEUR-SATELLITE		14 000-14 250 (CIVIL) AMATEUR AMATEUR-SATELLITE
14 250-14 350	AMATEUR	5.152	14 250-14 350 (CIVIL) AMATEUR
14 350-14 990	FIXED Mobile except aeronautical mobile (R)		14 350-14 990 (SHARED) FIXED Mobile except aeronautical mobile (R)
14 990-15 005	STANDARD FREQUENCY AND TIME SIGNAL (15 000 kHz) 5.111		14 990-15 005 (SHARED) STANDARD FREQUENCY AND TIME SIGNAL (15 000 kHz) 5.111
15 005-15 010	STANDARD FREQUENCY AND TIME SIGNAL Space research		15 005-15 010 (SHARED) STANDARD FREQUENCY AND TIME SIGNAL Space research
15 010-15 100	AERONAUTICAL MOBILE (OR)		15 010-15 100 (SHARED) AERONAUTICAL MOBILE (OR)
15 100-15 600	BROADCASTING		15 100-15 600 (CIVIL) BROADCASTING
15 600-15 800	BROADCASTING	5.134 5.146	15 600-15 800 (CIVIL) BROADCASTING 5.134 5.146
15 800-16 360	FIXED	5.153	15 800-16 360 (SHARED) FIXED

16 360 – 21 870 kHz

ALLOCATION TO SERVICES			
REGION 1	REGION 2	REGION 3	SULTANATE OF OMAN
16 360-17 410	MARITIME MOBILE	5.109 5.110 5.132 5.145	16 360-17 410 (SHARED) MARITIME MOBILE 5.109 5.110 5.132 5.145
17 410-17 480	FIXED		17 410-17 480 (SHARED) FIXED
17 480-17 550	BROADCASTING	5.134 5.146	17 480-17 550 (CIVIL) BROADCASTING 5.134 5.146
17 550-17 900	BROADCASTING		17 550-17 900 (CIVIL) BROADCASTING
17 900-17 970	AERONAUTICAL MOBILE (R)		17 900-17 970 (SHARED) AERONAUTICAL MOBILE (R)
17 970-18 030	AERONAUTICAL MOBILE (OR)		17 970-18 030 (SHARED) AERONAUTICAL MOBILE (OR)
18 030-18 052	FIXED		18 030-18 052 (SHARED) FIXED
18 052-18 068	FIXED Space research		18 052-18 068 (SHARED) FIXED Space research
18 068-18 168	AMATEUR AMATEUR-SATELLITE	5.154	18 068-18 168 (CIVIL) AMATEUR AMATEUR-SATELLITE
18 168-18 780	FIXED Mobile except aeronautical mobile		18 168-18 780 (SHARED) FIXED Mobile except aeronautical mobile
18 780-18 900	MARITIME MOBILE		18 780-18 900 (SHARED) MARITIME MOBILE
18 900-19 020	BROADCASTING	5.134 5.146	18 900-19 020 (CIVIL) BROADCASTING 5.134 5.146
19 020-19 680	FIXED		19 020-19 680 (SHARED) FIXED
19 680-19 800	MARITIME MOBILE	5.132	19 680-19 800 (SHARED) MARITIME MOBILE 5.132
19 800-19 990	FIXED		19 800-19 990 (SHARED) FIXED
19 990-19 995	STANDARD FREQUENCY AND TIME SIGNAL Space research	5.111	19 990-19 995 (SHARED) STANDARD FREQUENCY AND TIME SIGNAL Space research 5.111
19 995-20 010	STANDARD FREQUENCY AND TIME SIGNAL (20 000 kHz)	5.111	19 995-20 010 (SHARED) STANDARD FREQUENCY AND TIME SIGNAL (20 000 kHz) 5.111
20 010-21 000	FIXED Mobile		20 010-21 000 (SHARED) FIXED Mobile
21 000-21 450	AMATEUR AMATEUR-SATELLITE		21 000-21 450 (CIVIL) AMATEUR AMATEUR-SATELLITE
21 450-21 850	BROADCASTING		21 450-21 850 (CIVIL) BROADCASTING
21 850-21 870	FIXED	5.155A 5.155	21 850-21 870 (SHARED) FIXED

21870 – 27 500 kHz

ALLOCATION TO SERVICES			
REGION 1	REGION 2	REGION 3	SULTANATE OF OMAN
21 870-21 924	FIXED 5.155B		21 870-21 924 (SHARED) FIXED 5.155B
21 924-22 000	AERONAUTICAL MOBILE (R)		21 924-22 000 (SHARED) AERONAUTICAL MOBILE (R)
22 000-22 855	MARITIME MOBILE 5.132 5.156		22 000-22 855 (SHARED) MARITIME MOBILE 5.132
22 855-23 000	FIXED 5.156		22 855-23 000 (SHARED) FIXED
23 000-23 200	FIXED Mobile except aeronautical mobile (R) 5.156		23 000-23 200 (SHARED) FIXED Mobile except aeronautical mobile (R)
23 200-23 350	FIXED 5.156A AERONAUTICAL MOBILE (OR)		23 200-23 350 (SHARED) FIXED 5.156A AERONAUTICAL MOBILE (OR)
23 350-24 000	FIXED MOBILE except aeronautical mobile 5.157		23 350-24 000 (SHARED) FIXED MOBILE except aeronautical mobile 5.157
24 000-24 890	FIXED LAND MOBILE		24 000-24 890 (SHARED) FIXED LAND MOBILE
24 890-24 990	AMATEUR AMATEUR-SATELLITE		24 890-24 990 (CIVIL) AMATEUR AMATEUR-SATELLITE
24 990-25 005	STANDARD FREQUENCY AND TIME SIGNAL (25 000 kHz)		24 990-25 005 (SHARED) STANDARD FREQUENCY AND TIME SIGNAL (25 000 kHz)
25 005-25 010	STANDARD FREQUENCY AND TIME SIGNAL Space research		25 005-25 010 (SHARED) STANDARD FREQUENCY AND TIME SIGNAL Space research
25 010-25 070	FIXED MOBILE except aeronautical mobile		25 010-25 070 (SHARED) FIXED MOBILE except aeronautical mobile
25 070-25 210	MARITIME MOBILE		25 070-25 210 (SHARED) MARITIME MOBILE
25 210-25 550	FIXED MOBILE except aeronautical mobile		25 210-25 550 (SHARED) FIXED MOBILE except aeronautical mobile
25 550-25 670	RADIO ASTRONOMY 5.149		25 550-25 670 (SHARED) RADIO ASTRONOMY 5.149
25 670-26 100	BROADCASTING		25 670-26 100 (CIVIL) BROADCASTING
26 100-26 175	MARITIME MOBILE 5.132		26 100-26 175 (SHARED) MARITIME MOBILE 5.132
26 175-27 500	FIXED MOBILE except aeronautical mobile 5.150		26 175-27 500 (SHARED) FIXED MOBILE except aeronautical mobile 5.150

27.5 – 68 MHz

ALLOCATION TO SERVICES			
REGION 1	REGION 2	REGION 3	SULTANATE OF OMAN
27.5-28	METEOROLOGICAL AIDS FIXED MOBILE		27.5-28 (SHARED) METEOROLOGICAL AIDS FIXED MOBILE
28-29.7	AMATEUR AMATEUR-SATELLITE		28-29.7 (CIVIL) AMATEUR AMATEUR-SATELLITE
29.7-30.005	FIXED MOBILE		29.7-30.005 (MILITARY) FIXED MOBILE
30.005-30.01	SPACE OPERATION (satellite identification) FIXED MOBILE SPACE RESEARCH		30.005-30.01 (MILITARY) SPACE OPERATION (satellite identification) FIXED MOBILE SPACE RESEARCH
30.01-37.5	FIXED MOBILE		30.01-37.5 (MILITARY) FIXED MOBILE
37.5-38.25	FIXED MOBILE Radio astronomy 5.149		37.5-38.25 (SHARED) FIXED MOBILE Radio astronomy 5.149
38.25-39.986	FIXED MOBILE		38.25-39.986 (SHARED) FIXED MOBILE
39.986-40.02	FIXED MOBILE Space research		39.986-40.02 (SHARED) FIXED MOBILE Space research
40.02-40.98	FIXED MOBILE 5.150		40.02-40.98 (SHARED) FIXED MOBILE 5.150
40.98-41.015	FIXED MOBILE Space research 5.160 5.161		40.98-41.015 (SHARED) FIXED MOBILE Space research
41.015-44	FIXED MOBILE 5.160 5.161		41.015-44 (MILITARY) FIXED MOBILE
44-47	FIXED MOBILE 5.162 5.162A		44-47 (MILITARY) FIXED MOBILE
47-68 BROADCASTING 5.162A 5.163 5.164 5.165 5.169 5.171	47-50 FIXED MOBILE	47-50 FIXED MOBILE BROADCASTING 5.162A	47-68 (CIVIL) BROADCASTING OMA 2
	50-54 AMATEUR 5.162A 5.166 5.167 5.167A 5.168 5.170		
	54-68 BROADCASTING Fixed Mobile 5.172	54-68 FIXED MOBILE BROADCASTING 5.162A	

68 – 137 MHz

ALLOCATION TO SERVICES			
REGION 1	REGION 2	REGION 3	SULTANATE OF OMAN
68-74.8 FIXED MOBILE except aeronautical mobile 5.149 5.175 5.177 5.179	68-72 BROADCASTING Fixed Mobile 5.173	68-74.8 FIXED MOBILE 5.149 5.176 5.179	68-74.8 (SHARED) FIXED MOBILE except aeronautical mobile 5.149
	72-73 FIXED MOBILE		
	73-74.6 RADIO ASTRONOMY 5.178		
	74.6-74.8 FIXED MOBILE		
74.8-75.2	AERONAUTICAL RADIONAVIGATION 5.180 5.181		74.8-75.2 (SHARED) AERONAUTICAL RADIONAVIGATION 5.180
75.2-87.5 FIXED MOBILE except aeronautical mobile 5.175 5.179 5.187	75.2-75.4 FIXED MOBILE 5.179	75.4-87 FIXED MOBILE 5.182 5.183 5.188	75.2-77.8 (MILITARY) FIXED MOBILE except aeronautical mobile
	75.4-76 FIXED MOBILE		
	76-88 BROADCASTING Fixed Mobile	87-100 FIXED MOBILE BROADCASTING	77.8-84.6 (SHARED) FIXED MOBILE except aeronautical mobile
	5.185		84.6-87.5 (MILITARY) FIXED MOBILE except aeronautical mobile
87.5-100 BROADCASTING 5.190	88-100 BROADCASTING		87.5-100 (CIVIL) BROADCASTING
100-108	BROADCASTING 5.192 5.194		100-108 (CIVIL) BROADCASTING
108-117.975	AERONAUTICAL RADIONAVIGATION 5.197 5.197A		108-117.975 (CIVIL) AERONAUTICAL RADIONAVIGATION 5.197A
117.975-137	AERONAUTICAL MOBILE (R) 5.111 5.200 5.201 5.202		117.975-137 (CIVIL) AERONAUTICAL MOBILE (R) 5.111 5.200 5.202

137 – 144 MHz

ALLOCATION TO SERVICES			
REGION 1	REGION 2	REGION 3	SULTANATE OF OMAN
137-137.025	SPACE OPERATION (space-to-Earth) METEOROLOGICAL-SATELLITE (space-to-Earth) MOBILE-SATELLITE (space-to-Earth) 5.208A 5.208B 5.209 SPACE RESEARCH (space-to-Earth) Fixed Mobile except aeronautical mobile (R)		137-137.025 (CIVIL) FIXED MOBILE except aeronautical mobile (R) SPACE OPERATION (space-to-Earth) METEOROLOGICAL-SATELLITE (space-to-Earth) MOBILE-SATELLITE (space-to-Earth) 5.208A 5.208B 5.209 SPACE RESEARCH (space-to-Earth) 5.208
	5.204 5.205 5.206 5.207 5.208		
137.025-137.175	SPACE OPERATION (space-to-Earth) METEOROLOGICAL-SATELLITE (space-to-Earth) SPACE RESEARCH (space-to-Earth) Fixed Mobile-satellite (space-to-Earth) 5.208A 5.208B 5.209 Mobile except aeronautical mobile (R)		137.025-137.175 (CIVIL) FIXED MOBILE except aeronautical mobile (R) SPACE OPERATION (space-to-Earth) METEOROLOGICAL-SATELLITE (space-to-Earth) SPACE RESEARCH (space-to-Earth) Mobile-satellite (space-to-Earth) 5.208A 5.208B 5.209 5.208
	5.204 5.205 5.206 5.207 5.208		
137.175-137.825	SPACE OPERATION (space-to-Earth) METEOROLOGICAL-SATELLITE (space-to-Earth) MOBILE-SATELLITE (space-to-Earth) 5.208A 5.208B 5.209 SPACE RESEARCH (space-to-Earth) Fixed Mobile except aeronautical mobile (R)		137.175-137.825 (CIVIL) FIXED MOBILE except aeronautical mobile (R) SPACE OPERATION (space-to-Earth) METEOROLOGICAL-SATELLITE (space-to-Earth) MOBILE-SATELLITE (space-to-Earth) 5.208A 5.208B 5.209 SPACE RESEARCH (space-to-Earth) 5.208
	5.204 5.205 5.206 5.207 5.208		
137.825-138	SPACE OPERATION (space-to-Earth) METEOROLOGICAL-SATELLITE (space-to-Earth) SPACE RESEARCH (space-to-Earth) Fixed Mobile-satellite (space-to-Earth) 5.208A 5.208B 5.209 Mobile except aeronautical mobile (R)		137.825-138 (CIVIL) FIXED MOBILE except aeronautical mobile (R) SPACE OPERATION (space-to-Earth) METEOROLOGICAL-SATELLITE (space-to-Earth) SPACE RESEARCH (space-to-Earth) Mobile-satellite (space-to-Earth) 5.208A 5.208B 5.209 5.208
	5.204 5.205 5.206 5.207 5.208		
138-143.6 AERONAUTICAL MOBILE (OR)	138-143.6 FIXED MOBILE RADIOLOCATION Space research (space-to-Earth)	138-143.6 FIXED MOBILE Space research (space-to-Earth)	138-144 (SHARED) FIXED MOBILE
5.210 5.211 5.212 5.214		5.207 5.213	

143.6 – 156.8375 MHz

ALLOCATION TO SERVICES			
REGION 1	REGION 2	REGION 3	SULTANATE OF OMAN
143.6-143.65 AERONAUTICAL MOBILE (OR) SPACE RESEARCH (space-to-Earth) 5.211 5.212 5.214	143.6-143.65 FIXED MOBILE RADIOLOCATION SPACE RESEARCH (space-to-Earth)	143.6-143.65 FIXED MOBILE SPACE RESEARCH (space-to-Earth) 5.207 5.213	
143.65-144 AERONAUTICAL MOBILE (OR) 5.210 5.211 5.212 5.214	143.65-144 FIXED MOBILE RADIOLOCATION Space research (space-to- Earth)	143.65-144 FIXED MOBILE Space research (space-to- Earth) 5.207 5.213	
144-146	AMATEUR AMATEUR-SATELLITE 5.216		144-146 (CIVIL) AMATEUR AMATEUR-SATELLITE
146-148 FIXED MOBILE except aeronautical mobile (R)	146-148 AMATEUR 5.217	146-148 AMATEUR FIXED MOBILE 5.217	146-148 (CIVIL) FIXED MOBILE except aeronautical mobile (R)
148-149.9 FIXED MOBILE except aeronautical mobile (R) MOBILE-SATELLITE (Earth-to-space) 5.209 5.218 5.219 5.221	148-149.9 FIXED MOBILE MOBILE-SATELLITE (Earth-to-space) 5.209 5.218 5.219 5.221		148-149.9 (CIVIL) FIXED MOBILE except aeronautical mobile (R) MOBILE-SATELLITE (Earth-to-space) 5.209 5.218 5.219 5.221
149.9-150.05	MOBILE-SATELLITE (Earth-to-space) 5.209 5.224A RADIONAVIGATION-SATELLITE 5.224B 5.220 5.222 5.223		149.9-150.05 (CIVIL) MOBILE-SATELLITE (Earth- to-space) 5.209 5.224A RADIONAVIGATION- SATELLITE 5.224B 5.220 5.222 5.223
150.05-153 FIXED MOBILE except aeronautical mobile RADIO ASTRONOMY 5.149	150.05-156.4875 FIXED MOBILE		150.05-153 (CIVIL) FIXED MOBILE except aeronautical mobile RADIO ASTRONOMY 5.149
153-154 FIXED MOBILE except aeronautical mobile (R) Meteorological Aids			153-154 (CIVIL) FIXED MOBILE except aeronautical mobile (R) Meteorological Aids
154-156.4875 FIXED MOBILE except aeronautical mobile (R) 5.226			154-156 (CIVIL) FIXED MOBILE except aeronautical mobile (R) 156-156.4875 (SHARED) FIXED MOBILE except aeronautical mobile (R) 5.226
156.4875-156.5625	MARITIME MOBILE (distress and calling via DSC) 5.111 5.226 5.227		156.4875-156.5625 (SHARED) MARITIME MOBILE (distress and calling via DSC) 5.111 5.226 5.227
156.5625-156.7625 FIXED MOBILE except aeronautical mobile (R) 5.226	156.5625-156.7625 FIXED MOBILE 5.225 5.226		156.5625-156.7625 (SHARED) FIXED MOBILE except aeronautical mobile (R) 5.226
156.7625-156.8375	MARITIME MOBILE (distress and calling) 5.111 5.226		156.7625-156.8375 (CIVIL) MARITIME MOBILE (distress and calling) 5.111 5.226

267 – 400.05 MHz

ALLOCATION TO SERVICES			
REGION 1	REGION 2	REGION 3	SULTANATE OF OMAN
267-272	FIXED MOBILE Space operation (space-to-Earth) 5.254 5.257		267-272 (MILITARY) FIXED MOBILE Space operation (space-to-Earth) 5.254 5.257
272-273	SPACE OPERATION (space-to-Earth) FIXED MOBILE 5.254		272-273 (MILITARY) SPACE OPERATION (space-to-Earth) FIXED MOBILE 5.254
273-312	FIXED MOBILE 5.254		273-312 (MILITARY) FIXED MOBILE 5.254
312-315	FIXED MOBILE Mobile-satellite (Earth-to-space) 5.254 5.255		312-315 (MILITARY) FIXED MOBILE Mobile-satellite (Earth-to-space) 5.254 5.255
315-322	FIXED MOBILE 5.254		315-322 (MILITARY) FIXED MOBILE 5.254
322-328.6	FIXED MOBILE RADIO ASTRONOMY 5.149		322-328.6 (SHARED) FIXED MOBILE RADIO ASTRONOMY 5.149
328.6-335.4	AERONAUTICAL RADIONAVIGATION 5.258 5.259		328.6-335.4 (SHARED) AERONAUTICAL RADIONAVIGATION 5.258
335.4-387	FIXED MOBILE 5.254		335.4-380 (MILITARY) FIXED MOBILE 5.254 380-387 (MILITARY) MOBILE 5.254
387-390	FIXED MOBILE Mobile-satellite (space-to-Earth) 5.208A 5.208B 5.254 5.255		387-390 (MILITARY) MOBILE Mobile-satellite (space-to-Earth) 5.208A 5.208B 5.254 5.255
390-399.9	FIXED MOBILE 5.254		390-399.9 (MILITARY) MOBILE 5.254
399.9-400.05	MOBILE-SATELLITE (Earth-to-space) 5.209 5.224A RADIONAVIGATION-SATELLITE 5.222 5.224B 5.260 5.220		399.9-400.05 (CIVIL) MOBILE-SATELLITE (Earth-to-space) 5.209 5.224A RADIONAVIGATION-SATELLITE 5.222 5.224B 5.260 5.220

400.05 – 430 MHz

ALLOCATION TO SERVICES			
REGION 1	REGION 2	REGION 3	SULTANATE OF OMAN
400.05-400.15	STANDARD FREQUENCY AND TIME SIGNAL-SATELLITE (400.1 MHz) 5.261 5.262		400.05-400.15 (SHARED) STANDARD FREQUENCY AND TIME SIGNAL-SATELLITE (400.1 MHz) 5.261
400.15-401	METEOROLOGICAL AIDS METEOROLOGICAL-SATELLITE (space-to-Earth) MOBILE-SATELLITE (space-to-Earth) 5.208A 5.208B 5.209 SPACE RESEARCH (space-to-Earth) 5.263 Space operation (space-to-Earth) 5.262 5.264		400.15-401 (SHARED) METEOROLOGICAL AIDS METEOROLOGICAL-SATELLITE (space-to-Earth) MOBILE-SATELLITE (space-to-Earth) 5.208A 5.208B 5.209 SPACE RESEARCH (space-to-Earth) 5.263 Space operation (space-to-Earth) 5.264
401-402	METEOROLOGICAL AIDS SPACE OPERATION (space-to-Earth) EARTH EXPLORATION-SATELLITE (Earth-to-space) METEOROLOGICAL-SATELLITE (Earth-to-space) Fixed Mobile except aeronautical mobile		401-402 (SHARED) METEOROLOGICAL AIDS SPACE OPERATION (space-to-Earth) EARTH EXPLORATION-SATELLITE (Earth-to-space) METEOROLOGICAL-SATELLITE (Earth-to-space) Fixed Mobile except aeronautical mobile
402-403	METEOROLOGICAL AIDS EARTH EXPLORATION-SATELLITE (Earth-to-space) METEOROLOGICAL-SATELLITE (Earth-to-space) Fixed Mobile except aeronautical mobile		402-403 (SHARED) METEOROLOGICAL AIDS EARTH EXPLORATION-SATELLITE (Earth-to-space) METEOROLOGICAL-SATELLITE (Earth-to-space) Fixed Mobile except aeronautical mobile
403-406	METEOROLOGICAL AIDS Fixed Mobile except aeronautical mobile		403-406 (SHARED) METEOROLOGICAL AIDS Fixed Mobile except aeronautical mobile
406-406.1	MOBILE-SATELLITE (Earth-to-space) 5.266 5.267		406-406.1 (SHARED) MOBILE-SATELLITE (Earth-to-space) 5.266 5.267
406.1-410	FIXED MOBILE except aeronautical mobile RADIO ASTRONOMY 5.149		406.1-410 (CIVIL) FIXED MOBILE except aeronautical mobile RADIO ASTRONOMY 5.149
410-420	FIXED MOBILE except aeronautical mobile SPACE RESEARCH (space-to-space) 5.268		410-420 (CIVIL) FIXED MOBILE except aeronautical mobile SPACE RESEARCH (space-to-space) 5.268
420-430	FIXED MOBILE except aeronautical mobile Radiolocation 5.269 5.270 5.271		420-430 (CIVIL) FIXED MOBILE except aeronautical mobile Radiolocation

430 – 460 MHz

ALLOCATION TO SERVICES			
REGION 1	REGION 2	REGION 3	SULTANATE OF OMAN
430-432 AMATEUR RADIOLOCATION 5.271 5.272 5.273 5.274 5.275 5.276 5.277	430-432 RADIOLOCATION Amateur 5.271 5.276 5.277 5.278 5.279		430-432 (CIVIL) AMATEUR FIXED MOBILE except aeronautical mobile RADIOLOCATION
432-438 AMATEUR RADIOLOCATION Earth exploration-satellite (active) 5.279A 5.138 5.271 5.272 5.276 5.277 5.280 5.281 5.282	432-438 RADIOLOCATION Amateur Earth exploration-satellite (active) 5.279A 5.271 5.276 5.277 5.278 5.279 5.281 5.282		432-435 (CIVIL) AMATEUR FIXED MOBILE except aeronautical mobile RADIOLOCATION Earth exploration-satellite (active) 5.279A 5.138 435-438 (CIVIL) AMATEUR FIXED RADIOLOCATION Earth exploration-satellite (active) 5.279A
438-440 AMATEUR RADIOLOCATION 5.271 5.273 5.274 5.275 5.276 5.277 5.283	438-440 RADIOLOCATION Amateur 5.271 5.276 5.277 5.278 5.279		438-440 (CIVIL) AMATEUR FIXED MOBILE except aeronautical mobile RADIOLOCATION
440-450	FIXED MOBILE except aeronautical mobile Radiolocation 5.269 5.270 5.271 5.284 5.285 5.286		440-450 (CIVIL) FIXED MOBILE except aeronautical mobile Radiolocation 5.286
450-455	FIXED MOBILE 5.286AA 5.209 5.271 5.286 5.286A 5.286B 5.286C 5.286D 5.286E		450-455 (CIVIL) FIXED MOBILE 5.286AA 5.209 5.286 5.286A
455-456 FIXED MOBILE 5.286AA 5.209 5.271 5.286A 5.286B 5.286C 5.286E	455-456 FIXED MOBILE 5.286AA MOBILE-SATELLITE (Earth-to-space) 5.286A 5.286B 5.286C 5.209	455-456 FIXED MOBILE 5.286AA 5.209 5.271 5.286A 5.286B 5.286C 5.286E	455-456 (CIVIL) FIXED MOBILE 5.286AA 5.209 5.286A
456-459	FIXED MOBILE 5.286AA 5.271 5.287 5.288		456-459 (CIVIL) FIXED MOBILE 5.286AA 5.287
459-460 FIXED MOBILE 5.286AA 5.209 5.271 5.286A 5.286B 5.286C 5.286E	459-460 FIXED MOBILE 5.286AA MOBILE-SATELLITE (Earth-to-space) 5.286A 5.286B 5.286C 5.209	459-460 FIXED MOBILE 5.286AA 5.209 5.271 5.286A 5.286B 5.286C 5.286E	459-460 (CIVIL) FIXED MOBILE 5.286AA 5.209 5.286A

460 – 942 MHz

ALLOCATION TO SERVICES			
REGION 1	REGION 2	REGION 3	SULTANATE OF OMAN
460-470	FIXED MOBILE 5.286AA Meteorological-Satellite (space-to-Earth)		460-470 (CIVIL) FIXED MOBILE 5.286AA Meteorological-Satellite (space-to-Earth)
	5.287 5.288 5.289 5.290		5.287 5.289
470-790 BROADCASTING	470-512 BROADCASTING Fixed Mobile 5.292 5.293	470-585 FIXED MOBILE BROADCASTING 5.291 5.298	470-790 (CIVIL) BROADCASTING Fixed 5.300 Land mobile 5.296 Mobile except aeronautical mobile 5.300
	512-608 BROADCASTING 5.297		
	608-614 RADIO ASTRONOMY Mobile-satellite except aeronautical mobile-satellite (Earth-to-space)	585-610 FIXED MOBILE BROADCASTING RADIONAVIGATION 5.149 5.305 5.306 5.307	
5.149 5.291A 5.294 5.296 5.300 5.302 5.304 5.306 5.311A 5.312		610-890 FIXED MOBILE 5.313A 5.317A BROADCASTING	5.149 5.311A
790-862 FIXED BROADCASTING MOBILE except aeronautical mobile 5.316B 5.317A	614-698 BROADCASTING Fixed Mobile 5.293 5.309 5.311A		790-862 (CIVIL) FIXED BROADCASTING MOBILE except aeronautical mobile 5.316B 5.317A
	698-806 BROADCASTING MOBILE 5.313B 5.317A Fixed 5.293 5.309 5.311A		
	806-890 FIXED MOBILE 5.317A BROADCASTING		5.316A
5.312 5.314 5.315 5.316 5.316A 5.319			
862-890 FIXED MOBILE except aeronautical mobile 5.317A BROADCASTING 5.322			862-870 (CIVIL) FIXED MOBILE except aeronautical mobile 5.317A
			870-876 (MILITARY) FIXED MOBILE except aeronautical mobile 5.317A
5.319 5.323	5.317 5.318	5.149 5.305 5.306 5.307 5.311A 5.320	876-915 (CIVIL) LAND MOBILE 5.317A
890-942 FIXED MOBILE except aeronautical mobile 5.317A BROADCASTING 5.322 Radiolocation	890-902 FIXED MOBILE except aeronautical mobile 5.317A Radiolocation 5.318 5.325	890-942 FIXED MOBILE 5.317A BROADCASTING Radiolocation	
5.323		5.327	

902 – 1 350 MHz

ALLOCATION TO SERVICES			
REGION 1	REGION 2	REGION 3	SULTANATE OF OMAN
	902-928 FIXED Amateur Mobile except aeronautical mobile 5.325A Radiolocation 5.150 5.325 5.326		915-921 (MILITARY) FIXED MOBILE except aeronautical mobile 5.317A 921-960 (CIVIL) LAND MOBILE 5.317A
	928-942 FIXED MOBILE except aeronautical mobile 5.317A Radiolocation 5.325		
942-960 FIXED MOBILE except aeronautical mobile 5.317A BROADCASTING 5.322 5.323	942-960 FIXED MOBILE 5.317A	942-960 FIXED MOBILE 5.317A BROADCASTING 5.320	
960-1 164	AERONAUTICAL RADIONAVIGATION 5.328 AERONAUTICAL MOBILE (R) 5.327A		960-1 164 (SHARED) AERONAUTICAL RADIONAVIGATION 5.328 AERONAUTICAL MOBILE (R) 5.327A
1 164-1 215	AERONAUTICAL RADIONAVIGATION 5.328 RADIONAVIGATION-SATELLITE (space-to-Earth) (space-to-space) 5.328B 5.328A		1 164-1 215 (SHARED) AERONAUTICAL RADIONAVIGATION 5.328 RADIONAVIGATION-SATELLITE (space-to-Earth) (space-to-space) 5.328B 5.328A
1 215-1 240	EARTH EXPLORATION-SATELLITE (active) RADIOLOCATION RADIONAVIGATION-SATELLITE (space-to-Earth) (space-to-space) 5.328B 5.329 5.329A SPACE RESEARCH (active) 5.330 5.331 5.332		1 215-1 240 (SHARED) EARTH EXPLORATION-SATELLITE (active) RADIOLOCATION RADIONAVIGATION RADIONAVIGATION-SATELLITE (space-to-Earth) (space-to-space) 5.328B 5.329 5.329A SPACE RESEARCH (active) 5.332
1 240-1 300	EARTH EXPLORATION-SATELLITE (active) RADIOLOCATION RADIONAVIGATION-SATELLITE (space-to-Earth) (space-to-space) 5.328B 5.329 5.329A SPACE RESEARCH (active) Amateur 5.282 5.330 5.331 5.332 5.335 5.335A		1 240-1 300 (SHARED) EARTH EXPLORATION-SATELLITE (active) RADIOLOCATION RADIONAVIGATION RADIONAVIGATION-SATELLITE (space-to-Earth) (space-to-space) 5.328B 5.329 5.329A SPACE RESEARCH (active) Amateur 5.282 5.332 5.335A
1 300-1 350	AERONAUTICAL RADIONAVIGATION 5.337 RADIOLOCATION RADIONAVIGATION SATELLITE (Earth-to-space) 5.149 5.337A		1 300-1 350 (CIVIL) AERONAUTICAL RADIONAVIGATION 5.337 RADIOLOCATION RADIONAVIGATION SATELLITE (Earth-to-space) 5.149 5.337A

1 350 – 1 530 MHz

ALLOCATION TO SERVICES			
REGION 1	REGION 2	REGION 3	SULTANATE OF OMAN
1 350-1 400 FIXED MOBILE RADIOLOCATION 5.149 5.338 5.338A 5.339	1 350-1 400 RADIOLOCATION 5.338A 5.149 5.334 5.339		1 350-1 400 (SHARED) FIXED MOBILE RADIOLOCATION 5.149 5.338A
1 400-1 427	EARTH EXPLORATION-SATELLITE (passive) RADIO ASTRONOMY SPACE RESEARCH (passive) 5.340 5.341		1 400-1 427 (CIVIL) EARTH EXPLORATION-SATELLITE (passive) RADIO ASTRONOMY SPACE RESEARCH (passive) 5.340 5.341
1 427-1 429	SPACE OPERATION (Earth-to-space) FIXED MOBILE except aeronautical mobile 5.338A 5.341		1 427-1 429 (SHARED) SPACE OPERATION (Earth-to-space) FIXED MOBILE except aeronautical mobile 5.338A 5.341
1 429-1 452 FIXED MOBILE except aeronautical mobile 5.338A 5.341 5.342	1 429-1 452 FIXED MOBILE 5.343 5.338A 5.341		1 429-1 452 (SHARED) FIXED MOBILE except aeronautical mobile 5.338A 5.341
1 452-1 492 FIXED MOBILE except aeronautical mobile BROADCASTING 5.345 BROADCASTING-SATELLITE 5.208B 5.345 5.341 5.342	1 452-1 492 FIXED MOBILE 5.343 BROADCASTING 5.345 BROADCASTING-SATELLITE 5.208B 5.345 5.341 5.344		1 452-1 492 (CIVIL) FIXED MOBILE except aeronautical mobile BROADCASTING 5.345 BROADCASTING-SATELLITE 5.208B 5.345 5.341
1 492-1 518 FIXED MOBILE except aeronautical mobile 5.341 5.342	1 492-1 518 FIXED MOBILE 5.343 5.341 5.344	1 492-1 518 FIXED MOBILE 5.341	1 492-1 518 (SHARED) FIXED MOBILE except aeronautical mobile 5.341
1 518-1 525 FIXED MOBILE except aeronautical mobile MOBILE-SATELLITE (space-to-Earth) 5.348 5.348A 5.348B 5.351A 5.341 5.342	1 518-1 525 FIXED MOBILE 5.343 MOBILE-SATELLITE (space-to-Earth) 5.348 5.348A 5.348B 5.351A 5.341 5.344	1 518-1 525 FIXED MOBILE MOBILE-SATELLITE (space-to-Earth) 5.348 5.348A 5.348B 5.351A 5.341	1 518-1 525 (CIVIL) FIXED MOBILE except aeronautical mobile MOBILE-SATELLITE (space-to-Earth) 5.348 5.348A 5.351A 5.341
1 525-1 530 SPACE OPERATION (space-to-Earth) FIXED MOBILE-SATELLITE (space-to-Earth) 5.208B 5.351A Earth exploration-satellite Mobile except aeronautical mobile 5.349 5.341 5.342 5.350 5.351 5.352A 5.354	1 525-1 530 SPACE OPERATION (space-to-Earth) MOBILE-SATELLITE (space-to-Earth) 5.208B 5.351A Earth exploration-satellite Fixed Mobile 5.343 5.341 5.351 5.354	1 525-1 530 SPACE OPERATION (space-to-Earth) FIXED MOBILE-SATELLITE (space-to-Earth) 5.208B 5.351A Earth exploration-satellite Mobile 5.349 5.341 5.351 5.352A 5.354	1 525-1 530 (CIVIL) SPACE OPERATION (space-to-Earth) FIXED MOBILE-SATELLITE (space-to-Earth) 5.208B 5.351A Earth exploration-satellite Mobile except aeronautical mobile 5.341 5.351 5.352A 5.354

1 530 – 1 660 MHz

ALLOCATION TO SERVICES			
REGION 1	REGION 2	REGION 3	SULTANATE OF OMAN
1 530-1 535 SPACE OPERATION (space-to-Earth) MOBILE-SATELLITE (space-to-Earth) 5.208B 5.351A 5.353A Earth exploration-satellite Fixed Mobile except aeronautical mobile 5.341 5.342 5.351 5.354	1 530-1 535 SPACE OPERATION (space-to-Earth) MOBILE-SATELLITE (space-to-Earth) 5.208B 5.351A 5.353A Earth exploration-satellite Fixed Mobile 5.343 5.341 5.351 5.354		1 530-1 535 (CIVIL) SPACE OPERATION (space-to-Earth) MOBILE-SATELLITE (space-to-Earth) 5.208B 5.351A 5.353A Earth exploration-satellite Fixed Mobile except aeronautical mobile 5.341 5.351 5.354
1 535-1 559	MOBILE-SATELLITE (space-to-Earth) 5.208B 5.351A 5.341 5.351 5.353A 5.354 5.355 5.356 5.357 5.357A 5.359 5.362A		1 535-1 559 (CIVIL) MOBILE-SATELLITE (space-to-Earth) 5.208B 5.351A 5.341 5.351 5.353A 5.354 5.356 5.357 5.357A
1 559-1 610	AERONAUTICAL RADIONAVIGATION RADIONAVIGATION-SATELLITE (space-to-Earth) (space-to-space) 5.208B 5.328B 5.329A 5.341 5.362B 5.362C		1 559-1 610 (SHARED) AERONAUTICAL RADIONAVIGATION RADIONAVIGATION-SATELLITE (space-to-Earth) (space-to-space) 5.208B 5.328B 5.329A 5.341
1 610-1 610.6 MOBILE-SATELLITE (Earth-to-space) 5.351A AERONAUTICAL RADIONAVIGATION 5.341 5.355 5.359 5.364 5.366 5.367 5.368 5.369 5.371 5.372	1 610-1 610.6 MOBILE-SATELLITE (Earth-to-space) 5.351A AERONAUTICAL RADIONAVIGATION RADIODETERMINATION-SATELLITE (Earth-to-space) 5.341 5.364 5.366 5.367 5.368 5.370 5.372	1 610-1 610.6 MOBILE-SATELLITE (Earth-to-space) 5.351A AERONAUTICAL RADIONAVIGATION Radiodetermination-satellite (Earth-to-space) 5.341 5.355 5.359 5.364 5.366 5.367 5.368 5.369 5.372	1 610-1 610.6 (CIVIL) MOBILE-SATELLITE (Earth-to-space) 5.351A AERONAUTICAL RADIONAVIGATION 5.341 5.364 5.366 5.367 5.368 5.371 5.372
1 610.6-1 613.8 MOBILE-SATELLITE (Earth-to-space) 5.351A RADIO ASTRONOMY AERONAUTICAL RADIONAVIGATION 5.149 5.341 5.355 5.359 5.364 5.366 5.367 5.368 5.369 5.371 5.372	1 610.6-1 613.8 MOBILE-SATELLITE (Earth-to-space) 5.351A RADIO ASTRONOMY AERONAUTICAL RADIONAVIGATION RADIODETERMINATION-SATELLITE (Earth-to-space) 5.149 5.341 5.364 5.366 5.367 5.368 5.370 5.372	1 610.6-1 613.8 MOBILE-SATELLITE (Earth-to-space) 5.351A RADIO ASTRONOMY AERONAUTICAL RADIONAVIGATION Radiodetermination-satellite (Earth-to-space) 5.149 5.341 5.355 5.359 5.364 5.366 5.367 5.368 5.369 5.372	1 610.6-1 613.8 (CIVIL) MOBILE-SATELLITE (Earth-to-space) 5.351A RADIO ASTRONOMY AERONAUTICAL RADIONAVIGATION 5.149 5.341 5.364 5.366 5.367 5.368 5.371 5.372
1 613.8-1 626.5 MOBILE-SATELLITE (Earth-to-space) 5.351A AERONAUTICAL RADIONAVIGATION Mobile-satellite (space-to-Earth) 5.208B 5.341 5.355 5.359 5.364 5.365 5.366 5.367 5.368 5.369 5.371 5.372	1 613.8-1 626.5 MOBILE-SATELLITE (Earth-to-space) 5.351A AERONAUTICAL RADIONAVIGATION RADIODETERMINATION-SATELLITE (Earth-to-space) Mobile-satellite (space-to-Earth) 5.208B 5.341 5.364 5.365 5.366 5.367 5.368 5.370 5.372	1 613.8-1 626.5 MOBILE-SATELLITE (Earth-to-space) 5.351A AERONAUTICAL RADIONAVIGATION Mobile-satellite (space-to-Earth) 5.208B Radiodetermination-satellite (Earth-to-space) 5.341 5.355 5.359 5.364 5.365 5.366 5.367 5.368 5.369 5.372	1 613.8-1 626.5 (CIVIL) MOBILE-SATELLITE (Earth-to-space) 5.351A AERONAUTICAL RADIONAVIGATION Mobile-satellite (space-to-Earth) 5.208B 5.341 5.364 5.365 5.366 5.367 5.368 5.371 5.372
1 626.5-1 660	MOBILE-SATELLITE (Earth-to-space) 5.351A 5.341 5.351 5.353A 5.354 5.355 5.357A 5.359 5.362A 5.374 5.375 5.376		1 626.5-1 660 (CIVIL) MOBILE-SATELLITE (Earth-to-space) 5.351A 5.341 5.351 5.353A 5.354 5.357A 5.374 5.375 5.376

1 660 – 1 700 MHz

ALLOCATION TO SERVICES			
REGION 1	REGION 2	REGION 3	SULTANATE OF OMAN
1 660-1 660.5	MOBILE-SATELLITE (Earth-to-space) 5.351A RADIO ASTRONOMY 5.149 5.341 5.351 5.354 5.362A 5.376A		1 660-1 660.5 (CIVIL) MOBILE-SATELLITE (Earth-to-space) 5.351A RADIO ASTRONOMY 5.149 5.341 5.351 5.354 5.376A
1 660.5-1 668	RADIO ASTRONOMY SPACE RESEARCH (passive) Fixed Mobile except aeronautical mobile 5.149 5.341 5.379 5.379A		1 660.5-1 668 (CIVIL) RADIO ASTRONOMY SPACE RESEARCH (passive) Fixed Mobile except aeronautical mobile 5.149 5.341 5.379A
1 668-1 668.4	MOBILE-SATELLITE (Earth-to-space) 5.351A 5.379B 5.379C RADIO ASTRONOMY SPACE RESEARCH (passive) Fixed Mobile except aeronautical mobile 5.149 5.341 5.379 5.379A		1 668-1 668.4 (CIVIL) MOBILE-SATELLITE (Earth-to-space) 5.351A 5.379B 5.379C RADIO ASTRONOMY SPACE RESEARCH (passive) Fixed Mobile except aeronautical mobile 5.149 5.341 5.379A
1 668.4-1 670	METEOROLOGICAL AIDS FIXED MOBILE except aeronautical mobile MOBILE-SATELLITE (Earth-to-space) 5.351A 5.379B 5.379C RADIO ASTRONOMY 5.149 5.341 5.379D 5.379E		1 668.4-1 670 (CIVIL) METEOROLOGICAL AIDS FIXED MOBILE except aeronautical mobile MOBILE-SATELLITE (Earth-to-space) 5.351A 5.379B 5.379C RADIO ASTRONOMY 5.149 5.341 5.379D 5.379E
1 670-1 675	METEOROLOGICAL AIDS FIXED METEOROLOGICAL-SATELLITE (space-to-Earth) MOBILE MOBILE-SATELLITE (Earth-to-space) 5.351A 5.379B 5.341 5.379D 5.379E 5.380A		1 670-1 675 (CIVIL) METEOROLOGICAL AIDS FIXED METEOROLOGICAL-SATELLITE (space-to-Earth) MOBILE MOBILE-SATELLITE (Earth-to-space) 5.351A 5.379B 5.341 5.379D 5.379E 5.380A
1 675-1 690	METEOROLOGICAL AIDS FIXED METEOROLOGICAL-SATELLITE (space-to-Earth) MOBILE except aeronautical mobile 5.341		1 675-1 690 (SHARED) METEOROLOGICAL AIDS FIXED METEOROLOGICAL-SATELLITE (space-to-Earth) MOBILE except aeronautical mobile 5.341
1 690-1 700 METEOROLOGICAL AIDS METEOROLOGICAL-SATELLITE (space-to-Earth) Fixed Mobile except aeronautical mobile 5.289 5.341 5.382	1 690-1 700 METEOROLOGICAL AIDS METEOROLOGICAL-SATELLITE (space-to-Earth) 5.289 5.341 5.381		1 690-1 700 (SHARED) FIXED METEOROLOGICAL AIDS METEOROLOGICAL-SATELLITE (space-to-Earth) MOBILE except aeronautical mobile 5.289 5.341

1 700 – 2 110 MHz

ALLOCATION TO SERVICES			
REGION 1	REGION 2	REGION 3	SULTANATE OF OMAN
1 700-1 710 FIXED METEOROLOGICAL-SATELLITE (space-to-Earth) MOBILE except aeronautical mobile 5.289 5.341		1 700-1 710 FIXED METEOROLOGICAL-SATELLITE (space-to-Earth) MOBILE except aeronautical mobile 5.289 5.341 5.384	1 700-1 710 (CIVIL) FIXED METEOROLOGICAL-SATELLITE (space-to-Earth) MOBILE except aeronautical mobile 5.289 5.341
1 710-1 930	FIXED MOBILE 5.384A 5.388A 5.388B 5.149 5.341 5.385 5.386 5.387 5.388		1 710-1 785 (CIVIL) LAND MOBILE 5.384A 5.149 5.341 5.385 1 785-1 800 (CIVIL) FIXED MOBILE 5.384A 1 800-1 880 (CIVIL) MOBILE 5.384A 1 880-1 885 (CIVIL) FIXED LAND MOBILE 5.384A 1 885-1 980 (CIVIL) LAND MOBILE 5.388A <u>5.388B</u>
1 930-1 970 FIXED MOBILE 5.388A 5.388B 5.388	1 930-1 970 FIXED MOBILE 5.388A 5.388B Mobile-satellite (Earth-to-space) 5.388	1 930-1 970 FIXED MOBILE 5.388A 5.388B 5.388	
1 970-1 980	FIXED MOBILE 5.388A 5.388B 5.388		5.388
1 980-2 010	FIXED MOBILE MOBILE-SATELLITE (Earth-to-space) 5.351A 5.388 5.389A 5.389B 5.389F		1 980-2 010 (CIVIL) FIXED MOBILE MOBILE-SATELLITE (Earth-to-space) 5.351A 5.388 5.389A
2 010-2 025 FIXED MOBILE 5.388A 5.388B 5.388	2 010-2 025 FIXED MOBILE MOBILE-SATELLITE (Earth-to-space) 5.388 5.389C 5.389E	2 010-2 025 FIXED MOBILE 5.388A 5.388B 5.388	2 010-2 025 (CIVIL) FIXED MOBILE 5.388A 5.388B 5.388
2 025-2 110	SPACE OPERATION (Earth-to-space) (space-to-space) EARTH EXPLORATION-SATELLITE (Earth-to-space) (space-to-space) FIXED MOBILE 5.391 SPACE RESEARCH (Earth-to-space) (space-to-space) 5.392		2 025-2 070 (MILITARY) SPACE OPERATION (Earth-to-space) (space-to-space) EARTH EXPLORATION-SATELLITE (Earth-to-space) (space-to-space) FIXED MOBILE 5.391 SPACE RESEARCH (Earth-to-space) (space-to-space) 5.392

2 070 – 2 300 MHz

ALLOCATION TO SERVICES			
REGION 1	REGION 2	REGION 3	SULTANATE OF OMAN
			2 070-2 110 (CIVIL) SPACE OPERATION (Earth-to-space) (space-to-space) EARTH EXPLORATION-SATELLITE (Earth-to-space) (space-to-space) FIXED MOBILE 5.391 SPACE RESEARCH (Earth-to-space) (space-to-space) 5.392
2 110-2 120	FIXED MOBILE 5.388A 5.388B SPACE RESEARCH (deep space) (Earth-to-space) 5.388		2 110-2 120 (CIVIL) LAND MOBILE 5.388A 5.388B SPACE RESEARCH (deep space) (Earth-to-space) 5.388
2 120-2 160 FIXED MOBILE 5.388A 5.388B 5.388	2 120-2 160 FIXED MOBILE 5.388A 5.388B Mobile-satellite (space-to-Earth) 5.388	2 120-2 160 FIXED MOBILE 5.388A 5.388B 5.388	2 120-2 170 (CIVIL) LAND MOBILE 5.388A 5.388B
2 160-2 170 FIXED MOBILE 5.388A 5.388B 5.388	2 160-2 170 FIXED MOBILE MOBILE-SATELLITE (space-to-Earth) 5.388 5.389C 5.389E	2 160-2 170 FIXED MOBILE 5.388A 5.388B 5.388	5.388
2 170-2 200	FIXED MOBILE MOBILE-SATELLITE (space-to-Earth) 5.351A 5.388 5.389A 5.389F		2 170-2 200 (CIVIL) FIXED MOBILE MOBILE-SATELLITE (space-to-Earth) 5.351A 5.388 5.389A
2 200-2 290	SPACE OPERATION (space-to-Earth) (space-to-space) EARTH EXPLORATION-SATELLITE (space-to-Earth) (space-to-space) FIXED MOBILE 5.391 SPACE RESEARCH (space-to-Earth) (space-to-space) 5.392		2 200-2 245 (MILITARY) SPACE OPERATION (space-to-Earth) (space-to-space) EARTH EXPLORATION-SATELLITE (space-to-Earth) (space-to-space) FIXED MOBILE 5.391 SPACE RESEARCH (space-to-Earth) (space-to-space) 5.392 2 245-2 290 (CIVIL) SPACE OPERATION (space-to-Earth) (space-to-space) EARTH EXPLORATION-SATELLITE (space-to-Earth) (space-to-space) FIXED MOBILE 5.391 SPACE RESEARCH (space-to-Earth) (space-to-space) 5.392
2 290-2 300	FIXED MOBILE except aeronautical mobile SPACE RESEARCH (deep space) (space-to-Earth)		2 290-2 300 (CIVIL) FIXED MOBILE except aeronautical mobile SPACE RESEARCH (deep space) (space-to-Earth)

2 300 – 2 655 MHz

ALLOCATION TO SERVICES			
REGION 1	REGION 2	REGION 3	SULTANATE OF OMAN
<p>2 300-2 450 FIXED MOBILE 5.384A Amateur Radiolocation</p> <p>5.150 5.282 5.395</p>	<p>2 300-2 450 FIXED MOBILE 5.384A RADIOLOCATION Amateur</p> <p>5.150 5.282 5.393 5.394 5.396</p>		<p>2 300-2 400 (SHARED) FIXED MOBILE Amateur Radiolocation 5.395</p> <p>2 400-2 450 (CIVIL) FIXED MOBILE Amateur Radiolocation 5.150 5.282</p>
<p>2 450-2 483.5 FIXED MOBILE Radiolocation 5.150 5.397</p>	<p>2 450-2 483.5 FIXED MOBILE RADIOLOCATION 5.150</p>		<p>2 450-2 483.5 (CIVIL) FIXED MOBILE Radiolocation 5.150</p>
<p>2 483.5-2 500 FIXED MOBILE MOBILE-SATELLITE (space-to-Earth) 5.351A Radiolocation</p> <p>5.150 5.371 5.397 5.398 5.399 5.400 5.402</p>	<p>2 483.5-2 500 FIXED MOBILE MOBILE-SATELLITE (space-to-Earth) 5.351A RADIOLOCATION RADIODETERMINATION- SATELLITE (space-to-Earth) 5.398</p> <p>5.150 5.402</p>	<p>2 483.5-2 500 FIXED MOBILE MOBILE-SATELLITE (space-to-Earth) 5.351A RADIOLOCATION Radiodetermination-satellite (space-to-Earth) 5.398</p> <p>5.150 5.400 5.402</p>	<p>2 483.5-2 500 (CIVIL) FIXED MOBILE MOBILE-SATELLITE (space-to-Earth) 5.351A Radiolocation</p> <p>5.150 5.371 5.398 5.399 5.402</p>
<p>2 500-2 520 FIXED 5.410 MOBILE except aeronautical mobile 5.384A</p> <p>5.405 5.412</p>	<p>2 500-2 520 FIXED 5.410 FIXED-SATELLITE (space-to- Earth) 5.415 MOBILE except aeronautical mobile 5.384A</p> <p>5.404</p>	<p>2 500-2 520 FIXED 5.410 FIXED-SATELLITE (space-to- Earth) 5.415 MOBILE except aeronautical mobile 5.384A MOBILE-SATELLITE (space-to- Earth) 5.351A 5.407 5.414 5.414A</p> <p>5.404 5.415A</p>	<p>2 500-2 520 (CIVIL) FIXED 5.410 MOBILE except aeronautical mobile 5.384A</p>
<p>2 520-2 655 FIXED 5.410 MOBILE except aeronautical mobile 5.384A BROADCASTING-SATELLITE 5.413 5.416</p> <p>5.339 5.405 5.412 5.417C 5.417D 5.418B 5.418C</p>	<p>2 520-2 655 FIXED 5.410 FIXED-SATELLITE (space-to-Earth) 5.415 MOBILE except aeronautical mobile 5.384A BROADCASTING-SATELLITE 5.413 5.416</p> <p>5.339 5.417C 5.417D 5.418B 5.418C</p>	<p>2 520-2 535 FIXED 5.410 FIXED-SATELLITE (space-to-Earth) 5.415 MOBILE except aeronautical mobile 5.384A BROADCASTING-SATELLITE 5.413 5.416</p> <p>5.403 5.414A 5.415A</p> <p>2 535-2 655 FIXED 5.410 MOBILE except aeronautical mobile 5.384A BROADCASTING-SATELLITE 5.413 5.416</p> <p>5.339 5.417A 5.417B 5.417C 5.417D 5.418 5.418A 5.418B 5.418C</p>	<p>2 520-2 655 (SHARED) FIXED 5.410 MOBILE except aeronautical mobile 5.384A BROADCASTING-SATELLITE 5.413 5.416</p> <p>5.339 5.417C 5.417D 5.418B 5.418C</p>

2 655 – 3 600 MHz

ALLOCATION TO SERVICES			
REGION 1	REGION 2	REGION 3	SULTANATE OF OMAN
2 655-2 670 FIXED 5.410 MOBILE except aeronautical mobile 5.384A BROADCASTING-SATELLITE 5.208B 5.413 5.416 Earth exploration-satellite (passive) Radio astronomy Space research (passive) 5.149 5.412	2 655-2 670 FIXED 5.410 FIXED-SATELLITE (Earth-to-space) (space-to-Earth) 5.415 MOBILE except aeronautical mobile 5.384A BROADCASTING-SATELLITE 5.413 5.416 Earth exploration-satellite (passive) Radio astronomy Space research (passive) 5.149 5.208B	2 655-2 670 FIXED 5.410 FIXED-SATELLITE (Earth-to-space) 5.415 MOBILE except aeronautical mobile 5.384A BROADCASTING-SATELLITE 5.413 5.416 Earth exploration-satellite (passive) Radio astronomy Space research (passive) 5.149 5.208B 5.420	2 655-2 670 (SHARED) FIXED 5.410 MOBILE except aeronautical mobile 5.384A BROADCASTING-SATELLITE 5.208B 5.413 5.416 Earth exploration-satellite (passive) Radio astronomy Space research (passive) 5.149
2 670-2 690 FIXED 5.410 MOBILE except aeronautical mobile 5.384A Earth exploration-satellite (passive) Radio astronomy Space research (passive) 5.149 5.412	2 670-2 690 FIXED 5.410 FIXED-SATELLITE (Earth-to-space) (space-to-Earth) 5.208B 5.415 MOBILE except aeronautical mobile 5.384A Earth exploration-satellite (passive) Radio astronomy Space research (passive) 5.149	2 670-2 690 FIXED 5.410 FIXED-SATELLITE (Earth-to-space) 5.415 MOBILE except aeronautical mobile 5.384A MOBILE-SATELLITE (Earth-to-space) 5.351A 5.419 Earth exploration-satellite (passive) Radio astronomy Space research (passive) 5.149	2 670-2 690 (CIVIL) FIXED 5.410 MOBILE except aeronautical mobile 5.384A Earth exploration-satellite (passive) Radio astronomy Space research (passive) 5.149
2 690-2 700	EARTH EXPLORATION-SATELLITE (passive) RADIO ASTRONOMY SPACE RESEARCH (passive) 5.340 5.422		2 690-2 700 (CIVIL) EARTH EXPLORATION-SATELLITE (passive) RADIO ASTRONOMY SPACE RESEARCH (passive) 5.340 5.422
2 700-2 900	AERONAUTICAL RADIONAVIGATION 5.337 Radiolocation 5.423 5.424		2 700-2 900 (SHARED) AERONAUTICAL RADIONAVIGATION 5.337 Radiolocation 5.423
2 900-3 100	RADIOLOCATION 5.424A RADIONAVIGATION 5.426 5.425 5.427		2 900-3 100 (SHARED) RADIOLOCATION 5.424A RADIONAVIGATION 5.426 5.425 5.427
3 100-3 300	RADIOLOCATION Earth exploration-satellite (active) Space research (active) 5.149 5.428		3 100-3 300 (SHARED) RADIOLOCATION Earth exploration-satellite (active) Space research (active) 5.149
3 300-3 400 RADIOLOCATION 5.149 5.429 5.430	3 300-3 400 RADIOLOCATION Amateur Fixed Mobile 5.149	3 300-3 400 RADIOLOCATION Amateur 5.149 5.429	3 300-3 400 (SHARED) FIXED MOBILE RADIOLOCATION 5.149
3 400-3 600 FIXED FIXED-SATELLITE (space-to-Earth) Mobile 5.430A Radiolocation 5.431	3 400-3 500 FIXED FIXED-SATELLITE (space-to-Earth) Amateur Mobile 5.431A Radiolocation 5.433 5.282	3 400-3 500 FIXED FIXED-SATELLITE (space-to-Earth) Amateur Mobile 5.432B Radiolocation 5.433 5.282 5.432 5.432A	3 400-3 600 (CIVIL) FIXED FIXED-SATELLITE (space-to-Earth) MOBILE except aeronautical mobile 5.430A Radiolocation OMA 1

3 500 – 5 250 MHz

ALLOCATION TO SERVICES			
REGION 1	REGION 2	REGION 3	SULTANATE OF OMAN
	3 500-3 700 FIXED FIXED-SATELLITE (space-to-Earth) MOBILE except aeronautical mobile Radiolocation 5.433	3 500-3 600 FIXED FIXED-SATELLITE (space-to-Earth) MOBILE except aeronautical mobile 5.433A Radiolocation 5.433	
3 600-4 200 FIXED FIXED-SATELLITE (space-to-Earth) Mobile		3 600-3 700 FIXED FIXED-SATELLITE (space-to-Earth) MOBILE except aeronautical mobile Radiolocation 5.435	3 600-4 200 (CIVIL) FIXED FIXED-SATELLITE (space-to-Earth) Mobile
	3 700-4 200 FIXED FIXED-SATELLITE (space-to-Earth) MOBILE except aeronautical mobile		
4 200-4 400	AERONAUTICAL RADIONAVIGATION 5.438 5.439 5.440		4 200-4 400 (CIVIL) AERONAUTICAL RADIONAVIGATION 5.438 5.440
4 400-4 500	FIXED MOBILE 5.440A		4 400-4 500 (MILITARY) FIXED MOBILE
4 500-4 800	FIXED FIXED-SATELLITE (space-to-Earth) 5.441 MOBILE 5.440A		4 500-4 800 (SHARED) FIXED FIXED-SATELLITE (space-to-Earth) 5.441 MOBILE
4 800-4 990	FIXED MOBILE 5.440A 5.442 Radio astronomy 5.149 5.339 5.443		4 800-4 990 (MILITARY) FIXED MOBILE 5.442 Radio astronomy 5.149
4 990-5 000	FIXED MOBILE except aeronautical mobile RADIO ASTRONOMY Space research (passive) 5.149		4 990-5 000 (MILITARY) FIXED MOBILE except aeronautical mobile RADIO ASTRONOMY Space research (passive) 5.149
5 000-5 010	AERONAUTICAL RADIONAVIGATION RADIONAVIGATION-SATELLITE (Earth-to-space) 5.367		5 000-5 010 (CIVIL) AERONAUTICAL RADIONAVIGATION RADIONAVIGATION-SATELLITE (Earth-to-space) 5.367
5 010-5 030	AERONAUTICAL RADIONAVIGATION RADIONAVIGATION-SATELLITE (space-to-Earth) (space-space) 5.328B 5.443B 5.367		5 010-5 030 (CIVIL) AERONAUTICAL RADIONAVIGATION RADIONAVIGATION-SATELLITE (space-to-Earth) (space-space) 5.328B 5.443B 5.367
5 030-5 091	AERONAUTICAL RADIONAVIGATION 5.367 5.444		5 030-5 091 (CIVIL) AERONAUTICAL RADIONAVIGATION 5.367 5.444
5 091-5 150	AERONAUTICAL RADIONAVIGATION AERONAUTICAL MOBILE 5.444B 5.367 5.444 5.444A		5 091-5 150 (CIVIL) AERONAUTICAL RADIONAVIGATION AERONAUTICAL MOBILE 5.444B 5.367 5.444 5.444A
5 150-5 250	AERONAUTICAL RADIONAVIGATION FIXED-SATELLITE (Earth-to-space) 5.447A MOBILE except aeronautical mobile 5.446A 5.446B 5.446 5.446C 5.447 5.447B 5.447C		5 150-5 250 (CIVIL) AERONAUTICAL RADIONAVIGATION AERONAUTICAL MOBILE 5.446C FIXED-SATELLITE (Earth-to-space) 5.447A MOBILE except aeronautical mobile 5.446A 5.446B 5.446 5.447B 5.447C

5 250 – 5 830 MHz

ALLOCATION TO SERVICES			
REGION 1	REGION 2	REGION 3	SULTANATE OF OMAN
5 250-5 255	EARTH EXPLORATION-SATELLITE (active) RADIOLOCATION SPACE RESEARCH 5.447D MOBILE except aeronautical mobile 5.446A 5.447F 5.447E 5.448 5.448A		5 250-5 255 (SHARED) EARTH EXPLORATION-SATELLITE (active) RADIOLOCATION SPACE RESEARCH 5.447D MOBILE except aeronautical mobile 5.446A 5.447F 5.448A
5 255- 5 350	EARTH EXPLORATION-SATELLITE (active) RADIOLOCATION SPACE RESEARCH (active) MOBILE except aeronautical mobile 5.446A 5.447F 5.447E 5.448 5.448A		5 255- 5 350 (SHARED) EARTH EXPLORATION-SATELLITE (active) RADIOLOCATION SPACE RESEARCH (active) MOBILE except aeronautical mobile 5.446A 5.447F 5.448A
5 350-5 460	EARTH EXPLORATION-SATELLITE (active) 5.448B SPACE RESEARCH (active) 5.448C AERONAUTICAL RADIONAVIGATION 5.449 RADIOLOCATION 5.448D		5 350-5 460 (SHARED) EARTH EXPLORATION-SATELLITE (active) 5.448B SPACE RESEARCH (active) 5.448C AERONAUTICAL RADIONAVIGATION 5.449 RADIOLOCATION 5.448D
5 460-5 470	RADIONAVIGATION 5.449 EARTH EXPLORATION-SATELLITE (active) SPACE RESEARCH (active) RADIOLOCATION 5.448D 5.448B		5 460-5 470 (SHARED) RADIONAVIGATION 5.449 EARTH EXPLORATION-SATELLITE (active) SPACE RESEARCH (active) RADIOLOCATION 5.448D 5.448B
5 470-5 570	MARITIME RADIONAVIGATION MOBILE except aeronautical mobile 5.446A 5.450A EARTH EXPLORATION-SATELLITE (active) SPACE RESEARCH (active) RADIOLOCATION 5.450B 5.448B 5.450 5.451		5 470-5 570 (SHARED) MARITIME RADIONAVIGATION MOBILE except aeronautical mobile 5.446A 5.450A EARTH EXPLORATION-SATELLITE (active) SPACE RESEARCH (active) RADIOLOCATION 5.450B 5.448B
5 570-5 650	MARITIME RADIONAVIGATION MOBILE except aeronautical mobile 5.446A 5.450A RADIOLOCATION 5.450B 5.450 5.451 5.452		5 570-5 650 (SHARED) MARITIME RADIONAVIGATION MOBILE except aeronautical mobile 5.446A 5.450A RADIOLOCATION 5.450B 5.452
5 650-5 725	RADIOLOCATION MOBILE except aeronautical mobile 5.446A 5.450A Amateur Space research (deep space) 5.282 5.451 5.453 5.454 5.455		5 650-5 725 (SHARED) FIXED MOBILE 5.450A RADIOLOCATION Amateur Space research (deep space) 5.282
5 725-5 830 FIXED-SATELLITE (Earth-to-space) RADIOLOCATION Amateur 5.150 5.451 5.453 5.455 5.456	5 725-5 830 RADIOLOCATION Amateur 5.150 5.453 5.455		5 725-5 830 (SHARED) FIXED MOBILE FIXED-SATELLITE (Earth-to-space) RADIOLOCATION Amateur 5.150

5 830 – 7 550 MHz

ALLOCATION TO SERVICES			
REGION 1	REGION 2	REGION 3	SULTANATE OF OMAN
5 830-5 850 FIXED-SATELLITE (Earth-to-space) RADIOLOCATION Amateur Amateur-satellite (space-to-Earth) 5.150 5.451 5.453 5.455 5.456	5 830-5 850 RADIOLOCATION Amateur Amateur-satellite (space-to-Earth) 5.150 5.453 5.455		5 830-5 850 (SHARED) FIXED-SATELLITE (Earth-to-space) RADIOLOCATION Amateur Amateur-satellite (space-to-Earth) 5.150 5.453
5 850-5 925 FIXED FIXED-SATELLITE (Earth-to-space) MOBILE 5.150	5 850-5 925 FIXED FIXED-SATELLITE (Earth-to-space) MOBILE Amateur Radiolocation 5.150	5 850-5 925 FIXED FIXED-SATELLITE (Earth-to-space) MOBILE Radiolocation 5.150	5 850-5 925 (CIVIL) FIXED FIXED-SATELLITE (Earth-to-space) MOBILE 5.150
5 925-6 700	FIXED FIXED-SATELLITE (Earth-to-space) 5.457A 5.457B MOBILE 5.457C 5.149 5.440 5.458		5 925-6 700 (CIVIL) FIXED FIXED-SATELLITE (Earth-to-space) 5.457A 5.457B MOBILE 5.149 5.440 5.458
6 700-7 075	FIXED FIXED-SATELLITE (Earth-to-space) (space-to-Earth) 5.441 MOBILE 5.458 5.458A 5.458B 5.458C		6 700-7 075 (CIVIL) FIXED FIXED-SATELLITE (Earth-to-space) (space-to-Earth) 5.441 MOBILE 5.458 5.458A 5.458B 5.458C
7 075-7 145	FIXED MOBILE 5.458 5.459		7 075-7 145 (CIVIL) FIXED MOBILE 5.458
7 145-7 235	FIXED MOBILE SPACE RESEARCH (Earth-to-space) 5.460 5.458 5.459		7 145-7 235 (CIVIL) FIXED MOBILE SPACE RESEARCH (Earth-to-space) 5.460 5.458
7 235-7 250	FIXED MOBILE 5.458		7 235-7 250 (CIVIL) FIXED MOBILE 5.458
7 250-7 300	FIXED FIXED-SATELLITE (space-to-Earth) MOBILE 5.461		7 250-7 300 (SHARED) FIXED FIXED-SATELLITE (space-to-Earth) MOBILE 5.461
7 300-7 450	FIXED FIXED-SATELLITE (space-to-Earth) MOBILE except aeronautical mobile 5.461		7 300-7 450 (SHARED) FIXED FIXED-SATELLITE (space-to-Earth) MOBILE except aeronautical mobile 5.461
7 450-7 550	FIXED FIXED-SATELLITE (space-to-Earth) METEOROLOGICAL-SATELLITE (space-to-Earth) MOBILE except aeronautical mobile 5.461A		7 450-7 550 (SHARED) FIXED FIXED-SATELLITE (space-to-Earth) METEOROLOGICAL-SATELLITE (space-to-Earth) MOBILE except aeronautical mobile 5.461A

7 550 – 8 650 MHz

ALLOCATION TO SERVICES			
REGION 1	REGION 2	REGION 3	SULTANATE OF OMAN
7 550-7 750	FIXED FIXED-SATELLITE (space-to-Earth) MOBILE except aeronautical mobile		7 550-7 750 (SHARED) FIXED FIXED-SATELLITE (space-to-Earth) MOBILE except aeronautical mobile
7 750-7 850	FIXED METEOROLOGICAL-SATELLITE (space-to-Earth) 5.461B MOBILE except aeronautical mobile		7 750-7 850 (SHARED) FIXED METEOROLOGICAL-SATELLITE (space-to-Earth) 5.461B MOBILE except aeronautical mobile
7 850-7 900	FIXED MOBILE except aeronautical mobile		7 850-7 900 (SHARED) FIXED MOBILE except aeronautical mobile
7 900-8 025	FIXED FIXED-SATELLITE (Earth-to-space) MOBILE 5.461		7 900-8 025 (SHARED) FIXED FIXED-SATELLITE (Earth-to-space) MOBILE 5.461
8 025-8 175	EARTH EXPLORATION-SATELLITE (space-to-Earth) FIXED FIXED-SATELLITE (Earth-to-space) MOBILE 5.463 5.462A		8 025-8 175 (SHARED) EARTH EXPLORATION-SATELLITE (space-to-Earth) FIXED FIXED-SATELLITE (Earth-to-space) MOBILE 5.463 5.462A
8 175-8 215	EARTH EXPLORATION-SATELLITE (space-to-Earth) FIXED FIXED-SATELLITE (Earth-to-space) METEOROLOGICAL-SATELLITE (Earth-to-space) MOBILE 5.463 5.462A		8 175-8 215 (SHARED) EARTH EXPLORATION-SATELLITE (space-to-Earth) FIXED FIXED-SATELLITE (Earth-to-space) METEOROLOGICAL-SATELLITE (Earth-to-space) MOBILE 5.463 5.462A
8 215-8 400	EARTH EXPLORATION-SATELLITE (space-to-Earth) FIXED FIXED-SATELLITE (Earth-to-space) MOBILE 5.463 5.462A		8 215-8 400 (MILITARY) EARTH EXPLORATION-SATELLITE (space-to-Earth) FIXED FIXED-SATELLITE (Earth-to-space) MOBILE 5.463 5.462A
8 400-8 500	FIXED MOBILE except aeronautical mobile SPACE RESEARCH (space-to-Earth) 5.465 5.466		8 400-8 500 (MILITARY) FIXED MOBILE except aeronautical mobile SPACE RESEARCH (space-to-Earth) 5.465
8 500-8 550	RADIOLOCATION 5.468 5.469		8 500-8 550 (SHARED) FIXED MOBILE RADIOLOCATION
8 550-8 650	EARTH EXPLORATION-SATELLITE (active) RADIOLOCATION SPACE RESEARCH (active) 5.468 5.469 5.469A		8 550-8 650 (SHARED) EARTH EXPLORATION-SATELLITE (active) FIXED MOBILE RADIOLOCATION SPACE RESEARCH (active) 5.469A

8 650 – 10 000 MHz

ALLOCATION TO SERVICES			
REGION 1	REGION 2	REGION 3	SULTANATE OF OMAN
8 650-8 750	RADIOLOCATION 5.468 5.469		8 650-8 750 (SHARED) FIXED MOBILE RADIOLOCATION
8 750-8 850	RADIOLOCATION AERONAUTICAL RADIONAVIGATION 5.470 5.471		8 750-8 850 (SHARED) RADIOLOCATION AERONAUTICAL RADIONAVIGATION 5.470
8 850-9 000	RADIOLOCATION MARITIME RADIONAVIGATION 5.472 5.473		8 850-9 000 (SHARED) RADIOLOCATION MARITIME RADIONAVIGATION 5.472
9 000-9 200	AERONAUTICAL RADIONAVIGATION 5.337 RADIOLOCATION 5.471 5.473A		9 000-9 200 (SHARED) AERONAUTICAL RADIONAVIGATION 5.337 RADIOLOCATION 5.473A
9 200-9 300	RADIOLOCATION MARITIME RADIONAVIGATION 5.472 5.473 5.474		9 200-9 300 (SHARED) RADIOLOCATION MARITIME RADIONAVIGATION 5.472 5.474
9 300-9 500	RADIONAVIGATION EARTH EXPLORATION-SATELLITE (active) SPACE RESEARCH (active) RADIOLOCATION 5.427 5.474 5.475 5.475A 5.475B 5.476A		9 300-9 500 (SHARED) RADIONAVIGATION 5.476 EARTH EXPLORATION- SATELLITE (active) SPACE RESEARCH (active) RADIOLOCATION 5.427 5.474 5.475 5.475A 5.475B 5.476A
9 500-9 800	EARTH EXPLORATION-SATELLITE (active) RADIOLOCATION RADIONAVIGATION SPACE RESEARCH (active) 5.476A		9 500-9 800 (SHARED) EARTH EXPLORATION- SATELLITE (active) RADIOLOCATION RADIONAVIGATION SPACE RESEARCH (active) 5.476A
9 800-9 900	RADIOLOCATION Earth exploration-satellite (active) Space research (active) Fixed 5.477 5.478 5.478A 5.478B		9 800-9 900 (SHARED) FIXED RADIOLOCATION Earth exploration-satellite (active) Space research (active) 5.478A 5.478B
9 900-10 000	RADIOLOCATION Fixed 5.477 5.478 5.479		9 900-10 000 (SHARED) FIXED RADIOLOCATION 5.479

10 – 12.5 GHz

ALLOCATION TO SERVICES			
REGION 1	REGION 2	REGION 3	SULTANATE OF OMAN
10-10.45 FIXED MOBILE RADIOLOCATION Amateur 5.479	10-10.45 RADIOLOCATION Amateur 5.479 5.480	10-10.45 FIXED MOBILE RADIOLOCATION Amateur 5.479	10-10.45 (SHARED) FIXED MOBILE RADIOLOCATION Amateur 5.479
10.45-10.5	RADIOLOCATION Amateur Amateur-satellite 5.481		10.45-10.5 (SHARED) FIXED MOBILE RADIOLOCATION Amateur Amateur-satellite
10.5-10.55 FIXED MOBILE Radiolocation	10.5-10.55 FIXED MOBILE RADIOLOCATION		10.5-10.55 (CIVIL) FIXED MOBILE Radiolocation
10.55-10.6	FIXED MOBILE except aeronautical mobile Radiolocation		10.55-10.6 (CIVIL) FIXED MOBILE except aeronautical mobile Radiolocation
10.6-10.68	EARTH EXPLORATION-SATELLITE (passive) FIXED MOBILE except aeronautical mobile RADIO ASTRONOMY SPACE RESEARCH (passive) Radiolocation 5.149 5.482 5.482A		10.6-10.68 (CIVIL) EARTH EXPLORATION-SATELLITE (passive) FIXED MOBILE except aeronautical mobile RADIO ASTRONOMY SPACE RESEARCH (passive) Radiolocation 5.149 5.482 5.482A
10.68-10.7	EARTH EXPLORATION-SATELLITE (passive) RADIO ASTRONOMY SPACE RESEARCH (passive) 5.340 5.483		10.68-10.7 (CIVIL) EARTH EXPLORATION-SATELLITE (passive) RADIO ASTRONOMY SPACE RESEARCH (passive) 5.340
10.7-11.7 FIXED FIXED-SATELLITE (space-to-Earth) 5.441 5.484A (Earth-to-space) 5.484 MOBILE except aeronautical mobile	10.7-11.7 FIXED FIXED-SATELLITE (space-to-Earth) 5.441 5.484A MOBILE except aeronautical mobile		10.7-11.7 (CIVIL) FIXED FIXED-SATELLITE (space-to-Earth) 5.441 5.484A (Earth-to-space) 5.484 MOBILE except aeronautical mobile
11.7-12.5 FIXED MOBILE except aeronautical mobile BROADCASTING BROADCASTING-SATELLITE 5.492 5.487 5.487A	11.7-12.1 FIXED 5.486 FIXED-SATELLITE (space-to-Earth) 5.484A 5.488 Mobile except aeronautical mobile 5.485 12.1-12.2 FIXED-SATELLITE (space-to-Earth) 5.484A 5.488 5.485 5.489	11.7-12.2 FIXED MOBILE except aeronautical mobile BROADCASTING BROADCASTING-SATELLITE 5.492 5.487 5.487A	11.7-12.5 (CIVIL) FIXED MOBILE except aeronautical mobile BROADCASTING BROADCASTING-SATELLITE 5.492

12.2 – 14.25 GHz

ALLOCATION TO SERVICES			
REGION 1	REGION 2	REGION 3	SULTANATE OF OMAN
	12.2-12.7 FIXED MOBILE except aeronautical mobile BROADCASTING BROADCASTING-SATELLITE 5.492	12.2-12.5 FIXED FIXED-SATELLITE (space-to-Earth) MOBILE except aeronautical mobile BROADCASTING 5.484A 5.487	
12.5-12.75 FIXED-SATELLITE (space-to-Earth) 5.484A (Earth-to-space) 5.494 5.495 5.496	5.487A 5.488 5.490 12.7-12.75 FIXED FIXED-SATELLITE (Earth-to-space) MOBILE except aeronautical mobile	12.5-12.75 FIXED FIXED-SATELLITE (space-to-Earth) 5.484A MOBILE except aeronautical mobile BROADCASTING-SATELLITE 5.493	12.5-12.75 (CIVIL) FIXED-SATELLITE (space-to-Earth) 5.484A (Earth-to-space)
12.75-13.25	FIXED FIXED-SATELLITE (Earth-to-space) 5.441 MOBILE Space research (deep space) (space-to-Earth)		12.75-13.25 (CIVIL) FIXED FIXED-SATELLITE (Earth-to-space) 5.441 MOBILE Space research (deep space) (space-to-Earth)
13.25-13.4	EARTH EXPLORATION-SATELLITE (active) AERONAUTICAL RADIONAVIGATION 5.497 SPACE RESEARCH (active) 5.498A 5.499		13.25-13.4 (CIVIL) EARTH EXPLORATION-SATELLITE (active) AERONAUTICAL RADIONAVIGATION 5.497 SPACE RESEARCH (active) 5.498A
13.4-13.75	EARTH EXPLORATION-SATELLITE (active) RADIOLOCATION SPACE RESEARCH 5.501A Standard frequency and time signal-satellite (Earth-to-space) 5.499 5.500 5.501 5.501B		13.4-13.75 (SHARED) EARTH EXPLORATION-SATELLITE (active) RADIOLOCATION SPACE RESEARCH 5.501A Standard frequency and time signal-satellite (Earth-to-space) 5.501B
13.75-14	FIXED-SATELLITE (Earth-to-space) 5.484A RADIOLOCATION Earth exploration-satellite Standard frequency and time signal-satellite (Earth-to-space) Space research 5.499 5.500 5.501 5.502 5.503		13.75-14 (SHARED) FIXED-SATELLITE (Earth-to-space) 5.484A RADIOLOCATION Earth exploration-satellite Standard frequency and time signal-satellite (Earth-to-space) Space research 5.502 5.503
14-14.25	FIXED-SATELLITE (Earth-to-space) 5.457A 5.457B 5.484A 5.506 5.506B RADIONAVIGATION 5.504 Mobile-satellite (Earth-to-space) 5.504B 5.504C 5.506A Space research 5.504A 5.505		14-14.25 (CIVIL) FIXED FIXED-SATELLITE (Earth-to-space) 5.457A 5.457B 5.484A 5.506 RADIONAVIGATION 5.504 Mobile-satellite (Earth-to-space) 5.504B 5.504C 5.506A Space research 5.504A

14.25 – 15.43 GHz

ALLOCATION TO SERVICES			
REGION 1	REGION 2	REGION 3	SULTANATE OF OMAN
14.25-14.3	FIXED-SATELLITE (Earth-to-space) 5.457A 5.457B 5.484A 5.506 5.506B RADIONAVIGATION 5.504 Mobile-satellite (Earth-to-space) 5.504B 5.506A 5.508A Space research 5.504A 5.505 5.508		14.25-14.3 (CIVIL) FIXED FIXED-SATELLITE (Earth-to-space) 5.457A 5.457B 5.484A 5.506 RADIONAVIGATION 5.504 Mobile-satellite (Earth-to-space) 5.504B 5.506A 5.508A Space research 5.504A
14.3-14.4 FIXED FIXED-SATELLITE (Earth-to-space) 5.457A 5.457B 5.484A 5.506 5.506B MOBILE except aeronautical mobile Mobile-satellite (Earth-to-space) 5.504B 5.506A 5.509A Radionavigation-satellite 5.504A	14.3-14.4 FIXED-SATELLITE (Earth-to-space) 5.457A 5.484A 5.506 5.506B Mobile-satellite (Earth-to-space) 5.506A Radionavigation-satellite 5.504A	14.3-14.4 FIXED FIXED-SATELLITE (Earth-to-space) 5.457A 5.484A 5.506 5.506B MOBILE except aeronautical mobile Mobile-satellite (Earth-to-space) 5.504B 5.506A 5.509A Radionavigation-satellite 5.504A	14.3-14.4 (CIVIL) FIXED FIXED-SATELLITE (Earth-to-space) 5.457A 5.457B 5.484A 5.506 MOBILE except aeronautical mobile Mobile-satellite (Earth-to-space) 5.504B 5.506A 5.509A Radionavigation-satellite 5.504A
14.4-14.47	FIXED FIXED-SATELLITE (Earth-to-space) 5.457A 5.457B 5.484A 5.506 5.506B MOBILE except aeronautical mobile Mobile-satellite (Earth-to-space) 5.504B 5.506A 5.509A Space research (space-to-Earth) 5.504A		14.4-14.47 (CIVIL) FIXED FIXED-SATELLITE (Earth-to-space) 5.457A 5.457B 5.484A 5.506 MOBILE except aeronautical mobile Mobile-satellite (Earth-to-space) 5.504B 5.506A 5.509A Space research (space-to-Earth) 5.504A
14.47-14.5	FIXED FIXED-SATELLITE (Earth-to-space) 5.457A 5.457B 5.484A 5.506 5.506B MOBILE except aeronautical mobile Mobile-satellite (Earth-to-space) 5.504B 5.506A 5.509A Radio astronomy 5.149 5.504A		14.47-14.5 (CIVIL) FIXED FIXED-SATELLITE (Earth-to-space) 5.457A 5.457B 5.484A 5.506 MOBILE except aeronautical mobile Mobile-satellite (Earth-to-space) 5.504B 5.506A 5.509A Radio astronomy 5.149 5.504A
14.5-14.8	FIXED FIXED-SATELLITE (Earth-to-space) 5.510 MOBILE Space research		14.5-14.8 (SHARED) FIXED FIXED-SATELLITE (Earth-to-space) 5.510 MOBILE Space research
14.8-15.35	FIXED MOBILE Space research 5.339		14.8-15.35 (SHARED) FIXED MOBILE Space research 5.339
15.35-15.4	EARTH EXPLORATION-SATELLITE (passive) RADIO ASTRONOMY SPACE RESEARCH (passive) 5.340 5.511		15.35-15.4 (CIVIL) EARTH EXPLORATION-SATELLITE (passive) RADIO ASTRONOMY SPACE RESEARCH (passive) 5.340
15.4-15.43	AERONAUTICAL RADIONAVIGATION 5.511D		15.4-15.43 (CIVIL) AERONAUTICAL RADIONAVIGATION 5.511D

15.43 – 18.4 GHz

ALLOCATION TO SERVICES			
REGION 1	REGION 2	REGION 3	SULTANATE OF OMAN
15.43-15.63	FIXED-SATELLITE (Earth-to-space) 5.511A AERONAUTICAL RADIONAVIGATION 5.511C		15.43-15.63 (CIVIL) FIXED-SATELLITE (Earth-to-space) 5.511A AERONAUTICAL RADIONAVIGATION 5.511C
15.63-15.7	AERONAUTICAL RADIONAVIGATION 5.511D		15.63-15.7 (CIVIL) AERONAUTICAL RADIONAVIGATION 5.511D
15.7-16.6	RADIOLOCATION 5.512 5.513		15.7-16.6 (MILITARY) FIXED MOBILE RADIOLOCATION
16.6-17.1	RADIOLOCATION Space research (deep space) (Earth-to-space) 5.512 5.513		16.6-17.1 (MILITARY) FIXED MOBILE RADIOLOCATION Space research (deep space) (Earth-to-space)
17.1-17.2	RADIOLOCATION 5.512 5.513		17.1-17.2 (SHARED) FIXED MOBILE RADIOLOCATION
17.2-17.3	EARTH EXPLORATION-SATELLITE (active) RADIOLOCATION SPACE RESEARCH (active) 5.512 5.513 5.513A		17.2-17.3 (SHARED) EARTH EXPLORATION-SATELLITE (active) FIXED MOBILE RADIOLOCATION SPACE RESEARCH (active) 5.513A
17.3-17.7 FIXED-SATELLITE (Earth-to-space) 5.516 (space-to-Earth) 5.516A 5.516B Radiolocation 5.514	17.3-17.7 FIXED-SATELLITE (Earth-to-space) 5.516 BROADCASTING-SATELLITE Radiolocation 5.514 5.515	17.3-17.7 FIXED-SATELLITE (Earth-to-space) 5.516 Radiolocation 5.514	17.3-17.7 (SHARED) FIXED-SATELLITE (Earth-to-space) 5.516 (space-to-Earth) 5.516A 5.516B Fixed Mobile Radiolocation 5.514
17.7-18.1 FIXED FIXED-SATELLITE (space-to-Earth) 5.484A (Earth-to-space) 5.516 MOBILE	17.7-17.8 FIXED FIXED-SATELLITE (space-to-Earth) 5.517 (Earth-to-space) 5.516 BROADCASTING-SATELLITE Mobile 5.515 17.8-18.1 FIXED FIXED-SATELLITE (space-to-Earth) 5.484A (Earth-to-space) 5.516 MOBILE 5.519	17.7-18.1 FIXED FIXED-SATELLITE (space-to-Earth) 5.484A (Earth-to-space) 5.516 MOBILE	17.7-18.1 (SHARED) FIXED FIXED-SATELLITE (space-to-Earth) 5.484A (Earth-to-space) 5.516 MOBILE
18.1-18.4	FIXED FIXED-SATELLITE (space-to-Earth) 5.484A 5.516B (Earth-to-space) 5.520 MOBILE 5.519 5.521		18.1-18.4 (MILITARY) FIXED FIXED-SATELLITE (space-to-Earth) 5.484A 5.516B (Earth-to-space) 5.520 MOBILE 5.519

18.4 – 22 GHz

ALLOCATION TO SERVICES			
REGION 1	REGION 2	REGION 3	SULTANATE OF OMAN
18.4-18.6	FIXED FIXED-SATELLITE (space-to-Earth) 5.484A 5.516B MOBILE		18.4-18.6 (MILITARY) FIXED FIXED-SATELLITE (space-to-Earth) 5.484A 5.516B MOBILE
18.6-18.8 EARTH EXPLORATION-SATELLITE (passive) FIXED FIXED-SATELLITE (space-to-Earth) 5.522B MOBILE except aeronautical mobile Space research (passive) 5.522A 5.522C	18.6-18.8 EARTH EXPLORATION-SATELLITE (passive) FIXED FIXED-SATELLITE (space-to-Earth) 5.516B 5.522B MOBILE except aeronautical mobile SPACE RESEARCH (passive) 5.522A	18.6-18.8 EARTH EXPLORATION-SATELLITE (passive) FIXED FIXED-SATELLITE (space-to-Earth) 5.522B MOBILE except aeronautical mobile Space research (passive) 5.522A	18.6-18.8 (MILITARY) EARTH EXPLORATION-SATELLITE (passive) FIXED FIXED-SATELLITE (space-to-Earth) 5.522B MOBILE except aeronautical mobile Space research (passive) 5.522A 5.522C
18.8-19.3	FIXED FIXED-SATELLITE (space-to-Earth) 5.516.B 5.523A MOBILE		18.8-19.3 (MILITARY) FIXED FIXED-SATELLITE (space-to-Earth) 5.516.B 5.523A MOBILE
19.3-19.7	FIXED FIXED-SATELLITE (space-to-Earth) (Earth-to-space) 5.523B 5.523C 5.523D 5.523E MOBILE		19.3-19.7 (MILITARY) FIXED FIXED-SATELLITE (space-to-Earth) (Earth-to-space) 5.523B 5.523C 5.523D 5.523E MOBILE
19.7-20.1 FIXED-SATELLITE (space-to-Earth) 5.484A 5.516B Mobile-satellite (space-to-Earth) 5.524	19.7-20.1 FIXED-SATELLITE (space-to-Earth) 5.484A 5.516B MOBILE-SATELLITE (space-to-Earth) 5.524 5.525 5.526 5.527 5.528 5.529	19.7-20.1 FIXED-SATELLITE (space-to-Earth) 5.484A 5.516B Mobile-satellite (space-to-Earth) 5.524	19.7-20.1 (CIVIL) FIXED MOBILE FIXED-SATELLITE (space-to-Earth) 5.484A 5.516B Mobile-satellite (space-to-Earth) 5.524
20.1-20.2	FIXED-SATELLITE (space-to-Earth) 5.484A 5.516B MOBILE-SATELLITE (space-to-Earth) 5.524 5.525 5.526 5.527 5.528		20.1-20.2 (CIVIL) FIXED MOBILE FIXED-SATELLITE (space-to-Earth) 5.484A 5.516B MOBILE-SATELLITE (space-to-Earth) 5.524 5.525 5.526 5.527 5.528
20.2-21.2	FIXED-SATELLITE (space-to-Earth) MOBILE-SATELLITE (space-to-Earth) Standard frequency and time signal-satellite (space-to-Earth) 5.524		20.2-21.2 (SHARED) FIXED MOBILE FIXED-SATELLITE(space-to-Earth) MOBILE-SATELLITE (space-to-Earth) Standard frequency and time signal-satellite (space-to-Earth) 5.524
21.2-21.4	EARTH EXPLORATION-SATELLITE (passive) FIXED MOBILE SPACE RESEARCH (passive)		21.2-21.4 (MILITARY) EARTH EXPLORATION-SATELLITE (passive) FIXED MOBILE SPACE RESEARCH (passive)
21.4-22 FIXED MOBILE BROADCASTING-SATELLITE 5.208B 5.530	21.4-22 FIXED MOBILE	21.4-22 FIXED MOBILE BROADCASTING-SATELLITE 5.208B 5.530 5.531	21.4-22 (CIVIL) FIXED MOBILE BROADCASTING-SATELLITE 5.208B 5.530

22 – 25.25 GHz

ALLOCATION TO SERVICES			
REGION 1	REGION 2	REGION 3	SULTANATE OF OMAN
22-22.21	FIXED MOBILE except aeronautical mobile 5.149		22-22.21 (CIVIL) FIXED MOBILE except aeronautical mobile 5.149
22.21-22.5	EARTH EXPLORATION-SATELLITE (passive) FIXED MOBILE except aeronautical mobile RADIO ASTRONOMY SPACE RESEARCH (passive) 5.149 5.532		22.21-22.5 (CIVIL) EARTH EXPLORATION-SATELLITE (passive) FIXED MOBILE except aeronautical mobile RADIO ASTRONOMY SPACE RESEARCH (passive) 5.149 5.532
22.5-22.55	FIXED MOBILE		22.5-22.55 (CIVIL) FIXED MOBILE
22.55-23.55	FIXED INTER-SATELLITE 5.338A MOBILE 5.149		22.55-22.6 (CIVIL) FIXED INTER-SATELLITE 5.338A MOBILE 5.149 22.6-23 (MILITARY) FIXED INTER-SATELLITE 5.338A MOBILE 5.149 23-23.55 (CIVIL) FIXED INTER-SATELLITE 5.338A MOBILE 5.149
23.55-23.6	FIXED MOBILE		23.55-23.6 (CIVIL) FIXED MOBILE
23.6-24	EARTH EXPLORATION-SATELLITE (passive) RADIO ASTRONOMY SPACE RESEARCH (passive) 5.340		23.6-24 (CIVIL) EARTH EXPLORATION-SATELLITE (passive) RADIO ASTRONOMY SPACE RESEARCH (passive) 5.340
24-24.05	AMATEUR AMATEUR-SATELLITE 5.150		24-24.05 (CIVIL) AMATEUR AMATEUR-SATELLITE 5.150
24.05-24.25	RADIOLOCATION Amateur Earth exploration-satellite (active) 5.150		24.05-24.25 (SHARED) RADIOLOCATION Amateur Earth exploration-satellite (active) 5.150
24.25-24.45 FIXED	24.25-24.45 RADIONAVIGATION	24.25-24.45 RADIONAVIGATION FIXED MOBILE	24.25-24.45 (CIVIL) FIXED
24.45-24.65 FIXED INTER-SATELLITE	24.45-24.65 INTER-SATELLITE RADIONAVIGATION 5.533	24.45-24.65 FIXED INTER-SATELLITE MOBILE RADIONAVIGATION 5.533	24.45-24.65 (CIVIL) FIXED INTER-SATELLITE
24.65-24.75 FIXED INTER-SATELLITE	24.65-24.75 INTER-SATELLITE RADIOLOCATION-SATELLITE (Earth-to-space)	24.65-24.75 FIXED INTER-SATELLITE MOBILE 5.533	24.65-24.75 (CIVIL) FIXED INTER-SATELLITE
24.75-25.25 FIXED	24.75-25.25 FIXED-SATELLITE (Earth-to-space) 5.535	24.75-25.25 FIXED FIXED-SATELLITE (Earth-to-space) 5.535 MOBILE	24.75-25.25 (CIVIL) FIXED

25.25 – 29.5 GHz

ALLOCATION TO SERVICES			
REGION 1	REGION 2	REGION 3	SULTANATE OF OMAN
25.25-25.5	FIXED INTER-SATELLITE 5.536 MOBILE Standard frequency and time signal-satellite (Earth-to-space)		25.25-25.5 (CIVIL) FIXED INTER-SATELLITE 5.536 MOBILE Standard frequency and time signal-satellite (Earth-to-space)
25.5-27	EARTH EXPLORATION-SATELLITE (space-to Earth) 5.536B FIXED INTER-SATELLITE 5.536 MOBILE SPACE RESEARCH (space-to-Earth) 5.536C Standard frequency and time signal-satellite (Earth-to-space)		25.5-26.5 (CIVIL) EARTH EXPLORATION-SATELLITE (space-to Earth) 5.536B FIXED INTER-SATELLITE 5.536 MOBILE SPACE RESEARCH (space-to-Earth) 5.536C Standard frequency and time signal-satellite (Earth-to-space) 5.536A
	5.536A		26.5-27 (MILITARY) EARTH EXPLORATION-SATELLITE (space-to Earth) 5.536A 5.536B FIXED INTER-SATELLITE 5.536 MOBILE SPACE RESEARCH (space-to-Earth) 5.536A 5.536C Standard frequency and time signal-satellite (Earth-to-space) 5.536A
27-27.5 FIXED INTER-SATELLITE 5.536 MOBILE	27-27.5 FIXED FIXED-SATELLITE (Earth-to-space) INTER-SATELLITE 5.536 5.537 MOBILE		27-27.5 (MILITARY) FIXED INTER-SATELLITE 5.536 MOBILE
27.5-28.5	FIXED 5.537A FIXED-SATELLITE (Earth-to-space) 5.484A 5.516B 5.539 MOBILE 5.538 5.540		27.5-28.5 (CIVIL) FIXED 5.537A FIXED-SATELLITE (Earth-to-space) 5.484A 5.516B 5.539 MOBILE 5.538 5.540
28.5-29.1	FIXED FIXED-SATELLITE (Earth-to-space) 5.484A 5.516B 5.523A 5.539 MOBILE Earth exploration-satellite (Earth-to-space) 5.541 5.540		28.5-29.1 (CIVIL) FIXED FIXED-SATELLITE (Earth-to-space) 5.484A 5.516B 5.523A 5.539 MOBILE Earth exploration-satellite (Earth-to-space) 5.541 5.540
29.1-29.5	FIXED FIXED-SATELLITE (Earth-to-space) 5.516B 5.523C 5.523E 5.535A 5.539 5.541A MOBILE Earth exploration-satellite (Earth-to-space) 5.541 5.540		29.1-29.5 (CIVIL) FIXED FIXED-SATELLITE (Earth-to-space) 5.516B 5.523C 5.523E 5.535A 5.539 5.541A MOBILE Earth exploration-satellite (Earth-to-space) 5.541 5.540

29.5 – 32.3 GHz

ALLOCATION TO SERVICES			
REGION 1	REGION 2	REGION 3	SULTANATE OF OMAN
29.5-29.9 FIXED-SATELLITE (Earth-to-space) 5.484A 5.516B 5.539 Earth exploration-satellite (Earth-to-space) 5.541 Mobile-satellite (Earth-to-space) 5.540 5.542	29.5-29.9 FIXED-SATELLITE (Earth-to-space) 5.484A 5.516B 5.539 MOBILE-SATELLITE (Earth-to-space) Earth exploration-satellite (Earth-to-space) 5.541 5.525 5.526 5.527 5.529 5.540 5.542	29.5-29.9 FIXED-SATELLITE (Earth-to-space) 5.484A 5.516B 5.539 Earth exploration-satellite (Earth-to-space) 5.541 Mobile-satellite (Earth-to-space) 5.540 5.542	29.5-29.9 (CIVIL) FIXED-SATELLITE (Earth-to-space) 5.484A 5.516B 5.539 Earth exploration-satellite (Earth-to-space) 5.541 Mobile-satellite (Earth-to-space) 5.540
29.9-30	FIXED-SATELLITE (Earth-to-space) 5.484A 5.516B 5.539 MOBILE-SATELLITE (Earth-to-space) Earth exploration-satellite (Earth-to-space) 5.541 5.543 5.525 5.526 5.527 5.538 5.540 5.542		29.9-30 (CIVIL) FIXED-SATELLITE (Earth-to-space) 5.484A 5.516B 5.539 MOBILE-SATELLITE (Earth-to-space) Earth exploration-satellite (Earth-to-space) 5.541 5.543 5.525 5.526 5.527 5.538 5.540
30-31	FIXED-SATELLITE (Earth-to-space) 5.338A MOBILE-SATELLITE (Earth-to-space) Standard frequency and time signal-satellite (space-to-Earth) 5.542		30-31 (SHARED) FIXED-SATELLITE (Earth-to-space) 5.338A MOBILE-SATELLITE (Earth-to-space) Standard frequency and time signal-satellite (space-to-Earth)
31-31.3	FIXED 5.338A 5.543A MOBILE Standard frequency and time signal-satellite (space-to-Earth) Space research 5.544 5.545 5.149		31-31.3 (CIVIL) FIXED 5.338A MOBILE Standard frequency and time signal-satellite (space-to-Earth) Space research 5.544 5.149
31.3-31.5	EARTH EXPLORATION-SATELLITE (passive) RADIO ASTRONOMY SPACE RESEARCH (passive) 5.340		31.3-31.5 (CIVIL) EARTH EXPLORATION-SATELLITE (passive) RADIO ASTRONOMY SPACE RESEARCH (passive) 5.340
31.5-31.8 EARTH EXPLORATION-SATELLITE (passive) RADIO ASTRONOMY SPACE RESEARCH (passive) Fixed Mobile except aeronautical mobile 5.149 5.546	31.5-31.8 EARTH EXPLORATION-SATELLITE (passive) RADIO ASTRONOMY SPACE RESEARCH (passive) 5.340	31.5-31.8 EARTH EXPLORATION-SATELLITE (passive) RADIO ASTRONOMY SPACE RESEARCH (passive) Fixed Mobile except aeronautical mobile 5.149	31.5-31.8 (CIVIL) EARTH EXPLORATION-SATELLITE (passive) RADIO ASTRONOMY SPACE RESEARCH (passive) Fixed Mobile except aeronautical mobile 5.149
31.8-32	FIXED 5.547A RADIONAVIGATION SPACE RESEARCH (deep space) (space-to-Earth) 5.547 5.547B 5.548		31.8-32 (CIVIL) FIXED 5.547A RADIONAVIGATION SPACE RESEARCH (deep space) (space-to-Earth) 5.547 5.548
32-32.3	FIXED 5.547A RADIONAVIGATION SPACE RESEARCH (deep space) (space-to-Earth) 5.547 5.547C 5.548		32-32.3 (CIVIL) FIXED 5.547A RADIONAVIGATION SPACE RESEARCH (deep space) (space-to-Earth) 5.547 5.548

32.3 – 37.5 GHz

ALLOCATION TO SERVICES			
REGION 1	REGION 2	REGION 3	SULTANATE OF OMAN
32.3-33	FIXED 5.547A INTER-SATELLITE RADIONAVIGATION 5.547 5.547D 5.548		32.3-33 (CIVIL) FIXED 5.547A INTER-SATELLITE RADIONAVIGATION 5.547 5.548
33-33.4	FIXED 5.547A RADIONAVIGATION 5.547 5.547E		33-33.4 (CIVIL) FIXED 5.547A RADIONAVIGATION 5.547
33.4-34.2	RADIOLOCATION 5.549		33.4-34.2 (SHARED) FIXED MOBILE RADIOLOCATION
34.2-34.7	RADIOLOCATION SPACE RESEARCH (deep space) (Earth-to-space) 5.549		34.2-34.7 (SHARED) FIXED MOBILE RADIOLOCATION SPACE RESEARCH (deep space) (Earth-to-space)
34.7-35.2	RADIOLOCATION Space research 5.550 5.549		34.7-35.2 (SHARED) FIXED MOBILE RADIOLOCATION Space research 5.550
35.2-35.5	METEOROLOGICAL AIDS RADIOLOCATION 5.549		35.2-35.5 (SHARED) FIXED METEOROLOGICAL AIDS MOBILE RADIOLOCATION
35.5-36	METEOROLOGICAL AIDS EARTH EXPLORATION-SATELLITE (active) RADIOLOCATION SPACE RESEARCH (active) 5.549 5.549A		35.5-36 (SHARED) FIXED METEOROLOGICAL AIDS MOBILE EARTH EXPLORATION-SATELLITE (active) RADIOLOCATION SPACE RESEARCH (active) 5.549A
36-37	EARTH EXPLORATION-SATELLITE (passive) FIXED MOBILE SPACE RESEARCH (passive) 5.149 5.550A		36-37 (SHARED) EARTH EXPLORATION-SATELLITE (passive) FIXED MOBILE SPACE RESEARCH (passive) 5.149 5.550A
37-37.5	FIXED MOBILE SPACE RESEARCH (space-to-Earth) 5.547		37-37.5 (SHARED) FIXED MOBILE SPACE RESEARCH (space-to-Earth) 5.547

37.5 – 42.5 GHz

ALLOCATION TO SERVICES			
REGION 1	REGION 2	REGION 3	SULTANATE OF OMAN
37.5-38	FIXED FIXED-SATELLITE (space-to-Earth) MOBILE SPACE RESEARCH (space-to-Earth) Earth exploration-satellite (space-to-Earth) 5.547		37.5-38 (SHARED) FIXED FIXED-SATELLITE (space-to-Earth) MOBILE SPACE RESEARCH (space-to-Earth) Earth exploration-satellite (space-to-Earth) 5.547
38-39.5	FIXED FIXED-SATELLITE (space-to-Earth) MOBILE Earth exploration-satellite (space-to-Earth) 5.547		38-39.5 (SHARED) FIXED FIXED-SATELLITE (space-to-Earth) MOBILE Earth exploration-satellite (space-to-Earth) 5.547
39.5-40	FIXED FIXED-SATELLITE (space-to-Earth) 5.516B MOBILE MOBILE-SATELLITE (space-to-Earth) Earth exploration-satellite (space-to-Earth) 5.547		39.5-40 (SHARED) FIXED FIXED-SATELLITE (space-to-Earth) 5.516B MOBILE MOBILE-SATELLITE (space-to-Earth) Earth exploration-satellite (space-to-Earth) 5.547
40-40.5	EARTH EXPLORATION-SATELLITE (Earth-to-space) FIXED FIXED-SATELLITE (space-to-Earth) 5.516B MOBILE MOBILE-SATELLITE (space-to-Earth) SPACE RESEARCH (Earth-to-space) Earth exploration-satellite (space-to-Earth)		40-40.5 (SHARED) EARTH EXPLORATION-SATELLITE (Earth-to-space) FIXED FIXED-SATELLITE (space-to-Earth) 5.516B MOBILE MOBILE-SATELLITE (space-to-Earth) SPACE RESEARCH (Earth-to-space) Earth exploration-satellite (space-to-Earth)
40.5-41 FIXED FIXED-SATELLITE (space-to-Earth) BROADCASTING BROADCASTING-SATELLITE Mobile 5.547	40.5-41 FIXED FIXED-SATELLITE (space-to-Earth) 5.516B BROADCASTING BROADCASTING-SATELLITE Mobile Mobile-satellite (space-to-Earth) 5.547	40.5-41 FIXED FIXED-SATELLITE (space-to-Earth) BROADCASTING BROADCASTING-SATELLITE Mobile 5.547	40.5-41 (CIVIL) FIXED FIXED-SATELLITE (space-to-Earth) BROADCASTING BROADCASTING-SATELLITE Mobile 5.547
41-42.5	FIXED FIXED-SATELLITE (space-to-Earth) 5.516B BROADCASTING BROADCASTING-SATELLITE Mobile 5.547 5.551F 5.551H 5.551I		41-42.5 (CIVIL) FIXED FIXED-SATELLITE (space-to-Earth) 5.516B BROADCASTING BROADCASTING-SATELLITE Mobile 5.547 5.551H 5.551I

42.5 – 50.2 GHz

ALLOCATION TO SERVICES			
REGION 1	REGION 2	REGION 3	SULTANATE OF OMAN
42.5-43.5	FIXED FIXED-SATELLITE (Earth-to-space) 5.552 MOBILE except aeronautical mobile RADIO ASTRONOMY 5.149 5.547		42.5-43.5 (CIVIL) FIXED FIXED-SATELLITE (Earth-to-space) 5.552 MOBILE except aeronautical mobile RADIO ASTRONOMY 5.149 5.547
43.5-47	MOBILE 5.553 MOBILE-SATELLITE RADIONAVIGATION RADIONAVIGATION-SATELLITE 5.554		43.5-45.5 (MILITARY) MOBILE 5.553 MOBILE-SATELLITE RADIONAVIGATION RADIONAVIGATION-SATELLITE 5.554 45.5-47 (CIVIL) MOBILE 5.553 MOBILE-SATELLITE RADIONAVIGATION RADIONAVIGATION-SATELLITE 5.554
47-47.2	AMATEUR AMATEUR-SATELLITE		47-47.2 (CIVIL) AMATEUR AMATEUR-SATELLITE
47.2-47.5	FIXED FIXED-SATELLITE (Earth-to-space) 5.552 MOBILE 5.552A		47.2-47.5 (CIVIL) FIXED FIXED-SATELLITE (Earth-to-space) 5.552 MOBILE 5.552A
47.5-47.9 FIXED FIXED-SATELLITE (Earth-to-space) 5.552 (space-to-Earth) 5.516B 5.554A MOBILE	47.5-47.9 FIXED FIXED-SATELLITE (Earth-to-space) 5.552 MOBILE		47.5-47.9 (CIVIL) FIXED FIXED-SATELLITE (Earth-to-space) 5.552 (space-to-Earth) 5.516B 5.554A MOBILE
47.9-48.2	FIXED FIXED-SATELLITE (Earth-to-space) 5.552 MOBILE 5.552A		47.9-48.2 (CIVIL) FIXED FIXED-SATELLITE (Earth-to-space) 5.552 MOBILE 5.552A
48.2-48.54 FIXED FIXED-SATELLITE (Earth-to-space) 5.552 (space-to-Earth) 5.516B 5.554A 5.555B MOBILE	48.2-50.2 FIXED FIXED-SATELLITE (Earth-to-space) 5.516B 5.338A 5.552 MOBILE		48.2-48.54 (CIVIL) FIXED FIXED-SATELLITE (Earth-to-space) 5.552 (space-to-Earth) 5.516B 5.554A 5.555B MOBILE
48.54-49.44 FIXED FIXED-SATELLITE (Earth-to-space) 5.552 MOBILE 5.149 5.340 5.555			48.54-49.44 (CIVIL) FIXED FIXED-SATELLITE (Earth-to-space) 5.552 MOBILE 5.149 5.340 5.555
49.44-50.2 FIXED FIXED-SATELLITE (Earth-to-space) 5.338A 5.552 (space-to-Earth) 5.516B 5.554A 5.555B MOBILE			49.44-50.2 (CIVIL) FIXED FIXED-SATELLITE (Earth-to-space) 5.338A 5.552 (space-to-Earth) 5.516B 5.554A 5.555B MOBILE
	5.149 5.340 5.555		

50.2 – 59 GHz

ALLOCATION TO SERVICES			
REGION 1	REGION 2	REGION 3	SULTANATE OF OMAN
50.2-50.4	EARTH EXPLORATION-SATELLITE (passive) SPACE RESEARCH (passive) 5.340		50.2-50.4 (CIVIL) EARTH EXPLORATION-SATELLITE (passive) SPACE RESEARCH (passive) 5.340
50.4-51.4	FIXED FIXED-SATELLITE (Earth-to-space) 5.338A MOBILE Mobile-satellite (Earth-to-space)		50.4-51.4 (SHARED) FIXED FIXED-SATELLITE (Earth-to-space) 5.338A MOBILE Mobile-satellite (Earth-to-space)
51.4-52.6	FIXED 5.338A MOBILE 5.547 5.556		51.4-52.6 (CIVIL) FIXED 5.338A MOBILE 5.547 5.556
52.6-54.25	EARTH EXPLORATION-SATELLITE (passive) SPACE RESEARCH (passive) 5.340 5.556		52.6-54.25 (CIVIL) EARTH EXPLORATION-SATELLITE (passive) SPACE RESEARCH (passive) 5.340 5.556
54.25-55.78	EARTH EXPLORATION-SATELLITE (passive) INTER-SATELLITE 5.556A SPACE RESEARCH (passive) 5.556B		54.25-55.78 (CIVIL) EARTH EXPLORATION-SATELLITE (passive) INTER-SATELLITE 5.556A SPACE RESEARCH (passive)
55.78-56.9	EARTH EXPLORATION-SATELLITE (passive) FIXED 5.557A INTER-SATELLITE 5.556A MOBILE 5.558 SPACE RESEARCH (passive) 5.547 5.557		55.78-56.9 (CIVIL) EARTH EXPLORATION-SATELLITE (passive) FIXED 5.557A INTER-SATELLITE 5.556A MOBILE 5.558 SPACE RESEARCH (passive) 5.547
56.9-57	EARTH EXPLORATION-SATELLITE (passive) FIXED INTER-SATELLITE 5.558A MOBILE 5.558 SPACE RESEARCH (passive) 5.547 5.557		56.9-57 (CIVIL) EARTH EXPLORATION-SATELLITE (passive) FIXED INTER-SATELLITE 5.558A MOBILE 5.558 SPACE RESEARCH (passive) 5.547
57-58.2	EARTH EXPLORATION-SATELLITE (passive) FIXED INTER-SATELLITE 5.556A MOBILE 5.558 SPACE RESEARCH (passive) 5.547 5.557		57-58.2 (CIVIL) EARTH EXPLORATION-SATELLITE (passive) FIXED INTER-SATELLITE 5.556A MOBILE 5.558 SPACE RESEARCH (passive) 5.547
58.2-59	EARTH EXPLORATION-SATELLITE (passive) FIXED MOBILE SPACE RESEARCH (passive) 5.547 5.556		58.2-59 (CIVIL) EARTH EXPLORATION-SATELLITE (passive) FIXED MOBILE SPACE RESEARCH (passive) 5.547 5.556

59 – 76 GHz

ALLOCATION TO SERVICES			
REGION 1	REGION 2	REGION 3	SULTANATE OF OMAN
59-59.3	EARTH EXPLORATION-SATELLITE (passive) FIXED INTER-SATELLITE 5.556A MOBILE 5.558 RADIOLOCATION 5.559 SPACE RESEARCH (passive)		59-59.3 (SHARED) EARTH EXPLORATION-SATELLITE (passive) FIXED INTER-SATELLITE 5.556A MOBILE 5.558 RADIOLOCATION 5.559 SPACE RESEARCH (passive)
59.3-64	FIXED INTER-SATELLITE MOBILE 5.558 RADIOLOCATION 5.559 5.138		59.3-64 (SHARED) FIXED INTER-SATELLITE MOBILE 5.558 RADIOLOCATION 5.559 5.138
64-65	FIXED INTER-SATELLITE MOBILE except aeronautical mobile 5.547 5.556		64-65 (CIVIL) FIXED INTER-SATELLITE MOBILE except aeronautical mobile 5.547 5.556
65-66	EARTH EXPLORATION-SATELLITE FIXED INTER-SATELLITE MOBILE except aeronautical mobile SPACE RESEARCH 5.547		65-66 (CIVIL) EARTH EXPLORATION-SATELLITE FIXED INTER-SATELLITE MOBILE except aeronautical mobile SPACE RESEARCH 5.547
66-71	INTER-SATELLITE MOBILE 5.553 5.558 MOBILE-SATELLITE RADIONAVIGATION RADIONAVIGATION-SATELLITE 5.554		66-71 (CIVIL) INTER-SATELLITE MOBILE 5.553 5.558 MOBILE-SATELLITE RADIONAVIGATION RADIONAVIGATION-SATELLITE 5.554
71-74	FIXED FIXED-SATELLITE (space-to-Earth) MOBILE MOBILE-SATELLITE (space-to-Earth)		71-74 (SHARED) FIXED FIXED-SATELLITE (space-to-Earth) MOBILE MOBILE-SATELLITE (space-to-Earth)
74-76	FIXED FIXED-SATELLITE (space-to-Earth) MOBILE BROADCASTING BROADCASTING-SATELLITE Space research (space-to-Earth) 5.561		74-75.5 (CIVIL) FIXED FIXED-SATELLITE (space-to-Earth) MOBILE BROADCASTING BROADCASTING-SATELLITE Space research (space-to-Earth) 5.559A 5.561 75.5-76 (SHARED) FIXED FIXED-SATELLITE (space-to-Earth) MOBILE BROADCASTING BROADCASTING-SATELLITE Space research (space-to-Earth) 5.561

76 – 94 GHz

ALLOCATION TO SERVICES			
REGION 1	REGION 2	REGION 3	SULTANATE OF OMAN
76-77.5	RADIO ASTRONOMY RADIOLOCATION Amateur Amateur-satellite Space research (space-to-Earth) 5.149		76-77.5 (SHARED) RADIO ASTRONOMY RADIOLOCATION Amateur Amateur-satellite Space research (space-to-Earth) 5.149
77.5-78	AMATEUR AMATEUR-SATELLITE Radio astronomy Space research (space-to-Earth) 5.149		77.5-78 (CIVIL) AMATEUR AMATEUR-SATELLITE Radio astronomy Space research (space-to-Earth) 5.149
78-79	RADIOLOCATION Amateur Amateur-satellite Radio astronomy Space research (space-to-Earth) 5.149 5.560		78-79 (CIVIL) RADIOLOCATION Amateur Amateur-satellite Radio astronomy Space research (space-to-Earth) 5.149 5.560
79-81	RADIO ASTRONOMY RADIOLOCATION Amateur Amateur-satellite Space research (space-to-Earth) 5.149		79-81 (SHARED) RADIO ASTRONOMY RADIOLOCATION Amateur Amateur-satellite Space research (space-to-Earth) 5.149
81-84	FIXED FIXED-SATELLITE (Earth-to-space) MOBILE MOBILE-SATELLITE (Earth-to-space) RADIO ASTRONOMY Space research (space-to-Earth) 5.149 5.561A		81-84 (SHARED) FIXED FIXED-SATELLITE (Earth-to-space) MOBILE MOBILE-SATELLITE (Earth-to-space) RADIO ASTRONOMY Space research (space-to-Earth) 5.149 5.561A
84-86	FIXED FIXED-SATELLITE (Earth-to-space) 5.561B MOBILE RADIO ASTRONOMY 5.149		84-86 (CIVIL) FIXED FIXED-SATELLITE (Earth-to-space) 5.561B MOBILE RADIO ASTRONOMY 5.149
86-92	EARTH EXPLORATION-SATELLITE (passive) RADIO ASTRONOMY SPACE RESEARCH (passive) 5.340		86-92 (CIVIL) EARTH EXPLORATION-SATELLITE (passive) RADIO ASTRONOMY SPACE RESEARCH (passive) 5.340
92-94	FIXED MOBILE RADIO ASTRONOMY RADIOLOCATION 5.149		92-94 (SHARED) FIXED MOBILE RADIO ASTRONOMY RADIOLOCATION 5.149

94 – 116 GHz

ALLOCATION TO SERVICES			
REGION 1	REGION 2	REGION 3	SULTANATE OF OMAN
94-94.1	EARTH EXPLORATION-SATELLITE (active) RADIOLOCATION SPACE RESEARCH (active) Radio astronomy 5.562 5.562A		94-94.1 (SHARED) EARTH EXPLORATION-SATELLITE (active) RADIOLOCATION SPACE RESEARCH (active) Radio astronomy 5.562 5.562A
94.1-95	FIXED MOBILE RADIO ASTRONOMY RADIOLOCATION 5.149		94.1-95 (SHARED) FIXED MOBILE RADIO ASTRONOMY RADIOLOCATION 5.149
95-100	FIXED MOBILE RADIO ASTRONOMY RADIOLOCATION RADIONAVIGATION RADIONAVIGATION-SATELLITE 5.149 5.554		95-100 (SHARED) FIXED MOBILE RADIO ASTRONOMY RADIOLOCATION RADIONAVIGATION RADIONAVIGATION-SATELLITE 5.149 5.554
100-102	EARTH EXPLORATION-SATELLITE (passive) RADIO ASTRONOMY SPACE RESEARCH (passive) 5.340 5.341		100-102 (CIVIL) EARTH EXPLORATION-SATELLITE (passive) RADIO ASTRONOMY SPACE RESEARCH (passive) 5.340 5.341
102-105	FIXED MOBILE RADIO ASTRONOMY 5.149 5.341		102-105 (CIVIL) FIXED MOBILE RADIO ASTRONOMY 5.149 5.341
105-109.5	FIXED MOBILE RADIO ASTRONOMY SPACE RESEARCH (passive) 5.562B 5.149 5.341		105-109.5 (CIVIL) FIXED MOBILE RADIO ASTRONOMY SPACE RESEARCH (passive) 5.562B 5.149 5.341
109.5-111.8	EARTH EXPLORATION-SATELLITE (passive) RADIO ASTRONOMY SPACE RESEARCH (passive) 5.340 5.341		109.5-111.8 (CIVIL) EARTH EXPLORATION-SATELLITE (passive) RADIO ASTRONOMY SPACE RESEARCH (passive) 5.340 5.341
111.8-114.25	FIXED MOBILE RADIO ASTRONOMY SPACE RESEARCH (passive) 5.562B 5.149 5.341		111.8-114.25 (CIVIL) FIXED MOBILE RADIO ASTRONOMY SPACE RESEARCH (passive) 5.562B 5.149 5.341
114.25-116	EARTH EXPLORATION-SATELLITE (passive) RADIO ASTRONOMY SPACE RESEARCH (passive) 5.340 5.341		114.25-116 (CIVIL) EARTH EXPLORATION-SATELLITE (passive) RADIO ASTRONOMY SPACE RESEARCH (passive) 5.340 5.341

116 – 151.5 GHz

ALLOCATION TO SERVICES			
REGION 1	REGION 2	REGION 3	SULTANATE OF OMAN
116-119.98	EARTH EXPLORATION-SATELLITE (passive) INTER-SATELLITE 5.562C SPACE RESEARCH (passive) 5.341		116-119.98 (CIVIL) EARTH EXPLORATION-SATELLITE (passive) INTER-SATELLITE 5.562C SPACE RESEARCH (passive) 5.341
119.98-122.25	EARTH EXPLORATION-SATELLITE (passive) INTER-SATELLITE 5.562C SPACE RESEARCH (passive) 5.138 5.341		119.98-122.25 (CIVIL) EARTH EXPLORATION-SATELLITE (passive) INTER-SATELLITE 5.562C SPACE RESEARCH (passive) 5.138 5.341
122.25-123	FIXED INTER-SATELLITE MOBILE 5.558 Amateur 5.138		122.25-123 (CIVIL) FIXED INTER-SATELLITE MOBILE 5.558 Amateur 5.138
123-130	FIXED-SATELLITE (space-to-Earth) MOBILE-SATELLITE (space-to-Earth) RADIONAVIGATION RADIONAVIGATION-SATELLITE Radio astronomy 5.562D 5.149 5.554		123-130 (CIVIL) FIXED-SATELLITE (space-to-Earth) MOBILE-SATELLITE (space-to-Earth) RADIONAVIGATION RADIONAVIGATION-SATELLITE Radio astronomy 5.149 5.554
130-134	EARTH EXPLORATION-SATELLITE (active) 5.562E FIXED INTER-SATELLITE MOBILE 5.558 RADIO ASTRONOMY 5.149 5.562A		130-134 (CIVIL) EARTH EXPLORATION-SATELLITE (active) 5.562E FIXED INTER-SATELLITE MOBILE 5.558 RADIO ASTRONOMY 5.149 5.562A
134-136	AMATEUR AMATEUR-SATELLITE Radio astronomy		134-136 (CIVIL) AMATEUR AMATEUR-SATELLITE Radio astronomy
136-141	RADIO ASTRONOMY RADIOLOCATION Amateur Amateur-satellite 5.149		136-141 (CIVIL) RADIO ASTRONOMY RADIOLOCATION Amateur Amateur-satellite 5.149
141-148.5	FIXED MOBILE RADIO ASTRONOMY RADIOLOCATION 5.149		141-148.5 (CIVIL) FIXED MOBILE RADIO ASTRONOMY RADIOLOCATION 5.149
148.5-151.5	EARTH EXPLORATION-SATELLITE (passive) RADIO ASTRONOMY SPACE RESEARCH (passive) 5.340		148.5-151.5 (CIVIL) EARTH EXPLORATION-SATELLITE (passive) RADIO ASTRONOMY SPACE RESEARCH (passive) 5.340

151.5 – 191.8 GHz

ALLOCATION TO SERVICES			
REGION 1	REGION 2	REGION 3	SULTANATE OF OMAN
151.5-155.5	FIXED MOBILE RADIO ASTRONOMY RADIOLOCATION 5.149		151.5-155.5 (CIVIL) FIXED MOBILE RADIO ASTRONOMY RADIOLOCATION 5.149
155.5-158.5	EARTH EXPLORATION-SATELLITE (passive) FIXED MOBILE RADIO ASTRONOMY SPACE RESEARCH (passive) 5.562B 5.149 5.562F 5.562G		155.5-158.5 (CIVIL) EARTH EXPLORATION-SATELLITE (passive) FIXED MOBILE RADIO ASTRONOMY SPACE RESEARCH (passive) 5.562B 5.149 5.562G
158.5-164	FIXED FIXED-SATELLITE (space-to-Earth) MOBILE MOBILE-SATELLITE (space-to-Earth)		158.5-164 (CIVIL) FIXED FIXED-SATELLITE (space-to-Earth) MOBILE MOBILE-SATELLITE (space-to-Earth)
164-167	EARTH EXPLORATION-SATELLITE (passive) RADIO ASTRONOMY SPACE RESEARCH (passive) 5.340		164-167 (CIVIL) EARTH EXPLORATION-SATELLITE (passive) RADIO ASTRONOMY SPACE RESEARCH (passive) 5.340
167-174.5	FIXED FIXED-SATELLITE (space-to-Earth) INTER-SATELLITE MOBILE 5.558 5.149 5.562D		167-174.5 (CIVIL) FIXED FIXED-SATELLITE (space-to-Earth) INTER-SATELLITE MOBILE 5.558 5.149
174.5-174.8	FIXED INTER-SATELLITE MOBILE 5.558		174.5-174.8 (CIVIL) FIXED INTER-SATELLITE MOBILE 5.558
174.8-182	EARTH EXPLORATION-SATELLITE (passive) INTER-SATELLITE 5.562H SPACE RESEARCH (passive)		174.8-182 (CIVIL) EARTH EXPLORATION-SATELLITE (passive) INTER-SATELLITE 5.562H SPACE RESEARCH (passive)
182-185	EARTH EXPLORATION-SATELLITE (passive) RADIO ASTRONOMY SPACE RESEARCH (passive) 5.340		182-185 (CIVIL) EARTH EXPLORATION-SATELLITE (passive) RADIO ASTRONOMY SPACE RESEARCH (passive) 5.340
185-190	EARTH EXPLORATION-SATELLITE (passive) INTER-SATELLITE 5.562H SPACE RESEARCH (passive)		185-190 (CIVIL) EARTH EXPLORATION-SATELLITE (passive) INTER-SATELLITE 5.562H SPACE RESEARCH (passive)
190-191.8	EARTH EXPLORATION-SATELLITE (passive) SPACE RESEARCH (passive) 5.340		190-191.8 (CIVIL) EARTH EXPLORATION-SATELLITE (passive) SPACE RESEARCH (passive) 5.340

191.8 – 238 GHz

ALLOCATION TO SERVICES			
REGION 1	REGION 2	REGION 3	SULTANATE OF OMAN
191.8-200	FIXED INTER-SATELLITE MOBILE 5.558 MOBILE-SATELLITE RADIONAVIGATION RADIONAVIGATION-SATELLITE 5.149 5.341 5.554		191.8-200 (CIVIL) FIXED INTER-SATELLITE MOBILE 5.558 MOBILE-SATELLITE RADIONAVIGATION RADIONAVIGATION-SATELLITE 5.149 5.341 5.554
200-202	EARTH EXPLORATION-SATELLITE (passive) RADIO ASTRONOMY SPACE RESEARCH (passive) 5.340 5.341 5.563A		200-202 (CIVIL) EARTH EXPLORATION-SATELLITE (passive) RADIO ASTRONOMY SPACE RESEARCH (passive) 5.340 5.341 5.563A
202-209	EARTH EXPLORATION-SATELLITE (passive) RADIO ASTRONOMY SPACE RESEARCH (passive) 5.340 5.341 5.563A		202-209 (CIVIL) EARTH EXPLORATION-SATELLITE (passive) RADIO ASTRONOMY SPACE RESEARCH (passive) 5.340 5.341 5.563A
209-217	FIXED FIXED-SATELLITE (Earth-to-space) MOBILE RADIO ASTRONOMY 5.149 5.341		209-217 (CIVIL) FIXED FIXED-SATELLITE (Earth-to-space) MOBILE RADIO ASTRONOMY 5.149 5.341
217-226	FIXED FIXED-SATELLITE (Earth-to-space) MOBILE RADIO ASTRONOMY SPACE RESEARCH (passive) 5.562B 5.149 5.341		217-226 (CIVIL) FIXED FIXED-SATELLITE (Earth-to-space) MOBILE RADIO ASTRONOMY SPACE RESEARCH (passive) 5.562B 5.149 5.341
226-231.5	EARTH EXPLORATION-SATELLITE (passive) RADIO ASTRONOMY SPACE RESEARCH (passive) 5.340		226-231.5 (CIVIL) EARTH EXPLORATION-SATELLITE (passive) RADIO ASTRONOMY SPACE RESEARCH (passive) 5.340
231.5-232	FIXED MOBILE Radiolocation		231.5-232 (CIVIL) FIXED MOBILE Radiolocation
232-235	FIXED FIXED-SATELLITE (space-to-Earth) MOBILE Radiolocation		232-235 (CIVIL) FIXED FIXED-SATELLITE (space-to-Earth) MOBILE Radiolocation
235-238	EARTH EXPLORATION-SATELLITE (passive) FIXED-SATELLITE (space-to-Earth) SPACE RESEARCH (passive) 5.563A 5.563B		235-238 (CIVIL) EARTH EXPLORATION-SATELLITE (passive) FIXED-SATELLITE (space-to-Earth) SPACE RESEARCH (passive) 5.563A 5.563B

238 – 275 GHz

ALLOCATION TO SERVICES			
REGION 1	REGION 2	REGION 3	SULTANATE OF OMAN
238-240	FIXED FIXED-SATELLITE (space-to-Earth) MOBILE RADIOLOCATION RADIONAVIGATION RADIONAVIGATION-SATELLITE		238-240 (CIVIL) FIXED FIXED-SATELLITE (space-to-Earth) MOBILE RADIOLOCATION RADIONAVIGATION RADIONAVIGATION-SATELLITE
240-241	FIXED MOBILE RADIOLOCATION		240-241 (CIVIL) FIXED MOBILE RADIOLOCATION
241-248	RADIO ASTRONOMY RADIOLOCATION Amateur Amateur-satellite 5.138 5.149		241-248 (CIVIL) RADIO ASTRONOMY RADIOLOCATION Amateur Amateur-satellite 5.138 5.149
248-250	AMATEUR AMATEUR-SATELLITE Radio astronomy 5.149		248-250 (CIVIL) AMATEUR AMATEUR-SATELLITE Radio astronomy 5.149
250-252	EARTH EXPLORATION-SATELLITE (passive) RADIO ASTRONOMY SPACE RESEARCH (passive) 5.340 5.563A		250-252 (CIVIL) EARTH EXPLORATION-SATELLITE (passive) RADIO ASTRONOMY SPACE RESEARCH (passive) 5.340 5.563A
252-265	FIXED MOBILE MOBILE-SATELLITE (Earth-to-space) RADIO ASTRONOMY RADIONAVIGATION RADIONAVIGATION-SATELLITE 5.149 5.554		252-265 (CIVIL) FIXED MOBILE MOBILE-SATELLITE (Earth-to-space) RADIO ASTRONOMY RADIONAVIGATION RADIONAVIGATION-SATELLITE 5.149 5.554
265-275	FIXED FIXED-SATELLITE (Earth-to-space) MOBILE RADIO ASTRONOMY 5.149 5.563A		265-275 (CIVIL) FIXED FIXED-SATELLITE (Earth-to-space) MOBILE RADIO ASTRONOMY 5.149 5.563A
275-1 000	(Not allocated) 5.565		275-1 000 (Not allocated) 5.565

2.4 Footnotes

The footnotes referenced in the Regional columns (Regions 1, 2 and 3. See Figure 1) of table of national frequency allocation in the format "5.nnn" provided here from Article 5, Vol.1, ITU Radio Regulations. Therefore, same notation has been kept intact to ease for further investigation in ITU legal documents.

- OMA 1** The band 3555-3595 MHz is reserved for the future government use and will be assigned under instructions from the Frequency Spectrum Allocation Committee.
- OMA 2** Additional allocation: The operation of the amateur stations in 50-52 MHz band in Sultanate of Oman is allowed subject to the application of the No. 4.4 of the RR; it shall not cause harmful interference to, and shall not claim protection from harmful interference caused by, a station of a primary and secondary services in this band
- 5.53** Administrations authorizing the use of frequencies below 9 kHz shall ensure that no harmful interference is caused thereby to the services to which the bands above 9 kHz are allocated.
- 5.54** Administrations conducting scientific research using frequencies below 9 kHz are urged to advise other administrations that may be concerned in order that such research may be afforded all practicable protection from harmful interference.
- 5.55** *Additional allocation:* in Armenia, Azerbaijan, the Russian Federation, Georgia, Kyrgyzstan, Tajikistan and Turkmenistan, the band 14-17 kHz is also allocated to the radionavigation service on a primary basis. (WRC-07)
- 5.56** The stations of services to which the bands 14-19.95 kHz and 20.05-70 kHz and in Region 1 also the bands 72-84 kHz and 86-90 kHz are allocated may transmit standard frequency and time signals. Such stations shall be afforded protection from harmful interference. In Armenia, Azerbaijan, Belarus, Bulgaria, the Russian Federation, Georgia, Kazakhstan, Mongolia, Kyrgyzstan, Slovakia, Tajikistan and Turkmenistan, the frequencies 25 kHz and 50 kHz will be used for this purpose under the same conditions. (WRC-07)
- 5.57** The use of the bands 14-19.95 kHz, 20.05-70 kHz and 70-90 kHz (72-84 kHz and 86-90 kHz in Region 1) by the maritime mobile service is limited to coast radiotelegraph stations (A1A and F1B only). Exceptionally, the use of class J2B or J7B emissions is authorized subject to the necessary bandwidth not exceeding that normally used for class A1A or F1B emissions in the band concerned.
- 5.58** *Additional allocation:* in Armenia, Azerbaijan, the Russian Federation, Georgia, Kazakhstan, Kyrgyzstan, Tajikistan and Turkmenistan, the band 67-70 kHz is also allocated to the radionavigation service on a primary basis. (WRC-2000)
- 5.59** *Different category of service:* in Bangladesh and Pakistan, the allocation of the bands 70-72 kHz and 84-86 kHz to the fixed and maritime mobile services is on a primary basis (see No. 5.33). (WRC-2000)
- 5.60** In the bands 70-90 kHz (70-86 kHz in Region 1) and 110-130 kHz (112-130 kHz in Region 1), pulsed radionavigation systems may be used on condition that they do not cause harmful interference to other services to which these bands are allocated.
- 5.61** In Region 2, the establishment and operation of stations in the maritime radionavigation service in the bands 70-90 kHz and 110-130 kHz shall be subject to agreement obtained under No. 9.21 with administrations whose services, operating in accordance with the Table, may be affected. However, stations of the fixed, maritime mobile and radiolocation services shall not cause harmful interference to stations in the maritime radionavigation service established under such agreements.
- 5.62** Administrations which operate stations in the radionavigation service in the band 90-110 kHz are urged to coordinate technical and operating characteristics in such a way as to avoid harmful interference to the services provided by these stations.
- 5.63** (SUP - WRC-97)
- 5.64** Only classes A1A or F1B, A2C, A3C, F1C or F3C emissions are authorized for stations of the fixed service in the bands allocated to this service between 90 kHz and 160 kHz (148.5 kHz in Region 1) and for stations of the maritime mobile service in the bands allocated to this service between 110 kHz and 160 kHz (148.5 kHz in Region 1). Exceptionally, class J2B or J7B emissions are also authorized in the bands between 110 kHz and 160 kHz (148.5 kHz in Region 1) for stations of the maritime mobile service.
- 5.65** *Different category of service:* in Bangladesh, the allocation of the bands 112-117.6 kHz and 126-129 kHz to the fixed and maritime mobile services is on a primary basis (see No. 5.33). (WRC-2000)
- 5.66** *Different category of service:* in Germany, the allocation of the band 115-117.6 kHz to the fixed and maritime mobile services is on a primary basis (see No. 5.33) and to the radionavigation service on a secondary basis (see No. 5.32).

- 5.67** *Additional allocation:* in Mongolia, Kyrgyzstan and Turkmenistan, the band 130-148.5 kHz is also allocated to the radionavigation service on a secondary basis. Within and between these countries this service shall have an equal right to operate. (WRC-07)
- 5.67A** Stations in the amateur service using frequencies in the band 135.7-137.8 kHz shall not exceed a maximum radiated power of 1 W (e.i.r.p.) and shall not cause harmful interference to stations of the radionavigation service operating in countries listed in No. **5.67**. (WRC-07)
- 5.67B** The use of the band 135.7-137.8 kHz in Algeria, Egypt, Iran (Islamic Republic of), Iraq, Libyan Arab Jamahiriya, Lebanon, Syrian Arab Republic, Sudan and Tunisia is limited to the fixed and maritime mobile services. The amateur service shall not be used in the above-mentioned countries in the band 135.7-137.8 kHz, and this should be taken into account by the countries authorizing such use. (WRC-07)
- 5.68** *Alternative allocation:* in Angola, Burundi, Congo (Rep. of the), Malawi, the Dem. Rep. of the Congo, Rwanda and South Africa, the band 160-200 kHz is allocated to the fixed service on a primary basis. (WRC-03)
- 5.69** *Additional allocation:* in Somalia, the band 200-255 kHz is also allocated to the aeronautical radionavigation service on a primary basis.
- 5.70** *Alternative allocation:* in Angola, Botswana, Burundi, the Central African Rep., Congo (Rep. of the), Ethiopia, Kenya, Lesotho, Madagascar, Malawi, Mozambique, Namibia, Nigeria, Oman, the Dem. Rep. of the Congo, Rwanda, South Africa, Swaziland, Tanzania, Chad, Zambia and Zimbabwe, the band 200-283.5 kHz is allocated to the aeronautical radionavigation service on a primary basis. (WRC-07)
- 5.71** *Alternative allocation:* in Tunisia, the band 255-283.5 kHz is allocated to the broadcasting service on a primary basis.
- 5.72** Norwegian stations of the fixed service situated in northern areas (north of 60° N) subject to auroral disturbances are allowed to continue operation on four frequencies in the bands 283.5-490 kHz and 510-526.5 kHz.
- 5.73** The band 285-325 kHz (283.5-325 kHz in Region 1) in the maritime radionavigation service may be used to transmit supplementary navigational information using narrow-band techniques, on condition that no harmful interference is caused to radiobeacon stations operating in the radionavigation service. (WRC-97)
- 5.74** *Additional Allocation:* in Region 1, the frequency band 285.3-285.7 kHz is also allocated to the maritime radionavigation service (other than radiobeacons) on a primary basis.
- 5.75** *Different category of service:* in Armenia, Azerbaijan, Belarus, the Russian Federation, Georgia, Moldova, Kyrgyzstan, Tajikistan, Turkmenistan, Ukraine and the Black Sea areas of Romania, the allocation of the band 315-325 kHz to the maritime radionavigation service is on a primary basis under the condition that in the Baltic Sea area, the assignment of frequencies in this band to new stations in the maritime or aeronautical radionavigation services shall be subject to prior consultation between the administrations concerned. (WRC-07)
- 5.76** The frequency 410 kHz is designated for radio direction-finding in the maritime radionavigation service. The other radionavigation services to which the band 405-415 kHz is allocated shall not cause harmful interference to radio direction-finding in the band 406.5-413.5 kHz.
- 5.77** *Different category of service:* in Australia, China, the French Overseas Communities of Region 3, India, Iran (Islamic Republic of), Japan, Pakistan, Papua New Guinea and Sri Lanka, the allocation of the band 415-495 kHz to the aeronautical radionavigation service is on a primary basis. Administrations in these countries shall take all practical steps necessary to ensure that aeronautical radionavigation stations in the band 435-495 kHz do not cause interference to reception by coast stations of ship stations transmitting on frequencies designated for ship stations on a worldwide basis (see No. **52.39**). (WRC-07)
- 5.78** *Different category of service:* in Cuba, the United States of America and Mexico, the allocation of the band 415-435 kHz to the aeronautical radionavigation service is on a primary basis.
- 5.79** The use of the bands 415-495 kHz and 505-526.5 kHz (505-510 kHz in Region 2) by the maritime mobile service is limited to radiotelegraphy.
- 5.79A** When establishing coast stations in the NAVTEX service on the frequencies 490 kHz, 518 kHz and 4 209.5 kHz, administrations are strongly recommended to coordinate the operating characteristics in accordance with the procedures of the International Maritime Organization (IMO) (see Resolution **339 (Rev.WRC-07)**). (WRC-07)
- 5.80** In Region 2, the use of the band 435-495 kHz by the aeronautical radionavigation service is limited to non-directional beacons not employing voice transmission.

- 5.81** (SUP - WRC-2000)
- 5.82** In the maritime mobile service, the frequency 490 kHz is to be used exclusively for the transmission by coast stations of navigational and meteorological warnings and urgent information to ships, by means of narrow-band direct-printing telegraphy. The conditions for use of the frequency 490 kHz are prescribed in Articles **31** and **52**. In using the band 415-495 kHz for the aeronautical radionavigation service, administrations are requested to ensure that no harmful interference is caused to the frequency 490 kHz. (WRC-07)
- 5.82A** The use of the band 495-505 kHz is limited to radiotelegraphy. (WRC-07)
- 5.82B** Administrations authorizing the use of frequencies in the band 495-505 kHz by services other than the maritime mobile service shall ensure that no harmful interference is caused to the maritime mobile service in this band or to the services having allocations in the adjacent bands, noting in particular the conditions of use of the frequencies 490 kHz and 518 kHz, as prescribed in Articles **31** and **52**. (WRC-07)
- 5.83** (SUP - WRC-07).
- 5.84** The conditions for the use of the frequency 518 kHz by the maritime mobile service are prescribed in Articles **31** and **52**. (WRC-07)
- 5.85** Not used.
- 5.86** In Region 2, in the band 525-535 kHz the carrier power of broadcasting stations shall not exceed 1 kW during the day and 250 W at night.
- 5.87** *Additional allocation:* in Angola, Botswana, Lesotho, Malawi, Mozambique, Namibia, South Africa, Swaziland and Zimbabwe, the band 526.5-535 kHz is also allocated to the mobile service on a secondary basis. (WRC-03)
- 5.87A** *Additional allocation:* in Uzbekistan, the band 526.5-1 606.5 kHz is also allocated to the radionavigation service on a primary basis. Such use is subject to agreement obtained under No. **9.21** with administrations concerned and limited to ground-based radiobeacons in operation on 27 October 1997 until the end of their lifetime. (WRC-97)
- 5.88** *Additional allocation:* in China, the band 526.5-535 kHz is also allocated to the aeronautical radionavigation service on a secondary basis.
- 5.89** In Region 2, the use of the band 1 605-1 705 kHz by stations of the broadcasting service is subject to the Plan established by the Regional Administrative Radio Conference (Rio de Janeiro, 1988).
The examination of frequency assignments to stations of the fixed and mobile services in the band 1 625-1 705 kHz shall take account of the allotments appearing in the Plan established by the Regional Administrative Radio Conference (Rio de Janeiro, 1988).
- 5.90** In the band 1 605-1 705 kHz, in cases where a broadcasting station of Region 2 is concerned, the service area of the maritime mobile stations in Region 1 shall be limited to that provided by ground-wave propagation.
- 5.91** *Additional allocation:* in the Philippines and Sri Lanka, the band 1 606.5-1 705 kHz is also allocated to the broadcasting service on a secondary basis. (WRC-97)
- 5.92** Some countries of Region 1 use radiodetermination systems in the bands 1 606.5-1 625 kHz, 1 635-1 800 kHz, 1 850-2 160 kHz, 2 194-2 300 kHz, 2 502-2 850 kHz and 3 500-3 800 kHz, subject to agreement obtained under No. **9.21**. The radiated mean power of these stations shall not exceed 50 W.
- 5.93** *Additional allocation:* in Angola, Armenia, Azerbaijan, Belarus, the Russian Federation, Georgia, Hungary, Kazakhstan, Latvia, Lithuania, Moldova, Mongolia, Nigeria, Uzbekistan, Poland, Kyrgyzstan, Slovakia, the Czech Rep., Tajikistan, Chad, Turkmenistan and Ukraine, the bands 1 625-1 635 kHz, 1 800-1 810 kHz and 2 160-2 170 kHz are also allocated to the fixed and land mobile services on a primary basis, subject to agreement obtained under No. **9.21**. (WRC-07)
- 5.94** and **5.95** Not used.
- 5.96** In Germany, Armenia, Austria, Azerbaijan, Belarus, Denmark, Estonia, the Russian Federation, Finland, Georgia, Hungary, Ireland, Iceland, Israel, Kazakhstan, Latvia, Liechtenstein, Lithuania, Malta, Moldova, Norway, Uzbekistan, Poland, Kyrgyzstan, Slovakia, the Czech Rep., the United Kingdom, Sweden, Switzerland, Tajikistan, Turkmenistan and Ukraine, administrations may allocate up to 200 kHz to their amateur service in the bands 1 715-1 800 kHz and 1 850-2 000 kHz. However, when allocating the bands within this range to their amateur service, administrations shall, after prior consultation with administrations of neighbouring countries, take such steps as may be necessary to prevent harmful interference from their amateur service to the fixed and mobile services of other countries. The mean power of any amateur station shall not exceed 10 W. (WRC-03)

- 5.97** In Region 3, the Loran system operates either on 1 850 kHz or 1 950 kHz, the bands occupied being 1 825-1 875 kHz and 1 925-1 975 kHz respectively. Other services to which the band 1 800-2 000 kHz is allocated may use any frequency therein on condition that no harmful interference is caused to the Loran system operating on 1 850 kHz or 1 950 kHz.
- 5.98** *Alternative allocation:* in Angola, Armenia, Azerbaijan, Belarus, Belgium, Cameroon, Congo (Rep. of the), Denmark, Egypt, Eritrea, Spain, Ethiopia, the Russian Federation, Georgia, Greece, Italy, Kazakhstan, Lebanon, Lithuania, Moldova, the Syrian Arab Republic, Kyrgyzstan, Somalia, Tajikistan, Tunisia, Turkmenistan, Turkey and Ukraine, the band 1 810-1 830 kHz is allocated to the fixed and mobile, except aeronautical mobile, services on a primary basis. (WRC-07)
- 5.99** *Additional allocation:* in Saudi Arabia, Austria, Iraq, the Libyan Arab Jamahiriya, Uzbekistan, Slovakia, Romania, Serbia, Slovenia, Chad, and Togo, the band 1 810-1 830 kHz is also allocated to the fixed and mobile, except aeronautical mobile, services on a primary basis. (WRC-07)
- 5.100** In Region 1, the authorization to use the band 1 810-1 830 kHz by the amateur service in countries situated totally or partially north of 40° N shall be given only after consultation with the countries mentioned in Nos. **5.98** and **5.99** to define the necessary steps to be taken to prevent harmful interference between amateur stations and stations of other services operating in accordance with Nos. **5.98** and **5.99**.
- 5.101** *Alternative allocation:* in Burundi and Lesotho, the band 1 810-1 850 kHz is allocated to the fixed and mobile, except aeronautical mobile, services on a primary basis.
- 5.102** *Alternative allocation:* in Bolivia, Chile, Mexico, Paraguay, Peru and Uruguay, the band 1 850-2 000 kHz is allocated to the fixed, mobile except aeronautical mobile, radiolocation and radionavigation services on a primary basis. (WRC-07)
- 5.103** In Region 1, in making assignments to stations in the fixed and mobile services in the bands 1 850-2 045 kHz, 2 194-2 498 kHz, 2 502-2 625 kHz and 2 650-2 850 kHz, administrations should bear in mind the special requirements of the maritime mobile service.
- 5.104** In Region 1, the use of the band 2 025-2 045 kHz by the meteorological aids service is limited to oceanographic buoy stations.
- 5.105** In Region 2, except in Greenland, coast stations and ship stations using radiotelephony in the band 2 065-2 107 kHz shall be limited to class J3E emissions and to a peak envelope power not exceeding 1 kW. Preferably, the following carrier frequencies should be used: 2 065.0 kHz, 2 079.0 kHz, 2 082.5 kHz, 2 086.0 kHz, 2 093.0 kHz, 2 096.5 kHz, 2 100.0 kHz and 2 103.5 kHz. In Argentina and Uruguay, the carrier frequencies 2 068.5 kHz and 2 075.5 kHz are also used for this purpose, while the frequencies within the band 2 072-2 075.5 kHz are used as provided in No. **52.165**.
- 5.106** In Regions 2 and 3, provided no harmful interference is caused to the maritime mobile service, the frequencies between 2 065 kHz and 2 107 kHz may be used by stations of the fixed service communicating only within national borders and whose mean power does not exceed 50 W. In notifying the frequencies, the attention of the Bureau should be drawn to these provisions.
- 5.107** *Additional allocation:* in Saudi Arabia, Eritrea, Ethiopia, Iraq, the Libyan Arab Jamahiriya, Lesotho, Somalia and Swaziland, the band 2 160-2 170 kHz is also allocated to the fixed and mobile, except aeronautical mobile (R), services on a primary basis. The mean power of stations in these services shall not exceed 50 W. (WRC-03)
- 5.108** The carrier frequency 2 182 kHz is an international distress and calling frequency for radiotelephony. The conditions for the use of the band 2 173.5-2 190.5 kHz are prescribed in Articles **31** and **52**. (WRC-07)
- 5.109** The frequencies 2 187.5 kHz, 4 207.5 kHz, 6 312 kHz, 8 414.5 kHz, 12 577 kHz and 16 804.5 kHz are international distress frequencies for digital selective calling. The conditions for the use of these frequencies are prescribed in Article **31**.
- 5.110** The frequencies 2 174.5 kHz, 4 177.5 kHz, 6 268 kHz, 8 376.5 kHz, 12 520 kHz and 16 695 kHz are international distress frequencies for narrow-band direct-printing telegraphy. The conditions for the use of these frequencies are prescribed in Article **31**.
- 5.111** The carrier frequencies 2 182 kHz, 3 023 kHz, 5 680 kHz, 8 364 kHz and the frequencies 121.5 MHz, 156.525 MHz, 156.8 MHz and 243 MHz may also be used, in accordance with the procedures in force for terrestrial radiocommunication services, for search and rescue operations concerning manned space vehicles. The conditions for the use of the frequencies are prescribed in Article **31**.
The same applies to the frequencies 10 003 kHz, 14 993 kHz and 19 993 kHz, but in each of these cases emissions must be confined in a band of ± 3 kHz about the frequency. (WRC-07)
- 5.112** *Alternative allocation:* in Denmark, Malta, Serbia and Sri Lanka, the band 2 194-2 300 kHz is allocated

- to the fixed and mobile, except aeronautical mobile, services on a primary basis. (WRC-07)
- 5.113** For the conditions for the use of the bands 2 300-2 495 kHz (2 498 kHz in Region 1), 3 200-3 400 kHz, 4 750-4 995 kHz and 5 005-5 060 kHz by the broadcasting service, see Nos. **5.16** to **5.20**, **5.21** and **23.3** to **23.10**.
- 5.114** *Alternative allocation:* in Denmark, Iraq, Malta and Serbia, the band 2 502-2 625 kHz is allocated to the fixed and mobile, except aeronautical mobile, services on a primary basis. (WRC-07)
- 5.115** The carrier (reference) frequencies 3 023 kHz and 5 680 kHz may also be used, in accordance with Article **31**, by stations of the maritime mobile service engaged in coordinated search and rescue operations. (WRC-07)
- 5.116** Administrations are urged to authorize the use of the band 3 155-3 195 kHz to provide a common worldwide channel for low power wireless hearing aids. Additional channels for these devices may be assigned by administrations in the bands between 3 155 kHz and 3 400 kHz to suit local needs.
- It should be noted that frequencies in the range 3 000 kHz to 4 000 kHz are suitable for hearing aid devices which are designed to operate over short distances within the induction field.
- 5.117** *Alternative allocation:* in Côte d'Ivoire, Denmark, Egypt, Liberia, Malta, Serbia, Sri Lanka and Togo, the band 3 155-3 200 kHz is allocated to the fixed and mobile, except aeronautical mobile, services on a primary basis. (WRC-07)
- 5.118** *Additional allocation:* in the United States, Mexico, Peru and Uruguay, the band 3 230-3 400 kHz is also allocated to the radiolocation service on a secondary basis. (WRC-03)
- 5.119** *Additional allocation:* in Honduras, Mexico and Peru, the band 3 500-3 750 kHz is also allocated to the fixed and mobile services on a primary basis. (WRC-07)
- 5.120** (SUP - WRC-2000)
- 5.121** Not used.
- 5.122** *Alternative allocation:* in Bolivia, Chile, Ecuador, Paraguay, Peru and Uruguay, the band 3 750-4 000 kHz is allocated to the fixed and mobile, except aeronautical mobile, services on a primary basis. (WRC-07)
- 5.123** *Additional allocation:* in Botswana, Lesotho, Malawi, Mozambique, Namibia, South Africa, Swaziland, Zambia and Zimbabwe, the band 3 900-3 950 kHz is also allocated to the broadcasting service on a primary basis, subject to agreement obtained under No. **9.21**.
- 5.124** (SUP - WRC-2000)
- 5.125** *Additional allocation:* in Greenland, the band 3 950-4 000 kHz is also allocated to the broadcasting service on a primary basis. The power of the broadcasting stations operating in this band shall not exceed that necessary for a national service and shall in no case exceed 5 kW.
- 5.126** In Region 3, the stations of those services to which the band 3 995-4 005 kHz is allocated may transmit standard frequency and time signals.
- 5.127** The use of the band 4 000-4 063 kHz by the maritime mobile service is limited to ship stations using radiotelephony (see No. **52.220** and Appendix **17**).
- 5.128** Frequencies in the bands 4 063-4 123 kHz and 4 130-4 438 kHz may be used exceptionally by stations in the fixed service, communicating only within the boundary of the country in which they are located, with a mean power not exceeding 50 W, on condition that harmful interference is not caused to the maritime mobile service. In addition, in Afghanistan, Argentina, Armenia, Azerbaijan, Belarus, Botswana, Burkina Faso, the Central African Rep., China, the Russian Federation, Georgia, India, Kazakhstan, Mali, Niger, Kyrgyzstan, Tajikistan, Chad, Turkmenistan and Ukraine, in the bands 4 063-4 123 kHz, 4 130-4 133 kHz and 4 408-4 438 kHz, stations in the fixed service, with a mean power not exceeding 1 kW, can be operated on condition that they are situated at least 600 km from the coast and that harmful interference is not caused to the maritime mobile service. (WRC-07)
- 5.129** (SUP - WRC-07)
- 5.130** The conditions for the use of the carrier frequencies 4 125 kHz and 6 215 kHz are prescribed in Articles **31** and **52**. (WRC-07)
- 5.131** The frequency 4 209.5 kHz is used exclusively for the transmission by coast stations of meteorological and navigational warnings and urgent information to ships by means of narrow-band direct-printing techniques. (WRC-97)
- 5.132** The frequencies 4 210 kHz, 6 314 kHz, 8 416.5 kHz, 12 579 kHz, 16 806.5 kHz, 19 680.5 kHz, 22 376 kHz and 26 100.5 kHz are the international frequencies for the transmission of maritime safety information (MSI) (see Appendix **17**).

- 5.133** *Different category of service:* in Armenia, Azerbaijan, Belarus, the Russian Federation, Georgia, Kazakhstan, Latvia, Lithuania, Uzbekistan, Kyrgyzstan, Tajikistan, Turkmenistan and Ukraine, the allocation of the band 5 130-5 250 kHz to the mobile, except aeronautical mobile, service is on a primary basis (see No. **5.33**). (WRC-07)
- 5.134** The use of the bands 5 900-5 950 kHz, 7 300-7 350 kHz, 9 400-9 500 kHz, 11 600-11 650 kHz, 12 050-12 100 kHz, 13 570-13 600 kHz, 13 800-13 870 kHz, 15 600-15 800 kHz, 17 480-17 550 kHz and 18 900-19 020 kHz by the broadcasting service is subject to the application of the procedure of Article 12. Administrations are encouraged to use these bands to facilitate the introduction of digitally modulated emissions in accordance with the provisions of Resolution **517 (Rev.WRC-07)**. (WRC-07)
- 5.135** (SUP - WRC-97)
- 5.136** *Additional allocation:* frequencies in the band 5 900-5 950 kHz may be used by stations in the following services, communicating only within the boundary of the country in which they are located: fixed service (in all three Regions), land mobile service (in Region 1), mobile except aeronautical mobile (R) service (in Regions 2 and 3), on condition that harmful interference is not caused to the broadcasting service. When using frequencies for these services, administrations are urged to use the minimum power required and to take account of the seasonal use of frequencies by the broadcasting service published in accordance with the Radio Regulations. (WRC-07)
- 5.137** On condition that harmful interference is not caused to the maritime mobile service, the bands 6 200-6 213.5 kHz and 6 220.5-6 525 kHz may be used exceptionally by stations in the fixed service, communicating only within the boundary of the country in which they are located, with a mean power not exceeding 50 W. At the time of notification of these frequencies, the attention of the Bureau will be drawn to the above conditions.
- 5.138** The following bands:
- | | |
|-------------------|--|
| 6 765-6 795 kHz | (centre frequency 6 780 kHz), |
| 433.05-434.79 MHz | (centre frequency 433.92 MHz) in Region 1
except in the countries mentioned in No. 5.280 , |
| 61-61.5 GHz | (centre frequency 61.25 GHz), |
| 122-123 GHz | (centre frequency 122.5 GHz), and |
| 244-246 GHz | (centre frequency 245 GHz) |
- are designated for industrial, scientific and medical (ISM) applications. The use of these frequency bands for ISM applications shall be subject to special authorization by the administration concerned, in agreement with other administrations whose radiocommunication services might be affected. In applying this provision, administrations shall have due regard to the latest relevant ITU-R Recommendations.
- 5.138A** Until 29 March 2009, the band 6 765-7 000 kHz is allocated to the fixed service on a primary basis and to the land mobile service on a secondary basis. After this date, this band is allocated to the fixed and the mobile except aeronautical mobile (R) services on a primary basis. (WRC-03)
- 5.139** *Different category of service:* until 29 March 2009, in Armenia, Azerbaijan, Belarus, the Russian Federation, Georgia, Kazakhstan, Latvia, Lithuania, Mongolia, Uzbekistan, Kyrgyzstan, Tajikistan, Turkmenistan and Ukraine, the allocation of the band 6 765-7 000 kHz to the land mobile service is on a primary basis (see No. **5.33**). (WRC-07)
- 5.140** *Additional allocation:* in Angola, Iraq, Kenya, Rwanda, Somalia and Togo, the band 7 000-7 050 kHz is also allocated to the fixed service on a primary basis. (WRC-03)
- 5.141** *Alternative allocation:* in Egypt, Eritrea, Ethiopia, Guinea, the Libyan Arab Jamahiriya and Madagascar, the band 7 000-7 050 kHz is allocated to the fixed service on a primary basis. (WRC-97)
- 5.141A** *Additional allocation:* in Uzbekistan and Kyrgyzstan, the bands 7 000-7 100 kHz and 7 100-7 200 kHz are also allocated to the fixed and land mobile services on a secondary basis. (WRC-03)
- 5.141B** *Additional allocation:* after 29 March 2009, in Algeria, Saudi Arabia, Australia, Bahrain, Botswana, Brunei Darussalam, China, Comoros, Korea (Rep. of), Diego Garcia, Djibouti, Egypt, United Arab Emirates, Eritrea, Indonesia, Iran (Islamic Republic of), Japan, Jordan, Kuwait, the Libyan Arab Jamahiriya, Morocco, Mauritania, New Zealand, Oman, Papua New Guinea, Qatar, the Syrian Arab Republic, Singapore, Sudan, Tunisia, Viet Nam and Yemen, the band 7 100-7 200 kHz is also allocated to the fixed and the mobile, except aeronautical mobile (R), services on a primary basis. (WRC-03)
- 5.141C** In Regions 1 and 3, the band 7 100-7 200 kHz is allocated to the broadcasting service until 29 March 2009 on a primary basis. (WRC-03)
- 5.142** Until 29 March 2009, the use of the band 7 100-7 300 kHz in Region 2 by the amateur service shall not

- impose constraints on the broadcasting service intended for use within Region 1 and Region 3. After 29 March 2009 the use of the band 7 200-7 300 kHz in Region 2 by the amateur service shall not impose constraints on the broadcasting service intended for use within Region 1 and Region 3. (WRC-03)
- 5.143** *Additional allocation:* frequencies in the band 7 300-7 350 kHz may be used by stations in the fixed service and in the land mobile service, communicating only within the boundary of the country in which they are located, on condition that harmful interference is not caused to the broadcasting service. When using frequencies for these services, administrations are urged to use the minimum power required and to take account of the seasonal use of frequencies by the broadcasting service published in accordance with the Radio Regulations. (WRC-07)
- 5.143A** In Region 3, the band 7 350-7 450 kHz is allocated, until 29 March 2009, to the fixed service on a primary basis and to the land mobile service on a secondary basis. After 29 March 2009, frequencies in this band may be used by stations in the above-mentioned services, communicating only within the boundary of the country in which they are located, on condition that harmful interference is not caused to the broadcasting service. When using frequencies for these services, administrations are urged to use the minimum power required and to take account of the seasonal use of frequencies by the broadcasting service published in accordance with the Radio Regulations. (WRC-03)
- 5.143B** In Region 1, the band 7 350-7 450 kHz is allocated, until 29 March 2009, to the fixed service on a primary basis and to the land mobile service on a secondary basis. After 29 March 2009, on condition that harmful interference is not caused to the broadcasting service, frequencies in the band 7 350-7 450 kHz may be used by stations in the fixed and land mobile services communicating only within the boundary of the country in which they are located, each station using a total radiated power that shall not exceed 24 dBW. (WRC-03)
- 5.143C** *Additional allocation:* after 29 March 2009 in Algeria, Saudi Arabia, Bahrain, Comoros, Djibouti, Egypt, United Arab Emirates, Iran (Islamic Republic of), the Libyan Arab Jamahiriya, Jordan, Kuwait, Morocco, Mauritania, Oman, Qatar, the Syrian Arab Republic, Sudan, Tunisia and Yemen, the bands 7 350-7 400 kHz and 7 400-7 450 kHz are also allocated to the fixed service on a primary basis. (WRC-03)
- 5.143D** In Region 2, the band 7 350-7 400 kHz is allocated, until 29 March 2009, to the fixed service on a primary basis and to the land mobile service on a secondary basis. After 29 March 2009, frequencies in this band may be used by stations in the above-mentioned services, communicating only within the boundary of the country in which they are located, on condition that harmful interference is not caused to the broadcasting service. When using frequencies for these services, administrations are urged to use the minimum power required and to take account of the seasonal use of frequencies by the broadcasting service published in accordance with the Radio Regulations. (WRC-03)
- 5.143E** Until 29 March 2009, the band 7 450-8 100 kHz is allocated to the fixed service on a primary basis and to the land mobile service on a secondary basis. (WRC-03)
- 5.144** In Region 3, the stations of those services to which the band 7 995-8 005 kHz is allocated may transmit standard frequency and time signals.
- 5.145** The conditions for the use of the carrier frequencies 8 291 kHz, 12 290 kHz and 16 420 kHz are prescribed in Articles 31 and 52. (WRC-07)
- 5.146** *Additional allocation:* frequencies in the bands 9 400-9 500 kHz, 11 600-11 650 kHz, 12 050-12 100 kHz, 15 600-15 800 kHz, 17 480-17 550 kHz and 18 900-19 020 kHz may be used by stations in the fixed service, communicating only within the boundary of the country in which they are located, on condition that harmful interference is not caused to the broadcasting service. When using frequencies in the fixed service, administrations are urged to use the minimum power required and to take account of the seasonal use of frequencies by the broadcasting service published in accordance with the Radio Regulations. (WRC-07)
- 5.147** On condition that harmful interference is not caused to the broadcasting service, frequencies in the bands 9 775-9 900 kHz, 11 650-11 700 kHz and 11 975-12 050 kHz may be used by stations in the fixed service communicating only within the boundary of the country in which they are located, each station using a total radiated power not exceeding 24 dBW.
- 5.148** (SUP - WRC-97)

5.149 In making assignments to stations of other services to which the bands:

13 360-13 410 kHz,	4 950-4 990 MHz,	102-109.5 GHz,
25 550-25 670 kHz,	4 990-5 000 MHz,	111.8-114.25 GHz,
37.5-38.25 MHz,	6 650-6 675.2 MHz,	128.33-128.59 GHz,
73-74.6 MHz in Regions 1 and 3,	10.6-10.68 GHz,	129.23-129.49 GHz,
150.05-153 MHz in Region 1,	14.47-14.5 GHz,	130-134 GHz,
322-328.6 MHz,	22.01-22.21 GHz,	136-148.5 GHz,
406.1-410 MHz,	22.21-22.5 GHz,	151.5-158.5 GHz,
608-614 MHz in Regions 1 and 3,	22.81-22.86 GHz,	168.59-168.93 GHz,
1 330-1 400 MHz,	23.07-23.12 GHz,	171.11-171.45 GHz,
1 610.6-1 613.8 MHz,	31.2-31.3 GHz,	172.31-172.65 GHz,
1 660-1 670 MHz,	31.5-31.8 GHz in Regions 1 and 3,	173.52-173.85 GHz,
1 718.8-1 722.2 MHz,	36.43-36.5 GHz,	195.75-196.15 GHz,
2 655-2 690 MHz,	42.5-43.5 GHz,	209-226 GHz,
3 260-3 267 MHz,	48.94-49.04 GHz,	241-250 GHz,
3 332-3 339 MHz,	76-86 GHz,	252-275 GHz
3 345.8-3 352.5 MHz,	92-94 GHz,	
4 825-4 835 MHz,	94.1-100 GHz,	

are allocated, administrations are urged to take all practicable steps to protect the radio astronomy service from harmful interference. Emissions from spaceborne or airborne stations can be particularly serious sources of interference to the radio astronomy service (see Nos. **4.5** and **4.6** and Article **29**). (WRC-07)

5.150 The following bands:

13 553-13 567 kHz	(centre frequency 13 560 kHz),
26 957-27 283 kHz	(centre frequency 27 120 kHz),
40.66-40.70 MHz	(centre frequency 40.68 MHz),
902-928 MHz	in Region 2 (centre frequency 915 MHz),
2 400-2 500 MHz	(centre frequency 2 450 MHz),
5 725-5 875 MHz	(centre frequency 5 800 MHz), and
24-24.25 GHz	(centre frequency 24.125 GHz)

are also designated for industrial, scientific and medical (ISM) applications. Radiocommunication services operating within these bands must accept harmful interference which may be caused by these applications. ISM equipment operating in these bands is subject to the provisions of No. **15.13**.

5.151 *Additional allocation:* frequencies in the bands 13 570-13 600 kHz and 13 800-13 870 kHz may be used by stations in the fixed service and in the mobile except aeronautical mobile (R) service, communicating only within the boundary of the country in which they are located, on the condition that harmful interference is not caused to the broadcasting service. When using frequencies in these services, administrations are urged to use the minimum power required and to take account of the seasonal use of frequencies by the broadcasting service published in accordance with the Radio Regulations. (WRC-07)

5.152 *Additional allocation:* in Armenia, Azerbaijan, China, Côte d'Ivoire, the Russian Federation, Georgia, Iran (Islamic Republic of), Kazakhstan, Uzbekistan, Kyrgyzstan, Tajikistan, Turkmenistan and Ukraine, the band 14 250-14 350 kHz is also allocated to the fixed service on a primary basis. Stations of the fixed service shall not use a radiated power exceeding 24 dBW. (WRC-03)

5.153 In Region 3, the stations of those services to which the band 15 995-16 005 kHz is allocated may transmit standard frequency and time signals.

5.154 *Additional allocation:* in Armenia, Azerbaijan, the Russian Federation, Georgia, Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Ukraine, the band 18 068-18 168 kHz is also allocated to the fixed service on a primary basis for use within their boundaries, with a peak envelope power not exceeding 1 kW. (WRC-03)

- 5.155** *Additional allocation:* in Armenia, Azerbaijan, Belarus, the Russian Federation, Georgia, Kazakhstan, Moldova, Mongolia, Uzbekistan, Kyrgyzstan, Slovakia, Tajikistan, Turkmenistan and Ukraine, the band 21 850-21 870 kHz is also allocated to the aeronautical mobile (R) service on a primary basis. (WRC-07)
- 5.155A** In Armenia, Azerbaijan, Belarus, the Russian Federation, Georgia, Kazakhstan, Moldova, Mongolia, Uzbekistan, Kyrgyzstan, Slovakia, Tajikistan, Turkmenistan and Ukraine, the use of the band 21 850-21 870 kHz by the fixed service is limited to provision of services related to aircraft flight safety. (WRC-07)
- 5.155B** The band 21 870-21 924 kHz is used by the fixed service for provision of services related to aircraft flight safety.
- 5.156** *Additional allocation:* in Nigeria, the band 22 720-23 200 kHz is also allocated to the meteorological aids service (radiosondes) on a primary basis.
- 5.156A** The use of the band 23 200-23 350 kHz by the fixed service is limited to provision of services related to aircraft flight safety.
- 5.157** The use of the band 23 350-24 000 kHz by the maritime mobile service is limited to inter-ship radiotelegraphy.
- 5.158** and **5.159** Not used.
- 5.160** *Additional allocation:* in Botswana, Burundi, Lesotho, Malawi, Dem. Rep. of the Congo, Rwanda and Swaziland, the band 41-44 MHz is also allocated to the aeronautical radionavigation service on a primary basis. (WRC-2000)
- 5.161** *Additional allocation:* in Iran (Islamic Republic of) and Japan, the band 41-44 MHz is also allocated to the radiolocation service on a secondary basis.
- 5.162** *Additional allocation:* in Australia and New Zealand, the band 44-47 MHz is also allocated to the broadcasting service on a primary basis.
- 5.162A** *Additional allocation:* in Germany, Austria, Belgium, Bosnia and Herzegovina, China, Vatican, Denmark, Spain, Estonia, the Russian Federation, Finland, France, Ireland, Iceland, Italy, Latvia, The Former Yugoslav Republic of Macedonia, Liechtenstein, Lithuania, Luxembourg, Monaco, Montenegro, Norway, the Netherlands, Poland, Portugal, Slovakia, the Czech Rep., the United Kingdom, Serbia, Slovenia, Sweden and Switzerland the band 46-68 MHz is also allocated to the radiolocation service on a secondary basis. This use is limited to the operation of wind profiler radars in accordance with Resolution **217 (WRC-97)**. (WRC-07)
- 5.163** *Additional allocation:* in Armenia, Belarus, the Russian Federation, Georgia, Hungary, Kazakhstan, Latvia, Lithuania, Moldova, Uzbekistan, Kyrgyzstan, Slovakia, the Czech Rep., Tajikistan, Turkmenistan and Ukraine, the bands 47-48.5 MHz and 56.5-58 MHz are also allocated to the fixed and land mobile services on a secondary basis. (WRC-07)
- 5.164** *Additional allocation:* in Albania, Germany, Austria, Belgium, Bosnia and Herzegovina, Botswana, Bulgaria, Côte d'Ivoire, Denmark, Spain, Estonia, Finland, France, Gabon, Greece, Ireland, Israel, Italy, the Libyan Arab Jamahiriya, Jordan, Lebanon, Liechtenstein, Luxembourg, Madagascar, Mali, Malta, Morocco, Mauritania, Monaco, Montenegro, Nigeria, Norway, the Netherlands, Poland, Syrian Arab Republic, Romania, the United Kingdom, Serbia, Slovenia, Sweden, Switzerland, Swaziland, Chad, Togo, Tunisia and Turkey, the band 47-68 MHz, in South Africa the band 47-50 MHz, in the Czech Rep. the band 66-68 MHz, and in Latvia and Lithuania the band 48.5-56.5 MHz, are also allocated to the land mobile service on a primary basis. However, stations of the land mobile service in the countries mentioned in connection with each band referred to in this footnote shall not cause harmful interference to, or claim protection from, existing or planned broadcasting stations of countries other than those mentioned in connection with the band. (WRC-07)
- 5.165** *Additional allocation:* in Angola, Cameroon, Congo (Rep. of the), Madagascar, Mozambique, Somalia, Sudan, Tanzania and Chad, the band 47-68 MHz is also allocated to the fixed and mobile, except aeronautical mobile, services on a primary basis.
- 5.166** *Alternative allocation:* in New Zealand, the band 50-51 MHz is allocated to the fixed, mobile and broadcasting services on a primary basis; the band 53-54 MHz is allocated to the fixed and mobile services on a primary basis.
- 5.167** *Alternative allocation:* in Bangladesh, Brunei Darussalam, India, Iran (Islamic Republic of), Pakistan, Singapore and Thailand, the band 50-54 MHz is allocated to the fixed, mobile and broadcasting services on a primary basis. (WRC-07)
- 5.167A** *Additional allocation:* in Indonesia, the band 50-54 MHz is also allocated to the fixed, mobile and broadcasting services on a primary basis. (WRC-07)

- 5.168** *Additional allocation:* in Australia, China and the Dem. People's Rep. of Korea, the band 50-54 MHz is also allocated to the broadcasting service on a primary basis.
- 5.169** *Alternative allocation:* in Botswana, Burundi, Lesotho, Malawi, Namibia, the Dem. Rep. of the Congo, Rwanda, South Africa, Swaziland, Zambia and Zimbabwe, the band 50-54 MHz is allocated to the amateur service on a primary basis.
- 5.170** *Additional allocation:* in New Zealand, the band 51-53 MHz is also allocated to the fixed and mobile services on a primary basis.
- 5.171** *Additional allocation:* in Botswana, Burundi, Lesotho, Malawi, Mali, Namibia, Dem. Rep. of the Congo, Rwanda, South Africa, Swaziland and Zimbabwe, the band 54-68 MHz is also allocated to the fixed and mobile, except aeronautical mobile, services on a primary basis.
- 5.172** *Different category of service:* in the French Overseas Departments in Region 2, Guyana, Jamaica and Mexico, the allocation of the band 54-68 MHz to the fixed and mobile services is on a primary basis (see No. 5.33).
- 5.173** *Different category of service:* in the French Overseas Departments in Region 2, Guyana, Jamaica and Mexico, the allocation of the band 68-72 MHz to the fixed and mobile services is on a primary basis (see No. 5.33).
- 5.174** (SUP - WRC-07)
- 5.175** *Alternative allocation:* in Armenia, Azerbaijan, Belarus, the Russian Federation, Georgia, Kazakhstan, Moldova, Uzbekistan, Kyrgyzstan, Tajikistan, Turkmenistan and Ukraine, the bands 68-73 MHz and 76-87.5 MHz are allocated to the broadcasting service on a primary basis. In Latvia and Lithuania, the bands 68-73 MHz and 76-87.5 MHz are allocated to the broadcasting and mobile, except aeronautical mobile, services on a primary basis. The services to which these bands are allocated in other countries and the broadcasting service in the countries listed above are subject to agreements with the neighbouring countries concerned. (WRC-07)
- 5.176** *Additional allocation:* in Australia, China, Korea (Rep. of), the Philippines, the Dem. People's Rep. of Korea and Samoa, the band 68-74 MHz is also allocated to the broadcasting service on a primary basis. (WRC-07)
- 5.177** *Additional allocation:* in Armenia, Azerbaijan, Belarus, the Russian Federation, Georgia, Kazakhstan, Uzbekistan, Kyrgyzstan, Tajikistan, Turkmenistan and Ukraine, the band 73-74 MHz is also allocated to the broadcasting service on a primary basis, subject to agreement obtained under No. 9.21. (WRC-07)
- 5.178** *Additional allocation:* in Colombia, Costa Rica, Cuba, El Salvador, Guatemala, Guyana, Honduras and Nicaragua, the band 73-74.6 MHz is also allocated to the fixed and mobile services on a secondary basis.
- 5.179** *Additional allocation:* in Armenia, Azerbaijan, Belarus, China, the Russian Federation, Georgia, Kazakhstan, Lithuania, Mongolia, Kyrgyzstan, Slovakia, Tajikistan, Turkmenistan and Ukraine, the bands 74.6-74.8 MHz and 75.2-75.4 MHz are also allocated to the aeronautical radionavigation service, on a primary basis, for ground-based transmitters only. (WRC-07)
- 5.180** The frequency 75 MHz is assigned to marker beacons. Administrations shall refrain from assigning frequencies close to the limits of the guardband to stations of other services which, because of their power or geographical position, might cause harmful interference or otherwise place a constraint on marker beacons.
- Every effort should be made to improve further the characteristics of airborne receivers and to limit the power of transmitting stations close to the limits 74.8 MHz and 75.2 MHz.
- 5.181** *Additional allocation:* in Egypt, Israel and the Syrian Arab Republic, the band 74.8-75.2 MHz is also allocated to the mobile service on a secondary basis, subject to agreement obtained under No. 9.21. In order to ensure that harmful interference is not caused to stations of the aeronautical radionavigation service, stations of the mobile service shall not be introduced in the band until it is no longer required for the aeronautical radionavigation service by any administration which may be identified in the application of the procedure invoked under No. 9.21. (WRC-03)
- 5.182** *Additional allocation:* in Western Samoa, the band 75.4-87 MHz is also allocated to the broadcasting service on a primary basis.
- 5.183** *Additional allocation:* in China, Korea (Rep. of), Japan, the Philippines and the Dem. People's Rep. of Korea, the band 76-87 MHz is also allocated to the broadcasting service on a primary basis.
- 5.184** (SUP - WRC-07)
- 5.185** *Different category of service:* in the United States, the French Overseas Departments in Region 2, Guyana, Jamaica, Mexico and Paraguay, the allocation of the band 76-88 MHz to the fixed and mobile

- services is on a primary basis (see No. 5.33).
- 5.186** (SUP - WRC-97)
- 5.187** *Alternative allocation:* in Albania, the band 81-87.5 MHz is allocated to the broadcasting service on a primary basis and used in accordance with the decisions contained in the Final Acts of the Special Regional Conference (Geneva, 1960).
- 5.188** *Additional allocation:* in Australia, the band 85-87 MHz is also allocated to the broadcasting service on a primary basis. The introduction of the broadcasting service in Australia is subject to special agreements between the administrations concerned.
- 5.189** Not used.
- 5.190** *Additional allocation:* in Monaco, the band 87.5-88 MHz is also allocated to the land mobile service on a primary basis, subject to agreement obtained under No. 9.21. (WRC-97)
- 5.191** Not used.
- 5.192** *Additional allocation:* in China and Korea (Rep. of), the band 100-108 MHz is also allocated to the fixed and mobile services on a primary basis. (WRC-97)
- 5.193** Not used.
- 5.194** *Additional allocation:* in Azerbaijan, Kyrgyzstan, Somalia and Turkmenistan, the band 104-108 MHz is also allocated to the mobile, except aeronautical mobile (R), service on a secondary basis. (WRC-07)
- 5.195** and **5.196** Not used.
- 5.197** *Additional allocation:* in Pakistan and the Syrian Arab Republic, the band 108-111.975 MHz is also allocated to the mobile service on a secondary basis, subject to agreement obtained under No. 9.21. In order to ensure that harmful interference is not caused to stations of the aeronautical radionavigation service, stations of the mobile service shall not be introduced in the band until it is no longer required for the aeronautical radionavigation service by any administration which may be identified in the application of the procedures invoked under No. 9.21. (WRC-07)
- 5.197A** *Additional allocation:* the band 108-117.975 MHz is also allocated on a primary basis to the aeronautical mobile (R) service, limited to systems operating in accordance with recognized international aeronautical standards. Such use shall be in accordance with Resolution 413 (Rev.WRC-07). The use of the band 108-112 MHz by the aeronautical mobile (R) service shall be limited to systems composed of ground-based transmitters and associated receivers that provide navigational information in support of air navigation functions in accordance with recognized international aeronautical standards. (WRC-07)
- 5.198** (SUP - WRC-07)
- 5.199** (SUP – WRC-07).
- 5.200** In the band 117.975-137 MHz, the frequency 121.5 MHz is the aeronautical emergency frequency and, where required, the frequency 123.1 MHz is the aeronautical frequency auxiliary to 121.5 MHz. Mobile stations of the maritime mobile service may communicate on these frequencies under the conditions laid down in Article 31 for distress and safety purposes with stations of the aeronautical mobile service. (WRC-07)
- 5.201** *Additional allocation:* in Angola, Armenia, Azerbaijan, Belarus, Bulgaria, Estonia, the Russian Federation, Georgia, Hungary, Iran (Islamic Republic of), Iraq, Japan, Kazakhstan, Latvia, Moldova, Mongolia, Mozambique, Uzbekistan, Papua New Guinea, Poland, Kyrgyzstan, Slovakia, the Czech Rep., Romania, Tajikistan, Turkmenistan and Ukraine, the band 132-136 MHz is also allocated to the aeronautical mobile (OR) service on a primary basis. In assigning frequencies to stations of the aeronautical mobile (OR) service, the administration shall take account of the frequencies assigned to stations in the aeronautical mobile (R) service. (WRC-97)
- 5.202** *Additional allocation:* in Saudi Arabia, Armenia, Azerbaijan, Belarus, Bulgaria, the United Arab Emirates, the Russian Federation, Georgia, Iran (Islamic Republic of), Jordan, Latvia, Moldova, Oman, Uzbekistan, Poland, the Syrian Arab Republic, Kyrgyzstan, Slovakia, the Czech Rep., Romania, Tajikistan, Turkmenistan and Ukraine, the band 136-137 MHz is also allocated to the aeronautical mobile (OR) service on a primary basis. In assigning frequencies to stations of the aeronautical mobile (OR) service, the administration shall take account of the frequencies assigned to stations in the aeronautical mobile (R) service. (WRC-2000)
- 5.203** (SUP - WRC-07)
- 5.203A** (SUP - WRC-07)
- 5.203B** (SUP - WRC-07)

- 5.204** *Different category of service:* in Afghanistan, Saudi Arabia, Bahrain, Bangladesh, Brunei Darussalam, China, Cuba, the United Arab Emirates, India, Indonesia, Iran (Islamic Republic of), Iraq, Kuwait, Montenegro, Oman, Pakistan, the Philippines, Qatar, Serbia, Singapore, Thailand and Yemen, the band 137-138 MHz is allocated to the fixed and mobile, except aeronautical mobile (R), services on a primary basis (see No. **5.33**). (WRC-07)
- 5.205** *Different category of service:* in Israel and Jordan, the allocation of the band 137-138 MHz to the fixed and mobile, except aeronautical mobile, services is on a primary basis (see No. **5.33**).
- 5.206** *Different category of service:* in Armenia, Azerbaijan, Belarus, Bulgaria, Egypt, the Russian Federation, Finland, France, Georgia, Greece, Kazakhstan, Lebanon, Moldova, Mongolia, Uzbekistan, Poland, Kyrgyzstan, the Syrian Arab Republic, Slovakia, the Czech Rep., Romania, Tajikistan, Turkmenistan and Ukraine, the allocation of the band 137-138 MHz to the aeronautical mobile (OR) service is on a primary basis (see No. **5.33**). (WRC-2000)
- 5.207** *Additional allocation:* in Australia, the band 137-144 MHz is also allocated to the broadcasting service on a primary basis until that service can be accommodated within regional broadcasting allocations.
- 5.208** The use of the band 137-138 MHz by the mobile-satellite service is subject to coordination under No. **9.11A**. (WRC-97)
- 5.208A** In making assignments to space stations in the mobile-satellite service in the bands 137-138 MHz, 387-390 MHz and 400.15-401 MHz, administrations shall take all practicable steps to protect the radio astronomy service in the bands 150.05-153 MHz, 322-328.6 MHz, 406.1-410 MHz and 608-614 MHz from harmful interference from unwanted emissions. The threshold levels of interference detrimental to the radio astronomy service are shown in the relevant ITU-R Recommendation. (WRC-07)
- 5.208B*** In the bands:
 137-138 MHz,
 387-390 MHz,
 400.15-401 MHz,
 1 452-1 492 MHz,
 1 525-1 610 MHz,
 1 613.8-1 626.5 MHz,
 2 655-2 690 MHz,
 21.4-22 GHz,
 Resolution **739 (Rev.WRC-07)** applies. (WRC-07)
- 5.209** The use of the bands 137-138 MHz, 148-150.05 MHz, 399.9-400.05 MHz, 400.15-401 MHz, 454-456 MHz and 459-460 MHz by the mobile-satellite service is limited to non-geostationary-satellite systems. (WRC-97)
- 5.210** *Additional allocation:* in Italy, the Czech Rep. and the United Kingdom, the bands 138-143.6 MHz and 143.65-144 MHz are also allocated to the space research service (space-to-Earth) on a secondary basis. (WRC-07)
- 5.211** *Additional allocation:* in Germany, Saudi Arabia, Austria, Bahrain, Belgium, Denmark, the United Arab Emirates, Spain, Finland, Greece, Ireland, Israel, Kenya, Kuwait, The Former Yugoslav Republic of Macedonia, Lebanon, Liechtenstein, Luxembourg, Mali, Malta, Montenegro, Norway, the Netherlands, Qatar, the United Kingdom, Serbia, Slovenia, Somalia, Sweden, Switzerland, Tanzania, Tunisia and Turkey, the band 138-144 MHz is also allocated to the maritime mobile and land mobile services on a primary basis. (WRC-07)
- 5.212** *Alternative allocation:* in Angola, Botswana, Burundi, Cameroon, the Central African Rep., Congo (Rep. of the), Gabon, Gambia, Ghana, Guinea, Iraq, Libyan Arab Jamahiriya, Jordan, Lesotho, Liberia, Malawi, Mozambique, Namibia, Oman, Uganda, Syrian Arab Republic, the Dem. Rep. of the Congo, Rwanda, Sierra Leone, South Africa, Swaziland, Chad, Togo, Zambia and Zimbabwe, the band 138-144 MHz is allocated to the fixed and mobile services on a primary basis. (WRC-07)
- 5.213** *Additional allocation:* in China, the band 138-144 MHz is also allocated to the radiolocation service on a primary basis.
- 5.214** *Additional allocation:* in Eritrea, Ethiopia, Kenya, The Former Yugoslav Republic of Macedonia, Malta, Montenegro, Serbia, Somalia, Sudan and Tanzania, the band 138-144 MHz is also allocated to the fixed service on a primary basis. (WRC-07)
- 5.215** Not used.
- 5.216** *Additional allocation:* in China, the band 144-146 MHz is also allocated to the aeronautical mobile (OR)

*This provision was previously numbered as No. **5.347A**. It was renumbered to preserve the sequential order. Consequential modifications, if any, to other parts of the Table will be made in the 2008 Edition of the Radio Regulations.

service on a secondary basis.

- 5.217** *Alternative allocation:* in Afghanistan, Bangladesh, Cuba, Guyana and India, the band 146-148 MHz is allocated to the fixed and mobile services on a primary basis.
- 5.218** *Additional allocation:* the band 148-149.9 MHz is also allocated to the space operation service (Earth-to-space) on a primary basis, subject to agreement obtained under No. **9.21**. The bandwidth of any individual transmission shall not exceed ± 25 kHz.
- 5.219** The use of the band 148-149.9 MHz by the mobile-satellite service is subject to coordination under No. **9.11A**. The mobile-satellite service shall not constrain the development and use of the fixed, mobile and space operation services in the band 148-149.9 MHz.
- 5.220** The use of the bands 149.9-150.05 MHz and 399.9-400.05 MHz by the mobile-satellite service is subject to coordination under No. **9.11A**. The mobile-satellite service shall not constrain the development and use of the radionavigation-satellite service in the bands 149.9-150.05 MHz and 399.9-400.05 MHz. (WRC-97)
- 5.221** Stations of the mobile-satellite service in the band 148-149.9 MHz shall not cause harmful interference to, or claim protection from, stations of the fixed or mobile services operating in accordance with the Table of Frequency Allocations in the following countries: Albania, Algeria, Germany, Saudi Arabia, Australia, Austria, Bahrain, Bangladesh, Barbados, Belarus, Belgium, Benin, Bosnia and Herzegovina, Botswana, Brunei Darussalam, Bulgaria, Cameroon, China, Cyprus, Congo (Rep. of the), Korea (Rep. of), Côte d'Ivoire, Croatia, Cuba, Denmark, Egypt, the United Arab Emirates, Eritrea, Spain, Estonia, Ethiopia, the Russian Federation, Finland, France, Gabon, Ghana, Greece, Guinea, Guinea Bissau, Hungary, India, Iran (Islamic Republic of), Ireland, Iceland, Israel, Italy, the Libyan Arab Jamahiriya, Jamaica, Japan, Jordan, Kazakhstan, Kenya, Kuwait, The Former Yugoslav Republic of Macedonia, Lesotho, Latvia, Lebanon, Liechtenstein, Lithuania, Luxembourg, Malaysia, Mali, Malta, Mauritania, Moldova, Mongolia, Montenegro, Mozambique, Namibia, Norway, New Zealand, Oman, Uganda, Uzbekistan, Pakistan, Panama, Papua New Guinea, Paraguay, the Netherlands, the Philippines, Poland, Portugal, Qatar, the Syrian Arab Republic, Kyrgyzstan, Dem. People's Rep. of Korea, Slovakia, Romania, the United Kingdom, Senegal, Serbia, Sierra Leone, Singapore, Slovenia, Sri Lanka, South Africa, Sweden, Switzerland, Swaziland, Tanzania, Chad, Thailand, Togo, Tonga, Trinidad and Tobago, Tunisia, Turkey, Ukraine, Viet Nam, Yemen, Zambia and Zimbabwe. (WRC-07)
- 5.222** Emissions of the radionavigation-satellite service in the bands 149.9-150.05 MHz and 399.9-400.05 MHz may also be used by receiving earth stations of the space research service.
- 5.223** Recognizing that the use of the band 149.9-150.05 MHz by the fixed and mobile services may cause harmful interference to the radionavigation-satellite service, administrations are urged not to authorize such use in application of No. **4.4**.
- 5.224** (SUP - WRC-97)
- 5.224A** The use of the bands 149.9-150.05 MHz and 399.9-400.05 MHz by the mobile-satellite service (Earth-to-space) is limited to the land mobile-satellite service (Earth-to-space) until 1 January 2015. (WRC-97)
- 5.224B** The allocation of the bands 149.9-150.05 MHz and 399.9-400.05 MHz to the radionavigation-satellite service shall be effective until 1 January 2015. (WRC-97)
- 5.225** *Additional allocation:* in Australia and India, the band 150.05-153 MHz is also allocated to the radio astronomy service on a primary basis.
- 5.226** The frequency 156.525 MHz is the international distress, safety and calling frequency for the maritime mobile VHF radiotelephone service using digital selective calling (DSC). The conditions for the use of this frequency and the band 156.4875-156.5625 MHz are contained in Articles **31** and **52**, and in Appendix **18**.

The frequency 156.8 MHz is the international distress, safety and calling frequency for the maritime mobile VHF radiotelephone service. The conditions for the use of this frequency and the band 156.7625-156.8375 MHz are contained in Article **31** and Appendix **18**.

In the bands 156-156.4875 MHz, 156.5625-156.7625 MHz, 156.8375-157.45 MHz, 160.6-160.975 MHz and 161.475-162.05 MHz, each administration shall give priority to the maritime mobile service on only such frequencies as are assigned to stations of the maritime mobile service by the administration (see Articles **31** and **52**, and Appendix **18**).

Any use of frequencies in these bands by stations of other services to which they are allocated should be avoided in areas where such use might cause harmful interference to the maritime mobile VHF radiocommunication service.

However, the frequencies 156.8 MHz and 156.525 MHz and the frequency bands in which priority is

given to the maritime mobile service may be used for radiocommunications on inland waterways subject to agreement between interested and affected administrations and taking into account current frequency usage and existing agreements. (WRC-07)

- 5.227** *Additional allocation:* the bands 156.4875-156.5125 MHz and 156.5375-156.5625 MHz are also allocated to the fixed and land mobile services on a primary basis. The use of these bands by the fixed and land mobile services shall not cause harmful interference to nor claim protection from the maritime mobile VHF radiocommunication service. (WRC-07)
- 5.227A** *Additional allocation:* the bands 161.9625-161.9875 MHz and 162.0125-162.0375 MHz are also allocated to the mobile-satellite service (Earth-to-space) on a secondary basis for the reception of automatic identification system (AIS) emissions from stations operating in the maritime-mobile service (see Appendix 18). (WRC-07)
- 5.228** Not used.
- 5.229** *Alternative allocation:* in Morocco, the band 162-174 MHz is allocated to the broadcasting service on a primary basis. The use of this band shall be subject to agreement with administrations having services, operating or planned, in accordance with the Table which are likely to be affected. Stations in existence on 1 January 1981, with their technical characteristics as of that date, are not affected by such agreement.
- 5.230** *Additional allocation:* in China, the band 163-167 MHz is also allocated to the space operation service (space-to-Earth) on a primary basis, subject to agreement obtained under No. **9.21**.
- 5.231** *Additional allocation:* in Afghanistan, China and Pakistan, the band 167-174 MHz is also allocated to the broadcasting service on a primary basis. The introduction of the broadcasting service into this band shall be subject to agreement with the neighbouring countries in Region 3 whose services are likely to be affected.
- 5.232** *Additional allocation:* in Japan, the band 170-174 MHz is also allocated to the broadcasting service on a primary basis.
- 5.233** *Additional allocation:* in China, the band 174-184 MHz is also allocated to the space research (space-to-Earth) and the space operation (space-to-Earth) services on a primary basis, subject to agreement obtained under No. **9.21**. These services shall not cause harmful interference to, or claim protection from, existing or planned broadcasting stations.
- 5.234** *Different category of service:* in Mexico, the allocation of the band 174-216 MHz to the fixed and mobile services is on a primary basis (see No. **5.33**).
- 5.235** *Additional allocation:* in Germany, Austria, Belgium, Denmark, Spain, Finland, France, Israel, Italy, Liechtenstein, Malta, Monaco, Norway, the Netherlands, the United Kingdom, Sweden and Switzerland, the band 174-223 MHz is also allocated to the land mobile service on a primary basis. However, the stations of the land mobile service shall not cause harmful interference to, or claim protection from, broadcasting stations, existing or planned, in countries other than those listed in this footnote.
- 5.236** Not used.
- 5.237** *Additional allocation:* in Congo (Rep. of the), Eritrea, Ethiopia, Gambia, Guinea, the Libyan Arab Jamahiriya, Malawi, Mali, Sierra Leone, Somalia and Chad, the band 174-223 MHz is also allocated to the fixed and mobile services on a secondary basis. (WRC-07)
- 5.238** *Additional allocation:* in Bangladesh, India, Pakistan and the Philippines, the band 200-216 MHz is also allocated to the aeronautical radionavigation service on a primary basis.
- 5.239** Not used.
- 5.240** *Additional allocation:* in China and India, the band 216-223 MHz is also allocated to the aeronautical radionavigation service on a primary basis and to the radiolocation service on a secondary basis.
- 5.241** In Region 2, no new stations in the radiolocation service may be authorized in the band 216-225 MHz. Stations authorized prior to 1 January 1990 may continue to operate on a secondary basis.
- 5.242** *Additional allocation:* in Canada, the band 216-220 MHz is also allocated to the land mobile service on a primary basis.
- 5.243** *Additional allocation:* in Somalia, the band 216-225 MHz is also allocated to the aeronautical radionavigation service on a primary basis, subject to not causing harmful interference to existing or planned broadcasting services in other countries.
- 5.244** (SUP - WRC-97)
- 5.245** *Additional allocation:* in Japan, the band 222-223 MHz is also allocated to the aeronautical radionavigation service on a primary basis and to the radiolocation service on a secondary basis.
- 5.246** *Alternative allocation:* in Spain, France, Israel and Monaco, the band 223-230 MHz is allocated to

- the broadcasting and land mobile services on a primary basis (see No. 5.33) on the basis that, in the preparation of frequency plans, the broadcasting service shall have prior choice of frequencies; and allocated to the fixed and mobile, except land mobile, services on a secondary basis. However, the stations of the land mobile service shall not cause harmful interference to, or claim protection from, existing or planned broadcasting stations in Morocco and Algeria.
- 5.247** *Additional allocation:* in Saudi Arabia, Bahrain, the United Arab Emirates, Jordan, Oman, Qatar and Syrian Arab Republic, the band 223-235 MHz is also allocated to the aeronautical radionavigation service on a primary basis.
- 5.248** and **5.249** Not used.
- 5.250** *Additional allocation:* in China, the band 225-235 MHz is also allocated to the radio astronomy service on a secondary basis.
- 5.251** *Additional allocation:* in Nigeria, the band 230-235 MHz is also allocated to the aeronautical radionavigation service on a primary basis, subject to agreement obtained under No. 9.21.
- 5.252** *Alternative allocation:* in Botswana, Lesotho, Malawi, Mozambique, Namibia, South Africa, Swaziland, Zambia and Zimbabwe, the bands 230-238 MHz and 246-254 MHz are allocated to the broadcasting service on a primary basis, subject to agreement obtained under No. 9.21.
- 5.253** Not used.
- 5.254** The bands 235-322 MHz and 335.4-399.9 MHz may be used by the mobile-satellite service, subject to agreement obtained under No. 9.21, on condition that stations in this service do not cause harmful interference to those of other services operating or planned to be operated in accordance with the Table of Frequency Allocations except for the additional allocation made in footnote No. 5.256A. (WRC-03)
- 5.255** The bands 312-315 MHz (Earth-to-space) and 387-390 MHz (space-to-Earth) in the mobile-satellite service may also be used by non-geostationary-satellite systems. Such use is subject to coordination under No. 9.11A.
- 5.256** The frequency 243 MHz is the frequency in this band for use by survival craft stations and equipment used for survival purposes. (WRC-07)
- 5.256A** *Additional allocation:* in China, the Russian Federation, Kazakhstan and Ukraine, the band 258-261 MHz is also allocated to the space research service (Earth-to-space) and space operation service (Earth-to-space) on a primary basis. Stations in the space research service (Earth-to-space) and space operation service (Earth-to-space) shall not cause harmful interference to, nor claim protection from, nor constrain the use and development of the mobile service systems and mobile-satellite service systems operating in the band. Stations in space research service (Earth-to-space) and space operation service (Earth-to-space) shall not constrain the future development of fixed service systems of other countries.(WRC-03)
- 5.257** The band 267-272 MHz may be used by administrations for space telemetry in their countries on a primary basis, subject to agreement obtained under No. 9.21.
- 5.258** The use of the band 328.6-335.4 MHz by the aeronautical radionavigation service is limited to Instrument Landing Systems (glide path).
- 5.259** *Additional allocation:* in Egypt, Israel and the Syrian Arab Republic, the band 328.6-335.4 MHz is also allocated to the mobile service on a secondary basis, subject to agreement obtained under No. 9.21. In order to ensure that harmful interference is not caused to stations of the aeronautical radionavigation service, stations of the mobile service shall not be introduced in the band until it is no longer required for the aeronautical radionavigation service by any administration which may be identified in the application of the procedure invoked under No. 9.21. (WRC-07)
- 5.260** Recognizing that the use of the band 399.9-400.05 MHz by the fixed and mobile services may cause harmful interference to the radionavigation satellite service, administrations are urged not to authorize such use in application of No. 4.4.
- 5.261** Emissions shall be confined in a band of ± 25 kHz about the standard frequency 400.1 MHz.
- 5.262** *Additional allocation:* in Saudi Arabia, Armenia, Azerbaijan, Bahrain, Belarus, Botswana, Colombia, Costa Rica, Cuba, Egypt, the United Arab Emirates, Ecuador, the Russian Federation, Georgia, Hungary, Iran (Islamic Republic of), Iraq, Israel, Jordan, Kazakhstan, Kuwait, Liberia, Malaysia, Moldova, Uzbekistan, Pakistan, the Philippines, Qatar, the Syrian Arab Republic, Kyrgyzstan, Romania, Singapore, Somalia, Tajikistan, Turkmenistan and Ukraine, the band 400.05-401 MHz is also allocated to the fixed and mobile services on a primary basis. (WRC-07)
- 5.263** The band 400.15-401 MHz is also allocated to the space research service in the space-to-space direction for communications with manned space vehicles. In this application, the space research service will not be regarded as a safety service.

- 5.264** The use of the band 400.15-401 MHz by the mobile-satellite service is subject to coordination under No. **9.11A**. The power flux-density limit indicated in Annex 1 of Appendix 5 shall apply until such time as a competent world radiocommunication conference revises it.
- 5.265** Not used.
- 5.266** The use of the band 406-406.1 MHz by the mobile-satellite service is limited to low power satellite emergency position-indicating radiobeacons (see also Article **31**). (WRC-07)
- 5.267** Any emission capable of causing harmful interference to the authorized uses of the band 406-406.1 MHz is prohibited.
- 5.268** Use of the band 410-420 MHz by the space research service is limited to communications within 5 km of an orbiting, manned space vehicle. The power flux-density at the surface of the Earth produced by emissions from extra-vehicular activities shall not exceed $-153 \text{ dB(W/m}^2\text{)}$ for $0^\circ \leq \delta \leq 5^\circ$, $-153 + 0.077(\delta - 5) \text{ dB(W/m}^2\text{)}$ for $5^\circ \leq \delta \leq 70^\circ$ and $-148 \text{ dB(W/m}^2\text{)}$ for $70^\circ \leq \delta \leq 90^\circ$, where δ is the angle of arrival of the radio-frequency wave and the reference bandwidth is 4 kHz. No. **4.10** does not apply to extra-vehicular activities. In this frequency band the space research (space-to-space) service shall not claim protection from, nor constrain the use and development of, stations of the fixed and mobile services. (WRC-97)
- 5.269** *Different category of service:* in Australia, the United States, India, Japan and the United Kingdom, the allocation of the bands 420-430 MHz and 440-450 MHz to the radiolocation service is on a primary basis (see No. **5.33**).
- 5.270** *Additional allocation:* in Australia, the United States, Jamaica and the Philippines, the bands 420-430 MHz and 440-450 MHz are also allocated to the amateur service on a secondary basis.
- 5.271** *Additional allocation:* in Belarus, China, India, Kyrgyzstan and Turkmenistan, the band 420-460 MHz is also allocated to the aeronautical radionavigation service (radio altimeters) on a secondary basis. (WRC-07)
- 5.272** *Different category of service:* in France, the allocation of the band 430-434 MHz to the amateur service is on a secondary basis (see No. **5.32**).
- 5.273** *Different category of service:* in the Libyan Arab Jamahiriya, the allocation of the bands 430-432 MHz and 438-440 MHz to the radiolocation service is on a secondary basis (see No. **5.32**). (WRC-03)
- 5.274** *Alternative allocation:* in Denmark, Norway and Sweden, the bands 430-432 MHz and 438-440 MHz are allocated to the fixed and mobile, except aeronautical mobile, services on a primary basis.
- 5.275** *Additional allocation:* in Croatia, Estonia, Finland, Libyan Arab Jamahiriya, The Former Yugoslav Republic of Macedonia, Montenegro, Serbia and Slovenia, the bands 430-432 MHz and 438-440 MHz are also allocated to the fixed and mobile, except aeronautical mobile, services on a primary basis. (WRC-07)
- 5.276** *Additional allocation:* in Afghanistan, Algeria, Saudi Arabia, Bahrain, Bangladesh, Brunei Darussalam, Burkina Faso, Burundi, Egypt, the United Arab Emirates, Ecuador, Eritrea, Ethiopia, Greece, Guinea, India, Indonesia, Iran (Islamic Republic of), Iraq, Israel, Italy, Libyan Arab Jamahiriya, Jordan, Kenya, Kuwait, Lebanon, Malaysia, Malta, Nigeria, Oman, Pakistan, the Philippines, Qatar, the Syrian Arab Republic, the Dem. People's Rep. of Korea, Singapore, Somalia, Switzerland, Tanzania, Thailand, Togo, Turkey and Yemen, the band 430-440 MHz is also allocated to the fixed service on a primary basis and the bands 430-435 MHz and 438-440 MHz are also allocated to the mobile, except aeronautical mobile, service on a primary basis. (WRC-07)
- 5.277** *Additional allocation:* in Angola, Armenia, Azerbaijan, Belarus, Cameroon, Congo (Rep. of the), Djibouti, the Russian Federation, Georgia, Hungary, Israel, Kazakhstan, Mali, Moldova, Mongolia, Uzbekistan, Poland, Kyrgyzstan, Slovakia, Romania, Rwanda, Tajikistan, Chad, Turkmenistan and Ukraine, the band 430-440 MHz is also allocated to the fixed service on a primary basis. (WRC-07)
- 5.278** *Different category of service:* in Argentina, Colombia, Costa Rica, Cuba, Guyana, Honduras, Panama and Venezuela, the allocation of the band 430-440 MHz to the amateur service is on a primary basis (see No. **5.33**).
- 5.279** *Additional allocation:* in Mexico, the bands 430-435 MHz and 438-440 MHz are also allocated on a primary basis to the land mobile service, subject to agreement obtained under No. **9.21**.
- 5.279A** The use of this band by sensors in the Earth exploration-satellite service (active) shall be in accordance with Recommendation ITU-R SA.1260-1. Additionally, the Earth exploration-satellite service (active) in the band 432-438 MHz shall not cause harmful interference to the aeronautical radionavigation service in China. The provisions of this footnote in no way diminish the obligation of the Earth exploration-satellite service (active) to operate as a secondary service in accordance with Nos. **5.29** and **5.30**. (WRC-03)
- 5.280** In Germany, Austria, Bosnia and Herzegovina, Croatia, The Former Yugoslav Republic of Macedonia, Liechtenstein, Montenegro, Portugal, Serbia, Slovenia and Switzerland, the band 433.05-434.79 MHz

- (centre frequency 433.92 MHz) is designated for industrial, scientific and medical (ISM) applications. Radiocommunication services of these countries operating within this band must accept harmful interference which may be caused by these applications. ISM equipment operating in this band is subject to the provisions of No. **15.13**. (WRC-07)
- 5.281** *Additional allocation:* in the French Overseas Departments in Region 2 and India, the band 433.75-434.25 MHz is also allocated to the space operation service (Earth-to-space) on a primary basis. In France and in Brazil, the band is allocated to the same service on a secondary basis.
- 5.282** In the bands 435-438 MHz, 1 260-1 270 MHz, 2 400-2 450 MHz, 3 400-3 410 MHz (in Regions 2 and 3 only) and 5 650-5 670 MHz, the amateur-satellite service may operate subject to not causing harmful interference to other services operating in accordance with the Table (see No. **5.43**). Administrations authorizing such use shall ensure that any harmful interference caused by emissions from a station in the amateur-satellite service is immediately eliminated in accordance with the provisions of No. **25.11**. The use of the bands 1 260-1 270 MHz and 5 650-5 670 MHz by the amateur-satellite service is limited to the Earth-to-space direction.
- 5.283** *Additional allocation:* in Austria, the band 438-440 MHz is also allocated to the fixed and mobile, except aeronautical mobile, services on a primary basis.
- 5.284** *Additional allocation:* in Canada, the band 440-450 MHz is also allocated to the amateur service on a secondary basis.
- 5.285** *Different category of service:* in Canada, the allocation of the band 440-450 MHz to the radiolocation service is on a primary basis (see No. **5.33**).
- 5.286** The band 449.75-450.25 MHz may be used for the space operation service (Earth-to-space) and the space research service (Earth-to-space), subject to agreement obtained under No. **9.21**.
- 5.286A** The use of the bands 454-456 MHz and 459-460 MHz by the mobile-satellite service is subject to coordination under No. **9.11A**. (WRC-97)
- 5.286AA** The band 450-470 MHz is identified for use by administrations wishing to implement International Mobile Telecommunications (IMT). See Resolution **224 (Rev.WRC-07)**. This identification does not preclude the use of this band by any application of the services to which it is allocated and does not establish priority in the Radio Regulations. (WRC-07)
- 5.286B** The use of the band 454-455 MHz in the countries listed in No. **5.286D**, 455-456 MHz and 459-460 MHz in Region 2, and 454-456 MHz and 459-460 MHz in the countries listed in No. **5.286E**, by stations in the mobile-satellite service, shall not cause harmful interference to, or claim protection from, stations in the fixed or mobile services operating in accordance with the Table of Frequency Allocations. (WRC-97)
- 5.286C** The use of the band 454-455 MHz in the countries listed in No. **5.286D**, 455-456 MHz and 459-460 MHz in Region 2, and 454-456 MHz and 459-460 MHz in the countries listed in No. **5.286E**, by stations in the mobile-satellite service, shall not constrain the development and use of the fixed and mobile services operating in accordance with the Table of Frequency Allocations. (WRC-97)
- 5.286D** *Additional allocation:* in Canada, the United States and Panama, the band 454-455 MHz is also allocated to the mobile-satellite service (Earth-to-space) on a primary basis. (WRC-07)
- 5.286E** *Additional allocation:* in Cape Verde, Nepal and Nigeria, the bands 454-456 MHz and 459-460 MHz are also allocated to the mobile-satellite (Earth-to-space) service on a primary basis. (WRC-07)
- 5.287** In the maritime mobile service, the frequencies 457.525 MHz, 457.550 MHz, 457.575 MHz, 467.525 MHz, 467.550 MHz and 467.575 MHz may be used by on-board communication stations. Where needed, equipment designed for 12.5 kHz channel spacing using also the additional frequencies 457.5375 MHz, 457.5625 MHz, 467.5375 MHz and 467.5625 MHz may be introduced for on-board communications. The use of these frequencies in territorial waters may be subject to the national regulations of the administration concerned. The characteristics of the equipment used shall conform to those specified in Recommendation ITU-R M.1174-2. (WRC-07)
- 5.288** In the territorial waters of the United States and the Philippines, the preferred frequencies for use by on-board communication stations shall be 457.525 MHz, 457.550 MHz, 457.575 MHz and 457.600 MHz paired, respectively, with 467.750 MHz, 467.775 MHz, 467.800 MHz and 467.825 MHz. The characteristics of the equipment used shall conform to those specified in Recommendation ITU-R M.1174-1. (WRC-03)
- 5.289** Earth exploration-satellite service applications, other than the meteorological-satellite service, may also be used in the bands 460-470 MHz and 1 690-1 710 MHz for space-to-Earth transmissions subject to not causing harmful interference to stations operating in accordance with the Table.
- 5.290** *Different category of service:* in Afghanistan, Azerbaijan, Belarus, China, the Russian Federation, Japan,

Mongolia, Kyrgyzstan, Slovakia, Tajikistan, Turkmenistan and Ukraine, the allocation of the band 460-470 MHz to the meteorological-satellite service (space-to-Earth) is on a primary basis (see No. 5.33), subject to agreement obtained under No. 9.21. (WRC-07)

- 5.291** *Additional allocation:* in China, the band 470-485 MHz is also allocated to the space research (space-to-Earth) and the space operation (space-to-Earth) services on a primary basis subject to agreement obtained under No. 9.21 and subject to not causing harmful interference to existing and planned broadcasting stations.
- 5.291A** *Additional allocation:* in Germany, Austria, Denmark, Estonia, Finland, Liechtenstein, Norway, Netherlands, the Czech Rep. and Switzerland, the band 470-494 MHz is also allocated to the radiolocation service on a secondary basis. This use is limited to the operation of wind profiler radars in accordance with Resolution 217 (WRC-97). (WRC-97)
- 5.292** *Different category of service:* in Mexico, the allocation of the band 470-512 MHz to the fixed and mobile services, and in Argentina, Uruguay and Venezuela to the mobile service, is on a primary basis (see No. 5.33), subject to agreement obtained under No. 9.21. (WRC-07)
- 5.293** *Different category of service:* in Canada, Chile, Colombia, Cuba, the United States, Guyana, Honduras, Jamaica, Mexico, Panama and Peru, the allocation of the bands 470-512 MHz and 614-806 MHz to the fixed service is on a primary basis (see No. 5.33), subject to agreement obtained under No. 9.21. In Canada, Chile, Colombia, Cuba, the United States, Guyana, Honduras, Jamaica, Mexico, Panama and Peru, the allocation of the bands 470-512 MHz and 614-698 MHz to the mobile service is on a primary basis (see No. 5.33), subject to agreement obtained under No. 9.21. In Argentina and Ecuador, the allocation of the band 470-512 MHz to the fixed and mobile services is on a primary basis (see No. 5.33), subject to agreement obtained under No. 9.21. (WRC-07)
- 5.294** *Additional allocation:* in Saudi Arabia, Burundi, Cameroon, Côte d'Ivoire, Egypt, Ethiopia, Israel, the Libyan Arab Jamahiriya, Kenya, Malawi, the Syrian Arab Republic, Sudan, Chad and Yemen, the band 470-582 MHz is also allocated to the fixed service on a secondary basis. (WRC-07)
- 5.295** Not used.
- 5.296** *Additional allocation:* in Germany, Saudi Arabia, Austria, Belgium, Côte d'Ivoire, Denmark, Egypt, Spain, Finland, France, Ireland, Israel, Italy, the Libyan Arab Jamahiriya, Jordan, Lithuania, Malta, Morocco, Monaco, Norway, Oman, the Netherlands, Portugal, the Syrian Arab Republic, the United Kingdom, Sweden, Switzerland, Swaziland and Tunisia, the band 470-790 MHz is also allocated on a secondary basis to the land mobile service, intended for applications ancillary to broadcasting. Stations of the land mobile service in the countries listed in this footnote shall not cause harmful interference to existing or planned stations operating in accordance with the Table in countries other than those listed in this footnote. (WRC-07)
- 5.297** *Additional allocation:* in Canada, Costa Rica, Cuba, El Salvador, the United States, Guatemala, Guyana, Honduras, Jamaica and Mexico, the band 512-608 MHz is also allocated to the fixed and mobile services on a primary basis, subject to agreement obtained under No. 9.21. (WRC-07)
- 5.298** *Additional allocation:* in India, the band 549.75-550.25 MHz is also allocated to the space operation service (space-to-Earth) on a secondary basis.
- 5.299** Not used.
- 5.300** *Additional allocation:* in Saudi Arabia, Egypt, Israel, the Libyan Arab Jamahiriya, Jordan, Oman, the Syrian Arab Republic and Sudan, the band 582-790 MHz is also allocated to the fixed and mobile, except aeronautical mobile, services on a secondary basis. (WRC-07)
- 5.301** Not used.
- 5.302** *Additional allocation:* in the United Kingdom, the band 590-598 MHz is also allocated to the aeronautical radionavigation service on a primary basis. All new assignments to stations in the aeronautical radionavigation service, including those transferred from the adjacent bands, shall be subject to coordination with the Administrations of the following countries: Germany, Belgium, Denmark, Spain, France, Ireland, Luxembourg, Morocco, Norway and the Netherlands.
- 5.303** Not used.
- 5.304** *Additional allocation:* in the African Broadcasting Area (see Nos. 5.10 to 5.13), the band 606-614 MHz is also allocated to the radio astronomy service on a primary basis.
- 5.305** *Additional allocation:* in China, the band 606-614 MHz is also allocated to the radio astronomy service on a primary basis.
- 5.306** *Additional allocation:* in Region 1, except in the African Broadcasting Area (see Nos. 5.10 to 5.13), and in Region 3, the band 608-614 MHz is also allocated to the radio astronomy service on a secondary basis.

- 5.307** *Additional allocation:* in India, the band 608-614 MHz is also allocated to the radio astronomy service on a primary basis.
- 5.308** Not used.
- 5.309** *Different category of service:* in Costa Rica, El Salvador and Honduras, the allocation of the band 614-806 MHz to the fixed service is on a primary basis (see No. **5.33**), subject to agreement obtained under No. **9.21**.
- 5.310** (SUP - WRC-97)
- 5.311** (SUP - WRC-07)
- 5.311A** For the frequency band 620-790 MHz, see also Resolution **549 (WRC-07)**. (WRC-07)
- 5.312** *Additional allocation:* in Armenia, Azerbaijan, Belarus, Bulgaria, the Russian Federation, Georgia, Hungary, Kazakhstan, Moldova, Mongolia, Uzbekistan, Poland, Kyrgyzstan, Slovakia, the Czech Rep., Romania, Tajikistan, Turkmenistan and Ukraine, the band 645-862 MHz is also allocated to the aeronautical radionavigation service on a primary basis. (WRC-03)
- 5.313** (SUP - WRC-97)
- 5.313A** The band, or portions of the band 698-790 MHz, in Bangladesh, China, Korea (Rep. of), India, Japan, New Zealand, Papua New Guinea, Philippines and Singapore are identified for use by these administrations wishing to implement International Mobile Telecommunications (IMT). This identification does not preclude the use of these bands by any application of the services to which they are allocated and does not establish priority in the Radio Regulations. In China, the use of IMT in this band will not start until 2015. (WRC-07)
- 5.313B** *Different category of service:* in Brazil, the allocation of the band 698-806 MHz to the mobile service is on a secondary basis (see No. **5.32**). (WRC-07)
- 5.314** *Additional allocation:* in Austria, Italy, Moldova, Uzbekistan, Kyrgyzstan, the United Kingdom and Swaziland, the band 790-862 MHz is also allocated to the land mobile service on a secondary basis. (WRC-07)
- 5.315** *Alternative allocation:* in Greece, Italy and Tunisia, the band 790-838 MHz is allocated to the broadcasting service on a primary basis. (WRC-2000)
- 5.316** *Additional allocation:* in Germany, Saudi Arabia, Bosnia and Herzegovina, Burkina Faso, Cameroon, Côte d'Ivoire, Croatia, Denmark, Egypt, Finland, Greece, Israel, the Libyan Arab Jamahiriya, Jordan, Kenya, The Former Yugoslav Republic of Macedonia, Liechtenstein, Mali, Monaco, Montenegro, Norway, the Netherlands, Portugal, the United Kingdom, the Syrian Arab Republic, Serbia, Sweden and Switzerland, the band 790-830 MHz, and in these same countries and in Spain, France, Gabon and Malta, the band 830-862 MHz, are also allocated to the mobile, except aeronautical mobile, service on a primary basis. However, stations of the mobile service in the countries mentioned in connection with each band referred to in this footnote shall not cause harmful interference to, or claim protection from, stations of services operating in accordance with the Table in countries other than those mentioned in connection with the band. This allocation is effective until 16 June 2015. (WRC-07)
- 5.316A** *Additional allocation:* in Spain, France, Gabon and Malta, the band 790-830 MHz, in Angola, Bahrain, Benin, Botswana, Congo (Rep. of the), French Overseas Departments and Communities of Region 1, Gambia, Ghana, Guinea, Kuwait, Lesotho, Lebanon, Malawi, Morocco, Mauritania, Mozambique, Namibia, Niger, Oman, Uganda, Poland, Qatar, Rwanda, Senegal, Sudan, South Africa, Swaziland, Tanzania, Chad, Togo, Yemen, Zambia and Zimbabwe, the band 790-862 MHz, in Georgia, the band 806-862 MHz, and in Lithuania, the band 830-862 MHz is also allocated to the mobile, except aeronautical mobile, service on a primary basis subject to the agreement by the administrations concerned obtained under No. **9.21** and under the GE06 Agreement, as appropriate, including those administrations mentioned in No. **5.312** where appropriate. However, stations of the mobile service in the countries mentioned in connection with each band referred to in this footnote shall not cause unacceptable interference to, nor claim protection from, stations of services operating in accordance with the Table in countries other than those mentioned in connection with the band. Frequency assignments to the mobile service under this allocation in Lithuania and Poland shall not be used without the agreement of the Russian Federation and Belarus. This allocation is effective until 16 June 2015. (WRC-07)
- 5.316B** In Region 1, the allocation to the mobile, except aeronautical mobile, service on a primary basis in the frequency band 790-862 MHz shall come into effect from 17 June 2015 and shall be subject to agreement obtained under No. **9.21** with respect to the aeronautical radionavigation service in countries mentioned in No. **5.312**. For countries party to the GE06 Agreement, the use of stations of the mobile service is also subject to the successful application of the procedures of that Agreement. Resolutions **224 (Rev. WRC-07)** and **749 (WRC-07)** shall apply. (WRC-07)

- 5.317** *Additional allocation:* in Region 2 (except Brazil and the United States), the band 806-890 MHz is also allocated to the mobile-satellite service on a primary basis, subject to agreement obtained under No. **9.21**. The use of this service is intended for operation within national boundaries.
- 5.317A** Those parts of the band 698-960 MHz in Region 2 and the band 790-960 MHz in Regions 1 and 3 which are allocated to the mobile service on a primary basis are identified for use by administrations wishing to implement International Mobile Telecommunications (IMT). See Resolutions **224 (Rev.WRC-07)** and **749 (WRC-07)**. This identification does not preclude the use of these bands by any application of the services to which they are allocated and does not establish priority in the Radio Regulations. (WRC-07)
- 5.318** *Additional allocation:* in Canada, the United States and Mexico, the bands 849-851 MHz and 894-896 MHz are also allocated to the aeronautical mobile service on a primary basis, for public correspondence with aircraft. The use of the band 849-851 MHz is limited to transmissions from aeronautical stations and the use of the band 894-896 MHz is limited to transmissions from aircraft stations.
- 5.319** *Additional allocation:* in Belarus, the Russian Federation and Ukraine, the bands 806-840 MHz (Earth-to-space) and 856-890 MHz (space-to-Earth) are also allocated to the mobile-satellite, except aeronautical mobile-satellite (R), service. The use of these bands by this service shall not cause harmful interference to, or claim protection from, services in other countries operating in accordance with the Table of Frequency Allocations and is subject to special agreements between the administrations concerned.
- 5.320** *Additional allocation:* in Region 3, the bands 806-890 MHz and 942-960 MHz are also allocated to the mobile-satellite, except aeronautical mobile-satellite (R), service on a primary basis, subject to agreement obtained under No. **9.21**. The use of this service is limited to operation within national boundaries. In seeking such agreement, appropriate protection shall be afforded to services operating in accordance with the Table, to ensure that no harmful interference is caused to such services.
- 5.321** (SUP - WRC-07)
- 5.322** In Region 1, in the band 862-960 MHz, stations of the broadcasting service shall be operated only in the African Broadcasting Area (see Nos. **5.10** to **5.13**) excluding Algeria, Egypt, Spain, the Libyan Arab Jamahiriya, Morocco, Namibia, Nigeria, South Africa, Tanzania, Zimbabwe and Zambia, subject to agreement obtained under No. **9.21**. (WRC-2000)
- 5.323** *Additional allocation:* in Armenia, Azerbaijan, Belarus, Bulgaria, the Russian Federation, Hungary, Kazakhstan, Moldova, Uzbekistan, Poland, Kyrgyzstan, Romania, Tajikistan, Turkmenistan and Ukraine, the band 862-960 MHz is also allocated to the aeronautical radionavigation service on a primary basis. Such use is subject to agreement obtained under No. **9.21** with administrations concerned and limited to ground-based radiobeacons in operation on 27 October 1997 until the end of their lifetime. (WRC-07)
- 5.324** Not used.
- 5.325** *Different category of service:* in the United States, the allocation of the band 890-942 MHz to the radiolocation service is on a primary basis (see No. **5.33**), subject to agreement obtained under No. **9.21**.
- 5.325A** *Different category of service:* in Cuba, the allocation of the band 902-915 MHz to the land mobile service is on a primary basis. (WRC-2000)
- 5.326** *Different category of service:* in Chile, the band 903-905 MHz is allocated to the mobile, except aeronautical mobile, service on a primary basis, subject to agreement obtained under No. **9.21**.
- 5.327** *Different category of service:* in Australia, the allocation of the band 915-928 MHz to the radiolocation service is on a primary basis (see No. **5.33**).
- 5.327A** The use of the band 960-1 164 MHz by the aeronautical mobile (R) service is limited to systems that operate in accordance with recognized international aeronautical standards. Such use shall be in accordance with Resolution **417 (WRC-07)**. (WRC-07)
- 5.328** The use of the band 960-1 215 MHz by the aeronautical radionavigation service is reserved on a worldwide basis for the operation and development of airborne electronic aids to air navigation and any directly associated ground-based facilities. (WRC-2000)
- 5.328A** Stations in the radionavigation-satellite service in the band 1 164-1 215 MHz shall operate in accordance with the provisions of Resolution **609 (Rev.WRC-07)** and shall not claim protection from stations in the aeronautical radionavigation service in the band 960-1 215 MHz. No. **5.43A** does not apply. The provisions of No. **21.18** shall apply. (WRC-07)
- 5.328B** The use of the bands 1 164-1 300 MHz, 1 559-1 610 MHz and 5 010-5 030 MHz by systems and networks in the radionavigation-satellite service for which complete coordination or notification information, as appropriate, is received by the Radiocommunication Bureau after 1 January 2005 is

- subject to the application of the provisions of Nos. **9.12**, **9.12A** and **9.13**. Resolution **610 (WRC-03)** shall also apply; however, in the case of radionavigation-satellite service (space-to-space) networks and systems, Resolution **610 (WRC-03)** shall only apply to transmitting space stations. In accordance with No. **5.329A**, for systems and networks in the radionavigation-satellite service (space-to-space) in the bands 1 215-1 300 MHz and 1 559-1 610 MHz, the provisions of Nos. **9.7**, **9.12**, **9.12A** and **9.13** shall only apply with respect to other systems and networks in the radionavigation-satellite service (space-to-space). (WRC-07)
- 5.329** Use of the radionavigation-satellite service in the band 1 215-1 300 MHz shall be subject to the condition that no harmful interference is caused to, and no protection is claimed from, the radionavigation service authorized under No. **5.331**. Furthermore, the use of the radionavigation-satellite service in the band 1 215-1 300 MHz shall be subject to the condition that no harmful interference is caused to the radiolocation service. No. **5.43** shall not apply in respect of the radiolocation service. Resolution **608 (WRC-03)** shall apply. (WRC-03)
- 5.329A** Use of systems in the radionavigation-satellite service (space-to-space) operating in the bands 1 215-1 300 MHz and 1 559-1 610 MHz is not intended to provide safety service applications, and shall not impose any additional constraints on radionavigation-satellite service (space-to-Earth) systems or on other services operating in accordance with the Table of Frequency Allocations. (WRC-07)
- 5.330** *Additional allocation:* in Angola, Saudi Arabia, Bahrain, Bangladesh, Cameroon, China, the United Arab Emirates, Eritrea, Ethiopia, Guyana, India, Indonesia, Iran (Islamic Republic of), Iraq, Israel, the Libyan Arab Jamahiriya, Japan, Jordan, Kuwait, Lebanon, Mozambique, Nepal, Pakistan, the Philippines, Qatar, the Syrian Arab Republic, Somalia, Sudan, Chad, Togo and Yemen, the band 1 215-1 300 MHz is also allocated to the fixed and mobile services on a primary basis. (WRC-03)
- 5.331** *Additional allocation:* in Algeria, Germany, Saudi Arabia, Australia, Austria, Bahrain, Belarus, Belgium, Benin, Bosnia and Herzegovina, Brazil, Burkina Faso, Burundi, Cameroon, China, Korea (Rep. of), Croatia, Denmark, Egypt, the United Arab Emirates, Estonia, the Russian Federation, Finland, France, Ghana, Greece, Guinea, Equatorial Guinea, Hungary, India, Indonesia, Iran (Islamic Republic of), Iraq, Ireland, Israel, Jordan, Kenya, Kuwait, The Former Yugoslav Republic of Macedonia, Lesotho, Latvia, Lebanon, Liechtenstein, Lithuania, Luxembourg, Madagascar, Mali, Mauritania, Montenegro, Nigeria, Norway, Oman, the Netherlands, Poland, Portugal, Qatar, the Syrian Arab Republic, Dem. People's Rep. of Korea, Slovakia, the United Kingdom, Serbia, Slovenia, Somalia, Sudan, Sri Lanka, South Africa, Sweden, Switzerland, Thailand, Togo, Turkey, Venezuela and Viet Nam, the band 1 215-1 300 MHz is also allocated to the radionavigation service on a primary basis. In Canada and the United States, the band 1 240-1 300 MHz is also allocated to the radionavigation service, and use of the radionavigation service shall be limited to the aeronautical radionavigation service. (WRC-07)
- 5.332** In the band 1 215-1 260 MHz, active spaceborne sensors in the Earth exploration-satellite and space research services shall not cause harmful interference to, claim protection from, or otherwise impose constraints on operation or development of the radiolocation service, the radionavigation-satellite service and other services allocated on a primary basis. (WRC-2000)
- 5.333** (SUP - WRC-97)
- 5.334** *Additional allocation:* in Canada and the United States, the band 1 350-1,370 MHz is also allocated to the aeronautical radionavigation service on a primary basis. (WRC-03)
- 5.335** In Canada and the United States in the band 1 240-1 300 MHz, active spaceborne sensors in the earth exploration-satellite and space research services shall not cause interference to, claim protection from, or otherwise impose constraints on operation or development of the aeronautical radionavigation service. (WRC-97)
- 5.335A** In the band 1 260-1 300 MHz, active spaceborne sensors in the Earth exploration-satellite and space research services shall not cause harmful interference to, claim protection from, or otherwise impose constraints on operation or development of the radiolocation service and other services allocated by footnotes on a primary basis. (WRC-2000)
- 5.336** Not used.
- 5.337** The use of the bands 1 300-1 350 MHz, 2 700-2 900 MHz and 9 000-9 200 MHz by the aeronautical radionavigation service is restricted to ground-based radars and to associated airborne transponders which transmit only on frequencies in these bands and only when actuated by radars operating in the same band.
- 5.337A** The use of the band 1 300-1 350 MHz by earth stations in the radionavigation-satellite service and by stations in the radiolocation service shall not cause harmful interference to, nor constrain the operation and development of, the aeronautical-radionavigation service. (WRC-2000)

- 5.338** In Mongolia, Kyrgyzstan, Slovakia, the Czech Rep. and Turkmenistan, existing installations of the radionavigation service may continue to operate in the band 1 350-1 400 MHz. (WRC-07)
- 5.338A** In the bands 1 350-1 400 MHz, 1 427-1 452 MHz, 22.55-23.55 GHz, 30-31.3 GHz, 49.7-50.2 GHz, 50.4-50.9 GHz and 51.4-52.6 GHz, Resolution **750 (WRC-07)** applies. (WRC-07)
- 5.339** The bands 1 370-1 400 MHz, 2 640-2 655 MHz, 4 950-4 990 MHz and 15.20-15.35 GHz are also allocated to the space research (passive) and Earth exploration-satellite (passive) services on a secondary basis.
- 5.339A** (SUP - WRC-07)
- 5.340** All emissions are prohibited in the following bands:
- | | |
|------------------------------|---|
| 1 400-1 427 MHz, | |
| 2 690-2 700 MHz, | except those provided for by No. 5.422 , |
| 10.68-10.7 GHz, | except those provided for by No. 5.483 , |
| 15.35-15.4 GHz, | except those provided for by No. 5.511 , |
| 23.6-24 GHz, | |
| 31.3-31.5 GHz, | |
| 31.5-31.8 GHz, | in Region 2, |
| 48.94-49.04 GHz, | from airborne stations |
| 50.2-50.4 GHz ² , | |
| 52.6-54.25 GHz, | |
| 86-92 GHz, | |
| 100-102 GHz, | |
| 109.5-111.8 GHz, | |
| 114.25-116 GHz, | |
| 148.5-151.5 GHz, | |
| 164-167 GHz, | |
| 182-185 GHz, | |
| 190-191.8 GHz, | |
| 200-209 GHz, | |
| 226-231.5 GHz, | |
| 250-252 GHz. | (WRC-03) |
- 5.341** In the bands 1 400-1 727 MHz, 101-120 GHz and 197-220 GHz, passive research is being conducted by some countries in a programme for the search for intentional emissions of extraterrestrial origin.
- 5.342** *Additional allocation:* in Armenia, Azerbaijan, Belarus, Bulgaria, the Russian Federation, Uzbekistan, Kyrgyzstan and Ukraine, the band 1 429-1 535 MHz is also allocated to the aeronautical mobile service on a primary basis exclusively for the purposes of aeronautical telemetry within the national territory. As of 1 April 2007, the use of the band 1 452-1 492 MHz is subject to agreement between the administrations concerned. (WRC-2000)
- 5.343** In Region 2, the use of the band 1 435-1 535 MHz by the aeronautical mobile service for telemetry has priority over other uses by the mobile service.
- 5.344** *Alternative allocation:* in the United States, the band 1 452-1 525 MHz is allocated to the fixed and mobile services on a primary basis (see also No. **5.343**).
- 5.345** Use of the band 1 452-1 492 MHz by the broadcasting-satellite service, and by the broadcasting service, is limited to digital audio broadcasting and is subject to the provisions of Resolution **528 (WARC-92)** ^{*}.
- 5.346** Not used.
- 5.347** (SUP - WRC-07)
- 5.347A** (SUP - WRC-07)
- 5.348** The use of the band 1 518-1 525 MHz by the mobile-satellite service is subject to coordination under No. **9.11A**. In the band 1 518-1 525 MHz stations in the mobile-satellite service shall not claim protection from the stations in the fixed service. No. **5.43A** does not apply. (WRC-03)

² 5.340.1 The allocation to the Earth exploration-satellite service (passive) and the space research service (passive) in the band 50.2-50.4 GHz should not impose undue constraints on the use of the adjacent bands by the primary allocated services in those bands. (WRC-97)

^{*} Note by the Secretariat: This Resolution was revised by WRC-03.

- 5.348A** In the band 1 518-1 525 MHz, the coordination threshold in terms of the power flux-density levels at the surface of the Earth in application of No. **9.11A** for space stations in the mobile-satellite (space-to-Earth) service, with respect to the land mobile service use for specialized mobile radios or used in conjunction with public switched telecommunication networks (PSTN) operating within the territory of Japan, shall be -150 dB(W/m²) in any 4 kHz band for all angles of arrival, instead of those given in Table 5-2 of Appendix 5. In the band 1 518-1 525 MHz stations in the mobile-satellite service shall not claim protection from stations in the mobile service in the territory of Japan. No. **5.43A** does not apply. (WRC-03)
- 5.348B** In the band 1 518-1 525 MHz, stations in the mobile-satellite service shall not claim protection from aeronautical mobile telemetry stations in the mobile service in the territory of the United States (see Nos. **5.343** and **5.344**) and in the countries listed in No. **5.342**. No. **5.43A** does not apply. (WRC-03)
- 5.348C** (SUP - WRC-07)
- 5.349** *Different category of service:* in Saudi Arabia, Azerbaijan, Bahrain, Cameroon, Egypt, France, Iran (Islamic Republic of), Iraq, Israel, Kazakhstan, Kuwait, The Former Yugoslav Republic of Macedonia, Lebanon, Morocco, Qatar, Syrian Arab Republic, Kyrgyzstan, Turkmenistan and Yemen, the allocation of the band 1 525-1 530 MHz to the mobile, except aeronautical mobile, service is on a primary basis (see No. **5.33**). (WRC-07)
- 5.350** *Additional allocation:* in Azerbaijan, Kyrgyzstan and Turkmenistan, the band 1 525-1 530 MHz is also allocated to the aeronautical mobile service on a primary basis. (WRC-2000)
- 5.351** The bands 1 525-1 544 MHz, 1 545-1 559 MHz, 1 626.5-1 645.5 MHz and 1 646.5-1 660.5 MHz shall not be used for feeder links of any service. In exceptional circumstances, however, an earth station at a specified fixed point in any of the mobile-satellite services may be authorized by an administration to communicate via space stations using these bands.
- 5.351A** For the use of the bands 1 518-1 544 MHz, 1 545-1 559 MHz, 1 610-1 645.5 MHz, 1 646.5-1 660.5 MHz, 1 668-1 675 MHz, 1 980-2 010 MHz, 2 170-2 200 MHz, 2 483.5-2 520 MHz and 2 670-2 690 MHz by the mobile-satellite service, see Resolutions **212 (Rev.WRC-07)** and **225 (Rev.WRC-07)**. (WRC-07)
- 5.352** (SUP - WRC-97)
- 5.352A** In the band 1 525-1 530 MHz, stations in the mobile-satellite service, except stations in the maritime mobile-satellite service, shall not cause harmful interference to, or claim protection from, stations of the fixed service in France and French overseas territories in Region 3, Algeria, Saudi Arabia, Egypt, Guinea, India, Israel, Italy, Jordan, Kuwait, Mali, Malta, Morocco, Mauritania, Nigeria, Oman, Pakistan, the Philippines, Qatar, Syrian Arab Republic, Tanzania, Viet Nam and Yemen notified prior to 1 April 1998. (WRC-97)
- 5.353** (SUP - WRC-97)
- 5.353A** In applying the procedures of Section II of Article **9** to the mobile-satellite service in the bands 1 530-1 544 MHz and 1 626.5-1 645.5 MHz, priority shall be given to accommodating the spectrum requirements for distress, urgency and safety communications of the Global Maritime Distress and Safety System (GMDSS). Maritime mobile-satellite distress, urgency and safety communications shall have priority access and immediate availability over all other mobile satellite communications operating within a network. Mobile-satellite systems shall not cause unacceptable interference to, or claim protection from, distress, urgency and safety communications of the GMDSS. Account shall be taken of the priority of safety-related communications in the other mobile-satellite services. (The provisions of Resolution **222 (WRC-2000)** shall apply.) (WRC-2000)
- 5.354** The use of the bands 1 525-1 559 MHz and 1 626.5-1 660.5 MHz by the mobile-satellite services is subject to coordination under No. **9.11A**.
- 5.355** *Additional allocation:* in Bahrain, Bangladesh, Congo (Rep. of the), Egypt, Eritrea, Iraq, Israel, Kuwait, Lebanon, Malta, Qatar, Syrian Arab Republic, Somalia, Sudan, Chad, Togo and Yemen, the bands 1 540-1 559 MHz, 1 610-1 645.5 MHz and 1 646.5-1 660 MHz are also allocated to the fixed service on a secondary basis. (WRC-03)
- 5.356** The use of the band 1 544-1 545 MHz by the mobile-satellite service (space-to-Earth) is limited to distress and safety communications (see Article **31**).
- 5.357** Transmissions in the band 1 545-1 555 MHz from terrestrial aeronautical stations directly to aircraft stations, or between aircraft stations, in the aeronautical mobile (R) service are also authorized when such transmissions are used to extend or supplement the satellite-to-aircraft links.
- 5.357A** In applying the procedures of Section II of Article **9** to the mobile-satellite service in the bands 1 545-1 555 MHz and 1 646.5-1 656.5 MHz, priority shall be given to accommodating the spectrum requirements of the aeronautical mobile-satellite (R) service providing transmission of messages with priority 1 to 6 in Article **44**. Aeronautical mobile-satellite (R) service communications with priority 1 to

6 in Article 44 shall have priority access and immediate availability, by pre-emption if necessary, over all other mobile-satellite communications operating within a network. Mobile-satellite systems shall not cause unacceptable interference to, or claim protection from, aeronautical mobile-satellite (R) service communications with priority 1 to 6 in Article 44. Account shall be taken of the priority of safety-related communications in the other mobile-satellite services. (The provisions of Resolution 222 (WRC-2000) shall apply.) (WRC-2000)

5.358 (SUP - WRC-97)

5.359 *Additional allocation:* in Germany, Saudi Arabia, Armenia, Austria, Azerbaijan, Belarus, Benin, Bulgaria, Cameroon, Spain, the Russian Federation, France, Gabon, Georgia, Greece, Guinea, Guinea-Bissau, the Libyan Arab Jamahiriya, Jordan, Kazakhstan, Kuwait, Lebanon, Lithuania, Mauritania, Moldova, Uganda, Uzbekistan, Pakistan, Poland, the Syrian Arab Republic, Kyrgyzstan, the Dem. People's Rep. of Korea, Romania, Swaziland, Tajikistan, Tanzania, Tunisia, Turkmenistan and Ukraine, the bands 1 550-1 559 MHz, 1 610-1 645.5 MHz and 1 646.5-1 660 MHz are also allocated to the fixed service on a primary basis. Administrations are urged to make all practicable efforts to avoid the implementation of new fixed-service stations in these bands. (WRC-07)

5.360 to 5.362 (SUP - WRC-97)

5.362A In the United States, in the bands 1 555-1 559 MHz and 1 656.5-1 660.5 MHz, the aeronautical mobile-satellite (R) service shall have priority access and immediate availability, by pre-emption if necessary, over all other mobile-satellite communications operating within a network. Mobile-satellite systems shall not cause unacceptable interference to, or claim protection from, aeronautical mobile-satellite (R) service communications with priority 1 to 6 in Article 44. Account shall be taken of the priority of safety-related communications in the other mobile-satellite services. (WRC-97)

5.362B *Additional allocation:* The band 1 559-1 610 MHz is also allocated to the fixed service on a primary basis until 1 January 2010 in Algeria, Saudi Arabia, Cameroon, Libyan Arab Jamahiriya, Jordan, Mali, Mauritania, Syrian Arab Republic and Tunisia. After this date, the fixed service may continue to operate on a secondary basis until 1 January 2015, at which time this allocation shall no longer be valid. The band 1 559-1 610 MHz is also allocated to the fixed service on a secondary basis in Algeria, Germany, Armenia, Azerbaijan, Belarus, Benin, Bulgaria, Spain, Russian Federation, France, Gabon, Georgia, Guinea, Guinea-Bissau, Kazakhstan, Lithuania, Moldova, Nigeria, Uganda, Uzbekistan, Pakistan, Poland, Kyrgyzstan, Dem. People's Rep. of Korea, Romania, Senegal, Swaziland, Tajikistan, Tanzania, Turkmenistan and Ukraine until 1 January 2015, at which time this allocation shall no longer be valid. Administrations are urged to take all practicable steps to protect the radionavigation-satellite service and the aeronautical radionavigation service and not authorize new frequency assignments to fixed-service systems in this band. (WRC-07)

5.362C *Additional allocation:* in Congo (Rep. of the), Egypt, Eritrea, Iraq, Israel, Jordan, Malta, Qatar, the Syrian Arab Republic, Somalia, Sudan, Chad, Togo and Yemen, the band 1 559-1 610 MHz is also allocated to the fixed service on a secondary basis until 1 January 2015, at which time this allocation shall no longer be valid. Administrations are urged to take all practicable steps to protect the radionavigation-satellite service and not authorize new frequency assignments to fixed-service systems in this band. (WRC-07)

5.363 (SUP - WRC-07)

5.364 The use of the band 1 610-1 626.5 MHz by the mobile-satellite service (Earth-to-space) and by the radiodetermination-satellite service (Earth-to-space) is subject to coordination under No. 9.11A. A mobile earth station operating in either of the services in this band shall not produce a peak e.i.r.p. density in excess of -15 dB(W/4 kHz) in the part of the band used by systems operating in accordance with the provisions of No. 5.366 (to which No. 4.10 applies), unless otherwise agreed by the affected administrations. In the part of the band where such systems are not operating, the mean e.i.r.p. density of a mobile earth station shall not exceed -3 dB(W/4 kHz). Stations of the mobile-satellite service shall not claim protection from stations in the aeronautical radionavigation service, stations operating in accordance with the provisions of No. 5.366 and stations in the fixed service operating in accordance with the provisions of No. 5.359. Administrations responsible for the coordination of mobile-satellite networks shall make all practicable efforts to ensure protection of stations operating in accordance with the provisions of No. 5.366.

5.365 The use of the band 1 613.8-1 626.5 MHz by the mobile-satellite service (space-to-Earth) is subject to coordination under No. 9.11A.

5.366 The band 1 610-1 626.5 MHz is reserved on a worldwide basis for the use and development of airborne electronic aids to air navigation and any directly associated ground-based or satellite-borne facilities. Such satellite use is subject to agreement obtained under No. 9.21.

5.367 *Additional allocation:* The bands 1 610-1 626.5 MHz and 5 000-5 150 MHz are also allocated to the aeronautical mobile-satellite (R) service on a primary basis, subject to agreement obtained under No. 9.21.

- 5.368** With respect to the radiodetermination-satellite and mobile-satellite services the provisions of No. **4.10** do not apply in the band 1 610-1 626.5 MHz, with the exception of the aeronautical radionavigation-satellite service.
- 5.369** *Different category of service:* in Angola, Australia, Burundi, China, Eritrea, Ethiopia, India, Iran (Islamic Republic of), Israel, the Libyan Arab Jamahiriya, Lebanon, Liberia, Madagascar, Mali, Pakistan, Papua New Guinea, Syrian Arab Republic, the Dem. Rep. of the Congo, Sudan, Swaziland, Togo and Zambia, the allocation of the band 1 610-1 626.5 MHz to the radiodetermination-satellite service (Earth-to-space) is on a primary basis (see No. **5.33**), subject to agreement obtained under No. **9.21** from countries not listed in this provision. (WRC-03)
- 5.370** *Different category of service:* in Venezuela, the allocation to the radiodetermination-satellite service in the band 1 610-1 626.5 MHz (Earth-to-space) is on a secondary basis.
- 5.371** *Additional allocation:* in Region 1, the bands 1 610-1 626.5 MHz (Earth-to-space) and 2 483.5-2 500 MHz (space-to-Earth) are also allocated to the radiodetermination-satellite service on a secondary basis, subject to agreement obtained under No. **9.21**.
- 5.372** Harmful interference shall not be caused to stations of the radio astronomy service using the band 1 610.6-1 613.8 MHz by stations of the radiodetermination-satellite and mobile-satellite services (No. **29.13** applies).
- 5.373** Not used.
- 5.373A** (SUP - WRC-97)
- 5.374** Mobile earth stations in the mobile-satellite service operating in the bands 1 631.5-1 634.5 MHz and 1 656.5-1 660 MHz shall not cause harmful interference to stations in the fixed service operating in the countries listed in No. **5.359**. (WRC-97)
- 5.375** The use of the band 1 645.5-1 646.5 MHz by the mobile-satellite service (Earth-to-space) and for inter-satellite links is limited to distress and safety communications (see Article **31**).
- 5.376** Transmissions in the band 1 646.5-1 656.5 MHz from aircraft stations in the aeronautical mobile (R) service directly to terrestrial aeronautical stations, or between aircraft stations, are also authorized when such transmissions are used to extend or supplement the aircraft-to-satellite links.
- 5.376A** Mobile earth stations operating in the band 1 660-1 660.5 MHz shall not cause harmful interference to stations in the radio astronomy service. (WRC-97)
- 5.377** (SUP - WRC-03)
- 5.378** Not used.
- 5.379** *Additional allocation:* in Bangladesh, India, Indonesia, Nigeria and Pakistan, the band 1 660.5-1 668.4 MHz is also allocated to the meteorological aids service on a secondary basis.
- 5.379A** Administrations are urged to give all practicable protection in the band 1 660.5-1 668.4 MHz for future research in radio astronomy, particularly by eliminating air-to-ground transmissions in the meteorological aids service in the band 1 664.4-1 668.4 MHz as soon as practicable.
- 5.379B** The use of the band 1 668-1 675 MHz by the mobile-satellite service is subject to coordination under No. **9.11A**. In the band 1 668-1 668.4 MHz, Resolution **904 (WRC-07)** shall apply. (WRC-07)
- 5.379C** In order to protect the radio astronomy service in the band 1 668-1 670 MHz, the aggregate power flux-density values produced by mobile earth stations in a network of the mobile-satellite service operating in this band shall not exceed -181 dB(W/m²) in 10 MHz and -194 dB(W/m²) in any 20 kHz at any radio astronomy station recorded in the Master International Frequency Register, for more than 2% of integration periods of 2 000 s. (WRC-03)
- 5.379D** For sharing of the band 1 668.4-1 675 MHz between the mobile-satellite service and the fixed and mobile services, Resolution **744 (Rev.WRC-07)** shall apply. (WRC-07)
- 5.379E** In the band 1 668.4-1 675 MHz, stations in the mobile-satellite service shall not cause harmful interference to stations in the meteorological aids service in China, Iran (Islamic Republic of), Japan and Uzbekistan. In the band 1 668.4-1 675 MHz, administrations are urged not to implement new systems in the meteorological aids service and are encouraged to migrate existing meteorological aids service operations to other bands as soon as practicable. (WRC-03)
- 5.380** (SUP - WRC-07)
- 5.380A** In the band 1 670-1 675 MHz, stations in the mobile-satellite service shall not cause harmful interference to, nor constrain the development of, existing earth stations in the meteorological-satellite service notified before 1 January 2004. Any new assignment to these earth stations in this band shall also be protected from harmful interference from stations in the mobile-satellite service. (WRC-07)

- 5.381** *Additional allocation:* in Afghanistan, Costa Rica, Cuba, India, Iran (Islamic Republic of) and Pakistan, the band 1 690-1 700 MHz is also allocated to the fixed and mobile, except aeronautical mobile, services on a primary basis. (WRC-03)
- 5.382** *Different category of service:* in Saudi Arabia, Armenia, Azerbaijan, Bahrain, Belarus, Congo (Rep. of the), Egypt, the United Arab Emirates, Eritrea, Ethiopia, the Russian Federation, Guinea, Iraq, Israel, Jordan, Kazakhstan, Kuwait, the Former Yugoslav Republic of Macedonia, Lebanon, Mauritania, Moldova, Mongolia, Oman, Uzbekistan, Poland, Qatar, the Syrian Arab Republic, Kyrgyzstan, Serbia, Somalia, Tajikistan, Tanzania, Turkmenistan, Ukraine and Yemen, the allocation of the band 1 690-1 700 MHz to the fixed and mobile, except aeronautical mobile, services is on a primary basis (see No. **5.33**), and in the Dem. People's Rep. of Korea, the allocation of the band 1 690-1 700 MHz to the fixed service is on a primary basis (see No. **5.33**) and to the mobile, except aeronautical mobile, service on a secondary basis. (WRC-07)
- 5.383** Not used.
- 5.384** *Additional allocation:* in India, Indonesia and Japan, the band 1 700-1 710 MHz is also allocated to the space research service (space-to-Earth) on a primary basis. (WRC-97)
- 5.384A** The bands, or portions of the bands, 1 710-1 885 MHz, 2 300-2 400 MHz and 2 500-2 690 MHz, are identified for use by administrations wishing to implement International Mobile Telecommunications (IMT) in accordance with Resolution **223 (Rev.WRC-07)**. This identification does not preclude the use of these bands by any application of the services to which they are allocated and does not establish priority in the Radio Regulations. (WRC-07)
- 5.385** *Additional allocation:* the band 1 718.8-1 722.2 MHz is also allocated to the radio astronomy service on a secondary basis for spectral line observations. (WRC-2000)
- 5.386** *Additional allocation:* the band 1 750-1 850 MHz is also allocated to the space operation (Earth-to-space) and space research (Earth-to-space) services in Region 2, in Australia, Guam, India, Indonesia and Japan on a primary basis, subject to agreement obtained under No. **9.21**, having particular regard to troposcatter systems. (WRC-03)
- 5.387** *Additional allocation:* in Belarus, Georgia, Kazakhstan, Mongolia, Kyrgyzstan, Slovakia, Romania, Tajikistan and Turkmenistan, the band 1 770-1 790 MHz is also allocated to the meteorological-satellite service on a primary basis, subject to agreement obtained under No. **9.21**. (WRC-07)
- 5.388** The bands 1 885-2 025 MHz and 2 110-2 200 MHz are intended for use, on a worldwide basis, by administrations wishing to implement International Mobile Telecommunications-2000 (IMT-2000). Such use does not preclude the use of these bands by other services to which they are allocated. The bands should be made available for IMT-2000 in accordance with Resolution **212 (Rev.WRC-97)**. (See also Resolution **223 (WRC-2000)**.) (WRC-2000)
- 5.388A** In Regions 1 and 3, the bands 1 885-1 980 MHz, 2 010-2 025 MHz and 2 110-2 170 MHz and, in Region 2, the bands 1 885-1 980 MHz and 2 110-2 160 MHz may be used by high altitude platform stations as base stations to provide International Mobile Telecommunications-2000 (IMT-2000), in accordance with Resolution **221 (Rev.WRC-03)**. Their use by IMT-2000 applications using high altitude platform stations as base stations does not preclude the use of these bands by any station in the services to which they are allocated and does not establish priority in the Radio Regulations. (WRC-03)
- 5.388B** In Algeria, Saudi Arabia, Bahrain, Benin, Burkina Faso, Cameroon, Comoros, Côte d'Ivoire, China, Cuba, Djibouti, Egypt, United Arab Emirates, Eritrea, Ethiopia, Gabon, Ghana, India, Iran (Islamic Republic of), Israel, the Libyan Arab Jamahiriya, Jordan, Kenya, Kuwait, Mali, Morocco, Mauritania, Nigeria, Oman, Uganda, Qatar, the Syrian Arab Republic, Senegal, Singapore, Sudan, Tanzania, Chad, Togo, Tunisia, Yemen, Zambia and Zimbabwe, for the purpose of protecting fixed and mobile services, including IMT-2000 mobile stations, in their territories from co-channel interference, a high altitude platform station (HAPS) operating as an IMT-2000 base station in neighbouring countries, in the bands referred to in No. **5.388A**, shall not exceed a co-channel power flux-density of $-127 \text{ dB(W/(m}^2 \cdot \text{MHz))}$ at the Earth's surface outside a country's borders unless explicit agreement of the affected administration is provided at the time of the notification of HAPS. (WRC-03)
- 5.389** Not used.
- 5.389A** The use of the bands 1 980-2 010 MHz and 2 170-2 200 MHz by the mobile-satellite service is subject to coordination under No. **9.11A** and to the provisions of Resolution **716 (Rev.WRC-2000)**. (WRC-07)
- 5.389B** The use of the band 1 980-1 990 MHz by the mobile-satellite service shall not cause harmful interference to or constrain the development of the fixed and mobile services in Argentina, Brazil, Canada, Chile, Ecuador, the United States, Honduras, Jamaica, Mexico, Peru, Suriname, Trinidad and Tobago, Uruguay and Venezuela.

- 5.389C** The use of the bands 2 010-2 025 MHz and 2 160-2 170 MHz in Region 2 by the mobile-satellite service is subject to coordination under No. **9.11A** and to the provisions of Resolution **716 (Rev.WRC-2000)**. (WRC-07)
- 5.389D** (SUP - WRC-03)
- 5.389E** The use of the bands 2 010-2 025 MHz and 2 160-2 170 MHz by the mobile-satellite service in Region 2 shall not cause harmful interference to or constrain the development of the fixed and mobile services in Regions 1 and 3.
- 5.389F** In Algeria, Benin, Cape Verde, Egypt, Iran (Islamic Republic of), Mali, Syrian Arab Republic and Tunisia, the use of the bands 1 980-2 010 MHz and 2 170-2 200 MHz by the mobile-satellite service shall neither cause harmful interference to the fixed and mobile services, nor hamper the development of those services prior to 1 January 2005, nor shall the former service request protection from the latter services. (WRC-2000)
- 5.390** (SUP - WRC-07)
- 5.391** In making assignments to the mobile service in the bands 2 025-2 110 MHz and 2 200-2 290 MHz, administrations shall not introduce high-density mobile systems, as described in Recommendation ITU-R SA.1154, and shall take that Recommendation into account for the introduction of any other type of mobile system. (WRC-97)
- 5.392** (SUP RRB04/35)
- 5.392A** (SUP - WRC-07)
- 5.393** *Additional allocation:* in Canada, the United States, India and Mexico, the band 2 310-2 360 MHz is also allocated to the broadcasting-satellite service (sound) and complementary terrestrial sound broadcasting service on a primary basis. Such use is limited to digital audio broadcasting and is subject to the provisions of Resolution **528 (Rev.WRC-03)**, with the exception of *resolves* 3 in regard to the limitation on broadcasting-satellite systems in the upper 25 MHz. (WRC-07)
- 5.394** In the United States, the use of the band 2 300-2 390 MHz by the aeronautical mobile service for telemetry has priority over other uses by the mobile services. In Canada, the use of the band 2 360-2 400 MHz by the aeronautical mobile service for telemetry has priority over other uses by the mobile services. (WRC-07)
- 5.395** In France and Turkey, the use of the band 2 310-2 360 MHz by the aeronautical mobile service for telemetry has priority over other uses by the mobile service. (WRC-03)
- 5.396** Space stations of the broadcasting-satellite service in the band 2 310-2 360 MHz operating in accordance with No. **5.393** that may affect the services to which this band is allocated in other countries shall be coordinated and notified in accordance with Resolution **33 (Rev.WRC-97)**. Complementary terrestrial broadcasting stations shall be subject to bilateral coordination with neighbouring countries prior to their bringing into use.
- 5.397** *Different category of service:* in France, the band 2 450-2 500 MHz is allocated on a primary basis to the radiolocation service (see No. **5.33**). Such use is subject to agreement with administrations having services operating or planned to operate in accordance with the Table of Frequency Allocations which may be affected.
- 5.398** In respect of the radiodetermination-satellite service in the band 2 483.5-2 500 MHz, the provisions of No. **4.10** do not apply.
- 5.399** In Region 1, in countries other than those listed in No. **5.400**, harmful interference shall not be caused to, or protection shall not be claimed from, stations of the radiolocation service by stations of the radiodetermination satellite service.
- 5.400** *Different category of service:* in Angola, Australia, Bangladesh, Burundi, China, Eritrea, Ethiopia, India, Iran (Islamic Republic of), the Libyan Arab Jamahiriya, Lebanon, Liberia, Madagascar, Mali, Pakistan, Papua New Guinea, the Dem. Rep. of the Congo, the Syrian Arab Republic, Sudan, Swaziland, Togo and Zambia, the allocation of the band 2 483.5-2 500 MHz to the radiodetermination-satellite service (space-to-Earth) is on a primary basis (see No. **5.33**), subject to agreement obtained under No. **9.21** from countries not listed in this provision. (WRC-03)
- 5.401** Not used.
- 5.402** The use of the band 2 483.5-2 500 MHz by the mobile-satellite and the radiodetermination-satellite services is subject to the coordination under No. **9.11A**. Administrations are urged to take all practicable steps to prevent harmful interference to the radio astronomy service from emissions in the 2 483.5-2 500 MHz band, especially those caused by second-harmonic radiation that would fall into the 4 990-5 000 MHz band allocated to the radio astronomy service worldwide.

- 5.403** Subject to agreement obtained under No. **9.21**, the band 2 520-2 535 MHz may also be used for the mobile-satellite (space-to-Earth), except aeronautical mobile-satellite, service for operation limited to within national boundaries. The provisions of No. **9.11A** apply. (WRC-07)
- 5.404** *Additional allocation:* in India and Iran (Islamic Republic of), the band 2 500-2 516.5 MHz may also be used for the radiodetermination-satellite service (space-to-Earth) for operation limited to within national boundaries, subject to agreement obtained under No. **9.21**.
- 5.405** *Additional allocation:* in France, the band 2 500-2 550 MHz is also allocated to the radiolocation service on a primary basis. Such use is subject to agreement with the administrations having services operating or planned to operate in accordance with the Table which may be affected.
- 5.406** Not used.
- 5.407** In the band 2 500-2 520 MHz, the power flux-density at the surface of the Earth from space stations operating in the mobile-satellite (space-to-Earth) service shall not exceed $-152 \text{ dB(W/(m}^2 \cdot 4 \text{ kHz))}$ in Argentina, unless otherwise agreed by the administrations concerned.
- 5.408** (SUP - WRC-2000)
- 5.409** (SUP - WRC-07)
- 5.410** The band 2 500-2 690 MHz may be used for tropospheric scatter systems in Region 1, subject to agreement obtained under No. **9.21**. Administrations shall make all practicable efforts to avoid developing new tropospheric scatter systems in this band. When planning new tropospheric scatter radio-relay links in this band, all possible measures shall be taken to avoid directing the antennas of these links towards the geostationary-satellite orbit. (WRC-07)
- 5.411** (SUP - WRC-07)
- 5.412** *Alternative allocation:* in Azerbaijan, Kyrgyzstan and Turkmenistan, the band 2 500-2 690 MHz is allocated to the fixed and mobile, except aeronautical mobile, services on a primary basis. (WRC-07)
- 5.413** In the design of systems in the broadcasting-satellite service in the bands between 2 500 MHz and 2 690 MHz, administrations are urged to take all necessary steps to protect the radio astronomy service in the band 2 690-2 700 MHz.
- 5.414** The allocation of the frequency band 2 500-2 520 MHz to the mobile-satellite service (space-to-Earth) is subject to coordination under No. **9.11A**. (WRC-07)
- 5.414A** In Japan and India, the use of the bands 2 500-2 520 MHz and 2 520-2 535 MHz, under No. **5.403**, by a satellite network in the mobile-satellite service (space-to-Earth) is limited to operation within national boundaries and subject to the application of No. **9.11A**. The following pfd values shall be used as a threshold for coordination under No. **9.11A**, for all conditions and for all methods of modulation, in an area of 1 000 km around the territory of the administration notifying the mobile-satellite service network:
- | | | |
|---|-----|------------------------------------|
| $-136 \text{ dB(W/(m}^2 \cdot \text{MHz))}$ | for | $0^\circ \leq \theta \leq 5^\circ$ |
| $-136 + 0.55 (\theta - 5) \text{ dB(W/(m}^2 \cdot \text{MHz))}$ | for | $5^\circ < \theta \leq 25^\circ$ |
| $-125 \text{ dB(W/(m}^2 \cdot \text{MHz))}$ | for | $25^\circ < \theta \leq 90^\circ$ |
- where θ is the angle of arrival of the incident wave above the horizontal plane, in degrees. Outside this area Table **21-4** of Article **21** shall apply. Furthermore, the coordination thresholds in Table 5-2 of Annex 1 to Appendix **5** of the Radio Regulations (Edition of 2004), in conjunction with the applicable provisions of Articles **9** and **11** associated with No. **9.11A**, shall apply to systems for which complete notification information has been received by the Radicommunication Bureau by 14 November 2007 and that have been brought into use by that date. (WRC-07)
- 5.415** The use of the bands 2 500-2 690 MHz in Region 2 and 2 500-2 535 MHz and 2 655-2 690 MHz in Region 3 by the fixed-satellite service is limited to national and regional systems, subject to agreement obtained under No. **9.21**, giving particular attention to the broadcasting-satellite service in Region 1. (WRC-07)
- 5.415A** *Additional allocation:* in India and Japan, subject to agreement obtained under No. **9.21**, the band 2 515-2 535 MHz may also be used for the aeronautical mobile-satellite service (space-to-Earth) for operation limited to within their national boundaries. (WRC-2000)
- 5.416** The use of the band 2 520-2 670 MHz by the broadcasting-satellite service is limited to national and regional systems for community reception, subject to agreement obtained under No. **9.21**. The provisions of No. **9.19** shall be applied by administrations in this band in their bilateral and multilateral negotiations. (WRC-07)
- 5.417** (SUP - WRC-2000)
- 5.417A** In applying provision No. **5.418**, in Korea (Rep. of) and Japan, *resolves* 3 of Resolution **528 (Rev.**

WRC-03 is relaxed to allow the broadcasting-satellite service (sound) and the complementary terrestrial broadcasting service to additionally operate on a primary basis in the band 2 605-2 630 MHz. This use is limited to systems intended for national coverage. An administration listed in this provision shall not have simultaneously two overlapping frequency assignments, one under this provision and the other under No. **5.416**. The provisions of No. **5.416** and Table **21-4** of Article **21** do not apply. Use of non-geostationary-satellite systems in the broadcasting-satellite service (sound) in the band 2 605-2 630 MHz is subject to the provisions of Resolution **539 (Rev.WRC-03)**. The power flux-density at the Earth's surface produced by emissions from a geostationary broadcasting-satellite service (sound) space station operating in the band 2 605-2 630 MHz for which complete Appendix **4** coordination information, or notification information, has been received after 4 July 2003, for all conditions and for all methods of modulation, shall not exceed the following limits:

-130 dB(W/(m ² · MHz))	for	0° ≤ θ ≤ 5°
-130 + 0.4 (θ - 5) dB(W/(m ² · MHz))	for	5° < θ ≤ 25°
-122 dB(W/(m ² · MHz))	for	25° < θ ≤ 90°

where θ is the angle of arrival of the incident wave above the horizontal plane, in degrees. These limits may be exceeded on the territory of any country whose administration has so agreed. In the case of the broadcasting-satellite service (sound) networks of Korea (Rep. of), as an exception to the limits above, the power flux-density value of -122 dB(W/(m² · MHz)) shall be used as a threshold for coordination under No. **9.11** in an area of 1 000 km around the territory of the administration notifying the broadcasting-satellite service (sound) system, for angles of arrival greater than 35°. (WRC-03)

- 5.417B** In Korea (Rep. of) and Japan, use of the band 2 605-2 630 MHz by non-geostationary-satellite systems in the broadcasting-satellite service (sound), pursuant to No. **5.417A**, for which complete Appendix **4** coordination information, or notification information, has been received after 4 July 2003, is subject to the application of the provisions of No. **9.12A**, in respect of geostationary-satellite networks for which complete Appendix **4** coordination information, or notification information, is considered to have been received after 4 July 2003, and No. **22.2** does not apply. No. **22.2** shall continue to apply with respect to geostationary-satellite networks for which complete Appendix **4** coordination information, or notification information, is considered to have been received before 5 July 2003. (WRC-03)
- 5.417C** Use of the band 2 605-2 630 MHz by non-geostationary-satellite systems in the broadcasting-satellite service (sound), pursuant to No. **5.417A**, for which complete Appendix **4** coordination information, or notification information, has been received after 4 July 2003, is subject to the application of the provisions of No. **9.12**. (WRC-03)
- 5.417D** Use of the band 2 605-2 630 MHz by geostationary-satellite networks for which complete Appendix **4** coordination information, or notification information, has been received after 4 July 2003 is subject to the application of the provisions of No. **9.13** with respect to non-geostationary-satellite systems in the broadcasting-satellite service (sound), pursuant to No. **5.417A**, and No. **22.2** does not apply. (WRC-03)
- 5.418** *Additional allocation:* in Korea (Rep. of), India, Japan, Pakistan and Thailand, the band 2 535-2 655 MHz is also allocated to the broadcasting-satellite service (sound) and complementary terrestrial broadcasting service on a primary basis. Such use is limited to digital audio broadcasting and is subject to the provisions of Resolution **528 (Rev.WRC-03)**. The provisions of No. **5.416** and Table **21-4** of Article **21**, do not apply to this additional allocation. Use of non-geostationary-satellite systems in the broadcasting-satellite service (sound) is subject to Resolution **539 (Rev.WRC-03)**. Geostationary broadcasting-satellite service (sound) systems for which complete Appendix **4** coordination information has been received after 1 June 2005 are limited to systems intended for national coverage. The power flux-density at the Earth's surface produced by emissions from a geostationary broadcasting-satellite service (sound) space station operating in the band 2 630-2 655 MHz, and for which complete Appendix **4** coordination information has been received after 1 June 2005, shall not exceed the following limits, for all conditions and for all methods of modulation:

-130 dB(W/(m ² · MHz))	for	0° ≤ θ ≤ 5°
-130 + 0.4 (θ - 5) dB(W/(m ² · MHz))	for	5° < θ ≤ 25°
-122 dB(W/(m ² · MHz))	for	25° < θ ≤ 90°

where θ is the angle of arrival of the incident wave above the horizontal plane, in degrees. These limits may be exceeded on the territory of any country whose administration has so agreed. As an exception to the limits above, the pfd value of -122 dB(W/(m² · MHz)) shall be used as a threshold for coordination under No. **9.11** in an area of 1 500 km around the territory of the administration notifying the broadcasting-satellite service (sound) system.

In addition, an administration listed in this provision shall not have simultaneously two overlapping frequency assignments, one under this provision and the other under No. 5.416 for systems for which complete Appendix 4 coordination information has been received after 1 June 2005. (WRC-07)

- 5.418A** In certain Region 3 countries listed in No. 5.418, use of the band 2 630-2 655 MHz by non-geostationary-satellite systems in the broadcasting-satellite service (sound) for which complete Appendix 4 coordination information, or notification information, has been received after 2 June 2000, is subject to the application of the provisions of No. 9.12A, in respect of geostationary-satellite networks for which complete Appendix 4 coordination information, or notification information, is considered to have been received after 2 June 2000, and No. 22.2 does not apply. No. 22.2 shall continue to apply with respect to geostationary-satellite networks for which complete Appendix 4 coordination information, or notification information, is considered to have been received before 3 June 2000. (WRC-03)
- 5.418B** Use of the band 2 630-2 655 MHz by non-geostationary-satellite systems in the broadcasting-satellite service (sound), pursuant to No. 5.418, for which complete Appendix 4 coordination information, or notification information, has been received after 2 June 2000, is subject to the application of the provisions of No. 9.12. (WRC-03)
- 5.418C** Use of the band 2 630-2 655 MHz by geostationary-satellite networks for which complete Appendix 4 coordination information, or notification information, has been received after 2 June 2000 is subject to the application of the provisions of No. 9.13 with respect to non-geostationary-satellite systems in the broadcasting-satellite service (sound), pursuant to No. 5.418 and No. 22.2 does not apply. (WRC-03)
- 5.419** When introducing systems of the mobile-satellite service in the band 2 670-2 690 MHz, administrations shall take all necessary steps to protect the satellite systems operating in this band prior to 3 March 1992. The coordination of mobile-satellite systems in the band shall be in accordance with No. 9.11A. (WRC-07)
- 5.420** The band 2 655-2 670 MHz may also be used for the mobile-satellite (Earth-to-space), except aeronautical mobile-satellite, service for operation limited to within national boundaries, subject to agreement obtained under No. 9.21. The coordination under No. 9.11A applies. (WRC-07)
- 5.420A** (SUP - WRC-07)
- 5.421** (SUP - WRC-03)
- 5.422** *Additional allocation:* in Saudi Arabia, Armenia, Azerbaijan, Bahrain, Belarus, Brunei Darussalam, Congo (Rep. of the), Côte d'Ivoire, Cuba, Egypt, the United Arab Emirates, Eritrea, Ethiopia, Gabon, Georgia, Guinea, Guinea-Bissau, Iran (Islamic Republic of), Iraq, Israel, Jordan, Kuwait, Lebanon, Mauritania, Moldova, Mongolia, Montenegro, Nigeria, Oman, Pakistan, the Philippines, Qatar, Syrian Arab Republic, Kyrgyzstan, the Dem. Rep. of the Congo, Romania, Somalia, Tajikistan, Tunisia, Turkmenistan, Ukraine and Yemen, the band 2 690-2 700 MHz is also allocated to the fixed and mobile, except aeronautical mobile, services on a primary basis. Such use is limited to equipment in operation by 1 January 1985. (WRC-07)
- 5.423** In the band 2 700-2 900 MHz, ground-based radars used for meteorological purposes are authorized to operate on a basis of equality with stations of the aeronautical radionavigation service.
- 5.424** *Additional allocation:* in Canada, the band 2 850-2 900 MHz is also allocated to the maritime radionavigation service, on a primary basis, for use by shore-based radars.
- 5.424A** In the band 2 900-3 100 MHz, stations in the radiolocation service shall not cause harmful interference to, nor claim protection from, radar systems in the radionavigation service. (WRC-03)
- 5.425** In the band 2 900-3 100 MHz, the use of the shipborne interrogator-transponder (SIT) system shall be confined to the sub-band 2 930 -2 950 MHz.
- 5.426** The use of the band 2 900-3 100 MHz by the aeronautical radionavigation service is limited to ground-based radars.
- 5.427** In the bands 2 900-3 100 MHz and 9 300-9 500 MHz, the response from radar transponders shall not be capable of being confused with the response from radar beacons (racons) and shall not cause interference to ship or aeronautical radars in the radionavigation service, having regard, however, to No. 4.9.
- 5.428** *Additional allocation:* in Azerbaijan, Mongolia, Kyrgyzstan, Romania and Turkmenistan, the band 3 100-3 300 MHz is also allocated to the radionavigation service on a primary basis. (WRC-07)
- 5.429** *Additional allocation:* in Saudi Arabia, Bahrain, Bangladesh, Brunei Darussalam, China, Congo (Rep. of the), Korea (Rep. of), Côte d'Ivoire, the United Arab Emirates, India, Indonesia, Iran (Islamic Republic of), Iraq, Israel, the Libyan Arab Jamahiriya, Japan, Jordan, Kenya, Kuwait, Lebanon, Malaysia, Oman, Uganda, Pakistan, Qatar, the Syrian Arab Republic, the Dem. People's Rep. of Korea and Yemen,

- the band 3 300-3 400 MHz is also allocated to the fixed and mobile services on a primary basis. The countries bordering the Mediterranean shall not claim protection for their fixed and mobile services from the radiolocation service. (WRC-07)
- 5.430** *Additional allocation:* in Azerbaijan, Mongolia, Kyrgyzstan, Romania and Turkmenistan, the band 3 300-3 400 MHz is also allocated to the radionavigation service on a primary basis. (WRC-07)
- 5.430A** *Different category of service:* in Albania, Algeria, Germany, Andorra, Saudi Arabia, Austria, Azerbaijan, Bahrain, Belgium, Benin, Bosnia and Herzegovina, Botswana, Bulgaria, Burkina Faso, Cameroon, Cyprus, Vatican, Congo (Rep. of the), Côte d'Ivoire, Croatia, Denmark, Egypt, Spain, Estonia, Finland, France and French Overseas Departments and Communities in Region 1, Gabon, Georgia, Greece, Guinea, Hungary, Ireland, Iceland, Israel, Italy, Jordan, Kuwait, Lesotho, Latvia, The Former Yugoslav Republic of Macedonia, Liechtenstein, Lithuania, Malawi, Mali, Malta, Morocco, Mauritania, Moldova, Monaco, Mongolia, Montenegro, Mozambique, Namibia, Niger, Norway, Oman, Netherlands, Poland, Portugal, Qatar, the Syrian Arab Republic, Slovakia, Czech Rep., Romania, United Kingdom, San Marino, Senegal, Serbia, Sierra Leone, Slovenia, South Africa, Sweden, Switzerland, Swaziland, Chad, Togo, Tunisia, Turkey, Ukraine, Zambia and Zimbabwe, the band 3 400-3 600 MHz is allocated to the mobile, except aeronautical mobile, service on a primary basis subject to agreement obtained under No. **9.21** with other administrations and is identified for International Mobile Telecommunications (IMT). This identification does not preclude the use of this band by any application of the services to which it is allocated and does not establish priority in the Radio Regulations. At the stage of coordination the provisions of Nos. **9.17** and **9.18** also apply. Before an administration brings into use a (base or mobile) station of the mobile service in this band, it shall ensure that the power flux-density (pfd) produced at 3 m above ground does not exceed $-154.5 \text{ dB(W/(m}^2 \cdot 4 \text{ kHz))}$ for more than 20% of time at the border of the territory of any other administration. This limit may be exceeded on the territory of any country whose administration has so agreed. In order to ensure that the pfd limit at the border of the territory of any other administration is met, the calculations and verification shall be made, taking into account all relevant information, with the mutual agreement of both administrations (the administration responsible for the terrestrial station and the administration responsible for the earth station), with the assistance of the Bureau if so requested. In case of disagreement, the calculation and verification of the pfd shall be made by the Bureau, taking into account the information referred to above. Stations of the mobile service in the band 3 400-3 600 MHz shall not claim more protection from space stations than that provided in Table **21-4** of the Radio Regulations (Edition of 2004). This allocation is effective from 17 November 2010. (WRC-07)
- 5.431** *Additional allocation:* in Germany, Israel and the United Kingdom, the band 3 400-3 475 MHz is also allocated to the amateur service on a secondary basis. (WRC-03)
- 5.431A** *Different category of service:* in Argentina, Brazil, Chile, Costa Rica, Cuba, Dominican Republic, El Salvador, Guatemala, Mexico, Paraguay, Suriname, Uruguay, Venezuela and French Overseas Departments and Communities in Region 2, the band 3 400-3 500 MHz is allocated to the mobile, except aeronautical mobile, service on a primary basis, subject to agreement obtained under No. **9.21**. Stations of the mobile service in the band 3 400-3 500 MHz shall not claim more protection from space stations than that provided in Table **21-4** of the Radio Regulations (Edition of 2004). (WRC-07)
- 5.432** *Different category of service:* in Korea (Rep. of), Japan and Pakistan, the allocation of the band 3 400-3 500 MHz to the mobile, except aeronautical mobile, service is on a primary basis (see No. **5.33**). (WRC-2000)
- 5.432A** In Korea (Rep. of), Japan and Pakistan, the band 3 400-3 500 MHz is identified for International Mobile Telecommunications (IMT). This identification does not preclude the use of this band by any application of the services to which it is allocated and does not establish priority in the Radio Regulations. At the stage of coordination the provisions of Nos. **9.17** and **9.18** also apply. Before an administration brings into use a (base or mobile) station of the mobile service in this band it shall ensure that the power flux-density (pfd) produced at 3 m above ground does not exceed $-154.5 \text{ dB(W/(m}^2 \cdot 4 \text{ kHz))}$ for more than 20% of time at the border of the territory of any other administration. This limit may be exceeded on the territory of any country whose administration has so agreed. In order to ensure that the pfd limit at the border of the territory of any other administration is met, the calculations and verification shall be made, taking into account all relevant information, with the mutual agreement of both administrations (the administration responsible for the terrestrial station and the administration responsible for the earth station), with the assistance of the Bureau if so requested. In case of disagreement, the calculation and verification of the pfd shall be made by the Bureau, taking into account the information referred to above. Stations of the mobile service in the band 3 400-3 500 MHz shall not claim more protection from space stations than that provided in Table **21-4** of the Radio Regulations (Edition of 2004). (WRC-07)

- 5.432B** *Different category of service:* in Bangladesh, China, India, Iran (Islamic Republic of), New Zealand, Singapore and French Overseas Communities in Region 3, the band 3 400-3 500 MHz is allocated to the mobile, except aeronautical mobile, service on a primary basis, subject to agreement obtained under No. **9.21** with other administrations and is identified for International Mobile Telecommunications (IMT). This identification does not preclude the use of this band by any application of the services to which it is allocated and does not establish priority in the Radio Regulations. At the stage of coordination the provisions of Nos. **9.17** and **9.18** also apply. Before an administration brings into use a (base or mobile) station of the mobile service in this band it shall ensure that the power flux-density (pfd) produced at 3 m above ground does not exceed $-154.5 \text{ dB(W/(m}^2 \cdot 4 \text{ kHz))}$ for more than 20% of time at the border of the territory of any other administration. This limit may be exceeded on the territory of any country whose administration has so agreed. In order to ensure that the pfd limit at the border of the territory of any other administration is met, the calculations and verification shall be made, taking into account all relevant information, with the mutual agreement of both administrations (the administration responsible for the terrestrial station and the administration responsible for the earth station) with the assistance of the Bureau if so requested. In case of disagreement, the calculation and verification of the pfd shall be made by the Bureau, taking into account the information referred to above. Stations of the mobile service in the band 3 400-3 500 MHz shall not claim more protection from space stations than that provided in Table **21-4** of the Radio Regulations (Edition of 2004). This allocation is effective from 17 November 2010. (WRC-07)
- 5.433** In Regions 2 and 3, in the band 3 400-3 600 MHz the radiolocation service is allocated on a primary basis. However, all administrations operating radiolocation systems in this band are urged to cease operations by 1985. Thereafter, administrations shall take all practicable steps to protect the fixed-satellite service and coordination requirements shall not be imposed on the fixed-satellite service.
- 5.433A** In Bangladesh, China, Korea (Rep. of), India, Iran (Islamic Republic of), Japan, New Zealand, Pakistan and French Overseas Communities in Region 3, the band 3 500-3 600 MHz is identified for International Mobile Telecommunications (IMT). This identification does not preclude the use of this band by any application of the services to which it is allocated and does not establish priority in the Radio Regulations. At the stage of coordination the provisions of Nos. **9.17** and **9.18** also apply. Before an administration brings into use a (base or mobile) station of the mobile service in this band it shall ensure that the power flux-density (pfd) produced at 3 m above ground does not exceed $-154.5 \text{ dB(W/(m}^2 \cdot 4 \text{ kHz))}$ for more than 20% of time at the border of the territory of any other administration. This limit may be exceeded on the territory of any country whose administration has so agreed. In order to ensure that the pfd limit at the border of the territory of any other administration is met, the calculations and verification shall be made, taking into account all relevant information, with the mutual agreement of both administrations (the administration responsible for the terrestrial station and the administration responsible for the earth station), with the assistance of the Bureau if so requested. In case of disagreement, the calculation and verification of the pfd shall be made by the Bureau, taking into account the information referred to above. Stations of the mobile service in the band 3 500-3 600 MHz shall not claim more protection from space stations than that provided in Table **21-4** of the Radio Regulations (Edition of 2004). (WRC-07)
- 5.434** (SUP - WRC-97)
- 5.435** In Japan, in the band 3 620-3 700 MHz, the radiolocation service is excluded.
- 5.436** Not used.
- 5.437** (SUP - WRC-2000)
- 5.438** Use of the band 4 200-4 400 MHz by the aeronautical radionavigation service is reserved exclusively for radio altimeters installed on board aircraft and for the associated transponders on the ground. However, passive sensing in the Earth exploration-satellite and space research services may be authorized in this band on a secondary basis (no protection is provided by the radio altimeters).
- 5.439** *Additional allocation:* in Iran (Islamic Republic of) and Libyan Arab Jamahiriya, the band 4 200-4 400 MHz is also allocated to the fixed service on a secondary basis. (WRC-2000)
- 5.440** The standard frequency and time signal-satellite service may be authorized to use the frequency 4 202 MHz for space-to-Earth transmissions and the frequency 6 427 MHz for Earth-to-space transmissions. Such transmissions shall be confined within the limits of ± 2 MHz of these frequencies, subject to agreement obtained under No. **9.21**.
- 5.440A** In Region 2 (except Brazil, Cuba, French Overseas Departments and Communities, Guatemala, Paraguay, Uruguay and Venezuela), and in Australia, the band 4 400-4 940 MHz may be used for aeronautical mobile telemetry for flight testing by aircraft stations (see No. **1.83**). Such use shall be in accordance with Resolution **416 (WRC-07)** and shall not cause harmful interference to, nor claim protection from, the fixed-satellite and fixed services. Any such use does not preclude the use of these bands by other mobile

- service applications or by other services to which these bands are allocated on a co-primary basis and does not establish priority in the Radio Regulations. (WRC-07)
- 5.441** The use of the bands 4 500-4 800 MHz (space-to-Earth), 6 725-7 025 MHz (Earth-to-space) by the fixed-satellite service shall be in accordance with the provisions of Appendix **30B**. The use of the bands 10.7-10.95 GHz (space-to-Earth), 11.2-11.45 GHz (space-to-Earth) and 12.75-13.25 GHz (Earth-to-space) by geostationary-satellite systems in the fixed-satellite service shall be in accordance with the provisions of Appendix **30B**. The use of the bands 10.7-10.95 GHz (space-to-Earth), 11.2-11.45 GHz (space-to-Earth) and 12.75-13.25 GHz (Earth-to-space) by a non-geostationary-satellite system in the fixed-satellite service is subject to application of the provisions of No. **9.12** for coordination with other non-geostationary-satellite systems in the fixed-satellite service. Non-geostationary-satellite systems in the fixed-satellite service shall not claim protection from geostationary-satellite networks in the fixed-satellite service operating in accordance with the Radio Regulations, irrespective of the dates of receipt by the Bureau of the complete coordination or notification information, as appropriate, for the non-geostationary-satellite systems in the fixed-satellite service and of the complete coordination or notification information, as appropriate, for the geostationary-satellite networks, and No. **5.43A** does not apply. Non-geostationary-satellite systems in the fixed-satellite service in the above bands shall be operated in such a way that any unacceptable interference that may occur during their operation shall be rapidly eliminated. (WRC-2000)
- 5.442** In the bands 4 825-4 835 MHz and 4 950-4 990 MHz, the allocation to the mobile service is restricted to the mobile, except aeronautical mobile, service. In Region 2 (except Brazil, Cuba, Guatemala, Paraguay, Uruguay and Venezuela), and in Australia, the band 4 825-4 835 MHz is also allocated to the aeronautical mobile service, limited to aeronautical mobile telemetry for flight testing by aircraft stations. Such use shall be in accordance with Resolution **416 (WRC-07)** and shall not cause harmful interference to the fixed service. (WRC-07)
- 5.443** *Different category of service:* in Argentina, Australia and Canada, the allocation of the bands 4 825-4 835 MHz and 4 950-4 990 MHz to the radio astronomy service is on a primary basis (see No. **5.33**).
- 5.443A** (SUP - WRC-03)
- 5.443B** In order not to cause harmful interference to the microwave landing system operating above 5 030 MHz, the aggregate power flux-density produced at the Earth's surface in the band 5 030-5 150 MHz by all the space stations within any radionavigation-satellite service system (space-to-Earth) operating in the band 5 010-5 030 MHz shall not exceed -124.5 dB(W/m²) in a 150 kHz band. In order not to cause harmful interference to the radio astronomy service in the band 4 990-5 000 MHz, radionavigation-satellite service systems operating in the band 5 010-5 030 MHz shall comply with the limits in the band 4 990-5 000 MHz defined in Resolution **741 (WRC-03)**. (WRC-03)
- 5.444** The band 5 030-5 150 MHz is to be used for the operation of the international standard system (microwave landing system) for precision approach and landing. In the band 5 030-5 091 MHz, the requirements of this system shall take precedence over other uses of this band. For the use of the band 5 091-5 150 MHz, No. **5.444A** and Resolution **114 (Rev.WRC-03)** apply. (WRC-07)
- 5.444A** *Additional allocation:* the band 5 091-5 150 MHz is also allocated to the fixed-satellite service (Earth-to-space) on a primary basis. This allocation is limited to feeder links of non-geostationary satellite systems in the mobile-satellite service and is subject to coordination under No. **9.11A**.
- In the band 5 091-5 150 MHz, the following conditions also apply:
- prior to 1 January 2018, the use of the band 5 091-5 150 MHz by feeder links of non-geostationary-satellite systems in the mobile-satellite service shall be made in accordance with Resolution **114 (Rev.WRC-03)**;
 - after 1 January 2016, no new assignments shall be made to earth stations providing feeder links of non-geostationary mobile-satellite systems;
 - after 1 January 2018, the fixed-satellite service will become secondary to the aeronautical radio-navigation service. (WRC-07)
- 5.444B** The use of the band 5 091-5 150 MHz by the aeronautical mobile service is limited to:
- systems operating in the aeronautical mobile (R) service and in accordance with international aeronautical standards, limited to surface applications at airports. Such use shall be in accordance with Resolution **748 (WRC-07)**;
 - aeronautical telemetry transmissions from aircraft stations (see No. **1.83**) in accordance with Resolution **418 (WRC-07)**;
 - aeronautical security transmissions. Such use shall be in accordance with Resolution **419 (WRC-07)**. (WRC-07)

- 5.445** Not used.
- 5.446** *Additional allocation:* in the countries listed in Nos. **5.369** and **5.400**, the band 5 150-5 216 MHz is also allocated to the radiodetermination-satellite service (space-to-Earth) on a primary basis, subject to agreement obtained under No. **9.21**. In Region 2, the band is also allocated to the radiodetermination-satellite service (space-to-Earth) on a primary basis. In Regions 1 and 3, except those countries listed in Nos. **5.369** and **5.400**, the band is also allocated to the radiodetermination-satellite service (space-to-Earth) on a secondary basis. The use by the radiodetermination-satellite service is limited to feeder links in conjunction with the radiodetermination-satellite service operating in the bands 1 610-1 626.5 MHz and/or 2 483.5-2 500 MHz. The total power flux-density at the Earth's surface shall in no case exceed -159 dB(W/m²) in any 4 kHz band for all angles of arrival.
- 5.446A** The use of the bands 5 150-5 350 MHz and 5 470-5 725 MHz by the stations in the mobile, except aeronautical mobile, service shall be in accordance with Resolution **229 (WRC-03)**. (WRC-07)
- 5.446B** In the band 5 150-5 250 MHz, stations in the mobile service shall not claim protection from earth stations in the fixed-satellite service. No. **5.43A** does not apply to the mobile service with respect to fixed-satellite service earth stations. (WRC-03)
- 5.446C** *Additional allocation:* in Region 1 (except in Algeria, Saudi Arabia, Bahrain, Egypt, United Arab Emirates, Jordan, Kuwait, Lebanon, Morocco, Oman, Qatar, Syrian Arab Republic, Sudan and Tunisia) and in Brazil, the band 5 150-5 250 MHz is also allocated to the aeronautical mobile service on a primary basis, limited to aeronautical telemetry transmissions from aircraft stations (see No. **1.83**), in accordance with Resolution **418 (WRC-07)**. These stations shall not claim protection from other stations operating in accordance with Article 5. No. **5.43A** does not apply. (WRC-07)
- 5.447** *Additional allocation:* in Côte d'Ivoire, Israel, Lebanon, Pakistan, the Syrian Arab Republic and Tunisia, the band 5 150-5 250 MHz is also allocated to the mobile service, on a primary basis, subject to agreement obtained under No. **9.21**. In this case, the provisions of Resolution **229 (WRC-03)** do not apply. (WRC-07)
- 5.447A** The allocation to the fixed-satellite service (Earth-to-space) is limited to feeder links of non-geostationary-satellite systems in the mobile-satellite service and is subject to coordination under No. **9.11A**.
- 5.447B** *Additional allocation:* the band 5 150-5 216 MHz is also allocated to the fixed-satellite service (space-to-Earth) on a primary basis. This allocation is limited to feeder links of non-geostationary-satellite systems in the mobile-satellite service and is subject to provisions of No. **9.11A**. The power flux-density at the Earth's surface produced by space stations of the fixed-satellite service operating in the space-to-Earth direction in the band 5 150-5 216 MHz shall in no case exceed -164 dB(W/m²) in any 4 kHz band for all angles of arrival.
- 5.447C** Administrations responsible for fixed-satellite service networks in the band 5 150-5 250 MHz operated under Nos. **5.447A** and **5.447B** shall coordinate on an equal basis in accordance with No. **9.11A** with administrations responsible for non-geostationary-satellite networks operated under No. **5.446** and brought into use prior to 17 November 1995. Satellite networks operated under No. **5.446** brought into use after 17 November 1995 shall not claim protection from, and shall not cause harmful interference to, stations of the fixed-satellite service operated under Nos. **5.447A** and **5.447B**.
- 5.447D** The allocation of the band 5 250-5 255 MHz to the space research service on a primary basis is limited to active spaceborne sensors. Other uses of the band by the space research service are on a secondary basis. (WRC-97)
- 5.447E** *Additional allocation:* The band 5 250-5 350 MHz is also allocated to the fixed service on a primary basis in the following countries in Region 3: Australia, Korea (Rep. of), India, Indonesia, Iran (Islamic Republic of), Japan, Malaysia, Papua New Guinea, the Philippines, Dem. People's Rep. of Korea, Sri Lanka, Thailand and Viet Nam. The use of this band by the fixed service is intended for the implementation of fixed wireless access systems and shall comply with Recommendation ITU-R F.1613. In addition, the fixed service shall not claim protection from the radiodetermination, Earth exploration-satellite (active) and space research (active) services, but the provisions of No. **5.43A** do not apply to the fixed service with respect to the Earth exploration-satellite (active) and space research (active) services. After implementation of fixed wireless access systems in the fixed service with protection for the existing radiodetermination systems, no more stringent constraints should be imposed on the fixed wireless access systems by future radiodetermination implementations. (WRC-07)
- 5.447F** In the band 5 250-5 350 MHz, stations in the mobile service shall not claim protection from the radiolocation service, the Earth exploration-satellite service (active) and the space research service (active). These services shall not impose on the mobile service more stringent protection criteria, based on system characteristics and interference criteria, than those stated in Recommendations ITU-R M.1638 and ITU-R SA.1632. (WRC-03)

- 5.448** *Additional allocation:* in Azerbaijan, Libyan Arab Jamahiriya, Mongolia, Kyrgyzstan, Slovakia, Romania and Turkmenistan, the band 5 250-5 350 MHz is also allocated to the radionavigation service on a primary basis. (WRC-03)
- 5.448A** The Earth exploration-satellite (active) and space research (active) services in the frequency band 5 250-5 350 MHz shall not claim protection from the radiolocation service. No. **5.43A** does not apply. (WRC-03)
- 5.448B** The Earth exploration-satellite service (active) operating in the band 5 350-5 570 MHz and space research service (active) operating in the band 5 460-5 570 MHz shall not cause harmful interference to the aeronautical radionavigation service in the band 5 350-5 460 MHz, the radionavigation service in the band 5 460-5 470 MHz and the maritime radionavigation service in the band 5 470-5 570 MHz. (WRC-03)
- 5.448C** The space research service (active) operating in the band 5 350-5 460 MHz shall not cause harmful interference to nor claim protection from other services to which this band is allocated. (WRC-03)
- 5.448D** In the frequency band 5 350-5 470 MHz, stations in the radiolocation service shall not cause harmful interference to, nor claim protection from, radar systems in the aeronautical radionavigation service operating in accordance with No. **5.449**. (WRC-03)
- 5.449** The use of the band 5 350-5 470 MHz by the aeronautical radionavigation service is limited to airborne radars and associated airborne beacons.
- 5.450** *Additional allocation:* in Austria, Azerbaijan, Iran (Islamic Republic of), Mongolia, Kyrgyzstan, Romania, Turkmenistan and Ukraine, the band 5 470-5 650 MHz is also allocated to the aeronautical radionavigation service on a primary basis. (WRC-03)
- 5.450A** In the band 5 470-5 725 MHz, stations in the mobile service shall not claim protection from radio-determination services. Radiodetermination services shall not impose on the mobile service more stringent protection criteria, based on system characteristics and interference criteria, than those stated in Recommendation ITU-R M.1638. (WRC-03)
- 5.450B** In the frequency band 5 470-5 650 MHz, stations in the radiolocation service, except ground-based radars used for meteorological purposes in the band 5 600-5 650 MHz, shall not cause harmful interference to, nor claim protection from, radar systems in the maritime radionavigation service. (WRC-03)
- 5.451** *Additional allocation:* in the United Kingdom, the band 5 470-5 850 MHz is also allocated to the land mobile service on a secondary basis. The power limits specified in Nos. **21.2**, **21.3**, **21.4** and **21.5** shall apply in the band 5 725-5 850 MHz.
- 5.452** Between 5 600 MHz and 5 650 MHz, ground-based radars used for meteorological purposes are authorized to operate on a basis of equality with stations of the maritime radionavigation service.
- 5.453** *Additional allocation:* in Saudi Arabia, Bahrain, Bangladesh, Brunei Darussalam, Cameroon, China, Congo (Rep. of the), Korea (Rep. of), Côte d'Ivoire, Egypt, the United Arab Emirates, Gabon, Guinea, Equatorial Guinea, India, Indonesia, Iran (Islamic Republic of), Iraq, Israel, the Libyan Arab Jamahiriya, Japan, Jordan, Kenya, Kuwait, Lebanon, Madagascar, Malaysia, Nigeria, Oman, Pakistan, the Philippines, Qatar, the Syrian Arab Republic, the Dem. People's Rep. of Korea, Singapore, Sri Lanka, Swaziland, Tanzania, Chad, Thailand, Togo, Viet Nam and Yemen, the band 5 650-5 850 MHz is also allocated to the fixed and mobile services on a primary basis. In this case, the provisions of Resolution **229 (WRC-03)** do not apply. (WRC-03)
- 5.454** *Different category of service:* in Azerbaijan, the Russian Federation, Georgia, Mongolia, Kyrgyzstan, Tajikistan and Turkmenistan, the allocation of the band 5 670-5 725 MHz to the space research service is on a primary basis (see No. **5.33**). (WRC-07)
- 5.455** *Additional allocation:* in Armenia, Azerbaijan, Belarus, Cuba, the Russian Federation, Georgia, Hungary, Kazakhstan, Moldova, Mongolia, Uzbekistan, Kyrgyzstan, Tajikistan, Turkmenistan and Ukraine, the band 5 670-5 850 MHz is also allocated to the fixed service on a primary basis. (WRC-07)
- 5.456** *Additional allocation:* in Cameroon, the band 5 755-5 850 MHz is also allocated to the fixed service on a primary basis. (WRC-03)
- 5.457** Not used.
- 5.457A** In the bands 5 925-6 425 MHz and 14-14.5 GHz, earth stations located on board vessels may communicate with space stations of the fixed-satellite service. Such use shall be in accordance with Resolution **902 (WRC-03)**. (WRC-03)
- 5.457B** In the bands 5 925-6 425 MHz and 14-14.5 GHz, earth stations located on board vessels may operate with the characteristics and under the conditions contained in Resolution **902 (WRC-03)** in Algeria, Saudi Arabia, Bahrain, Comoros, Djibouti, Egypt, United Arab Emirates, the Libyan Arab Jamahiriya, Jordan,

Kuwait, Morocco, Mauritania, Oman, Qatar, the Syrian Arab Republic, Sudan, Tunisia and Yemen, in the maritime mobile-satellite service on a secondary basis. Such use shall be in accordance with Resolution **902 (WRC-03)**. (WRC-03)

- 5.457C** In Region 2 (except Brazil, Cuba, French Overseas Departments and Communities, Guatemala, Paraguay, Uruguay and Venezuela), the band 5 925-6 700 MHz may be used for aeronautical mobile telemetry for flight testing by aircraft stations (see No. **1.83**). Such use shall be in accordance with Resolution **416 (WRC-07)** and shall not cause harmful interference to, nor claim protection from, the fixed-satellite and fixed services. Any such use does not preclude the use of these bands by other mobile service applications or by other services to which these bands are allocated on a co-primary basis and does not establish priority in the Radio Regulations. (WRC-07)
- 5.458** In the band 6 425-7 075 MHz, passive microwave sensor measurements are carried out over the oceans. In the band 7 075-7 250 MHz, passive microwave sensor measurements are carried out. Administrations should bear in mind the needs of the Earth exploration-satellite (passive) and space research (passive) services in their future planning of the bands 6 425-7 025 MHz and 7 075-7 250 MHz.
- 5.458A** In making assignments in the band 6 700-7 075 MHz to space stations of the fixed-satellite service, administrations are urged to take all practicable steps to protect spectral line observations of the radio astronomy service in the band 6 650-6 675.2 MHz from harmful interference from unwanted emissions.
- 5.458B** The space-to-Earth allocation to the fixed-satellite service in the band 6 700-7 075 MHz is limited to feeder links for non-geostationary satellite systems of the mobile-satellite service and is subject to coordination under No. **9.11A**. The use of the band 6 700-7 075 MHz (space-to-Earth) by feeder links for non-geostationary satellite systems in the mobile-satellite service is not subject to No. **22.2**.
- 5.458C** Administrations making submissions in the band 7 025-7 075 MHz (Earth-to-space) for geostationary-satellite systems in the fixed-satellite service after 17 November 1995 shall consult on the basis of relevant ITU-R Recommendations with the administrations that have notified and brought into use non-geostationary-satellite systems in this frequency band before 18 November 1995 upon request of the latter administrations. This consultation shall be with a view to facilitating shared operation of both geostationary-satellite systems in the fixed-satellite service and non-geostationary-satellite systems in this band.
- 5.459** *Additional allocation:* in the Russian Federation, the frequency bands 7 100-7 155 MHz and 7 190-7 235 MHz are also allocated to the space operation service (Earth-to-space) on a primary basis, subject to agreement obtained under No. **9.21**. (WRC-97)
- 5.460** The use of the band 7 145-7 190 MHz by the space research service (Earth-to-space) is restricted to deep space; no emissions to deep space shall be effected in the band 7 190-7 235 MHz. Geostationary satellites in the space research service operating in the band 7 190-7 235 MHz shall not claim protection from existing and future stations of the fixed and mobile services and No. **5.43A** does not apply. (WRC-03)
- 5.461** *Additional allocation:* the bands 7 250-7 375 MHz (space-to-Earth) and 7 900-8 025 MHz (Earth-to-space) are also allocated to the mobile-satellite service on a primary basis, subject to agreement obtained under No. **9.21**.
- 5.461A** The use of the band 7 450-7 550 MHz by the meteorological-satellite service (space-to-Earth) is limited to geostationary-satellite systems. Non-geostationary meteorological-satellite systems in this band notified before 30 November 1997 may continue to operate on a primary basis until the end of their lifetime. (WRC-97)
- 5.461B** The use of the band 7 750-7 850 MHz by the meteorological-satellite service (space-to-Earth) is limited to non-geostationary satellite systems. (WRC-97)
- 5.462** (SUP - WRC-97)
- 5.462A** In Regions 1 and 3 (except for Japan), in the band 8 025-8 400 MHz, the Earth exploration-satellite service using geostationary satellites shall not produce a power flux-density in excess of the following provisional values for angles of arrival (θ), without the consent of the affected administration:
- | | | |
|---|-----|--------------------------------------|
| -174 dB(W/m ²) in a 4 kHz band | for | $0^\circ \leq \theta < 5^\circ$ |
| -174 + 0.5 ($\theta - 5$) dB(W/m ²) in a 4 kHz band | for | $5^\circ \leq \theta < 25^\circ$ |
| -164 dB(W/m ²) in a 4 kHz band | for | $25^\circ \leq \theta \leq 90^\circ$ |
- These values are subject to study under Resolution **124 (WRC-97)***. (WRC-97)
- 5.463** Aircraft stations are not permitted to transmit in the band 8 025-8 400 MHz. (WRC-97)

* Note by the Secretariat: This Resolution was revised by WRC-2000.

- 5.464** (SUP - WRC-97)
- 5.465** In the space research service, the use of the band 8 400-8 450 MHz is limited to deep space.
- 5.466** *Different category of service:* in Israel, Singapore and Sri Lanka, the allocation of the band 8 400-8 500 MHz to the space research service is on a secondary basis (see No. **5.32**). (WRC-03)
- 5.467** (SUP - WRC-03)
- 5.468** *Additional allocation:* in Saudi Arabia, Bahrain, Bangladesh, Brunei Darussalam, Burundi, Cameroon, China, Congo (Rep. of the), Costa Rica, Egypt, the United Arab Emirates, Gabon, Guyana, Indonesia, Iran (Islamic Republic of), Iraq, the Libyan Arab Jamahiriya, Jamaica, Jordan, Kenya, Kuwait, Lebanon, Malaysia, Mali, Morocco, Mauritania, Nepal, Nigeria, Oman, Pakistan, Qatar, Syrian Arab Republic, the Dem. People's Rep. of Korea, Senegal, Singapore, Somalia, Swaziland, Tanzania, Chad, Togo, Tunisia and Yemen, the band 8 500-8 750 MHz is also allocated to the fixed and mobile services on a primary basis. (WRC-03)
- 5.469** *Additional allocation:* in Armenia, Azerbaijan, Belarus, the Russian Federation, Georgia, Hungary, Lithuania, Moldova, Mongolia, Uzbekistan, Poland, Kyrgyzstan, the Czech Rep., Romania, Tajikistan, Turkmenistan and Ukraine, the band 8 500-8 750 MHz is also allocated to the land mobile and radionavigation services on a primary basis. (WRC-03)
- 5.469A** In the band 8 550-8 650 MHz, stations in the Earth exploration-satellite service (active) and space research service (active) shall not cause harmful interference to, or constrain the use and development of, stations of the radiolocation service. (WRC-97)
- 5.470** The use of the band 8 750-8 850 MHz by the aeronautical radionavigation service is limited to airborne Doppler navigation aids on a centre frequency of 8 800 MHz.
- 5.471** *Additional allocation:* in Algeria, Germany, Bahrain, Belgium, China, Egypt, the United Arab Emirates, France, Greece, Indonesia, Iran (Islamic Republic of), the Libyan Arab Jamahiriya, the Netherlands, Qatar and Sudan, the bands 8 825-8 850 MHz and 9 000-9 200 MHz are also allocated to the maritime radionavigation service, on a primary basis, for use by shore-based radars only. (WRC-07)
- 5.472** In the bands 8 850-9 000 MHz and 9 200-9 225 MHz, the maritime radionavigation service is limited to shore-based radars.
- 5.473** *Additional allocation:* in Armenia, Austria, Azerbaijan, Belarus, Cuba, the Russian Federation, Georgia, Hungary, Mongolia, Uzbekistan, Poland, Kyrgyzstan, Romania, Tajikistan, Turkmenistan and Ukraine, the bands 8 850-9 000 MHz and 9 200-9 300 MHz are also allocated to the radionavigation service on a primary basis. (WRC-07)
- 5.473A** In the band 9 000-9 200 MHz, stations operating in the radiolocation service shall not cause harmful interference to, nor claim protection from, systems identified in No. **5.337** operating in the aeronautical radionavigation service, or radar systems in the maritime radionavigation service operating in this band on a primary basis in the countries listed in No. **5.471**. (WRC-07)
- 5.474** In the band 9 200-9 500 MHz, search and rescue transponders (SART) may be used, having due regard to the appropriate ITU-R Recommendation (see also Article **31**).
- 5.475** The use of the band 9 300-9 500 MHz by the aeronautical radionavigation service is limited to airborne weather radars and ground-based radars. In addition, ground-based radar beacons in the aeronautical radionavigation service are permitted in the band 9 300-9 320 MHz on condition that harmful interference is not caused to the maritime radionavigation service. (WRC-07)
- 5.475A** The use of the band 9 300-9 500 MHz by the Earth exploration-satellite service (active) and the space research service (active) is limited to systems requiring necessary bandwidth greater than 300 MHz that cannot be fully accommodated within the 9 500-9 800 MHz band. (WRC-07)
- 5.475B** In the band 9 300-9 500 MHz, stations operating in the radiolocation service shall not cause harmful interference to, nor claim protection from, radars operating in the radionavigation service in conformity with the Radio Regulations. Ground-based radars used for meteorological purposes have priority over other radiolocation uses. (WRC-07)
- 5.476** (SUP - WRC-07)
- 5.476A** In the band 9 300-9 800 MHz, stations in the Earth exploration-satellite service (active) and space research service (active) shall not cause harmful interference to, nor claim protection from, stations of the radionavigation and radiolocation services. (WRC-07)
- 5.477** *Different category of service:* in Algeria, Saudi Arabia, Bahrain, Bangladesh, Brunei Darussalam, Cameroon, Egypt, the United Arab Emirates, Eritrea, Ethiopia, Guyana, India, Indonesia, Iran (Islamic Republic of), Iraq, Jamaica, Japan, Jordan, Kuwait, Lebanon, Liberia, Malaysia, Nigeria, Oman, Pakistan, Qatar, Syrian Arab Republic, the Dem. People's Rep. of Korea, Singapore, Somalia, Sudan, Trinidad and

Tobago, and Yemen, the allocation of the band 9 800-10 000 MHz to the fixed service is on a primary basis (see No. 5.33). (WRC-07)

- 5.478** *Additional allocation:* in Azerbaijan, Mongolia, Kyrgyzstan, Romania, Turkmenistan and Ukraine, the band 9 800-10 000 MHz is also allocated to the radionavigation service on a primary basis. (WRC-07)
- 5.478A** The use of the band 9 800-9 900 MHz by the Earth exploration-satellite service (active) and the space research service (active) is limited to systems requiring necessary bandwidth greater than 500 MHz that cannot be fully accommodated within the 9 300-9 800 MHz band. (WRC-07)
- 5.478B** In the band 9 800-9 900 MHz, stations in the Earth exploration-satellite service (active) and space research service (active) shall not cause harmful interference to, nor claim protection from stations of the fixed service to which this band is allocated on a secondary basis. (WRC-07)
- 5.479** The band 9 975-10 025 MHz is also allocated to the meteorological-satellite service on a secondary basis for use by weather radars.
- 5.480** *Additional allocation:* in Argentina, Brazil, Chile, Costa Rica, Cuba, El Salvador, Ecuador, Guatemala, Honduras, Mexico, Paraguay, the Netherlands Antilles, Peru and Uruguay, the band 10-10.45 GHz is also allocated to the fixed and mobile services on a primary basis. In Venezuela, the band 10-10.45 GHz is also allocated to the fixed service on a primary basis. (WRC-07)
- 5.481** *Additional allocation:* in Germany, Angola, Brazil, China, Costa Rica, Côte d'Ivoire, El Salvador, Ecuador, Spain, Guatemala, Hungary, Japan, Kenya, Morocco, Nigeria, Oman, Uzbekistan, Paraguay, Peru, the Dem. People's Rep. of Korea, Romania, Tanzania, Thailand and Uruguay, the band 10.45-10.5 GHz is also allocated to the fixed and mobile services on a primary basis. (WRC-07)
- 5.482** In the band 10.6-10.68 GHz, the power delivered to the antenna of stations of the fixed and mobile, except aeronautical mobile, services shall not exceed -3 dBW. This limit may be exceeded, subject to agreement obtained under No. 9.21. However, in Algeria, Saudi Arabia, Armenia, Azerbaijan, Bahrain, Bangladesh, Belarus, Egypt, United Arab Emirates, Georgia, India, Indonesia, Iran (Islamic Republic of), Iraq, Jordan, Libyan Arab Jamahiriya, Kazakhstan, Kuwait, Lebanon, Morocco, Mauritania, Moldova, Nigeria, Oman, Uzbekistan, Pakistan, Philippines, Qatar, Syrian Arab Republic, Kyrgyzstan, Singapore, Tajikistan, Tunisia, Turkmenistan and Viet Nam, this restriction on the fixed and mobile, except aeronautical mobile, service is not applicable. (WRC-07)
- 5.482A** For sharing of the band 10.6-10.68 GHz between the Earth exploration-satellite (passive) service and the fixed and mobile, except aeronautical mobile, services, Resolution 751 (WRC-07) applies. (WRC-07)
- 5.483** *Additional allocation:* in Saudi Arabia, Armenia, Azerbaijan, Bahrain, Belarus, China, Colombia, Korea (Rep. of), Costa Rica, Egypt, the United Arab Emirates, Georgia, Iran (Islamic Republic of), Iraq, Israel, Jordan, Kazakhstan, Kuwait, Lebanon, Mongolia, Qatar, Kyrgyzstan, the Dem. People's Rep. of Korea, Romania, Tajikistan, Turkmenistan and Yemen, the band 10.68-10.7 GHz is also allocated to the fixed and mobile, except aeronautical mobile, services on a primary basis. Such use is limited to equipment in operation by 1 January 1985. (WRC-07)
- 5.484** In Region 1, the use of the band 10.7-11.7 GHz by the fixed-satellite service (Earth-to-space) is limited to feeder links for the broadcasting-satellite service.
- 5.484A** The use of the bands 10.95-11.2 GHz (space-to-Earth), 11.45-11.7 GHz (space-to-Earth), 11.7-12.2 GHz (space-to-Earth) in Region 2, 12.2-12.75 GHz (space-to-Earth) in Region 3, 12.5-12.75 GHz (space-to-Earth) in Region 1, 13.75-14.5 GHz (Earth-to-space), 17.8-18.6 GHz (space-to-Earth), 19.7-20.2 GHz (space-to-Earth), 27.5-28.6 GHz (Earth-to-space), 29.5-30 GHz (Earth-to-space) by a non-geostationary-satellite system in the fixed-satellite service is subject to application of the provisions of No. 9.12 for coordination with other non-geostationary-satellite systems in the fixed-satellite service. Non-geostationary-satellite systems in the fixed-satellite service shall not claim protection from geostationary-satellite networks in the fixed-satellite service operating in accordance with the Radio Regulations, irrespective of the dates of receipt by the Bureau of the complete coordination or notification information, as appropriate, for the non-geostationary-satellite systems in the fixed-satellite service and of the complete coordination or notification information, as appropriate, for the geostationary-satellite networks, and No. 5.43A does not apply. Non-geostationary-satellite systems in the fixed-satellite service in the above bands shall be operated in such a way that any unacceptable interference that may occur during their operation shall be rapidly eliminated. (WRC-2000)
- 5.485** In Region 2, in the band 11.7-12.2 GHz, transponders on space stations in the fixed-satellite service may be used additionally for transmissions in the broadcasting-satellite service, provided that such transmissions do not have a maximum e.i.r.p. greater than 53 dBW per television channel and do not cause greater interference or require more protection from interference than the coordinated fixed-

- satellite service frequency assignments. With respect to the space services, this band shall be used principally for the fixed-satellite service.
- 5.486** *Different category of service:* in Mexico and the United States, the allocation of the band 11.7-12.1 GHz to the fixed service is on a secondary basis (see No. **5.32**).
- 5.487** In the band 11.7-12.5 GHz in Regions 1 and 3, the fixed, fixed-satellite, mobile, except aeronautical mobile, and broadcasting services, in accordance with their respective allocations, shall not cause harmful interference to, or claim protection from, broadcasting-satellite stations operating in accordance with the Regions 1 and 3 Plan in Appendix **30**. (WRC-03)
- 5.487A** *Additional allocation:* in Region 1, the band 11.7-12.5 GHz, in Region 2, the band 12.2-12.7 GHz and, in Region 3, the band 11.7-12.2 GHz, are also allocated to the fixed-satellite service (space-to-Earth) on a primary basis, limited to non-geostationary systems and subject to application of the provisions of No. **9.12** for coordination with other non-geostationary-satellite systems in the fixed-satellite service. Non-geostationary-satellite systems in the fixed-satellite service shall not claim protection from geostationary-satellite networks in the broadcasting-satellite service operating in accordance with the Radio Regulations, irrespective of the dates of receipt by the Bureau of the complete coordination or notification information, as appropriate, for the non-geostationary-satellite systems in the fixed-satellite service and of the complete coordination or notification information, as appropriate, for the geostationary-satellite networks, and No. **5.43A** does not apply. Non-geostationary-satellite systems in the fixed-satellite service in the above bands shall be operated in such a way that any unacceptable interference that may occur during their operation shall be rapidly eliminated. (WRC-03)
- 5.488** The use of the band 11.7-12.2 GHz by geostationary-satellite networks in the fixed-satellite service in Region 2 is subject to application of the provisions of No. **9.14** for coordination with stations of terrestrial services in Regions 1, 2 and 3. For the use of the band 12.2-12.7 GHz by the broadcasting-satellite service in Region 2, see Appendix **30**. (WRC-03)
- 5.489** *Additional allocation:* in Peru, the band 12.1-12.2 GHz is also allocated to the fixed service on a primary basis.
- 5.490** In Region 2, in the band 12.2-12.7 GHz, existing and future terrestrial radiocommunication services shall not cause harmful interference to the space services operating in conformity with the broadcasting-satellite Plan for Region 2 contained in Appendix **30**.
- 5.491** (SUP - WRC-03)
- 5.492** Assignments to stations of the broadcasting-satellite service which are in conformity with the appropriate regional Plan or included in the Regions 1 and 3 List in Appendix **30** may also be used for transmissions in the fixed-satellite service (space-to-Earth), provided that such transmissions do not cause more interference, or require more protection from interference, than the broadcasting-satellite service transmissions operating in conformity with the Plan or the List, as appropriate. (WRC-2000)
- 5.493** The broadcasting-satellite service in the band 12.5-12.75 GHz in Region 3 is limited to a power flux-density not exceeding $-111 \text{ dB(W/(m}^2 \cdot 27 \text{ MHz))}$ for all conditions and for all methods of modulation at the edge of the service area. (WRC-97)
- 5.494** *Additional allocation:* in Algeria, Angola, Saudi Arabia, Bahrain, Cameroon, the Central African Rep., Congo (Rep. of the), Côte d'Ivoire, Egypt, the United Arab Emirates, Eritrea, Ethiopia, Gabon, Ghana, Guinea, Iraq, Israel, the Libyan Arab Jamahiriya, Jordan, Kuwait, Lebanon, Madagascar, Mali, Morocco, Mongolia, Nigeria, Qatar, the Syrian Arab Republic, the Dem. Rep. of the Congo, Somalia, Sudan, Chad, Togo and Yemen, the band 12.5-12.75 GHz is also allocated to the fixed and mobile, except aeronautical mobile, services on a primary basis. (WRC-03)
- 5.495** *Additional allocation:* in Bosnia and Herzegovina, France, Greece, Liechtenstein, Monaco, Montenegro, Uganda, Romania, Serbia, Switzerland, Tanzania and Tunisia, the band 12.5-12.75 GHz is also allocated to the fixed and mobile, except aeronautical mobile, services on a secondary basis. (WRC-07)
- 5.496** *Additional allocation:* in Austria, Azerbaijan, Kyrgyzstan and Turkmenistan, the band 12.5-12.75 GHz is also allocated to the fixed service and the mobile, except aeronautical mobile, service on a primary basis. However, stations in these services shall not cause harmful interference to fixed-satellite service earth stations of countries in Region 1 other than those listed in this footnote. Coordination of these earth stations is not required with stations of the fixed and mobile services of the countries listed in this footnote. The power flux-density limit at the Earth's surface given in Table **21-4** of Article **21**, for the fixed-satellite service shall apply on the territory of the countries listed in this footnote. (WRC-2000)
- 5.497** The use of the band 13.25-13.4 GHz by the aeronautical radionavigation service is limited to Doppler navigation aids.
- 5.498** (SUP - WRC-97)

5.498A The Earth exploration-satellite (active) and space research (active) services operating in the band 13.25-13.4 GHz shall not cause harmful interference to, or constrain the use and development of, the aeronautical radionavigation service. (WRC-97)

5.499 *Additional allocation:* in Bangladesh, India and Pakistan, the band 13.25-14 GHz is also allocated to the fixed service on a primary basis.

5.500 *Additional allocation:* in Algeria, Angola, Saudi Arabia, Bahrain, Brunei Darussalam, Cameroon, Egypt, the United Arab Emirates, Gabon, Indonesia, Iran (Islamic Republic of), Iraq, Israel, Jordan, Kuwait, Lebanon, Madagascar, Malaysia, Mali, Malta, Morocco, Mauritania, Nigeria, Pakistan, Qatar, the Syrian Arab Republic, Singapore, Sudan, Chad and Tunisia, the band 13.4-14 GHz is also allocated to the fixed and mobile services on a primary basis. (WRC-03)

5.501 *Additional allocation:* in Azerbaijan, Hungary, Japan, Mongolia, Kyrgyzstan, Romania and Turkmenistan, the band 13.4-14 GHz is also allocated to the radionavigation service on a primary basis. (WRC-07)

5.501A The allocation of the band 13.4-13.75 GHz to the space research service on a primary basis is limited to active spaceborne sensors. Other uses of the band by the space research service are on a secondary basis. (WRC-97)

5.501B In the band 13.4-13.75 GHz, the Earth exploration-satellite (active) and space research (active) services shall not cause harmful interference to, or constrain the use and development of, the radiolocation service. (WRC-97)

5.502 In the band 13.75-14 GHz, an earth station of a geostationary fixed-satellite service network shall have a minimum antenna diameter of 1.2 m and an earth station of a non-geostationary fixed-satellite service system shall have a minimum antenna diameter of 4.5 m. In addition, the e.i.r.p., averaged over one second, radiated by a station in the radiolocation or radionavigation services shall not exceed 59 dBW for elevation angles above 2° and 65 dBW at lower angles. Before an administration brings into use an earth station in a geostationary-satellite network in the fixed-satellite service in this band with an antenna diameter smaller than 4.5 m, it shall ensure that the power flux-density produced by this earth station does not exceed:

- -115 dB(W/(m² · 10 MHz)) for more than 1% of the time produced at 36 m above sea level at the low water mark, as officially recognized by the coastal State;
- -115 dB(W/(m² · 10 MHz)) for more than 1% of the time produced 3 m above ground at the border of the territory of an administration deploying or planning to deploy land mobile radars in this band, unless prior agreement has been obtained.

For earth stations within the fixed-satellite service having an antenna diameter greater than or equal to 4.5 m, the e.i.r.p. of any emission should be at least 68 dBW and should not exceed 85 dBW. (WRC-03)

5.503 In the band 13.75-14 GHz, geostationary space stations in the space research service for which information for advance publication has been received by the Bureau prior to 31 January 1992 shall operate on an equal basis with stations in the fixed-satellite service; after that date, new geostationary space stations in the space research service will operate on a secondary basis. Until those geostationary space stations in the space research service for which information for advance publication has been received by the Bureau prior to 31 January 1992 cease to operate in this band:

- in the band 13.77-13.78 GHz, the e.i.r.p. density of emissions from any earth station in the fixed-satellite service operating with a space station in geostationary-satellite orbit shall not exceed:
 - i) $4.7D + 28$ dB(W/40 kHz), where D is the fixed-satellite service earth station antenna diameter (m) for antenna diameters equal to or greater than 1.2 m and less than 4.5 m;
 - ii) $49.2 + 20 \log(D/4.5)$ dB(W/40 kHz), where D is the fixed-satellite service earth station antenna diameter (m) for antenna diameters equal to or greater than 4.5 m and less than 31.9 m;
 - iii) 66.2 dB(W/40 kHz) for any fixed-satellite service earth station for antenna diameters (m) equal to or greater than 31.9 m;
 - iv) 56.2 dB(W/4 kHz) for narrow-band (less than 40 kHz of necessary bandwidth) fixed-satellite service earth station emissions from any fixed-satellite service earth station having an antenna diameter of 4.5 m or greater;
- the e.i.r.p. density of emissions from any earth station in the fixed-satellite service operating with a space station in non-geostationary-satellite orbit shall not exceed 51 dBW in the 6 MHz band from 13.772 to 13.778 GHz.

- Automatic power control may be used to increase the e.i.r.p. density in these frequency ranges to compensate for rain attenuation, to the extent that the power flux-density at the fixed-satellite service space station does not exceed the value resulting from use by an earth station of an e.i.r.p. meeting the above limits in clear-sky conditions. (WRC-03)
- 5.503A** (SUP - WRC-03)
- 5.504** The use of the band 14-14.3 GHz by the radionavigation service shall be such as to provide sufficient protection to space stations of the fixed-satellite service.
- 5.504A** In the band 14-14.5 GHz, aircraft earth stations in the secondary aeronautical mobile-satellite service may also communicate with space stations in the fixed-satellite service. The provisions of Nos. **5.29**, **5.30** and **5.31** apply. (WRC-03)
- 5.504B** Aircraft earth stations operating in the aeronautical mobile-satellite service in the band 14-14.5 GHz shall comply with the provisions of Annex 1, Part C of Recommendation ITU-R M.1643, with respect to any radio astronomy station performing observations in the 14.47-14.5 GHz band located on the territory of Spain, France, India, Italy, the United Kingdom and South Africa. (WRC-03)
- 5.504C** In the band 14-14.25 GHz, the power flux-density produced on the territory of the countries of Saudi Arabia, Botswana, Côte d'Ivoire, Egypt, Guinea, India, Iran (Islamic Republic of), Kuwait, Lesotho, Nigeria, Oman, the Syrian Arab Republic and Tunisia by any aircraft earth station in the aeronautical mobile-satellite service shall not exceed the limits given in Annex 1, Part B of Recommendation ITU-R M.1643, unless otherwise specifically agreed by the affected administration(s). The provisions of this footnote in no way derogate the obligations of the aeronautical mobile-satellite service to operate as a secondary service in accordance with No. **5.29**. (WRC-03)
- 5.505** *Additional allocation:* in Algeria, Angola, Saudi Arabia, Bahrain, Botswana, Brunei Darussalam, Cameroon, China, Congo (Rep. of the), Korea (Rep. of), Egypt, the United Arab Emirates, Gabon, Guinea, India, Indonesia, Iran (Islamic Republic of), Iraq, Israel, Japan, Jordan, Kuwait, Lesotho, Lebanon, Malaysia, Mali, Morocco, Mauritania, Oman, Pakistan, the Philippines, Qatar, the Syrian Arab Republic, the Dem. People's Rep. of Korea, Singapore, Somalia, Sudan, Swaziland, Tanzania, Chad, Viet Nam and Yemen, the band 14-14.3 GHz is also allocated to the fixed service on a primary basis. (WRC-07)
- 5.506** The band 14-14.5 GHz may be used, within the fixed-satellite service (Earth-to-space), for feeder links for the broadcasting-satellite service, subject to coordination with other networks in the fixed-satellite service. Such use of feeder links is reserved for countries outside Europe.
- 5.506A** In the band 14-14.5 GHz, ship earth stations with an e.i.r.p. greater than 21 dBW shall operate under the same conditions as earth stations located on board vessels, as provided in Resolution **902 (WRC-03)**. This footnote shall not apply to ship earth stations for which the complete Appendix 4 information has been received by the Bureau prior to 5 July 2003. (WRC-03)
- 5.506B** Earth stations located on board vessels communicating with space stations in the fixed-satellite service may operate in the frequency band 14-14.5 GHz without the need for prior agreement from Cyprus, Greece and Malta, within the minimum distance given in Resolution **902 (WRC-03)** from these countries. (WRC-03)
- 5.507** Not used.
- 5.508** *Additional allocation:* in Germany, Bosnia and Herzegovina, France, Italy, Libyan Arab Jamahiriya, The Former Yugoslav Rep. of Macedonia and the United Kingdom, the band 14.25-14.3 GHz is also allocated to the fixed service on a primary basis. (WRC-07)
- 5.508A** In the band 14.25-14.3 GHz, the power flux-density produced on the territory of the countries of Saudi Arabia, Botswana, China, Côte d'Ivoire, Egypt, France, Guinea, India, Iran (Islamic Republic of), Italy, Kuwait, Lesotho, Nigeria, Oman, the Syrian Arab Republic, the United Kingdom and Tunisia by any aircraft earth station in the aeronautical mobile-satellite service shall not exceed the limits given in Annex 1, Part B of Recommendation ITU-R M.1643, unless otherwise specifically agreed by the affected administration(s). The provisions of this footnote in no way derogate the obligations of the aeronautical mobile-satellite service to operate as a secondary service in accordance with No. **5.29**. (WRC-03)
- 5.509** (SUP - WRC-07)
- 5.509A** In the band 14.3-14.5 GHz, the power flux-density produced on the territory of the countries of Saudi Arabia, Botswana, Cameroon, China, Côte d'Ivoire, Egypt, France, Gabon, Guinea, India, Iran (Islamic Republic of), Italy, Kuwait, Lesotho, Morocco, Nigeria, Oman, the Syrian Arab Republic, the United Kingdom, Sri Lanka, Tunisia and Viet Nam by any aircraft earth station in the aeronautical mobile-satellite service shall not exceed the limits given in Annex 1, Part B of Recommendation ITU-R M.1643, unless otherwise specifically agreed by the affected administration(s). The provisions of this footnote in no way derogate the obligations of the aeronautical mobile-satellite service to operate as a secondary service in accordance with No. **5.29**. (WRC-03)

- 5.510** The use of the band 14.5-14.8 GHz by the fixed-satellite service (Earth-to-space) is limited to feeder links for the broadcasting-satellite service. This use is reserved for countries outside Europe.
- 5.511** *Additional allocation:* in Saudi Arabia, Bahrain, Bosnia and Herzegovina, Cameroon, Egypt, the United Arab Emirates, Guinea, Iran (Islamic Republic of), Iraq, Israel, the Libyan Arab Jamahiriya, Kuwait, Lebanon, Pakistan, Qatar, the Syrian Arab Republic and Somalia, the band 15.35-15.4 GHz is also allocated to the fixed and mobile services on a secondary basis. (WRC-07)
- 5.511A** The band 15.43-15.63 GHz is also allocated to the fixed-satellite service (space-to-Earth) on a primary basis. Use of the band 15.43-15.63 GHz by the fixed-satellite service (space-to-Earth and Earth-to-space) is limited to feeder links of non-geostationary systems in the mobile-satellite service, subject to coordination under No. **9.11A**. The use of the frequency band 15.43-15.63 GHz by the fixed-satellite service (space-to-Earth) is limited to feeder links of non-geostationary systems in the mobile-satellite service for which advance publication information has been received by the Bureau prior to 2 June 2000. In the space-to-Earth direction, the minimum earth station elevation angle above and gain towards the local horizontal plane and the minimum coordination distances to protect an earth station from harmful interference shall be in accordance with Recommendation ITU-R S.1341. In order to protect the radio astronomy service in the band 15.35-15.4 GHz, the aggregate power flux-density radiated in the 15.35-15.4 GHz band by all the space stations within any feeder-link of a non-geostationary system in the mobile-satellite service (space-to-Earth) operating in the 15.43-15.63 GHz band shall not exceed the level of -156 dB(W/m²) in a 50 MHz bandwidth, into any radio astronomy observatory site for more than 2% of the time. (WRC-2000)
- 5.511B** (SUP - WRC-97)
- 5.511C** Stations operating in the aeronautical radionavigation service shall limit the effective e.i.r.p. in accordance with Recommendation ITU-R S.1340. The minimum coordination distance required to protect the aeronautical radionavigation stations (No. **4.10** applies) from harmful interference from feeder-link earth stations and the maximum e.i.r.p. transmitted towards the local horizontal plane by a feeder-link earth station shall be in accordance with Recommendation ITU-R S.1340. (WRC-97)
- 5.511D** Fixed-satellite service systems for which complete information for advance publication has been received by the Bureau by 21 November 1997 may operate in the bands 15.4-15.43 GHz and 15.63-15.7 GHz in the space-to-Earth direction and 15.63-15.65 GHz in the Earth-to-space direction. In the bands 15.4-15.43 GHz and 15.65-15.7 GHz, emissions from a non-geostationary space station shall not exceed the power flux-density limits at the Earth's surface of -146 dB(W/(m² · MHz)) for any angle of arrival. In the band 15.63-15.65 GHz, where an administration plans emissions from a non-geostationary space station that exceed -146 dB(W/(m² · MHz)) for any angle of arrival, it shall coordinate under No. **9.11A** with the affected administrations. Stations in the fixed-satellite service operating in the band 15.63-15.65 GHz in the Earth-to-space direction shall not cause harmful interference to stations in the aeronautical radionavigation service (No. **4.10** applies). (WRC-97)
- 5.512** *Additional allocation:* in Algeria, Angola, Saudi Arabia, Austria, Bahrain, Bangladesh, Brunei Darussalam, Cameroon, Congo (Rep. of the), Costa Rica, Egypt, El Salvador, the United Arab Emirates, Eritrea, Finland, Guatemala, India, Indonesia, Iran (Islamic Republic of), the Libyan Arab Jamahiriya, Jordan, Kenya, Kuwait, Lebanon, Malaysia, Mali, Morocco, Mauritania, Montenegro, Mozambique, Nepal, Nicaragua, Oman, Pakistan, Qatar, Syrian Arab Republic, Serbia, Singapore, Somalia, Sudan, Swaziland, Tanzania, Chad, Togo and Yemen, the band 15.7-17.3 GHz is also allocated to the fixed and mobile services on a primary basis. (WRC-07)
- 5.513** *Additional allocation:* in Israel, the band 15.7-17.3 GHz is also allocated to the fixed and mobile services on a primary basis. These services shall not claim protection from or cause harmful interference to services operating in accordance with the Table in countries other than those included in No. **5.512**.
- 5.513A** Spaceborne active sensors operating in the band 17.2-17.3 GHz shall not cause harmful interference to, or constrain the development of, the radiolocation and other services allocated on a primary basis. (WRC97)
- 5.514** *Additional allocation:* in Algeria, Angola, Saudi Arabia, Bahrain, Bangladesh, Cameroon, Costa Rica, El Salvador, the United Arab Emirates, Guatemala, India, Iran (Islamic Republic of), Iraq, Israel, Italy, the Libyan Arab Jamahiriya, Japan, Jordan, Kuwait, Lithuania, Nepal, Nicaragua, Nigeria, Oman, Uzbekistan, Pakistan, Qatar, Kyrgyzstan and Sudan, the band 17.3-17.7 GHz is also allocated to the fixed and mobile services on a secondary basis. The power limits given in Nos. **21.3** and **21.5** shall apply. (WRC-07)
- 5.515** In the band 17.3-17.8 GHz, sharing between the fixed-satellite service (Earth-to-space) and the broadcasting-satellite service shall also be in accordance with the provisions of § 1 of Annex 4 of Appendix **30A**.
- 5.516** The use of the band 17.3-18.1 GHz by geostationary-satellite systems in the fixed-satellite service

(Earth-to-space) is limited to feeder links for the broadcasting-satellite service. The use of the band 17.3-17.8 GHz in Region 2 by systems in the fixed-satellite service (Earth-to-space) is limited to geostationary satellites. For the use of the band 17.3-17.8 GHz in Region 2 by feeder links for the broadcasting-satellite service in the band 12.2-12.7 GHz, see Article 11. The use of the bands 17.3-18.1 GHz (Earth-to-space) in Regions 1 and 3 and 17.8-18.1 GHz (Earth-to-space) in Region 2 by non-geostationary-satellite systems in the fixed-satellite service is subject to application of the provisions of No. 9.12 for coordination with other non-geostationary-satellite systems in the fixed-satellite service. Non-geostationary-satellite systems in the fixed-satellite service shall not claim protection from geostationary-satellite networks in the fixed-satellite service operating in accordance with the Radio Regulations, irrespective of the dates of receipt by the Bureau of the complete coordination or notification information, as appropriate, for the non-geostationary-satellite systems in the fixed-satellite service and of the complete coordination or notification information, as appropriate, for the geostationary-satellite networks, and No. 5.43A does not apply. Non-geostationary-satellite systems in the fixed-satellite service in the above bands shall be operated in such a way that any unacceptable interference that may occur during their operation shall be rapidly eliminated. (WRC-2000)

5.516A In the band 17.3-17.7 GHz, earth stations of the fixed-satellite service (space-to-Earth) in Region 1 shall not claim protection from the broadcasting-satellite service feeder-link earth stations operating under Appendix 30A, nor put any limitations or restrictions on the locations of the broadcasting-satellite service feeder-link earth stations anywhere within the service area of the feeder link. (WRC-03)

5.516B The following bands are identified for use by high-density applications in the fixed-satellite service:

17.3-17.7 GHz	(space-to-Earth) in Region 1,
18.3-19.3 GHz	(space-to-Earth) in Region 2,
19.7-20.2 GHz	(space-to-Earth) in all Regions,
39.5-40 GHz	(space-to-Earth) in Region 1,
40-40.5 GHz	(space-to-Earth) in all Regions,
40.5-42 GHz	(space-to-Earth) in Region 2,
47.5-47.9 GHz	(space-to-Earth) in Region 1,
48.2-48.54 GHz	(space-to-Earth) in Region 1,
49.44-50.2 GHz	(space-to-Earth) in Region 1,
and	
27.5-27.82 GHz	(Earth-to-space) in Region 1,
28.35-28.45 GHz	(Earth-to-space) in Region 2,
28.45-28.94 GHz	(Earth-to-space) in all Regions,
28.94-29.1 GHz	(Earth-to-space) in Region 2 and 3,
29.25-29.46 GHz	(Earth-to-space) in Region 2,
29.46-30 GHz	(Earth-to-space) in all Regions,
48.2-50.2 GHz	(Earth-to-space) in Region 2.

This identification does not preclude the use of these bands by other fixed-satellite service applications or by other services to which these bands are allocated on a co-primary basis and does not establish priority in these Radio Regulations among users of the bands. Administrations should take this into account when considering regulatory provisions in relation to these bands. See Resolution 143 (WRC-03). (WRC-03)

5.517 In Region 2, use of the fixed-satellite (space-to-Earth) service in the band 17.7-17.8 GHz shall not cause harmful interference to nor claim protection from assignments in the broadcasting-satellite service operating in conformity with the Radio Regulations. (WRC-07)

5.518 (SUP - WRC-07)

5.519 *Additional allocation:* the bands 18-18.3 GHz in Region 2 and 18.1-18.4 GHz in Regions 1 and 3 are also allocated to the meteorological-satellite service (space-to-Earth) on a primary basis. Their use is limited to geostationary satellites. (WRC-07)

5.520 The use of the band 18.1-18.4 GHz by the fixed-satellite service (Earth-to-space) is limited to feeder links of geostationary-satellite systems in the broadcasting-satellite service. (WRC-2000)

5.521 *Alternative allocation:* in Germany, Denmark, the United Arab Emirates and Greece, the band 18.1-18.4 GHz is allocated to the fixed, fixed-satellite (space-to-Earth) and mobile services on a primary basis (see No. 5.33). The provisions of No. 5.519 also apply. (WRC-03)

5.522 (SUP - WRC-2000)

5.522A The emissions of the fixed service and the fixed-satellite service in the band 18.6-18.8 GHz are limited to the values given in Nos. **21.5A** and **21.16.2**, respectively. (WRC-2000)

5.522B The use of the band 18.6-18.8 GHz by the fixed-satellite service is limited to geostationary systems and systems with an orbit of apogee greater than 20 000 km. (WRC-2000)

5.522C In the band 18.6-18.8 GHz, in Algeria, Saudi Arabia, Bahrain, Egypt, the United Arab Emirates, the Libyan Arab Jamahiriya, Jordan, Lebanon, Morocco, Oman, Qatar, the Syrian Arab Republic, Tunisia and Yemen, fixed-service systems in operation at the date of entry into force of the Final Acts of WRC-2000 are not subject to the limits of No. **21.5A**. (WRC-2000)

5.523 (SUP - WRC-2000)

5.523A The use of the bands 18.8-19.3 GHz (space-to-Earth) and 28.6-29.1 GHz (Earth-to-space) by geostationary and non-geostationary fixed-satellite service networks is subject to the application of the provisions of No. **9.11A** and No. **22.2** does not apply. Administrations having geostationary-satellite networks under coordination prior to 18 November 1995 shall cooperate to the maximum extent possible to coordinate pursuant to No. **9.11A** with non-geostationary-satellite networks for which notification information has been received by the Bureau prior to that date, with a view to reaching results acceptable to all the parties concerned. Non-geostationary-satellite networks shall not cause unacceptable interference to geostationary fixed-satellite service networks for which complete Appendix 4 notification information is considered as having been received by the Bureau prior to 18 November 1995. (WRC-97)

5.523B The use of the band 19.3-19.6 GHz (Earth-to-space) by the fixed-satellite service is limited to feeder links for non-geostationary-satellite systems in the mobile-satellite service. Such use is subject to the application of the provisions of No. **9.11A**, and No. **22.2** does not apply.

5.523C No. **22.2** shall continue to apply in the bands 19.3-19.6 GHz and 29.1-29.4 GHz, between feeder links of non-geostationary mobile-satellite service networks and those fixed-satellite service networks for which complete Appendix 4 coordination information, or notification information, is considered as having been received by the Bureau prior to 18 November 1995. (WRC-97)

5.523D The use of the band 19.3-19.7 GHz (space-to-Earth) by geostationary fixed-satellite service systems and by feeder links for non-geostationary-satellite systems in the mobile-satellite service is subject to the application of the provisions of No. **9.11A**, but not subject to the provisions of No. **22.2**. The use of this band for other non-geostationary fixed-satellite service systems, or for the cases indicated in Nos. **5.523C** and **5.523E**, is not subject to the provisions of No. **9.11A** and shall continue to be subject to Articles 9 (except No. **9.11A**) and 11 procedures, and to the provisions of No. **22.2**. (WRC-97)

5.523E No. **22.2** shall continue to apply in the bands 19.6-19.7 GHz and 29.4-29.5 GHz, between feeder links of non-geostationary mobile-satellite service networks and those fixed-satellite service networks for which complete Appendix 4 coordination information, or notification information, is considered as having been received by the Bureau by 21 November 1997. (WRC-97)

5.524 *Additional allocation:* in Afghanistan, Algeria, Angola, Saudi Arabia, Bahrain, Brunei Darussalam, Cameroon, China, Congo (Rep. of the), Costa Rica, Egypt, the United Arab Emirates, Gabon, Guatemala, Guinea, India, Iran (Islamic Republic of), Iraq, Israel, Japan, Jordan, Kuwait, Lebanon, Malaysia, Mali, Morocco, Mauritania, Nepal, Nigeria, Oman, Pakistan, the Philippines, Qatar, the Syrian Arab Republic, the Dem. Rep. of the Congo, the Dem. People's Rep. of Korea, Singapore, Somalia, Sudan, Tanzania, Chad, Togo and Tunisia, the band 19.7-21.2 GHz is also allocated to the fixed and mobile services on a primary basis. This additional use shall not impose any limitation on the power flux-density of space stations in the fixed-satellite service in the band 19.7-21.2 GHz and of space stations in the mobile-satellite service in the band 19.7-20.2 GHz where the allocation to the mobile-satellite service is on a primary basis in the latter band. (WRC-07)

5.525 In order to facilitate interregional coordination between networks in the mobile-satellite and fixed-satellite services, carriers in the mobile-satellite service that are most susceptible to interference shall, to the extent practicable, be located in the higher parts of the bands 19.7-20.2 GHz and 29.5-30 GHz.

5.526 In the bands 19.7-20.2 GHz and 29.5-30 GHz in Region 2, and in the bands 20.1-20.2 GHz and 29.9-30 GHz in Regions 1 and 3, networks which are both in the fixed-satellite service and in the mobile-satellite service may include links between earth stations at specified or unspecified points or while in motion, through one or more satellites for point-to-point and point-to-multipoint communications.

5.527 In the bands 19.7-20.2 GHz and 29.5-30 GHz, the provisions of No. **4.10** do not apply with respect to the mobile-satellite service.

5.528 The allocation to the mobile-satellite service is intended for use by networks which use narrow spot-beam antennas and other advanced technology at the space stations. Administrations operating systems in

- the mobile-satellite service in the band 19.7-20.1 GHz in Region 2 and in the band 20.1-20.2 GHz shall take all practicable steps to ensure the continued availability of these bands for administrations operating fixed and mobile systems in accordance with the provisions of No. **5.524**.
- 5.529** The use of the bands 19.7-20.1 GHz and 29.5-29.9 GHz by the mobile-satellite service in Region 2 is limited to satellite networks which are both in the fixed-satellite service and in the mobile-satellite service as described in No. **5.526**.
- 5.530** In Regions 1 and 3, the use of the band 21.4-22 GHz by the broadcasting-satellite service is subject to the provisions of Resolution **525 (Rev.WRC-07)**. (WRC-07)
- 5.531** *Additional allocation:* in Japan, the band 21.4-22 GHz is also allocated to the broadcasting service on a primary basis.
- 5.532** The use of the band 22.21-22.5 GHz by the Earth exploration-satellite (passive) and space research (passive) services shall not impose constraints upon the fixed and mobile, except aeronautical mobile, services.
- 5.533** The inter-satellite service shall not claim protection from harmful interference from airport surface detection equipment stations of the radionavigation service.
- 5.534** (SUP - WRC-03)
- 5.535** In the band 24.75-25.25 GHz, feeder links to stations of the broadcasting-satellite service shall have priority over other uses in the fixed-satellite service (Earth-to-space). Such other uses shall protect and shall not claim protection from existing and future operating feeder-link networks to such broadcasting satellite stations.
- 5.535A** The use of the band 29.1-29.5 GHz (Earth-to-space) by the fixed-satellite service is limited to geostationary-satellite systems and feeder links to non-geostationary-satellite systems in the mobile-satellite service. Such use is subject to the application of the provisions of No. **9.11A**, but not subject to the provisions of No. **22.2**, except as indicated in Nos. **5.523C** and **5.523E** where such use is not subject to the provisions of No. **9.11A** and shall continue to be subject to Articles **9** (except No. **9.11A**) and **11** procedures, and to the provisions of No. **22.2**. (WRC-97)
- 5.536** Use of the 25.25-27.5 GHz band by the inter-satellite service is limited to space research and Earth exploration-satellite applications, and also transmissions of data originating from industrial and medical activities in space.
- 5.536A** Administrations operating earth stations in the Earth exploration-satellite service or the space research service shall not claim protection from stations in the fixed and mobile services operated by other administrations. In addition, earth stations in the Earth exploration-satellite service or in the space research service should be operated taking into account Recommendations ITU-R SA.1278 and ITU-R SA.1625, respectively. (WRC-03)
- 5.536B** In Germany, Saudi Arabia, Austria, Belgium, Brazil, Bulgaria, China, Korea (Rep. of), Denmark, Egypt, United Arab Emirates, Spain, Estonia, Finland, France, Hungary, India, Iran (Islamic Republic of), Ireland, Israel, Italy, the Libyan Arab Jamahiriya, Jordan, Kenya, Kuwait, Lebanon, Liechtenstein, Lithuania, Moldova, Norway, Oman, Uganda, Pakistan, the Philippines, Poland, Portugal, the Syrian Arab Republic, Dem. People's Rep. of Korea, Slovakia, the Czech Rep., Romania, the United Kingdom, Singapore, Sweden, Switzerland, Tanzania, Turkey, Viet Nam and Zimbabwe, earth stations operating in the Earth exploration-satellite service in the band 25.5-27 GHz shall not claim protection from, or constrain the use and deployment of, stations of the fixed and mobile services. (WRC-07)
- 5.536C** In Algeria, Saudi Arabia, Bahrain, Botswana, Brazil, Cameroon, Comoros, Cuba, Djibouti, Egypt, United Arab Emirates, Estonia, Finland, Iran (Islamic Republic of), Israel, Jordan, Kenya, Kuwait, Lithuania, Malaysia, Morocco, Nigeria, Oman, Qatar, Syrian Arab Republic, Somalia, Sudan, Tanzania, Tunisia, Uruguay, Zambia and Zimbabwe, earth stations operating in the space research service in the band 25.5-27 GHz shall not claim protection from, or constrain the use and deployment of, stations of the fixed and mobile services. (WRC-03)
- 5.537** Space services using non-geostationary satellites operating in the inter-satellite service in the band 27-27.5 GHz are exempt from the provisions of No. **22.2**.
- 5.537A** In Bhutan, Cameroon, Korea (Rep. of), the Russian Federation, India, Indonesia, Iran (Islamic Republic of), Japan, Kazakhstan, Lesotho, Malaysia, Maldives, Mongolia, Myanmar, Uzbekistan, Pakistan, the Philippines, Kyrgyzstan, the Dem. People's Rep. of Korea, Sri Lanka, Thailand and Viet Nam, the allocation to the fixed service in the band 27.9-28.2 GHz may also be used by high altitude platform stations (HAPS) within the territory of these countries. Such use of 300 MHz of the fixed-service allocation by HAPS in the above countries is further limited to operation in the HAPS-to-ground direction and shall not cause harmful interference to, nor claim protection from, other types of fixed-service systems or other

co-primary services. Furthermore, the development of these other services shall not be constrained by HAPS. See Resolution **145 (Rev.WRC-07)**. (WRC-07)

- 5.538** *Additional allocation:* the bands 27.500-27.501 GHz and 29.999-30.000 GHz are also allocated to the fixed-satellite service (space-to-Earth) on a primary basis for the beacon transmissions intended for up-link power control. Such space-to-Earth transmissions shall not exceed an equivalent isotropically radiated power (e.i.r.p.) of +10 dBW in the direction of adjacent satellites on the geostationary-satellite orbit. (WRC-07)
- 5.539** The band 27.5-30 GHz may be used by the fixed-satellite service (Earth-to-space) for the provision of feeder links for the broadcasting-satellite service.
- 5.540** *Additional allocation:* the band 27.501-29.999 GHz is also allocated to the fixed-satellite service (space-to-Earth) on a secondary basis for beacon transmissions intended for up-link power control.
- 5.541** In the band 28.5-30 GHz, the earth exploration-satellite service is limited to the transfer of data between stations and not to the primary collection of information by means of active or passive sensors.
- 5.541A** Feeder links of non-geostationary networks in the mobile-satellite service and geostationary networks in the fixed-satellite service operating in the band 29.1-29.5 GHz (Earth-to-space) shall employ uplink adaptive power control or other methods of fade compensation, such that the earth station transmissions shall be conducted at the power level required to meet the desired link performance while reducing the level of mutual interference between both networks. These methods shall apply to networks for which Appendix 4 coordination information is considered as having been received by the Bureau after 17 May 1996 and until they are changed by a future competent world radiocommunication conference. Administrations submitting Appendix 4 information for coordination before this date are encouraged to utilize these techniques to the extent practicable. (WRC-2000)
- 5.542** *Additional allocation:* in Algeria, Saudi Arabia, Bahrain, Brunei Darussalam, Cameroon, China, Congo (Rep. of the), Egypt, the United Arab Emirates, Eritrea, Ethiopia, Guinea, India, Iran (Islamic Republic of), Iraq, Japan, Jordan, Kuwait, Lebanon, Malaysia, Mali, Morocco, Mauritania, Nepal, Pakistan, Philippines, Qatar, the Syrian Arab Republic, the Dem. People's Rep. of Korea, Somalia, Sudan, Sri Lanka and Chad, the band 29.5-31 GHz is also allocated to the fixed and mobile services on a secondary basis. The power limits specified in Nos. **21.3** and **21.5** shall apply. (WRC-07)
- 5.543** The band 29.95-30 GHz may be used for space-to-space links in the Earth exploration-satellite service for telemetry, tracking, and control purposes, on a secondary basis.
- 5.543A** In Bhutan, Cameroon, Korea (Rep. of), the Russian Federation, India, Indonesia, Iran (Islamic Republic of), Japan, Kazakhstan, Lesotho, Malaysia, Maldives, Mongolia, Myanmar, Uzbekistan, Pakistan, the Philippines, Kyrgyzstan, the Dem. People's Rep. of Korea, Sri Lanka, Thailand and Viet Nam, the allocation to the fixed service in the band 31-31.3 GHz may also be used by systems using high altitude platform stations (HAPS) in the ground-to-HAPS direction. The use of the band 31-31.3 GHz by systems using HAPS is limited to the territory of the countries listed above and shall not cause harmful interference to, nor claim protection from, other types of fixed-service systems, systems in the mobile service and systems operated under No. **5.545**. Furthermore, the development of these services shall not be constrained by HAPS. Systems using HAPS in the band 31-31.3 GHz shall not cause harmful interference to the radio astronomy service having a primary allocation in the band 31.3-31.8 GHz, taking into account the protection criterion as given in Recommendation ITU-R RA.769. In order to ensure the protection of satellite passive services, the level of unwanted power density into a HAPS ground station antenna in the band 31.3-31.8 GHz shall be limited to -106 dB(W/MHz) under clear-sky conditions, and may be increased up to -100 dB(W/MHz) under rainy conditions to mitigate fading due to rain, provided the effective impact on the passive satellite does not exceed the impact under clear-sky conditions. See Resolution **145 (Rev.WRC-07)**. (WRC-07)
- 5.544** In the band 31-31.3 GHz the power flux-density limits specified in Article **21**, Table **21-4** shall apply to the space research service.
- 5.545** *Different category of service:* in Armenia, Georgia, Mongolia, Kyrgyzstan, Tajikistan and Turkmenistan, the allocation of the band 31-31.3 GHz to the space research service is on a primary basis (see No. **5.33**). (WRC-07)
- 5.546** *Different category of service:* in Saudi Arabia, Armenia, Azerbaijan, Belarus, Egypt, the United Arab Emirates, Spain, Estonia, the Russian Federation, Georgia, Hungary, Iran (Islamic Republic of), Israel, Jordan, Lebanon, Moldova, Mongolia, Uzbekistan, Poland, the Syrian Arab Republic, Kyrgyzstan, Romania, the United Kingdom, South Africa, Tajikistan, Turkmenistan and Turkey, the allocation of the

- band 31.5-31.8 GHz to the fixed and mobile, except aeronautical mobile, services is on a primary basis (see No. **5.33**). (WRC-07)
- 5.547** The bands 31.8-33.4 GHz, 37-40 GHz, 40.5-43.5 GHz, 51.4-52.6 GHz, 55.78-59 GHz and 64-66 GHz are available for high-density applications in the fixed service (see Resolution **75 (WRC-2000)**). Administrations should take this into account when considering regulatory provisions in relation to these bands. Because of the potential deployment of high-density applications in the fixed-satellite service in the bands 39.5-40 GHz and 40.5-42 GHz (see No. **5.516B**), administrations should further take into account potential constraints to high-density applications in the fixed service, as appropriate. (WRC-07)
- 5.547A** Administrations should take practical measures to minimize the potential interference between stations in the fixed service and airborne stations in the radionavigation service in the 31.8-33.4 GHz band, taking into account the operational needs of the airborne radar systems. (WRC-2000)
- 5.547B** *Alternative allocation:* in the United States, the band 31.8-32 GHz is allocated to the radionavigation and space research (deep space) (space-to-Earth) services on a primary basis. (WRC-97)
- 5.547C** *Alternative allocation:* in the United States, the band 32-32.3 GHz is allocated to the radionavigation and space research (deep space) (space-to-Earth) services on a primary basis. (WRC-03)
- 5.547D** *Alternative allocation:* in the United States, the band 32.3-33 GHz is allocated to the inter-satellite and radionavigation services on a primary basis. (WRC-97)
- 5.547E** *Alternative allocation:* in the United States, the band 33-33.4 GHz is allocated to the radionavigation service on a primary basis. (WRC-97)
- 5.548** In designing systems for the inter-satellite service in the band 32.3-33 GHz, for the radionavigation service in the band 32-33 GHz, and for the space research service (deep space) in the band 31.8-32.3 GHz, administrations shall take all necessary measures to prevent harmful interference between these services, bearing in mind the safety aspects of the radionavigation service (see Recommendation **707**). (WRC-03)
- 5.549** *Additional allocation:* in Saudi Arabia, Bahrain, Bangladesh, Egypt, the United Arab Emirates, Gabon, Indonesia, Iran (Islamic Republic of), Iraq, Israel, the Libyan Arab Jamahiriya, Jordan, Kuwait, Lebanon, Malaysia, Mali, Malta, Morocco, Mauritania, Nepal, Nigeria, Oman, Pakistan, the Philippines, Qatar, the Syrian Arab Republic, the Dem. Rep. of the Congo, Singapore, Somalia, Sudan, Sri Lanka, Togo, Tunisia and Yemen, the band 33.4-36 GHz is also allocated to the fixed and mobile services on a primary basis. (WRC-03)
- 5.549A** In the band 35.5-36.0 GHz, the mean power flux-density at the Earth's surface, generated by any spaceborne sensor in the Earth exploration-satellite service (active) or space research service (active), for any angle greater than 0.8° from the beam centre shall not exceed -73.3 dB(W/m²) in this band. (WRC-03)
- 5.550** *Different category of service:* in Armenia, Azerbaijan, Belarus, the Russian Federation, Georgia, Mongolia, Kyrgyzstan, Tajikistan and Turkmenistan, the allocation of the band 34.7-35.2 GHz to the space research service is on a primary basis (see No. **5.33**). (WRC-07)
- 5.550A** For sharing of the band 36-37 GHz between the Earth exploration-satellite (passive) service and the fixed and mobile services, Resolution **752 (WRC-07)** shall apply. (WRC-07)
- 5.551** (SUP - WRC-97)
- 5.551A** (SUP - WRC-03)
- 5.551AA** (SUP - WRC-03)
- 5.551B** (SUP - WRC-2000)
- 5.551C** (SUP - WRC-2000)
- 5.551D** (SUP - WRC-2000)
- 5.551E** (SUP - WRC-2000)
- 5.551F** *Different category of service:* in Japan, the allocation of the band 41.5-42.5 GHz to the mobile service is on a primary basis (see No. **5.33**). (WRC-97)
- 5.551G** (SUP - WRC-03)
- 5.551H** The equivalent power flux-density (epfd) produced in the band 42.5-43.5 GHz by all space stations in any non-geostationary-satellite system in the fixed-satellite service (space-to-Earth), or in the broadcasting-satellite service operating in the 42-42.5 GHz band, shall not exceed the following values at the site of any radio astronomy station for more than 2% of the time:
- 230 dB(W/m²) in 1 GHz and -246 dB(W/m²) in any 500 kHz of the 42.5-43.5 GHz band at the site of any radio astronomy station registered as a single-dish telescope; and

- 209 dB(W/m²) in any 500 kHz of the 42.5-43.5 GHz band at the site of any radio astronomy station registered as a very long baseline interferometry station.

These efpd values shall be evaluated using the methodology given in Recommendation ITU-R S.1586-1 and the reference antenna pattern and the maximum gain of an antenna in the radio astronomy service given in Recommendation ITU-R RA.1631 and shall apply over the whole sky and for elevation angles higher than the minimum operating angle θ_{min} of the radiotelescope (for which a default value of 5° should be adopted in the absence of notified information).

These values shall apply at any radio astronomy station that either:

- was in operation prior to 5 July 2003 and has been notified to the Bureau before 4 January 2004; or
- was notified before the date of receipt of the complete Appendix 4 information for coordination or notification, as appropriate, for the space station to which the limits apply.

Other radio astronomy stations notified after these dates may seek an agreement with administrations that have authorized the space stations. In Region 2, Resolution 743 (WRC-03) shall apply. The limits in this footnote may be exceeded at the site of a radio astronomy station of any country whose administration so agreed. (WRC-07)

5.551I The power flux-density in the band 42.5-43.5 GHz produced by any geostationary space station in the fixed-satellite service (space-to-Earth), or the broadcasting-satellite service operating in the 42-42.5 GHz band, shall not exceed the following values at the site of any radio astronomy station:

- 137 dB(W/m²) in 1 GHz and –153 dB(W/m²) in any 500 kHz of the 42.5-43.5 GHz band at the site of any radio astronomy station registered as a single-dish telescope; and
- 116 dB(W/m²) in any 500 kHz of the 42.5-43.5 GHz band at the site of any radio astronomy station registered as a very long baseline interferometry station.

These values shall apply at the site of any radio astronomy station that either:

- was in operation prior to 5 July 2003 and has been notified to the Bureau before 4 January 2004; or
- was notified before the date of receipt of the complete Appendix 4 information for coordination or notification, as appropriate, for the space station to which the limits apply.

Other radio astronomy stations notified after these dates may seek an agreement with administrations that have authorized the space stations. In Region 2, Resolution 743 (WRC-03) shall apply. The limits in this footnote may be exceeded at the site of a radio astronomy station of any country whose administration so agreed. (WRC-03)

5.552 The allocation of the spectrum for the fixed-satellite service in the bands 42.5-43.5 GHz and 47.2-50.2 GHz for Earth-to-space transmission is greater than that in the band 37.5-39.5 GHz for space-to-Earth transmission in order to accommodate feeder links to broadcasting satellites. Administrations are urged to take all practicable steps to reserve the band 47.2-49.2 GHz for feeder links for the broadcasting-satellite service operating in the band 40.5-42.5 GHz.

5.552A The allocation to the fixed service in the bands 47.2-47.5 GHz and 47.9-48.2 GHz is designated for use by high altitude platform stations. The use of the bands 47.2-47.5 GHz and 47.9-48.2 GHz is subject to the provisions of Resolution 122 (Rev.WRC-07). (WRC-07)

5.553 In the bands 43.5-47 GHz and 66-71 GHz, stations in the land mobile service may be operated subject to not causing harmful interference to the space radiocommunication services to which these bands are allocated (see No. 5.43). (WRC-2000)

5.554 In the bands 43.5-47 GHz, 66-71 GHz, 95-100 GHz, 123-130 GHz, 191.8-200 GHz and 252-265 GHz, satellite links connecting land stations at specified fixed points are also authorized when used in conjunction with the mobile-satellite service or the radionavigation-satellite service. (WRC-2000)

5.554A The use of the bands 47.5-47.9 GHz, 48.2-48.54 GHz and 49.44-50.2 GHz by the fixed-satellite service (space-to-Earth) is limited to geostationary satellites. (WRC-03)

5.555 *Additional allocation:* the band 48.94-49.04 GHz is also allocated to the radio astronomy service on a primary basis. (WRC-2000)

5.555A (SUP - WRC-03)

5.555B The power flux-density in the band 48.94-49.04 GHz produced by any geostationary space station in the fixed-satellite service (space-to-Earth) operating in the bands 48.2-48.54 GHz and 49.44-50.2 GHz shall not exceed –151.8 dB(W/m²) in any 500 kHz band at the site of any radio astronomy station. (WRC-03)

5.556 In the bands 51.4-54.25 GHz, 58.2-59 GHz and 64-65 GHz, radio astronomy observations may be carried out under national arrangements. (WRC-2000)

- 5.556A** Use of the bands 54.25-56.9 GHz, 57-58.2 GHz and 59-59.3 GHz by the inter-satellite service is limited to satellites in the geostationary-satellite orbit. The single-entry power flux-density at all altitudes from 0 km to 1 000 km above the Earth's surface produced by a station in the inter-satellite service, for all conditions and for all methods of modulation, shall not exceed $-147 \text{ dB(W/(m}^2 \cdot 100 \text{ MHz))}$ for all angles of arrival. (WRC-97)
- 5.556B** *Additional allocation:* in Japan, the band 54.25-55.78 GHz is also allocated to the mobile service on a primary basis for low-density use. (WRC-97)
- 5.557** *Additional allocation:* in Japan, the band 55.78-58.2 GHz is also allocated to the radiolocation service on a primary basis. (WRC-97)
- 5.557A** In the band 55.78-56.26 GHz, in order to protect stations in the Earth exploration-satellite service (passive), the maximum power density delivered by a transmitter to the antenna of a fixed service station is limited to -26 dB(W/MHz) . (WRC-2000)
- 5.558** In the bands 55.78-58.2 GHz, 59-64 GHz, 66-71 GHz, 122.25-123 GHz, 130-134 GHz, 167-174.8 GHz and 191.8-200 GHz, stations in the aeronautical mobile service may be operated subject to not causing harmful interference to the inter-satellite service (see No. 5.43). (WRC-2000)
- 5.558A** Use of the band 56.9-57 GHz by inter-satellite systems is limited to links between satellites in geostationary-satellite orbit and to transmissions from non-geostationary satellites in high-Earth orbit to those in low-Earth orbit. For links between satellites in the geostationary-satellite orbit, the single entry power flux-density at all altitudes from 0 km to 1 000 km above the Earth's surface, for all conditions and for all methods of modulation, shall not exceed $-147 \text{ dB(W/(m}^2 \cdot 100 \text{ MHz))}$ for all angles of arrival. (WRC-97)
- 5.559** In the band 59-64 GHz, airborne radars in the radiolocation service may be operated subject to not causing harmful interference to the inter-satellite service (see No. 5.43). (WRC-2000)
- 5.559A** (SUP - WRC-07)
- 5.560** In the band 78-79 GHz radars located on space stations may be operated on a primary basis in the Earth exploration-satellite service and in the space research service.
- 5.561** In the band 74-76 GHz, stations in the fixed, mobile and broadcasting services shall not cause harmful interference to stations of the fixed-satellite service or stations of the broadcasting-satellite service operating in accordance with the decisions of the appropriate frequency assignment planning conference for the broadcasting-satellite service. (WRC-2000)
- 5.561A** The 81-81.5 GHz band is also allocated to the amateur and amateur-satellite services on a secondary basis. (WRC-2000)
- 5.561B** In Japan, use of the band 84-86 GHz, by the fixed-satellite service (Earth-to-space) is limited to feeder links in the broadcasting-satellite service using the geostationary-satellite orbit. (WRC-2000)
- 5.562** The use of the band 94-94.1 GHz by the Earth exploration-satellite (active) and space research (active) services is limited to spaceborne cloud radars. (WRC-97)
- 5.562A** In the bands 94-94.1 GHz and 130-134 GHz, transmissions from space stations of the Earth exploration-satellite service (active) that are directed into the main beam of a radio astronomy antenna have the potential to damage some radio astronomy receivers. Space agencies operating the transmitters and the radio astronomy stations concerned should mutually plan their operations so as to avoid such occurrences to the maximum extent possible. (WRC-2000)
- 5.562B** In the bands 105-109.5 GHz, 111.8-114.25 GHz, 155.5-158.5 GHz and 217-226 GHz, the use of this allocation is limited to space-based radio astronomy only. (WRC-2000)
- 5.562C** Use of the band 116-122.25 GHz by the inter-satellite service is limited to satellites in the geostationary-satellite orbit. The single-entry power flux-density produced by a station in the inter-satellite service, for all conditions and for all methods of modulation, at all altitudes from 0 km to 1 000 km above the Earth's surface and in the vicinity of all geostationary orbital positions occupied by passive sensors, shall not exceed $-148 \text{ dB(W/(m}^2 \cdot \text{MHz))}$ for all angles of arrival. (WRC-2000)
- 5.562D** *Additional allocation:* In Korea (Rep. of), the bands 128-130 GHz, 171-171.6 GHz, 172.2-172.8 GHz and 173.3-174 GHz are also allocated to the radio astronomy service on a primary basis until 2015. (WRC-2000)
- 5.562E** The allocation to the Earth exploration-satellite service (active) is limited to the band 133.5-134 GHz. (WRC-2000)
- 5.562F** In the band 155.5-158.5 GHz, the allocation to the Earth exploration-satellite (passive) and space research (passive) services shall terminate on 1 January 2018. (WRC-2000)
- 5.562G** The date of entry into force of the allocation to the fixed and mobile services in the band 155.5-158.5 GHz shall be 1 January 2018. (WRC-2000)

5.562H Use of the bands 174.8-182 GHz and 185-190 GHz by the inter-satellite service is limited to satellites in the geostationary-satellite orbit. The single-entry power flux-density produced by a station in the inter-satellite service, for all conditions and for all methods of modulation, at all altitudes from 0 to 1 000 km above the Earth's surface and in the vicinity of all geostationary orbital positions occupied by passive sensors, shall not exceed $-144 \text{ dB(W/(m}^2 \cdot \text{MHz))}$ for all angles of arrival. (WRC-2000)

5.563 (SUP - WRC-03)

5.563A In the bands 200-209 GHz, 235-238 GHz, 250-252 GHz and 265-275 GHz, ground-based passive atmospheric sensing is carried out to monitor atmospheric constituents. (WRC-2000)

5.563B The band 237.9-238 GHz is also allocated to the Earth exploration-satellite service (active) and the space research service (active) for spaceborne cloud radars only. (WRC-2000)

5.564 (SUP - WRC-2000)

5.565 The frequency band 275-1 000 GHz may be used by administrations for experimentation with, and development of, various active and passive services. In this band a need has been identified for the following spectral line measurements for passive services:

- radio astronomy service: 275-323 GHz, 327-371 GHz, 388-424 GHz, 426-442 GHz, 453-510 GHz, 623-711 GHz, 795-909 GHz and 926-945 GHz;
- Earth exploration-satellite service (passive) and space research service (passive): 275-277 GHz, 294-306 GHz, 316-334 GHz, 342-349 GHz, 363-365 GHz, 371-389 GHz, 416-434 GHz, 442-444 GHz, 496-506 GHz, 546-568 GHz, 624-629 GHz, 634-654 GHz, 659-661 GHz, 684-692 GHz, 730-732 GHz, 851-853 GHz and 951-956 GHz.

Future research in this largely unexplored spectral region may yield additional spectral lines and continuum bands of interest to the passive services. Administrations are urged to take all practicable steps to protect these passive services from harmful interference until the date when the allocation Table is established in the above-mentioned frequency band. (WRC-2000)

3

National Frequency Assignment Table

National Frequency Assignment Table

3.1 Introduction

Following the adoption of the National Frequency Allocations Table of Sultanate of Oman (hereinafter as Allocation table) the Telecommunications Regulatory Authority (TRA) has issued the National Frequency Assignment Table (hereinafter as Assignment table) in 2005. While the Allocation table provides the general plan for spectrum use and the basic structure to ensure effective utilization of the spectrum and the prevention of radio frequency interference between services, the Assignment table provides more detail information about how each band in Allocation table is actually planned and sub-divided to accommodate particular radio technologies and references to corresponding regulations. Thus, the Assignment table is used by the TRA primarily for efficient band planning and spectrum utilization. Another aim of the document is to assist radio spectrum users, investors and telecom dealers in the Sultanate in production, import and purchasing of telecommunication equipment, planning and deployment of telecommunication networks.

The information regarding to major utilization shows only systems and technologies that are capable to share and utilize the spectrum efficiently. Furthermore, these are systems/technologies mostly supported in the region in the given bands. The column 'Notes' indicates further limits on bands and frequencies, specific radio technologies and systems and relevant regulations applied to corresponding systems/technologies in column 'Major utilization'.

The order of systems/technologies in column 'Major utilization' is listed under certain radio services they belong to. The essential regulatory requirements stated in the ITU Radio Regulations imposed to radio services in specific bands are also applied to subsequent systems and technologies.

The Assignment table shows only certain arrangements among various recommended and existing channel arrangements. The options chosen are the ones which lead to efficient spectrum planning, mostly harmonized in the region and mostly support the historical and existing channel arrangements in the Sultanate.

Use of frequency spectrum for military purposes in exclusive military bands is not shown for security reasons but utilization must be in accordance with the ITU Radio Regulations, national regulations, world and regional agreements where the Sultanate is a part. Conformity of existing and planned services and systems with the National Frequency Allocations Table of Sultanate of Oman is a must.

For the convenience of users of the Assignment table, the ITU Region 1 frequency allocations are stated together with the National Frequency Allocations Table of the Sultanate.

The contents of annexes show basic formulas that describe adopted channel arrangements for land mobile, fixed and broadcasting services in relevant bands. Furthermore, the block allocations for land mobile service and cellular systems (2G and 3G) in VHF and UHF bands and for maritime mobile service in exclusive and non-exclusive bands below 30 MHz are shown in diagrams.

3.2 Concerns on 2nd revision

This (3rd) edition of the Assignment table editorially updates the previously issued 2nd edition. In this edition (3rd), the Assignment table has been revised with taking into consideration the decisions taken by the National Spectrum Allocation Committee.

3.3 Consistency of existing systems with revised National Frequency Assignment Table

In revision, essential attention was paid to the issue of consistency of existing systems with the Assignment table. Revised Table is compatible with those national assignments that were compatible with previously issued (2nd edition) Assignment table. Therefore, the revised Assignment table does not raise new issues (except existing) in migration. Furthermore, there are some assignments that are consistent now but were not consistent before.

3.4 Future revision

Nowadays telecommunication is growing very rapidly. Regulations in telecom must be as neutral and minimum as necessary to promote the deployment of spectrum efficient and advanced technologies and networks. These circumstances impose that the Assignment table shall be a dynamic document to reflect all these rapid changes. Therefore, the Assignment table will be revised and amended very often to reflect national and international regulations, at least, after each Regional and World Radiocommunication Conferences and as it was mentioned earlier (see Disclaimer), TRA may, without prior notice, amend the content of this document.

Allocations for ITU Region 1	National Allocations of Sultanate of Oman	Major utilization	Notes	National Channel/ Block arrangements
Below 9 kHz (Not allocated)	Below 9 kHz (Not allocated)			
5.53 5.54				
9-14 kHz RADIONAVIGATION	9-14 kHz (SHARED) RADIONAVIGATION	Radionavigation aid		
14-19.95 kHz FIXED MARITIME MOBILE 5.57	14-19.95 kHz (SHARED) FIXED MARITIME MOBILE 5.57	SRD	9-135 kHz: Inductive applications. Decision of TRA No 133/2008 of 28-Oct-08	
5.55 5.56	5.56	SRD	9-135 kHz: Inductive applications. Decision of TRA No 133/2008 of 28-Oct-08	
19.95-20.05 kHz STANDARD FREQUENCY AND TIME SIGNAL (20 kHz)	19.95-20.05 kHz (SHARED) STANDARD FREQUENCY AND TIME SIGNAL (20 kHz)	Standard Frequency and Time Signal	Art. 26 ITU RR	
20.05-70 kHz FIXED MARITIME MOBILE 5.57 5.56 5.58	20.05-70 kHz (SHARED) FIXED MARITIME MOBILE 5.57 5.56			
70-72 kHz RADIONAVIGATION 5.60	70-72 kHz (SHARED) RADIONAVIGATION 5.60	SRD	9-135 kHz: Inductive applications. Decision of TRA No 133/2008 of 28-Oct-08	
72-84 kHz FIXED MARITIME MOBILE 5.57 RADIONAVIGATION 5.60	72-84 kHz (SHARED) FIXED MARITIME MOBILE 5.57 RADIONAVIGATION 5.60			
5.56	5.56	SRD	9-135 kHz: Inductive applications. Decision of TRA No 133/2008 of 28-Oct-08	

Allocations for ITU Region 1	National Allocations of Sultanate of Oman	Major utilization	Notes	National Channel/ Block arrangements
84-86 kHz RADIONAVIGATION 5.60	84-86 kHz (SHARED) RADIONAVIGATION 5.60			
86-90 kHz FIXED MARITIME MOBILE 5.57 RADIONAVIGATION	86-90 kHz (SHARED) FIXED MARITIME MOBILE 5.57 RADIONAVIGATION	SRD	9-135 kHz: Inductive applications. Decision of TRA No 133/2008 of 28-Oct-08	
5.56	5.56	SRD	9-135 kHz: Inductive applications. Decision of TRA No 133/2008 of 28-Oct-08	
90-110 kHz RADIONAVIGATION 5.62 Fixed	90-110 kHz (SHARED) RADIONAVIGATION 5.62 Fixed	Loran C		
5.64	5.64	SRD	9-135 kHz: Inductive applications. Decision of TRA No 133/2008 of 28-Oct-08	
110-112 kHz FIXED MARITIME MOBILE RADIONAVIGATION	110-112 kHz (SHARED) FIXED MARITIME MOBILE RADIONAVIGATION			
5.64	5.64	SRD	9-135 kHz: Inductive applications. Decision of TRA No 133/2008 of 28-Oct-08	
112-115 kHz RADIONAVIGATION 5.60	112-115 kHz (SHARED) RADIONAVIGATION 5.60	SRD	9-135 kHz: Inductive applications. Decision of TRA No 133/2008 of 28-Oct-08	
115-117.6 kHz RADIONAVIGATION 5.60	115-117.6 kHz (SHARED) RADIONAVIGATION 5.60	SRD	9-135 kHz: Inductive applications. Decision of TRA No 133/2008 of 28-Oct-08	

Allocations for ITU Region 1	National Allocations of Sultanate of Oman	Major utilization	Notes	National Channel/ Block arrangements
Fixed	Fixed			
Maritime mobile	Maritime mobile			
5.64 5.66	5.64	SRD	9-135 kHz: Inductive applications. Decision of TRA No 133/2008 of 28-Oct-08	
117.6-126 kHz	117.6-126 kHz (SHARED)			
FIXED	FIXED			
MARITIME MOBILE	MARITIME MOBILE			
RADIONAVIGATION 5.60	RADIONAVIGATION 5.60			
5.64	5.64	SRD	Decision of TRA No 133/2008 of 28-Oct-08	
126-129 kHz	126-129 kHz (SHARED)			
RADIONAVIGATION 5.60	RADIONAVIGATION 5.60			
129-130 kHz	129-130 kHz (SHARED)			
FIXED	FIXED			
MARITIME MOBILE	MARITIME MOBILE			
RADIONAVIGATION 5.60	RADIONAVIGATION 5.60			
5.64	5.64	SRD	9-135 kHz: Inductive applications. Decision of TRA No 133/2008 of 28-Oct-08	
130-135.7 kHz	130-135.7 kHz (SHARED)			
FIXED	FIXED			
MARITIME MOBILE	MARITIME MOBILE			
5.64 5.67	5.64	SRD	9-135 kHz: Inductive applications. Decision of TRA No 133/2008 of 28-Oct-08	
135.7-137.8 kHz	135.7-137.8 kHz (SHARED)			
FIXED	FIXED			

Allocations for ITU Region 1	National Allocations of Sultanate of Oman	Major utilization	Notes	National Channel/ Block arrangements
MARITIME MOBILE	MARITIME MOBILE			
Amateur 5.67A	Amateur 5.67A			
5.64 5.67 5.67B	5.64	SRD	9-135 kHz: Inductive applications. Decision of TRA No 133/2008 of 28-Oct-08	
137.8-148.5 kHz	137.8-148.5 kHz (SHARED)			
FIXED	FIXED			
MARITIME MOBILE	MARITIME MOBILE			
5.64 5.67	5.64	SRD	9-135 kHz: Inductive applications. Decision of TRA No 133/2008 of 28-Oct-08	
148.5-255 kHz	148.5-200 kHz (CIVIL)			
BROADCASTING	BROADCASTING	Broadcasting	Regional agreement GE75	Annex 3
5.68 5.69 5.70				
255-283.5 kHz	200-255 kHz (SHARED)			
BROADCASTING	AERONAUTICAL RADIONAVIGATION	Beacons (aeronautical)		
AERONAUTICAL RADIONAVIGATION				
5.70 5.71				
283.5-315 kHz	283.5-315 kHz (SHARED)			
AERONAUTICAL RADIONAVIGATION	AERONAUTICAL RADIONAVIGATION	Beacons (aeronautical)	Regional agreement GE85-EIMA	
MARITIME RADIONAVIGATION (radiobeacons) 5.73	MARITIME RADIONAVIGATION (radiobeacons) 5.73	Beacons (maritime)	Regional agreement GE85-EIMA	
5.72 5.74	5.74			
315-325 kHz	315-325 kHz (SHARED)			
AERONAUTICAL RADIONAVIGATION	AERONAUTICAL RADIONAVIGATION	Beacons (aeronautical)	Regional agreement GE85-EIMA	
Maritime radionavigation (radiobeacons) 5.73	Maritime radionavigation (radiobeacons) 5.73	Beacons (maritime)	Regional agreement GE85-EIMA	
5.72 5.75				
325-405 kHz	325-405 kHz (SHARED)			
AERONAUTICAL RADIONAVIGATION	AERONAUTICAL RADIONAVIGATION	Beacons (aeronautical)		

Allocations for ITU Region 1	National Allocations of Sultanate of Oman	Major utilization	Notes	National Channel/ Block arrangements
5.72				
405-415 kHz	405-415 kHz (SHARED)			
RADIONAVIGATION 5.76	RADIONAVIGATION 5.76	Beacons (aeronautical)		
		Beacons (maritime)		
5.72				
415-435 kHz	415-435 kHz (SHARED)			
MARITIME MOBILE 5.79	MARITIME MOBILE 5.79	Maritime	Regional agreement GE85-MM-R1	Annex 4
AERONAUTICAL RADIONAVIGATION	AERONAUTICAL RADIONAVIGATION	Beacons (aeronautical)	Regional agreement GE85-MM-R1	Annex 4
5.72				
435-495 kHz	435-495 kHz (SHARED)			
MARITIME MOBILE 5.79 5.79A	MARITIME MOBILE 5.79 5.79A	Maritime	Regional agreement GE85-MM-R1	Annex 4
		Maritime safety information, NAV/TEX	490 kHz using NBDP	
Aeronautical radionavigation	Aeronautical radionavigation			
5.72 5.82	5.82	SRD	457 kHz: Detection of avalanche victims. Decision of TRA No 133/2008 of 28-Oct-08	
495-505 kHz	495-505 kHz (SHARED)			
MOBILE 5.82A	MOBILE 5.82A	GMDSS, International distress and calling	500 kHz using Morse radiotelegraphy. Art. 31, 52 & App. 13 ITU-RR	
5.82B	5.82B			
505-526.5 kHz	505-526.5 kHz (SHARED)			
MARITIME MOBILE 5.79 5.79A 5.84	MARITIME MOBILE 5.79 5.79A 5.84	Maritime	Regional agreement GE85-MM-R1	Annex 4
		NAV/TEX International transmission	518 kHz	
AERONAUTICAL RADIONAVIGATION	AERONAUTICAL RADIONAVIGATION	Beacons (aeronautical)	Regional agreement GE85-MM-R1	Annex 4
5.72				
526.5-1 606.5 kHz	526.5-1 606.5 kHz (CIVIL)			
BROADCASTING	BROADCASTING	Broadcasting	Regional agreement GE75	Annex 3
5.87 5.87A				

Allocations for ITU Region 1	National Allocations of Sultanate of Oman	Major utilization	Notes	National Channel/ Block arrangements
1 606.5-1 625 kHz	1 606.5-1 625 kHz (SHARED)			
FIXED	FIXED			
MARITIME MOBILE 5.90	MARITIME MOBILE 5.90	Maritime	Regional agreement GE85-MM-R1	Annex 4
LAND MOBILE	LAND MOBILE			
5.92				
1 625-1 635 kHz	1 625-1 635 kHz (SHARED)			
RADIOLOCATION	RADIOLOCATION	Radiodetermination applications		
5.93				
1 635-1 800 kHz	1 635-1 800 kHz (SHARED)			
FIXED	FIXED	Fixed links	Art. 6 of GE85-MM-R1 applied	Annex 2
MARITIME MOBILE 5.90	MARITIME MOBILE 5.90	Maritime	Regional agreement GE85-MM-R1	Annex 4
LAND MOBILE	LAND MOBILE			
5.92 5.96	5.92			
1 800-1 810 kHz	1 800-1 810 kHz (SHARED)			
RADIOLOCATION	RADIOLOCATION	Radiodetermination applications		
5.93				
1 810-1 850 kHz	1 810-1 850 kHz (CIVIL)			
AMATEUR	AMATEUR	Amateur		
5.98 5.99 5.100 5.101				
1 850-2 000 kHz	1 850-2 000 kHz (SHARED)			
FIXED	FIXED			
MOBILE except aeronautical mobile	MOBILE except aeronautical mobile	Maritime	Art. 52 ITU RR	Annex 4
5.92 5.96 5.103	5.92 5.103			
2 000-2 025 kHz	2 000-2 025 kHz (SHARED)			
FIXED	FIXED	Fixed links		Annex 2
MOBILE except aeronautical mobile (R)	MOBILE except aeronautical mobile (R)	Maritime	Art. 52 ITU RR	Annex 4
		Mobile applications		
5.92 5.103	5.92 5.103			

Allocations for ITU Region 1	National Allocations of Sultanate of Oman	Major utilization	Notes	National Channel/ Block arrangements
2 025-2 045 kHz	2 025-2 045 kHz (SHARED)			
FIXED	FIXED	Fixed links		Annex 2
MOBILE except aeronautical mobile (R)	MOBILE except aeronautical mobile (R)	Maritime	Art. 52 ITU RR	Annex 4
Meteorological aids 5.104	Meteorological aids 5.104	Mobile applications		
		Oceanographic buoys		
		meteorological		
5.92 5.103	5.92 5.103			
2 045-2 160 kHz	2 045-2 160 kHz (SHARED)			
FIXED	FIXED	Fixed links		
MARITIME MOBILE	MARITIME MOBILE	Maritime	Regional agreement R1	Annex 2
LAND MOBILE	LAND MOBILE	Mobile applications		
5.92	5.92			
2 160-2 170 kHz	2 160-2 170 kHz (SHARED)			
RADIOLOCATION	RADIOLOCATION	Radiodetermination applications		
5.93 5.107				
2 170-2 173.5 kHz	2 170-2 173.5 kHz (SHARED)			
MARITIME MOBILE	MARITIME MOBILE	Maritime		
2 173.5-2 190.5 kHz	2 173.5-2 190.5 kHz (SHARED)			
MOBILE (distress and calling)	MOBILE (distress and calling)	DSC for distress and calling	2187.5 kHz	
		Maritime GMDSS distress and calling	2182 kHz	
		Telex distress traffic	2174.5 kHz	
5.108 5.109 5.110 5.111	5.108 5.109 5.110 5.111			
2 190.5-2 194 kHz	2 190.5-2 194 kHz (SHARED)			
MARITIME MOBILE	MARITIME MOBILE	Maritime		
2 194-2 300 kHz	2 194-2 300 kHz (SHARED)			
FIXED	FIXED	Fixed links		Annex 2
MOBILE except aeronautical mobile (R)	MOBILE except aeronautical mobile (R)	Maritime	Art. 52 ITU RR	Annex 4
		Mobile applications		
5.92 5.103 5.112	5.92 5.103			
2 300-2 498 kHz	2 300-2 498 kHz (SHARED)			
FIXED	FIXED	Fixed links		Annex 2

Allocations for ITU Region 1	National Allocations of Sultanate of Oman	Major utilization	Notes	National Channel/ Block arrangements
MOBILE except aeronautical mobile (R)	MOBILE except aeronautical mobile (R)	Maritime	Art. 52 ITU RR	Annex 4
BROADCASTING 5.113	BROADCASTING 5.113	Mobile applications Broadcasting (tropical zones)	Subject to coordination (Art. 23 ITU RR)	
5.103	5.103			
2 498-2 501 kHz STANDARD FREQUENCY AND TIME SIGNAL (2 500 kHz)	2 498-2 501 kHz (SHARED) STANDARD FREQUENCY AND TIME SIGNAL (2 500 kHz)	Standard Signal	2 500 kHz. Art. 26 ITU RR	
2 501-2 502 kHz STANDARD FREQUENCY AND TIME SIGNAL	2 501-2 502 kHz (SHARED) STANDARD FREQUENCY AND TIME SIGNAL	Standard Signal	Art. 26 ITU RR	
Space Research	Space Research			
2 502-2 625 kHz FIXED	2 502-2 625 kHz (SHARED) FIXED	Fixed links		Annex 2
MOBILE except aeronautical mobile (R)	MOBILE except aeronautical mobile (R)	Maritime	Art. 52 ITU RR	Annex 4
5.92 5.103 5.114	5.92 5.103	Mobile applications		
2 625-2 650 kHz MARITIME MOBILE	2 625-2 650 kHz (SHARED) MARITIME MOBILE	Maritime	Art. 52 ITU RR	Annex 4
MARITIME RADIONAVIGATION	MARITIME RADIONAVIGATION			
5.92	5.92			
2 650-2 850 kHz FIXED	2 650-2 850 kHz (SHARED) FIXED	Fixed links		Annex 2
MOBILE except aeronautical mobile (R)	MOBILE except aeronautical mobile (R)	Maritime	Art. 52 ITU RR	Annex 4
5.92 5.103	5.92 5.103	Mobile applications		
2 850-3 025 kHz AERONAUTICAL MOBILE (R)	2 850-3 025 kHz (SHARED) AERONAUTICAL MOBILE (R)	Aeronautical mobile (R)	App. 27 ITU RR. Allotment plan	
5.111 5.115	5.111 5.115	Telephony distress traffic and calling by Rescue centers	3 023 kHz	
3 025-3 155 kHz AERONAUTICAL MOBILE (OR)	3 025-3 155 kHz (SHARED) AERONAUTICAL MOBILE (OR)	Aeronautical mobile (OR)	App. 26 ITU RR. Allotment plan	

Allocations for ITU Region 1	National Allocations of Sultanate of Oman	Major utilization	Notes	National Channel/ Block arrangements
3 155-3 200 kHz	3 155-3 200 kHz (SHARED)			
FIXED	FIXED	Fixed links		Annex 2
MOBILE except aeronautical mobile (R)	MOBILE except aeronautical mobile (R)	Maritime	Art. 52 ITU RR	Annex 4
		Mobile applications		
5.116 5.117	5.116			
3 200-3 230 kHz	3 200-3 230 kHz (SHARED)			
FIXED	FIXED	Fixed links		Annex 2
MOBILE except aeronautical mobile (R)	MOBILE except aeronautical mobile (R)	Maritime	Art. 52 ITU RR	Annex 4
		Mobile applications		
BROADCASTING 5.113	BROADCASTING 5.113	Broadcasting (tropical zones)	Subject to coordination (Art. 23 ITU RR)	
5.116	5.116			
3 230-3 400 kHz	3 230-3 400 kHz (SHARED)			
FIXED	FIXED	Fixed links		Annex 2
MOBILE except aeronautical mobile	MOBILE except aeronautical mobile	Maritime	Art. 52 ITU RR	Annex 4
		Mobile applications		
BROADCASTING 5.113	BROADCASTING 5.113	Broadcasting (tropical zones)	Subject to coordination (Art. 23 ITU RR)	
5.116 5.118	5.116			
3 400-3 500 kHz	3 400-3 500 kHz (SHARED)			
AERONAUTICAL MOBILE (R)	AERONAUTICAL MOBILE (R)	Aeronautical mobile (R)	App. 27 ITU RR, Allotment plan	
3 500-3 800 kHz	3 500-3 800 kHz (SHARED)			
AMATEUR	AMATEUR	Amateur		
FIXED	FIXED	Fixed links		Annex 2
MOBILE except aeronautical mobile	MOBILE except aeronautical mobile	Maritime	Art. 52 ITU RR	Annex 4
		Mobile applications		
5.92	5.92			
3 800-3 900 kHz	3 800-3 900 kHz (SHARED)			
FIXED	FIXED	Fixed links		Annex 2
AERONAUTICAL MOBILE (OR)	AERONAUTICAL MOBILE (OR)	Aeronautical mobile (OR)		
LAND MOBILE	LAND MOBILE	Mobile applications		
3 900-3 950 kHz	3 900-3 950 kHz (SHARED)			
AERONAUTICAL MOBILE (OR)	AERONAUTICAL MOBILE (OR)	Aeronautical mobile (OR)	App. 26 ITU RR, Allotment plan	

Allocations for ITU Region 1	National Allocations of Sultanate of Oman	Major utilization	Notes	National Channel/ Block arrangements
5.123				
3 950-4 000 kHz	3 950-4 000 kHz (SHARED)			
FIXED	FIXED	Fixed links		Annex 2
BROADCASTING	BROADCASTING	Broadcasting	Introduction of digital systems is encouraged	
4 000-4 063 kHz	4 000-4 063 kHz (SHARED)			
FIXED	FIXED	Fixed links		Annex 2
MARITIME MOBILE 5.127	MARITIME MOBILE 5.127	Maritime	App. 25 ITU RR. Allotment plan	
5.126				
4 063-4 438 kHz	4 063-4 438 kHz (SHARED)			
MARITIME MOBILE 5.79A 5.110 5.130	MARITIME MOBILE 5.79A 5.109 5.110 5.130	Maritime	App. 25 ITU RR. Allotment plan	Annex 4
5.131 5.132	5.131 5.132		4208, 4208.5, 4209, 4219.5, 4220, 4220.5 kHz	
		DSC calling	4207.5 kHz	
		DCS distress and traffic	4209.5 kHz	
		Meteorological and navigational warnings		
		Maritime Safety Information	4210 kHz	
		Telephony distress traffic and calling by rescue centers	4225 kHz	
		Telex distress traffic	4177.5 kHz	
5.128				
4 438-4 650 kHz	4 438-4 650 kHz (SHARED)			
FIXED	FIXED	Fixed links		Annex 2
MOBILE except aeronautical mobile (R)	MOBILE except aeronautical mobile (R)	Mobile applications		
4 650-4 700 kHz	4 650-4 700 kHz (SHARED)			
AERONAUTICAL MOBILE (R)	AERONAUTICAL MOBILE (R)	Aeronautical mobile (R)	App. 27 ITU RR. Allotment plan	
4 700-4 750 kHz	4 700-4 750 kHz (SHARED)			
AERONAUTICAL MOBILE (OR)	AERONAUTICAL MOBILE (OR)	Aeronautical mobile (OR)	App. 26 ITU RR. Allotment plan	
4 750-4 850 kHz	4 750-4 850 kHz (SHARED)			
FIXED	FIXED	Fixed links		Annex 2
AERONAUTICAL MOBILE (OR)	AERONAUTICAL MOBILE (OR)	Aeronautical mobile (OR)		
LAND MOBILE	LAND MOBILE	Mobile applications		
BROADCASTING 5.113	BROADCASTING 5.113			

Allocations for ITU Region 1	National Allocations of Sultanate of Oman	Major utilization	Notes	National Channel/ Block arrangements
4 850-4 995 kHz	4 850-4 995 kHz (SHARED)			
FIXED	FIXED	Fixed links		Annex 2
LAND MOBILE	LAND MOBILE	Mobile applications		
BROADCASTING 5.113	BROADCASTING 5.113	Broadcasting (tropical zones)	Subject to coordination (Art. 23 ITU RR)	
4 995-5 003 kHz	4 995-5 003 kHz (SHARED)			
STANDARD FREQUENCY AND TIME SIGNAL (5 000 kHz)	STANDARD FREQUENCY AND TIME SIGNAL (5 000 kHz)	Standard Signal	Frequency and Time	5 000 kHz. Art. 26 ITU RR
5 003-5 005 kHz	5 003-5 005 kHz (SHARED)			
STANDARD FREQUENCY AND TIME SIGNAL	STANDARD FREQUENCY AND TIME SIGNAL	Standard Signal	Frequency and Time	Art. 26 ITU RR
Space research	Space research			
5 005-5 060 kHz	5 005-5 060 kHz (SHARED)			
FIXED	FIXED	Fixed links		Annex 2
BROADCASTING 5.113	BROADCASTING 5.113	Broadcasting (tropical zones)	Subject to coordination (Art. 23 ITU RR)	
5 060-5 250 kHz	5 060-5 250 kHz (SHARED)			
FIXED	FIXED	Fixed links		Annex 2
Mobile except aeronautical mobile	Mobile except aeronautical mobile			
5.133				
5 250-5 450 kHz	5 250-5 450 kHz (SHARED)			
FIXED	FIXED	Fixed links		Annex 2
MOBILE except aeronautical mobile	MOBILE except aeronautical mobile	Mobile applications		
5 450-5 480 kHz	5 450-5 480 kHz (SHARED)			
FIXED	FIXED	Fixed links		Annex 2
AERONAUTICAL MOBILE (OR)	AERONAUTICAL MOBILE (OR)	Aeronautical mobile (OR)		
LAND MOBILE	LAND MOBILE			
5 480-5 680 kHz	5 480-5 680 kHz (SHARED)			
AERONAUTICAL MOBILE (R)	AERONAUTICAL MOBILE (R)	Aeronautical mobile (R)	App. 27 ITU RR. Allotment plan	5 680 kHz
		Telephony distress traffic and calling by rescue centers		

Allocations for ITU Region 1	National Allocations of Sultanate of Oman	Major utilization	Notes	National Channel/ Block arrangements
5.111 5.115	5.111 5.115			
5 680-5 730 kHz	5 680-5 730 kHz (SHARED)			
AERONAUTICAL MOBILE (OR)	AERONAUTICAL MOBILE (OR)	Aeronautical mobile (OR)	App. 26 ITU RR. Allotment plan	
		Telephony distress traffic and calling by rescue centers	5 680 kHz	
5.111 5.115	5.111 5.115			
5 730-5 900 kHz	5 730-5 900 kHz (SHARED)			
FIXED	FIXED	Fixed links		Annex 2
LAND MOBILE	LAND MOBILE	Mobile applications		
5 900-5 950 kHz	5 900-5 950 kHz (CIVIL)			
BROADCASTING 5.134	BROADCASTING 5.134	Broadcasting	Art. 12 ITU RR	Annex 3
5.136	5.136			
5 950-6 200 kHz	5 950-6 200 kHz (CIVIL)			
BROADCASTING	BROADCASTING	Broadcasting	Art. 12 ITU RR	Annex 3
6 200-6 525 kHz	6 200-6 525 kHz (SHARED)			
MARITIME MOBILE 5.109 5.110 5.130 5.132	MARITIME MOBILE 5.109 5.110 5.130 5.132	Maritime	App. 25 ITU RR. Allotment plan	Annex 4
		DSC calling	6312.5, 6313, 6313.5, 6331, 6331.5, 6332 kHz	
		DCS distress traffic	6312 kHz	
		Maritime Safety Information	6314 kHz	
		Telephony distress traffic and calling by rescue centers	6215 kHz	
		Telex distress traffic	6268 kHz	
5.137	5.137			
6 525-6 685 kHz	6 525-6 685 kHz (CIVIL)			
AERONAUTICAL MOBILE (R)	AERONAUTICAL MOBILE (R)	Aeronautical mobile (R)	App. 27 ITU RR. Allotment plan	
6 685-6 765 kHz	6 685-6 765 kHz (SHARED)			
AERONAUTICAL MOBILE (OR)	AERONAUTICAL MOBILE (OR)	Aeronautical mobile (OR)	App. 26 ITU RR. Allotment plan	
6 765-7 000 kHz	6 765-7 000 kHz (SHARED)			
FIXED	FIXED	Fixed links		Annex 2
MOBILE except aeronautical mobile (R)	MOBILE except aeronautical mobile (R) 5.138A	Mobile applications	Effective from 29.03.09	
	Land mobile 5.138A		Effective till 29.03.09	

Allocations for ITU Region 1	National Allocations of Sultanate of Oman	Major utilization	Notes	National Channel/ Block arrangements
5.138 5.138A 5.139	5.138	ISM	6765-6795 kHz	
7 000-7 100 kHz	7 000-7 100 kHz (CIVIL)			
AMATEUR	AMATEUR	Amateur		
AMATEUR-SATELLITE	AMATEUR-SATELLITE			
5.140 5.141 5.141A				
7 100-7 200 kHz	7 100-7 200 kHz (CIVIL)			
AMATEUR	AMATEUR	Amateur	Effective from 29.03.09	
	FIXED 5.141B		Effective from 29.03.09	
	MOBILE except aeronautical mobile (R) 5.141B			
5.141A 5.141B 5.141C 5.142	5.141C 5.142			
7 200-7 300 kHz	7 200-7 300 kHz (CIVIL)			
BROADCASTING	BROADCASTING	Broadcasting	Art. 12 ITU RR	Annex 3
7 300-7 400 kHz	7 300-7 350 kHz (CIVIL)			
BROADCASTING 5.134	BROADCASTING 5.134	Broadcasting	Art. 12 ITU RR	Annex 3
	5.143 5.143B			
	7 350-7 400 kHz (CIVIL)			
	BROADCASTING 5.134	Broadcasting	Art. 12 ITU RR	Annex 3
	FIXED 5.143C	Fixed links	Effective from 29.03.09 but priority is given to Broadcasting	Annex 2
5.143 5.143A 5.143B 5.143C 5.143D	5.143 5.143B			
7 400-7 450 kHz	7 400-7 450 kHz (CIVIL)			
BROADCASTING	BROADCASTING	Broadcasting	Art. 12 ITU RR	Annex 3
	FIXED 5.143C	Fixed links	Effective from 29.03.09 but priority is given to Broadcasting	Annex 2
5.143B 5.143C	5.143B	SRD	7400 – 8800 kHz: Inductive applications. Decision of TRA No 133/2008 of 28-Oct-08	
7 450-8 100 kHz	7 450-8 100 kHz (SHARED)			
FIXED	FIXED	Fixed links		Annex 2
MOBILE except aeronautical mobile (R)	MOBILE except aeronautical mobile (R)	Mobile applications		

Allocations for ITU Region 1	National Allocations of Sultanate of Oman	Major utilization	Notes	National Channel/ Block arrangements
5.143E 5.144	5.143E	SRD	7400 – 8800 kHz: Inductive applications. Decision of TRA No 133/2008 of 28-Oct-08	
8 100-8 195 kHz	8 100-8 195 kHz (SHARED)			
FIXED	FIXED	Fixed links		Annex 2
MARITIME MOBILE	MARITIME MOBILE	Maritime	App. 17 ITU RR. Channeling plan	
		SRD	7400 – 8800 kHz: Inductive applications. Decision of TRA No 133/2008 of 28-Oct-08	
8 195-8 815 kHz	8 195-8 815 kHz (SHARED)			
MARITIME MOBILE 5.109 5.110 5.132 5.145	MARITIME MOBILE 5.109 5.110 5.132 5.145	Maritime	App. 25 ITU RR. Allotment plan	Annex 4
		DSC calling	8415, 8415.5, 8416, 8436.5, 8437, 8437.5 kHz	
		DSC distress traffic	8414.5 kHz	
		Maritime Safety Information	8416.5 kHz	
		Telephony distress traffic and calling by rescue centers	8291 kHz	
		Telex distress traffic	8376.5 kHz	
5.111	5.111	SRD	7400 – 8800 kHz: Inductive applications. Decision of TRA No 133/2008 of 28-Oct-08	
8 815-8 965 kHz	8 815-8 965 kHz (CIVIL)			
AERONAUTICAL MOBILE (R)	AERONAUTICAL MOBILE (R)	Aeronautical mobile (R)	App. 27 ITU RR. Allotment plan	
8 965-9 040 kHz	8 965-9 040 kHz (MILITARY)			
AERONAUTICAL MOBILE (OR)	AERONAUTICAL MOBILE (OR)	Aeronautical mobile (OR)	App. 26 ITU RR. Allotment plan	
9 040-9 400 kHz	9 040-9 400 kHz (SHARED)			
FIXED	FIXED	Fixed links		Annex 2
9 400-9 500 kHz	9 400-9 500 kHz (CIVIL)			
BROADCASTING 5.134	BROADCASTING 5.134	Broadcasting	Art. 12 ITU RR. Introduction of digital systems is encouraged	Annex 3
5.146	5.146			
9 500-9 900 kHz	9 500-9 900 kHz (CIVIL)			
BROADCASTING	BROADCASTING	Broadcasting	Art. 12 ITU RR. Introduction of digital systems is encouraged	Annex 3

Allocations for ITU Region 1	National Allocations of Sultanate of Oman	Major utilization	Notes	National Channel/ Block arrangements
5.147	5.147			
9 900-9 995 kHz	9 900-9 995 kHz (SHARED)			
FIXED	FIXED	Fixed links		Annex 2
9 995-10 003 kHz	9 995-10 003 kHz (SHARED)			
STANDARD FREQUENCY AND TIME SIGNAL (10 000 kHz)	STANDARD FREQUENCY AND TIME SIGNAL (10 000 kHz)	Standard Frequency and Time Signal	10 000 kHz, Art. 26 ITU RR	
5.111	5.111	SAR (communications)	10003 kHz (± 3 kHz) concerning manned space vehicles	
10 003-10 005 kHz	10 003-10 005 kHz (SHARED)			
STANDARD FREQUENCY AND TIME SIGNAL	STANDARD FREQUENCY AND TIME SIGNAL	Standard Frequency and Time Signal	Art. 26 ITU RR	
Space research	Space research			
5.111	5.111	SAR (communications)	10003 kHz (± 3 kHz) concerning manned space vehicles	
10 005-10 100 kHz	10 005-10 100 kHz (CIVIL)			
AERONAUTICAL MOBILE (R)	AERONAUTICAL MOBILE (R)	Aeronautical mobile (R)	App. 27 ITU RR, Allotment plan	
5.111	5.111	SAR (communications)	10003 kHz (± 3 kHz) concerning manned space vehicles	
10 100-10 150 kHz	10 100-10 150 kHz (SHARED)			
FIXED	FIXED			
Amateur	Amateur	Amateur		
10 150-11 175 kHz	10 150-11 175 kHz (SHARED)			
FIXED	FIXED	Fixed links		Annex 2
Mobile except aeronautical mobile (R)	Mobile except aeronautical mobile (R)			
11 175-11 275 kHz	11 175-11 275 kHz (SHARED)			
AERONAUTICAL MOBILE (OR)	AERONAUTICAL MOBILE (OR)	Aeronautical mobile (OR)	App. 26 ITU RR, Allotment plan	
11 275-11 400 kHz	11 275-11 400 kHz (SHARED)			
AERONAUTICAL MOBILE (R)	AERONAUTICAL MOBILE (R)	Aeronautical mobile (R)	App. 27 ITU RR, Allotment plan	
11 400-11 600 kHz	11 400-11 600 kHz (SHARED)			
FIXED	FIXED	Fixed links		Annex 2

Allocations for ITU Region 1	National Allocations of Sultanate of Oman	Major utilization	Notes	National Channel/ Block arrangements
11 600-11 650 kHz BROADCASTING 5.134	11 600-11 650 kHz (CIVIL) BROADCASTING 5.134	Broadcasting	Art. 12 ITU RR. Introduction of digital systems is encouraged	Annex 3
5.146	5.146			
11 650-12 050 kHz BROADCASTING	11 650-12 050 kHz (CIVIL) BROADCASTING	Broadcasting	Art. 12 ITU RR. Introduction of digital systems is encouraged	Annex 3
5.147	5.147			
12 050-12 100 kHz BROADCASTING 5.134	12 050-12 100 kHz (CIVIL) BROADCASTING 5.134	Broadcasting	Art. 12 ITU RR. Introduction of digital systems is encouraged	Annex 3
5.146	5.146			
12 100-12 230 kHz FIXED	12 100-12 230 kHz (SHARED) FIXED	Fixed links		Annex 2
12 230-13 200 kHz MARITIME MOBILE 5.109 5.110 5.132 5.145	12 230-13 200 kHz (SHARED) MARITIME MOBILE 5.109 5.110 5.132 5.145	Maritime	App. 25 ITU RR. Allotment plan	Annex 4
		DSC calling	12577.5, 12578, 12578.5, 12657, 12657.5, 12658 kHz	
		DCS distress traffic	12577 kHz	
		Maritime Safety Information	12579 kHz	
		Telephony distress traffic and calling by rescue centers	12290 kHz	
		Telex distress traffic	12520 kHz	
13 200-13 260 kHz AERONAUTICAL MOBILE (OR)	13 200-13 260 kHz (SHARED) AERONAUTICAL MOBILE (OR)	Aeronautical mobile (OR)	App. 26 ITU RR. Allotment plan	
13 260-13 360 kHz AERONAUTICAL MOBILE (R)	13 260-13 360 kHz (SHARED) AERONAUTICAL MOBILE (R)	Aeronautical mobile (R)	App. 27 ITU RR. Allotment plan	
13 360-13 410 kHz FIXED RADIO ASTRONOMY	13 360-13 410 kHz (SHARED) FIXED RADIO ASTRONOMY	Fixed links		Annex 2
5.149	5.149			

Allocations for ITU Region 1	National Allocations of Sultanate of Oman	Major utilization	Notes	National Channel/ Block arrangements
13 410-13 570 kHz	13 410-13 570 kHz (SHARED)			
FIXED	FIXED	Fixed links		Annex 2
Mobile except aeronautical mobile (R)	Mobile except aeronautical mobile (R)			
5.150	5.150	ISM	13553 – 13567 kHz	
13 570-13 600 kHz	13 570-13 600 kHz (CIVIL)			
BROADCASTING 5.134	BROADCASTING 5.134	Broadcasting	Art. 12 ITU RR. Introduction of digital systems is encouraged	Annex 3
5.151	5.151			
13 600-13 800 kHz	13 600-13 800 kHz (CIVIL)			
BROADCASTING	BROADCASTING	Broadcasting	Art. 12 ITU RR. Introduction of digital systems is encouraged	Annex 3
13 800-13 870 kHz	13 800-13 870 kHz (CIVIL)			
BROADCASTING 5.134	BROADCASTING 5.134	Broadcasting	Art. 12 ITU RR. Introduction of digital systems is encouraged	Annex 3
5.151	5.151			
13 870-14 000 kHz	13 870-14 000 kHz (SHARED)			
FIXED	FIXED	Fixed links		Annex 2
Mobile except aeronautical mobile (R)	Mobile except aeronautical mobile (R)			
14 000-14 250 kHz	14 000-14 250 kHz (CIVIL)			
AMATEUR	AMATEUR	Amateur		
AMATEUR-SATELLITE	AMATEUR-SATELLITE	Amateur Satellite		
14 250-14 350 kHz	14 250-14 350 kHz (CIVIL)			
AMATEUR	AMATEUR	Amateur		
5.152				
14 350-14 990 kHz	14 350-14 990 kHz (SHARED)			
FIXED	FIXED	Fixed links		Annex 2
Mobile except aeronautical mobile (R)	Mobile except aeronautical mobile (R)			
14 990-15 005 kHz	14 990-15 005 kHz (SHARED)			
STANDARD FREQUENCY AND TIME SIGNAL (15 000 kHz)	STANDARD FREQUENCY AND TIME SIGNAL (15 000 kHz)	Standard Frequency and Time Signal	15 000 kHz. Art. 26 ITU RR	

Allocations for ITU Region 1	National/Allocations of Sultanate of Oman	Major utilization	Notes	National Channel/ Block arrangements
5.111	5.111	SAR (communications)	14993 kHz (±3 kHz) concerning manned space vehicles	
15 005-15 010 kHz STANDARD FREQUENCY AND TIME SIGNAL	15 005-15 010 kHz (SHARED) STANDARD FREQUENCY AND TIME SIGNAL	Standard Frequency and Time Signal	Art. 26 ITU RR	
Space research	Space research			
15 010-15 100 kHz AERONAUTICAL MOBILE (OR)	15 010-15 100 kHz (SHARED) AERONAUTICAL MOBILE (OR)	Aeronautical mobile (OR)	App. 26 ITU RR, Allotment plan	
15 100-15 600 kHz BROADCASTING	15 100-15 600 kHz (CIVIL) BROADCASTING	Broadcasting	Art. 12 ITU RR, Introduction of digital systems is encouraged	Annex 3
15 600-15 800 kHz BROADCASTING 5.134	15 600-15 800 kHz (CIVIL) BROADCASTING 5.134	Broadcasting	Art. 12 ITU RR, Introduction of digital systems is encouraged	Annex 3
5.146	5.146			
15 800-16 360 kHz FIXED	15 800-16 360 kHz (SHARED) FIXED	Fixed links		Annex 2
5.153				
16 360-17 410 kHz MARITIME MOBILE 5.109 5.110 5.132 5.145	16 360-17 410 kHz (SHARED) MARITIME MOBILE 5.109 5.110 5.132 5.145	Maritime	App. 25 ITU RR, Allotment plan	Annex 4
		DSC calling	16805, 16805.5, 16806, 16903, 16903.5, 16904 kHz	
		DCS distress traffic	16804.5 kHz	
		Maritime Safety Information	16806.5 kHz	
		Telephony distress traffic and calling by rescue centers	16420 kHz	
		Telex distress traffic	16695 kHz	
17 410-17 480 kHz FIXED	17 410-17 480 kHz (SHARED) FIXED	Fixed links		Annex 2
17 480-17 550 kHz BROADCASTING 5.134	17 480-17 550 kHz (CIVIL) BROADCASTING 5.134	Broadcasting	Art. 12 ITU RR, Introduction of digital systems is encouraged	Annex 3

Allocations for ITU Region 1	National Allocations of Sultanate of Oman	Major utilization	Notes	National Channel/ Block arrangements
5.146	5.146			
17 550-17 900 kHz BROADCASTING	17 550-17 900 kHz (CIVIL) BROADCASTING	Broadcasting	Art. 12 ITU RR. Introduction of digital systems is encouraged	Annex 3
17 900-17 970 kHz AERONAUTICAL MOBILE (R)	17 900-17 970 kHz (SHARED) AERONAUTICAL MOBILE (R)	Aeronautical mobile (R)	App. 27 ITU RR. Allotment plan	
17 970-18 030 kHz AERONAUTICAL MOBILE (OR)	17 970-18 030 kHz (SHARED) AERONAUTICAL MOBILE (OR)	Aeronautical mobile (OR)	App. 26 ITU RR. Allotment plan	
18 030-18 052 kHz FIXED	18 030-18 052 kHz (SHARED) FIXED	Fixed links		Annex 2
18 052-18 068 kHz FIXED Space research	18 052-18 068 kHz (SHARED) FIXED Space research	Fixed links		Annex 2
18 068-18 168 kHz AMATEUR AMATEUR-SATELLITE	18 068-18 168 kHz (CIVIL) AMATEUR AMATEUR-SATELLITE	Amateur Amateur Satellite		
5.154				
18 168-18 780 kHz FIXED Mobile except aeronautical mobile	18 168-18 780 kHz (SHARED) FIXED Mobile except aeronautical mobile	Fixed links DSC calling	18898.5, 18899, 18899.5 kHz	Annex 2
18 780-18 900 kHz MARITIME MOBILE	18 780-18 900 kHz (SHARED) MARITIME MOBILE	Maritime	App. 25 ITU RR. Allotment plan	Annex 4
18 900-19 020 kHz BROADCASTING 5.134	18 900-19 020 kHz (CIVIL) BROADCASTING 5.134	Broadcasting	Art. 12 ITU RR. Introduction of digital systems is encouraged	Annex 3
5.146	5.146			
19 020-19 680 kHz FIXED	19 020-19 680 kHz (SHARED) FIXED	Fixed links		Annex 2

Allocations for ITU Region 1	National Allocations of Sultanate of Oman	Major utilization	Notes	National Channel/ Block arrangements
19 680-19 800 kHz	19 680-19 800 kHz (SHARED)			
MARITIME MOBILE 5.132	MARITIME MOBILE 5.132	Maritime	App. 25 ITU RR, Allotment plan	Annex 4
		DSC calling	19703.5, 19704, 19704.5 kHz	
		Maritime Safety Information	19680.5 kHz	
19 800-19 990 kHz	19 800-19 990 kHz (SHARED)	Fixed links		Annex 2
FIXED	FIXED			
19 990-19 995 kHz	19 990-19 995 kHz (SHARED)	Standard Frequency and Time Signal	Art. 26 ITU RR	
STANDARD FREQUENCY AND TIME SIGNAL	STANDARD FREQUENCY AND TIME SIGNAL			
Space research	Space research			
5.111	5.111	SAR (communications)	19993 kHz (± 3 kHz) concerning manned space vehicles	
19 995-20 010 kHz	19 995-20 010 kHz (SHARED)	Standard Frequency and Time Signal	20 000 kHz, Art. 26 ITU RR	
STANDARD FREQUENCY AND TIME SIGNAL (20 000 kHz)	STANDARD FREQUENCY AND TIME SIGNAL (20 000 kHz)			
5.111	5.111			
20 010-21 000 kHz	20 010-21 000 kHz (SHARED)	Fixed links		Annex 2
FIXED	FIXED			
Mobile	Mobile			
21 000-21 450 kHz	21 000-21 450 kHz (CIVIL)	Amateur		
AMATEUR	AMATEUR	Amateur Satellite		
AMATEUR-SATELLITE	AMATEUR-SATELLITE			
21 450-21 850 kHz	21 450-21 850 kHz (CIVIL)	Broadcasting	Art. 12 ITU RR. Introduction of digital systems is encouraged	Annex 3
BROADCASTING	BROADCASTING			
21 850-21 870 kHz	21 850-21 870 kHz (SHARED)	Fixed links		Annex 2
FIXED 5.155A	FIXED			
5.155				
21 870-21 924 kHz	21 870-21 924 kHz (SHARED)	Fixed links	Only for provision of services related to aircraft flight safety	Annex 2
FIXED 5.155B	FIXED 5.155B			

Allocations for ITU Region 1	National Allocations of Sultanate of Oman	Major utilization	Notes	National Channel/ Block arrangements
21 924-22 000 kHz AERONAUTICAL MOBILE (R)	21 924-22 000 kHz (SHARED) AERONAUTICAL MOBILE (R)	Aeronautical mobile (R)	App. 27. ITU RR, Allotment plan	
22 000-22 855 kHz MARITIME MOBILE 5.132	22 000-22 855 kHz (SHARED) MARITIME MOBILE 5.132	Maritime DSC calling	App. 25. ITU RR, Allotment plan 22374.5, 22375, 22375.5, 22444, 22444.5, 22445 kHz	Annex 4
5.156		Maritime Safety Information	22376 kHz	
22 855-23 000 kHz FIXED	22 855-23 000 kHz (SHARED) FIXED	Fixed links		Annex 2
5.156				
23 000-23 200 kHz FIXED	23 000-23 200 kHz (SHARED) FIXED	Fixed links		Annex 2
Mobile except aeronautical mobile (R)	Mobile except aeronautical mobile (R)			
5.156				
23 200-23 350 kHz FIXED 5.156A	23 200-23 350 kHz (SHARED) FIXED 5.156A	Fixed links	Only for provision of services related to aircraft flight safety	Annex 2
AERONAUTICAL MOBILE (OR)	AERONAUTICAL MOBILE (OR)	Aeronautical mobile (OR)		
23 350-24 000 kHz FIXED	23 350-24 000 kHz (SHARED) FIXED	Fixed links		Annex 2
MOBILE except aeronautical mobile 5.157	MOBILE except aeronautical mobile 5.157	Maritime mobile	Limited to radiotelegraphy only	
24 000-24 890 kHz FIXED	24 000-24 890 kHz (SHARED) FIXED	Fixed links		Annex 2
LAND MOBILE	LAND MOBILE	Mobile applications		
24 890-24 990 kHz AMATEUR	24 890-24 990 kHz (CIVIL) AMATEUR	Amateur		
AMATEUR-SATELLITE	AMATEUR-SATELLITE	Amateur Satellite		

Allocations for ITU Region 1	National Allocations of Sultanate of Oman	Major utilization	Notes	National Channel/ Block arrangements
24 990-25 005 kHz STANDARD FREQUENCY AND TIME SIGNAL (25 000 kHz)	24 990-25 005 kHz (SHARED) STANDARD FREQUENCY AND TIME SIGNAL (25 000 kHz)	Standard Frequency and Time Signal	25 000 kHz. Art. 26 ITU RR	
25 005-25 010 kHz STANDARD FREQUENCY AND TIME SIGNAL Space research	25 005-25 010 kHz (SHARED) STANDARD FREQUENCY AND TIME SIGNAL Space research	Standard Frequency and Time Signal	Art. 26 ITU RR	
25 010-25 070 kHz FIXED MOBILE except aeronautical mobile	25 010-25 070 kHz (SHARED) FIXED MOBILE except aeronautical mobile	Fixed links Mobile applications		Annex 2
25 070-25 210 kHz MARITIME MOBILE	25 070-25 210 kHz (SHARED) MARITIME MOBILE	Maritime DSC calling	App. 25 ITU RR. Allotment plan 25208.5, 25209, 25209.5 kHz	Annex 4
25 210-25 550 kHz FIXED MOBILE except aeronautical mobile	25 210-25 550 kHz (SHARED) FIXED MOBILE except aeronautical mobile	Fixed links Mobile applications		Annex 2
25 550-25 670 kHz RADIO ASTRONOMY 5.149	25 550-25 670 kHz (SHARED) RADIO ASTRONOMY 5.149	Radio astronomy		
25 670-26 100 kHz BROADCASTING	25 670-26 100 kHz (CIVIL) BROADCASTING	Broadcasting	Art. 12 ITU RR. Introduction of digital systems is encouraged	Annex 3
26 100-26 175 kHz MARITIME MOBILE 5.132	26 100-26 175 kHz (SHARED) MARITIME MOBILE 5.132	Maritime DSC calling Maritime Safety Information	App. 25 ITU RR. Allotment plan 26121, 26121.56, 26122 kHz 26100.5 kHz	Annex 4
26 175-27 500 kHz FIXED	26 175-27 500 kHz (SHARED) FIXED	Fixed links		Annex 2

Allocations for ITU Region 1	National Allocations of Sultanate of Oman	Major utilization	Notes	National Channel/ Block arrangements
MOBILE except aeronautical mobile	MOBILE except aeronautical mobile	CB Radio	Within the band: 26.960-27.410 MHz	Annex 1
		Mobile applications		
		ISM	26.975-27.283 MHz	
		SRD	26.957 – 27.283 MHz: Non-specific applications. Decision of TRA No 133/2008 of 28-Oct-08	
			26.995 MHz, 27.045 MHz, 27.095 MHz, 27.145 MHz and 27.195 MHz: Model control. Decision of TRA No 133/2008 of 28-Oct-08	
			26.957 – 27.283 MHz: Inductive applications. Decision of TRA No 133/2008 of 28-Oct-08	
5.150	5.150			
27.5-28 MHz	27.5-28 MHz (SHARED)			
METEOROLOGICAL AID	METEOROLOGICAL AID			
FIXED	FIXED	Fixed links		Annex 2
MOBILE	MOBILE	Mobile applications		Annex 1
28-29.7 MHz	28-29.7 MHz (CIVIL)			
AMATEUR	AMATEUR	Amateur		
AMATEUR-SATELLITE	AMATEUR-SATELLITE	Amateur Satellite		
29.7-30.005 MHz	29.7-30.005 MHz (MILITARY)			
FIXED	FIXED			
MOBILE	MOBILE			
		Military systems		
30.005-30.01 MHz	30.005-30.01 MHz (MILITARY)			
SPACE OPERATION (satellite identification)	SPACE OPERATION (satellite identification)			
FIXED	FIXED			
MOBILE	MOBILE			
SPACE RESEARCH	SPACE RESEARCH			
		Military systems		
30.01-37.5 MHz	30.01-37.5 MHz (MILITARY)			
FIXED	FIXED			

Allocations for ITU Region 1	National Allocations of Sultanate of Oman	Major utilization	Notes	National Channel/ Block arrangements
MOBILE	MOBILE			
		Military systems		
		SRD	34.995-35.225 MHz; Model control. Decision of TRA No 133/2008 of 28-Oct-08	
37.5-38.25 MHz	37.5-38.25 MHz (SHARED)			
FIXED	FIXED			
MOBILE	MOBILE	PMR		Annex 1
		Paging		
Radio astronomy	Radio astronomy			
5.149	5.149			
38.25-39.986 MHz	38.25-39.986 MHz (SHARED)			
FIXED	FIXED			
MOBILE	MOBILE	PMR		Annex 1
39.986-40.02 MHz	39.986-40.02 MHz (SHARED)			
FIXED	FIXED			
MOBILE	MOBILE	PMR		Annex 1
Space research	Space research			
40.02-40.98 MHz	40.02-40.98 MHz (SHARED)			
FIXED	FIXED			
MOBILE	MOBILE	PMR	40.02-40.66 MHz and 40.7-40.98 MHz	Annex 1
		ISM	40.66 – 40.70 MHz	
		SRD	40.66 – 40.7 MHz; Non-specific applications. Decision of TRA No 133/2008 of 28-Oct-08	
			40.66 MHz, 40.675 MHz, 40.685 MHz and 40.695 MHz; Model control. Decision of TRA No 133/2008 of 28-Oct-08	
5.150	5.150			
40.98-41.015 MHz	40.98-41.015 MHz (SHARED)			
FIXED	FIXED			
MOBILE	MOBILE	PMR		Annex 1

Allocations for ITU Region 1	National Allocations of Sultanate of Oman	Major utilization	Notes	National Channel/ Block arrangements
Space research	Space research			
5.160 5.161				
41.015-44 MHz	41.015-44 MHz (MILITARY)			
FIXED	FIXED			
MOBILE	MOBILE			
5.160 5.161		Military systems		
44-47 MHz	44-47 MHz (MILITARY)			
FIXED	FIXED			
MOBILE	MOBILE			
5.162 5.162A		Military systems		
47-68 MHz	47-68 MHz (CIVIL)			
BROADCASTING	BROADCASTING			
5.162A 5.163 5.164 5.165 5.169 5.171		Amateur	50-52 MHz Subject to application of No. 4.4 of the RR	Annex 1
68-74.8 MHz	68-74.8 MHz (SHARED)	PMR/PAMR	On permitted basis	Annex 1
FIXED	FIXED			
MOBILE except aeronautical mobile	MOBILE except aeronautical mobile	PMR/PAMR		Annex 1
5.149 5.175 5.177 5.179				
74.8-75.2 MHz	74.8-75.2 MHz (SHARED)			
AERONAUTICAL RADIONAVIGATION	AERONAUTICAL RADIONAVIGATION	ILS/marker beacons	75 MHz ± 0.005%, ICAO Regulations (Annex 10, volume 1, chapter 3, sections 3.1.7 and 3.6)	
5.180 5.181				
75.2-87.5 MHz	75.2-77.8 MHz (MILITARY)			
FIXED	FIXED			
MOBILE except aeronautical mobile	MOBILE except aeronautical mobile	Military systems		
5.180 5.181				
77.8-84.6 MHz	77.8-84.6 MHz (SHARED)			
FIXED	FIXED			
MOBILE except aeronautical mobile	MOBILE except aeronautical mobile	PMR/PAMR		Annex 1

Allocations for ITU Region 1	National Allocations of Sultanate of Oman	Major utilization	Notes	National Channel/ Block arrangements
	84.6-87.5 MHz (MILITARY)			
	FIXED			
	MOBILE except aeronautical mobile			
		Military systems		
5.175 5.179 5.187				
87.5-100 MHz	87.5-100 MHz (CIVIL)			
BROADCASTING	BROADCASTING	Broadcasting	FM sound. Regional agreement GE84	Annex 3
5.190				
100-108 MHz	100-108 MHz (CIVIL)			
BROADCASTING	BROADCASTING	Broadcasting	FM sound. Regional agreement GE84	Annex 3
5.192 5.194				
108-117.975 MHz	108-117.975 MHz (CIVIL)			
AERONAUTICAL RADIONAVIGATION	AERONAUTICAL RADIONAVIGATION	ILS/Localizer	108-112 MHz	
		VOR	112-117.975 MHz	
5.197 5.197A	5.197A			
117.975-137 MHz	117.975-137 MHz (CIVIL)			
AERONAUTICAL MOBILE (R)	AERONAUTICAL MOBILE (R)	Aeronautical mobile	117.975-121.45 MHz. Safety and regularity of flights. ICAO Regulations (Annex 10, volume III, Part II, Chapter 2)	
		EPIRB	121.45-121.55 MHz band only for distress and safety	
		Aeronautical mobile	121.55-136 MHz	
		Aeronautical mobile distress communication	123.1 MHz	
		Aeronautical communication	136-137 MHz	
5.111 5.200 5.201 5.202	5.111 5.200 5.202			
137-137.025 MHz	137-137.025 MHz (CIVIL)			
SPACE OPERATION (space-to-Earth)	FIXED			
METEOROLOGICAL-SATELLITE (space-to-Earth)	MOBILE except aeronautical mobile (R)	Mobile applications	Restricted to Aeronautical Mobile (OR), including air sport	Annex 1
MOBILE-SATELLITE (space-to-Earth) 5.208A 5.209	SPACE OPERATION (space-to-Earth)			
SPACE RESEARCH (space-to-Earth)	METEOROLOGICAL-SATELLITE (space-to-Earth)	Meteorological satellites		
Fixed	MOBILE-SATELLITE (space-to-Earth) 5.208B 5.209	Low earth orbit satellites		
Mobile except aeronautical mobile (R)	SPACE RESEARCH (space-to-Earth)			

Allocations for ITU Region 1	National Allocations of Sultanate of Oman	Major utilization	Notes	National Channel/ Block arrangements
5.204 5.205 5.206 5.207 5.208	5.208			
137.025-137.175 MHz	137.025-137.175 MHz (CIVIL)			
SPACE OPERATION (space-to-Earth)	FIXED	Fixed links	Priority to mobile and satellite applications	Annex 2
METEOROLOGICAL-SATELLITE (space-to-Earth)	MOBILE except aeronautical mobile (R)	Mobile applications	Restricted to Aeronautical Mobile (OR), including air sport	Annex 1
SPACE RESEARCH (space-to-Earth)	SPACE OPERATION (space-to-Earth)			
Fixed	METEOROLOGICAL-SATELLITE (space-to-Earth)	Meteorological satellites		
Mobile-satellite (space-to-Earth) 5.208A 5.208B 5.209	SPACE RESEARCH (space-to-Earth)			
Mobile except aeronautical mobile (R)	Mobile-satellite (space-to-Earth) 5.208A 5.208B 5.209	Low earth orbit satellites		
5.204 5.205 5.206 5.207 5.208	5.208			
137.175-137.825 MHz	137.175-137.825 MHz (CIVIL)			
SPACE OPERATION (space-to-Earth)	FIXED	Fixed links	Priority to mobile and satellite applications	Annex 2
METEOROLOGICAL-SATELLITE (space-to-Earth)	MOBILE except aeronautical mobile (R)	Mobile applications	Restricted to Aeronautical Mobile (OR), including air sport	Annex 1
MOBILE-SATELLITE (space-to-Earth) 5.208A 5.208B 5.209	SPACE OPERATION (space-to-Earth)			
SPACE RESEARCH (space-to-Earth)	METEOROLOGICAL-SATELLITE (space-to-Earth)	Meteorological satellites		
Fixed	MOBILE-SATELLITE (space-to-Earth) 5.208A 5.208B 5.209	Low earth orbit satellites		
Mobile except aeronautical mobile (R)	SPACE RESEARCH (space-to-Earth)			
5.204 5.205 5.206 5.207 5.208	5.208			
137.825-138 MHz	137.825-138 MHz (CIVIL)			
SPACE OPERATION (space-to-Earth)	FIXED	Fixed links	Priority to mobile and satellite applications	Annex 2
METEOROLOGICAL-SATELLITE (space-to-Earth)	MOBILE except aeronautical mobile (R)	Mobile applications	Restricted to Aeronautical Mobile (OR), including air sport	Annex 1
SPACE RESEARCH (space-to-Earth)	SPACE OPERATION (space-to-Earth)			
Fixed	METEOROLOGICAL-SATELLITE (space-to-Earth)	Meteorological satellites		
Mobile-satellite (space-to-Earth) 5.208A 5.208B 5.209	SPACE RESEARCH (space-to-Earth)			
Mobile except aeronautical mobile (R)	Mobile-satellite (space-to-Earth) 5.208A 5.208B 5.209	Low earth orbit satellites		
5.204 5.205 5.206 5.207 5.208	5.208			

Allocations for ITU Region 1	National Allocations of Sultanate of Oman	Major utilization	Notes	National Channel/ Block arrangements
138-143.6 MHz	138-144 MHz (SHARED)			
AERONAUTICAL MOBILE (OR)	FIXED	Fixed links		Annex 2
	MOBILE	Mobile applications	Including air operation control	Annex 1
5.210 5.211 5.212 5.214				
143.6-143.65 MHz				
AERONAUTICAL MOBILE (OR)				
SPACE RESEARCH (space-to-Earth)				
5.211 5.212 5.214				
143.65-144 MHz				
AERONAUTICAL MOBILE (OR)				
5.210 5.211 5.212 5.214				
144-146 MHz	144-146 MHz (CIVIL)			
AMATEUR	AMATEUR	Amateur		
AMATEUR-SATELLITE	AMATEUR-SATELLITE	Amateur Satellite		
5.216				
146-148 MHz	146-148 MHz (CIVIL)			
FIXED	FIXED	Fixed links	Priority to PMR/PAMR	Annex 2
MOBILE except aeronautical mobile (R)	MOBILE except aeronautical mobile (R)	PMR/PAMR		Annex 1
148-149.9 MHz	148-149.9 MHz (CIVIL)			
FIXED	FIXED			
MOBILE except aeronautical mobile (R)	MOBILE except aeronautical mobile (R)	PMR/PAMR		Annex 1
MOBILE-SATELLITE (Earth-to-space) 5.209	MOBILE-SATELLITE (Earth-to-space) 5.209	Low earth orbit satellites		
5.218 5.219 5.221	5.218 5.219 5.221			
149.9-150.05 MHz	149.9-150.05 MHz (CIVIL)			
MOBILE-SATELLITE (Earth-to-space) 5.209 5.224A	MOBILE-SATELLITE (Earth-to-space) 5.209 5.224A	Low earth orbit satellites		
RADIONAVIGATION-SATELLITE 5.224B	RADIONAVIGATION-SATELLITE 5.224B			
5.220 5.222 5.223	5.220 5.222 5.223			
150.05-153 MHz	150.05-153 MHz (CIVIL)			
FIXED	FIXED			

Allocations for ITU Region 1	National Allocations of Sultanate of Oman	Major utilization	Notes	National Channel/ Block arrangements
MOBILE except aeronautical mobile	MOBILE except aeronautical mobile			
RADIO ASTRONOMY	RADIO ASTRONOMY	PMR/PAMR		Annex 1
5.149	5.149			
153-154 MHz	153-154 MHz (CIVIL)			
FIXED	FIXED			
MOBILE except aeronautical mobile (R)	MOBILE except aeronautical mobile (R)	PMR/PAMR		Annex 1
Meteorological Aids	Meteorological Aids			
154-156.4875 MHz	154-156 MHz (CIVIL)			
FIXED	FIXED			
MOBILE except aeronautical mobile (R)	MOBILE except aeronautical mobile (R)	PMR/PAMR		Annex 1
	156-156.4875 MHz (SHARED)			
	FIXED			
	MOBILE except aeronautical mobile (R)	Maritime	App. 18 ITU RR	
5.226	5.226			
156.4875-156.5625 MHz	156.4875-156.5625 MHz (SHARED)			
MARITIME MOBILE (distress and calling via DSC)	MARITIME MOBILE (distress and calling via DSC)	DSC for distress and calling	156.525 MHz. App. 18 ITU RR	
5.111 5.226 5.227	5.111 5.226 5.227			
156.5625-156.7625 MHz	156.5625-156.7625 MHz (SHARED)			
FIXED	FIXED			
MOBILE except aeronautical mobile (R)	MOBILE except aeronautical mobile (R)	Maritime	App. 18 ITU RR	
5.226	5.226			
156.7625-156.8375 MHz	156.7625-156.8375 MHz (CIVIL)			
MARITIME MOBILE (distress and calling)	MARITIME MOBILE (distress and calling)	Distress, safety and calling	156.8 MHz. App. 18 ITU RR	
5.111 5.226	5.111 5.226			
156.8375-174 MHz	156.8375-174.45 MHz (SHARED)			
FIXED	MARITIME MOBILE	Maritime	App. 18 ITU RR	
MOBILE except aeronautical mobile				
	157.45-160.6 MHz (CIVIL)			
	FIXED	Fixed links	Priority to PMR/PAMR	Annex 2

Allocations for ITU Region 1	National Allocations of Sultanate of Oman	Major utilization	Notes	National Channel/ Block arrangements
	MOBILE except aeronautical mobile	PMR/PAMR		Annex 1
	160.6-160.975 MHz (SHARED) MARITIME MOBILE	Maritime	App. 18 ITU RR	
	160.975-161.475 MHz (CIVIL) FIXED	Fixed links	Priority to PMR/PAMR	Annex 2
	MOBILE except aeronautical mobile	PMR/PAMR		Annex 1
	161.475-162.05 MHz (SHARED) MARITIME MOBILE	Maritime	App. 18 ITU RR	
	5.227A	Shipborne AIS	161.975 MHz and 162.025 MHz	
	162.05-174 MHz (CIVIL) FIXED	Fixed links	Priority to PMR/PAMR	Annex 2
	MOBILE except aeronautical mobile	PMR/PAMR		Annex 1
		SRD	169.4-169.475 MHz: Meter reading and Asset tracking and tracing systems. Decision of TRA No 133/2008 of 28-Oct-08	
			169.4875-169.5875 MHz: Aids for hearing impairment. Decision of TRA No 133/2008 of 28-Oct-08	
			169.48125 MHz and 169.59375 MHz: Social alarms, alarms for security and safety. Decision of TRA No 133/2008 of 28-Oct-08	
5.226 5.227A 5.229				
174-223 MHz BROADCASTING	174-223 MHz (CIVIL) BROADCASTING	Broadcasting	174-230 MHz: Analog TV (B/PAL). Regional agreement GE06	Annex 3
			174-216 MHz: DVB-T. Regional agreement GE06	Annex 3
5.235 5.237 5.243			216-230 MHz: T-DAB. Regional agreement GE06	Annex 3
223-230 MHz BROADCASTING	223-230 MHz (CIVIL) BROADCASTING	Broadcasting	174-230 MHz: Analog TV (B/PAL). Regional agreement GE06	Annex 3
Fixed	Fixed		216-230 MHz: T-DAB. Regional agreement GE06	

Allocations for ITU Region 1	National Allocations of Sultanate of Oman	Major utilization	Notes	National Channel/ Block arrangements
Mobile	Mobile			
5.243 5.246 5.247				
230-235 MHz	230-235 MHz (MILITARY)			
FIXED	AERONAUTICAL RADIONAVIGATION			
MOBILE	FIXED			
	MOBILE			
5.247 5.251 5.252		Military systems		
235-267 MHz	235-242.95 MHz (MILITARY)			
FIXED	FIXED			
MOBILE	MOBILE			
	5.254	Military systems		
	242.95-243.05 MHz (SHARED)			
	MOBILE 5.256			
	MOBILE-SATELLITE 5.199			
	5.111	EPIRB	Band only available for distress and safety purposes 243 MHz	
	243.05-267 MHz (MILITARY)			
	FIXED			
	MOBILE			
5.111 5.199 5.252 5.254 5.256 5.256A		Military systems		
267-272 MHz	267-272 MHz (MILITARY)			
FIXED	FIXED			
MOBILE	MOBILE			
Space operation (space-to-Earth)	Space operation (space-to-Earth)			
5.254 5.257	5.254 5.257	Military systems		
272-273 MHz	272-273 MHz (MILITARY)			
SPACE OPERATION (space-to-Earth)	SPACE OPERATION (space-to-Earth)			
FIXED	FIXED			
MOBILE	MOBILE			
	5.254	Military systems		

Allocations for ITU Region 1	National Allocations of Sultanate of Oman	Major utilization	Notes	National Channel/ Block arrangements
273-312 MHz	273-312 MHz (MILITARY)			
FIXED	FIXED			
MOBILE	MOBILE			
5.254	5.254	Military systems		
312-315 MHz	312-315 MHz (MILITARY)			
FIXED	FIXED			
MOBILE	MOBILE			
Mobile-satellite (Earth-to-space) 5.254 5.255	Mobile-satellite (Earth-to-space) 5.254 5.255			
315-322 MHz	315-322 MHz (MILITARY)			
FIXED	FIXED			
MOBILE	MOBILE			
5.254	5.254	Military systems		
322-328.6 MHz	322-328.6 MHz (SHARED)			
FIXED	FIXED			
MOBILE	MOBILE	Mobile applications	including AGA communication	
RADIO ASTRONOMY	RADIO ASTRONOMY			
5.149	5.149			
328.6-335.4 MHz	328.6-335.4 MHz (SHARED)			
AERONAUTICAL RADIONAVIGATION 5.258	AERONAUTICAL RADIONAVIGATION 5.258	ILS/Glide path	ICAO Regulations (Annex 10, Volume 1, Chapter 3)	
5.259				
335.4-387 MHz	335.4-380 MHz (MILITARY)			
FIXED	FIXED			
MOBILE	MOBILE			
	5.254	Military systems		
	380-387 MHz (MILITARY)			
	MOBILE	Military systems	TETRA military	
5.254	5.254			
387-390 MHz	387-390 MHz (MILITARY)			
FIXED	MOBILE	Military systems	TETRA military	

Allocations for ITU Region 1	National Allocations of Sultanate of Oman	Major utilization	Notes	National Channel/ Block arrangements
MOBILE	Mobile-satellite (space-to-Earth) 5.208A 5.208B 5.254 5.255			
Mobile-satellite (space-to-Earth) 5.208A 5.208B 5.254 5.255				
390-399.9 MHz	390-399.9 MHz (MILITARY)			
FIXED	MOBILE	Military systems	TETRA military	
MOBILE				
5.254	5.254			
399.9-400.05 MHz	399.9-400.05 MHz (CIVIL)			
MOBILE-SATELLITE (Earth-to-space) 5.209 5.224A	MOBILE-SATELLITE (Earth-to-space) 5.209 5.224A	Mobile satellite applications	Subject to coordination: Use of this band limited to the land MSS and RNS until 1.1.2015	
RADIONAVIGATION-SATELLITE 5.222 5.224B 5.260	RADIONAVIGATION-SATELLITE 5.222 5.224B 5.260			
5.220	5.220			
400.05-400.15 MHz	400.05-400.15 MHz (SHARED)			
STANDARD FREQUENCY AND TIME SIGNAL-SATELLITE (400.1 MHz)	STANDARD FREQUENCY AND TIME SIGNAL-SATELLITE (400.1 MHz)	Standard Frequency and Time Signal	400.1 MHz. Art. 26 ITU RR	
5.261 5.262	5.261			
400.15-401 MHz	400.15-401 MHz (SHARED)			
METEOROLOGICAL-AIDS	METEOROLOGICAL-AIDS	Meteorological radiosondes		
METEOROLOGICAL-SATELLITE (space-to-Earth)	METEOROLOGICAL-SATELLITE (space-to-Earth)	Meteorological satellites		
MOBILE-SATELLITE (space-to-Earth) 5.208A 5.208B 5.209	MOBILE-SATELLITE (space-to-Earth) 5.208A 5.208B 5.209	Low earth orbit satellites		
SPACE RESEARCH (space-to-Earth) 5.263	SPACE RESEARCH (space-to-Earth) 5.263			
Space operation (space-to-Earth)	Space operation (space-to-Earth)			
5.262 5.264	5.264			
401-402 MHz	401-402 MHz (SHARED)			
METEOROLOGICAL-AIDS	METEOROLOGICAL-AIDS	Meteorological radiosondes		
SPACE OPERATION (space-to-Earth)	SPACE OPERATION (space-to-Earth)			
EARTH EXPLORATION-SATELLITE (Earth-to-space)	EARTH EXPLORATION-SATELLITE (Earth-to-space)			
METEOROLOGICAL-SATELLITE (Earth-to-space)	METEOROLOGICAL-SATELLITE (Earth-to-space)	Meteorological satellites	Data collection platform telemetry	
Fixed	Fixed			
Mobile except aeronautical mobile	Mobile except aeronautical mobile			

Allocations for ITU Region 1	National Allocations of Sultanate of Oman	Major utilization	Notes	National Channel/ Block arrangements
402-403 MHz	402-403 MHz (SHARED)			
METEOROLOGICAL AIDS	METEOROLOGICAL AIDS	Meteorological radiosondes		
EARTH EXPLORATION-SATELLITE (Earth-to-space)	EARTH EXPLORATION-SATELLITE (Earth-to-space)			
METEOROLOGICAL-SATELLITE (Earth-to-space)	METEOROLOGICAL-SATELLITE (Earth-to-space)	Meteorological satellites		
Fixed	Fixed			
Mobile except aeronautical mobile	Mobile except aeronautical mobile	SRD	402 – 405 MHz: Ultra low power active medical implants. Decision of TRA No 133/2008 of 28-Oct-08	
403-406 MHz	403-406 MHz (SHARED)			
METEOROLOGICAL AIDS	METEOROLOGICAL AIDS	Meteorological radiosondes		
Fixed	Fixed			
Mobile except aeronautical mobile	Mobile except aeronautical mobile	SRD	402 – 405 MHz: Ultra low power active medical implants. Decision of TRA No 133/2008 of 28-Oct-08	
406-406.1 MHz	406-406.1 MHz (SHARED)			
MOBILE-SATELLITE (Earth-to-space)	MOBILE-SATELLITE (Earth-to-space)	Satellite EPIRB	Band only available for distress and safety purposes. Art. 31, App. 13 and 15 ITU RR	
5.266 5.267	5.266 5.267			
406.1-410 MHz	406.1-410 MHz (CIVIL)			
FIXED	FIXED			
MOBILE except aeronautical mobile	MOBILE except aeronautical mobile	PMR/PAMR		Annex 1
RADIO ASTRONOMY	RADIO ASTRONOMY			
5.149	5.149			
410-420 MHz	410-420 MHz (CIVIL)			
FIXED	FIXED			
MOBILE except aeronautical mobile	MOBILE except aeronautical mobile	PMR/PAMR	TETRA	Annex 1
SPACE RESEARCH (space-to-space) 5.268	SPACE RESEARCH (space-to-space) 5.268			
420-430 MHz	420-430 MHz (CIVIL)			
FIXED	FIXED			
MOBILE except aeronautical mobile	MOBILE except aeronautical mobile	PMR/PAMR	TETRA	Annex 1
Radiolocation	Radiolocation			

Allocations for ITU Region 1	National Allocations of Sultanate of Oman	Major utilization	Notes	National Channel/ Block arrangements
5.269 5.270 5.271				
430-432 MHz	430-432 MHz (CIVIL)			
AMATEUR	AMATEUR		on coordination basis	
RADIOLOCATION	FIXED	Fixed links		Annex 2
	MOBILE except aeronautical mobile	PMR/PAMR		Annex 1
	RADIOLOCATION			
5.271 5.272 5.273 5.274				
5.275 5.276 5.277				
432-438 MHz	432-435 MHz (CIVIL)			
AMATEUR	AMATEUR		on coordination basis	
RADIOLOCATION	FIXED			
Earth exploration-satellite (active) 5.279A	MOBILE except aeronautical mobile	PMR/PAMR		Annex 1
	RADIOLOCATION			
	Earth exploration-satellite (active) 5.279A			
			433.05 – 434.79 MHz	
	5.138	ISM	433.05 – 4434.79 MHz: Non-specific applications. Decision of TRA No 133/2008 of 28-Oct-08	
	435-438 MHz (CIVIL)			
	AMATEUR	Amateur		
	FIXED			
	RADIOLOCATION			
	Earth exploration-satellite (active) 5.279A			
5.138 5.271 5.272 5.276				
5.277 5.280 5.281 5.282				
438-440 MHz	438-440 MHz (CIVIL)			
AMATEUR	AMATEUR		on coordination basis	
RADIOLOCATION	FIXED			
	MOBILE except aeronautical mobile	PMR/PAMR		Annex 1
	RADIOLOCATION			
5.271 5.273 5.274 5.275				
5.276 5.277 5.283				
440-450 MHz	440-450 MHz (CIVIL)			
FIXED	FIXED	Fixed links	Priority to PMR/PAMR	Annex 2
MOBILE except aeronautical mobile	MOBILE except aeronautical mobile	PMR/PAMR	Paging: 443.5-443.75 MHz	Annex 1
Radiolocation	Radiolocation			

Allocations for ITU Region 1	National Allocations of Sultanate of Oman	Major utilization	Notes	National Channel/ Block arrangements
5.269 5.270 5.271 5.284 5.285 5.286	5.286			
450-455 MHz	450-455 MHz (CIVIL)			
FIXED	FIXED			
MOBILE 5.286AA	MOBILE 5.286AA	IMT	CDMA450/3G	
5.209 5.271 5.286 5.286A 5.286B 5.286C 5.286D 5.286E	5.209 5.286 5.286A			
455-456 MHz	455-456 MHz (CIVIL)			
FIXED	FIXED			
MOBILE 5.286AA	MOBILE 5.286AA	IMT	CDMA450/3G	
5.209 5.271 5.286A 5.286B	5.209 5.286A			
5.286C 5.286E				
456-459 MHz	456-459 MHz (CIVIL)			
FIXED	FIXED			
MOBILE 5.286AA	MOBILE 5.286AA	IMT	CDMA450/3G	
5.271 5.287 5.288	5.287			
459-460 MHz	459-460 MHz (CIVIL)			
FIXED	FIXED			
MOBILE 5.286AA	MOBILE 5.286AA	IMT	CDMA450/3G	
5.209 5.271 5.286A 5.286B 5.286C 5.286E	5.209 5.286A			
460-470 MHz	460-470 MHz (CIVIL)			
FIXED	FIXED			
MOBILE 5.286AA	MOBILE 5.286AA	IMT	CDMA450/3G	
Meteorological-Satellite (space-to-Earth)	Meteorological-Satellite (space-to-Earth)			
5.287 5.288 5.289 5.290	5.287 5.289			
470-790 MHz	470-790 MHz (CIVIL)			
BROADCASTING	BROADCASTING	Broadcasting	Analog TV (G/PAL), Regional agreement GE06	Annex 3
			DVB-T. Regional agreement GE06	
	Fixed 5.300			
	Land mobile 5.296			
	Mobile mobile 5.300 except aeronautical			

Allocations for ITU Region 1	National Allocations of Sultanate of Oman	Major utilization	Notes	National Channel/ Block arrangements
5.149 5.291A 5.294 5.296				
5.300 5.302 5.304 5.306				
5.311A 5.312	5.149 5.311A			
790-862 MHz	790-862 MHz (CIVIL)			
FIXED	FIXED			
BROADCASTING	BROADCASTING	Broadcasting	Analog TV (G/PAL). Regional agreement GE06	Annex 3
MOBILE except aeronautical mobile 5.316B 5.317A	MOBILE except aeronautical mobile 5.316B 5.317A		DVB-T. Regional agreement GE06	
			Allocation is effective from 17 June 2015	
5.312 5.314 5.315 5.316 5.316A 5.319	5.316A			
862-990 MHz	862-970 MHz (CIVIL)			
FIXED	FIXED	Fixed links		Annex 2
MOBILE except aeronautical mobile 5.317A	MOBILE except aeronautical mobile 5.317A	PMR/PAMR		Annex 1
BROADCASTING 5.322				
		SRD	868-868.6 MHz, 868.7-869.2 MHz, 869.4-869.65 MHz and 869.7-870 MHz. Non-specific applications. Decision of TRA No 133/2008 of 28-Oct-08	
			868.6-868.7 MHz, 869.25-869.3 MHz, 869.65-869.7 MHz: Social alarms, alarms for security and safety. Decision of TRA No 133/2008 of 28-Oct-08	
			863-865 MHz: wireless audio applications. Decision of TRA No 133/2008 of 28-Oct-08	
	870-876 MHz (MILITARY)			
	FIXED			
	MOBILE except aeronautical mobile 5.317A	Military systems	Future TETRA military	
	876-915 MHz (CIVIL)			
5.319 5.323				
890-942 MHz	LAND MOBILE 5.317A	EGSM	880-890 MHz paired with 925-935 MHz	
FIXED		GSM-900	890-915 MHz paired with 935-960 MHz	

Allocations for ITU Region 1	National Allocations of Sultanate of Oman	Major utilization	Notes	National Channel/ Block arrangements
MOBILE except aeronautical mobile 5.317A				
BROADCASTING 5.322	915-921 MHz (MILITARY)			
Radiolocation	FIXED			
	MOBILE except aeronautical mobile 5.317A	Military systems	Future TETRA military	
	921-960 MHz (CIVIL)			
	LAND MOBILE 5.317A	EGSM	925-935 MHz paired with 880-890 MHz	
5.323		GSM-900	935-960 MHz paired with 890-915 MHz	
942-960 MHz				
FIXED				
MOBILE except aeronautical mobile 5.317A				
BROADCASTING 5.322				
5.323				
960-1 164 MHz	960-1 164 MHz (SHARED)			
AERONAUTICAL RADIONAVIGATION 5.328	AERONAUTICAL RADIONAVIGATION 5.328	Navigation systems	960-1215 MHz: DME with 1 MHz channel bandwidth	
AERONAUTICAL MOBILE (R) 5.327A			962-1214 MHz: DME/TACAN with 252 channels (126X and 126Y) and 1 MHz channel bandwidth	
			1025-1035 MHz paired with 1085 – 1095 MHz: SSR	
			960-1215 MHz: JTIDS/MIDS terminals	
			ACAS supplementing SSR	
	AERONAUTICAL MOBILE (R) 5.327A			
1 164-1 215 MHz	1 164-1 215 MHz (SHARED)			
AERONAUTICAL RADIONAVIGATION 5.328	AERONAUTICAL RADIONAVIGATION 5.328	Navigation systems	960-1215 MHz: DME with 1 MHz channel bandwidth	
RADIONAVIGATION-SATELLITE (space-to-Earth) (space-to-space) 5.328B			962-1214 MHz: DME/TACAN with 252 channels (126X and 126Y) and 1 MHz channel bandwidth	
			960-1215 MHz: JTIDS/MIDS terminals	
			ACAS supplementing SSR	
	RADIONAVIGATION-SATELLITE (space-to-Earth) (space-to-space) 5.328B	Galileo	1164-1214 MHz	
		GLONASS	1190.3-1213.8 MHz	

Allocations for ITU Region 1	National Allocations of Sultanate of Oman	Major utilization	Notes	National Channel/ Block arrangements
5.328A	5.328A	GPS	L5 link (operational by 2008)	
1 215-1 240 MHz	1 215-1 240 MHz (SHARED)			
EARTH EXPLORATION-SATELLITE (active)	EARTH EXPLORATION-SATELLITE (active)			
RADIOLOCATION	RADIOLOCATION	Radiolocation systems	1215 – 1300 MHz	
RADIONAVIGATION-SATELLITE (space-to-Earth) (space-to-space) 5.328B 5.329 5.329A	RADIONAVIGATION	Radar and Radionavigation		
SPACE RESEARCH (active)	RADIONAVIGATION-SATELLITE (space-to-Earth) (space-to-space) 5.328B 5.329 5.329A	GPS	1215.6-1239.6 MHz	
	SPACE RESEARCH (active)	GLONASS	1237.8-1253.8 MHz	
5.330 5.331 5.332	5.332			
1 240-1 300 MHz	1 240-1 300 MHz (SHARED)			
EARTH EXPLORATION-SATELLITE (active)	EARTH EXPLORATION-SATELLITE (active)			
RADIOLOCATION	RADIOLOCATION	Radiolocation systems	1215 – 1300 MHz	
RADIONAVIGATION-SATELLITE (space-to-Earth) (space-to-space) 5.328B 5.329 5.329A	RADIONAVIGATION	Radar and Radionavigation		
SPACE RESEARCH (active)	SPACE RESEARCH (active)	Wind profiler radars	1270-1295 MHz	
Amateur	RADIONAVIGATION-SATELLITE (space-to-Earth) (space-to-space) 5.328B 5.329 5.329A	GLONASS	1237.8-1253.8 MHz	
	SPACE RESEARCH (active)	Galileo	1260 – 1300 MHz	
	Amateur			
5.282 5.330 5.331 5.332 5.335 5.335A	5.282 5.332 5.335A			
1 300-1 350 MHz	1 300-1 350 MHz (CIVIL)			
AERONAUTICAL RADIONAVIGATION 5.337	AERONAUTICAL RADIONAVIGATION 5.337	Radar and Radionavigation systems		
RADIOLOCATION	RADIOLOCATION			
RADIONAVIGATION SATELLITE (Earth-to-space)	RADIONAVIGATION SATELLITE (Earth-to-space)	Satellite navigation systems		
5.149 5.337A	5.149 5.337A			
1 350-1 400 MHz	1 350-1 400 MHz (SHARED)			
FIXED	FIXED	Fixed links	Low capacity	Annex 2
MOBILE	MOBILE	PMR/PAMR		
RADIOLOCATION	RADIOLOCATION			
5.149 5.338 5.338A 5.339	5.149 5.338A			

Allocations for ITU Region 1	National Allocations of Sultanate of Oman	Major utilization	Notes	National Channel/ Block arrangements
1 400-1 427 MHz	1 400-1 427 MHz (CIVIL)			
EARTH EXPLORATION-SATELLITE (passive)	EARTH EXPLORATION-SATELLITE (passive)	Passive sensors (satellite)		
RADIO ASTRONOMY	RADIO ASTRONOMY			
SPACE RESEARCH (passive)	SPACE RESEARCH (passive)			
5.340 5.341	5.340 5.341			
1 427-1 429 MHz	1 427-1 429 MHz (SHARED)			
SPACE OPERATION (Earth-to-space)	SPACE OPERATION (Earth-to-space)			
FIXED	FIXED	Fixed links	Low capacity	Annex 2
MOBILE except aeronautical mobile	MOBILE except aeronautical mobile			
5.338A 5.341	5.338A 5.341			
1 429-1 452 MHz	1 429-1 452 MHz (SHARED)			
FIXED	FIXED	Fixed links	Low capacity	Annex 2
MOBILE except aeronautical mobile	MOBILE except aeronautical mobile			
5.338A 5.341 5.342	5.338A 5.341			
1 452-1 492 MHz	1 452-1 492 MHz (CIVIL)			
FIXED	FIXED			
MOBILE except aeronautical mobile	MOBILE except aeronautical mobile			
BROADCASTING 5.345	BROADCASTING 5.345	T-DAB	1452-1479.5 MHz	
BROADCASTING-SATELLITE 5.208B 5.345	BROADCASTING-SATELLITE 5.208B 5.345	S-DAB	1479.5-1492 MHz	
5.341 5.342	5.341			
1 492-1 518 MHz	1 492-1 518 MHz (SHARED)			
FIXED	FIXED	Fixed links	Low capacity	Annex 2
MOBILE except aeronautical mobile	MOBILE except aeronautical mobile			
5.341 5.342	5.341			
1 518-1 525 MHz	1 518-1 525 MHz (CIVIL)			
FIXED	FIXED	Fixed links	Unidirectional	Annex 2
MOBILE except aeronautical mobile	MOBILE except aeronautical mobile			
MOBILE-SATELLITE (space-to-Earth) 5.348 5.348B 5.348B 5.351A	MOBILE-SATELLITE (space-to-Earth) 5.348 5.348A 5.351A	Mobile satellite applications (S/E)	Including IMT satellite component	
5.341 5.342	5.341			
1 525-1 530 MHz	1 525-1 530 MHz (CIVIL)			
SPACE OPERATION (space-to-Earth)	SPACE OPERATION (space-to-Earth)			

Allocations for ITU Region 1	National Allocations of Sultanate of Oman	Major utilization	Notes	National Channel/ Block arrangements
FIXED	FIXED			
MOBILE-SATELLITE (space-to-Earth) 5.208B 5.351A	MOBILE-SATELLITE (space-to-Earth) 5.208B 5.351A	Mobile satellite applications (S/E)		
Earth exploration-satellite	Earth exploration-satellite			
Mobile except aeronautical mobile 5.349	Mobile except aeronautical mobile			
5.341 5.342 5.350 5.351 5.352A 5.354	5.341 5.351 5.352A 5.354			
1 530-1 535 MHz	1 530-1 535 MHz (CIVIL)			
SPACE OPERATION (space-to-Earth)	SPACE OPERATION (space-to-Earth)			
MOBILE-SATELLITE (space-to-Earth) 5.208B 5.351A 5.353A	MOBILE-SATELLITE (space-to-Earth) 5.208B 5.351A 5.353A	Mobile satellite applications (S/E)	Priority for GMDSS Distress and safety communications in the band 1530 – 1544 MHz. App. 15 ITU RR	
Earth exploration-satellite	Earth exploration-satellite			
Fixed	Fixed			
Mobile except aeronautical mobile	Mobile except aeronautical mobile			
5.341 5.342 5.351 5.354	5.341 5.351 5.354			
1 535-1 559 MHz	1 535-1 559 MHz (CIVIL)			
MOBILE-SATELLITE (space-to-Earth) 5.208B 5.351A	MOBILE-SATELLITE (space-to-Earth) 5.208B 5.351A	Mobile satellite applications (S/E)	1544-1545 MHz band is limited to distress and safety communications. Priority for GMDSS Distress and safety communications in the band 1530-1544 MHz. App. 15 ITU RR	
5.341 5.351 5.353A 5.354 5.355 5.356 5.357 5.357A 5.359 5.362A	5.341 5.351 5.353A 5.354 5.356 5.357 5.357A	Distress and safety communications (including GMDSS)	1530-1544 MHz. Art. 31 ITU RR	
1 559-1 610 MHz	1 559-1 610 MHz (SHARED)			
AERONAUTICAL RADIONAVIGATION	AERONAUTICAL RADIONAVIGATION			
RADIONAVIGATION-SATELLITE (space-to-Earth) (space-to-space) 5.208B 5.328B 5.329A	RADIONAVIGATION-SATELLITE (space-to-Earth) (space-to-space) 5.208B 5.328B 5.329A	GPS	1563.42-1587.42 MHz	
		GLONASS	1592.9-1610.5 MHz	
		Galileo	1559.42 – 1591.42 MHz	
5.341 5.362B 5.362C	5.341			
1 610-1 610.6 MHz	1 610-1 610.6 MHz (CIVIL)			
MOBILE-SATELLITE (Earth-to-space) 5.351A	MOBILE-SATELLITE (Earth-to-space) 5.351A	Mobile satellite applications (E/S)		
AERONAUTICAL RADIONAVIGATION	AERONAUTICAL RADIONAVIGATION			

Allocations for ITU Region 1	National Allocations of Sultanate of Oman	Major utilization	Notes	National Channel/ Block arrangements
5.341 5.355 5.359 5.364 5.366 5.367 5.368 5.369 5.371 5.372	5.341 5.364 5.366 5.367 5.368 5.371 5.372	GLONASS	1592.9-1610.5 MHz	
1 610.6-1 613.8 MHz	1 610.6-1 613.8 MHz (CIVIL)			
MOBILE-SATELLITE (Earth-to-space) 5.351A	MOBILE-SATELLITE (Earth-to-space) 5.351A	Mobile satellite applications (E/S)		
RADIO ASTRONOMY	RADIO ASTRONOMY			
AERONAUTICAL RADIONAVIGATION	AERONAUTICAL RADIONAVIGATION			
5.149 5.341 5.355 5.359 5.364 5.366 5.367 5.368 5.369 5.371 5.372	5.149 5.341 5.364 5.366 5.367 5.368 5.371 5.372			
1 613.8-1 626.5 MHz	1 613.8-1 626.5 MHz (CIVIL)			
MOBILE-SATELLITE (Earth-to-space) 5.351A	MOBILE-SATELLITE (Earth-to-space) 5.351A	Mobile satellite applications (E/S)		
AERONAUTICAL RADIONAVIGATION	AERONAUTICAL RADIONAVIGATION			
Mobile-satellite (space-to-Earth) 5.208B	Mobile-satellite (space-to-Earth) 5.208B			
5.341 5.355 5.359 5.364 5.365 5.366 5.367 5.368 5.369 5.371 5.372	5.341 5.364 5.365 5.366 5.367 5.368 5.371 5.372			
1 626.5-1 660 MHz	1 626.5-1 660 MHz (CIVIL)			
MOBILE-SATELLITE (Earth-to-space) 5.351A	MOBILE-SATELLITE (Earth-to-space) 5.351A	Mobile satellite applications (E/S)	1645.5-1646.5 MHz band is limited to distress and safety communications. Priority for GMDSS Distress and safety communications in the band 1626.5-1645.5 MHz	
5.341 5.351 5.353A 5.354 5.355 5.357A 5.359 5.362A 5.374 5.375 5.376	5.341 5.351 5.353A 5.354 5.357A 5.374 5.375 5.376		1645.5-1646.5 MHz. Art. 31 and App. 15 ITU RR	
1 660-1 660.5 MHz	1 660-1 660.5 MHz (CIVIL)			
MOBILE-SATELLITE (Earth-to-space) 5.351A	MOBILE-SATELLITE (Earth-to-space) 5.351A	Distress and safety communications (including GMDSS)		
RADIO ASTRONOMY	RADIO ASTRONOMY			
5.149 5.341 5.351 5.354 5.362A 5.376A	5.149 5.341 5.351 5.354 5.376A			
1 660.5-1 668 MHz	1 660.5-1 668 MHz (CIVIL)			
RADIO ASTRONOMY	RADIO ASTRONOMY			
SPACE RESEARCH (passive)	SPACE RESEARCH (passive)			
Fixed	Fixed			
Mobile except aeronautical mobile	Mobile except aeronautical mobile			
5.149 5.341 5.379 5.379A	5.149 5.341 5.379A			
1 668-1 668.4 MHz	1 668-1 668.4 MHz (CIVIL)			
MOBILE-SATELLITE (Earth-to-space) 5.379B 5.379C	MOBILE-SATELLITE (Earth-to-space) 5.379B 5.379C	Mobile satellite applications (E/S)	Including IMT satellite component	

Allocations for ITU Region 1	National Allocations of Sultanate of Oman	Major utilization	Notes	National Channel/ Block arrangements
RADIO ASTRONOMY	RADIO ASTRONOMY			
SPACE RESEARCH (passive)	SPACE RESEARCH (passive)			
Fixed	Fixed			
Mobile except aeronautical mobile	Mobile except aeronautical mobile			
5.149 5.341 5.379 5.379A	5.149 5.341 5.379A			
1 668.4-1 670 MHz	1 668.4-1 670 MHz (CIVIL)			
METEOROLOGICAL AIDS	METEOROLOGICAL AIDS	Meteorology		
FIXED	FIXED			
MOBILE except aeronautical mobile	MOBILE except aeronautical mobile			
MOBILE-SATELLITE (Earth-to-space) 5.351A 5.379B 5.379C	MOBILE-SATELLITE (Earth-to-space) 5.351A 5.379B 5.379C	Mobile satellite applications (E/S)	Including IMT satellite component	
RADIO ASTRONOMY	RADIO ASTRONOMY			
5.149 5.341 5.379D 5.379E	5.149 5.341 5.379D 5.379E			
1 670-1 675 MHz	1 670-1 675 MHz (CIVIL)			
METEOROLOGICAL AIDS	METEOROLOGICAL AIDS			
FIXED	FIXED			
METEOROLOGICAL-SATELLITE (space-to-Earth)	METEOROLOGICAL-SATELLITE (space-to-Earth)	Meteorological satellites		
MOBILE	MOBILE			
MOBILE-SATELLITE (Earth-to-space) 5.351A 5.379B	MOBILE-SATELLITE (Earth-to-space) 5.351A 5.379B	Mobile satellite applications (E/S)	Including IMT satellite component	
5.341 5.379D 5.379E 5.380A	5.341 5.379D 5.379E 5.380A			
1 675-1 690 MHz	1 675-1 690 MHz (SHARED)			
METEOROLOGICAL AIDS	METEOROLOGICAL AIDS	Meteorological radiosondes		
FIXED	FIXED			
METEOROLOGICAL-SATELLITE (space-to-Earth)	METEOROLOGICAL-SATELLITE (space-to-Earth)	Meteorological satellites	Data collection platform	
MOBILE except aeronautical mobile	MOBILE except aeronautical mobile			
5.341	5.341			
1 690-1 700 MHz	1 690-1 700 MHz (SHARED)			
METEOROLOGICAL AIDS	FIXED			
METEOROLOGICAL-SATELLITE (space-to-Earth)	METEOROLOGICAL AIDS			
Fixed	METEOROLOGICAL-SATELLITE (space-to-Earth)	Meteorological satellites	Data collection platform	
Mobile except aeronautical mobile	MOBILE except aeronautical mobile			
5.289 5.341 5.382	5.289 5.341			

Allocations for ITU Region 1	National Allocations of Sultanate of Oman	Major utilization	Notes	National Channel/ Block arrangements
1 700-1 710 MHz	1 700-1 710 MHz (CIVIL)			
FIXED	FIXED			
METEOROLOGICAL-SATELLITE (space-to-Earth)	METEOROLOGICAL-SATELLITE (space-to-Earth)	Meteorological satellites	Data collection platform	
MOBILE except aeronautical mobile	MOBILE except aeronautical mobile			
5.289 5.341	5.289 5.341			
1 710-1 930 MHz	1 710-1 785 MHz (CIVIL)			
FIXED	LAND MOBILE 5.384A	GSM-1800	1710-1785 MHz paired with 1805-1880 MHz	
MOBILE 5.384A 5.388A 5.388B		IMT	1710-1785 MHz paired with 1805-1880 MHz	
	5.149 5.341 5.385			
	1 785-1 800 MHz (CIVIL)			
	FIXED	FWA	1785-1805 MHz; iBurst	
	MOBILE 5.384A			
	1 800-1 880 MHz (CIVIL)			
	MOBILE 5.384A	GSM-1800	1805-1880 MHz paired with 1710-1785 MHz	
		IMT	1805-1880 MHz paired with 1710-1785 MHz	
		FWA	1785-1805 MHz; iBurst	
	1 880-1 885 MHz (CIVIL)			
	FIXED			
	LAND MOBILE 5.384A	Cordless telephone system	1880-1900 MHz; DECT	
	1 885-1 980 MHz (CIVIL)			
5.149 5.341 5.385 5.386 5.387 5.388	LAND MOBILE 5.388A 5.388B	Cordless telephone system	1880-1900 MHz; DECT	
1 930-1 970 MHz		IMT	1900-1980 MHz; UMTS	
FIXED				
MOBILE 5.388A 5.388B				
5.388				
1 970-1 980 MHz				
FIXED				
MOBILE 5.388A 5.388B				
5.388	5.388			

Allocations for ITU Region 1	National Allocations of Sultanate of Oman	Major utilization	Notes	National Channel/ Block arrangements
1 980-2 010 MHz	1 980-2 010 MHz (CIVIL)			
FIXED	FIXED			
MOBILE	MOBILE			
MOBILE-SATELLITE (Earth-to-space) 5.351A	MOBILE-SATELLITE (Earth-to-space) 5.351A	IMT satellite component		
		Mobile satellite applications		
5.388 5.389A 5.389B 5.389F	5.388 5.389A			
2 010-2 025 MHz	2 010-2 025 MHz (CIVIL)			
FIXED	FIXED			
MOBILE 5.388A 5.388B	MOBILE 5.388A 5.388B	IMT	UMTS	
5.388	5.388			
2 025-2 110 MHz	2 025-2 070 MHz (MILITARY)			
SPACE OPERATION (Earth-to-space) (space-to-space)	SPACE OPERATION (Earth-to-space) (space-to-space)			
EARTH EXPLORATION-SATELLITE (Earth-to-space) (space-to-space)	EARTH EXPLORATION-SATELLITE (Earth-to-space) (space-to-space)			
FIXED	FIXED	Fixed links	Tactical radio relay systems in the band 2025-2070 MHz can be paired with the band 2200-2245 MHz	Annex 2
MOBILE 5.391	MOBILE 5.391			
SPACE RESEARCH (Earth-to-space) (space-to-space)	SPACE RESEARCH (Earth-to-space) (space-to-space)			
	5.392			
	2 070-2 110 MHz (CIVIL)			
	SPACE OPERATION (Earth-to-space) (space-to-space)			
	EARTH EXPLORATION-SATELLITE (Earth-to-space) (space-to-space)			
	FIXED	Fixed links		Annex 2
	MOBILE 5.391			
	SPACE RESEARCH (Earth-to-space) (space-to-space)			
5.392	5.392			
2 110-2 120 MHz	2 110-2 120 MHz (CIVIL)			
FIXED	LAND MOBILE 5.388A 5.388B	IMT	UMTS	
MOBILE 5.388A 5.388B	SPACE RESEARCH (deep space) (Earth-to-space)			

Allocations for ITU Region 1	National Allocations of Sultanate of Oman	Major utilization	Notes	National Channel/ Block arrangements
SPACE RESEARCH (deep space) (Earth-to-space)				
5.388	5.388			
2 120-2 160 MHz	2 120-2 170 MHz (CIVIL)			
FIXED	LAND MOBILE 5.388A 5.388B	IMT	UMTS	
MOBILE 5.388A 5.388B				
5.388				
2 160-2 170 MHz				
FIXED				
MOBILE 5.388A 5.388B				
5.388	5.388			
2 170-2 200 MHz	2 170-2 200 MHz (CIVIL)			
FIXED	FIXED			
MOBILE	MOBILE			
MOBILE-SATELLITE (space-to-Earth) 5.351A	MOBILE-SATELLITE (space-to-Earth) 5.351A	IMT satellite component		
5.388 5.389A 5.389F	5.388 5.389A	Mobile satellite applications		
2 200-2 290 MHz	2 200-2 245 MHz (MILITARY)			
SPACE OPERATION (space-to-Earth) (space-to-space)	SPACE OPERATION (space-to-Earth) (space-to-space)			
EARTH EXPLORATION-SATELLITE (space-to-Earth) (space-to-space)	EARTH EXPLORATION-SATELLITE (space-to-Earth) (space-to-space)			
FIXED	FIXED	Fixed links	Tactical radio relay systems in the band 2200-2245 MHz can be paired with the band 2025-2070 MHz	Annex 2
MOBILE 5.391	MOBILE 5.391			
SPACE RESEARCH (space-to-Earth) (space-to-space)	SPACE RESEARCH (space-to-Earth) (space-to-space)			
	5.392			
	2 245-2 290 MHz (CIVIL)			
	SPACE OPERATION (space-to-Earth) (space-to-space)			
	EARTH EXPLORATION-SATELLITE (space-to-Earth) (space-to-space)			
	FIXED	Fixed links		Annex 2
	MOBILE 5.391			

Allocations for ITU Region 1	National Allocations of Sultanate of Oman	Major utilization	Notes	National Channel/ Block arrangements
MOBILE	MOBILE	Mobile applications		
MOBILE-SATELLITE (space-to-Earth) 5.351A	MOBILE-SATELLITE (space-to-Earth) 5.351A	Mobile satellite applications		
Radiolocation	Radiolocation			
5.150 5.371 5.397 5.398 5.399 5.400 5.402	5.150 5.371 5.398 5.399 5.402	ISM	2400-2500 MHz	
2 500-2 520 MHz	2 500-2 520 MHz (CIVIL)			
FIXED 5.410	FIXED 5.410			
MOBILE except aeronautical mobile 5.384A	MOBILE except aeronautical mobile 5.384A	IMT	UMTS	
5.405 5.412				
2 520-2 655 MHz	2 520-2 655 MHz (SHARED)			
FIXED 5.410	FIXED 5.410			
MOBILE except aeronautical mobile 5.384A	MOBILE except aeronautical mobile 5.384A	IMT	UMTS	
BROADCASTING-SATELLITE 5.413 5.416	BROADCASTING-SATELLITE 5.413 5.416			
5.339 5.405 5.412 5.417C 5.417D 5.418B 5.418C	5.339 5.417C 5.417D 5.418B 5.418C			
2 655-2 670 MHz	2 655-2 670 MHz (SHARED)			
FIXED 5.410	FIXED 5.410			
MOBILE except aeronautical mobile 5.384A	MOBILE except aeronautical mobile 5.384A	IMT	UMTS	
BROADCASTING-SATELLITE 5.208B 5.413 5.416	BROADCASTING-SATELLITE 5.208B 5.413 5.416			
Earth exploration-satellite (passive)	Earth exploration-satellite (passive)			
Radio astronomy	Radio astronomy			
Space research (passive)	Space research (passive)			
5.149 5.412	5.149			
2 670-2 690 MHz	2 670-2 690 MHz (CIVIL)			
FIXED 5.410	FIXED 5.410			
MOBILE except aeronautical mobile 5.384A	MOBILE except aeronautical mobile 5.384A	IMT	UMTS	
Earth exploration-satellite (passive)	Earth exploration-satellite (passive)			
Radio astronomy	Radio astronomy			
Space research (passive)	Space research (passive)			
5.149 5.412	5.149			
2 690-2 700 MHz	2 690-2 700 MHz (CIVIL)			
EARTH EXPLORATION-SATELLITE (passive)	EARTH EXPLORATION-SATELLITE (passive)			
RADIO ASTRONOMY	RADIO ASTRONOMY			

Allocations for ITU Region 1	National Allocations of Sultanate of Oman	Major utilization	Notes	National Channel/ Block arrangements
SPACE RESEARCH (passive)	SPACE RESEARCH (passive)			
5.340 5.422	5.340 5.422		Passive band. No frequency assignment for transmitting stations is permitted in this band.	
2 700-2 900 MHz	2 700-2 900 MHz (SHARED)			
AERONAUTICAL RADIONAVIGATION 5.337	AERONAUTICAL RADIONAVIGATION 5.337	Radar and Radionavigation systems		
Radiolocation	Radiolocation	Meteorological radars		
5.423 5.424	5.423			
2 900-3 100 MHz	2 900-3 100 MHz (SHARED)			
RADIOLOCATION 5.424A	RADIOLOCATION 5.424A			
RADIONAVIGATION 5.426	RADIONAVIGATION 5.426	Radar and Radionavigation systems		
5.425 5.427	5.425 5.427			
3 100-3 300 MHz	3 100-3 300 MHz (SHARED)			
RADIOLOCATION	RADIOLOCATION	Radiodetermination applications		
Earth exploration-satellite (active)	Earth exploration-satellite (active)			
Space research (active)	Space research (active)			
5.149 5.428	5.149			
3 300-3 400 MHz	3 300-3 400 MHz (SHARED)			
RADIOLOCATION	FIXED	BWA		Annex 2
	MOBILE			
	RADIOLOCATION			
5.149 5.429 5.430	5.149			
3 400-3 600 MHz	3 400-3 600 MHz (CIVIL)			
FIXED	FIXED	BWA		Annex 2
FIXED-SATELLITE (space-to-Earth)	FIXED-SATELLITE (space-to-Earth)			
Mobile 5.430A	MOBILE except aeronautical mobile 5.430A		The band might be redefined for IMT in the future	
Radiolocation	Radiolocation			
5.431	OMA 1			

Allocations for ITU Region 1	National Allocations of Sultanate of Oman	Major utilization	Notes	National Channel/ Block arrangements
3 600-4 200 MHz	3 600-4 200 MHz (CIVIL)			
FIXED	FIXED	BWA	3600 – 3800 MHz. Priority for FSS networks	Annex 2
FIXED-SATELLITE (space-to-Earth)	FIXED-SATELLITE (space-to-Earth)	FSS (S/E)		
Mobile	Mobile	Fixed links	Medium/high capacity. Priority for FSS networks	Annex 2
4 200-4 400 MHz	4 200-4 400 MHz (CIVIL)	Allimeters		
AERONAUTICAL RADIONAVIGATION 5.438	AERONAUTICAL RADIONAVIGATION 5.438			
5.439 5.440	5.440			
4 400-4 500 MHz	4 400-4 500 MHz (MILITARY)			
FIXED	FIXED			
MOBILE 5.440A	MOBILE	BWA		
4 500-4 800 MHz	4 500-4 800 MHz (SHARED)			
FIXED	FIXED			
FIXED-SATELLITE (space-to-Earth) 5.441	FIXED-SATELLITE (space-to-Earth) 5.441	FSS (S/E)	App. 30B ITU RR. Oman has a national allotment (OMA00000)	
MOBILE 5.440A	MOBILE		The band can also be used for coordinated SAP/SAB applications (occasional use only). Priority for FSS networks	
4 800-4 990 MHz	4 800-4 990 MHz (MILITARY)			
FIXED	FIXED			
MOBILE 5.440A 5.442	MOBILE 5.442	BWA		
Radio astronomy	Radio astronomy			
5.149 5.339 5.443	5.149			
4 990-5 000 MHz	4 990-5 000 MHz (MILITARY)			
FIXED	FIXED			
MOBILE except aeronautical mobile	MOBILE except aeronautical mobile	BWA		
RADIO ASTRONOMY	RADIO ASTRONOMY			
Space research (passive)	Space research (passive)			

Allocations for ITU Region 1	National Allocations of Sultanate of Oman	Major utilization	Notes	National Channel/ Block arrangements
5.149	5.149			
5 000-5 010 MHz	5 000-5 010 MHz (CIVIL)			
AERONAUTICAL RADIONAVIGATION	AERONAUTICAL RADIONAVIGATION			
RADIONAVIGATION-SATELLITE (Earth-to-space)	RADIONAVIGATION-SATELLITE (Earth-to-space)	Galileo	For future use	Annex 2
5.367	5.367	Satellite navigation systems		
5 010-5 030 MHz	5 010-5 030 MHz (CIVIL)			
AERONAUTICAL RADIONAVIGATION	AERONAUTICAL RADIONAVIGATION			
RADIONAVIGATION-SATELLITE (space-to-Earth) (space-space) 5.328B 5.443B	RADIONAVIGATION-SATELLITE (space-to-Earth) (space-space) 5.328B 5.443B	Galileo	C1	
5.367	5.367	Satellite navigation systems		
5 030-5 091 MHz	5 030-5 091 MHz (CIVIL)			
AERONAUTICAL RADIONAVIGATION	AERONAUTICAL RADIONAVIGATION	MLS		
5.367 5.444	5.367 5.444			
5 091-5 150 MHz	5 091-5 150 MHz (CIVIL)			
AERONAUTICAL RADIONAVIGATION	AERONAUTICAL RADIONAVIGATION	MLS		
AERONAUTICAL MOBILE 5.444B	AERONAUTICAL MOBILE 5.444B	Airport surface applications	Res. 748	
		Aircraft telemetry	Res. 418	
		Aeronautical security	Res. 419	
5.367 5.444 5.444A	5.367 5.444 5.444A			
5 150-5 250 MHz	5 150-5 250 MHz (CIVIL)			
AERONAUTICAL RADIONAVIGATION	AERONAUTICAL RADIONAVIGATION			
FIXED-SATELLITE (Earth-to-space) 5.447A	AERONAUTICAL MOBILE 5.446C			
MOBILE except aeronautical mobile 5.446A 5.446B	FIXED-SATELLITE (Earth-to-space) 5.447A	Feeder links for MSS		
	MOBILE except aeronautical mobile 5.446A 5.446B			
5.446 5.446C 5.447 5.447B 5.447C	5.446 5.447B 5.447C	WAS/PLAN	5150 – 5350 MHz, Decision of TRA No 133/2008 of 28-Oct-08	
5 250-5 265 MHz	5 250-5 265 MHz (SHARED)			
EARTH EXPLORATION-SATELLITE (active)	EARTH EXPLORATION-SATELLITE (active)			
RADIOLOCATION	RADIOLOCATION	Radars	Tactical and weapon system radars	
SPACE RESEARCH 5.447D		Position fixing		
MOBILE except aeronautical mobile 5.446A 5.447F		Shipborne and VTS radars		
		Weather radars	Ground based and airborne	

Allocations for ITU Region 1	National Allocations of Sultanate of Oman	Major utilization	Notes	National Channel/ Block arrangements
	SPACE RESEARCH 5.447D			
	MOBILE except aeronautical mobile 5.446A 5.447F			
5.447E 5.448 5.448A	5.448A	WAS/IRLAN	5150 – 5350 MHz. Decision of TRA No 133/2008 of 28-Oct-08	
5 255-5 350 MHz	5 255-5 350 MHz (SHARED)			
EARTH EXPLORATION-SATELLITE (active)	EARTH EXPLORATION-SATELLITE (active)			
RADIOLOCATION	RADIOLOCATION	Radars	Tactical and weapon system radars	
		Position fixing		
		Shipborne and VTS radars		
		Weather radars	Ground based and airborne	
SPACE RESEARCH (active)	SPACE RESEARCH (active)			
MOBILE except aeronautical mobile 5.446A 5.447F	MOBILE except aeronautical mobile 5.446A 5.447F			
5.447E 5.448 5.448A	5.448A	WAS/IRLAN	5150 – 5350 MHz. Decision of TRA No 133/2008 of 28-Oct-08	
5 350-5 460 MHz	5 350-5 460 MHz (SHARED)			
EARTH EXPLORATION-SATELLITE (active)	EARTH EXPLORATION-SATELLITE (active)			
5.448B	5.448B			
SPACE RESEARCH (active) 5.448C	SPACE RESEARCH (active) 5.448C			
AERONAUTICAL RADIONAVIGATION 5.449	AERONAUTICAL RADIONAVIGATION 5.449			
RADIOLOCATION 5.448D	RADIOLOCATION 5.448D	Radars	Tactical and weapon system radars	
		Position fixing		
		Shipborne and VTS radars		
		Weather radars	Ground based and airborne	
5 460-5 470 MHz	5 460-5 470 MHz (SHARED)			
RADIONAVIGATION 5.449	RADIONAVIGATION 5.449			
EARTH EXPLORATION-SATELLITE (active)	EARTH EXPLORATION-SATELLITE (active)			
SPACE RESEARCH (active)	SPACE RESEARCH (active)			
RADIOLOCATION 5.448D	RADIOLOCATION 5.448D	Radars	Tactical and weapon system radars	
		Position fixing		
		Shipborne and VTS radars		
		Weather radars	Ground based and airborne	
5.448B	5.448B	WAS/IRLAN	5150 – 5350 MHz. Decision of TRA No 133/2008 of 28-Oct-08	

Allocations for ITU Region 1	National Allocations of Sultanate of Oman	Major utilization	Notes	National Channel/ Block arrangements
5 470-5 570 MHz	5 470-5 570 MHz (SHARED)			
MARITIME RADIONAVIGATION	MARITIME RADIONAVIGATION			
MOBILE except aeronautical mobile 5.446A 5.450A	MOBILE except aeronautical mobile 5.446A 5.450A			
EARTH EXPLORATION-SATELLITE (active)	EARTH EXPLORATION-SATELLITE (active)			
SPACE RESEARCH (active)	SPACE RESEARCH (active)			
RADIOLOCATION 5.450B	RADIOLOCATION 5.450B	Radars	Tactical and weapon system radars	
		Position fixing		
		Shipborne and VTS radars		
		Weather radars	Ground based and airborne	
5.448B 5.450 5.451	5.448B	WAS/RLAN	5470 – 5725 MHz. Decision of TRA No 133/2008 of 28-Oct-08	
5 570-5 650 MHz	5 570-5 650 MHz (SHARED)			
MARITIME RADIONAVIGATION	MARITIME RADIONAVIGATION			
MOBILE except aeronautical mobile 5.446A 5.450A	MOBILE except aeronautical mobile 5.446A 5.450A			
RADIOLOCATION 5.450B	RADIOLOCATION 5.450B	Radars	Tactical and weapon system radars	
		Position fixing		
		Shipborne and VTS radars		
		Weather radars	Ground based and airborne	
5.450 5.451 5.452	5.452	WAS/RLAN	5470 – 5725 MHz. Decision of TRA No 133/2008 of 28-Oct-08	
5 650-5 725 MHz	5 650-5 725 MHz (SHARED)			
RADIOLOCATION	FIXED			
MOBILE except aeronautical mobile 5.446A 5.450A	MOBILE 5.450A			
Amateur	RADIOLOCATION	Radars	Tactical and weapon system radars	
Space research (deep space)		Position fixing		
		Shipborne and VTS radars		
		Weather radars	Ground based and airborne	
	Amateur			
	Space research (deep space)			
5.282 5.451 5.453 5.454 5.455	5.282	WAS/RLAN	5470 – 5725 MHz. Decision of TRA No 133/2008 of 28-Oct-08	

Allocations for ITU Region 1	National Allocations of Sultanate of Oman	Major utilization	Notes	National Channel/ Block arrangements
5 725-5 830 MHz	5 725-5 830 MHz (SHARED)			
FIXED-SATELLITE (Earth-to-space)	FIXED			
RADIOLOCATION	MOBILE			
Amateur	FIXED-SATELLITE (Earth-to-space)	Radars	Tactical and weapon system radars	
	RADIOLOCATION	Weather radars	Ground based and airborne	
	Amateur			
5.150 5.451 5.453 5.455 5.456	5.150	ISM WAS/IRLAN	5725 – 5875 MHz 5725 – 5850 MHz: Decision of TRA No 133/2008 of 28-Oct-08	
5 830-5 850 MHz	5 830-5 850 MHz (SHARED)			
FIXED-SATELLITE (Earth-to-space)	FIXED-SATELLITE (Earth-to-space)			
RADIOLOCATION	RADIOLOCATION	Radars	Tactical and weapon system radars	
Amateur	Amateur	Weather radars	Ground based and airborne	
Amateur-satellite (space-to-Earth)	Amateur-satellite (space-to-Earth)			
5.150 5.451 5.453 5.455 5.456	5.150 5.453	ISM FWA	5725 – 5875 MHz 5725 – 5850 MHz: Decision of TRA No 133/2008 of 28-Oct-08	
5 850-5 925 MHz	5 850-5 925 MHz (CIVIL)			
FIXED	FIXED	Fixed links	Priority for FSS networks	Annex 2
FIXED-SATELLITE (Earth-to-space)	FIXED-SATELLITE (Earth-to-space)	FSS		
MOBILE	MOBILE			
5.150	5.150	ISM	5725 – 5875 MHz	
5 925-6 700 MHz	5 925-6 700 MHz (CIVIL)			
FIXED	FIXED	Fixed links	Priority for FSS networks	Annex 2
FIXED-SATELLITE (Earth-to-space)	FIXED-SATELLITE (Earth-to-space)	FSS		
MOBILE 5.457C	MOBILE			
5.149 5.440 5.458	5.149 5.440 5.458			
6 700-7 075 MHz	6 700-7 075 MHz (CIVIL)			
FIXED	FIXED	Fixed links	Priority for FSS networks	Annex 2

Allocations for ITU Region 1	National Allocations of Sultanate of Oman	Major utilization	Notes	National Channel/ Block arrangements
FIXED-SATELLITE (Earth-to-space) (space-to-Earth) 5.441	FIXED-SATELLITE (Earth-to-space) (space-to-Earth) 5.441	FSS (E/S)	Band 6725-7025 MHz is regulated by App. 30B ITU RR. Oman has a national allotment (OMA00000)	
MOBILE	MOBILE			
5.458 5.458A 5.458B 5.458C	5.458 5.458A 5.458B 5.458C			
7 075-7 145 MHz	7 075-7 145 MHz (CIVIL)			
FIXED	FIXED	Fixed links		Annex 2
MOBILE	MOBILE			
5.458 5.459	5.458			
7 145-7 235 MHz	7 145-7 235 MHz (CIVIL)			
FIXED	FIXED	Fixed links		Annex 2
MOBILE	MOBILE			
SPACE RESEARCH (Earth-to-space) 5.460	SPACE RESEARCH (Earth-to-space) 5.460			
5.458 5.459	5.458			
7 235-7 250 MHz	7 235-7 250 MHz (CIVIL)			
FIXED	FIXED	Fixed links		Annex 2
MOBILE	MOBILE			
5.458	5.458			
7 250-7 300 MHz	7 250-7 300 MHz (SHARED)			
FIXED	FIXED	Fixed links		Annex 2
FIXED-SATELLITE (space-to-Earth)	FIXED-SATELLITE (space-to-Earth)			
MOBILE	MOBILE			
5.461	5.461	Mobile satellite applications	7250-7375 MHz. Subject to coordination under No 9.21 ITU RR	
7 300-7 450 MHz	7 300-7 450 MHz (SHARED)			
FIXED	FIXED	Fixed links		Annex 2
FIXED-SATELLITE (space-to-Earth)	FIXED-SATELLITE (space-to-Earth)			
MOBILE except aeronautical mobile	MOBILE except aeronautical mobile			
5.461	5.461	Mobile satellite applications	7250-7375 MHz. Subject to coordination under No 9.21 ITU RR	

Allocations for ITU Region 1	National Allocations of Sultanate of Oman	Major utilization	Notes	National Channel/ Block arrangements
7 450-7 550 MHz	7 450-7 550 MHz (SHARED)			
FIXED	FIXED	Fixed links		Annex 2
FIXED-SATELLITE (space-to-Earth)	FIXED-SATELLITE (space-to-Earth)			
METEOROLOGICAL-SATELLITE (space-to-Earth)	METEOROLOGICAL-SATELLITE (space-to-Earth)	Meteorological satellites	Limited to non-GSO satellite systems	
MOBILE except aeronautical mobile	MOBILE except aeronautical mobile			
5.461A	5.461A			
7 550-7 750 MHz	7 550-7 750 MHz (SHARED)			
FIXED	FIXED	Fixed links		Annex 2
FIXED-SATELLITE (space-to-Earth)	FIXED-SATELLITE (space-to-Earth)			
MOBILE except aeronautical mobile	MOBILE except aeronautical mobile		Military satellite operations	
7 750-7 850 MHz	7 750-7 850 MHz (SHARED)			
FIXED	FIXED	Fixed links	Including transportable radio relay systems	Annex 2
METEOROLOGICAL-SATELLITE (space-to-Earth)	METEOROLOGICAL-SATELLITE (space-to-Earth)			
5.461B	5.461B			
MOBILE except aeronautical mobile	MOBILE except aeronautical mobile			
7 850-7 900 MHz	7 850-7 900 MHz (SHARED)			
FIXED	FIXED	Fixed links	Including transportable radio relay systems	Annex 2
MOBILE except aeronautical mobile	MOBILE except aeronautical mobile			
7 900-8 025 MHz	7 900-8 025 MHz (SHARED)			
FIXED	FIXED	Fixed links	Including transportable radio relay systems	Annex 2
FIXED-SATELLITE (Earth-to-space)	FIXED-SATELLITE (Earth-to-space)			
MOBILE	MOBILE			
5.461	5.461			
8 025-8 175 MHz	8 025-8 175 MHz (SHARED)			
EARTH EXPLORATION-SATELLITE (space-to-Earth)	EARTH EXPLORATION-SATELLITE (space-to-Earth)			
FIXED	FIXED	Fixed links		Annex 2
FIXED-SATELLITE (Earth-to-space)	FIXED-SATELLITE (Earth-to-space)			
MOBILE 5.463	MOBILE 5.463	Mobile applications	Military satellite operations 8025 – 8200 MHz	

Allocations for ITU Region 1	National Allocations of Sultanate of Oman	Major utilization	Notes	National Channel/ Block arrangements
5.462A	5.462A			
8 175-8 215 MHz	8 175-8 215 MHz (SHARED)			
EARTH EXPLORATION-SATELLITE (space-to-Earth)	EARTH EXPLORATION-SATELLITE (space-to-Earth)			
FIXED	FIXED	Fixed links		
FIXED-SATELLITE (Earth-to-space)	FIXED-SATELLITE (Earth-to-space)		Military satellite operations	Annex 2
METEOROLOGICAL-SATELLITE (Earth-to-space)	METEOROLOGICAL-SATELLITE (Earth-to-space)			
MOBILE 5.463	MOBILE 5.463	Mobile applications	8025 – 8200 MHz	
5.462A	5.462A			
8 215-8 400 MHz	8 215-8 400 MHz (MILITARY)			
EARTH EXPLORATION-SATELLITE (space-to-Earth)	EARTH EXPLORATION-SATELLITE (space-to-Earth)			
FIXED	FIXED	Fixed links		
FIXED-SATELLITE (Earth-to-space)	FIXED-SATELLITE (Earth-to-space)		Military satellite operations	Annex 2
MOBILE 5.463	MOBILE 5.463			
5.462A	5.462A			
8 400-8 500 MHz	8 400-8 500 MHz (MILITARY)			
FIXED	FIXED	Fixed links		
MOBILE except aeronautical mobile	MOBILE except aeronautical mobile			Annex 2
SPACE RESEARCH (space-to-Earth) 5.465 5.466	SPACE RESEARCH (space-to-Earth) 5.465			
8 500-8 550 MHz	8 500-8 550 MHz (SHARED)			
RADIOLOCATION	FIXED			
	MOBILE			
	RADIOLOCATION	Aeronautical radionavigation	Airfield approach	
5.468 5.469		Radars	Shipborne, land and airborne surveillance and weapon	
8 550-8 650 MHz	8 550-8 650 MHz (SHARED)			
EARTH EXPLORATION-SATELLITE (active)	EARTH EXPLORATION-SATELLITE (active)			
RADIOLOCATION	FIXED			
SPACE RESEARCH (active)	MOBILE			
	RADIOLOCATION	Aeronautical radionavigation	Airfield approach	
		Radars	Shipborne, land and airborne surveillance and weapon	
	SPACE RESEARCH (active)			
5.468 5.469 5.469A	5.469A			

Allocations for ITU Region 1	National Allocations of Sultanate of Oman	Major utilization	Notes	National Channel/ Block arrangements
8 650-8 750 MHz RADIOLOCATION	8 650-8 750 MHz (SHARED) FIXED			
5.468 5.469	MOBILE RADIOLOCATION	Aeronautical radionavigation Radars	Airfield approach Shipborne, land and airborne surveillance and weapon	
8 750-8 850 MHz RADIOLOCATION	8 750-8 850 MHz (SHARED) RADIOLOCATION	Radars	Shipborne, land and airborne surveillance and weapon	
AERONAUTICAL RADIONAVIGATION 5.470	AERONAUTICAL RADIONAVIGATION 5.470	Aeronautical radionavigation	Airfield approach	
5.471				
8 850-9 000 MHz RADIOLOCATION	8 850-9 000 MHz (SHARED) RADIOLOCATION	Radars	Shipborne, land and airborne surveillance and weapon	
MARITIME RADIONAVIGATION 5.472	MARITIME RADIONAVIGATION 5.472	Aeronautical radionavigation	Airfield approach	
5.473				
9 000-9 200 MHz AERONAUTICAL RADIONAVIGATION 5.337	9 000-9 200 MHz (SHARED) AERONAUTICAL RADIONAVIGATION 5.337	Aeronautical radionavigation	Airfield approach. ICAO Regulations (Annex 10, Volume 1, chapter 3)	
RADIOLOCATION	RADIOLOCATION	Radars	Shipborne, land and airborne surveillance and weapon	
5.471 5.473A	5.473A			
9 200-9 300 MHz RADIOLOCATION	9 200-9 300 MHz (SHARED) RADIOLOCATION	Aeronautical radionavigation Radars	Airfield approach	
MARITIME RADIONAVIGATION 5.472	MARITIME RADIONAVIGATION 5.472	Search and rescue radar transponders	Shipborne, land and airborne surveillance and weapon 9200-9500 MHz. Art. 31 and App. 15 ITU RR	
5.473 5.474	5.474			
9 300-9 500 MHz RADIOLOCATION	9 300-9 500 MHz (SHARED) RADIOLOCATION 5.476	Aeronautical radionavigation	Airfield approach	
EARTH EXPLORATION-SATELLITE (active) SPACE RESEARCH (active)	EARTH EXPLORATION-SATELLITE (active) SPACE RESEARCH (active)			

Allocations for ITU Region 1	National Allocations of Sultanate of Oman	Major utilization	Notes	National Channel/ Block arrangements
RADIOLOCATION	RADIOLOCATION	Radars	Shipborne, land and airborne surveillance and weapon	
5.427 5.474 5.475 5.475A 5.475B 5.476A	5.427 5.474 5.475 5.475A 5.475B 5.476A	Search and rescue radar transponders	9200-9500 MHz. Art. 31 and App. 15 ITU RR	
5.427 5.474 5.475 5.475A 5.475B 5.476A	5.427 5.474 5.475 5.475A 5.475B 5.476A	Weather radars	Ground based and airborne	
9 500-9 800 MHz	9 500-9 800 MHz (SHARED)			
EARTH EXPLORATION-SATELLITE (active)	EARTH EXPLORATION-SATELLITE (active)			
RADIOLOCATION	RADIOLOCATION	Radars	Shipborne, land and airborne surveillance and weapon	
RADIONAVIGATION	RADIONAVIGATION	Aeronautical radionavigation	Airfield approach	
SPACE RESEARCH (active)	SPACE RESEARCH (active)			
5.476A	5.476A			
9 800-9 900 MHz	9 800-9 900 MHz (SHARED)			
RADIOLOCATION	FIXED			
Earth exploration-satellite (active)	RADIOLOCATION	Radars	Shipborne, land and airborne surveillance and weapon	
Space research (active)		Aeronautical radionavigation	Airfield approach	
Fixed	Earth exploration-satellite (active)			
	Space research (active)			
5.477 5.478 5.478A 5.478B	5.478A 5.478B			
9 900-10 000 MHz	9 900-10 000 MHz (SHARED)			
RADIOLOCATION	FIXED			
Fixed	RADIOLOCATION	Radars	Shipborne, land and airborne surveillance and weapon	
5.477 5.478 5.479	5.479	Aeronautical radionavigation	Airfield approach	
10-10.45 GHz	10-10.45 GHz (SHARED)			
FIXED	FIXED	FWA	10.15-10.30 GHz paired with 10.50-10.65 GHz	Annex 2
MOBILE	MOBILE	Fixed links		Annex 2
RADIOLOCATION	RADIOLOCATION			
Amateur	Amateur			
5.479	5.479			

Allocations for ITU Region 1	National Allocations of Sultanate of Oman	Major utilization	Notes	National Channel/ Block arrangements
10.45-10.5 GHz	10.45-10.5 GHz (SHARED)			
RADIOLOCATION	FIXED			
Amateur	MOBILE			
Amateur-satellite	RADIOLOCATION	Radars		
	Amateur			
	Amateur-satellite			
5.481				
10.5-10.55 GHz	10.5-10.55 GHz (CIVIL)			
FIXED	FIXED	FWA	10.50-10.65 GHz paired with 10.15-10.30 GHz	Annex 2
		Fixed links		Annex 2
MOBILE	MOBILE			
Radiolocation	Radiolocation			
10.55-10.6 GHz	10.55-10.6 GHz (CIVIL)			
FIXED	FIXED	FWA	10.50-10.65 GHz paired with 10.15-10.30 GHz	Annex 2
		Fixed links		Annex 2
MOBILE except aeronautical mobile	MOBILE except aeronautical mobile			
Radiolocation	Radiolocation			
10.6-10.68 GHz	10.6-10.68 GHz (CIVIL)			
EARTH EXPLORATION-SATELLITE (passive)	EARTH EXPLORATION-SATELLITE (passive)			
FIXED	FIXED	FWA	10.50-10.65 GHz paired with 10.15-10.30 GHz	Annex 2
		Fixed links		Annex 2
MOBILE except aeronautical mobile	MOBILE except aeronautical mobile			
RADIO ASTRONOMY	RADIO ASTRONOMY			
SPACE RESEARCH (passive)	SPACE RESEARCH (passive)			
Radiolocation	Radiolocation			
5.149 5.482 5.482A	5.149 5.482 5.482A			
10.68-10.7 GHz	10.68-10.7 GHz (CIVIL)			
EARTH EXPLORATION-SATELLITE (passive)	EARTH EXPLORATION-SATELLITE (passive)			
RADIO ASTRONOMY	RADIO ASTRONOMY			
SPACE RESEARCH (passive)	SPACE RESEARCH (passive)			
5.340 5.483	5.340			
			Passive band. All emissions prohibited in this band	

Allocations for ITU Region 1	National Allocations of Sultanate of Oman	Major utilization	Notes	National Channel/ Block arrangements
10.7-11.7 GHz	10.7-11.7 GHz (CIVIL)			
FIXED	FIXED			
FIXED-SATELLITE (space-to-Earth) 5.441 5.484A (Earth-to-space) 5.484	FIXED-SATELLITE (space-to-Earth) 5.441 5.484A (Earth-to-space) 5.484	FSS	Band 10.7-10.95/11.2-11.45 GHz is regulated by App. 30B ITU RR. Oman has a national allotment in these bands (App. 30B)	
MOBILE except aeronautical mobile	MOBILE except aeronautical mobile			
11.7-12.5 GHz	11.7-12.5 GHz (CIVIL)			
FIXED	FIXED			
MOBILE except aeronautical mobile	MOBILE except aeronautical mobile			
BROADCASTING	BROADCASTING			
BROADCASTING-SATELLITE 5.492	BROADCASTING-SATELLITE 5.492	Satellite Broadcasting	The band is regulated by App. 30 ITU RR. SJT within 12.4-12.5 GHz only. Oman national beam OMA12300 planned at 17.2E: 11708.30 + 19.18n MHz, 1 ≤ n ≤ 40 (App. 30)	
5.487 5.487A				
12.5-12.75 GHz	12.5-12.75 GHz (CIVIL)			
FIXED-SATELLITE (space-to-Earth) 5.484A (Earth-to-space)	FIXED-SATELLITE (space-to-Earth) 5.484A (Earth-to-space)	FSS		
5.494 5.495 5.496				
12.75-13.25 GHz	12.75-13.25 GHz (CIVIL)			
FIXED	FIXED	Fixed links		Annex 2
FIXED-SATELLITE (Earth-to-space) 5.441	FIXED-SATELLITE (Earth-to-space) 5.441	FSS	The band is regulated by App. 30B ITU RR. Oman has a national allotment (OMA00000) (App. 30B)	
MOBILE	MOBILE			
Space research (deep space) (space-to-Earth)	Space research (deep space) (space-to-Earth)			
13.25-13.4 GHz	13.25-13.4 GHz (CIVIL)			
EARTH EXPLORATION-SATELLITE (active)	EARTH EXPLORATION-SATELLITE (active)			
AERONAUTICAL RADIONAVIGATION 5.497	AERONAUTICAL RADIONAVIGATION 5.497	Doppler navigation aids		
SPACE RESEARCH (active)	SPACE RESEARCH (active)			
5.498A 5.499	5.498A			
13.4-13.75 GHz	13.4-13.75 GHz (SHARED)			
EARTH EXPLORATION-SATELLITE (active)	EARTH EXPLORATION-SATELLITE (active)			

Allocations for ITU Region 1	National Allocations of Sultanate of Oman	Major utilization	Notes	National Channel/ Block arrangements
RADIOLOCATION	RADIOLOCATION	Doppler navigation aids		
SPACE RESEARCH 5.501A		Radars	13.25 – 14 GHz. Military radars	
Standard frequency and time signal-satellite (Earth-to-space)		Ship berthing radars		
	SPACE RESEARCH 5.501A			
	Standard frequency and time signal-satellite (Earth-to-space)			
5.499 5.500 5.501 5.501B	5.501B			
13.75-14 GHz	13.75-14 GHz (SHARED)			
FIXED-SATELLITE (Earth-to-space) 5.484A	FIXED-SATELLITE (Earth-to-space) 5.484A	FSS		
RADIOLOCATION	RADIOLOCATION	Radars	13.25 – 14 GHz. Military radars	
		Ship berthing radars		
		Navigation radars		
Earth exploration-satellite	Earth exploration-satellite			
Standard frequency and time signal-satellite (Earth-to-space)	Standard frequency and time signal-satellite (Earth-to-space)			
Space research	Space research			
5.499 5.500 5.501 5.502 5.503	5.502 5.503			
14-14.25 GHz	14-14.25 GHz (CIVIL)			
	FIXED			
FIXED-SATELLITE (Earth-to-space) 5.457A	FIXED-SATELLITE (Earth-to-space) 5.457A			
5.457B 5.484A 5.506 5.506B	5.457B 5.484A 5.506			
RADIONAVIGATION 5.504	RADIONAVIGATION 5.504	FSS		
Mobile-satellite (Earth-to-space) 5.504B 5.504C 5.506A	Mobile-satellite (Earth-to-space) 5.504B 5.504C 5.506A			
Space research	Space research			
5.504A 5.505	5.504A			
14.25-14.3 GHz	14.25-14.3 GHz (CIVIL)			
	FIXED			
FIXED-SATELLITE (Earth-to-space) 5.457A	FIXED-SATELLITE (Earth-to-space) 5.457A			
5.457B 5.484A 5.506 5.506B	5.457B 5.484A 5.506			
RADIONAVIGATION 5.504	RADIONAVIGATION 5.504	FSS		
Mobile-satellite (Earth-to-space) 5.504B 5.506A 5.508A	Mobile-satellite (Earth-to-space) 5.504B 5.506A 5.508A			
Space research	Space research			

Allocations for ITU Region 1	National Allocations of Sultanate of Oman	Major utilization	Notes	National Channel/ Block arrangements
5.504A 5.505 5.508	5.504A			
14.3-14.4 GHz	14.3-14.4 GHz (CIVIL)			
FIXED	FIXED			
FIXED-SATELLITE (Earth-to-space) 5.457A 5.457B 5.484A 5.506 5.506B	FIXED-SATELLITE (Earth-to-space) 5.457A 5.457B 5.484A 5.506	FSS		
MOBILE except aeronautical mobile	MOBILE except aeronautical mobile			
Mobile-satellite (Earth-to-space) 5.504B 5.506A 5.509A	Mobile-satellite (Earth-to-space) 5.504B 5.506A 5.509A			
Radionavigation-satellite	Radionavigation-satellite			
5.504A	5.504A			
14.4-14.47 GHz	14.4-14.47 GHz (CIVIL)			
FIXED	FIXED			
FIXED-SATELLITE (Earth-to-space) 5.457A 5.457B 5.484A 5.506 5.506B	FIXED-SATELLITE (Earth-to-space) 5.457A 5.457B 5.484A 5.506	FSS		
MOBILE except aeronautical mobile	MOBILE except aeronautical mobile			
Mobile-satellite (Earth-to-space) 5.504B 5.506A 5.509A	Mobile-satellite (Earth-to-space) 5.504B 5.506A 5.509A			
Space research (space-to-Earth)	Space research (space-to-Earth)			
5.504A	5.504A			
14.47-14.5 GHz	14.47-14.5 GHz (CIVIL)			
FIXED	FIXED			
FIXED-SATELLITE (Earth-to-space) 5.457A 5.457B 5.484A 5.506 5.506B	FIXED-SATELLITE (Earth-to-space) 5.457A 5.457B 5.484A 5.506	FSS		
MOBILE except aeronautical mobile	MOBILE except aeronautical mobile			
Mobile-satellite (Earth-to-space) 5.504B 5.506A 5.509A	Mobile-satellite (Earth-to-space) 5.504B 5.506A 5.509A			
Radio astronomy	Radio astronomy			
5.149 5.504A	5.149 5.504A			
14.5-14.8 GHz	14.5-14.8 GHz (SHARED)			
FIXED	FIXED	Fixed links	Including tactical fixed data links	Annex 2
FIXED-SATELLITE (Earth-to-space) 5.510	FIXED-SATELLITE (Earth-to-space) 5.510			
MOBILE	MOBILE		Tactical mobile data links	
Space research	Space research			

Allocations for ITU Region 1	National Allocations of Sultanate of Oman	Major utilization	Notes	National Channel/ Block arrangements
17.1-17.2 GHz	17.1-17.2 GHz (SHARED)			
RADIOLOCATION	FIXED			
	MOBILE			
	RADIOLOCATION	Radars		
5.512 5.513				
17.2-17.3 GHz	17.2-17.3 GHz (SHARED)			
EARTH EXPLORATION-SATELLITE (active)	EARTH EXPLORATION-SATELLITE (active)			
RADIOLOCATION	FIXED			
SPACE RESEARCH (active)	MOBILE			
	RADIOLOCATION	Radars		
	SPACE RESEARCH (active)			
5.512 5.513 5.513A	5.513A			
17.3-17.7 GHz	17.3-17.7 GHz (SHARED)			
FIXED-SATELLITE (Earth-to-space) 5.516 (space-to-Earth) 5.516A 5.516B	FIXED-SATELLITE (Earth-to-space) 5.516 (space-to-Earth) 5.516A 5.516B	Feeder links for the BSS service	The band is regulated by App. 30A ITU RR, Oman national beam OMA12300 at 17.2 E: 17308.3 + 19.18n MHz, 1 ≤ n ≤ 20 (App. 30A)	
Radiolocation	Fixed	High density FSS	Res. 143 ITU RR	
	Mobile			
	Radiolocation			
5.514	5.514			
17.7-18.1 GHz	17.7-18.1 GHz (SHARED)			
FIXED	FIXED	Fixed links		Annex 2
FIXED-SATELLITE (space-to-Earth) 5.484A (Earth-to-space) 5.516	FIXED-SATELLITE (space-to-Earth) 5.484A (Earth-to-space) 5.516	Feeder links for the BSS service	The band is regulated by App. 30A ITU RR, Oman national beam OMA12300 at 17.2E: 17308.3 + 19.18n MHz, 21 ≤ n ≤ 40 (RR App. 30A)	
MOBILE	MOBILE	FSS	Coordinated earth stations	
18.1-18.4 GHz	18.1-18.4 GHz (MILITARY)			
FIXED	FIXED	Fixed links		
FIXED-SATELLITE (space-to-Earth) 5.516B (Earth-to-space) 5.520	FIXED-SATELLITE (space-to-Earth) 5.516B (Earth-to-space) 5.520	FSS	Coordinated earth stations	
MOBILE	MOBILE			

Allocations for ITU Region 1	National/Allocations of Sultanate of Oman	Major utilization	Notes	National Channel/ Block arrangements
5.519 5.521	5.519			
18.4-18.6 GHz	18.4-18.6 GHz (MILITARY)			
FIXED	FIXED	Fixed links		Annex 2
FIXED-SATELLITE (space-to-Earth) 5.484A 5.516B	FIXED-SATELLITE (space-to-Earth) 5.484A 5.516B	FSS	Coordinated earth stations	
MOBILE	MOBILE			
18.6-18.8 GHz	18.6-18.8 GHz (MILITARY)			
EARTH EXPLORATION-SATELLITE (passive)	EARTH EXPLORATION-SATELLITE (passive)			
FIXED	FIXED	Fixed links		Annex 2
FIXED-SATELLITE (space-to-Earth) 5.522B	FIXED-SATELLITE (space-to-Earth) 5.522B	FSS	Coordinated earth stations	
MOBILE except aeronautical mobile	MOBILE except aeronautical mobile			
Space research (passive)	Space research (passive)			
5.522A 5.522C	5.522A 5.522C			
18.8-19.3 GHz	18.8-19.3 GHz (MILITARY)			
FIXED	FIXED	Fixed links		
FIXED-SATELLITE (space-to-Earth) 5.516.B 5.523A	FIXED-SATELLITE (space-to-Earth) 5.516.B 5.523A	FSS	Coordinated earth stations	
MOBILE	MOBILE			
19.3-19.7 GHz	19.3-19.7 GHz (MILITARY)			
FIXED	FIXED	Fixed links		Annex 2
FIXED-SATELLITE (space-to-Earth) (Earth-to-space) 5.523B 5.523C 5.523D 5.523E	FIXED-SATELLITE (space-to-Earth) (Earth-to-space) 5.523B 5.523C 5.523D 5.523E	FSS		
MOBILE	MOBILE			
19.7-20.1 GHz	19.7-20.1 GHz (CIVIL)			
	FIXED			
	MOBILE			
FIXED-SATELLITE (space-to-Earth) 5.484A 5.516B	FIXED-SATELLITE (space-to-Earth) 5.484A 5.516B	High density FSS	Res. 143 ITU RR	
Mobile-satellite (space-to-Earth)	Mobile-satellite (space-to-Earth)	FSS		
5.524	5.524		Coordinated earth stations SUIT	

Allocations for ITU Region 1	National Allocations of Sultanate of Oman	Major utilization	Notes	National Channel/ Block arrangements
MOBILE except aeronautical mobile	MOBILE except aeronautical mobile			
5.149	5.149	Automotive SRR	21.65 – 26.65 GHz; Decision of TRA No 133/2008 of 28-Oct-08	
22.21-22.5 GHz	22.21-22.5 GHz (CIVIL)			
EARTH EXPLORATION-SATELLITE (passive)	EARTH EXPLORATION-SATELLITE (passive)			
FIXED	FIXED	Fixed links		Annex 2
MOBILE except aeronautical mobile	MOBILE except aeronautical mobile			
RADIO ASTRONOMY	RADIO ASTRONOMY			
SPACE RESEARCH (passive)	SPACE RESEARCH (passive)			
5.149 5.532	5.149 5.532	Automotive SRR	21.65 – 26.65 GHz; Decision of TRA No 133/2008 of 28-Oct-08	
22.5-22.55 GHz	22.5-22.55 GHz (CIVIL)			
FIXED	FIXED	Fixed links		Annex 2
MOBILE	MOBILE			
22.55-23.55 GHz	22.55-22.6 GHz (CIVIL)			
FIXED	FIXED	Fixed links		Annex 2
INTER-SATELLITE 5.338A	INTER-SATELLITE 5.338A			
MOBILE	MOBILE			
5.149	5.149	Automotive SRR	21.65 – 26.65 GHz; Decision of TRA No 133/2008 of 28-Oct-08	
	22.6-23 GHz (MILITARY)			
	FIXED	Fixed links		Annex 2
	INTER-SATELLITE 5.338A			
	MOBILE			
	5.149	Automotive SRR	21.65 – 26.65 GHz; Decision of TRA No 133/2008 of 28-Oct-08	
	23-23.55 GHz (CIVIL)			
	FIXED	Fixed links		Annex 2
	INTER-SATELLITE 5.338A			
	MOBILE			

Allocations for ITU Region 1	National Allocations of Sultanate of Oman	Major utilization	Notes	National Channel/ Block arrangements
	5.149	Automotive SRR	21.65 – 26.65 GHz; Decision of TRA No 133/2008 of 28-Oct-08	
23.55-23.6 GHz	23.55-23.6 GHz (CIVIL)			
FIXED	FIXED	Fixed links		Annex 2
MOBILE	MOBILE			
23.6-24 GHz	23.6-24 GHz (CIVIL)	Automotive SRR	21.65 – 26.65 GHz; Decision of TRA No 133/2008 of 28-Oct-08	
EARTH EXPLORATION-SATELLITE (passive)	EARTH EXPLORATION-SATELLITE (passive)			
RADIO ASTRONOMY	RADIO ASTRONOMY			
SPACE RESEARCH (passive)	SPACE RESEARCH (passive)			
5.340	5.340	Automotive SRR	Passive band 21.65 – 26.65 GHz; Decision of TRA No 133/2008 of 28-Oct-08	
24-24.05 GHz	24-24.05 GHz (CIVIL)			
AMATEUR	AMATEUR	Amateur		
AMATEUR-SATELLITE	AMATEUR-SATELLITE	Amateur Satellite		
5.150	5.150	ISM Automotive SRR	24 – 24.25 GHz 21.65 – 26.65 GHz; Decision of TRA No 133/2008 of 28-Oct-08	
24.05-24.25 GHz	24.05-24.25 GHz (SHARED)			
RADIOLOCATION	RADIOLOCATION			
Amateur	Amateur			
Earth exploration-satellite (active)	Earth exploration-satellite (active)			
5.150	5.150	ISM Automotive SRR	24 – 24.25 GHz 21.65 – 26.65 GHz; Decision of TRA No 133/2008 of 28-Oct-08	
24.25-24.45 GHz	24.25-24.45 GHz (CIVIL)			
FIXED	FIXED	Fixed links	24.25-24.5 GHz; Unidirectional only, including SAP/SAB	Annex 2
		Automotive SRR	21.65 – 26.65 GHz; Decision of TRA No 133/2008 of 28-Oct-08	

Allocations for ITU Region 1	National Allocations of Sultanate of Oman	Major utilization	Notes	National Channel/ Block arrangements
24.45-24.65 GHz FIXED	24.45-24.65 GHz (CIVIL) FIXED	Fixed links	24.25-24.5 GHz: Unidirectional only, including SAP/SAB. 24.5-25.5 GHz paired with 25.5-26.5 GHz in FWA spectrum blocks only	Annex 2
INTER-SATELLITE	INTER-SATELLITE	FWA	24.5-25.5 GHz paired with 25.5-26.5 GHz for FDD systems.	Annex 2
24.65-24.75 GHz FIXED	24.65-24.75 GHz (CIVIL) FIXED	Automotive SRR	21.65 – 26.65 GHz: Decision of TRA No 133/2008 of 28-Oct-08	
INTER-SATELLITE	INTER-SATELLITE	Fixed links	24.5-25.5 GHz paired with 25.5-26.5 GHz in FWA spectrum blocks only	Annex 2
INTER-SATELLITE	INTER-SATELLITE	FWA	24.5-25.5 GHz paired with 25.5-26.5 GHz for FDD systems.	Annex 2
24.75-25.25 GHz FIXED	24.75-25.25 GHz (CIVIL) FIXED	Automotive SRR	21.65 – 26.65 GHz: Decision of TRA No 133/2008 of 28-Oct-08	
INTER-SATELLITE	INTER-SATELLITE	Fixed links	24.5-25.5 GHz paired with 25.5-26.5 GHz in FWA spectrum blocks only	Annex 2
25.25-25.5 GHz FIXED	25.25-25.5 GHz (CIVIL) FIXED	FWA	24.5-25.5 GHz paired with 25.5-26.5 GHz for FDD systems.	Annex 2
INTER-SATELLITE	INTER-SATELLITE	Automotive SRR	21.65 – 26.65 GHz: Decision of TRA No 133/2008 of 28-Oct-08	
25.25-25.5 GHz FIXED	25.25-25.5 GHz (CIVIL) FIXED	Fixed links	24.5-25.5 GHz paired with 25.5-26.5 GHz in FWA spectrum blocks only	Annex 2
INTER-SATELLITE	INTER-SATELLITE	FWA	24.5-25.5 GHz paired with 25.5-26.5 GHz for FDD systems.	Annex 2
25.25-25.5 GHz FIXED	25.25-25.5 GHz (CIVIL) FIXED	Automotive SRR	21.65 – 26.65 GHz: Decision of TRA No 133/2008 of 28-Oct-08	
INTER-SATELLITE	INTER-SATELLITE	Fixed links	24.5-25.5 GHz paired with 25.5-26.5 GHz in FWA spectrum blocks only	Annex 2
MOBILE	MOBILE	FWA	24.5-25.5 GHz paired with 25.5-26.5 GHz for FDD systems.	Annex 2
Standard frequency and time signal-satellite (Earth-to-space)	Standard frequency and time signal-satellite (Earth-to-space)	Automotive SRR	21.65 – 26.65 GHz: Decision of TRA No 133/2008 of 28-Oct-08	

Allocations for ITU Region 1	National Allocations of Sultanate of Oman	Major utilization	Notes	National Channel/ Block arrangements
25.5-27 GHz EARTH EXPLORATION-SATELLITE (space-to Earth) 5.536B FIXED	25.5-26.5 GHz (CIVIL) EARTH EXPLORATION-SATELLITE (space-to Earth) 5.536B FIXED	Fixed links	24.5-25.5 GHz paired with 25.5-26.5 GHz in FWA spectrum blocks only	Annex 2
INTER-SATELLITE 5.536	INTER-SATELLITE 5.536	FWA	24.5-25.5 GHz paired with 25.5-26.5 GHz for FDD systems.	Annex 2
MOBILE	MOBILE			
SPACE RESEARCH (space-to-Earth) 5.536C Standard frequency and time signal-satellite (Earth-to-space)	SPACE RESEARCH (space-to-Earth) 5.536C Standard frequency and time signal-satellite (Earth-to-space)			
		Automotive SRR	21.65 – 26.65 GHz; Decision of TRA No 133/2008 of 28-Oct-08	
	5.536A			
	26.5-27 GHz (MILITARY)			
	EARTH EXPLORATION-SATELLITE (space-to Earth) 5.536A 5.536B FIXED	Fixed links	Unidirectional only	Annex 2
	INTER-SATELLITE 5.536			
	MOBILE	Mobile links		
	SPACE RESEARCH (space-to-Earth) 5.536A 5.536C Standard frequency and time signal-satellite (Earth-to-space)			
		Automotive SRR	21.65 – 26.65 GHz; Decision of TRA No 133/2008 of 28-Oct-08	
5.536A	5.536A			
27-27.5 GHz FIXED	27-27.5 GHz (MILITARY) FIXED			
INTER-SATELLITE 5.536	INTER-SATELLITE 5.536			
MOBILE	MOBILE	Military systems	Fixed and mobile systems	

Allocations for ITU Region 1	National Allocations of Sultanate of Oman	Major utilization	Notes	National Channel/ Block arrangements
27.5-28.5 GHz	27.5-28.5 GHz (CIVIL)			
FIXED 5.537A	FIXED 5.537A	Fixed links	27.5-28.5 GHz paired with 28.5-29.5 GHz in FWA spectrum blocks only	Annex 2
FIXED-SATELLITE (Earth-to-space) 5.484A 5.516B 5.539	FIXED-SATELLITE (Earth-to-space) 5.484A 5.516B 5.539	FWA	27.5-28.5 GHz paired with 28.5-29.5 GHz for FDD systems. For HDTV BSS: 27.5-29.5 GHz	
MOBILE	MOBILE	Feeder links		
5.538 5.540	5.538 5.540			
28.5-29.1 GHz	28.5-29.1 GHz (CIVIL)			
FIXED	FIXED	Fixed links	28.5-29.5 GHz paired with 27.5-28.5 GHz in FWA spectrum blocks only	Annex 2
FIXED-SATELLITE (Earth-to-space) 5.484A 5.516B 5.523A 5.539	FIXED-SATELLITE (Earth-to-space) 5.484A 5.516B 5.523A 5.539	FWA	28.5-29.5 GHz paired with 27.5-28.5 GHz for FDD systems	Annex 2
MOBILE	MOBILE	FSS	Uncoordinated earth stations within the band 28.4445-28.8365 GHz	
Earth exploration-satellite (Earth-to-space) 5.541	Earth exploration-satellite (Earth-to-space) 5.541	Feeder links	For HDTV BSS: 27.5-29.5 GHz	
5.540	5.540			
29.1-29.5 GHz	29.1-29.5 GHz (CIVIL)			
FIXED	FIXED	Fixed links	28.5-29.5 GHz paired with 27.5-28.5 GHz in FWA spectrum blocks only	Annex 2
FIXED-SATELLITE (Earth-to-space) 5.516B 5.523C 5.535A 5.539 5.541A	FIXED-SATELLITE (Earth-to-space) 5.516B 5.523C 5.523E 5.535A 5.539 5.541A	FWA	28.5-29.5 GHz paired with 27.5-28.5 GHz for FDD systems	Annex 2
MOBILE	MOBILE	FSS	Uncoordinated earth stations within the band 29.4525-29.5 GHz	
Earth exploration-satellite (Earth-to-space) 5.541	Earth exploration-satellite (Earth-to-space) 5.541	Feeder links	For HDTV BSS: 27.5-29.5 GHz	
5.540	5.540			
29.5-29.9 GHz	29.5-29.9 GHz (CIVIL)			
FIXED-SATELLITE (Earth-to-space) 5.484A 5.516B 5.539	FIXED-SATELLITE (Earth-to-space) 5.484A 5.516B 5.539	High Density FSS	SIT/SUT, ITU-RRR Resolution 143	

Allocations for ITU Region 1	National Allocations of Sultanate of Oman	Major utilization	Notes	National Channel/ Block arrangements
Earth exploration-satellite (Earth-to-space) 5.541	Earth exploration-satellite (Earth-to-space) 5.541	FSS		
Mobile-satellite (Earth-to-space)	Mobile-satellite (Earth-to-space)			
5.540 5.542	5.540			
29-9-30 GHz	29-9-30 GHz (CIVIL)			
FIXED-SATELLITE (Earth-to-space) 5.484A	FIXED-SATELLITE (Earth-to-space) 5.484A	High Density FSS	SIT/SUT	
5.516B 5.539	5.516B 5.539			
MOBILE-SATELLITE (Earth-to-space)	MOBILE-SATELLITE (Earth-to-space)	FSS		
Earth exploration-satellite (Earth-to-space) 5.541	Earth exploration-satellite (Earth-to-space) 5.541	MSS	Uncoordinated earth stations	
5.543	5.543			
5.525 5.526 5.527 5.538 5.540 5.542	5.525 5.526 5.527 5.538 5.540			
30-31 GHz	30-31 GHz (SHARED)			
FIXED-SATELLITE (Earth-to-space) 5.338A	FIXED-SATELLITE (Earth-to-space) 5.338A	FSS		
MOBILE-SATELLITE (Earth-to-space)	MOBILE-SATELLITE (Earth-to-space)	MSS		
Standard frequency and time signal-satellite (space-to-Earth)	Standard frequency and time signal-satellite (space-to-Earth)			
5.542				
31-31.3 GHz	31-31.3 GHz (CIVIL)			
FIXED 5.338A 5.543A	FIXED 5.338A	Fixed links	Channeling must be according to FWA	Annex 2
		FWA	Can be used for enterprises' FWA networks	Annex 2
MOBILE	MOBILE			
Standard frequency and time signal-satellite (space-to-Earth)	Standard frequency and time signal-satellite (space-to-Earth)			
Space research 5.544 5.545	Space research 5.544			
5.149	5.149			
31.3-31.5 GHz	31.3-31.5 GHz (CIVIL)			
EARTH EXPLORATION-SATELLITE (passive)	EARTH EXPLORATION-SATELLITE (passive)			
RADIO ASTRONOMY	RADIO ASTRONOMY			
SPACE RESEARCH (passive)	SPACE RESEARCH (passive)			
5.340	5.340		Passive band. All emissions prohibited in this band	

Allocations for ITU Region 1	National Allocations of Sultanate of Oman	Major utilization	Notes	National Channel/ Block arrangements
31.5-31.8 GHz	31.5-31.8 GHz (CIVIL)			
EARTH EXPLORATION-SATELLITE (passive)	EARTH EXPLORATION-SATELLITE (passive)			
RADIO ASTRONOMY	RADIO ASTRONOMY			
SPACE RESEARCH (passive)	SPACE RESEARCH (passive)			
Fixed	Fixed			
Mobile except aeronautical mobile	Mobile except aeronautical mobile			
5.149 5.546	5.149 5.546		Passive band	
31.8-32 GHz	31.8-32 GHz (CIVIL)			
FIXED 5.547A	FIXED 5.547A	High Density FS	31.8-33.4 GHz: P-P and P-MP	Annex 2
RADIONAVIGATION	RADIONAVIGATION			
SPACE RESEARCH (deep space) (space-to-Earth)	SPACE RESEARCH (deep space) (space-to-Earth)			
5.547 5.547B 5.548	5.547 5.548			
32-32.3 GHz	32-32.3 GHz (CIVIL)			
FIXED 5.547A	FIXED 5.547A	High Density FS	31.8-33.4 GHz: P-P and P-MP	Annex 2
RADIONAVIGATION	RADIONAVIGATION			
SPACE RESEARCH (deep space) (space-to-Earth)	SPACE RESEARCH (deep space) (space-to-Earth)			
5.547 5.547C 5.548	5.547 5.548			
32.3-33 GHz	32.3-33 GHz (CIVIL)			
FIXED 5.547A	FIXED 5.547A	High Density FS	31.8-33.4 GHz: P-P and P-MP	Annex 2
INTER-SATELLITE	INTER-SATELLITE			
RADIONAVIGATION	RADIONAVIGATION			
5.547 5.547D 5.548	5.547 5.548			
33-33.4 GHz	33-33.4 GHz (CIVIL)			
FIXED 5.547A	FIXED 5.547A	High Density FS	31.8-33.4 GHz: P-P and P-MP	Annex 2
RADIONAVIGATION	RADIONAVIGATION			
5.547 5.547E	5.547			
33.4-34.2 GHz	33.4-34.2 GHz (SHARED)			
RADIOLOCATION	FIXED			
	MOBILE			
	RADIOLOCATION	Radiolocation systems		
5.549		Surveying and measurement		

Allocations for ITU Region 1	National Allocations of Sultanate of Oman	Major utilization	Notes	National Channel/ Block arrangements
34.2-34.7 GHz	34.2-34.7 GHz (SHARED)			
RADIOLOCATION	FIXED			
SPACE RESEARCH (deep space) (Earth-to-space)	MOBILE			
	RADIOLOCATION	Radiolocation systems		
	SPACE RESEARCH (deep space) (Earth-to-space)	Surveying and measurement		
5.549				
34.7-35.2 GHz	34.7-35.2 GHz (SHARED)			
RADIOLOCATION	FIXED			
Space research 5.550	MOBILE			
	RADIOLOCATION	Radiolocation systems		
	Space research 5.550	Surveying and measurement		
5.549				
35.2-35.5 GHz	35.2-35.5 GHz (SHARED)			
METEOROLOGICAL AIDS	FIXED			
RADIOLOCATION	METEOROLOGICAL AIDS	Active sensors (satellite)	Rain radar from satellites	
	MOBILE			
	RADIOLOCATION	Radiolocation systems		
5.549				
35.5-36 GHz	35.5-36 GHz (SHARED)			
METEOROLOGICAL AIDS	FIXED			
EARTH EXPLORATION-SATELLITE (active)	METEOROLOGICAL AIDS	Active sensors (satellite)		
RADIOLOCATION	MOBILE			
SPACE RESEARCH (active)	EARTH EXPLORATION-SATELLITE (active)	Active sensors (satellite)		
	RADIOLOCATION	Radiolocation systems		
	SPACE RESEARCH (active)			
5.549 5.549A	5.549A			
36-37 GHz	36-37 GHz (SHARED)			
EARTH EXPLORATION-SATELLITE (passive)	EARTH EXPLORATION-SATELLITE (passive)			
FIXED	FIXED	Fixed links		Annex 2
MOBILE	MOBILE	Mobile links		
SPACE RESEARCH (passive)	SPACE RESEARCH (passive)			
5.149 5.550A	5.149 5.550A			

Allocations for ITU Region 1	National Allocations of Sultanate of Oman	Major utilization	Notes	National Channel/ Block arrangements
MOBILE-SATELLITE (space-to-Earth)	MOBILE-SATELLITE (space-to-Earth)			
SPACE RESEARCH (Earth-to-space)	SPACE RESEARCH (Earth-to-space)			
Earth exploration-satellite (space-to-Earth)	Earth exploration-satellite (space-to-Earth)			
40.5-41 GHz	40.5-41 GHz (CIVIL)			
FIXED	FIXED	MWS	Including MVDS	
FIXED-SATELLITE (space-to-Earth)	FIXED-SATELLITE (space-to-Earth)	FSS		
BROADCASTING	BROADCASTING			
BROADCASTING-SATELLITE	BROADCASTING-SATELLITE			
Mobile	Mobile			
5.547	5.547			
41-42.5 GHz	41-42.5 GHz (CIVIL)			
FIXED	FIXED	MWS	Including MVDS	
FIXED-SATELLITE (space-to-Earth) 5.516B	FIXED-SATELLITE (space-to-Earth) 5.516B	FSS		
BROADCASTING	BROADCASTING			
BROADCASTING-SATELLITE	BROADCASTING-SATELLITE			
Mobile	Mobile			
5.547 5.551F 5.551H 5.551I	5.547 5.551H 5.551I			
42.5-43.5 GHz	42.5-43.5 GHz (CIVIL)			
FIXED	FIXED	MWS	Including MVDS	
FIXED-SATELLITE (Earth-to-space) 5.552	FIXED-SATELLITE (Earth-to-space) 5.552	FSS		
MOBILE except aeronautical mobile	MOBILE except aeronautical mobile	Broadband mobile systems	Possible future band	
RADIO ASTRONOMY	RADIO ASTRONOMY			
5.149 5.547	5.149 5.547			
43.5-47 GHz	43.5-45.5 GHz (MILITARY)			
MOBILE 5.553	MOBILE 5.553	Mobile applications		
MOBILE-SATELLITE	MOBILE-SATELLITE	MSS		
RADIONAVIGATION	RADIONAVIGATION			
RADIONAVIGATION-SATELLITE	RADIONAVIGATION-SATELLITE			
5.554	5.554			
45.5-47 GHz (CIVIL)	45.5-47 GHz (CIVIL)			
MOBILE 5.553	MOBILE 5.553			
MOBILE-SATELLITE	MOBILE-SATELLITE			

Allocations for ITU Region 1	National Allocations of Sultanate of Oman	Major utilization	Notes	National Channel/ Block arrangements
	RADIONAVIGATION			
	RADIONAVIGATION-SATELLITE			
5.554	5.554			
47-47.2 GHz	47-47.2 GHz (CIVIL)			
AMATEUR	AMATEUR	Amateur		
AMATEUR-SATELLITE	AMATEUR-SATELLITE	Amateur Satellite		
47.2-47.5 GHz	47.2-47.5 GHz (CIVIL)			
FIXED	FIXED			
FIXED-SATELLITE (Earth-to-space)	FIXED-SATELLITE (Earth-to-space)	Feeder links	For 40 GHz Broadcasting satellites	
MOBILE	MOBILE	FSS		
		HAPS	The use of HAPS is subject to provisions of RR Resolution 122	
5.552A	5.552A			
47.5-47.9 GHz	47.5-47.9 GHz (CIVIL)			
FIXED	FIXED			
FIXED-SATELLITE (Earth-to-space)	FIXED-SATELLITE (Earth-to-space)	Feeder links	For 40 GHz Broadcasting satellites	
5.516B 5.554A	5.516B 5.554A	High Density FSS	ITU-RR Resolution 143	
MOBILE	MOBILE			
47.9-48.2 GHz	47.9-48.2 GHz (CIVIL)			
FIXED	FIXED			
FIXED-SATELLITE (Earth-to-space)	FIXED-SATELLITE (Earth-to-space)	Feeder links	For 40 GHz Broadcasting satellites	
5.552	5.552			
MOBILE	MOBILE	FSS		
		HAPS		
5.552A	5.552A			
48.2-48.54 GHz	48.2-48.54 GHz (CIVIL)			
FIXED	FIXED			
FIXED-SATELLITE (Earth-to-space)	FIXED-SATELLITE (Earth-to-space)	Fixed links	48.5-48.54 GHz	Annex 2
5.552A 5.554A 5.555B	5.552A 5.554A 5.555B	Feeder links	For 40 GHz Broadcasting satellites	
		High Density FSS	ITU-RR Resolution 143	
MOBILE	MOBILE			

Allocations for ITU Region 1	National Allocations of Sultanate of Oman	Major utilization	Notes	National Channel/ Block arrangements
48.54-49.44 GHz	48.54-49.44 GHz (CIVIL)			
FIXED	FIXED	Fixed links		Annex 2
FIXED-SATELLITE (Earth-to-space) 5.552	FIXED-SATELLITE (Earth-to-space) 5.552	Feeder links	48.5-49.2 GHz. For Broadcasting satellites	
MOBILE	MOBILE	FSS		
5.149 5.340 5.555	5.149 5.340 5.555			
49.44-50.2 GHz	49.44-50.2 GHz (CIVIL)			
FIXED	FIXED	Fixed links		Annex 2
FIXED-SATELLITE (Earth-to-space) 5.338A 5.552 (space-to-Earth) 5.516B 5.554A 5.555B	FIXED-SATELLITE (Earth-to-space) 5.338A 5.552 (space-to-Earth) 5.516B 5.554A 5.555B	High Density FSS	ITU-RR Resolution 143	
MOBILE	MOBILE			
50.2-50.4 GHz	50.2-50.4 GHz (CIVIL)			
EARTH EXPLORATION-SATELLITE (passive)	EARTH EXPLORATION-SATELLITE (passive)			
SPACE RESEARCH (passive)	SPACE RESEARCH (passive)			
5.340	5.340		Passive band. All emissions prohibited in this band	
50.4-51.4 GHz	50.4-51.4 GHz (SHARED)		Future satellite and terrestrial applications	
FIXED	FIXED			
FIXED-SATELLITE (Earth-to-space) 5.338A	FIXED-SATELLITE (Earth-to-space) 5.338A			
MOBILE	MOBILE			
Mobile-satellite (Earth-to-space)	Mobile-satellite (Earth-to-space)			
51.4-52.6 GHz	51.4-52.6 GHz (CIVIL)			
FIXED 5.338A	FIXED 5.338A	High Density FS		Annex 2
MOBILE	MOBILE			
5.547 5.556	5.547 5.556			
52.6-54.25 GHz	52.6-54.25 GHz (CIVIL)			
EARTH EXPLORATION-SATELLITE (passive)	EARTH EXPLORATION-SATELLITE (passive)			
SPACE RESEARCH (passive)	SPACE RESEARCH (passive)			
5.340 5.556	5.340 5.556		Passive band. All emissions prohibited in this band	

Allocations for ITU Region 1	National Allocations of Sultanate of Oman	Major utilization	Notes	National Channel/ Block arrangements
54.25-55.78 GHz	54.25-55.78 GHz (CIVIL)			
EARTH EXPLORATION-SATELLITE (passive)	EARTH EXPLORATION-SATELLITE (passive)			
INTER-SATELLITE 5.556A	INTER-SATELLITE 5.556A			
SPACE RESEARCH (passive)	SPACE RESEARCH (passive)			
5.556B			Passive band	
55.78-56.9 GHz	55.78-56.9 GHz (CIVIL)			
EARTH EXPLORATION-SATELLITE (passive)	EARTH EXPLORATION-SATELLITE (passive)			
FIXED 5.557A	FIXED 5.557A	High Density FS	55.78-59.0 GHz: P-P and P-MP	Annex 2
INTER-SATELLITE 5.556A	INTER-SATELLITE 5.556A			
MOBILE 5.558	MOBILE 5.558			
SPACE RESEARCH (passive)	SPACE RESEARCH (passive)			
5.547 5.557	5.547			
56.9-57 GHz	56.9-57 GHz (CIVIL)			
EARTH EXPLORATION-SATELLITE (passive)	EARTH EXPLORATION-SATELLITE (passive)			
FIXED	FIXED	High Density FS	55.78-59.0 GHz: P-P and P-MP	Annex 2
INTER-SATELLITE 5.558A	INTER-SATELLITE 5.558A			
MOBILE 5.558	MOBILE 5.558			
SPACE RESEARCH (passive)	SPACE RESEARCH (passive)			
5.547 5.557	5.547			
57-58.2 GHz	57-58.2 GHz (CIVIL)			
EARTH EXPLORATION-SATELLITE (passive)	EARTH EXPLORATION-SATELLITE (passive)			
FIXED	FIXED	High Density FS	55.78-59.0 GHz: P-P and P-MP	Annex 2
INTER-SATELLITE 5.556A	INTER-SATELLITE 5.556A			
MOBILE 5.558	MOBILE 5.558			
SPACE RESEARCH (passive)	SPACE RESEARCH (passive)			
5.547 5.557	5.547			
58.2-59 GHz	58.2-59 GHz (CIVIL)			
EARTH EXPLORATION-SATELLITE (passive)	EARTH EXPLORATION-SATELLITE (passive)			
FIXED	FIXED	High Density FS	55.78-59.0 GHz: P-P and P-MP	Annex 2
MOBILE	MOBILE			
SPACE RESEARCH (passive)	SPACE RESEARCH (passive)			
5.547 5.557	5.547			
5.547 5.556	5.547 5.556			

Allocations for ITU Region 1	National Allocations of Sultanate of Oman	Major utilization	Notes	National Channel/ Block arrangements
59-59.3 GHz	59-59.3 GHz (SHARED)			
EARTH EXPLORATION-SATELLITE (passive)	EARTH EXPLORATION-SATELLITE (passive)			
FIXED	FIXED	Fixed links		Annex 2
INTER-SATELLITE 5.556A	INTER-SATELLITE 5.556A			
MOBILE 5.558	MOBILE 5.558	Mobile applications		
RADIOLOCATION 5.559	RADIOLOCATION 5.559	Radiolocation systems		
SPACE RESEARCH (passive)	SPACE RESEARCH (passive)			
59-3-64 GHz	59-3-64 GHz (SHARED)			
FIXED	FIXED	Fixed links		Annex 2
INTER-SATELLITE	INTER-SATELLITE			
MOBILE 5.558	MOBILE 5.558	Mobile applications	62.0-63.0 GHz paired with 65.0-66.0 GHz	
RADIOLOCATION 5.559	RADIOLOCATION 5.559	Radiolocation systems		
5.138	5.138	ISM	61 – 61.5 GHz	
64-65 GHz	64-65 GHz (CIVIL)			
FIXED	FIXED	High Density FS	64.0-66.0 GHz: P-P and P-MP	Annex 2
INTER-SATELLITE	INTER-SATELLITE			
MOBILE except aeronautical mobile	MOBILE except aeronautical mobile			
5.547 5.556	5.547 5.556			
65-66 GHz	65-66 GHz (CIVIL)			
EARTH EXPLORATION-SATELLITE	EARTH EXPLORATION-SATELLITE			
FIXED	FIXED	High Density FS	64.0-66.0 GHz: P-P and P-MP	Annex 2
INTER-SATELLITE	INTER-SATELLITE			
MOBILE except aeronautical mobile	MOBILE except aeronautical mobile	Broadband mobile systems	65.0-66.0 GHz paired with 62.0-63.0 GHz	
SPACE RESEARCH	SPACE RESEARCH			
5.547	5.547			
66-71 GHz	66-71 GHz (CIVIL)			
INTER-SATELLITE	INTER-SATELLITE		Future civil systems (TBD)	
MOBILE 5.553 5.558	MOBILE 5.553 5.558			
MOBILE-SATELLITE	MOBILE-SATELLITE			
RADIONAVIGATION	RADIONAVIGATION			
RADIONAVIGATION-SATELLITE	RADIONAVIGATION-SATELLITE			

Allocations for ITU Region 1	National/Allocations of Sultanate of Oman	Major utilization	Notes	National Channel/ Block arrangements
5.554	5.554			
71-74 GHz	71-74 GHz (SHARED)			
FIXED	FIXED	Fixed links		Annex 2
FIXED-SATELLITE (space-to-Earth)	FIXED-SATELLITE (space-to-Earth)			
MOBILE	MOBILE			
MOBILE-SATELLITE (space-to-Earth)	MOBILE-SATELLITE (space-to-Earth)			
74-76 GHz	74-75.5 GHz (CIVIL)			
FIXED	FIXED	Fixed links		Annex 2
FIXED-SATELLITE (space-to-Earth)	FIXED-SATELLITE (space-to-Earth)			
MOBILE	MOBILE			
BROADCASTING	BROADCASTING			
BROADCASTING-SATELLITE	BROADCASTING-SATELLITE			
Space research (space-to-Earth)	Space research (space-to-Earth)			
	5.559A 5.561			
	75.5-76 GHz (SHARED)			
	FIXED	Fixed links		Annex 2
	FIXED-SATELLITE (space-to-Earth)			
	MOBILE			
	BROADCASTING			
	BROADCASTING-SATELLITE			
	Space research (space-to-Earth)			
	5.561			
76-77.5 GHz	76-77.5 GHz (SHARED)			
RADIO ASTRONOMY	RADIO ASTRONOMY			
RADIOLLOCATION	RADIOLLOCATION	Radiolocation systems		
Amateur	Amateur			
Amateur-satellite	Amateur-satellite			
Space research (space-to-Earth)	Space research (space-to-Earth)			
5.149	5.149	Automotive SRR	77-82 GHz. Decision of TRA No 133/2008 of 28-Oct-08	
77.5-78 GHz	77.5-78 GHz (CIVIL)			
AMATEUR	AMATEUR	Amateur		
AMATEUR-SATELLITE	AMATEUR-SATELLITE	Amateur Satellite		

Allocations for ITU Region 1		National Allocations of Sultanate of Oman		Major utilization	Notes	National Channel/ Block arrangements
Radio astronomy	Radio astronomy					
Space research (space-to-Earth)	Space research (space-to-Earth)					
5.149	5.149			Automotive SRR	77-82 GHz. Decision of TRA No 133/2008 of 28-Oct-08	
78-79 GHz	78-79 GHz (CIVIL)					
RADIOLOCATION	RADIOLOCATION			Radiolocation systems		
Amateur	Amateur					
Amateur-satellite	Amateur-satellite					
Radio astronomy	Radio astronomy					
Space research (space-to-Earth)	Space research (space-to-Earth)					
5.149 5.560	5.149 5.560			Automotive SRR	77-82 GHz. Decision of TRA No 133/2008 of 28-Oct-08	
79-81 GHz	79-81 GHz (SHARED)					
RADIO ASTRONOMY	RADIO ASTRONOMY					
RADIOLOCATION	RADIOLOCATION			Radiolocation systems		
Amateur	Amateur					
Amateur-satellite	Amateur-satellite					
Space research (space-to-Earth)	Space research (space-to-Earth)					
5.149	5.149			Automotive SRR	77-82 GHz. Decision of TRA No 133/2008 of 28-Oct-08	
81-84 GHz	81-84 GHz (SHARED)					
FIXED	FIXED			Fixed links		Annex 2
FIXED-SATELLITE (Earth-to-space)	FIXED-SATELLITE (Earth-to-space)					
MOBILE	MOBILE					
MOBILE-SATELLITE (Earth-to-space)	MOBILE-SATELLITE (Earth-to-space)					
RADIO ASTRONOMY	RADIO ASTRONOMY					
Space research (space-to-Earth)	Space research (space-to-Earth)					
5.149 5.561A	5.149 5.561A			Automotive SRR	77-82 GHz. Decision of TRA No 133/2008 of 28-Oct-08	
84-86 GHz	84-86 GHz (CIVIL)					
FIXED	FIXED			Fixed links		Annex 2
FIXED-SATELLITE (Earth-to-space) 5.561B	FIXED-SATELLITE (Earth-to-space) 5.561B					
MOBILE	MOBILE					
RADIO ASTRONOMY	RADIO ASTRONOMY					

Allocations for ITU Region 1	National Allocations of Sultanate of Oman	Major utilization	Notes	National Channel/ Block arrangements
5.149	5.149			
86-92 GHz	86-92 GHz (CIVIL)			
EARTH EXPLORATION-SATELLITE (passive)	EARTH EXPLORATION-SATELLITE (passive)			
RADIO ASTRONOMY	RADIO ASTRONOMY			
SPACE RESEARCH (passive)	SPACE RESEARCH (passive)			
5.340	5.340		Passive band. All emissions prohibited in this band	
92-94 GHz	92-94 GHz (SHARED)			
FIXED	FIXED			
MOBILE	MOBILE			
RADIO ASTRONOMY	RADIO ASTRONOMY			
RADIOLOCATION	RADIOLOCATION			
5.149	5.149		Radio astronomy	
94-94.1 GHz	94-94.1 GHz (SHARED)			
EARTH EXPLORATION-SATELLITE (active)	EARTH EXPLORATION-SATELLITE (active)			
RADIOLOCATION	RADIOLOCATION			
SPACE RESEARCH (active)	SPACE RESEARCH (active)			
Radio astronomy	Radio astronomy			
5.562 5.562A	5.562 5.562A		Active sensors (satellite) Space research (active)	
94.1-95 GHz	94.1-95 GHz (SHARED)			
FIXED	FIXED			
MOBILE	MOBILE			
RADIO ASTRONOMY	RADIO ASTRONOMY			
RADIOLOCATION	RADIOLOCATION			
5.149	5.149		Radio astronomy	
95-100 GHz	95-100 GHz (SHARED)			
FIXED	FIXED			
MOBILE	MOBILE			
RADIO ASTRONOMY	RADIO ASTRONOMY			
RADIOLOCATION	RADIOLOCATION			
RADIONAVIGATION	RADIONAVIGATION			
RADIONAVIGATION-SATELLITE	RADIONAVIGATION-SATELLITE			

Allocations for ITU Region 1	National Allocations of Sultanate of Oman	Major utilization	Notes	National Channel/ Block arrangements
5.149 5.554	5.149 5.554		Radio astronomy	
100-102 GHz	100-102 GHz (CIVIL)			
EARTH EXPLORATION-SATELLITE (passive)	EARTH EXPLORATION-SATELLITE (passive)			
RADIO ASTRONOMY	RADIO ASTRONOMY			
SPACE RESEARCH (passive)	SPACE RESEARCH (passive)			
5.340 5.341	5.340 5.341			
102-105 GHz	102-105 GHz (CIVIL)			
FIXED	FIXED			
MOBILE	MOBILE			
RADIO ASTRONOMY	RADIO ASTRONOMY			
5.149 5.341	5.149 5.341			
105-109.5 GHz	105-109.5 GHz (CIVIL)			
FIXED	FIXED			
MOBILE	MOBILE			
RADIO ASTRONOMY	RADIO ASTRONOMY			
SPACE RESEARCH (passive) 5.562B	SPACE RESEARCH (passive) 5.562B			
5.149 5.341	5.149 5.341			
109.5-111.8 GHz	109.5-111.8 GHz (CIVIL)			
EARTH EXPLORATION-SATELLITE (passive)	EARTH EXPLORATION-SATELLITE (passive)			
RADIO ASTRONOMY	RADIO ASTRONOMY			
SPACE RESEARCH (passive)	SPACE RESEARCH (passive)			
5.340 5.341	5.340 5.341			
111.8-114.25 GHz	111.8-114.25 GHz (CIVIL)			
FIXED	FIXED			
MOBILE	MOBILE			
RADIO ASTRONOMY	RADIO ASTRONOMY			
SPACE RESEARCH (passive) 5.562B	SPACE RESEARCH (passive) 5.562B			
5.149 5.341	5.149 5.341			
114.25-116 GHz	114.25-116 GHz (CIVIL)			
EARTH EXPLORATION-SATELLITE (passive)	EARTH EXPLORATION-SATELLITE (passive)			
RADIO ASTRONOMY	RADIO ASTRONOMY			
SPACE RESEARCH (passive)	SPACE RESEARCH (passive)			

Allocations for ITU Region 1	National Allocations of Sultanate of Oman	Major utilization	Notes	National Channel/ Block arrangements
5.340 5.341	5.340 5.341			
116-119.98 GHz	116-119.98 GHz (CIVIL)			
EARTH EXPLORATION-SATELLITE (passive)	EARTH EXPLORATION-SATELLITE (passive)			
INTER-SATELLITE 5.562C	INTER-SATELLITE 5.562C			
SPACE RESEARCH (passive)	SPACE RESEARCH (passive)			
5.341	5.341			
119.98-122.25 GHz	119.98-122.25 GHz (CIVIL)			
EARTH EXPLORATION-SATELLITE (passive)	EARTH EXPLORATION-SATELLITE (passive)			
INTER-SATELLITE 5.562C	INTER-SATELLITE 5.562C			
SPACE RESEARCH (passive)	SPACE RESEARCH (passive)	ISM	122-123 GHz	
5.138 5.341	5.138 5.341			
122.25-123 GHz	122.25-123 GHz (CIVIL)			
FIXED	FIXED			
INTER-SATELLITE	INTER-SATELLITE			
MOBILE 5.558	MOBILE 5.558			
Amateur	Amateur			
5.138	5.138			
123-130 GHz	123-130 GHz (CIVIL)			
FIXED-SATELLITE (space-to-Earth)	FIXED-SATELLITE (space-to-Earth)			
MOBILE-SATELLITE (space-to-Earth)	MOBILE-SATELLITE (space-to-Earth)			
RADIONAVIGATION	RADIONAVIGATION			
RADIONAVIGATION-SATELLITE	RADIONAVIGATION-SATELLITE			
Radio astronomy 5.562D	Radio astronomy			
5.149 5.554	5.149 5.554			
130-134 GHz	130-134 GHz (CIVIL)			
EARTH EXPLORATION-SATELLITE (active)	EARTH EXPLORATION-SATELLITE (active)			
5.562E	5.562E			
FIXED	FIXED			
INTER-SATELLITE	INTER-SATELLITE			
MOBILE 5.558	MOBILE 5.558			
RADIO ASTRONOMY	RADIO ASTRONOMY			

Allocations for ITU Region 1	National Allocations of Sultanate of Oman	Major utilization	Notes	National Channel/ Block arrangements
5.149 5.562A	5.149 5.562A			
134-136 GHz	134-136 GHz (CIVIL)			
AMATEUR	AMATEUR			
AMATEUR-SATELLITE	AMATEUR-SATELLITE			
Radio astronomy	Radio astronomy			
136-141 GHz	136-141 GHz (CIVIL)			
RADIO ASTRONOMY	RADIO ASTRONOMY			
RADIOLOCATION	RADIOLOCATION			
Amateur	Amateur			
Amateur-satellite	Amateur-satellite			
5.149	5.149			
141-148.5 GHz	141-148.5 GHz (CIVIL)			
FIXED	FIXED			
MOBILE	MOBILE			
RADIO ASTRONOMY	RADIO ASTRONOMY			
RADIOLOCATION	RADIOLOCATION			
5.149	5.149			
148.5-151.5 GHz	148.5-151.5 GHz (CIVIL)			
EARTH EXPLORATION-SATELLITE (passive)	EARTH EXPLORATION-SATELLITE (passive)			
RADIO ASTRONOMY	RADIO ASTRONOMY			
SPACE RESEARCH (passive)	SPACE RESEARCH (passive)			
5.340	5.340			
151.5-155.5 GHz	151.5-155.5 GHz (CIVIL)			
FIXED	FIXED			
MOBILE	MOBILE			
RADIO ASTRONOMY	RADIO ASTRONOMY			
RADIOLOCATION	RADIOLOCATION			
5.149	5.149			
155.5-158.5 GHz	155.5-158.5 GHz (CIVIL)			
EARTH EXPLORATION-SATELLITE (passive)	EARTH EXPLORATION-SATELLITE (passive)			
FIXED	FIXED			
MOBILE	MOBILE			

Allocations for ITU Region 1	National Allocations of Sultanate of Oman	Major utilization	Notes	National Channel/ Block arrangements
RADIO ASTRONOMY	RADIO ASTRONOMY			
SPACE RESEARCH (passive) 5.562B	SPACE RESEARCH (passive) 5.562B			
5.149 5.562F 5.562G	5.149 5.562G			
158.5-164 GHz	158.5-164 GHz (CIVIL)			
FIXED	FIXED			
FIXED-SATELLITE (space-to-Earth)	FIXED-SATELLITE (space-to-Earth)			
MOBILE	MOBILE			
MOBILE-SATELLITE (space-to-Earth)	MOBILE-SATELLITE (space-to-Earth)			
164-167 GHz	164-167 GHz (CIVIL)			
EARTH EXPLORATION-SATELLITE (passive)	EARTH EXPLORATION-SATELLITE (passive)			
RADIO ASTRONOMY	RADIO ASTRONOMY			
SPACE RESEARCH (passive)	SPACE RESEARCH (passive)			
5.340	5.340			
167-174.5 GHz	167-174.5 GHz (CIVIL)			
FIXED	FIXED			
FIXED-SATELLITE (space-to-Earth)	FIXED-SATELLITE (space-to-Earth)			
INTER-SATELLITE	INTER-SATELLITE			
MOBILE 5.558	MOBILE 5.558			
5.149 5.562D	5.149			
174.5-174.8 GHz	174.5-174.8 GHz (CIVIL)			
FIXED	FIXED			
INTER-SATELLITE	INTER-SATELLITE			
MOBILE 5.558	MOBILE 5.558			
174.8-182 GHz	174.8-182 GHz (CIVIL)			
EARTH EXPLORATION-SATELLITE (passive)	EARTH EXPLORATION-SATELLITE (passive)			
INTER-SATELLITE 5.562H	INTER-SATELLITE 5.562H			
SPACE RESEARCH (passive)	SPACE RESEARCH (passive)			
182-185 GHz	182-185 GHz (CIVIL)			
EARTH EXPLORATION-SATELLITE (passive)	EARTH EXPLORATION-SATELLITE (passive)			
RADIO ASTRONOMY	RADIO ASTRONOMY			
SPACE RESEARCH (passive)	SPACE RESEARCH (passive)			

Allocations for ITU Region 1	National Allocations of Sultanate of Oman	Major utilization	Notes	National Channel/ Block arrangements
5.340	5.340			
185-190 GHz	185-190 GHz (CIVIL)			
EARTH EXPLORATION-SATELLITE (passive)	EARTH EXPLORATION-SATELLITE (passive)			
INTER-SATELLITE 5.562H	INTER-SATELLITE 5.562H			
SPACE RESEARCH (passive)	SPACE RESEARCH (passive)			
190-191.8 GHz	190-191.8 GHz (CIVIL)			
EARTH EXPLORATION-SATELLITE (passive)	EARTH EXPLORATION-SATELLITE (passive)			
SPACE RESEARCH (passive)	SPACE RESEARCH (passive)			
5.340	5.340			
191.8-200 GHz	191.8-200 GHz (CIVIL)			
FIXED	FIXED			
INTER-SATELLITE	INTER-SATELLITE			
MOBILE 5.558	MOBILE 5.558			
MOBILE-SATELLITE	MOBILE-SATELLITE			
RADIONAVIGATION	RADIONAVIGATION			
RADIONAVIGATION-SATELLITE	RADIONAVIGATION-SATELLITE			
5.149 5.341 5.554	5.149 5.341 5.554			
200-202 GHz	200-202 GHz (CIVIL)			
EARTH EXPLORATION-SATELLITE (passive)	EARTH EXPLORATION-SATELLITE (passive)			
RADIO ASTRONOMY	RADIO ASTRONOMY			
SPACE RESEARCH (passive)	SPACE RESEARCH (passive)			
5.340 5.341 5.563A	5.340 5.341 5.563A			
202-209 GHz	202-209 GHz (CIVIL)			
EARTH EXPLORATION-SATELLITE (passive)	EARTH EXPLORATION-SATELLITE (passive)			
RADIO ASTRONOMY	RADIO ASTRONOMY			
SPACE RESEARCH (passive)	SPACE RESEARCH (passive)			
5.340 5.341 5.563A	5.340 5.341 5.563A			
209-217 GHz	209-217 GHz (CIVIL)			
FIXED	FIXED			
FIXED-SATELLITE (Earth-to-space)	FIXED-SATELLITE (Earth-to-space)			
MOBILE	MOBILE			

Allocations for ITU Region 1	National Allocations of Sultanate of Oman	Major utilization	Notes	National Channel/ Block arrangements
RADIO ASTRONOMY	RADIO ASTRONOMY			
5.149 5.341	5.149 5.341			
217-226 GHz	217-226 GHz (CIVIL)			
FIXED	FIXED			
FIXED-SATELLITE (Earth-to-space)	FIXED-SATELLITE (Earth-to-space)			
MOBILE	MOBILE			
RADIO ASTRONOMY	RADIO ASTRONOMY			
SPACE RESEARCH (passive) 5.562B	SPACE RESEARCH (passive) 5.562B			
5.149 5.341	5.149 5.341			
226-231.5 GHz	226-231.5 GHz (CIVIL)			
EARTH EXPLORATION-SATELLITE (passive)	EARTH EXPLORATION-SATELLITE (passive)			
RADIO ASTRONOMY	RADIO ASTRONOMY			
SPACE RESEARCH (passive)	SPACE RESEARCH (passive)			
5.340	5.340			
231.5-232 GHz	231.5-232 GHz (CIVIL)			
FIXED	FIXED			
MOBILE	MOBILE			
Radiolocation	Radiolocation			
232-235 GHz	232-235 GHz (CIVIL)			
FIXED	FIXED			
FIXED-SATELLITE (space-to-Earth)	FIXED-SATELLITE (space-to-Earth)			
MOBILE	MOBILE			
Radiolocation	Radiolocation			
235-238 GHz	235-238 GHz (CIVIL)			
EARTH EXPLORATION-SATELLITE (passive)	EARTH EXPLORATION-SATELLITE (passive)			
FIXED-SATELLITE (space-to-Earth)	FIXED-SATELLITE (space-to-Earth)			
SPACE RESEARCH (passive)	SPACE RESEARCH (passive)			
5.563A 5.563B	5.563A 5.563B			
238-240 GHz	238-240 GHz (CIVIL)			
FIXED	FIXED			
FIXED-SATELLITE (space-to-Earth)	FIXED-SATELLITE (space-to-Earth)			

Allocations for ITU Region 1	National Allocations of Sultanate of Oman	Major utilization	Notes	National Channel/ Block arrangements
MOBILE	MOBILE			
RADIOLOCATION	RADIOLOCATION			
RADIONAVIGATION	RADIONAVIGATION			
RADIONAVIGATION-SATELLITE	RADIONAVIGATION-SATELLITE			
240-241 GHz	240-241 GHz (CIVL)			
FIXED	FIXED			
MOBILE	MOBILE			
RADIOLOCATION	RADIOLOCATION			
241-248 GHz	241-248 GHz (CIVL)			
RADIO ASTRONOMY	RADIO ASTRONOMY			
RADIOLOCATION	RADIOLOCATION			
Amateur	Amateur			
Amateur-satellite	Amateur-satellite	ISM	244-246 GHz	
5.138 5.149	5.138 5.149			
248-250 GHz	248-250 GHz (CIVL)			
AMATEUR	AMATEUR			
AMATEUR-SATELLITE	AMATEUR-SATELLITE			
Radio astronomy	Radio astronomy			
5.149	5.149			
250-252 GHz	250-252 GHz (CIVL)			
EARTH EXPLORATION-SATELLITE (passive)	EARTH EXPLORATION-SATELLITE (passive)			
RADIO ASTRONOMY	RADIO ASTRONOMY			
SPACE RESEARCH (passive)	SPACE RESEARCH (passive)			
5.340 5.563A	5.340 5.563A			
252-265 GHz	252-265 GHz (CIVL)			
FIXED	FIXED			
MOBILE	MOBILE			
MOBILE-SATELLITE (Earth-to-space)	MOBILE-SATELLITE (Earth-to-space)			
RADIO ASTRONOMY	RADIO ASTRONOMY			
RADIONAVIGATION	RADIONAVIGATION			
RADIONAVIGATION-SATELLITE	RADIONAVIGATION-SATELLITE			

Allocations for ITU Region 1	National Allocations of Sultanate of Oman	Major utilization	Notes	National Channel/ Block arrangements
5.149 5.554	5.149 5.554			
265-275 GHz	265-275 GHz (CIVIL)			
FIXED	FIXED			
FIXED-SATELLITE (Earth-to-space)	FIXED-SATELLITE (Earth-to-space)			
MOBILE	MOBILE			
RADIO ASTRONOMY	RADIO ASTRONOMY			
5.149 5.563A	5.149 5.563A			
275-1 000 GHz	275-1 000 GHz			
(Not allocated) 5.565	(Not allocated) 5.565			

4

Annexes

NATIONAL CHANNEL/BLOCK ARRANGEMENTS

4.1 Annex 1 Channel/Block Arrangements for Land Mobile Services in VHF and UHF Bands

The center frequency in any bands mentioned in Table 1 below should be selected using the following formula:

$$f_n = f_L - (\text{channel spacing}/2) + n * (\text{channel spacing})$$

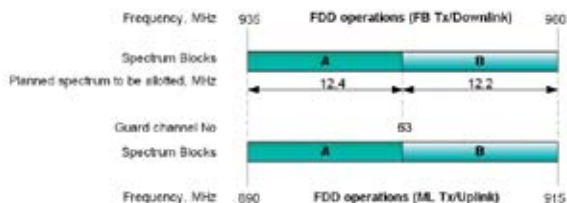
where:

- f_n*: center frequency
- n*: channel number = 1, 2, 3N, where N = integer of [(f_U-f_L)/channel spacing]
- f_L*: lower edge of the frequency band
- f_U*: upper edge of the frequency band
- channel spacing = 6.25, 12.5, or 25 KHz

TABLE 1 FREQUENCY BANDS ALLOCATED FOR CIVIL AND SHARED USERS CATEGORIES ON A PRIMARY BASIS

Frequency Bands (MHz)	Category of Band	Communication Type (Frequencies in MHz)	Remark
26.175 – 28	SHARED	Simplex	
37.5 – 41.015	SHARED	Simplex	
47.0 – 54.0	CIVIL	Simplex	On Permitted Basis Only
54.0 – 61.0	CIVIL	Up Link (MS), paired with 61 – 68	On Permitted Basis Only
61.0 – 68.0	CIVIL	Down Link (BS), paired with 54 – 61	On Permitted Basis Only
68.0 – 74.8	SHARED	Up Link (MS), paired with 77.8 – 84.6	
77.8 – 84.6	SHARED	Down Link (BS), paired with 68 – 74.8	
137 – 139	SHARED	Up Link (MS), paired with 141 – 143	
139 – 141	SHARED	Simplex	
141 – 143	SHARED	Down Link (BS), paired with 137 – 139	
143 – 144	SHARED	Simplex	
146 – 146.8	CIVIL	Simplex	
146.8 – 149.9	CIVIL	Up Link (MS), paired with 151.4 – 154.5	
150.05 – 151.4	CIVIL	Up Link (MS), paired with 154.65 – 156	
151.4 – 154.5	CIVIL	Down Link (BS), paired with 146.8 – 149.9	
154.5 – 154.65	CIVIL	Simplex	
154.65 – 156	CIVIL	Down Link (BS), paired with 150.05 – 151.4	
157.45 – 160.6	CIVIL	Up Link (MS), paired with 162.05 – 165.2	
160.975 – 161.475	CIVIL	Simplex	
162.05 – 165.2	CIVIL	Down Link (BS), paired with 157.45 – 160.6	
165.2 – 165.225	CIVIL	Simplex	
165.225 – 169.4	CIVIL	Up Link (MS), paired with 169.825 – 174	
169.4 – 169.825	CIVIL	Simplex	
169.825 – 174	CIVIL	Down Link (BS), paired with 162.05 – 165.2	
406.1 – 410	CIVIL	Simplex	
410 - 420	CIVIL	Up Link (MS), paired with 420 – 430	TETRA
420 - 430	CIVIL	Down Link (BS), paired with 410 – 420	TETRA
430 – 432	CIVIL	Up Link (MS), paired with 440 – 442	
432 – 435	CIVIL	Simplex	
438 - 440	CIVIL	Simplex	
440 – 442	CIVIL	Down Link (BS), paired with 430 – 432	
442 – 450	CIVIL	Simplex	
862 – 870	CIVIL	Simplex	

GSM-900 Bands Plan in Sultanate of Oman



The channel raster is 200 kHz and the carrier frequency is an integer multiple of 200 kHz. Carrier frequency of each channel relative to the Base station (FB) can be obtained by the following formula:

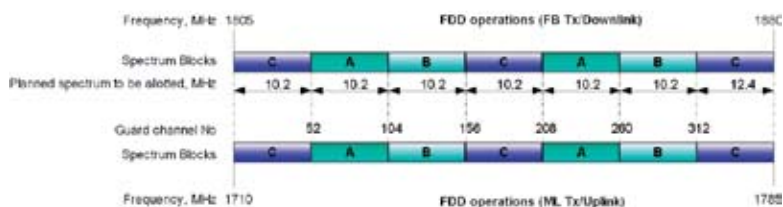
$$FRX(n) = 890.0 + 0.2n \text{ (MHz)}$$

$$FTX(n) = FRX(n) + 45 \text{ (MHz)}$$

where $n=1...124$

The guard channel shall not be used.

GSM-1800 Bands Plan in Sultanate of Oman



The channel raster is 200 kHz and the carrier frequency is an integer multiple of 200 kHz. Carrier frequency of each channel relative to the Base station (FB) can be obtained by the following formula:

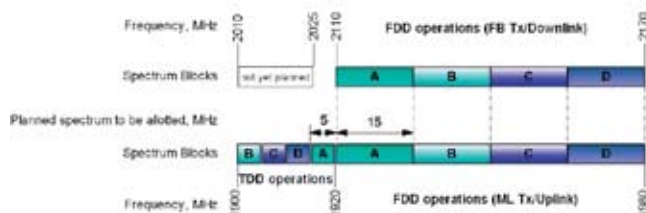
$$FRX(n) = 1710.0 + 0.2n \text{ (MHz)}$$

$$FTX(n) = FRX(n) + 45 \text{ (MHz)}$$

where $n=1...374$

The guard channel shall not be used.
Additional guard band nearest to 1880 MHz may be needed due to DECT applications in 1880-1900 MHz band

IMT/UMTS at 2 GHz Band Plan in Sultanate of Oman

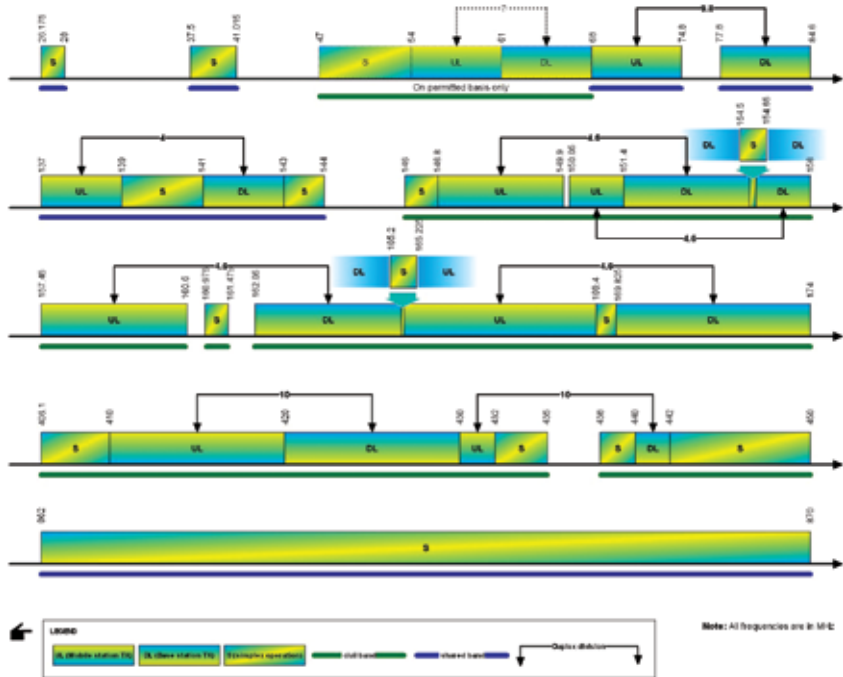


The guard bands at each end of allotted spectrum to operators shall be coordinated by operators of adjacent bands themselves depending on networks deployments.
Additional guard band nearest to 1900 MHz may be needed due to DECT applications in 1880-1900 MHz band

Depend on future trends, developments and market demand, the following options might be offered to UMTS Operators in the future

1900-1920 MHz may be used either for TDD or for FDD (uplink) paired with another not specified here band.
2010-2025 MHz may be used either for TDD or for FDD (uplink) paired with another not specified here band.
1920-1980 MHz may be used for TDD operation

CONFIGURATION of CIVIL and SHARED SUB-BANDS of LAND MOBILE SERVICE between 30 MHz and 1 GHz



4.2 Annex 2 Channel/Block Arrangements for Fixed Service

A. Channel Arrangements for Fixed Links below 30 MHz

The center frequency should be selected using the following formula:

$$fn = fL + n*(channel\ spacing)$$

where:

fn: center frequency

n: channel number = 1, 2, 3N, where N = integer of [(fU-fL)/channel spacing]

fL: lower edge of the frequency band

fU: upper edge of the frequency band

channel spacing = multiple of 0.5 kHz

B. Channel Arrangements for Fixed Links between 30 MHz and 1 GHz

The center frequency should be selected using the following formula:

$$fn = fL - (channel\ spacing/2) + n*(channel\ spacing)$$

where:

fn: center frequency

n: channel number = 1, 2, 3N, where N = integer of [(fU-fL)/channel spacing]

fL: lower edge of the frequency band

fU: upper edge of the frequency band

channel spacing = multiple of 6.25 kHz

A. Channel Arrangements for Fixed Links above 1 GHz

Frequency Band	Channel Spacing (MHz)	Channel number (n)	f_0 (MHz)	Go-Channel (MHz)	Return-Channel (MHz)	Recommendation
1350 – 1375 MHz 1492 – 1517 MHz	3.5	1...6	1433.5	$f_0 - 83.25 + 3.5 n$	$f_0 + 58.75 + 3.5 n$	ITU-R Rec. F.1242 §1
	2	1...12		$f_0 - 84 + 2 n$	$f_0 + 58 + 2 n$	
	1	1...24		$f_0 - 83.5 + 1 n$	$f_0 + 58.5 + 1 n$	
	0.5	1...48		$f_0 - 83.25 + 0.5 n$	$f_0 + 58.75 + 0.5 n$	
	0.25	1...96		$f_0 - 83.125 + 0.25 n$	$f_0 + 58.875 + 0.25 n$	
1375–1400 MHz 1427–1452 MHz	3.5	1...6	1413.5	$f_0 - 38.25 + 3.5 n$	$f_0 + 13.75 + 3.5 n$	ITU-R Rec. F.1242 §2
	2	1...12		$f_0 - 39 + 2 n$	$f_0 + 13 + 2 n$	
	1	1...24		$f_0 - 38.5 + 1 n$	$f_0 + 13.5 + 1 n$	
	0.5	1...48		$f_0 - 38.25 + 0.5 n$	$f_0 + 13.75 + 0.5 n$	
	0.25	1...96		$f_0 - 38.125 + 0.25 n$	$f_0 + 13.875 + 0.25 n$	
1518–1525 MHz	0.5	11...23	1530	$f_0 - 0.5 n$		ITU-R Rec. F.701 §3
2025–2110 MHz 2200–2290 MHz	3.5	1...24	2155	$f_0 - 131.25 + 3.5 n$	$f_0 + 43.75 + 3.5 n$	ITU-R Rec. F.1098 Annex 1
	7	1...12		$f_0 - 133 + 7 n$	$f_0 + 42 + 7 n$	
	14	1...6		$f_0 - 136.5 + 14 n$	$f_0 + 38.5 + 14 n$	
3300 – 3400 MHz	1.75	1...27		$3300 + 1.75 n$	$3350 + 1.75 n$	CEPT/ERC/REC 14-03 E Annex B
	3.5	1...14		$3298.75 + 3.5 n$	$3348.75 + 3.5 n$	

* For P-MP operations, channel arrangements are based on the smallest channel spacing in relevant frequency band. It is recommended to use the lower sub-band for up-link operations.

Frequency Band	Channel Spacing (MHz)	Channel number (n)	f_0 (MHz)	Go-Channel (MHz)	Return-Channel (MHz)	Recommendation
	7	1...7		$3297 + 7n$	$3347 + 7n$	
	14	1,2,3		$3293.5 + 14n$	$3343.5 + 14n$	
3400 – 3600 MHz	1.75	-5...50		$3410 + 1.75n$	$3510 + 1.75n$	CEPT/ERC/REC 14-03 E Annex B (B2)
	3.5	-1...25		$3408.25 + 3.5n$	$3508.25 + 3.5n$	
	7	0...12		$3406.5 + 7n$	$3506.5 + 7n$	
	14	1...6		$3403 + 14n$	$3503 + 14n$	
3600 – 3800 MHz	1.75	1...56		$3600.125 + 1.75n$	$3700.125 + 1.75n$	CEPT/ERC/REC 12-08 E (Annex B, PART 2, B2.2.3)
	3.5	1...28		$3599.25 + 3.5n$	$3699.25 + 3.5n$	
	7	1...14		$3597.5 + 7n$	$3697.5 + 7n$	
	14	1...7		$3594 + 14n$	$3694 + 14n$	
3800 – 4200 MHz	29	1...6		$f_0 - 208 + 29n$	$f_0 + 5 + 29n$	F.382 (CEPT 12-08 E, Annex B, PART 1)
	14.5	1...12	4003.5	$f_0 - 200.75 + 14.5n$	$f_0 + 12.25 + 14.5n$	
5925-6425 MHz	29.65	1...8	6175	$f_0 - 259.45 + 29.65n$	$f_0 - 7.41 + 29.65n$	ITU-R Rec. F.383 §1 CEPT/ERC/REC 14-01 E
	40	1...8		$f_0 - 350 + 40n$	$f_0 - 10 + 40n$	ITU-R Rec. F.384 CEPT/ERC/REC 1402 E
20	1...16	6770	$f_0 - 350 + 20n$	$f_0 - 10 + 20n$		
80	1...4		$f_0 - 350 + 80n$	$f_0 - 10 + 80n$		
7125-7425 MHz	7	1...20	7275	$f_0 - 154 + 7n$	$f_0 + 7 + 7n$	ITU-R Rec. F.385 §1 Channel spacing for 14 MHz or 28 MHz can be achieved by combining of multiple adjacent 7 MHz channels

Frequency Band	Channel Spacing (MHz)	Channel number (n)	f_0 (MHz)	Go-Channel (MHz)	Return-Channel (MHz)	Recommendation
7425 – 7725 MHz	28	1...5	7575	$f_0 - 161 + 28n$	$f_0 - 7 + 28n$	CEPT/ERC/REC (02)06
	14	1...10		$f_0 - 154 + 14n$	$f_0 + 14n$	
	7	1...20		$f_0 - 150.5 + 7n$	$f_0 + 3.5 + 7n$	
	3.5	1...40		$f_0 - 148.75 + 3.5n$	$f_0 + 5.25 + 3.5n$	
	1.75	1...80		$f_0 - 147.875 + 1.75n$	$f_0 + 6.125 + 1.75n$	
	29.65	1...5		$f_0 + 281.95 + 29.65n$	$f_0 + 29.37 + 29.65n$	
8.2 – 8.5 GHz	28	1...5	8350	$f_0 - 161 + 28n$	$f_0 - 7 + 28n$	—
	28	1...5	11701	$f_0 - 1561 + 28n$	$f_0 - 1211 + 28n$	CEPT/ERC/REC 12-05 E
14	1...10	$f_0 - 1554 + 14n$		$f_0 - 1204 + 14n$		
7	1...20	$f_0 - 1550.5 + 7n$		$f_0 - 1200.5 + 7n$		
3.5	1...42	$f_0 - 1552.25 + 3.5n$		$f_0 - 1202.25 + 3.5n$		
12.75 – 13.25 GHz	28	1...8	12996	$f_0 - 259 + 28n$	$f_0 + 7 + 28n$	CEPT/ERC/REC 12-02 E
	14	1...16		$f_0 - 252 + 14n$	$f_0 + 14 + 14n$	
	7	1...32		$f_0 - 248.5 + 7n$	$f_0 + 17.5 + 7n$	
	3.5	1...64		$f_0 - 246.75 + 3.5n$	$f_0 + 19.25 + 3.5n$	
	1.75	1...128		$f_0 - 245.875 + 1.75n$	$f_0 + 20.125 + 1.75n$	
	28	1...15		11701	$f_0 + 2786 + 28n$	
14	1...30	$f_0 + 2800 + 14n$	$f_0 + 3220 + 14n$			
7	n: 1...15 m: 1...4	$f_0 + 2768.5 + 28n + 7m$	$f_0 + 3188.5 + 28n + 7m$			

Frequency Band	Channel Spacing (MHz)	Channel number (n)	f_0 (MHz)	Go-Channel (MHz)	Return-Channel (MHz)	Recommendation
17.7 – 19.7 GHz	3.5	n: 1...15 m: 1...8	18700	$f_0 + 2770.25 + 28n + 3.5m$	$f_0 + 31902.5 + 28n + 3.5m$	CEPT/ERC/REC 12-03 E
		1...8		$f_0 - 1000 + 110n$	$f_0 + 10 + 110n$	
		1...17		$f_0 - 1000 + 55n$	$f_0 + 10 + 55n$	
		1...35		$f_0 - 1000 + 27.5n$	$f_0 + 10 + 27.5n$	
21.2-21.4 GHz 22.6-23.0 GHz	3.5	1...70	21196	$f_0 - 1000 + 13.75n$	$f_0 + 10 + 13.75n$	ITU-R Rec. F.637 §2
		1...56 401...513		$f_0 + 3.5 + 3.5n$		
		1...19		$f_0 + 791 + 28n$	$f_0 + 1841 + 28n$	
		1...39		$f_0 + 798 + 14n$	$f_0 + 1848 + 14n$	
22-22.6 GHz 23-23.6 GHz	7	1...78	21196	$f_0 + 801.5 + 7n$	$f_0 + 1851.5 + 7n$	ITU-R Rec. F.637-3
		1...156		$f_0 + 803.25 + 3.5n$	$f_0 + 1853.25 + 3.5n$	
		1...57 644...785		$f_0 + 3.5n$		
		1...8		$f_0 - 1008 + 112n$	$f_0 + 112n$	
24.25-24.45 GHz 26.5 – 27.0 GHz	3.5	1...16	24248	$f_0 - 980 + 56n$	$f_0 + 28 + 56n$	ITU-R Rec. F.748 Annex 1/ CEPT /R 13-02E Annex B
		1...32		$f_0 - 966 + 28n$	$f_0 + 42 + 28n$	
		1...64		$f_0 - 959 + 14n$	$f_0 + 49 + 14n$	
		1...128		$f_0 - 955.5 + 7n$	$f_0 + 52.5 + 7n$	
24.5 – 26.5 GHz	3.5	1...256	25501	$f_0 - 953.75 + 3.5n$	$f_0 + 54.25 + 3.5n$	

Frequency Band	Channel Spacing (MHz)	Channel number (n)	f_0 (MHz)	Go-Channel (MHz)	Return-Channel (MHz)	Recommendation		
27.5 – 29.5 GHz	112	1... 8	28500.5	$f_0 - 1008 + 112n$	$f_0 + 112n$	ITU-R Rec. F.748 Annex 2/ CEPT T/R 13-02E Annex C		
	56	1...16		$f_0 - 980 + 56n$	$f_0 + 28 + 56n$			
	28	1...32		$f_0 - 966 + 28n$	$f_0 + 42 + 28n$			
	14	1... 64		$f_0 - 959 + 14n$	$f_0 + 49 + 14n$			
	7	1...128		$f_0 - 955.5 + 7n$	$f_0 + 52.5 + 7n$			
	3.5	1...256		$f_0 - 953.75 + 3.5n$	$f_0 + 54.25 + 3.5n$			
31 – 31.3 GHz	28	1... 9	TDD 31000	$f_0 + 3 + 28n$	$f_0 + 15.25 + 3.5n$	ITU-R Rec. F.746 Annex 8/ CEPT/ERC/REC (02)02		
	14	1...18		$f_0 + 10 + 14n$				
	7	1...36		$f_0 + 13.5 + 7n$				
	3.5	1...72		$f_0 + 15.25 + 3.5n$				
	28	1,2,3,4		FDD 31150			$f_0 - 147 + 28n$	$f_0 - 7 + 28n$
	14	1... 8					$f_0 - 140 + 14n$	$f_0 + 0 + 14n$
7	1...16	$f_0 - 136.5 + 7n$	$f_0 + 3.5 + 7n$					
3.5	1...32	$f_0 - 134.75 + 3.5n$	$f_0 + 5.25 + 3.5n$					
31.8 – 33.4 GHz	56	1...12	32599	$f_0 - 756 + 56n$	$f_0 + 56 + 56n$	ITU-R Rec. F.1520		
	28	1,... 27		$f_0 - 798 + 28n$	$f_0 + 14 + 28n$			
	14	1...54		$f_0 - 791 + 14n$	$f_0 + 21 + 14n$			
	7	1...108		$f_0 - 787.5 + 7n$	$f_0 + 24.5 + 7n$			
	3.5	1...216		$f_0 - 785.75 + 3.5n$	$f_0 + 26.25 + 3.5n$			

Frequency Band	Channel Spacing (MHz)	Channel number (n)	f_0 (MHz)	Go-Channel (MHz)	Return-Channel (MHz)	Recommendation
36 – 37 GHz	112	1,2,3,4	36498	$f_0 - 532 + 112 n$	$f_0 - 70 + 112 n$	ITU-R Rec. F.749 Annex 2
	56	1...8		$f_0 - 476 + 56 n$	$f_0 - 14 + 56 n$	
	28	1...15		$f_0 - 448 + 28 n$	$f_0 + 14 + 28 n$	
	14	1...29		$f_0 - 434 + 14 n$	$f_0 + 28 + 14 n$	
	7	1...57		$f_0 - 427 + 7 n$	$f_0 + 35 + 7 n$	
	3.5	1...113		$f_0 - 423.5 + 3.5 n$	$f_0 + 38.5 + 3.5 n$	
37.0-39.5 GHz	140	1...8		$f_0 - 1\ 260 + 140 n$	$f_0 + 140 n$	ITU-R Rec. F.749 Annex 1/ CEPT TR12-01E
	56	1...20		$f_0 - 1\ 218 + 56 n$	$f_0 + 42 + 56 n$	
	28	1...40	38248	$f_0 - 1\ 204 + 28 n$	$f_0 + 56 + 28 n$	
	14	1...80		$f_0 - 1\ 197 + 14 n$	$f_0 + 63 + 14 n$	
	7	1...160		$f_0 - 1\ 193.5 + 7 n$	$f_0 + 66.5 + 7 n$	
	3.5	1...320		$f_0 - 1\ 191.75 + 3.5 n$	$f_0 + 68.25 + 3.5 n$	
	28	1...28		$f_0 - 848 + 28 n$	$f_0 + 36 + 28 n$	
	14	1...56	49350	$f_0 - 841 + 14 n$	$f_0 + 43 + 14 n$	
48.5 – 50.2 GHz	7	1...112		$f_0 - 837.5 + 7 n$	$f_0 + 46.5 + 7 n$	CEPT/ERC/REC 12-10
	3.5	1...224		$f_0 - 835.75 + 3.5 n$	$f_0 + 48.25 + 3.5 n$	
	56	1...9		$f_0 + 56 n$	$f_0 + 616 + 56 n$	
	28	1...18		$f_0 + 14 + 28 n$	$f_0 + 630 + 28 n$	
51.4 – 52.6 GHz	14	1...36	51412	$f_0 + 21 + 14 n$	$f_0 + 637 + 14 n$	ITU-R Rec. F.1496 Annex 1/ CEPT/ERC/REC 12-11
	7	1...72		$f_0 + 24.5 + 7 n$	$f_0 + 640.5 + 7 n$	
	3.5	1...114		$f_0 + 26.25 + 3.5 n$	$f_0 + 642.25 + 3.5 n$	

Frequency Band	Channel Spacing (MHz)	Channel number (n)	f_0 (MHz)	Go-Channel (MHz)	Return-Channel (MHz)	Recommendation
55.78 – 57 GHz	56	1...20		$f_0 + 28 + 56 n$		ITU-R Rec. F.1497 Annex 1/ CEPT/ERC/REC 12-12
	28	1...40		$f_0 + 42 + 28 n$		
	14	1...60	TDD 55786	$f_0 + 49 + 14 n$		
	7	1...80		$f_0 + 52.5 + 7 n$		
	3.5	1...160		$f_0 + 54.25 + 3.5 n$		
	56	1...9		$f_0 + 56 n$	$f_0 + 616 + 56 n$	ITU-R Rec. F.1497 Annex 2/ CEPT/ERC/REC 12-12
	28	1...18		$f_0 + 14 + 28 n$	$f_0 + 630 + 28 n$	
	14	1...36	FDD 55814	$f_0 + 21 + 14 n$	$f_0 + 637 + 14 n$	
	7	1...72		$f_0 + 24.5 + 7 n$	$f_0 + 649.5 + 7 n$	
	3.5	1...144		$f_0 + 26.25 + 3.5 n$	$f_0 + 651.25 + 3.5 n$	
57 – 64 GHz	50	1...140	56975	$f_0 + 50 n$ <i>(internal flexible duplex separation and aggregation of multiple 50 MHz channels with a maximum aggregated bandwidth up to 2500 MHz are allowed)</i>	ECC/REC/(09)01 for 57-64 GHz Revised ECC/REC/(05)02 for 64-66 GHz 50 MHz channels in 57-64 GHz and 64-66 GHz bands can be aggregated and paired with flexible duplex separation	
64 – 66 GHz	50	1...39	63975	$f_0 + 50 n$ <i>(internal flexible duplex separation and aggregation of multiple 50 MHz channels are allowed)</i>		
71 – 76 GHz	250	1...19	71000	$f_0 + 250 n$ <i>(internal flexible duplex separation of less than 5 GHz and aggregation of multiple 250 MHz channels are allowed)</i>	CEPT/ERC/REC (05)07 250 MHz channels in 71-76 GHz and 81-86 GHz bands can be aggregated and paired with 10 GHz duplex separation	
81 – 86 GHz	250	1...19	81000	$f_0 + 250 n$ <i>(internal flexible duplex separation of less than 5 GHz and aggregation of multiple 250 MHz channels are allowed)</i>		

B. Channel Arrangements for Fixed Wireless Access

Frequency Band	Edges of lower sub-band (MHz)	Edges of upper sub-band (MHz)	Factors	Recommendation
3300-3400 MHz	0.25N + 3300 to 0.25(N + k) + 3300	0.25(N + 200) + 3300 to 0.25(N + k + 200) + 3300	$1 \leq k \leq 200$ $0 \leq N \leq 199$ $(k + N) \leq 200$	Based on CEPT/ERC/REC 14-03 E (extended)
3400-3600 MHz	0.25N + 3400 to 0.25(N + k) + 3400	0.25(N + 400) + 3400 to 0.25(N + k + 400) + 3400	$1 \leq k \leq 400$ $0 \leq N \leq 399$ $(k + N) \leq 400$	CEPT/ERC/REC 14-03 E (extended)
3600-3800 MHz	0.25N + 3600 to 0.25(N + k) + 3600	0.25(N + 400) + 3600 to 0.25(N + k + 400) + 3600	$1 \leq k \leq 400$ $0 \leq N \leq 399$ $(k + N) \leq 400$	CEPT/ERC/REC 12-08 E
10.15 – 10.3/10.5-10.65 GHz	0.25N + 10150 to 0.25(N + k) + 10150	0.25(N + 1400) + 10150 to 0.25(N + k + 1400) + 10150	$1 \leq k \leq 600$ $0 \leq N \leq 599$ $(k + N) \leq 600$	ITU-R Rec. F.1568
24.5 – 25.5/25.5-26.5 GHz	3.5N + 24549 to 3.5(N + k) + 24549	3.5(N + 288) + 24549 to 3.5(N + k + 288) + 24549	$1 \leq k \leq 256$ $0 \leq N \leq 255$ $(k + N) \leq 256$	ITU-R Rec. F.748-4
27.5 – 28.5/28.5-29.5 GHz	3.5N + 27548.5 to 3.5(N + k) + 27548.5	3.5(N + 288) + 27548.5 to 3.5(N + k + 288) + 27548.5	$1 \leq k \leq 256$ $0 \leq N \leq 255$ $(k + N) \leq 256$	ITU-R Rec. F.748-4
31.0-31.3 GHz	3.5N + 31017 to 3.5(N + k) + 31017	3.5(N + 40) + 31017 to 3.5(N + k + 40) + 31017	$1 \leq k \leq 32$ $0 \leq N \leq 31$ $(k + N) \leq 32$	

4.3 Annex 3 Channel Arrangement for Terrestrial Broadcasting Services

Band	System	Channel No		Channel arrangement
148.5-200 kHz	AM Sound broadcasting	1...5		$f = 144 + 9*n$ kHz The assignment of AM sound broadcasting shall be according to GE75 agreement
526.5-1 606.5 kHz	AM Sound broadcasting	1...120		$f = 522 + 9*n$ kHz The assignment of AM sound broadcasting shall be according to GE75 agreement
5900 – 6200 kHz	HF sound broadcasting	For SSB	For DSB	$F_{Ch} = \text{Band Edge} + n * \text{Channel Spacing}$ Note: Channel Spacing = 5 kHz for SSB Channel Spacing = 10 kHz for DSB Band Edge = lower edge of corresponding band Seasonal planning of HF sound broadcasting shall be in accordance with Art. 12 ITU-RR
7200 – 7450 kHz		1...59	1...29	
9400 – 9900 kHz		1...49	1...24	
11600 – 12100 kHz		1...99	1...49	
13570 – 13870 kHz		1...100	1...49	
15100 – 15800 kHz		1...59	1...29	
17480 – 17900 kHz		1...139	1...69	
18900 – 19020 kHz		1...83	1...41	
21450 – 21850 kHz		1...23	1...11	
25670 – 26100 kHz		1...79	1...39	
		1...85	1...42	
87.5-108 MHz	FM Sound broadcasting	1...204		$f_n = 87.5 + 0.1*n$ MHz The assignment of FM sound broadcasting shall be according to GE 84 agreement
174-216 MHz	Analog TV DVB-T	5...10		$f_n = 142.5 + 7*n$ MHz The assignment of DVB-T& analog TV shall be according to GE06 agreement
216-230 MHz	Analog TV	11...12		$f_n = 142.5 + 7*n$ MHz The assignment of analog TV shall be according to GE06 agreement
	T-DAB	11A-12D		The channel arrangements of T-DAB in this band will be according to RRC06 final act (TableA.3.1-15) and is reproduced below

Band	System	Channel No	Channel arrangement
470-790 MHz	Analog TV	21...60	$f_n = 306 + 8*n$ MHz The assignment of DVB-T and analog TV shall be according to GE06 agreement
	DVB-T		
	DVB-H		
790-862 MHz	Analog TV	61...69	$f_n = 306 + 8*n$ MHz The assignment of DVB-T and analog TV shall be according to GE06 agreement
	DVB-T		
	DVB-H		

T-DAB frequency blocks in Band III

T-DAB frequency block	Assigned frequency (MHz)	Frequency block bandwidth (MHz)	Lower guardband (kHz)	Upper guardband (kHz)	Frequency range (MHz)
5A	174.928	174.160-175.696	–	176	174.0-181.0
5B	176.640	175.872-177.408	176	176	
5C	178.352	177.584-179.120	176	176	
5D	180.064	179.296-180.832	176	336	
6A	181.936	181.168-182.704	336	176	181.0-188.0
6B	183.648	182.880-184.416	176	176	
6C	185.360	184.592-186.128	176	176	
6D	187.072	186.304-187.840	176	320	
7A	188.928	188.160-189.696	320	176	188.0-195.0
7B	190.640	189.872-191.408	176	176	
7C	192.352	191.584-193.120	176	176	
7D	194.064	193.296-194.832	176	336	
8A	195.936	195.168-196.704	336	176	195.0-202.0
8B	197.648	196.880-198.416	176	176	
8C	199.360	198.592-200.128	176	176	
8D	201.072	200.304-201.840	176	320	
9A	202.928	202.160-203.696	320	176	202.0-209.0
9B	204.640	203.872-205.408	176	176	
9C	206.352	205.584-207.120	176	176	
9D	208.064	207.296-208.832	176	336	
10A	209.936	209.168-210.704	336	176	209.0-216.0
10B	211.648	210.880-212.416	176	176	
10C	213.360	212.592-214.128	176	176	
10D	215.072	214.304-215.840	176	320	
11A	216.928	216.160-217.696	320	176	216.0-223.0
11B	218.640	217.872-219.408	176	176	
11C	220.352	219.584-221.120	176	176	
11D	222.064	221.296-222.832	176	336	
12A	223.936	223.168-224.704	336	176	223.0-230.0
12B	225.648	224.880-226.416	176	176	
12C	227.360	226.592-228.128	176	176	
12D	229.072	228.304-229.840	176	–	

4.4 Annex 4 BLOCK ARRANGEMENT FOR MARITIME SERVICE

SUB-DIVISION OF NON-EXCLUSIVE MARITIME MOBILE BANDS BELOW 4 000 kHz

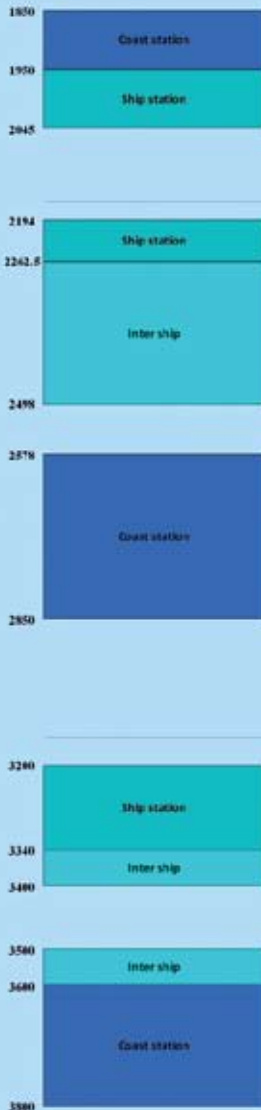
Abbreviation and channel spacings

NBDP - Narrow-band direct printing
(0.5 kHz channel spacing)

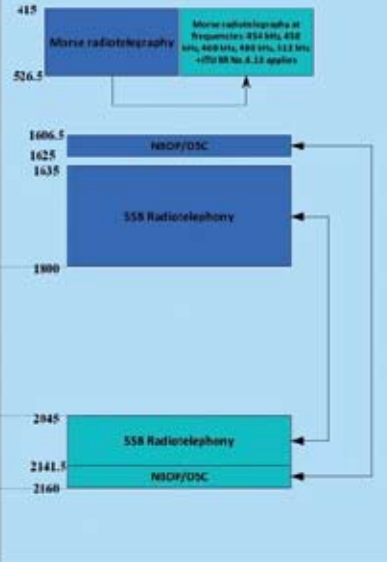
SSB - Single-side band
(0.5 kHz channel spacing)

DSC - Digital selective calling
(0.5 kHz channel spacing,
incl. Morse radiotelegraphy)

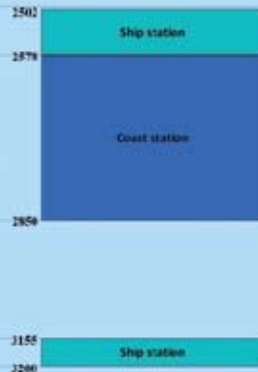
Single-side band radiotelephony (in accordance with the Art. 52 ITU RR)



GE 85-MM-R1 Assignment plan



Narrow-band direct printing (in accordance with the Art. 52 ITU RR)



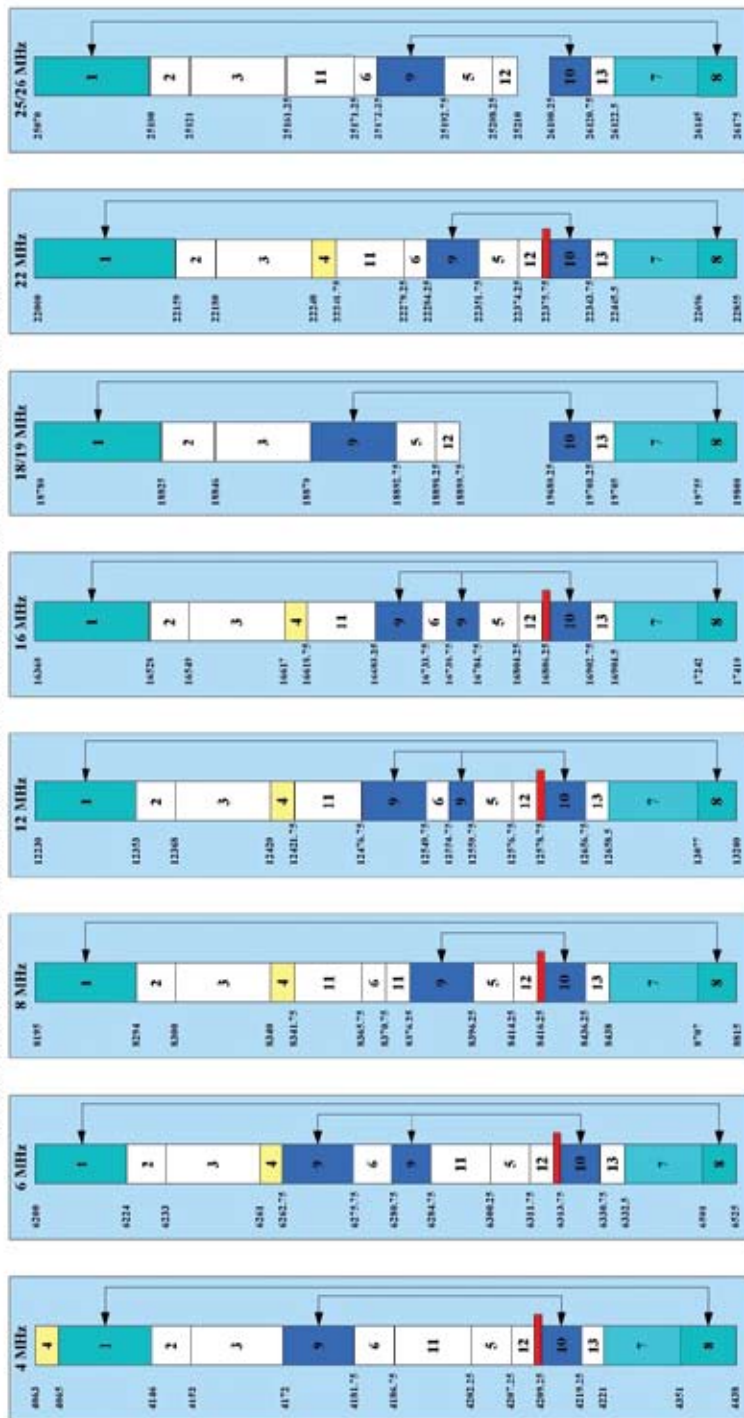
Legend

Block for Coast station

Block for Ship station

Block for inter ship comm.

SUB-DIVISION OF THE EXCLUSIVE MARITIME MOBILE BANDS BETWEEN 4 000 KHZ AND 27 500 KHZ



1	Ship stations, Telegraph, duplex operation (two-frequency channels). (frequencies paired with those in No. 8). (Appendices 17, Part B, Section 1 and 2, Section 1)
2	Ship stations and Coast stations, telephony, simplex operation (single-frequency channels) and intership cross-band operation (two frequencies). (Appendix 17, Part A)
3	Ship stations, wide-band telegraphy, facsimile and special transmission systems. (Appendix 17, Part A)
4	Oceanographic data transmission stations. (Appendix 17, Part A, Note c)
5	Ship stations, narrow-band direct-printing telegraphy and data transmission systems at speeds not exceeding 100 bauds for PSK and 200 bauds for FSK (non-paired frequencies), and ALA Morse telegraphy (working). (Appendix 17, Part A)
6	Ship stations, ALA Morse telegraphy, calling. (Appendix 17, Part A)
7	Coast stations, wide-band and ALA Morse telegraphy, facsimile and special and data transmission systems and direct printing telegraphy systems. (Appendix 17, Part A)
8	Coast stations, telephony, duplex operation (two-frequency channels). (frequencies paired with those in No. 1). (Appendices 17, Part B, section 1 and 2, Section 1)
9	Ship stations, narrow-band direct-printing telegraphy and data transmission systems at speeds not exceeding 100 bauds for PSK and 200 bauds for FSK (frequencies paired with those in No. 10). (Appendix 17, Part B, Section 1)
10	Coast stations, narrow-band direct-printing telegraphy and data transmission systems at speeds not exceeding 100 bauds for PSK and 200 bauds for FSK (frequencies paired with those in No. 9). (Appendix 17, Part B, Section 1)
11	Ship stations, ALA Morse telegraphy, working. (Appendix 17, Part A)
12	Ship stations, digital selective calling. (Appendix 17, Part A)
13	Coast stations, digital selective calling. (Appendix 17, Part A)

5

Abbreviations

Abbreviations

A3E	DOUBLE SIDEBAND AMPLITUDE MODULATED SINGLE CHANNEL EMISSION
AAIC	ACCOUNTING AUTHORITY IDENTIFICATION CODE
ACAS	AIRBORNE COLLISION AVOIDANCE SYSTEM
AERO	AERONAUTICAL
AGA	AIR-GROUND-AIR
AIS	UNIVERSAL SHIPBORNE AUTOMATIC IDENTIFICATION SYSTEM
ALS	AIRCRAFT LANDING SYSTEM
ARNS	AERONAUTICAL RADIO NAVIGATION SERVICE
ART.	ARTICLE
ASDE	AIRPORT SURFACE DETECTION EQUIPMENT
ASTAP	ASIA-PACIFIC TELECOMMUNICATION STANDARDIZATION PROGRAM
B/PAL	SYSTEM AND STANDARD FOR ANALOG TERRESTRIAL TELEVISION IN VHF BAND ADOPTED IN THE SULTANATE OF OMAN
BS	BASE STATION
BSS	BROADCASTING SATELLITE SERVICE
BWA	BROADBAND WIRELESS ACCESS
CB	CITIZEN BAND
CDMA	CODE-DIVISION MULTIPLEX ACCESS
CDMA450/3G	3G STANDARD IN 450 MHZ BAND
CISPR	INTERNATIONAL SPECIAL COMMITTEE ON RADIO INTERFERENCE
D&S-OPS	DISTRESS AND SAFETY OPERATIONS
DCS	DIGITAL SELECTIVE CALLING
DECT	DIGITAL ENHANCED CORDLESS TELECOMMUNICATIONS
DF	DIRECTION FINDING
DME	DISTANCE MEASURING EQUIPMENT
DRRS	DIGITAL RADIO-RELAY SYSTEM
DSB	DOUBLE SIDE BAND (AM MODULATION)
DSC	DIGITAL SELECTIVE CALLING
DSSS	DIRECT SEQUENCE SPREAD SPECTRUM
DTTB	DIGITAL TERRESTRIAL TELEVISION BROADCASTING
DVB-T	DIGITAL VIDEO BROADCASTING - TERRESTRIAL
E.I.R.P.	EFFECTIVE ISOTROPIC RADIATED POWER
E/S	EARTH-TO-SPACE DIRECTION
EAS	ELECTRONIC ARTICLE SURVEILLANCE
ECC	ELECTRONIC COMMUNICATIONS COMMITTEE
EGSM	GLOBAL SYSTEM FOR MOBILE COMMUNICATIONS IN EXTENDED BAND OF 900 MHZ
EPIRB	EMERGENCY POSITION INDICATING RADIO BEACONS
ERC	EUROPEAN RADIOCOMMUNICATION COMMITTEE
ESV	EARTH STATIONS ON-BOARD VESSELS
F3E	FREQUENCY MODULATED SINGLE CHANNEL EMISSION
FDD	FREQUENCY DIVISION DUPLEX
FDMA	FREQUENCY DIVISION MULTIPLE ACCESS
FHSS	FREQUENCY HOPPING SPREAD SPECTRUM
FIXED LINKS	STANDS FOR POINT-TO-POINT AND POINT-TO-MULTIPOINT RADIO LINKS BELOW 1 GHZ, AND POINT-TO-POINT LINKS (ONLY!) ABOVE 1 GHZ
FM	FREQUENCY MODULATION
FS	FIXED SERVICE
FSS	FIXED-SATELLITE SERVICE
FWS	FIXED WIRELESS SYSTEM
G/PAL	SYSTEM AND STANDARD FOR ANALOG TERRESTRIAL TELEVISION IN UHF BAND ADOPTED IN THE SULTANATE OF OMAN
GALILEO	GLOBAL SATELLITE RADIONAVIGATION SYSTEM BEING BUILT BY EUROPEAN UNION AND EUROPEAN SPACE AGENCY
GBAS	GROUND BASED AUGMENTATION SYSTEM

GE06	REGIONAL AGREEMENT RELATING TO THE PLANNING OF THE DIGITAL BROADCASTING SERVICE IN PARTS OF REGIONS 1 AND 3, IN THE FREQUENCY BANDS 174-230 MHZ AND 470-862 MHZ, GENEVA, 2006
GE75	REGIONAL AGREEMENT RELATING TO THE PLANNING OF LF/MF BROADCASTING IN PARTS OF REGIONS 1 AND 3, GENEVA, 1975
GE84	REGIONAL AGREEMENT CONCERNING FM SOUND BROADCASTING STATIONS (REGION 1 AND PART OF REGION 3), GENEVA, 1984
GE85-EMA	REGIONAL AGREEMENT CONCERNING THE PLANNING OF THE MARITIME RADIONAVIGATION SERVICE (RADIOBEACONS) IN THE FREQUENCY BAND 283.5-315 KHZ FOR THE EUROPEAN MARITIME AREA, GENEVA, 1985
GE85-MM-R1	REGIONAL AGREEMENT CONCERNING THE MF MARITIME MOBILE AND AERONAUTICAL RADIONAVIGATION SERVICES IN REGION 1, GENEVA, 1985
GLONASS	GLOBAL NAVIGATION SATELLITE SYSTEM
GMDSS	GLOBAL MARITIME DISTRESS AND SAFETY SYSTEM
GPS	GLOBAL POSITIONING SYSTEM
GSM-1800	GLOBAL SYSTEM FOR MOBILE COMMUNICATIONS IN 1800 MHZ BAND
GSM-900	GLOBAL SYSTEM FOR MOBILE COMMUNICATIONS IN 900 MHZ BAND
GSO	GEOSTATIONARY SATELLITE ORBIT
HAPS	HIGH ALTITUDE PLATFORM STATION
HDFS	HIGH-DENSITY FIXED SERVICE
HDFSS	HIGH-DENSITY FIXED-SATELLITE SERVICE
HDTV	HIGH-DEFINITION TELEVISION
HF	HIGH FREQUENCY (3 – 30 MHZ)
IBURST	WIRELESS BROADBAND TECHNOLOGY DEVELOPED BY ARRAYCOMM
ICAO	INTERNATIONAL CIVIL AVIATION ORGANIZATION
IEC	INTERNATIONAL ELECTROTECHNICAL COMMISSION
ILS	INSTRUMENTAL LANDING SYSTEM
IMO	INTERNATIONAL MARITIME ORGANIZATION
IMT	INTERNATIONAL MOBILE TELECOMMUNICATIONS
ISM	INDUSTRIAL, SCIENTIFIC AND MEDICAL
ITU	INTERNATIONAL TELECOMMUNICATION UNION
ITU RR	RADIO REGULATIONS OF THE INTERNATIONAL TELECOMMUNICATION UNION
JTIDS	JOINT TACTICAL INFORMATION AND DISTRIBUTION SYSTEM
LF	LOW FREQUENCY (30 – 300 KHZ)
LMDS	LOCAL MULTIPOINT DISTRIBUTION SYSTEM
LORAN	LONG RANGE AID TO NAVIGATION
MDS	MULTIPOINT DISTRIBUTION SYSTEM
METAIDS	METEOROLOGICAL AIDS
MF	MEDIUM FREQUENCY (300 – 3000 KHZ)
MICS	MEDICAL IMPLANT COMMUNICATION SYSTEM
MID	MARITIME IDENTIFICATION DIGITS
MIDS	MULTIFUNCTIONAL INFORMATION DISTRIBUTION SYSTEM
MLS	MICROWAVE LANDING SYSTEM
MMSI	MARITIME MOBILE SERVICE IDENTITY
MS	MOBILE STATION
MSI	MARITIME SAFETY INFORMATION
MSS	MOBILE-SATELLITE SERVICE
MVDS	MULTICHANNEL VIDEO DISTRIBUTION SYSTEM
MWS	MULTIMEDIA WIRELESS SYSTEM
NAVTEX	NARROW-BAND DIRECT-PRINTING TELEGRAPHY SYSTEM FOR TRANSMISSION OF NAVIGATIONAL AND METEOROLOGICAL WARNINGS AND URGENT INFORMATION TO SHIPS
NBDP	NARROW-BAND DIRECT-PRINTING
ND	NON-DIRECTIONAL RADIO (ANTENNA)
NDB	NON-DIRECTIONAL RADIO BEACON
NTLX	NATIONAL TELEX NUMBER
OMAXXXXX	ALLOTMENT/ASSIGNMENT IDS OF THE SULTANATE OF OMAN IN FIXED- OR BROADCASTING-SATELLITE SERVICE IN ITU-RR APPENDIXES

OR	OFF-ROUTE (IN AERONAUTICAL MOBILE SERVICE)
PAMR	PUBLIC ACCESS MOBILE RADIO
PF	POWER FLUX DENSITY
P-MP	POINT-TO-MULTIPOINT
PMR	PRIVATE (PROFESSIONAL) MOBILE RADIO
P-P	POINT-TO-POINT
PSD	POWER SPECTRAL DENSITY
R	ROUTE (IN AERONAUTICAL MOBILE SERVICE)
RDF	RADIOSONDE RADIO DIRECTION FINDING
REC	RECOMMENDATION
REOS	RECEIVE-ONLY SYSTEMS
RES.	RESOLUTION
RFID	RADIO FREQUENCY IDENTIFICATION
RLAN	RADIO LOCAL AREA NETWORK
RNS	RADIONAVIGATION SERVICE
RR	ITU RADIO REGULATIONS
RSME	RADAR SENSING AND MEASUREMENT SYSTEMS
RTP-COM	RADIO TELEPHONY COMMUNICATION
S/E	SPACE-TO-EARTH DIRECTION
SAB	SERVICE ANCILLARY TO BROADCASTING
SAP	SERVICE ANCILLARY TO PROGRAM MAKING
SAR	SEARCH AND RESCUE
SART	SEARCH AND RESCUE TRANSPONDER
SCADA	SUPERVISORY CONTROL AND DATA ACQUISITION
S-DAB	SATELLITE DIGITAL AUDIO BROADCASTING
SIT	SATELLITE INTERACTIVE TERMINAL
SNG	SATELLITE NEWS GATHERING
S-PCS	SATELLITE PERSONAL COMMUNICATION SYSTEM
SRD	SHORT RANGE DEVICE
SRR	SHORT RANGE RADAR
SSB	SINGLE SIDE BAND
SSR	SECONDARY SURVEILLANCE RADAR
SUT	SATELLITE USER TERMINAL
TACAN	TACTICAL AIR NAVIGATION
TBD	TO BE DETERMINED
T-DAB	TERRESTRIAL DIGITAL AUDIO BROADCASTING
TDD	TIME-DIVISION DUPLEX
TDMA	TIME-DIVISION MULTIPLE ACCESS
TETRA	TERRESTRIAL TRUNKED RADIO
UHF	ULTRA-HIGH FREQUENCY (300 – 3000 MHZ)
UMTS	UNIVERSAL MOBILE TELECOMMUNICATIONS SYSTEM
VHF	VERY HIGH FREQUENCY (30 – 300 MHZ)
VLBI	VERY LONG BASELINE INTERFEROMETRY
VLF	VERY LOW FREQUENCY (3 – 30 KHZ)
VOR	VHF OMNIDIRECTIONAL RANGING
VSAT	VERY SMALL APERTURE TERMINAL
VTS	VEHICLE TRACKING SYSTEM
WAS	WIRELESS ACCESS SYSTEM
WLL	WIRELESS LOCAL LOOP
WMO	WORLD METEOROLOGICAL ORGANIZATION