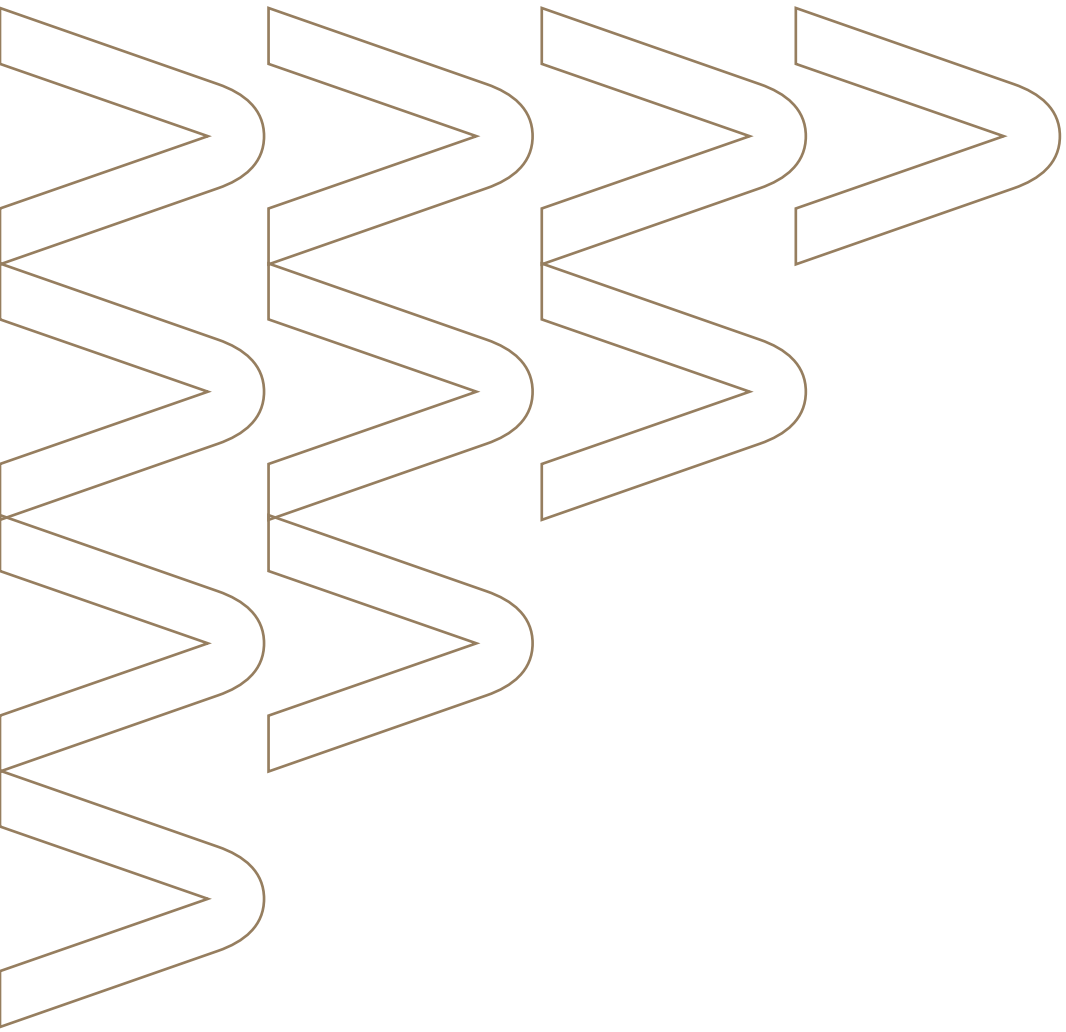
TDRA | هيئة تنظيم الاتصالات والحكومة الرقمية
TELECOMMUNICATIONS AND DIGITAL GOVERNMENT REGULATORY AUTHORITY

National Frequency Plan



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Preface

The National Frequency Plan is prepared and issued in accordance with Articles 46 and 47 of the Federal Law by Decree No. 3 of 2003 regarding the Organization of Telecommunications Sector, as amended. The National Frequency Plan is prepared in conformity with the International Regu-lations governing radio spectrum i.e. the ITU Radio Regulations and the international and regional agreements concluded or acceded to by the United Arab Emirates.

The Coordination Committee established by United Arab Emirates Cabinet Resolution No. 279/10/4 has undertaken the work on the National Frequency Plan. The National Frequency Plan and its Table of National Frequency Allocation take into consideration the existing and future requirements of the Radio Frequencies in the United Arab Emirates.

The National Frequency Plan provides a framework for the allocation and distribution of Radio Frequencies, accordingly Spectrum Regulations issuing is based on this National Frequency Plan.

Definitions

UAE: means the United Arab Emirates including its territorial waters and the airspace above.

TRA: means the General Authority for Regulating the Telecommunication Sector known as Telecommunications Regulatory Authority (TRA) established pursuant to the provisions of Article 6 of Federal Law by Decree No. 3 of 2003 as amended.

UAE Spectrum Regulations: means the technical regulations and specifications with details on objective procedures and criteria for regulating the use of frequency spectrum in United Arab Emirates.

ITU: means the International Telecommunication Union, a leading United Nations agency for information and communication technologies.

ICAO: is the International Civil Aviation Organization, United Nations specialized agency, to manage the administration and governance of the Convention on International Civil Aviation.

Radio Regulations: mean the ITU Administrative Regulations referred to Article 4 of ITU Constitutions, adopted by the ITU World Radiocommunication Conferences (WRC) and ratified by the UAE.

WRC: World Radiocommunication Conferences are held every three to four years, the job of WRC is to review, and, if necessary, revise the Radio Regulations, the international treaty governing the use of the radio frequency spectrum and the geostationary-satellite and non-geostationary-satellite orbits.

Radio Frequency: is any of the electromagnetic wave frequencies that lie in the range extending from 3 kHz to 3000 GHz.

Inductive systems: are electromagnetic communication systems which use a moving magnet to induce an electric current through induction, for transmission and reception of near field communication signals at low Radio Frequencies.

IMT: means International Mobile Telecommunications as per the ITU regulatory and technical frameworks.

PPDR: means Public Protection and Disaster Relief as per the ITU regulatory and technical frameworks.

Radiocommunication Service: means transmission, emission and/or reception of radio waves for specific telecommunication purposes (i.e. the conveyance of data, or messages or voice or visual images, or for the operation or control of machinery or apparatus.)

Aeronautical mobile service: means 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: means an Aeronautical Mobile Service re served for communications relating to safety and regularity of flight primarily along national or international civil air routes.

Aeronautical mobile (OR) service: means 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: means a Mobile-Satellite Service in which mobile earth stations are located on board aircraft.

Aeronautical mobile-satellite (R) service: means 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: means an Aeronautical Mobile-Satellite Service intended for communications, including those relating to flight coordination, primarily outside national and international civil air routes.

Aeronautical radionavigation service: means a Radionavigation Service intended for the benefit and for the safe operation of aircraft.

Aeronautical radionavigation-satellite service: means a Radionavigation Service intended for the benefit and for the safe operation of aircraft using satellites.

Amateur service: means 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: means a Radiocommunication Service using space stations on earth satellites for the same purposes as those of the amateur service.

Broadcasting service: means 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.

Broadcasting-satellite service: means a Radiocommunication Service in which signals transmitted or retransmitted by space stations are intended for direct reception by the general public.

Earth exploration-satellite service: means 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.

Fixed service: means a Radiocommunication Service between specified fixed points.

Fixed-satellite service: means 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.

Inter-satellite service: means a Radiocommunication Service providing links between artificial satellites.

Land mobile service: means a Mobile Service between base stations and land mobile stations, or between land mobile stations.

Land mobile-satellite service: means a Mobile-Satellite Service in which mobile earth stations are located on land.

Maritime mobile service: means a mobile Radiocommunication 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 be participating in this service.

Maritime mobile-satellite service: means a Mobile-Satellite Service in which mobile earth stations are located on board ships.

Maritime radionavigation service: means a Radionavigation Service intended for the benefit and for the safe operation of ships.

Maritime radionavigation-satellite service: means a Radionavigation-Satellite Service in which earth stations are located on board ships.

Meteorological aids service: means a Radiocommunication Service used for meteorological, including hydrological, observations and exploration.

Meteorological-satellite service: means an Earth Exploration-Satellite Service for meteorological purposes.

Mobile Service: means a Radiocommunication Service between mobile and land stations, or between mobile stations.

Mobile-Satellite Service: means 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.

Radio astronomy service: means a service involving the use of Radio Astronomy.

Radiodetermination service: means a Radiocommunication Service for the purpose of Radiodetermination.

Radiodetermination-satellite service: means a Radiocommunication Service for the purpose of Radiodetermination involving the use of one or more space stations.

Radiolocation service:
means a service (like Radar) that uses radio signals to detect and locate distant objects like aircraft.

Radiolocation-satellite service:
means a Radiodetermination-Satellite Service used for the purpose of Radiolocation.

Radionavigation service: means a Radiodetermination Service for the purpose of Radionavigation.

Radionavigation-satellite service: means a Radiodetermination-Satellite Service used for the purpose of Radionavigation.

Space operation Service: means a Radiocommunication Service concerned exclusively with the operation of spacecraft, in particular space tracking, space telemetry and space telecommand.

Space research service: means a Radiocommunication Service in which spacecraft or other objects in space are used for scientific or technological research purposes.

Standard frequency and time signal service: means 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.

Introduction

The Radio Frequencies are a scarce natural resource and it is essential that these are used in the most effective and efficient way by all wireless users in order to minimize harmful interference. The Radio Frequencies shall be subdivided into nine frequency bands, which shall be designated by progressive whole numbers in accordance with the following table.

As the unit of frequency is the hertz (Hz), frequencies shall be expressed *:

- in kilohertz (kHz), up to and including 3 000 kHz;
- in megahertz (MHz), above 3 MHz, up to and including 3 000 MHz;
- in gigahertz (GHz), above 3 GHz, up to and including 3 000 GHz.

(Table 1: Frequency bands and wavelength)

Band		Frequency		Wavelength	
No.	Description	Lower	Upper	Lower	Upper
4	Very Low Frequency (VLF)	3 kHz	30 kHz	100 km	10 km
5	Low Frequency (LF)	30 kHz	300 kHz	10 km	1 km
6	Medium Frequency (MF)	300 kHz	3 MHz	1 km	100 m
7	High Frequency (HF)	3 MHz	30MHz	100 m	10 m
8	Very High Frequency (VHF)	30 MHz	300 MHz	10 m	1 m
9	Ultra High Frequency (UHF)	300 MHz	3 GHz	1 m	10 cm
10	Super High Frequency (SHF)	3 GHz	30 GHz	10 cm	1 cm
11	Extremely High Frequency (EHF)	30 GHz	300 GHz	1 cm	1 mm
12	Tremendously High Frequency (THF)	300 GHz	3000 GHz	1 mm	100 µm

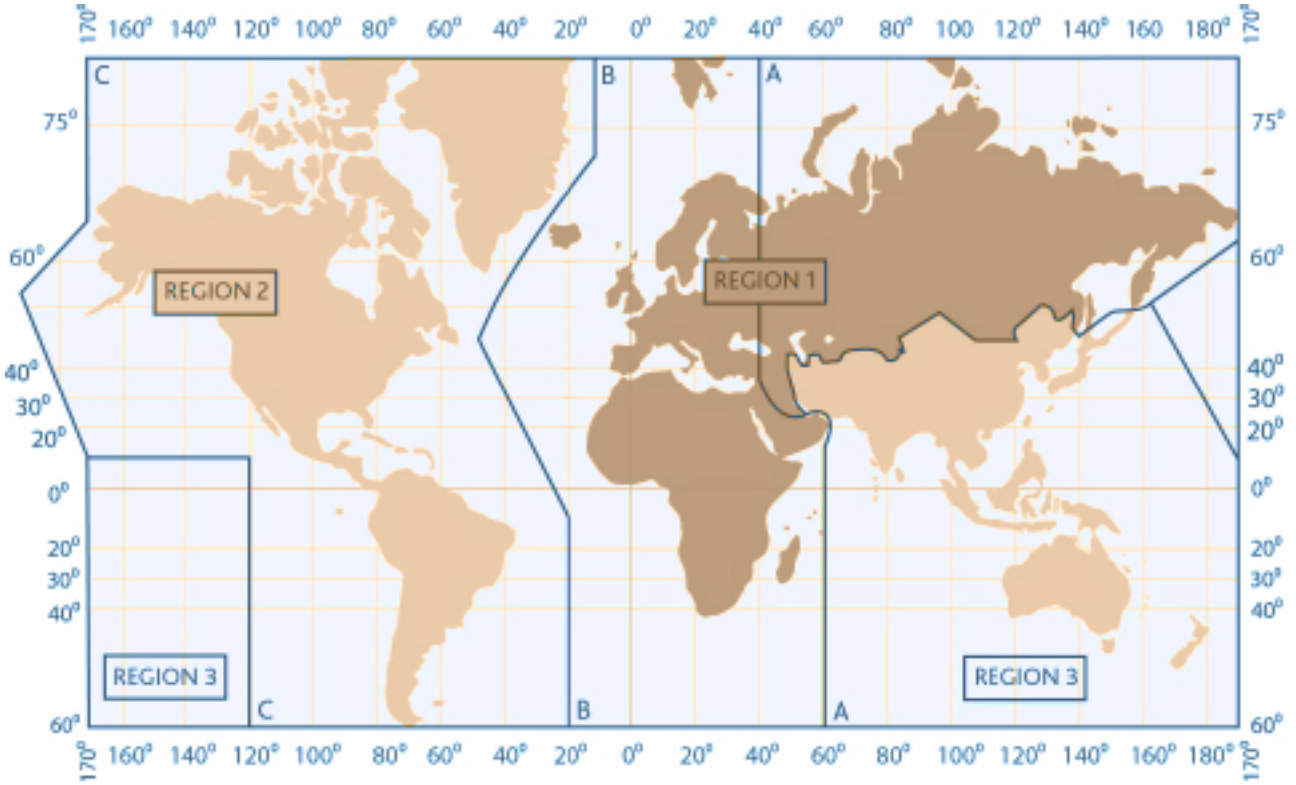
NOTE 1: "Band N" (N = band number) extends from 0.3×10^N Hz to 3×10^N Hz.
NOTE 2: Prefix: k = kilo (10^3), M = mega (10^6), G = giga (10^9).

* In the Table of National Frequency Allocation the following frequency units used:

(kHz) for frequencies up to 28 000 kHz inclusive
(MHz) for frequencies above 28 000 kHz up to 10 500 MHz inclusive
(GHz) for frequencies above 10 500 MHz

ITU-R* Regions

For the allocation of frequencies, the ITU Radio Regulations divides the world into three Regions as shown on the following map:



(Figure: Three Regions by ITU Radio Regulations)

5.3 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.

5.4 Region 2: Region 2 includes the area limited on the east by line B and on the west by line C.

5.5 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,

*ITU-R is the Radiocommunication sector of ITU

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.

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

5.7 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.

5.8 Line B: Line B extends from the North Pole along meridian 10° West of Greenwich to its intersection with parallel 72° North; then ceby 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.

5.9 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.

The United Arab Emirates lies in Region (1) near to territory borders of other countries in Region (3).

CATEGORIES OF SERVICES AS PRIMARY OR SECONDARY

Where, in this Plan, a band is indicated as allocated to more than one service, such services are listed in the following order:

- Services the names of which are printed in “capital” (example: FIXED); are called “primary” services;
- Services the names of which are printed in “normal characters” (example: Mobile); are called “secondary” services.
- Reference to ITU Radio Regulations Articles 5.29, 5.30 and 5.31, the stations of secondary service:

5.29 a) Shall not cause harmful interference to stations of primary service to which frequencies are already assigned or to which frequencies may be assigned at a later date;

5.30 b) 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;

5.31 c) Can claim protection, however, from harmful interference from stations of the same or other secondary services(s) to which frequencies may be assigned at a later date.

Table of National Frequency Allocation

This table of National Frequency Allocation is divided into rows representing frequency band allocations of Radio Services, and it consists of three columns, as follows:

ITU-Region 1:

- ITU allocations as given in ITU Radio Regulations, Article 5 for Region 1 (as UAE lies in Region 1) are listed to compare with the UAE Allocations.
- The Region 1 column has references to ITU International Footnotes as given in Article 5 of ITU Radio Regulations and shown as 5.XXX.
- The International Footnotes are reproduced at the end of this National Fre-quency Plan for reference purpose.

UAE Allocations:

- Primary Radio Services in the UAE Allocation column are arranged according to their priority amongst primary service. The Radio Service listed first in the cell has the highest priority.
- The UAE Allocations column has references to UAE National Footnotes and shown as UAEXX. These National Footnotes are also appended at the end of following table.
- The UAE National Footnotes are arranged in a Radio Service category for ease of reference and are based on additional and alternative allocations for UAE.

References and Notes:

- Includes further references information concerning the band and major utilization.

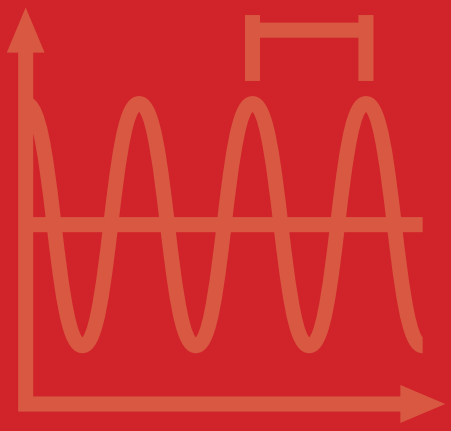


Table of National Frequency Allocation

Region 1	UAE Allocation	Remarks & References
Below 8.3 kHz		
(Not allocated) 5.53 5.54	(Not allocated) UAE1	• Inductive systems
8.3-9 kHz		
METEOROLOGICAL AIDS 5.54A 5.54B 5.54C	METEOROLOGICAL AIDS	• Inductive systems
	RADIONAVIGATION	
	FIXED	
	MOBILE UAE1	
9-11.3 kHz		
METEOROLOGICAL AIDS 5.54A	METEOROLOGICAL AIDS	• Inductive systems
RADIONAVIGATION	RADIONAVIGATION UAE1 UAE14	
11.3-14 kHz		
RADIONAVIGATION	RADIONAVIGATION UAE1 UAE14	• Inductive systems
14-19.95 kHz		
FIXED	FIXED	• Inductive systems
MARITIME MOBILE 5.57 5.55 5.56	MARITIME MOBILE UAE14	
19.95-20.05 kHz		
STANDARD FREQUENCY AND TIME SIGNAL (20 kHz)	STANDARD FREQUENCY AND TIME SIGNAL (20 kHz) UAE14	• ITU Radio Regulation Article 26

Region 1	UAE Allocation	Remarks & References
20.05-70 kHz		
FIXED	FIXED	• Inductive systems
MARITIME MOBILE 5.57 5.56 5.58	MARITIME MOBILE UAE14	
70-72 kHz		
RADIONAVIGATION 5.60	RADIONAVIGATION UAE14	• Inductive systems
72-84 kHz		
FIXED	FIXED	• Inductive systems
MARITIME MOBILE 5.57	MARITIME MOBILE	
RADIONAVIGATION 5.60 5.56	RADIONAVIGATION UAE14	
84-86 kHz		
RADIONAVIGATION 5.60	RADIONAVIGATION UAE14	• Inductive systems
86-90 kHz		
FIXED	FIXED	• Inductive systems
MARITIME MOBILE 5.57	MARITIME MOBILE	
RADIONAVIGATION 5.56	RADIONAVIGATION UAE14	

Region 1	UAE Allocation	Remarks & References
90-110 kHz		
RADIONAVIGATION 5.62	RADIONAVIGATION	• Inductive systems
Fixed 5.64	Fixed UAE14	
110-112 kHz		
FIXED	FIXED	• Inductive systems
MARITIME MOBILE	MARITIME MOBILE	
RADIONAVIGATION 5.64	RADIONAVIGATION UAE14	
112-115 kHz		
RADIONAVIGATION 5.60	RADIONAVIGATION UAE14	• Inductive systems
115-117.6 kHz		
RADIONAVIGATION 5.60	RADIONAVIGATION	• Inductive systems
Fixed	Fixed	
Maritime mobile 5.64 5.66	Maritime mobile UAE14	
117.6-126 kHz		
FIXED	FIXED	• Inductive systems
MARITIME MOBILE	MARITIME MOBILE	
RADIONAVIGATION 5.60 5.64	RADIONAVIGATION UAE14	

Region 1	UAE Allocation	Remarks & References
126-129 kHz		
RADIONAVIGATION 5.60	RADIONAVIGATION UAE14	• Inductive systems
129-130 kHz		
FIXED	FIXED	• Inductive systems
MARITIME MOBILE	MARITIME MOBILE	
RADIONAVIGATION 5.60 5.64	RADIONAVIGATION UAE14	
130-135.7 kHz		
FIXED	FIXED	• Inductive systems
MARITIME MOBILE 5.64 5.67	MARITIME MOBILE UAE14	
135.7-137.8 kHz		
FIXED	FIXED	• Inductive systems
MARITIME MOBILE	MARITIME MOBILE	
Amateur 5.67A 5.64 5.67 5.67B	Amateur UAE14	
137.8-148.5 kHz		
FIXED	FIXED	• Inductive systems
MARITIME MOBILE 5.64 5.67	MARITIME MOBILE UAE14	

Region 1	UAE Allocation	Remarks & References
148.5-255 kHz		
BROADCASTING 5.68 5.69 5.70	BROADCASTING UAE14	• Broadcasting is subject to ITU GE75 Agreement and Plan.
255-283.5 kHz		
BROADCASTING	BROADCASTING	• Broadcasting is subject to ITU GE75 Agreement and Plan. • ICAO Annex 10
AERONAUTICAL RADIONAVIGATION 5.70	AERONAUTICAL RADIONAVIGATION UAE7 UAE14	
283.5-315 kHz		
AERONAUTICAL RADIONAVIGATION	AERONAUTICAL RADIONAVIGATION	• ICAO Annex 10
MARITIME RADIONAVIGATION (radiobeacons) 5.73 5.74	MARITIME RADIONAVIGATION (radiobeacons) UAE7 UAE14	
315-325 kHz		
AERONAUTICAL RADIONAVIGATION	AERONAUTICAL RADIONAVIGATION	• ICAO Annex 10
Maritime radionavigation (radiobeacons) 5.73 5.72 5.75	Maritime radionavigation UAE7 UAE14	
325-405 kHz		
AERONAUTICAL RADIONAVIGATION 5.72	AERONAUTICAL RADIONAVIGATION UAE7 UAE14	• ICAO Annex 10

Region 1	UAE Allocation	Remarks & References
405-415 kHz		
RADIONAVIGATION 5.76 5.72	RADIONAVIGATION UAE7 UAE14	• ICAO Annex 10
415-435 kHz		
MARITIME MOBILE 5.79	MARITIME MOBILE	• ITU GE85 Plan • ICAO Annex 10
AERONAUTICAL RADIONAVIGATION	AERONAUTICAL RADIONAVIGATION UAE7 UAE11 UAE12 UAE14	
435-472 kHz		
MARITIME MOBILE 5.79	MARITIME MOBILE	• ITU GE85 Plan • ICAO Annex 10
Aeronautical radionavigation 5.77 5.82	Aeronautical radionavigation UAE7 UAE11 UAE12 UAE14	
472-479 kHz		
MARITIME MOBILE 5.79	MARITIME MOBILE	• ITU GE85 Plan • ICAO Annex 10
Amateur 5.80A	Aeronautical radionavigation	
Aeronautical radionavigation 5.77 5.80 5.80B 5.82	 UAE7 UAE11 UAE12 UAE14	
479-495 kHz		
MARITIME MOBILE 5.79 5.79A	MARITIME MOBILE	• ITU GE85 Plan • ICAO Annex 10
Aeronautical radionavigation 5.77 5.82	Aeronautical radionavigation UAE2 UAE7 UAE11 UAE12 UAE14	

Region 1	UAE Allocation	Remarks & References
495-505 kHz		
MARITIME MOBILE 5.82C	MARITIME MOBILE UAE2 UAE7 UAE11 UAE12 UAE14	• ITU GE85 Plan
505-526.5 kHz		
MARITIME MOBILE 5.7 5.79A 5.84	MARITIME MOBILE	• ITU GE85 Plan • ICAO Annex 10
AERONAUTICAL RADIONAVIGATION	AERONAUTICAL RADIONAVIGATION UAE2 UAE7 UAE11 UAE12 UAE14	
526.5-1 606.5 kHz		
BROADCASTING 5.87 5.87A	BROADCASTING UAE14	• Broadcasting is subject to ITU GE75 Agreement and Plan. • Digital Broadcasting is subject to ITU Radio Regulations and Rules of Procedures.
1 606.5-1 625 kHz		
FIXED	FIXED	• Maritime Mobile is subject to Appendix 17 and 25 of ITU Radio Regulations
MARITIME MOBILE 5.90	MARITIME MOBILE	
LAND MOBILE 5.92	LAND MOBILE UAE11 UAE12 UAE14	
1 625-1 635 kHz		
RADIOLOCATION 5.93	RADIOLOCATION UAE14	

Region 1	UAE Allocation	Remarks & References
1 635-1 800 kHz		
FIXED	FIXED	• Maritime Mobile is subject to Appendix 17 and 25 of ITU Radio Regulations
MARITIME MOBILE 5.90	MARITIME MOBILE	
LAND MOBILE 5.92 5.96	LAND MOBILE UAE11 UAE12 UAE14	
1 800-1 810 kHz		
RADIOLOCATION 5.93	RADIOLOCATION UAE14	
1 810-1 850 kHz		
AMATEUR 5.98 5.99 5.100 5.101	AMATEUR UAE8 UAE14	
1 850-2 000 kHz		
FIXED	FIXED	• Maritime Mobile is subject to Appendix 17 and 25 of ITU Radio Regulations
MOBILE except aeronautical mobile 5.92 5.96 5.103	MOBILE except aeronautical mobile UAE11 UAE12 UAE14	
2 000-2 025 kHz		
FIXED	FIXED	• Maritime Mobile is subject to Appendix 17 and 25 of ITU Radio Regulations
MOBILE except aeronautical mobile (R) 5.92 5.103	MOBILE except aeronautical mobile (R) UAE11 UAE12 UAE14	

Region 1	UAE Allocation	Remarks & References
2 025-2 045 kHz		
FIXED	FIXED	• Maritime Mobile is subject to Appendix 17 and 25 of ITU Radio Regulations
MOBILE except aeronautical mobile (R)	MOBILE except aeronautical mobile (R)	
Meteorological aids 5.104 5.92 5.103	Meteorological aids UAE11 UAE12 UAE14	
2 045-2 160 kHz		
FIXED	FIXED	• Maritime Mobile is subject to Appendix 17 and 25 of ITU Radio Regulations
MARITIME MOBILE	MARITIME MOBILE	
LAND MOBILE 5.92	LAND MOBILE UAE11 UAE12 UAE14	
2 160-2 170 kHz		
RADIOLOCATION 5.93 5.107	RADIOLOCATION UAE14	
2 170-2 173.5 kHz		
MARITIME MOBILE	MARITIME MOBILE UAE11 UAE14	
2 173.5-2 190.5 kHz		
MOBILE (distress and calling) 5.108 5.109 5.110 5.111	MOBILE (distress and calling) UAE2 UAE11	• Maritime Mobile is subject to Appendix 17 and 25 of ITU Radio Regulations
2 190.5-2 194 kHz		
MARITIME MOBILE	MARITIME MOBILE UAE11 UAE14	• Maritime Mobile is subject to Appendix 17 and 25 of ITU Radio Regulations

Region 1	UAE Allocation	Remarks & References
2 194-2 300 kHz		
FIXED	FIXED	
MOBILE except aeronautical mobile (R) 5.92 5.103 5.112	MOBILE except aeronautical mobile (R) UAE11 UAE12 UAE14	
2 300-2 498 kHz		
FIXED	FIXED	• Broadcasting is subject to ITU Radio Regulations Article 23
MOBILE except aeronautical mobile (R)	MOBILE except aeronautical mobile (R)	
BROADCASTING 5.113 5.103	BROADCASTING UAE11 UAE12 UAE14	
2 498-2 501 kHz		
STANDARD FREQUENCY AND TIME SIGNAL(2500kHz)	STANDARD FREQUENCY AND TIME SIGNAL(2500kHz) UAE14	• ITU Radio Regulations Article 26
2 501-2 502 kHz		
STANDARD FREQUENCY AND TIME SIGNAL	STANDARD FREQUENCY AND TIME SIGNAL	• ITU Radio Regulations Article 26
Space Research	Space Research UAE14	
2 502-2 625 kHz		
FIXED	FIXED	• Maritime Mobile is subject to Appendix 17 and 25 of ITU Radio Regulations
MOBILE except aeronautical mobile (R) 5.92 5.103 5.114	MOBILE except aeronautical mobile (R) UAE11 UAE12 UAE14	

Region 1	UAE Allocation	Remarks & References
2 625-2 650 kHz		
MARITIME MOBILE	MARITIME MOBILE	• Maritime Mobile is subject to Appendix 17 and 25 of ITU Radio Regulations
MARITIME RADIONAVIGATION 5.92	MARITIME RADIONAVIGATION UAE11 UAE14	
2 650-2 850 kHz		
FIXED	FIXED	• Maritime Mobile is subject to Appendix 17 and 25 of ITU Radio Regulations
MOBILE except aeronautical mobile (R) 5.92 5.103	MOBILE except aeronautical mobile (R) UAE11 UAE12 UAE14	
2 850-3 025 kHz		
AERONAUTICAL MOBILE (R) 5.111 5.115	AERONAUTICAL MOBILE (R) UAE2 UAE7 UAE14	• Aeronautical Mobile is subject to ITU Radio Regulations Appendix 27
3 025-3 155 kHz		
AERONAUTICAL MOBILE (OR)	AERONAUTICAL MOBILE (OR) UAE7 UAE14	• Aeronautical Mobile is subject to ITU Radio Regulations Appendix 26
3 155-3 200 kHz		
FIXED	FIXED	• Maritime Mobile is subject to Appendix 17 and 25 of ITU Radio Regulations
MOBILE except aeronautical mobile (R) 5.116 5.117	MOBILE except aeronautical mobile (R) UAE11 UAE12 UAE14	

Region 1	UAE Allocation	Remarks & References
3 200-3 230 kHz		
FIXED	FIXED	• Broadcasting is subject to ITU Radio Regulations Article 23
MOBILE except aeronautical mobile (R)	MOBILE except aeronautical mobile (R)	
BROADCASTING 5.113 5.116	BROADCASTING UAE11 UAE12 UAE14	
3 230-3 400 kHz		
FIXED	FIXED	• Broadcasting is subject to ITU Radio Regulations Article 23
MOBILE except aeronautical mobile	MOBILE except aeronautical mobile	
BROADCASTING 5.113 5.116 5.118	BROADCASTING UAE11 UAE12 UAE14	
3 400-3 500 kHz		
AERONAUTICAL MOBILE (R)	AERONAUTICAL MOBILE (R) UAE7 UAE14	• Aeronautical Mobile is subject to ITU Radio Regulations Appendix 27
3 500-3 800 kHz		
AMATEUR	AMATEUR	• Maritime Mobile is subject to Appendix 17 and 25 of ITU Radio Regulations
FIXED	FIXED	
MOBILE except aeronautical mobile 5.92	MOBILE except aeronautical mobile UAE8 UAE11 UAE12 UAE14	

Region 1	UAE Allocation	Remarks & References
3 800-3 900 kHz		
FIXED	FIXED	
AERONAUTICAL MOBILE (OR)	AERONAUTICAL MOBILE (OR)	
LAND MOBILE	LAND MOBILE UAE7 UAE12 UAE14	
3 900-3 950 kHz		
AERONAUTICAL MOBILE (OR) 5.123	AERONAUTICAL MOBILE (OR) UAE7 UAE14	• Aeronautical Mobile is subject ITU radio regulations Appendix 26
3 950-4 000 kHz		
FIXED	FIXED	• Broadcasting is subject to ITU Radio Regulations Article 23
BROADCASTING	BROADCASTING UAE14	
4 000-4 063 kHz		
FIXED	FIXED	• Maritime Mobile is subject to Appendix 17 and 25 of ITU Radio Regulations
MARITIME MOBILE 5.127 5.126	MARITIME MOBILE UAE11 UAE14	
4 063-4 438 kHz		
MARITIME MOBILE 5.79A 5.109 5.110 5.130 5.131 5.132 5.128	MARITIME MOBILE UAE2 UAE11 UAE14	• Maritime Mobile is subject to Appendix 17 and 25 of ITU Radio Regulations

Region 1	UAE Allocation	Remarks & References
4 438-4 488 kHz		
FIXED	FIXED	• Maritime Mobile is subject to Appendix 17 and 25 of ITU Radio Regulations
MOBILE except aeronautical mobile (R)	MOBILE except aeronautical mobile (R)	
Radiolocation 5.132A 5.132B	Radiolocation UAE11 UAE12 UAE14	
4 488-4 650 kHz		
FIXED	FIXED	• Maritime Mobile is subject to Appendix 17 and 25 of ITU Radio Regulations
MOBILE except aeronautical mobile (R)	MOBILE except aeronautical mobile (R) UAE11 UAE12 UAE14	
4 650-4 700 kHz		
AERONAUTICAL MOBILE (R)	AERONAUTICAL MOBILE (R) UAE7	• Aeronautical Mobile is subject to ITU Radio Regulations Appendix 27
4 700-4 750 kHz		
AERONAUTICAL MOBILE (OR)	AERONAUTICAL MOBILE (OR) UAE7	• Aeronautical Mobile is subject to ITU Radio Regulations Appendix 26
4 750-4 850 kHz		
FIXED	FIXED	• Broadcasting is subject to ITU Radio Regulations Article 23
AERONAUTICAL MOBILE (OR)	AERONAUTICAL MOBILE (OR)	
LAND MOBILE	LAND MOBILE	
BROADCASTING 5.113	BROADCASTING UAE7 UAE11 UAE12	

Region 1	UAE Allocation	Remarks & References
4 850-4 995 kHz		
FIXED	FIXED	• Broadcasting is subject to ITU Radio Regulations Article 23
LAND MOBILE	LAND MOBILE	
BROADCASTING 5.113	BROADCASTING UAE12 UAE14	
4 995-5 003 kHz		
STANDARD FREQUENCY AND TIME SIGNAL (5 000 kHz)	STANDARD FREQUENCY AND TIME SIGNAL (5 000 kHz) UAE14	• ITU Radio Regulations Article 26
5 003-5 005 kHz		
STANDARD FREQUENCY AND TIME SIGNAL	STANDARD FREQUENCY AND TIME SIGNAL	• ITU Radio Regulations Article 26
Space research	Space research UAE14	
5 005-5 060 kHz		
FIXED	FIXED	• Broadcasting is subject to ITU Radio Regulations Article 23
BROADCASTING 5.113	BROADCASTING UAE14	
5 060-5 250 kHz		
FIXED	FIXED	• Maritime Mobile is subject to Appendix 17 and 25 of ITU Radio Regulations
Mobile except aeronautical mobile 5.133	Mobile except aeronautical mobile UAE11 UAE12 UAE14	

Region 1	UAE Allocation	Remarks & References
5 250-5 275 kHz		
FIXED	FIXED	• Maritime Mobile is subject to Appendix 17 and 25 of ITU Radio Regulations.
MOBILE except aeronautical mobile	MOBILE except aeronautical mobile	
Radiolocation 5.132A 5.133A	Radiolocation UAE11 UAE12 UAE14	
5 275-5 351.5 kHz		
FIXED	FIXED	• Maritime Mobile is subject to Appendix 17 and 25 of ITU Radio Regulations.
MOBILE except aeronautical mobile	MOBILE except aeronautical mobile UAE11 UAE12 UAE14	
5 351.5-5 366.5 kHz		
FIXED	FIXED	• Maritime Mobile is subject to Appendix 17 and 25 of ITU Radio Regulations.
MOBILE except aeronautical mobile	MOBILE except aeronautical mobile	
Amateur 5.133B	Amateur UAE8 UAE11 UAE12 UAE14	
5 366.5-5 450 kHz		
FIXED	FIXED	• Maritime Mobile is subject to Appendix 17 and 25 of ITU Radio Regulations.
MOBILE except aeronautical mobile	MOBILE except aeronautical mobile UAE11 UAE12 UAE14	

Region 1	UAE Allocation	Remarks & References
5 450-5 480 kHz		
FIXED	FIXED	• Aeronautical Mobile is subject to ITU Radio Regulations Appendix 26.
AERONAUTICAL MOBILE (OR)	AERONAUTICAL MOBILE (OR)	
LAND MOBILE	LAND MOBILE UAE7 UAE12 UAE14	
5 480-5 680 kHz		
AERONAUTICAL MOBILE (R) 5.111 5.115	AERONAUTICAL MOBILE (R) UAE7	• Aeronautical Mobile is subject to ITU Radio Regulations Appendix 27.
5 680-5 730 kHz		
AERONAUTICAL MOBILE (OR) 5.111 5.115	AERONAUTICAL MOBILE (OR) UAE2 UAE7	• Aeronautical Mobile is subject to ITU Radio Regulations Appendix 26.
5 730-5 900 kHz		
FIXED	FIXED	
LAND MOBILE	LAND MOBILE UAE12 UAE14	
5 900-5 950 kHz		
BROADCASTING 5.134 5.136	BROADCASTING UAE14	• Broadcasting is subject to ITU Radio Regulations Article 12.
5 950-6 200 kHz		
BROADCASTING	BROADCASTING UAE14	• Broadcasting is subject to ITU Radio Regulations Article 12.

Region 1	UAE Allocation	Remarks & References
6 200-6 525 kHz		
MARITIME MOBILE 5.109 5.110 5.130 5.132 5.137	MARITIME MOBILE UAE2 UAE11	• Maritime Mobile is subject to Appendix 17 and 25 of ITU Radio Regulations.
6 525-6 685 kHz		
AERONAUTICAL MOBILE (R)	AERONAUTICAL MOBILE (R) UAE7	• Aeronautical Mobile is subject to ITU Radio Regulations Appendix 27.
6 685-6 765 kHz		
AERONAUTICAL MOBILE (OR)	AERONAUTICAL MOBILE (OR) UAE7	• Aeronautical Mobile is subject to ITU Radio Regulations Appendix 26
6 765-7 000 kHz		
FIXED	FIXED	• Maritime Mobile is subject to Appendix 17 and 25 of ITU Radio Regulations.
MOBILE except aeronautical mobile (R) 5.138	MOBILE except aeronautical mobile (R) UAE11 UAE12 UAE14	
7 000-7 100 kHz		
AMATEUR	AMATEUR	
AMATEUR-SATELLITE 5.140 5.141 5.141A	AMATEUR-SATELLITE UAE8	
7 100-7 200 kHz		
AMATEUR	FIXED	
	MOBILE except aeronautical mobile (R)	
	AMATEUR	
5.141A 5.141B	UAE8 UAE11 UAE12 UAE14	

Region 1	UAE Allocation	Remarks & References
7 200-7 300 kHz		
BROADCASTING	BROADCASTING UAE14	• Broadcasting is subject to ITU Radio Regulations Article 12.
7 300-7 400 kHz		
BROADCASTING 5.134 5.143 5.143A 5.143B 5.143C 5.143D	BROADCASTING FIXED UAE14	• Broadcasting is subject to ITU Radio Regulations Article 12.
7 400-7 450 kHz		
BROADCASTING 5.143B 5.143C	BROADCASTING FIXED UAE14	• Broadcasting is subject to ITU Radio Regulations Article 12.
7 450-8 100 kHz		
FIXED MOBILE except aeronautical mobile (R) 5.144	FIXED MOBILE except aeronautical mobile (R) UAE11 UAE12 UAE14	• Maritime Mobile is subject to Appendix 17 and 25 of ITU Radio Regulations.
8 100-8 195 kHz		
FIXED MARITIME MOBILE	FIXED MARITIME MOBILE UAE11	• Maritime Mobile is subject to Appendix 17 and 25 of ITU Radio Regulations.
8 195-8 815 kHz		
MARITIME MOBILE 5.109 5.110 5.132 5.145 5.111	MARITIME MOBILE UAE2 UAE11	• Maritime Mobile is subject to Appendix 17 and 25 of ITU

Region 1	UAE Allocation	Remarks & References
8 815-8 965 kHz		
AERONAUTICAL MOBILE (R)	AERONAUTICAL MOBILE (R) UAE7	• Aeronautical Mobile is subject to ITU Radio Regulations Appendix 27.
8 965-9 040 kHz		
AERONAUTICAL MOBILE (OR)	AERONAUTICAL MOBILE (OR) UAE7	• Aeronautical Mobile is subject to ITU Radio Regulations Appendix 26.
9 040-9 305 kHz		
FIXED	FIXED	
9 305-9 355 kHz		
FIXED	FIXED	
Radiolocation 5.145A 5.145B	Radiolocation	
9 355-9 400 kHz		
FIXED	FIXED	
9 400-9 500 kHz		
BROADCASTING 5.134 5.146	BROADCASTING UAE14	• Broadcasting is subject to ITU Radio Regulations Article 12.
9 500-9 900 kHz		
BROADCASTING 5.147	BROADCASTING UAE14	• Broadcasting is subject to ITU Radio Regulations Article 12.

Region 1	UAE Allocation	Remarks & References
9 900-9 995 kHz		
FIXED	FIXED	
9 995-10 003 kHz		
STANDARD FREQUENCY AND TIME SIGNAL (10 000 kHz) 5.111	STANDARD FREQUENCY AND TIME SIGNAL (10 000 kHz) UAE14	• ITU Radio Regulations Article 26
10 003-10 005 kHz		
STANDARD FREQUENCY AND TIME SIGNAL	STANDARD FREQUENCY AND TIME SIGNAL	• ITU Radio Regulations Article 26
Space research 5.111	Space research UAE2 UAE14	
10 005-10 100 kHz		
AERONAUTICAL MOBILE (R) 5.111	AERONAUTICAL MOBILE (R) UAE7	• Aeronautical Mobile is subject to ITU Radio Regulations Appendix 27.
10 100-10 150 kHz		
FIXED	FIXED	
Amateur	Amateur UAE8	
10 150-11 175 kHz		
FIXED	FIXED	• Maritime Mobile is subject to Appendix 17 and 25 of ITU Radio Regulations.
Mobile except aeronautical mobile (R)	Mobile except aeronautical mobile (R) UAE11 UAE12 UAE14	

Region 1	UAE Allocation	Remarks & References
11 175-11 275 kHz		
AERONAUTICAL MOBILE (OR)	AERONAUTICAL MOBILE (OR) UAE7	• Aeronautical Mobile is subject to ITU Radio Regulations Appendix 26
11 275-11 400 kHz		
AERONAUTICAL MOBILE (R)	AERONAUTICAL MOBILE (R) UAE7	• Aeronautical Mobile is subject to ITU Radio Regulations Appendix 27
11 400-11 600 kHz		
FIXED	FIXED	
11 600-11 650 kHz		
BROADCASTING 5.134 5.146	BROADCASTING UAE14	• Broadcasting is subject to ITU Radio Regulations Article 12
11 650-12 050 kHz		
BROADCASTING 5.147	BROADCASTING UAE14	• Broadcasting is subject to ITU Radio Regulations Article 12
12 050-12 100 kHz		
BROADCASTING 5.134 5.146	BROADCASTING UAE14	• Broadcasting is subject to ITU Radio Regulations Article 12
12 100-12 230 kHz		
FIXED	FIXED	

Region 1	UAE Allocation	Remarks & References
12 230-13 200 kHz		
MARITIME MOBILE 5.109 5.110 5.132 5.145	MARITIME MOBILE UAE2 UAE11	
13 200-13 260 kHz		
AERONAUTICAL MOBILE (OR)	AERONAUTICAL MOBILE (OR) UAE7	• Aeronautical Mobile is subject to ITU Radio Regulations Appendix 26
13 260-13 360 kHz		
AERONAUTICAL MOBILE (R)	AERONAUTICAL MOBILE (R) UAE7	• Aeronautical Mobile is subject to ITU Radio Regulations Appendix 27
13 360-13 410 kHz		
FIXED	FIXED	
RADIO ASTRONOMY 5.149	RADIO ASTRONOMY UAE5	
13 410-13 450 kHz		
FIXED	FIXED	
Mobile except aeronautical mobile (R)	Mobile except aeronautical mobile (R) UAE11 UAE12 UAE14	

Region 1	UAE Allocation	Remarks & References
13 450-13 550 kHz		
FIXED	FIXED	
Mobile except aeronautical mobile (R)	Mobile except aeronautical mobile (R)	
Radiolocation 5.132A 5.149A	Radiolocation UAE11 UAE12 UAE14	
13 550-13 570 kHz		
FIXED	FIXED	
Mobile except aeronautical mobile (R) 5.150	Mobile except aeronautical mobile (R) UAE11 UAE12 UAE14	
13 570-13 600 kHz		
BROADCASTING 5.134 5.151	BROADCASTING UAE14	• Broadcasting is subject to ITU Radio Regulations Article 12
13 600-13 800 kHz		
BROADCASTING	BROADCASTING UAE14	• Broadcasting is subject to ITU Radio Regulations Article 12
13 800-13 870 kHz		
BROADCASTING 5.134 5.151	BROADCASTING UAE14	• Broadcasting is subject to ITU Radio Regulations Article 12
13 870-14 000 kHz		
FIXED	FIXED	
Mobile except aeronautical mobile (R)	Mobile except aeronautical mobile (R) UAE11 UAE12 UAE14	

Region 1	UAE Allocation	Remarks & References
14 000-14 250 kHz		
AMATEUR	AMATEUR	
AMATEUR-SATELLITE	AMATEUR-SATELLITE UAE8	
14 250-14 350 kHz		
AMATEUR 5.152	AMATEUR UAE8	
14 350-14 990 kHz		
FIXED	FIXED	
Mobile except aeronautical mobile (R)	Mobile except aeronautical mobile (R) UAE11 UAE12 UAE14	
14 990-15 005 kHz		
STANDARD FREQUENCY AND TIME SIGNAL (15 000 kHz) 5.111	STANDARD FREQUENCY AND TIME SIGNAL (15 000 kHz) UAE2 UAE14	• ITU Radio Regulations Article 26
15 005-15 010 kHz		
STANDARD FREQUENCY AND TIME SIGNAL	STANDARD FREQUENCY AND TIME SIGNAL	• ITU Radio Regulations Article 26
Space research	Space research UAE14	
15 010-15 100 kHz		
AERONAUTICAL MOBILE (OR)	AERONAUTICAL MOBILE (OR) UAE7	• Aeronautical Mobile is subject to ITU Radio Regulations Appendix 26

Region 1	UAE Allocation	Remarks & References
15 100-15 600		
BROADCASTING	BROADCASTING UAE14	• Broadcasting is subject to ITU Radio Regulations Article 12
15 600-15 800 kHz		
BROADCASTING 5.134 5.146	BROADCASTING UAE14	• Broadcasting is subject to ITU Radio Regulations Article 12
15 800-16 100 kHz		
FIXED 5.153	FIXED	
16 100-16 200 kHz		
FIXED	FIXED	
Radiolocation 5.145A 5.145B	Radiolocation	
16 200-16 360 kHz		
FIXED	FIXED	
16 360-17 410 kHz		
MARITIME MOBILE 5.109 5.110 5.132 5.145	MARITIME MOBILE UAE2 UAE11	• Maritime Mobile is subject to Appendix 17 and 25 of ITU Radio Regulations
17 410-17 480 kHz		
FIXED	FIXED	

Region 1	UAE Allocation	Remarks & References
17 480-17 550 kHz		
BROADCASTING 5.134 5.146	BROADCASTING UAE14	• Broadcasting is subject to ITU Radio Regulations Article 12
17 550-17 900 kHz		
BROADCASTING	BROADCASTING UAE14	• Broadcasting is subject to ITU Radio Regulations Article 12
17 900-17 970 kHz		
AERONAUTICAL MOBILE (R)	AERONAUTICAL MOBILE (R) UAE7	• Aeronautical Mobile is subject to ITU Radio Regulations Appendix 27
17 970-18 030 kHz		
AERONAUTICAL MOBILE (OR)	AERONAUTICAL MOBILE (OR) UAE7	• Aeronautical Mobile is subject to ITU Radio Regulations Appendix 26
18 030-18 052 kHz		
FIXED	FIXED	
18 052-18 068 kHz		
FIXED	FIXED	
Space research	Space research	
18 068-18 168 kHz		
AMATEUR	AMATEUR	
AMATEUR-SATELLITE 5.154	AMATEUR-SATELLITE UAE8	

Region 1	UAE Allocation	Remarks & References
18 168-18 780 kHz		
FIXED	FIXED	
Mobile except aeronautical mobile	Mobile except aeronautical mobile UAE11 UAE12	
18 780-18 900 kHz		
MARITIME MOBILE	MARITIME MOBILE UAE11	• Maritime Mobile is subject to Appendix 17 and 25 of ITU Radio Regulations
18 900-19 020 kHz		
BROADCASTING 5.134 5.146	BROADCASTING UAE14	• Broadcasting is subject to ITU Radio Regulations Article 12
19 020-19 680 kHz		
FIXED	FIXED	
19 680-19 800 kHz		
MARITIME MOBILE 5.132	MARITIME MOBILE UAE2 UAE11	• Maritime Mobile is subject to Appendix 17 and 25 of ITU Radio Regulations
19 800-19 990 kHz		
FIXED	FIXED	

Region 1	UAE Allocation	Remarks & References
19 990-19 995 kHz		
STANDARD FREQUENCY AND TIME SIGNAL	STANDARD FREQUENCY AND TIME SIGNAL	• ITU Radio Regulations Article 26
Space research 5.111	Space research UAE2 UAE14	
19 995-20 010 kHz		
STANDARD FREQUENCY AND TIME SIGNAL (20 000 kHz) 5.111	STANDARD FREQUENCY AND TIME SIGNAL (20 000 kHz) UAE14	• ITU Radio Regulations Article 26
20 010-21 000 kHz		
FIXED	FIXED	
Mobile	Mobile UAE11 UAE12 UAE14	
21 000-21 450 kHz		
AMATEUR	AMATEUR	
AMATEUR-SATELLITE	AMATEUR-SATELLITE UAE8	
21 450-21 850 kHz		
BROADCASTING	BROADCASTING UAE14	• Broadcasting is subject to ITU Radio Regulations Article 12
21 850-21 870 kHz		
FIXED 5.155A 5.155	FIXED	

Region 1	UAE Allocation	Remarks & References
21 870-21 924 kHz		
FIXED 5.155B	FIXED UAE3	
21 924-22 000 kHz		
AERONAUTICAL MOBILE (R)	AERONAUTICAL MOBILE (R) UAE7	• Aeronautical Mobile is subject to ITU Radio Regulations Appendix 27
22 000-22 855 kHz		
MARITIME MOBILE 5.132 5.156	MARITIME MOBILE UAE2 UAE11	• Maritime Mobile is subject to Appendix 17 and 25 of ITU Radio Regulations
22 855-23 000 kHz		
FIXED 5.156	FIXED	
23 000-23 200 kHz		
FIXED	FIXED	• Aeronautical Mobile is subject to ITU Radio Regulations Appendix 27
Mobile except aeronautical mobile (R) 5.156	Mobile except aeronautical mobile (R) UAE11 UAE12 UAE14	
23 200-23 350 kHz		
FIXED 5.156A	FIXED	• Aeronautical Mobile is subject to ITU Radio Regulations Appendix 26
AERONAUTICAL MOBILE (OR)	AERONAUTICAL MOBILE (OR) UAE3 UAE7	

Region 1	UAE Allocation	Remarks & References
23 350-24 000 kHz		
FIXED	FIXED	
MOBILE except aeronautical mobile 5.157	MOBILE except aeronautical mobile UAE11 UAE12 UAE14	
24 000-24 450 kHz		
FIXED	FIXED	
LAND MOBILE	LAND MOBILE UAE11 UAE12 UAE14	
24 450-24 600 kHz		
FIXED	FIXED	
LAND MOBILE	LAND MOBILE	
Radiolocation 5.132A 5.158	Radiolocation UAE11 UAE12 UAE14	
24 600-24 890 kHz		
FIXED	FIXED	
LAND MOBILE	LAND MOBILE UAE11 UAE12 UAE14	
24 890-24 990 kHz		
AMATEUR	AMATEUR	
AMATEUR-SATELLITE	AMATEUR-SATELLITE UAE8	

Region 1	UAE Allocation	Remarks & References
24 990-25 005 kHz		
STANDARD FREQUENCY AND TIME SIGNAL (25 000 kHz)	STANDARD FREQUENCY AND TIME SIGNAL (25 000 kHz) UAE14	• ITU Radio Regulations Article 26
25 005-25 010 kHz		
STANDARD FREQUENCY AND TIME SIGNAL	STANDARD FREQUENCY AND TIME SIGNAL	• ITU Radio Regulations Article 26
Space research	Space research UAE14	
25 010-25 070 kHz		
FIXED	FIXED	
MOBILE except aeronautical mobile	MOBILE except aeronautical mobile UAE11 UAE12 UAE14	
25 070-25 210 kHz		
MARITIME MOBILE	MARITIME MOBILE UAE11	• Maritime Mobile is subject to Appendix 17 and 25 of ITU Radio Regulations
25 210-25 550 kHz		
FIXED	FIXED	
MOBILE except aeronautical mobile	MOBILE except aeronautical mobile UAE11 UAE12 UAE14	

Region 1	UAE Allocation	Remarks & References
25 550-25 670 kHz		
RADIO ASTRONOMY 5.149	RADIO ASTRONOMY UAE5	
25 670-26 100 kHz		
BROADCASTING	BROADCASTING UAE14	• Broadcasting is subject to ITU Radio Regulations Article 12
26 100-26 175 kHz		
MARITIME MOBILE 5.132	MARITIME MOBILE UAE2 UAE11	• Maritime Mobile is subject to Appendix 17 and 25 of ITU Radio Regulations
26 175-26 200 kHz		
FIXED	FIXED	
MOBILE except aeronautical mobile	MOBILE except aeronautical mobile UAE11 UAE12 UAE14	
26 200-26 350 kHz		
FIXED	FIXED	
MOBILE except aeronautical mobile	MOBILE except aeronautical mobile	
Radiolocation 5.132A 5.133A	Radiolocation UAE11 UAE12 UAE14	
26 350-27 500 kHz		
FIXED	FIXED	
MOBILE except aeronautical mobile 5.150	MOBILE except aeronautical mobile UAE11 UAE12 UAE14	

Region 1	UAE Allocation	Remarks & References
27.5-28 MHz		
METEOROLOGICAL AIDS	METEOROLOGICAL AIDS	
FIXED	FIXED	
MOBILE	MOBILE UAE12 UAE14	
28-29.7 MHz		
AMATEUR	AMATEUR	
AMATEUR-SATELLITE	AMATEUR-SATELLITE UAE8	
29.7-30.005 MHz		
FIXED	FIXED	
MOBILE	MOBILE UAE12 UAE14	
30.005-30.01 MHz		
SPACE OPERATION (satellite identification)	SPACE OPERATION (satellite identification)	
FIXED	FIXED	
MOBILE	MOBILE	
SPACE RESEARCH	SPACE RESEARCH UAE12 UAE14	
30.01-37.5 MHz		
FIXED	FIXED	
MOBILE	MOBILE UAE12 UAE14	

Region 1	UAE Allocation	Remarks & References
37.5-38.25 MHz		
FIXED	FIXED	
MOBILE	MOBILE	
Radio astronomy 5.149	Radio astronomy UAE5 UAE12 UAE14	
38.25-39 MHz		
FIXED	FIXED	
MOBILE	MOBILE UAE12 UAE14	
39-39.5 MHz		
FIXED	FIXED	
MOBILE	MOBILE	
Radiolocation 5.132A 5.159	Radiolocation UAE12 UAE14	
39.5-39.986 MHz		
FIXED	FIXED	
MOBILE	MOBILE UAE12 UAE14	
39.986-40.02 MHz		
FIXED	FIXED	
MOBILE	MOBILE	
Space research	Space research UAE12 UAE14	

Region 1	UAE Allocation	Remarks & References
40.02-40.98 MHz		
FIXED	FIXED	
MOBILE 5.150	MOBILE UAE12 UAE14	
40.98-41.015 MHz		
FIXED	FIXED	
MOBILE	MOBILE	
Space research 5.160 5.161	Space research UAE12 UAE14	
41.015-42 MHz		
FIXED	FIXED	
MOBILE 5.160 5.161 5.161A	MOBILE UAE12 UAE14	
42-42.5 MHz		
FIXED	FIXED	
MOBILE	MOBILE	
Radiolocation 5.132A 5.160 5.161B	Radiolocation UAE11 UAE12 UAE14	
42.5-44 MHz		
FIXED	FIXED	
MOBILE 5.160 5.161 5.161A	MOBILE UAE11 UAE12 UAE14	

Region 1	UAE Allocation	Remarks & References
44-47 MHz		
FIXED	FIXED	
MOBILE 5.162 5.162A	MOBILE UAE12 UAE14	
47-50 MHz		
BROADCASTING 5.162A 5.163 5.164 5.165	BROADCASTING	• Broadcasting is subject to ITU GE89 Agreement and Plan (Rev.2006) • FM sound Broadcasting for events
50-52 MHz		
BROADCASTING	BROADCASTING	• Broadcasting is subject to ITU GE89 Agreement and Plan (Rev.2006) • FM sound Broadcasting for events
Amateur 5.166A 5.166B 5.166C 5.166D 5.166E 5.169 5.169A 5.169B 5.162A 5.164 5.165	AMATEUR UAE8	
52-68 MHz		
BROADCASTING 5.162A 5.163 5.164 5.165 5.169 5.169A 5.169B 5.171	BROADCASTING AMATEUR UAE8 UAE16	• Broadcasting is subject to ITU GE89 Agreement and Plan (Rev.2006) • FM sound Broadcasting for events • Amateur range is 52-54 MHz
68-74.8 MHz		
FIXED	FIXED	
MOBILE except aeronautical mobile 5.149 5.175 5.177 5.179	MOBILE except aeronautical mobile UAE5 UAE8 UAE12 UAE16	

Region 1	UAE Allocation	Remarks & References
74.8-75.2 MHz		
AERONAUTICAL RADIONAVIGATION 5.180 5.181	AERONAUTICAL RADIONAVIGATION UAE3 UAE7	• Instrument Landing System (ILS)/Marker Beacons
75.2-87.5 MHz		
FIXED	FIXED	
MOBILE except aeronautical mobile 5.175 5.179 5.187	MOBILE except aeronautical mobile UAE12	
87.5-100 MHz		
BROADCASTING 5.190	BROADCASTING UAE14	• Broadcasting is subject to ITU GE84 Agreement and Plan • FM Broadcasting
100-108 MHz		
BROADCASTING 5.192 5.194	BROADCASTING UAE14	• Broadcasting is subject to ITU GE84 Agreement and Plan • FM Broadcasting
108-117.975 MHz		
AERONAUTICAL RADIONAVIGATION 5.197 5.197A	AERONAUTICAL RADIONAVIGATION UAE7	• Instrument Landing System/ Localizer • VHF Omnidirectional Radio (VOR)
117.975-137 MHz		
AERONAUTICAL MOBILE (R) 5.111 5.200 5.201 5.202	AERONAUTICAL MOBILE (R) UAE2 UAE7 UAE11	• Aeronautical Mobile is subject to ICAO Annex 10 • 136 – 137 MHz can also be used for Aeronautical Mobile (OR)

Region 1	UAE Allocation	Remarks & References
137-137.025 MHz		
SPACE OPERATION (space-to-Earth)5.203C	MOBILE except aeronautical mobile (R)	
METEOROLOGICAL-SATELLITE (space-to-Earth)	FIXED	
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)	
Fixed	MOBILE-SATELLITE (space-to-Earth)	
Mobile except aeronautical mobile (R) 5.204 5.205 5.206 5.207 5.208	SPACE RESEARCH (space-to-Earth) UAE12	
137.025-137.175 MHz		
SPACE OPERATION (space-to-Earth) 5.203C	MOBILE except aeronautical mobile (R)	
METEOROLOGICAL-SATELLITE (space-to-Earth)	FIXED	
SPACE RESEARCH (space-to-Earth)	SPACE OPERATION (space-to-Earth)	
Fixed	METEOROLOGICAL-SATELLITE (space-to-Earth)	
Mobile except aeronautical mobile (R)	SPACE RESEARCH (space-to-Earth)	

Region 1	UAE Allocation	Remarks & References
Mobile-satellite (space-to-Earth) 5.208A 5.208B 5.209 5.204 5.205 5.206 5.207 5.208	Mobile-satellite (space-to-Earth) UAE12	
137.175-137.825 MHz		
SPACE OPERATION (space-to-Earth) 5.203C 5.209A	MOBILE except aeronautical mobile (R)	
METEOROLOGICAL-SATELLITE (space-to-Earth)	FIXED	
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)	
Fixed	MOBILE-SATELLITE (space-to-Earth)	
Mobile except aeronautical mobile (R) 5.204 5.205 5.206 5.207 5.208	SPACE RESEARCH (space-to-Earth) UAE12	

Region 1	UAE Allocation	Remarks & References
137.825-138 MHz		
SPACE OPERATION (space-to-Earth) 5.203C	MOBILE except aeronautical mobile (R)	
METEOROLOGICAL-SATELLITE (space-to-Earth)	FIXED	
SPACE RESEARCH (space-to-Earth)	SPACE OPERATION (space-to-Earth)	
Fixed	METEOROLOGICAL-SATELLITE (space-to-Earth)	
Mobile except aeronautical mobile (R)	SPACE RESEARCH (space-to-Earth)	
Mobile-satellite (space-to-Earth) 5.208A 5.208B 5.209 5.204 5.205 5.206 5.207 5.208	Mobile-satellite (space-to-Earth) UAE12	
138-143.6 MHz		
AERONAUTICAL MOBILE (OR)	MARITIME MOBILE	
	LAND MOBILE	
	AERONAUTICAL MOBILE (OR)	
5.210 5.211 5.212 5.214	UAE12 UAE14 UAE16	

Region 1	UAE Allocation	Remarks & References
143.6-143.65 MHz		
AERONAUTICAL MOBILE (OR)	MARITIME MOBILE	
SPACE RESEARCH (space-to-Earth)	LAND MOBILE	
	AERONAUTICAL MOBILE (OR)	
	SPACE RESEARCH (space-to-Earth)	
5.211 5.212 5.214	UAE12 UAE16	
143.65-144 MHz		
AERONAUTICAL MOBILE (OR)	MARITIME MOBILE	
	LAND MOBILE	
	AERONAUTICAL MOBILE (OR)	
5.210 5.211 5.212 5.214	UAE12 UAE16	
144-146 MHz		
AMATEUR	AMATEUR	
AMATEUR-SATELLITE	AMATEUR-SATELLITE	
5.216	UAE8 UAE16	
146-148 MHz		
FIXED	MOBILE except aeronautical mobile (R)	
MOBILE except aeronautical mobile (R)	FIXED	
	UAE12 UAE16	

Region 1	UAE Allocation	Remarks & References
148-149.9 MHz		
FIXED	MOBILE except aeronautical mobile (R)	
MOBILE except aeronautical mobile (R)	FIXED	
MOBILE-SATELLITE (Earth-to-space) 5.209 5.218 5.218A 5.219 5.221	Mobile-satellite (Earth-to-space) UAE12 UAE16	
149.9-150.05 MHz		
MOBILE-SATELLITE (Earth-to-space) 5.209 5.220	MOBILE-SATELLITE (Earth-to-space)	
150.05-153 MHz		
FIXED	MOBILE except aeronautical mobile	
MOBILE except aeronautical mobile	FIXED	
RADIO ASTRONOMY 5.149	RADIO ASTRONOMY UAE5 UAE12 UAE16	
153-154 MHz		
FIXED	MOBILE except aeronautical mobile (R)	
MOBILE except aeronautical mobile (R)	FIXED	
Meteorological aids	Meteorological aids UAE12 UAE16	

Region 1	UAE Allocation	Remarks & References
154-156.4875 MHz		
FIXED	MOBILE except aeronautical mobile (R)	• Maritime Mobile is subject to Appendix 18
MOBILE except aeronautical mobile (R) 5.225A 5.226	FIXED UAE12 UAE16	
156.4875-156.5625 MHz		
MARITIME MOBILE (distress and calling via DSC) 5.111 5.226 5.227	MARITIME MOBILE (distress and calling via DSC) UAE2 UAE11	• Maritime Mobile is subject to Appendix 18
156.5625-156.7625 MHz		
FIXED	MOBILE except aeronautical mobile (R)	• Maritime Mobile is subject to Appendix 18
MOBILE except aeronautical mobile (R) 5.226	FIXED UAE11 UAE12	
156.7625-156.7875 MHz		
MARITIME MOBILE	MARITIME MOBILE	• Maritime Mobile is subject to Appendix 18
Mobile-satellite (Earth-to-space) 5.111 5.226 5.228	Mobile-satellite (Earth-to-space) UAE11	
156.7875-156.8125 MHz		
MARITIME MOBILE (distress and calling) 5.111 5.226	MARITIME MOBILE (distress and calling) UAE2 UAE11	• Maritime Mobile is subject to Appendix 18

Region 1	UAE Allocation	Remarks & References
156.8125-156.8375 MHz		
MARITIME MOBILE	MARITIME MOBILE	• Maritime Mobile is subject to Appendix 18
Mobile-satellite (Earth-to-space) 5.111 5.226 5.228	Mobile-satellite (Earth-to-space) UAE11	
156.8375-157.1875 MHz		
FIXED	MOBILE except aeronautical mobile	• Maritime Mobile is subject to Appendix 18
MOBILE except aeronautical mobile 5.226	FIXED UAE11 UAE12	
157.1875-157.3375 MHz		
FIXED	MOBILE except aeronautical mobile	• Maritime Mobile is subject to Appendix 18
MOBILE except aeronautical mobile	FIXED	
Maritime mobile-satellite 5.208A5.208B 5.228AB 5.228AC 5.226	Maritime mobile-satellite UAE11 UAE12	
157.3375-161.7875 MHz		
FIXED	MOBILE except aeronautical mobile	• Maritime Mobile is subject to Appendix 18
MOBILE except aeronautical mobile 5.226	FIXED UAE11 UAE12	

Region 1	UAE Allocation	Remarks & References
161.7875-161.9375 MHz		
FIXED	MOBILE except aeronautical mobile	• Maritime Mobile is subject to Appendix 18
MOBILE except aeronautical mobile	FIXED	
Maritime mobile-satellite 5.228AB 5.208A 5.208B 5.228AC 5.226	Maritime mobile-satellite UAE11 UAE12	
161.9375-161.9625 MHz		
FIXED	MOBILE except aeronautical mobile	• Maritime Mobile is subject to Appendix 18
MOBILE except aeronautical mobile	FIXED	
Maritime mobile-satellite (Earth-to-space) 5.228AA 5.226	Maritime mobile-satellite (Earth-to-space) UAE11 UAE12	
161.9625-161.9875 MHz		
FIXED	MOBILE except aeronautical mobile	• Maritime Mobile is subject to Appendix 18
MOBILE except aeronautical mobile	FIXED	
Mobile-satellite (Earth-to-space) 5.228F 5.226 5.228A 5.228B	Mobile-satellite (Earth-to-space) UAE11 UAE12	

Region 1	UAE Allocation	Remarks & References
161.9875-162.0125 MHz		
FIXED	MOBILE except aeronautical mobile	• Maritime Mobile is subject to ITU Radio Regulations Appendix 18
MOBILE except aeronautical mobile	FIXED	
Maritime mobile-satellite (Earth-to-space) 5.228AA 5.226 5.229	Maritime mobile-satellite (Earth-to-space) UAE11 UAE12	
162.0125-162.0375 MHz		
FIXED	MOBILE except aeronautical mobile	
MOBILE except aeronautical mobile	FIXED	
Mobile-satellite (Earth-to-space) 5.228F 5.226 5.228A 5.228B 5.229	Mobile-satellite (Earth-to-space) UAE12	
162.0375-174 MHz		
FIXED	MOBILE except aeronautical mobile	
MOBILE except aeronautical 5.226 5.229	FIXED UAE12 UAE14	
174-223 MHz		
BROADCASTING 5.235 5.237 5.243	BROADCASTING UAE16	• Broadcasting is subject to ITU GE06 Agreement and Plan and • The UAE Terrestrial Digital TV switchover plan

Region 1	UAE Allocation	Remarks & References
223-230 MHz		
BROADCASTING	AERONAUTICAL RADIONAVIGATION	• Broadcasting is subject to ITU GE06 Agreement and Plan and • The UAE Terrestrial Digital TV switchover plan
Fixed	BROADCASTING	
Mobile	Mobile	
	Fixed	
5.243 5.246 5.247	UAE16	
230-235 MHz		
FIXED	AERONAUTICAL RADIONAVIGATION	
MOBILE	MOBILE	
	FIXED	
5.247 5.251 5.252	UAE7	
235-267 MHz		
FIXED	MOBILE	
MOBILE	FIXED	
5.111 5.252 5.254 5.256 5.256A	UAE2 UAE7	
267-272 MHz		
FIXED	MOBILE	
MOBILE	FIXED	
Space operation (space-to-Earth)	Space operation (space-to-Earth)	
5.254 5.257	UAE7	

Region 1	UAE Allocation	Remarks & References
272-273 MHz		
SPACE OPERATION (space-to-Earth)	SPACE OPERATION (space-to-Earth)	
FIXED	MOBILE	
MOBILE 5.254	FIXED UAE7	
273-312 MHz		
FIXED	MOBILE	
MOBILE 5.254	FIXED UAE7	
312-315 MHz		
FIXED	MOBILE	
MOBILE	FIXED	
Mobile-satellite (Earth-to-space) 5.254 5.255	Mobile-satellite (Earth-to-space) UAE7 UAE14	
315-322 MHz		
FIXED	MOBILE	
MOBILE 5.254	FIXED UAE7	

Region 1	UAE Allocation	Remarks & References
322-328.6 MHz		
FIXED	MOBILE	
MOBILE	FIXED	
RADIO ASTRONOMY 5.149	RADIO ASTRONOMY UAE5 UAE7	
328.6-335.4 MHz		
AERONAUTICAL RADIONAVIGATION 5.258 5.259	AERONAUTICAL RADIONAVIGATION UAE3 UAE7	• ICAO Annex 10
335.4-387 MHz		
FIXED	MOBILE	• Preference for Public Protection use 380-399.9 MHz is for PAMR (e.g. TETRA)
MOBILE 5.254	FIXED UAE12	
387-390 MHz		
FIXED	MOBILE	• Preference for Public Protection use 380-399.9 MHz is for PAMR (e.g. TETRA)
MOBILE	FIXED	
Mobile-satellite (space-to-Earth) 5.208A 5.208B 5.254 5.255	Mobile-satellite (space-to-Earth) UAE12	
390-399.9 MHz		
FIXED	MOBILE	• Preference for Public Protection use 380-399.9 MHz is for PAMR (e.g. TETRA)
MOBILE 5.254	FIXED UAE12	

Region 1	UAE Allocation	Remarks & References
399.9-400.05 MHz		
MOBILE-SATELLITE (Earth-to-space) 5.209 5.220 5.260A 5.260B	MOBILE-SATELLITE (Earth-to-space)	
400.05-400.15 MHz		
STANDARD FREQUENCY AND TIME SIGNAL-SATELLITE (400.1 MHz)	STANDARD FREQUENCY AND TIME SIGNAL-SATELLITE (400.1 MHz)	• ITU Radio Regulations Article 26
	MOBILE	
5.261 5.262	FIXED	
400.15-401 MHz		
METEOROLOGICAL AIDS	METEOROLOGICAL AIDS	
METEOROLOGICAL-SATELLITE (space-to-Earth)	METEOROLOGICAL-SATELLITE (space-to-Earth)	
MOBILE-SATELLITE (space-to-Earth) 5.208A 5.208B 5.209	MOBILE-SATELLITE (space-to-Earth)	
SPACE RESEARCH (space-to-Earth) 5.263	SPACE RESEARCH (space-to-Earth)	
Space operation (space-to-Earth)	MOBILE	
	FIXED	
	Space operation (space-to-Earth)	
5.262 5.264	UAE12	

Region 1	UAE Allocation	Remarks & References
401-402 MHz		
METEOROLOGICAL AIDS	METEOROLOGICAL AIDS	
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)	
Fixed	Mobile except aeronautical mobile	
Mobile except aeronautical mobile 5.264A 5.264B	Fixed UAE12 UAE14	
402-403 MHz		
METEOROLOGICAL AIDS	METEOROLOGICAL AIDS	
EARTH EXPLORATION-SATELLITE (Earth-to-space)	EARTH EXPLORATION-SATELLITE (Earth-to-space)	
METEOROLOGICAL-SATELLITE (Earth-to-space)	METEOROLOGICAL-SATELLITE (Earth-to-space)	
Fixed	Mobile except aeronautical mobile	
Mobile except aeronautical mobile 5.264A 5.264B	Fixed UAE12 UAE14	

Region 1	UAE Allocation	Remarks & References
403-406 MHz		
METEOROLOGICAL AIDS	METEOROLOGICAL AIDS	
Fixed	Mobile except aeronautical mobile	
Mobile except aeronautical mobile 5.265	Fixed UAE12 UAE14	
406-406.1 MHz		
MOBILE-SATELLITE (Earth-to-space) 5.265 5.266 5.267	MOBILE-SATELLITE (Earth-to-space) UAE2 UAE7 UAE11	• Distress and Safety / Emergency and Locator Transmitters (ELT)
406.1-410 MHz		
FIXED	MOBILE except aeronautical mobile	
MOBILE except aeronautical mobile	FIXED	
RADIO ASTRONOMY 5.149 5.265	RADIO ASTRONOMY UAE5 UAE12 UAE16	
410-420 MHz		
FIXED	MOBILE except aeronautical mobile	
MOBILE except aeronautical mobile	FIXED	
SPACE RESEARCH (space-to-space) 5.268	SPACE RESEARCH (space-to-space) UAE12 UAE16	

Region 1	UAE Allocation	Remarks & References
420-430 MHz		
FIXED	MOBILE except aeronautical mobile	
MOBILE except aeronautical mobile	FIXED	
Radiolocation 5.269 5.270 5.271	Radiolocation UAE12 UAE16	
430-432 MHz		
AMATEUR	MOBILE except aeronautical mobile	
RADIOLOCATION	AMATEUR	
	RADIOLOCATION	
5.271 5.274 5.275 5.276 5.277	FIXED UAE12 UAE16	
432-438 MHz		
AMATEUR	AMATEUR	
RADIOLOCATION	RADIOLOCATION	
Earth exploration-satellite (active) 5.279A	MOBILE except aeronautical mobile	
	FIXED	
5.138 5.271 5.276 5.277 5.280 5.281 5.282	Earth exploration-satellite (active) UAE8 UAE12 UAE14 UAE16	

Region 1	UAE Allocation	Remarks & References
438-440 MHz		
AMATEUR	MOBILE except aeronautical mobile	
RADIOLOCATION	AMATEUR	
	RADIOLOCATION	
5.271 5.274 5.275 5.276 5.277 5.283	FIXED UAE12 UAE16	
440-450 MHz		
FIXED	MOBILE except aeronautical mobile	
MOBILE except aeronautical mobile	FIXED	
Radiolocation 5.269 5.270 5.271 5.284 5.285 5.286	Radiolocation UAE12 UAE14 UAE16	
450-455 MHz		
FIXED	MOBILE	• Preference for Public Protection • IMT band
MOBILE 5.286AA 5.209 5.271 5.286 5.286A 5.286B 5.286C 5.286D 5.286E	FIXED UAE15	
455-456 MHz		
FIXED	MOBILE	• Preference for Public Protection • IMT band
MOBILE 5.286AA 5.209 5.271 5.286A 5.286B 5.286C 5.286E	FIXED UAE12 UAE15	

Region 1	UAE Allocation	Remarks & References
456-459 MHz		
FIXED	MOBILE	• ITU-R M.1174 • IMT band
MOBILE 5.286AA 5.271 5.287 5.288	FIXED UAE11 UAE12 UAE15	
459-460 MHz		
FIXED	MOBILE	• Preference for Public Protection • IMT band
MOBILE 5.286AA 5.209 5.271 5.286A 5.286B 5.286C 5.286E	FIXED UAE12 UAE15	
460-470 MHz		
FIXED	MOBILE	• IMT band
MOBILE 5.286AA	FIXED	
Meteorological-satellite (space-to-Earth) 5.287 5.288 5.289 5.290	Meteorological-satellite (space-to-Earth) UAE11 UAE12 UAE15	
470-694 MHz		
BROADCASTING	BROADCASTING	• Broadcasting is subject to ITU GE06 Agreement and Plan and • The UAE Terrestrial Digital TV switchover plan.
	Mobile except aeronautical mobile	
	Fixed	
5.149 5.291A 5.294 5.296 5.300 5.304 5.306 5.312	UAE5 UAE16	

Region 1	UAE Allocation	Remarks & References
694-790 MHz		
MOBILE except aeronautical mobile 5.312A 5.317A	MOBILE except aeronautical mobile	• Portion can also be allocated for PPDR • IMT band
BROADCASTING 5.300 5.312	UAE15	
790-862 MHz		
FIXED	MOBILE except aeronautical mobile	• IMT band
MOBILE except aeronautical mobile 5.316B 5.317A		
BROADCASTING 5.312 5.319	UAE14 UAE15 UAE16	
862-890 MHz		
FIXED	MOBILE except aeronautical mobile	• IMT band
MOBILE except aeronautical mobile 5.317A		
BROADCASTING 5.322 5.319 5.323	UAE12 UAE14 UAE15 UAE16	

Region 1	UAE Allocation	Remarks & References
890-942 MHz		
FIXED	MOBILE except aeronautical mobile	• IMT band
MOBILE except aeronautical mobile 5.317A		
BROADCASTING 5.322		
Radiolocation 5.323	UAE12 UAE14 UAE15	
942-960 MHz		
FIXED	MOBILE except aeronautical mobile	• IMT band
MOBILE except aeronautical mobile 5.317A		
BROADCASTING 5.322 5.323	UAE15	
960-1 164 MHz		
AERONAUTICAL MOBILE (R) 5.327A	AERONAUTICAL MOBILE (R)	• ICAO Annex 10 • ITU Radio Regulation Res. 425
AERONAUTICAL RADIONAVIGATION 5.328 5.328AA	AERONAUTICAL RADIONAVIGATION UAE6 UAE7	

Region 1	UAE Allocation	Remarks & References
1 164-1 215 MHz		
AERONAUTICAL RADIONAVIGATION 5.328	AERONAUTICAL RADIONAVIGATION	• ICAO Annex 10 • ITU Radio Regulation Res. 609 • ITU Radio Regulation Res. 610
RADIONAVIGATION-SATELLITE (space-to-Earth) (space-to-space) 5.328B 5.328A	RADIONAVIGATION-SATELLITE (space-to-Earth) (space-to-space) UAE6 UAE7	
1 215-1 240 MHz		
EARTH EXPLORATION-SATELLITE (active)	RADIONAVIGATION	• ITU-R SM.329 • ITU-R SM.1541 • ICAO Annex 10 • ITU Radio Regulations Res. 608 • ITU Radio Regulations Res. 610
RADIOLOCATION	EARTH EXPLORATION-SATELLITE (active)	
RADIONAVIGATION-SATELLITE (space-to-Earth) (space-to-space) 5.328B 5.329 5.329A	RADIOLOCATION	
SPACE RESEARCH (active)	RADIONAVIGATION-SATELLITE (space-to-Earth) (space-to-space)	
	SPACE RESEARCH (active)	
	MOBILE	
5.330 5.331 5.332	FIXED UAE7	

Region 1	UAE Allocation	Remarks & References
1 240-1 300 MHz		
EARTH EXPLORATION-SATELLITE (active)	RADIONAVIGATION	• ITU-R SM.329 • ITU-R SM.1541 • ICAO Annex 10 • ITU Radio Regulations Res. 608 • ITU Radio Regulations Res. 610
RADIOLOCATION	EARTH EXPLORATION-SATELLITE (active)	
RADIONAVIGATION-SATELLITE (space-to-Earth) (space-to-space) 5.328B 5.329 5.329A	RADIOLOCATION	
SPACE RESEARCH (active)	RADIONAVIGATION-SATELLITE (space-to-Earth) (space-to-space)	
Amateur 5.282 5.330 5.331 5.332 5.335 5.335A	SPACE RESEARCH (active)	
	MOBILE	
	FIXED	
	Amateur UAE7 UAE8	
1 300-1 350 MHz		
RADIOLOCATION	RADIOLOCATION	• ITU-R SM.329 • ITU-R SM.1541 • ICAO Annex 10
AERONAUTICAL RADIONAVIGATION 5.337	AERONAUTICAL RADIONAVIGATION	
RADIONAVIGATION-SATELLITE (Earth-to-space) 5.149 5.337A	RADIONAVIGATION-SATELLITE (Earth-to-space) UAE5 UAE7	

Region 1	UAE Allocation	Remarks & References
1 350-1 400 MHz		
FIXED	MOBILE	• ITU-R SM.329 • ITU-R SM.1541 • ICAO Annex 10
MOBILE	FIXED	
RADIOLOCATION 5.149 5.338 5.338A 5.339	RADIOLOCATION UAE5 UAE7 UAE16	
1 400-1 427 MHz		
EARTH EXPLORATION-SATELLITE (passive)	EARTH EXPLORATION-SATELLITE (passive)	
RADIO ASTRONOMY	RADIO ASTRONOMY	
SPACE RESEARCH (passive) 5.340 5.341	SPACE RESEARCH (passive) UAE4	
1 427-1 429 MHz		
SPACE OPERATION (Earth-to-space)	SPACE OPERATION (Earth-to-space)	• IMT band
FIXED	MOBILE except aeronautical mobile	
MOBILE except aeronautical mobile 5.341A 5.341B 5.341C 5.338A 5.341	FIXED UAE15	
1 429-1 452 MHz		
FIXED	MOBILE except aeronautical mobile	• IMT band
MOBILE except aeronautical mobile 5.341A 5.338A 5.341 5.342	FIXED UAE15	

Region 1	UAE Allocation	Remarks & References
1 452-1 492 MHz		
FIXED	MOBILE except aeronautical mobile	• Broadcasting Satellite ITU Radio Regulations Res. 528. • IMT is with constrain to protect Mobile Satellite in adjacent band
MOBILE except aeronautical mobile 5.346	FIXED	
BROADCASTING	BROADCASTING	
BROADCASTING-SATELLITE 5.208B 5.341 5.342 5.345	BROADCASTING-SATELLITE UAE15	
1 492-1 518 MHz		
FIXED	MOBILE except aeronautical mobile	
MOBILE except aeronautical mobile 5.341A 5.341 5.342	FIXED	
1 518-1 525 MHz		
FIXED	MOBILE except aeronautical mobile	
MOBILE except aeronautical	FIXED	
MOBILE-SATELLITE (space-to-Earth) 5.348 5.348A 5.348B 5.351A 5.341 5.342	MOBILE-SATELLITE (space-to-Earth) UAE7 UAE9	

Region 1	UAE Allocation	Remarks & References
1 525-1 530 MHz		
SPACE OPERATION (space-to-Earth)	SPACE OPERATION (space-to-Earth)	• Mobile Satellite is operational
FIXED	FIXED	
MOBILE-SATELLITE (space-to-Earth) 5.208B 5.351A	MOBILE-SATELLITE (space-to-Earth)	
Earth exploration-satellite	Earth exploration-satellite	
Mobile except aeronautical mobile 5.349 5.341 5.342 5.350 5.351 5.352A 5.354	Mobile except aeronautical mobile UAE7 UAE9	
1 530-1 535 MHz		
SPACE OPERATION (space-to-Earth)	SPACE OPERATION (space-to-Earth)	• Mobile Satellite is operational
MOBILE-SATELLITE (space-to-Earth) 5.208B 5.351A 5.353A	MOBILE-SATELLITE (space-to-Earth)	
Earth exploration-satellite	Earth exploration-satellite	
Fixed	Mobile except aeronautical mobile	
Mobile except aeronautical mobile 5.341 5.342 5.351 5.354	Fixed UAE7 UAE9 UAE11	
1 535-1 559 MHz		
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	MOBILE-SATELLITE (space-to-Earth) UAE2 UAE7 UAE9 UAE11	• Mobile Satellite is operational • 1544 – 1545 MHz Distress and Safety satellite (EPIRB)

Region 1	UAE Allocation	Remarks & References
1 559-1 610 MHz		
AERONAUTICAL RADIONAVIGATION	AERONAUTICAL RADIONAVIGATION	• Global Navigation Satellite System (GNSS). • ITU Radio Regulations Res. 610
RADIONAVIGATION-SATELLITE (space-to-Earth) (space-to-space) 5.208B 5.328B 5.329A 5.341	RADIONAVIGATION-SATELLITE (space-to-Earth) (space-to-space) UAE7 UAE9	
1 610-1 610.6 MHz		
MOBILE-SATELLITE (Earth-to-space) 5.351A	MOBILE-SATELLITE (Earth-to-space)	• Global Navigation Satellite System (GNSS).
AERONAUTICAL RADIONAVIGATION 5.341 5.355 5.359 5.364 5.366 5.367 5.368 5.369 5.371 5.372	AERONAUTICAL RADIONAVIGATION UAE6 UAE7 UAE9	
1 610.6-1 613.8 MHz		
MOBILE-SATELLITE (Earth-to-space) 5.351A	MOBILE-SATELLITE (Earth-to-space)	• Global Navigation Satellite System (GNSS). • ITU Radio Regulations Res. 125
RADIO ASTRONOMY	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	AERONAUTICAL RADIONAVIGATION UAE5 UAE6 UAE7 UAE9	

Region 1	UAE Allocation	Remarks & References
1 613.8-1 621.35 MHz		
MOBILE-SATELLITE (Earth-to-space) 5.351A	MOBILE-SATELLITE (Earth-to-space)	• Global Navigation Satellite System (GNSS).
AERONAUTICAL RADIONAVIGATION	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 5.3715.372	Mobile-satellite (space-to-Earth) UAE6 UAE7 UAE9	
1 621.35-1 626.5 MHz		
MARITIME MOBILE-SATELLITE (space-to-Earth) 5.373 5.373A	MARITIME MOBILE-SATELLITE (space-to-Earth)	• Global Navigation Satellite System (GNSS).
MOBILE-SATELLITE (Earth-to-space) 5.351A	MOBILE-SATELLITE (Earth-to-space)	
AERONAUTICAL RADIONAVIGATION	AERONAUTICAL RADIONAVIGATION	
Mobile-satellite (space-to-Earth) except maritime 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	Mobile-satellite (space-to-Earth) except maritime mobile satellite (space-to-Earth) UAE6 UAE7 UAE9	

Region 1	UAE Allocation	Remarks & References
1 626.5-1 660 MHz		
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	MOBILE-SATELLITE (Earth-to-space) UAE2 UAE7 UAE9 UAE11	• Mobile Satellite is operational. • 1645.5 – 1646.5 MHz SARSAT Uplink, Distress and Safety satellite (EPIRB)
1 660-1 660.5 MHz		
MOBILE-SATELLITE (Earth-to-space) 5.351A	MOBILE-SATELLITE (Earth-to-space)	• Mobile Satellite is operational. • ITU Radio Regulations Res. 125.
RADIO ASTRONOMY 5.149 5.341 5.351 5.354 5.362A 5.376A	RADIO ASTRONOMY UAE5 UAE7 UAE9	
1 660.5-1 668 MHz		
RADIO ASTRONOMY	RADIO ASTRONOMY	
SPACE RESEARCH (passive)	SPACE RESEARCH (passive)	
Fixed	Mobile except aeronautical mobile	
Mobile except aeronautical mobile 5.149 5.341 5.379 5.379A	Fixed UAE4	

Region 1	UAE Allocation	Remarks & References
1 668-1 668.4 MHz		
MOBILE-SATELLITE (Earth-to-space) 5.351A 5.379B 5.379C	MOBILE-SATELLITE (Earth-to-space)	• Mobile Satellite is operational.
RADIO ASTRONOMY	RADIO ASTRONOMY	
SPACE RESEARCH (passive)	SPACE RESEARCH (passive)	
Fixed	Mobile except aeronautical mobile	
Mobile except aeronautical mobile 5.149 5.341 5.379 5.379A	Fixed UAE4	
1 668.4-1 670 MHz		
METEOROLOGICAL AIDS	METEOROLOGICAL AIDS	• Mobile Satellite is operational.
FIXED	MOBILE except aeronautical mobile	
MOBILE except aeronautical mobile	FIXED	
MOBILE-SATELLITE (Earth-to-space) 5.351A 5.379B 5.379C	MOBILE-SATELLITE (Earth-to-space)	
RADIO ASTRONOMY 5.149 5.341 5.379D 5.379E	RADIO ASTRONOMY UAE5 UAE7 UAE9	

Region 1	UAE Allocation	Remarks & References
1 670-1 675 MHz		
METEOROLOGICAL AIDS	METEOROLOGICAL AIDS	• Mobile Satellite is operational.
FIXED	MOBILE	
METEOROLOGICAL-SATELLITE (space-to-Earth)	METEOROLOGICAL-SATELLITE (space-to-Earth)	
MOBILE	FIXED	
MOBILE-SATELLITE (Earth-to-space) 5.351A 5.379B 5.341 5.379D 5.379E 5.380A	MOBILE-SATELLITE (Earth-to-space) UAE7 UAE9	
1 675-1 690 MHz		
METEOROLOGICAL AIDS	METEOROLOGICAL AIDS	
FIXED	METEOROLOGICAL-SATELLITE (space-to-Earth)	
METEOROLOGICAL-SATELLITE (space-to-Earth)	MOBILE except aeronautical mobile	
MOBILE except aeronautical mobile 5.341	FIXED UAE16	
1 690-1 700 MHz		
METEOROLOGICAL AIDS	MOBILE, except aeronautical mobile	
METEOROLOGICAL-SATELLITE (space-to-Earth)	FIXED	
Fixed	METEOROLOGICAL AIDS	
Mobile except aeronautical mobile 5.289 5.341 5.382	METEOROLOGICAL-SATELLITE (space-to-Earth) UAE16	

Region 1	UAE Allocation	Remarks & References
1 700-1 710 MHz		
FIXED	MOBILE except aeronautical mobile	
METEOROLOGICAL-SATELLITE (space-to-Earth)	FIXED	
MOBILE except aeronautical mobile 5.289 5.341	METEOROLOGICAL-SATELLITE (space-to-Earth) UAE16	
1 710-1 930 MHz		
FIXED	MOBILE	• IMT band
MOBILE 5.384A 5.388A 5.388B 5.149 5.341 5.385 5.386 5.387 5.388	FIXED UAE5 UAE7 UAE14 UAE15 UAE16	
1 930-1 970 MHz		
FIXED	MOBILE	• IMT band
MOBILE 5.388A 5.388B 5.388	FIXED UAE7 UAE15	
1 970-1 980 MHz		
FIXED	MOBILE	• IMT band
MOBILE 5.388A 5.388B 5.388	FIXED UAE7 UAE15	

Region 1	UAE Allocation	Remarks & References
1 980-2 010 MHz		
FIXED	MOBILE	• IMT band
MOBILE	FIXED	
MOBILE-SATELLITE (Earth-to-space) 5.351A 5.388 5.389A 5.389B 5.389F	MOBILE-SATELLITE (Earth-to-space) UAE7 UAE9 UAE15 UAE16	
2 010-2 025 MHz		
FIXED	MOBILE	
MOBILE 5.388A 5.388B 5.388	FIXED UAE16	
2 025-2 110 MHz		
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	MOBILE	
MOBILE 5.391	FIXED	
SPACE RESEARCH (Earth-to-space) (space-to-space) 5.392	SPACE RESEARCH (Earth-to-space) (space-to-space) UAE10 UAE16	

Region 1	UAE Allocation	Remarks & References
2 110-2 120 MHz		
FIXED	MOBILE	
MOBILE 5.388A 5.388B	FIXED	
SPACE RESEARCH (deep space) (Earth-to-space) 5.388	SPACE RESEARCH (deep space) (Earth-to-space) UAE7 UAE15	
2 120-2 160 MHz		
FIXED	MOBILE	
MOBILE 5.388A 5.388B 5.388	FIXED UAE7 UAE15	
2 160-2 170 MHz		
FIXED	MOBILE	
MOBILE 5.388A 5.388B 5.388	FIXED UAE7 UAE15	
2 170-2 200 MHz		
FIXED	MOBILE	• IMT band
MOBILE	FIXED	
MOBILE-SATELLITE (space-to-Earth) 5.351A 5.388 5.389A 5.389F	MOBILE-SATELLITE (space-to-Earth) UAE7 UAE9 UAE15 UAE16	

Region 1	UAE Allocation	Remarks & References
2 200-2 290 MHz		
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	MOBILE	
MOBILE 5.391	FIXED	
SPACE RESEARCH (space-to-Earth) (space-to-space) 5.392	SPACE RESEARCH (space-to-Earth) (space-to-space) UAE10 UAE16	
2 290-2 300 MHz		
FIXED	MOBILE except aeronautical mobile	
MOBILE except aeronautical mobile	FIXED	
SPACE RESEARCH (deep space) (space-to-Earth)	SPACE RESEARCH (deep space) (space-to-Earth) UAE16	
2 300-2 450 MHz		
FIXED	MOBILE	• IMT band
MOBILE 5.384A	FIXED	
Amateur	Amateur	
Radiolocation 5.150 5.282 5.395	Radiolocation UAE7 UAE8 UAE10 UAE14 UAE15	

Region 1	UAE Allocation	Remarks & References
2 450-2 483.5 MHz		
FIXED	MOBILE	
MOBILE	FIXED	
Radiolocation 5.150	Radiolocation UAE7 UAE10 UAE14 UAE16	
2 483.5-2 500 MHz		
FIXED	MOBILE	
MOBILE	FIXED	
MOBILE-SATELLITE (space-to-Earth) 5.351A	MOBILE-SATELLITE (space-to-Earth)	
RADIODETERMINATION-SATELLITE (space-to-Earth) 5.398	RADIODETERMINATION-SATELLITE (space-to-Earth)	
Radiolocation 5.398A 5.150 5.399 5.401 5.402	Radiolocation UAE14 UAE16	
2 500-2 520 MHz		
FIXED 5.410	MOBILE except aeronautical mobile	• IMT band
MOBILE except aeronautical mobile 5.384A 5.412	FIXED UAE15	

Region 1	UAE Allocation	Remarks & References
2 520-2 655 MHz		
FIXED 5.410	MOBILE except aeronautical mobile	• Broadcasting Satellite ITU Radio Regulations Res. 528. • IMT band
MOBILE except aeronautical mobile 5.384A	FIXED	
BROADCASTING-SATELLITE	BROADCASTING-SATELLITE	
5.413 5.416 5.339 5.412 5.418B 5.418C	 UAE15	
2 655-2 670 MHz		
FIXED 5.410	MOBILE except aeronautical mobile	• Broadcasting Satellite ITU Radio Regulations Res. 528. • IMT band
MOBILE except aeronautical mobile 5.384A	FIXED	
BROADCASTING-SATELLITE 5.208B 5.413 5.416	BROADCASTING-SATELLITE	
Earth exploration-satellite (passive)	Earth exploration-satellite (passive)	
Radio astronomy	Radio astronomy	
Space research (passive) 5.149 5.412	Space research (passive) UAE5 UAE15	

Region 1	UAE Allocation	Remarks & References
2 670-2 690 MHz		
FIXED 5.410	MOBILE except aeronautical mobile	• IMT band
MOBILE except aeronautical mobile 5.384A	FIXED	
Earth exploration-satellite	Earth exploration-satellite	
(passive)	(passive)	
Radio astronomy	Radio astronomy	
Space research (passive) 5.149 5.412	Space research (passive) UAE5 UAE15	
2 690-2 700 MHz		
EARTH EXPLORATION-SATELLITE (passive)	MOBILE except aeronautical mobile	
RADIO ASTRONOMY	FIXED	
SPACE RESEARCH (passive)	EARTH EXPLORATION-SATELLITE (passive)	
	RADIO ASTRONOMY	
	SPACE RESEARCH (passive) UAE4	
2 700-2 900 MHz		
AERONAUTICAL RADIONAVIGATION 5.337	AERONAUTICAL RADIONAVIGATION	• ICAO Annex 1 • ITU-R SM.329 • ITU-R SM.1541
Radiolocation 5.423 5.424	Radiolocation UAE7	

Region 1	UAE Allocation	Remarks & References
2 900-3 100 MHz		
RADIOLOCATION 5.424A	RADIOLOCATION	• ICAO Annex 10 • ITU-R SM.329 • ITU-R SM.1541 • ITU-R M.1313 • ITU-R M.824
RADIONAVIGATION 5.426 5.425 5.427	RADIONAVIGATION UAE7 UAE11	
3 100-3 300 MHz		
RADIOLOCATION	RADIOLOCATION	• ICAO Annex 10 • ITU-R SM.329 • ITU-R SM.1541
Earth exploration-satellite (active)	Earth exploration-satellite (active)	
Space research (active) 5.149 5.428	Space research (active) UAE5 UAE7 UAE16	
3 300-3 400 MHz		
RADIOLOCATION 5.149 5.429 5.429A 5.429B 5.430	FIXED	• IMT Band.
	MOBILE	
	RADIOLOCATION UAE5 UAE15	
3 400-3 600 MHz		
FIXED	FIXED	• ITU-R F.1488 • IMT is primarly in use with protection to earth station
FIXED-SATELLITE (space-to-Earth)	FIXED-SATELLITE (space-to-Earth)	
MOBILE except aeronautical mobile 5.430A	MOBILE except aeronautical mobile	
Radiolocation 5.431	Radiolocation UAE15	

Region 1	UAE Allocation	Remarks & References
3 600-4 200 MHz		
FIXED	FIXED	• ITU-R F.1488 • 3600 -3800 MHz in use primarily for IMT with protection to earth station
FIXED-SATELLITE (space-to-Earth)	FIXED-SATELLITE (space-to-Earth)	
Mobile	Mobile UAE9 UAE15 UAE16	
4 200-4 400 MHz		
AERONAUTICAL MOBILE (R) 5.436	AERONAUTICAL MOBILE (R)	• ITU-R SM.329 • ITU-R SM.1541 • ITU-R M.2067
AERONAUTICAL RADIONAVIGATION 5.438 5.437 5.439 5.440	AERONAUTICAL RADIONAVIGATION UAE7	
4 400-4 500 MHz		
FIXED	FIXED	• ITU-R F.1099
MOBILE 5.440A	MOBILE UAE10 UAE16	
4 500-4 800 MHz		
FIXED	FIXED	• ITU-R F.1099 • Fixed satellite is subject to ITU Radio Regulation Appendix 30B
FIXED-SATELLITE (space-to-Earth) 5.441	FIXED-SATELLITE (space-to-Earth)	
MOBILE 5.440A	MOBILE UAE9 UAE14 UAE16	

Region 1	UAE Allocation	Remarks & References
4 800-4 990 MHz		
FIXED	FIXED	• ITU-R F.1099
MOBILE 5.440A 5.441A 5.441B 5.442	MOBILE	
Radio astronomy 5.149 5.339 5.443	Radio astronomy UAE5 UAE14 UAE16	
4 990-5 000 MHz		
FIXED	FIXED	• ITU-R F.1099
MOBILE except aeronautical mobile	MOBILE except aeronautical mobile	
RADIO ASTRONOMY	RADIO ASTRONOMY	
Space research (passive) 5.149	Space research (passive) UAE5 UAE14	
5 000-5 010 MHz		
AERONAUTICAL MOBILE-SATELLITE (R) 5.443AA	AERONAUTICAL MOBILE-SATELLITE (R)	
AERONAUTICAL RADIONAVIGATION	AERONAUTICAL RADIONAVIGATION	
RADIONAVIGATION-SATELLITE (Earth-to-space)	RADIONAVIGATION-SATELLITE (Earth-to-space) UAE14	

Region 1	UAE Allocation	Remarks & References
5 010-5 030 MHz		
AERONAUTICAL MOBILE-SATELLITE (R) 5.443AA	AERONAUTICAL MOBILE-SATELLITE (R)	• ITU Radio Regulations Res. 610
AERONAUTICAL RADIONAVIGATION	AERONAUTICAL RADIONAVIGATION	
RADIONAVIGATION-SATELLITE (space-to-Earth) (space-to-space) 5.328B 5.443B	RADIONAVIGATION-SATELLITE (space-to-Earth) (space-to-space) UAE14	
5 030-5 091 MHz		
AERONAUTICAL MOBILE (R) 5.443C	AERONAUTICAL MOBILE (R)	• ICAO Annex 10 • Unmanned Aircraft System (UAS)
AERONAUTICAL MOBILE-SATELLITE (R) 5.443D	AERONAUTICAL MOBILE-SATELLITE (R)	
AERONAUTICAL RADIONAVIGATION 5.444	AERONAUTICAL RADIONAVIGATION UAE3 UAE7 UAE14	
5091-5150 MHz		
FIXED-SATELLITE (Earth-to-space) 5.444A	FIXED-SATELLITE (Earth-to-space)	• ICAO Annex 10 • ITU Radio Regulations Res. 114 • ITU Radio Regulations Res. 748 • ITU Radio Regulations Res. 418 • ITU Radio Regulations Res. 419
AERONAUTICAL MOBILE 5.444B	AERONAUTICAL MOBILE	
AERONAUTICAL MOBILE-SATELLITE (R) 5.443AA	AERONAUTICAL MOBILE-SATELLITE (R)	
AERONAUTICAL RADIONAVIGATION 5.444	AERONAUTICAL RADIONAVIGATION UAE3 UAE7 UAE14	

Region 1	UAE Allocation	Remarks & References
5 150-5 250 MHz		
FIXED-SATELLITE (Earth-to-space) 5.447A	AERONAUTICAL MOBILE	
MOBILE except aeronautical mobile 5.446A 5.446B	FIXED-SATELLITE (Earth-to-space)	
AERONAUTICAL RADIONAVIGATION 5.446 5.446C 5.446D 5.447 5.447B 5.447C	AERONAUTICAL RADIONAVIGATION UAE7 UAE9 UAE14 UAE16	
5 250-5 255 MHz		
EARTH EXPLORATION-SATELLITE (active)	EARTH EXPLORATION-SATELLITE (active)	
MOBILE except aeronautical mobile 5.446A 5.447F	MOBILE except aeronautical mobile	
RADIOLOCATION	RADIOLOCATION	
SPACE RESEARCH 5.447D 5.447E 5.448 5.448A	SPACE RESEARCH UAE7 UAE14 UAE16	
5 255-5 350 MHz		
EARTH EXPLORATION-SATELLITE (active)	EARTH EXPLORATION-SATELLITE (active)	
MOBILE except aeronautical mobile 5.446A 5.447F	MOBILE except aeronautical mobile	
RADIOLOCATION	RADIOLOCATION	
SPACE RESEARCH (active) 5.447E 5.448 5.448A	SPACE RESEARCH (active) UAE7 UAE14 UAE16	

Region 1	UAE Allocation	Remarks & References
5 350-5 460 MHz		
EARTH EXPLORATION-SATELLITE (active) 5.448B	EARTH EXPLORATION-SATELLITE (active)	• ITU-R SM.329 • ITU-R SM.1541
RADIOLOCATION 5.448D	RADIOLOCATION	
AERONAUTICAL RADIONAVIGATION 5.449	AERONAUTICAL RADIONAVIGATION	
SPACE RESEARCH (active) 5.448C	SPACE RESEARCH (active) UAE7 UAE14 UAE16	
5 460-5 470 MHz		
EARTH EXPLORATION-SATELLITE (active)	EARTH EXPLORATION-SATELLITE (active)	• ITU-R SM.329 • ITU-R SM.1541 • ITU-R M.1313
RADIOLOCATION 5.448D	RADIOLOCATION	
RADIONAVIGATION 5.449	RADIONAVIGATION	
SPACE RESEARCH (active) 5.448B	SPACE RESEARCH (active) UAE7 UAE11 UAE14 UAE16	
5 470-5 570 MHz		
EARTH EXPLORATION-SATELLITE (active)	EARTH EXPLORATION-SATELLITE (active)	• ITU-R M.1313
MOBILE except aeronautical mobile 5.446A 5.450A	MOBILE except aeronautical mobile	
RADIOLOCATION 5.450B	RADIOLOCATION	
MARITIME RADIONAVIGATION	MARITIME RADIONAVIGATION	
SPACE RESEARCH (active) 5.448B 5.450 5.451	SPACE RESEARCH (active) UAE7 UAE11 UAE14 UAE16	

Region 1	UAE Allocation	Remarks & References
5 570-5 650 MHz		
MOBILE except aeronautical mobile 5.446A 5.450A	MOBILE except aeronautical mobile	• ITU-R M.1313
RADIOLOCATION 5.450B	RADIOLOCATION	
MARITIME RADIONAVIGATION 5.450 5.451 5.452	MARITIME RADIONAVIGATION UAE7 UAE11 UAE14 UAE16	
5 650-5 725 MHz		
MOBILE except aeronautical mobile 5.446A 5.450A	FIXED	
RADIOLOCATION	MOBILE	
Amateur	RADIOLOCATION	
Space research (deep space)	Amateur	
  5.282 5.451 5.453 5.454 5.455	Space research (deep space) UAE7 UAE10 UAE14 UAE16	
5 725-5 830 MHz		
FIXED-SATELLITE (Earth-to-space)	FIXED	
RADIOLOCATION	MOBILE	
Amateur	FIXED-SATELLITE (Earth-to-space)	
	RADIOLOCATION	
  5.150 5.451 5.453 5.455	Amateur UAE7 UAE9 UAE10 UAE14 UAE16	

Region 1	UAE Allocation	Remarks & References
5 830-5 850 MHz		
FIXED-SATELLITE (Earth-to-space)	FIXED	
RADIOLOCATION	MOBILE	
Amateur	FIXED-SATELLITE (Earth-to-space)	
Amateur-satellite (space-to-Earth) 5.150 5.451 5.453 5.455	RADIOLOCATION	
	Amateur	
	Amateur-satellite (space-to-Earth) UAE7 UAE9 UAE10 UAE14 UAE16	
5 850-5 925 MHz		
FIXED	FIXED	
FIXED-SATELLITE (Earth-to-space)	FIXED-SATELLITE (Earth-to-space)	
MOBILE 5.150	MOBILE UAE7 UAE9 UAE10 UAE14 UAE16	
5 925-6 700 MHz		
FIXED 5.457	FIXED	• ITU-R F.383 • ITU Radio Regulation Res. 902. • The band 5 925-6 425 MHz can be used by ESVs.
FIXED-SATELLITE (Earth-to-space) 5.457A 5.457B	FIXED-SATELLITE (Earth-to-space)	
MOBILE 5.457C	MOBILE	
  5.149 5.440 5.458	Maritime mobile-satellite UAE5 UAE9 UAE10 UAE14 UAE16	

Region 1	UAE Allocation	Remarks & References
6 700-7 075 MHz		
FIXED	FIXED	• ITU-R F.384 • Fixed Satellite is subject to ITU Radio Regulation Appendix 30B
FIXED-SATELLITE (Earth-to-space) (space-to-Earth) 5.441	FIXED-SATELLITE (Earth-to-space) (space-to-Earth)	
MOBILE 5.458 5.458A 5.458B	MOBILE UAE5 UAE9 UAE10 UAE14 UAE16	
7 075-7 145 MHz		
FIXED	FIXED	• ITU-R F.385
MOBILE 5.458 5.459	MOBILE UAE10 UAE16	
7 145-7 190 MHz		
FIXED	FIXED	• ITU-R F.385
MOBILE	MOBILE	
SPACE RESEARCH (deep space) (Earth-to-space) 5.458 5.459	SPACE RESEARCH (deep space) (Earth-to-space) UAE10 UAE16	
7 190-7 235 MHz		
EARTH EXPLORATION-SATELLITE (Earth-to-space) 5.460A 5.460B	EARTH EXPLORATION-SATELLITE (Earth-to-space)	
FIXED	FIXED	
MOBILE	MOBILE	
SPACE RESEARCH (Earth-to-space) 5.460 5.458 5.459	SPACE RESEARCH (Earth-to-space) UAE10 UAE16	

Region 1	UAE Allocation	Remarks & References
7 235-7 250 MHz		
EARTH EXPLORATION-SATELLITE (Earth-to-space) 5.460A	EARTH EXPLORATION-SATELLITE (Earth-to-space)	• ITU-R F.385
FIXED	FIXED	
MOBILE 5.458	MOBILE UAE10 UAE16	
7 250-7 300 MHz		
FIXED	FIXED	• ITU-R F.385
FIXED-SATELLITE (space-to-Earth)	FIXED-SATELLITE (space-to-Earth)	
MOBILE 5.461	MOBILE UAE10 UAE16	
7 300-7 375 MHz		
FIXED	FIXED	• ITU-R F.385
FIXED-SATELLITE (space-to-Earth)	FIXED-SATELLITE (space-to-Earth)	
MOBILE except aeronautical mobile 5.461	MOBILE except aeronautical mobile UAE10 UAE16	

Region 1	UAE Allocation	Remarks & References
7 375-7 450 MHz		
FIXED	FIXED	• ITU-R F.385
FIXED-SATELLITE (space-to-Earth)	FIXED-SATELLITE (space-to-Earth)	
MOBILE except aeronautical mobile	MOBILE except aeronautical mobile	
MARITIME MOBILE-SATELLITE (space-to-Earth) 5.461AA 5.461AB	MARITIME MOBILE-SATELLITE (space-to-Earth) UAE10 UAE16	
7 450-7 550 MHz		
FIXED	FIXED	• ITU-R F.385
FIXED-SATELLITE (space-to-Earth)	FIXED-SATELLITE (space-to-Earth)	
METEOROLOGICAL-SATELLITE (space-to-Earth)	METEOROLOGICAL-SATELLITE (space-to-Earth)	
MOBILE except aeronautical mobile	MOBILE except aeronautical mobile	
MARITIME MOBILE-SATELLITE (space-to-Earth) 5.461AA 5.461AB 5.461A	MARITIME MOBILE-SATELLITE (space-to-Earth) UAE10 UAE16	

Region 1	UAE Allocation	Remarks & References
7 550-7 750 MHz		
FIXED	FIXED	• ITU-R F.385
FIXED-SATELLITE (space-to-Earth)	FIXED-SATELLITE (space-to-Earth)	
MOBILE except aeronautical mobile	MOBILE except aeronautical mobile	
MARITIME MOBILE-SATELLITE (space-to-Earth) 5.461AA 5.461AB	MARITIME MOBILE-SATELLITE (space-to-Earth) UAE10 UAE16	
7 750-7 900 MHz		
FIXED	FIXED	• ITU-R F.386
METEOROLOGICAL-SATELLITE (space-to-Earth) 5.461B	METEOROLOGICAL-SATELLITE (space-to-Earth)	
MOBILE except aeronautical mobile	MOBILE except aeronautical mobile UAE10 UAE16	
7 900-8 025 MHz		
FIXED	FIXED	• ITU-R F.386
FIXED-SATELLITE (Earth-to-space)	FIXED-SATELLITE (Earth-to-space)	
MOBILE 5.461	MOBILE UAE10 UAE16	

Region 1	UAE Allocation	Remarks & References
8 025-8 175 MHz		
EARTH EXPLORATION-SATELLITE (space-to-Earth)	EARTH EXPLORATION-SATELLITE (space-to-Earth)	• ITU-R F.386
FIXED	FIXED	
FIXED-SATELLITE (Earth-to-space)	FIXED-SATELLITE (Earth-to-space)	
MOBILE 5.463 5.462A	MOBILE UAE4	
8 175-8 215 MHz		
EARTH EXPLORATION-SATELLITE (space-to-Earth)	EARTH EXPLORATION-SATELLITE (space-to-Earth)	• ITU-R F.386
FIXED	FIXED	
FIXED-SATELLITE (Earth-to-space)	FIXED-SATELLITE (Earth-to-space)	
METEOROLOGICAL-SATELLITE (Earth-to-space)	METEOROLOGICAL-SATELLITE (Earth-to-space)	
MOBILE 5.463 5.462A	MOBILE UAE4	
8 215-8 400 MHz		
EARTH EXPLORATION-SATELLITE (space-to-Earth)	EARTH EXPLORATION-SATELLITE (space-to-Earth)	• ITU-R F.386
FIXED	FIXED	
FIXED-SATELLITE (Earth-to-space)	FIXED-SATELLITE (Earth-to-space)	
MOBILE 5.463 5.462A	MOBILE UAE4	

Region 1	UAE Allocation	Remarks & References
8 400-8 500 MHz		
FIXED	FIXED	• ITU-R F.386
MOBILE except aeronautical mobile	MOBILE except aeronautical mobile	
SPACE RESEARCH (space-to-Earth) 5.465 5.466	SPACE RESEARCH (space-to-Earth) UAE10	
8 500-8 550 MHz		
RADIOLOCATION	FIXED	• ITU-R F.386
	MOBILE	
	RADIOLOCATION	
5.468 5.469	UAE10 UAE14	
8 550-8 650 MHz		
EARTH EXPLORATION-SATELLITE (active)	FIXED	• ITU-R F.386
RADIOLOCATION	MOBILE	
SPACE RESEARCH (active)	EARTH EXPLORATION-SATELLITE (active)	
	RADIOLOCATION	
	SPACE RESEARCH (active)	
5.468 5.469 5.469A	UAE10 UAE14 UAE16	
8 650-8 750 MHz		
RADIOLOCATION	FIXED	• ITU-R F.386
	MOBILE	
	RADIOLOCATION	
5.468 5.469	UAE10 UAE14 UAE16	

Region 1	UAE Allocation	Remarks & References
8 750-8 850 MHz		
RADIOLOCATION	MARITIME RADIONAVIGATION	• ITU-R SM.329 • ITU-R SM.1541
AERONAUTICAL RADIONAVIGATION 5.470 5.471	RADIOLOCATION AERONAUTICAL RADIONAVIGATION UAE7 UAE14 UAE16	
8 850-9 000 MHz		
RADIOLOCATION	RADIOLOCATION	
MARITIME RADIONAVIGATION 5.472 5.473	MARITIME RADIONAVIGATION UAE14 UAE16	
9 000-9 200 MHz		
RADIOLOCATION	MARITIME RADIONAVIGATION	• ITU-R SM.329 • ITU-R SM.1541
AERONAUTICAL RADIONAVIGATION 5.337 5.471 5.473A	RADIOLOCATION AERONAUTICAL RADIONAVIGATION UAE7 UAE14 UAE16	
9 200-9 300 MHz		
EARTH EXPLORATION-SATELLITE (active) 5.474A 5.474B 5.474C	EARTH EXPLORATION-SATELLITE (active)	• ITU-R SM.329 • ITU-R SM.1541 • ITU-R M.824
RADIOLOCATION	RADIOLOCATION	
MARITIME RADIONAVIGATION 5.472 5.473 5.474 5.474D	MARITIME RADIONAVIGATION UAE2 UAE7 UAE11 UAE14	

Region 1	UAE Allocation	Remarks & References
9 300-9 500 MHz		
EARTH EXPLORATION-SATELLITE (active)	EARTH EXPLORATION-SATELLITE (active)	• ITU-R SM.329 • ITU-R SM.1541 • ITU-R F.474
RADIOLOCATION	RADIOLOCATION	
RADIONAVIGATION 5.475	RADIONAVIGATION	
SPACE RESEARCH (active) 5.427 5.474 5.475A 5.475B 5.476A	SPACE RESEARCH (active) UAE7 UAE11 UAE14	
9 500-9 800 MHz		
EARTH EXPLORATION-SATELLITE (active)	EARTH EXPLORATION-SATELLITE (active)	
RADIOLOCATION	RADIOLOCATION	
RADIONAVIGATION	RADIONAVIGATION	
SPACE RESEARCH (active) 5.476A	SPACE RESEARCH (active) UAE14	
9 800-9 900 MHz		
RADIOLOCATION	FIXED	
Earth exploration-satellite (active)	RADIOLOCATION	
Fixed	Earth exploration-satellite (active)	
Space research (active) 5.477 5.478 5.478A 5.478B	Space research (active) UAE14 UAE16	

Region 1	UAE Allocation	Remarks & References
9 900-10 000 MHz		
EARTH EXPLORATION-SATELLITE (active) 5.474A 5.474B 5.474C	FIXED	
RADIOLOCATION	EARTH EXPLORATION-SATELLITE (active)	
Fixed 5.474D 5.477 5.478 5.479	RADIOLOCATION UAE14 UAE16	
10-10.4 GHz		
EARTH EXPLORATION-SATELLITE (active) 5.474A 5.474B 5.474C	EARTH EXPLORATION-SATELLITE (active)	• ITU-R F.474
FIXED	FIXED	
MOBILE	MOBILE	
RADIOLOCATION	RADIOLOCATION	
Amateur 5.474D 5.479	Amateur UAE8 UAE14 UAE16	
10.4-10.45 GHz		
FIXED	FIXED	• ITU-R F.474
MOBILE	MOBILE	
RADIOLOCATION	RADIOLOCATION	
Amateur	Amateur UAE8 UAE14 UAE16	

Region 1	UAE Allocation	Remarks & References
10.45-10.5 GHz		
RADIOLOCATION	RADIOLOCATION	• ITU-R F.474
Amateur	Amateur	
Amateur-satellite 5.481	Amateur-satellite UAE8 UAE14 UAE16	
10.5-10.55 GHz		
FIXED	FIXED	• ITU-R F.474
MOBILE	MOBILE	
Radiolocation	Radiolocation UAE14 UAE16	
10.55-10.6 GHz		
FIXED	FIXED	• ITU-R F.474
MOBILE except aeronautical mobile	MOBILE except aeronautical mobile	
Radiolocation	Radiolocation UAE14 UAE16	

Region 1	UAE Allocation	Remarks & References
10.6-10.68 GHz		
EARTH EXPLORATION-SATELLITE (passive)	EARTH EXPLORATION-SATELLITE (passive)	• ITU-R F.474
FIXED	FIXED	
MOBILE except aeronautical mobile	MOBILE except aeronautical mobile	
RADIO ASTRONOMY	RADIO ASTRONOMY	
SPACE RESEARCH (passive)	SPACE RESEARCH (passive)	
Radiolocation 5.149 5.482 5.482A	Radiolocation UAE5 UAE10	
10.68-10.7 GHz		
EARTH EXPLORATION-SATELLITE (passive)	FIXED	
RADIO ASTRONOMY	MOBILE except aeronautical mobile	
SPACE RESEARCH (passive) 5.340 5.483	EARTH EXPLORATION-SATELLITE (passive)	
	RADIO ASTRONOMY	
	SPACE RESEARCH (passive) UAE4	

Region 1	UAE Allocation	Remarks & References
10.7-10.95 GHz		
FIXED	FIXED	• ITU-R F.387 • Fixed Satellite is subject to ITU Radio Regulation Appendix subject to 30B
FIXED-SATELLITE (space-to-Earth) 5.441 (Earth-to-space) 5.484	FIXED-SATELLITE (space-to-Earth) (Earth-to-space)	
MOBILE except aeronautical mobile	MOBILE except aeronautical mobile UAE7 UAE9 UAE10	
10.95-11.2 GHz		
FIXED	FIXED	• ITU Radio Regulations Res. 155 • ITU-R F.387
FIXED-SATELLITE (space-to-Earth) 5.484A 5.484B (Earth-to-space) 5.484	FIXED-SATELLITE (space-to-Earth) (Earth-to-space)	
MOBILE except aeronautical mobile	MOBILE except aeronautical mobile UAE7 UAE9 UAE10	
11.2-11.45 GHz		
FIXED	FIXED	• ITU-R F.387 • Fixed Satellite is subject to ITU Radio Regulation Appendix subject to 30B
FIXED-SATELLITE (space-to-Earth) 5.441 (Earth-to-space) 5.484	FIXED-SATELLITE (space-to-Earth) (Earth-to-space)	
MOBILE except aeronautical mobile	MOBILE except aeronautical mobile UAE7 UAE9 UAE10	

Region 1	UAE Allocation	Remarks & References
11.45-11.7 GHz		
FIXED	FIXED	• ITU-R F.387
FIXED-SATELLITE (space-to-Earth) 5.484A 5.484B(Earth-to-space) 5.484	FIXED-SATELLITE (space-to-Earth) (Earth-to-space)	
MOBILE except aeronautical mobile	MOBILE except aeronautical mobile UAE7 UAE9 UAE10	
11.7-12.5 GHz		
FIXED	FIXED	• Broadcast Satellite is subject ITU Radio Regulation Appendix 30B • ITU-R F.746 • ITU Radio Regulations Res. 73
MOBILE except aeronautical mobile	MOBILE except aeronautical mobile	
BROADCASTING	BROADCASTING	
BROADCASTING-SATELLITE 5.492 5.487 5.487A	BROADCASTING-SATELLITE UAE7 UAE9 UAE10 UAE16	
12.5-12.75 GHz		
FIXED-SATELLITE (space-to-Earth) 5.484A 5.484B (Earth-to-space) 5.494 5.495 5.496	FIXED	• ITU-R F.746 • ITU Radio Regulations Res. 34 • ITU Radio Regulations Res. 155 • Control and non-payload communication (CNPC) for Unmanned Aircraft Systems (UAS)
	MOBILEexcept aeronautical mobile	
	FIXED-SATELLITE(space-to-Earth) (Earth-to-space) UAE7 UAE9 UAE10	

Region 1	UAE Allocation	Remarks & References
12.75-13.25 GHz		
FIXED	FIXED	• ITU-R F.497 • Fixed Satellite is subject to ITU Radio Regulation Appendix 30B
FIXED-SATELLITE (Earth-to-space) 5.441	FIXED-SATELLITE (Earth-to-space)	
MOBILE	MOBILE	
Space research (deep space) (space-to-Earth)	Space research (deep space) (space-to-Earth) UAE9 UAE10	
13.25-13.4 GHz		
EARTH EXPLORATION-SATELLITE (active)	EARTH EXPLORATION-SATELLITE (active)	• ITU-R SM.329 • ITU-R SM.1541
AERONAUTICAL RADIONAVIGATION 5.497	AERONAUTICAL RADIONAVIGATION	
SPACE RESEARCH (active) 5.498A 5.499	SPACE RESEARCH (active) UAE7	

Region 1	UAE Allocation	Remarks & References
13.4-13.65 GHz		
EARTH EXPLORATION-SATELLITE (active)	FIXED	• ITU Radio Regulations Article 26
FIXED-SATELLITE (space-to-Earth) 5.499A 5.499B	MOBILE	
RADIOLOCATION	EARTH EXPLORATION-SATELLITE (active)	
SPACE RESEARCH 5.499C 5.499D	FIXED-SATELLITE (space-to-Earth)	
Standard frequency and time signal-satellite (Earth-to-space)	RADIOLOCATION	
	SPACE RESEARCH	
	Standard frequency and time signal-satellite (Earth-to-space)	
5.499E 5.500 5.501 5.501B	UAE9 UAE10 UAE11 UAE14 UAE16	
13.65-13.75 GHz		
EARTH EXPLORATION-SATELLITE (active)	FIXED	• ITU-R F.636 • ITU Radio Regulations Article 26
RADIOLOCATION	MOBILE	
SPACE RESEARCH 5.501A	EARTH EXPLORATION-SATELLITE (active)	
Standard frequency and time signal-satellite (Earth-to-space)	RADIOLOCATION	
	SPACE RESEARCH	
	Standard frequency and time signal-satellite (Earth-to-space)	
5.499 5.500 5.501 .501B	UAE11 UAE14 UAE16	

Region 1	UAE Allocation	Remarks & References
13.75-14 GHz		
FIXED-SATELLITE (Earth-to-space) 5.484A	FIXED	• ITU Radio Regulations Res. 144 • ITU Radio Regulations Article 26
RADIOLOCATION	MOBILE	
Earth exploration-satellite	RADIOLOCATION	
Standard frequency and time signal-satellite (Earth-to-space)	FIXED-SATELLITE (Earth-to-space)	
Space research	Earth exploration-satellite	
	Standard frequency and time signal-satellite (Earth-to-space)	
	Space research	
5.499 5.500 5.501 5.502 5.503	UAE9 UAE10 UAE11 UAE14 UAE16	
14-14.25 GHz		
FIXED-SATELLITE (Earth-to-space) 5.457A 5.457B 5.484A 5.484B 5.506 5.506B	FIXED	• ITU Radio Regulations Res.155 • ITU Radio Regulations Res.902 • Control and non-payload communication (CNPC) for Unmanned Aircraft Systems (UAS)
RADIONAVIGATION 5.504	FIXED-SATELLITE (Earth-to-space)	
Mobile-satellite (Earth-to-space) 5.504B 5.504C 5.506A	RADIONAVIGATION	
Space research	Mobile-satellite (Earth-to-space)	
	Space research	
	Maritime mobile-satellite	
5.504A 5.505	UAE7 UAE9 UAE10	

Region 1	UAE Allocation	Remarks & References
14.25-14.3 GHz		
FIXED-SATELLITE (Earth-to-space) 5.457A 5.457B 5.484A 5.484B 5.506 5.506B	FIXED	• ITU Radio Regulations Res.155 • ITU Radio Regulations Res.902 • Control and non-payload communication (CNPC) for Unmanned Aircraft Systems (UAS)
RADIONAVIGATION 5.504	FIXED-SATELLITE (Earth-to-space)	
Mobile-satellite (Earth-to-space) 5.504B 5.506A 5.508A	RADIONAVIGATION	
Space research	Mobile-satellite (Earth-to-space)	
	Space research	
	Maritime mobile-satellite	
5.504A 5.505 5.508	UAE7 UAE9 UAE10	
14.3-14.4 GHz		
FIXED	FIXED	• ITU Radio Regulations Res.155 • ITU Radio Regulations Res.902 • Control and non-payload communication (CNPC) for Unmanned Aircraft Systems (UAS)
FIXED-SATELLITE (Earth-to-space) 5.457A 5.457B 5.484A 5.484B 5.506 5.506B	FIXED-SATELLITE (Earth-to-space)	
MOBILE except aeronautical mobile	MOBILE except aeronautical mobile	
Mobile-satellite (Earth-to-space) 5.504B 5.506A 5.509A	Mobile-satellite (Earth-to-space)	
Radionavigation-satellite	Radionavigation-satellite	
	Maritime mobile-satellite	
5.504A	UAE7 UAE9 UAE10	

Region 1	UAE Allocation	Remarks & References
14.4-14.47 GHz		
FIXED	FIXED	• ITU Radio Regulations Res.155 • ITU Radio Regulations Res.902 • ITU-R F.636 • Control and non-payload communication (CNPC) for Unmanned Aircraft Systems (UAS)
FIXED-SATELLITE (Earth-to-space) 5.457A 5.457B 5.484A 5.484B 5.506 5.506B	FIXED-SATELLITE (Earth-to-space)	
MOBILE except aeronautical mobile	MOBILE except aeronautical mobile	
Mobile-satellite (Earth-to-space) 5.504B 5.506A 5.509A	Mobile-satellite (Earth-to-space)	
Space research (space-to-Earth)	Space research (space-to-Earth)	
	Maritime mobile-satellite	
5.504A	UAE7 UAE9 UAE10	
14.47-14.5 GHz		
FIXED	FIXED	• ITU Radio Regulation Res. 902 • ITU-R F.636
FIXED-SATELLITE (Earth-to-space) 5.457A 5.457B 5.484A	FIXED-SATELLITE (Earth-to-space)	
5.506 5.506B	MOBILE except aeronautical mobile	
MOBILE except aeronautical mobile	Mobile-satellite (Earth-to-space)	
Mobile-satellite (Earth-to-space) 5.504B 5.506A 5.509A	Radio astronomy	
Radio astronomy		
5.149 5.504A	UAE5 UAE7 UAE9 UAE10	

Region 1	UAE Allocation	Remarks & References
14.5-14.75 GHz		
FIXED	FIXED	• ITU-R F.636 • Fixed Satellite is subject to ITU Radio Regulations Appendix 30B
FIXED-SATELLITE (Earth-to-space) 5.509B 5.509C 5.509D 5.509E 5.509F 5.510	FIXED-SATELLITE (Earth-to-space)	
MOBILE	MOBILE	
Space research 5.509G	Space research UAE9 UAE10	
14.75-14.8 GHz		
FIXED	FIXED	• ITU-R F.636 • Fixed Satellite is subject to ITU Radio Regulations Appendix 30B
FIXED-SATELLITE (Earth-to-space) 5.510	FIXED-SATELLITE (Earth-to-space)	
MOBILE	MOBILE	
Space research 5.509G	Space research UAE9 UAE10	
14.8-15.35 GHz		
FIXED	FIXED	• ITU-R F.636
MOBILE	MOBILE	
Space research 5.339	Space research UAE10	

Region 1	UAE Allocation	Remarks & References
15.35-15.4 GHz		
EARTH EXPLORATION-SATELLITE (passive)	EARTH EXPLORATION-SATELLITE (passive)	
RADIO ASTRONOMY SPACE RESEARCH (passive)	RADIO ASTRONOMY SPACE RESEARCH (passive)	
	Fixed	
5.340 5.511	Mobile UAE4	
15.4-15.43 GHz		
RADIOLOCATION 5.511E 5.511F	RADIOLOCATION	• ITU-R SM.329 • ITU-R SM.1541
AERONAUTICAL RADIONAVIGATION	AERONAUTICAL RADIONAVIGATION UAE7	
15.43-15.63 GHz		
FIXED-SATELLITE (Earth-to-space) 5.511A	FIXED-SATELLITE (Earth-to-space)	• ITU-R SM.329 • ITU-R SM.1541
RADIOLOCATION 5.511E 5.511F	RADIOLOCATION	
AERONAUTICAL RADIONAVIGATION 5.511C	AERONAUTICAL RADIONAVIGATION UAE7	
15.63-15.7 GHz		
RADIOLOCATION 5.511E 5.511F	RADIOLOCATION	• ITU-R SM.329 • ITU-R SM.1541
AERONAUTICAL RADIONAVIGATION	AERONAUTICAL RADIONAVIGATION UAE7	

Region 1	UAE Allocation	Remarks & References
15.7-16.6 GHz		
RADIOLOCATION	FIXED	
	MOBILE	
	RADIOLOCATION	
5.512 5.513	UAE10	
16.6-17.1 GHz		
RADIOLOCATION	RADIOLOCATION	
Space research (deep space) (Earth-to-space)	FIXED	
	MOBILE	
	Space research (deep space) (Earth-to-space)	
5.512 5.513	UAE10	
17.1-17.2 GHz		
RADIOLOCATION	RADIOLOCATION	
	FIXED	
	MOBILE	
5.512 5.513	UAE10 UAE14 UAE16	

Region 1	UAE Allocation	Remarks & References
17.2-17.3 GHz		
EARTH EXPLORATION-SATELLITE (active)	EARTH EXPLORATION-SATELLITE (active)	
RADIOLOCATION	RADIOLOCATION	
SPACE RESEARCH (active)	SPACE RESEARCH (active)	
	FIXED	
	MOBILE	
5.512 5.513 5.513A	UAE10 UAE14 UAE16	
17.3-17.7 GHz		
FIXED-SATELLITE (Earth-to-space) 5.516 (space-to-Earth) 5.516A 5.516B	FIXED-SATELLITE (Earth-to-space) (space-to-Earth)	• Fixed Satellite is subject to ITU Radio Regulations Appendix 30B • ITU Radio Regulations Res. 143
Radiolocation	Fixed	
	Mobile	
	Radiolocation	
5.514		
17.7-18.1 GHz		
FIXED	FIXED	• ITU-R F.595 • Fixed Satellite is subject to ITU Radio Regulations Appendix 30B • ITU Radio Regulation Res. 147
FIXED-SATELLITE (space-to-Earth) 5.484A 5.517A (Earth-to-space) 5.516	FIXED-SATELLITE (space-to-Earth) (Earth-to-space)	
MOBILE	MOBILE	
	UAE9 UAE10	

Region 1	UAE Allocation	Remarks & References
18.1-18.4 GHz		
FIXED	FIXED	• ITU-R F.595
FIXED-SATELLITE (space-to-Earth) 5.484A 5.516B 5.517A (Earth-to-space) 5.520	FIXED-SATELLITE (space-to-Earth)	
MOBILE 5.519 5.521	MOBILE UAE9 UAE10	
18.4-18.6 GHz		
FIXED	FIXED	• ITU-R F.595
FIXED-SATELLITE (space-to-Earth) 5.484A 5.516B 5.517A	FIXED-SATELLITE (space-to-Earth)	
MOBILE	MOBILE UAE9 UAE10	
18.6-18.8 GHz		
EARTH EXPLORATION-SATELLITE (passive)	EARTH EXPLORATION-SATELLITE (passive)	• ITU-R F.595
FIXED	FIXED	
FIXED-SATELLITE (space-to-Earth) 5.517A 5.522B	FIXED-SATELLITE (space-to-Earth)	
MOBILE except aeronautical mobile	MOBILE except aeronautical mobile	
Space research (passive) 5.522A 5.522C	Space research (passive) UAE9 UAE10	

Region 1	UAE Allocation	Remarks & References
18.8-19.3 GHz		
FIXED	FIXED	• ITU-R F.595
FIXED-SATELLITE (space-to-Earth) 5.516B 5.517A 5.523A	FIXED-SATELLITE (space-to-Earth)	
MOBILE	MOBILE UAE9 UAE10	
19.3-19.7 GHz		
FIXED	FIXED	• ITU-R F.595
FIXED-SATELLITE (space-to-Earth) (Earth-to-space) 5.517A 5.523B 5.523C 5.523D 5.523E	FIXED-SATELLITE (space-to-Earth) (Earth-to-space)	
MOBILE	MOBILE UAE9 UAE10	
19.7-20.1 GHz		
FIXED-SATELLITE (space-to-Earth) 5.484A 5.484B 5.516B 5.527A	FIXED	• ITU Radio Regulation Res. 143 (HDFSS) • ITU Radio Regulation Res. 140 • ITU Radio Regulation Res. 155 • ITU Radio Regulation Res. 156 • Control and non-payload communication(CNPC) for Unmanned Aircraft Systems (UAS)
Mobile-satellite (space-to-Earth)	MOBILE	
	FIXED-SATELLITE (space-to-Earth)	
	Mobile-satellite (space-to-Earth)	
5.524	UAE7 UAE9	

Region 1	UAE Allocation	Remarks & References
20.1-20.2 GHz		
FIXED-SATELLITE (space-to-Earth) 5.484A 5.484B 5.516B 5.527A	FIXED	• ITU Radio Regulation Res. 140 • ITU Radio Regulation Res. 143 • ITU Radio Regulation Res. 155 • ITU Radio Regulation Res. 156 • Control and non-payload communication(CNPC) for Unmanned Aircraft Systems (UAS)
MOBILE-SATELLITE (space-to-Earth)	MOBILE	
	FIXED-SATELLITE (space-to-Earth)	
	MOBILE-SATELLITE (space-to-Earth)	
5.524 5.525 5.526 5.527 5.528	UAE7 UAE9	
20.2-21.2 GHz		
FIXED-SATELLITE (space-to-Earth)	FIXED	• ITU Radio Regulations Article 26
MOBILE-SATELLITE (space-to-Earth)	MOBILE	
Standard frequency and time signal-satellite (space-to-Earth)	FIXED-SATELLITE (space-to-Earth)	
	MOBILE-SATELLITE (space-to-Earth)	
	Standard frequency and time signal-satellite (space-to-Earth)	
5.524	UAE9	

Region 1	UAE Allocation	Remarks & References
21.2-21.4 GHz		
EARTH EXPLORATION-SATELLITE (passive)	EARTH EXPLORATION-SATELLITE (passive)	• ITU-R F.637
FIXED	FIXED	
MOBILE	MOBILE	
SPACE RESEARCH (passive)	SPACE RESEARCH (passive) UAE10 UAE16	
21.4-22 GHz		
FIXED	FIXED	• ITU-R F.637 • ITU Radio Regulations Res. 552 • ITU Radio Regulations Res. 553 • ITU Radio Regulations Res. 554 • ITU Radio Regulations Res. 555
MOBILE	MOBILE	
BROADCASTING-SATELLITE 5.208B 5.530A 5.530B	BROADCASTING-SATELLITE UAE10 UAE16	
22-22.21 GHz		
FIXED	FIXED	• ITU-R F.637
MOBILE except aeronautical mobile 5.149	MOBILE except aeronautical mobile UAE5 UAE10 UAE16	

Region 1	UAE Allocation	Remarks & References
22.21-22.5 GHz		
EARTH EXPLORATION-SATELLITE (passive)	EARTH EXPLORATION-SATELLITE (passive)	• ITU-R F.637
FIXED	FIXED	
MOBILE except aeronautical mobile	MOBILE except aeronautical mobile	
RADIO ASTRONOMY	RADIO ASTRONOMY	
SPACE RESEARCH (passive) 5.149 5.532	SPACE RESEARCH (passive) UAE5 UAE10 UAE16	
22.5-22.55 GHz		
FIXED	FIXED	• ITU-R F.637
MOBILE	MOBILE UAE10 UAE16	
22.55-23.15 GHz		
FIXED	FIXED	• ITU-R F.637
INTER-SATELLITE 5.338A	INTER-SATELLITE	
MOBILE	MOBILE	
SPACE RESEARCH (Earth-to-space) 5.532A 5.149	SPACE RESEARCH (Earth-to-space) UAE5 UAE16	
23.15-23.55 GHz		
FIXED	FIXED	• ITU-R F.637
INTER-SATELLITE 5.338A	INTER-SATELLITE	
MOBILE	MOBILE UAE10 UAE16	

Region 1	UAE Allocation	Remarks & References
23.55-23.6 GHz		
FIXED	FIXED	• ITU-R F.637
MOBILE	MOBILE UAE10 UAE16	
23.6-24 GHz		
EARTH EXPLORATION-SATELLITE (passive)	EARTH EXPLORATION-SATELLITE (passive)	
RADIO ASTRONOMY	RADIO ASTRONOMY	
SPACE RESEARCH (passive) 5.340	SPACE RESEARCH (passive) UAE4	
24-24.05 GHz		
AMATEUR	AMATEUR	
AMATEUR-SATELLITE 5.150	AMATEUR-SATELLITE UAE8 UAE14 UAE16	
24.05-24.25 GHz		
RADIOLOCATION	RADIOLOCATION	
Amateur	Amateur	
Earth exploration-satellite (active) 5.150	Earth exploration-satellite (active) UAE8 UAE14 UAE16	

Region 1	UAE Allocation	Remarks & References
24.25-24.45 GHz		
FIXED	MOBILE except aeronautical mobile	• ITU-R F.748 • IMT band
MOBILE except aeronautical mobile 5.532AB 5.338A	FIXED UAE7 UAE14 UAE15 UAE16	
24.45-24.65 GHz		
FIXED	MOBILE except aeronautical mobile	• ITU-R SM.329 • ITU-R SM.1541 • IMT band
INTER-SATELLITE	FIXED	
MOBILE except aeronautical mobile5.532AB 5.338A	INTER-SATELLITE UAE7 UAE14 UAE15 UAE16	
24.65-24.75 GHz		
FIXED	MOBILE except aeronautical mobile	• ITU-R F.748 • IMT band
FIXED-SATELLITE (Earth-to-space) 5.532B	FIXED	
INTER-SATELLITE	FIXED-SATELLITE (Earth-to-space)	
MOBILE except aeronautical mobile 5.532AB 5.338A	INTER-SATELLITE	

Region 1	UAE Allocation	Remarks & References
24.75-25.25 GHz		
FIXED	MOBILE except aeronautical mobile	• ITU-R F.748 • IMT band
FIXED-SATELLITE (Earth-to-space) 5.532B	FIXED	
MOBILE except aeronautical mobile 5.532AB 5.338A	FIXED-SATELLITE (Earth-to-space) UAE14 UAE15	
25.25-25.5 GHz		
FIXED 5.534A	MOBILE	• ITU-R F.748 • IMT band • ITU Radio Regulations Article 26
INTER-SATELLITE 5.536	INTER-SATELLITE	
MOBILE 5.532AB 5.338A	FIXED	
Standard frequency and time signal-satellite (Earth-to-space)	Standard frequency and time signal-satellite (Earth-to-space) UAE14 UAE15	

Region 1	UAE Allocation	Remarks & References
25.5-27 GHz		
EARTH EXPLORATION-SATELLITE (space-to Earth) 5.536B	MOBILE	• ITU-R F.748 • IMT band • ITU Radio Regulations Article 26
FIXED 5.534A	EARTH EXPLORATION-SATELLITE (space-to Earth)	
INTER-SATELLITE 5.536	FIXED	
MOBILE 5.532AB 5.338A	INTER-SATELLITE	
SPACE RESEARCH (space-to-Earth) 5.536C	SPACE RESEARCH (space-to-Earth)	
Standard frequency and time signal-satellite (Earth-to-space) 5.536A	Standard frequency and time signal-satellite (Earth-to-space) UAE14 UAE15	
27-27.5 GHz		
FIXED	FIXED	• ITU-R F.748 • IMT band
INTER-SATELLITE 5.536	INTER-SATELLITE	
MOBILE 5.532AB 5.338A	MOBILE UAE15	
27.5-28.5 GHz		
FIXED 5.537A	FIXED	• ITU-R F.748 • ITU Radio Regulations Res. 143
FIXED-SATELLITE (Earth-to-space) 5.484A 5.516B 5.517A 5.539	FIXED-SATELLITE (Earth-to-space)	
MOBILE 5.538 5.540	MOBILE UAE9 UAE10	

Region 1	UAE Allocation	Remarks & References
28.5-29.1 GHz		
FIXED	FIXED	• ITU-R F.748 • ITU Radio Regulations Res. 143
FIXED-SATELLITE (Earth-to-space) 5.484A 5.516B 5.517A 5.523A 5.539	FIXED-SATELLITE (Earth-to-space)	
MOBILE	MOBILE	
Earth exploration-satellite (Earth-to-space) 5.541 5.540	Earth exploration-satellite (Earth-to-space) UAE9 UAE10	
29.1-29.5 GHz		
FIXED	FIXED	• ITU-R F.748 • ITU Radio Regulations Res. 143
FIXED-SATELLITE (Earth-to-space) 5.516B 5.517A 5.523C 5.523E 5.535A 5.539 5.541A	FIXED-SATELLITE (Earth-to-space)	
MOBILE	MOBILE	
Earth exploration-satellite (Earth-to-space) 5.541 5.540	Earth exploration-satellite (Earth-to-space) UAE9 UAE10	

Region 1	UAE Allocation	Remarks & References
29.5-29.9 GHz		
FIXED-SATELLITE (Earth-to-space) 5.484A 5.484B 5.516B 5.527A 5.539	FIXED-SATELLITE (Earth-to-space)	• ITU Radio Regulation Res. 155 • ITU Radio Regulation Res. 156 • ITU Radio Regulation Res. 143 • Control and non-payload communication(CNPC) for Unmanned Aircraft Systems (UAS)
Earth exploration-satellite (Earth-to-space) 5.541	Earth exploration-satellite (Earth-to-space)	
Mobile-satellite (Earth-to-space)	Mobile-satellite (Earth-to-space)	
	Fixed	
5.540 5.542	Mobile UAE7 UAE9	
29.9-30 GHz		
FIXED-SATELLITE (Earth-to-space) 5.484A 5.484B 5.516B 5.527A 5.539	FIXED-SATELLITE (Earth-to-space)	• ITU Radio Regulation Res. 155 • ITU Radio Regulation Res. 156 • ITU Radio Regulation Res. 143 • Control and non-payload communication(CNPC) for Unmanned Aircraft Systems (UAS)
MOBILE-SATELLITE (Earth-to-space)	MOBILE-SATELLITE (Earth-to-space)	
Earth exploration-satellite (Earth-to-space) 5.541 5.543	Earth exploration-satellite (Earth-to-space)	
	Fixed	
5.525 5.526 5.527 5.538 5.540 5.542	Mobile UAE7 UAE9	

Region 1	UAE Allocation	Remarks & References
30-31 GHz		
FIXED-SATELLITE (Earth-to-space) 5.338A	FIXED-SATELLITE (Earth-to-space)	• ITU Radio Regulations Article 26
MOBILE-SATELLITE (Earth-to-space)	MOBILE-SATELLITE (Earth-to-space)	
Standard frequency and time signal-satellite (space-to-Earth)	Standard frequency and time signal-satellite (space-to-Earth)	
	Fixed	
	Mobile	
5.542	UAE9	
31-31.3 GHz		
FIXED 5.338A 5.543B	FIXED	• ITU-R F.746 • ITU Radio Regulations Article 26
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	
5.149	UAE5 UAE10	
31.3-31.5 GHz		
EARTH EXPLORATION-SATELLITE (passive)	EARTH EXPLORATION-SATELLITE (passive)	
RADIO ASTRONOMY	RADIO ASTRONOMY	
SPACE RESEARCH (passive)	SPACE RESEARCH (passive)	
5.340	UAE4	

Region 1	UAE Allocation	Remarks & References
31.5-31.8 GHz		
EARTH EXPLORATION-SATELLITE (passive)	FIXED	• ITU-R F.1520
RADIO ASTRONOMY	MOBILE except aeronautical mobile	
SPACE RESEARCH (passive)	EARTH EXPLORATION-SATELLITE (passive)	
Fixed	RADIO ASTRONOMY	
Mobile except aeronautical mobile 5.149 5.546	SPACE RESEARCH (passive) UAE5	
31.8-32 GHz		
FIXED 5.547A	FIXED	• ITU-R SM.329 • ITU-R SM.1541 • ITU-R F.1520 • ITU Radio Regulations Res. 75
RADIONAVIGATION	RADIONAVIGATION	
SPACE RESEARCH (deep space) (space-to-Earth) 5.547 5.547B 5.548	SPACE RESEARCH (deep space) (space-to-arth) UAE7 UAE10	
32-32.3 GHz		
FIXED 5.547A	FIXED	• ITU-R SM.329 • ITU-R SM.1541 • ITU-R F.1520 • ITU Radio Regulations Res. 75
RADIONAVIGATION	RADIONAVIGATION	
SPACE RESEARCH (deep space) (space-to-Earth) 5.547 5.547C 5.548	SPACE RESEARCH (deep space) (space-to-Earth) UAE7 UAE10	

Region 1	UAE Allocation	Remarks & References
32.3-33 GHz		
FIXED 5.547A	FIXED	• ITU-R F.1520 • ITU-R SM.329 • ITU-R SM.1541
INTER-SATELLITE	INTER-SATELLITE	
RADIONAVIGATION 5.547 5.547D 5.548	RADIONAVIGATION UAE7 UAE10	
33-33.4 GHz		
FIXED 5.547A	FIXED	• ITU-R F.1520 • ITU-R SM.329 • ITU-R SM.1541
RADIONAVIGATION 5.547 5.547E	RADIONAVIGATION UAE7 UAE10	
33.4-34.2 GHz		
RADIOLOCATION 5.549	FIXED	
	MOBILE	
	RADIOLOCATION	
34.2-34.7 GHz		
RADIOLOCATION	FIXED	
SPACE RESEARCH (deep space)(Earth-to-space) 5.549	MOBILE	
	RADIOLOCATION	
	SPACE RESEARCH (deep space) (Earth-to-pace)	

Region 1	UAE Allocation	Remarks & References
34.7-35.2 GHz		
RADIOLOCATION	FIXED	
Space research 5.550	MOBILE	
	RADIOLOCATION	
5.549	Space research	
35.2-35.5 GHz		
METEOROLOGICAL AIDS	FIXED	
RADIOLOCATION	MOBILE	
	METEOROLOGICAL AIDS	
5.549	RADIOLOCATION	
35.5-36 GHz		
METEOROLOGICAL AIDS	FIXED	
EARTH EXPLORATION-SATELLITE (active)	MOBILE	
RADIOLOCATION	METEOROLOGICAL AIDS	
SPACE RESEARCH (active)	EARTH EXPLORATION-SATELLITE (active)	
	RADIOLOCATION	
5.549 5.549A	SPACE RESEARCH (active)	

Region 1	UAE Allocation	Remarks & References
36-37 GHz		
EARTH EXPLORATION-SATELLITE (passive)	EARTH EXPLORATION-SATELLITE (passive)	• ITU-R F.749
FIXED	FIXED	
MOBILE	MOBILE	
SPACE RESEARCH (passive) 5.149 5.550A	SPACE RESEARCH (passive) UAE5 UAE10	
37-37.5 GHz		
FIXED	FIXED	• ITU-R F.749 • ITU Radio Regulations Res. 75 • IMT band.
MOBILE except aeronautical mobile 5.550B	MOBILE except aeronautical mobile	
SPACE RESEARCH (space-to-Earth) 5.547	SPACE RESEARCH (space-to-Earth) UAE10 UAE15	
37.5-38 GHz		
FIXED	FIXED	• ITU-R F.749 • ITU Radio Regulations Res. 75 • IMT band.
FIXED-SATELLITE (space-to-Earth)5.550C	FIXED-SATELLITE (space-to-Earth)	
MOBILE except aeronautical mobile 5.550B	MOBILE except aeronautical mobile	
SPACE RESEARCH (space-to-Earth)	SPACE RESEARCH (space-to-Earth)	
Earth exploration-satellite (space-to-Earth) 5.547	Earth exploration-satellite (space-to-Earth) UAE10 UAE15	

Region 1	UAE Allocation	Remarks & References
38-39.5 GHz		
FIXED 5.550D	FIXED	• ITU-R F.749 • IMT band.
FIXED-SATELLITE (space-to-Earth) 5.550C	FIXED-SATELLITE (space-to-Earth)	
MOBILE 5.550B	MOBILE	
Earth exploration-satellite (space-to-Earth) 5.547	Earth exploration-satellite (space-to-Earth) UAE10 UAE15	
39.5-40 GHz		
FIXED	FIXED	• ITU-R F.749 • ITU Radio Regulations Res. 143 • IMT band.
FIXED-SATELLITE (space-to-Earth) 5.516B 5.550C	FIXED-SATELLITE (space-to-Earth)	
MOBILE 5.550B	MOBILE	
MOBILE-SATELLITE (space-to-Earth)	MOBILE-SATELLITE (space-to-Earth)	
Earth exploration-satellite (space-to-Earth) 5.547 5.550E	Earth exploration-satellite (space-to-Earth) UAE10 UAE15	

Region 1	UAE Allocation	Remarks & References
40-40.5 GHz		
EARTH EXPLORATION-SATELLITE (Earth-to-space)	EARTH EXPLORATION-SATELLITE (Earth-to-space)	• ITU-R F.749 • ITU Radio Regulations Res. 143 • IMT band.
FIXED	FIXED	
FIXED-SATELLITE (space-to-Earth) 5.516B 5.550C	FIXED-SATELLITE (space-to-Earth)	
MOBILE 5.550B	MOBILE	
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) 5.550E	Earth exploration-satellite (space-to-Earth) UAE10 UAE15	
40.5-41 GHz		
FIXED	FIXED	• ITU-R F.2005 • IMT band.
FIXED-SATELLITE (space-to-Earth) 5.550C	FIXED-SATELLITE (space-to-Earth)	
LAND MOBILE 5.550B	LAND MOBILE	
BROADCASTING	BROADCASTING	
BROADCASTING-SATELLITE	BROADCASTING-SATELLITE	
Aeronautical mobile	Aeronautical mobile	
Maritime mobile 5.547	Maritime mobile UAE10 UAE15	

Region 1	UAE Allocation	Remarks & References
41-42.5 GHz		
FIXED	FIXED	• ITU-R F.2005 • IMT band.
FIXED-SATELLITE (space-to-Earth) 5.516B 5.550C	FIXED-SATELLITE (space-to-Earth)	
LAND MOBILE 5.550B	LAND MOBILE	
BROADCASTING	BROADCASTING	
BROADCASTING-SATELLITE	BROADCASTING-SATELLITE	
Aeronautical mobile	Aeronautical mobile	
Maritime mobile 5.547 5.551F 5.551H5.551I	Maritime mobile UAE10 UAE15	
42.5-43.5 GHz		
FIXED	FIXED	• ITU-R F.2005 • IMT band.
FIXED-SATELLITE (Earth-to-space) 5.552	FIXED-SATELLITE (Earth-to-space)	
MOBILE except aeronautical mobile 5.550B	MOBILE except aeronautical mobile	
RADIO ASTRONOMY 5.149 5.547	RADIO ASTRONOMY UAE5 UAE10 UAE15	
43.5-47 GHz		
MOBILE 5.553 5.553A	MOBILE	• IMT range is 45.5 - 47 GHz.
MOBILE-SATELLITE	MOBILE-SATELLITE	
RADIONAVIGATION	RADIONAVIGATION	
RADIONAVIGATION-SATELLITE 5.554	RADIONAVIGATION-SATELLITE UAE15	

Region 1	UAE Allocation	Remarks & References
47-47.2 GHz		
AMATEUR	AMATEUR	
AMATEUR-SATELLITE	AMATEUR-SATELLITE UAE8	
47.2-47.5 GHz		
FIXED	MOBILE	• IMT band.
FIXED-SATELLITE (Earth-to-space) 5.550C 5.552	FIXED-SATELLITE (Earth-to-space)	
MOBILE 5.553B 5.552A	FIXED UAE10 UAE15 UAE16	
47.5-47.9 GHz		
FIXED	MOBILE	• ITU Radio Regulations Res.143 • IMT band.
FIXED-SATELLITE (Earth-to-space) 5.552 5.550C (space-to-Earth) 5.516B 5.554A	FIXED-SATELLITE (Earth-to-space) (space-to-Earth)	
MOBILE 5.553B	FIXED UAE10 UAE15 UAE16	
47.9-48.2 GHz		
FIXED	MOBILE	• IMT band.
FIXED-SATELLITE (Earth-to-space) 5.552 5.550C	FIXED-SATELLITE (Earth-to-space)	
MOBILE 5.553B 5.552A	FIXED UAE10 UAE15 UAE16	

Region 1	UAE Allocation	Remarks & References
48.2-48.54 GHz		
FIXED	FIXED	• ITU Radio Regulations Res.143
FIXED-SATELLITE (Earth-to-space) 5.552 5.550C (space-to-Earth) 5.516B 5.554A 5.555B	FIXED-SATELLITE (Earth-to-space) (space-to-Earth)	
MOBILE	MOBILE UAE10 UAE16	
48.54-49.44 GHz		
FIXED	FIXED	
FIXED-SATELLITE (Earth-to-space) 5.552 5.550C	FIXED-SATELLITE (Earth-to-space)	
MOBILE 5.149 5.340 5.555	MOBILE UAE4	
49.44-50.2 GHz		
FIXED ~~FIXED-SATELLITE~~ (Earth-to-space) 5.338A 5.550C 5.552 (space-to-Earth) 5.516B 5.554A5.555B	FIXED ~~FIXED-SATELLITE~~ (Earth-to-space) (space-to-Earth)	• ITU Radio Regulations Res.143
MOBILE	MOBILE UAE10 UAE16	

Region 1	UAE Allocation	Remarks & References
50.2-50.4 GHz		
EARTH EXPLORATION-SATELLITE (passive)	EARTH EXPLORATION-SATELLITE (passive)	
SPACE RESEARCH (passive) 5.340	SPACE RESEARCH (passive) UAE4	
50.4-51.4 GHz		
FIXED	FIXED	
FIXED-SATELLITE (Earth-to-space) 5.338A 5.550C	FIXED-SATELLITE (Earth-to-space)	
MOBILE	MOBILE	
Mobile-satellite (Earth-to-space)	Mobile-satellite (Earth-to-space) UAE10	
51.4-52.4 GHz		
FIXED	FIXED	• ITU-R F.1496
FIXED-SATELLITE (Earth-to-space) 5.555C	FIXED-SATELLITE (Earth-to-space)	
MOBILE 5.338A 5.547 5.556	MOBILE UAE10 UAE13	
52.4-52.6 GHz		
FIXED 5.338A	FIXED	
MOBILE 5.547 5.556	MOBILE UAE10 UAE13	

Region 1	UAE Allocation	Remarks & References
52.6-54.25 GHz		
EARTH EXPLORATION-SATELLITE (passive)	EARTH EXPLORATION-SATELLITE (passive)	
SPACE RESEARCH (passive) 5.340 5.556	SPACE RESEARCH (passive) UAE4	
54.25-55.78 GHz		
EARTH EXPLORATION-SATELLITE (passive)	EARTH EXPLORATION-SATELLITE (passive)	
INTER-SATELLITE 5.556A	INTER-SATELLITE	
SPACE RESEARCH (passive) 5.556B	SPACE RESEARCH (passive)	
55.78-56.9 GHz		
EARTH EXPLORATION-SATELLITE (passive)	EARTH EXPLORATION-SATELLITE (passive)	• ITU-R F.1497
FIXED 5.557A	FIXED	
INTER-SATELLITE 5.556A	INTER-SATELLITE	
MOBILE 5.558	MOBILE	
SPACE RESEARCH (passive) 5.547 5.557	SPACE RESEARCH (passive) UAE10	

Region 1	UAE Allocation	Remarks & References
56.9-57 GHz		
EARTH EXPLORATION-SATELLITE (passive)	EARTH EXPLORATION-SATELLITE (passive)	• ITU-R F.1497
FIXED	FIXED	
INTER-SATELLITE 5.558A	INTER-SATELLITE	
MOBILE 5.558	MOBILE	
SPACE RESEARCH (passive) 5.547 5.557	SPACE RESEARCH (passive) UAE10	
57-58.2 GHz		
EARTH EXPLORATION-SATELLITE (passive)	EARTH EXPLORATION-SATELLITE (passive)	• ITU-R F.1497
FIXED	FIXED	
INTER-SATELLITE 5.556A	INTER-SATELLITE	
MOBILE 5.558	MOBILE	
SPACE RESEARCH (passive) 5.547 5.557	SPACE RESEARCH (passive) UAE10 UAE14 UAE16	
58.2-59 GHz		
EARTH EXPLORATION-SATELLITE (passive)	EARTH EXPLORATION-SATELLITE (passive)	• ITU-R F.1497
FIXED	FIXED	
MOBILE	MOBILE	
SPACE RESEARCH (passive) 5.547 5.556	SPACE RESEARCH (passive) UAE10 UAE13 UAE14 UAE16	

Region 1	UAE Allocation	Remarks & References
59-59.3 GHz		
EARTH EXPLORATION-SATELLITE (passive)	EARTH EXPLORATION-SATELLITE (passive)	• ITU-R F.1497
FIXED	FIXED	
INTER-SATELLITE 5.556A	INTER-SATELLITE	
MOBILE 5.558	MOBILE	
RADIOLOCATION 5.559	RADIOLOCATION	
SPACE RESEARCH (passive)	SPACE RESEARCH (passive) UAE10 UAE14 UAE16	
59.3-64 GHz		
FIXED	FIXED	• ITU-R F.1497
INTER-SATELLITE	INTER-SATELLITE	
MOBILE 5.558	MOBILE	
RADIOLOCATION 5.559 5.138	RADIOLOCATION UAE10 UAE14 UAE16	
64-65 GHz		
FIXED	FIXED	• ITU-R F.1497
INTER-SATELLITE	INTER-SATELLITE	
MOBILE except aeronautical mobile 5.547 5.556	MOBILE except aeronautical mobile UAE10 UAE13 UAE14	

Region 1	UAE Allocation	Remarks & References
65-66 GHz		
EARTH EXPLORATION-SATELLITE	EARTH EXPLORATION-SATELLITE	• ITU-R F.1497
FIXED	FIXED	
INTER-SATELLITE	INTER-SATELLITE	
MOBILE except aeronautical mobile	MOBILE except aeronautical mobile	
SPACE RESEARCH 5.547	SPACE RESEARCH UAE10 UAE14	
66-71 GHz		
INTER-SATELLITE	INTER-SATELLITE	• IMT band.
MOBILE 5.553 5.558 5.559AA	MOBILE	
MOBILE-SATELLITE	MOBILE-SATELLITE	
RADIONAVIGATION	RADIONAVIGATION	
RADIONAVIGATION-SATELLITE 5.554	RADIONAVIGATION-SATELLITE UAE15	
71-74 GHz		
FIXED	FIXED	• ITU-R F.2006
FIXED-SATELLITE (space-to-Earth)	FIXED-SATELLITE (space-to-Earth)	
MOBILE	MOBILE	
MOBILE-SATELLITE (space-to-Earth)	MOBILE-SATELLITE (space-to-Earth) UAE10	

Region 1	UAE Allocation	Remarks & References
74-76 GHz		
FIXED	FIXED	• ITU-R F.2006
FIXED-SATELLITE (space-to-Earth)	FIXED-SATELLITE (space-to-Earth)	
MOBILE	MOBILE	
BROADCASTING	BROADCASTING	
BROADCASTING-SATELLITE	BROADCASTING-SATELLITE	
Space research (space-to-Earth) 5.561	Space research (space-to-Earth) UAE10 UAE14	
76-77.5 GHz		
RADIO ASTRONOMY	RADIO ASTRONOMY	• ITU-R SM.329 • ITU-R SM.1541
RADIOLOCATION	RADIOLOCATION	
Amateur	Amateur	
Amateur-satellite	Amateur-satellite	
Space research (space-to-Earth) 5.149	Space research (space-to-Earth) UAE5 UAE7 UAE8 UAE14	

Region 1	UAE Allocation	Remarks & References
77.5-78 GHz		
AMATEUR	AMATEUR	
AMATEUR-SATELLITE	AMATEUR-SATELLITE	
RADIOLOCATION 5.559B	RADIOLOCATION	
Radio astronomy	Radio astronomy	
Space research (space-to-Earth) 5.149	Space research (space-to-Earth) UAE5 UAE8 UAE14	
78-79 GHz		
RADIOLOCATION	RADIOLOCATION	
Amateur	Amateur	
Amateur-satellite	Amateur-satellite	
Radio astronomy	Radio astronomy	
Space research (space-to-Earth) 5.149 5.560	Space research (space-to-Earth) UAE5 UAE8 UAE14	
79-81 GHz		
RADIO ASTRONOMY	RADIO ASTRONOMY	
RADIOLOCATION	RADIOLOCATION	
Amateur	Amateur	
Amateur-satellite	Amateur-satellite	
Space research (space-to-Earth) 5.149	Space research (space-to-Earth) UAE5 UAE8 UAE14	

Region 1	UAE Allocation	Remarks & References
81-84 GHz		
FIXED 5.338A	FIXED	• ITU-R F.2006
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) 5.149 5.561A	Space research (space-to-Earth) UAE5 UAE10 UAE14	
84-86 GHz		
FIXED 5.338A	FIXED	• ITU-R F.2006
FIXED-SATELLITE (Earth-to-space) 5.561B	FIXED-SATELLITE (Earth-to-space)	
MOBILE	MOBILE	
RADIO ASTRONOMY 5.149	RADIO ASTRONOMY UAE5 UAE10 UAE14	
86-92 GHz		
EARTH EXPLORATION-SATELLITE (passive)	EARTH EXPLORATION-SATELLITE (passive)	
RADIO ASTRONOMY	RADIO ASTRONOMY	
SPACE RESEARCH (passive) 5.340	SPACE RESEARCH (passive) UAE4	

Region 1	UAE Allocation	Remarks & References
92-94 GHz		
FIXED 5.338A	FIXED	• ITU-R SM.329 • ITU-R SM.1541 • ITU-R F.2004
MOBILE	MOBILE	
RADIO ASTRONOMY	RADIO ASTRONOMY	
RADIOLOCATION 5.149	RADIOLOCATION UAE5 UAE10	
94-94.1 GHz		
EARTH EXPLORATION-SATELLITE (active)	EARTH EXPLORATION-SATELLITE (active)	• ITU-R SM.329 • ITU-R SM.1541
RADIOLOCATION	RADIOLOCATION	
SPACE RESEARCH (active)	SPACE RESEARCH (active)	
Radio astronomy 5.562 5.562A	Radio astronomy UAE7	
94.1-95 GHz		
FIXED	FIXED	
MOBILE	MOBILE	
RADIO ASTRONOMY	RADIO ASTRONOMY	
RADIOLOCATION 5.149	RADIOLOCATION UAE5 UAE10	

Region 1	UAE Allocation	Remarks & References
95-100 GHz		
FIXED	FIXED	
MOBILE	MOBILE	
RADIO ASTRONOMY	RADIO ASTRONOMY	
RADIOLOCATION	RADIOLOCATION	
RADIONAVIGATION	RADIONAVIGATION	
RADIONAVIGATION-SATELLITE 5.149 5.554	RADIONAVIGATION-SATELLITE UAE5	
100-102 GHz		
EARTH EXPLORATION-SATELLITE (passive)	EARTH EXPLORATION-SATELLITE (passive)	
RADIO ASTRONOMY	RADIO ASTRONOMY	
SPACE RESEARCH (passive) 5.340 5.341	SPACE RESEARCH (passive) UAE4	
102-105 GHz		
FIXED	FIXED	
MOBILE	MOBILE	
RADIO ASTRONOMY 5.149 5.341	RADIO ASTRONOMY UAE5	

Region 1	UAE Allocation	Remarks & References
105-109.5 GHz		
FIXED	FIXED	
MOBILE	MOBILE	
RADIO ASTRONOMY	RADIO ASTRONOMY	
SPACE RESEARCH (passive) 5.562B 5.149 5.341	SPACE RESEARCH (passive) UAE5 UAE13	
109.5-111.8 GHz		
EARTH EXPLORATION-SATELLITE (passive)	EARTH EXPLORATION-SATELLITE (passive)	
RADIO ASTRONOMY	RADIO ASTRONOMY	
SPACE RESEARCH (passive) 5.340 5.341	SPACE RESEARCH (passive) UAE4	
111.8-114.25 GHz		
FIXED	FIXED	
MOBILE	MOBILE	
RADIO ASTRONOMY	RADIO ASTRONOMY	
SPACE RESEARCH (passive) 5.562B 5.149 5.341	SPACE RESEARCH (passive) UAE5 UAE13	

Region 1	UAE Allocation	Remarks & References
114.25-116 GHz		
EARTH EXPLORATION-SATELLITE (passive)	EARTH EXPLORATION-SATELLITE (passive)	
RADIO ASTRONOMY	RADIO ASTRONOMY	
SPACE RESEARCH (passive) 5.340 5.341	SPACE RESEARCH (passive) UAE4	
116-119.98 GHz		
EARTH EXPLORATION-SATELLITE (passive)	EARTH EXPLORATION-SATELLITE (passive)	
INTER-SATELLITE 5.562C	INTER-SATELLITE	
SPACE RESEARCH (passive) 5.341	SPACE RESEARCH (passive)	
119.98-122.25 GHz		
EARTH EXPLORATION-SATELLITE (passive)	EARTH EXPLORATION-SATELLITE (passive)	
INTER-SATELLITE 5.562C	INTER-SATELLITE	
SPACE RESEARCH (passive) 5.138 5.341	SPACE RESEARCH (passive) UAE14	
122.25-123 GHz		
FIXED	FIXED	
INTER-SATELLITE	INTER-SATELLITE	
MOBILE 5.558	MOBILE	
Amateur 5.138	Amateur UAE8 UAE14	

Region 1	UAE Allocation	Remarks & References
123-130 GHz		
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 5.149, 5.554	Radio astronomy UAE5	
130-134 GHz		
EARTH EXPLORATION-SATELLITE (active) 5.562E	EARTH EXPLORATION-SATELLITE (active)	
FIXED	FIXED	
INTER-SATELLITE	INTER-SATELLITE	
MOBILE 5.558	MOBILE	
RADIO ASTRONOMY 5.149 5.562A	RADIO ASTRONOMY UAE5	
134-136 GHz		
AMATEUR	AMATEUR	
AMATEUR-SATELLITE	AMATEUR-SATELLITE	
Radio astronomy	Radio astronomy UAE8	

Region 1	UAE Allocation	Remarks & References
136-141 GHz		
RADIO ASTRONOMY	RADIO ASTRONOMY	
RADIOLOCATION	RADIOLOCATION	
Amateur	Amateur	
Amateur-satellite 5.149	Amateur-satellite UAE5 UAE8	
141-148.5 GHz		
FIXED	FIXED	
MOBILE	MOBILE	
RADIO ASTRONOMY	RADIO ASTRONOMY	
RADIOLOCATION 5.149	RADIOLOCATION UAE5	
148.5-151.5 GHz		
EARTH EXPLORATION-SATELLITE (passive)	EARTH EXPLORATION-SATELLITE (passive)	
RADIO ASTRONOMY	RADIO ASTRONOMY	
SPACE RESEARCH (passive) 5.340	SPACE RESEARCH (passive) UAE4	
151.5-155.5 GHz		
FIXED	FIXED	
MOBILE	MOBILE	
RADIO ASTRONOMY	RADIO ASTRONOMY	
RADIOLOCATION 5.149	RADIOLOCATION UAE5	

Region 1	UAE Allocation	Remarks & References
155.5-158.5 GHz		
FIXED	FIXED	
MOBILE	MOBILE	
RADIO ASTRONOMY 5.149	RADIO ASTRONOMY UAE5 UAE13	
158.5-164 GHz		
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		
EARTH EXPLORATION-SATELLITE (passive)	EARTH EXPLORATION-SATELLITE (passive)	
RADIO ASTRONOMY	RADIO ASTRONOMY	
SPACE RESEARCH (passive) 5.340	SPACE RESEARCH (passive) UAE4	
167-174.5 GHz		
FIXED	FIXED	
FIXED-SATELLITE (space-to-Earth)	FIXED-SATELLITE (space-to-Earth)	
INTER-SATELLITE	INTER-SATELLITE	
MOBILE 5.558 5.149 5.562D	MOBILE UAE5	

Region 1	UAE Allocation	Remarks & References
174.5-174.8 GHz		
FIXED	FIXED	
INTER-SATELLITE	INTER-SATELLITE	
MOBILE 5.558	MOBILE	
174.8-182		
EARTH EXPLORATION-SATELLITE (passive)	EARTH EXPLORATION-SATELLITE (passive)	
INTER-SATELLITE 5.562H	INTER-SATELLITE	
SPACE RESEARCH (passive)	SPACE RESEARCH (passive)	
182-185 GHz		
EARTH EXPLORATION-SATELLITE (passive)	EARTH EXPLORATION-SATELLITE (passive)	
RADIO ASTRONOMY	RADIO ASTRONOMY	
SPACE RESEARCH (passive) 5.340	SPACE RESEARCH (passive)	
185-190 GHz		
EARTH EXPLORATION-SATELLITE (passive)	EARTH EXPLORATION-SATELLITE (passive)	
INTER-SATELLITE 5.562H	INTER-SATELLITE 5.562H	
SPACE RESEARCH (passive)	SPACE RESEARCH (passive)	

Region 1	UAE Allocation	Remarks & References
190-191.8 GHZ		
EARTH EXPLORATION-SATELLITE(passive)	EARTH EXPLORATION-SATELLITE(passive)	
SPACE RESEARCH (passive) 5.340	SPACE RESEARCH (passive) UAE4	
191.8-200 GHz		
FIXED	FIXED	
INTER-SATELLITE	INTER-SATELLITE	
MOBILE 5.558	MOBILE	
MOBILE-SATELLITE	MOBILE-SATELLITE	
RADIONAVIGATION	RADIONAVIGATION	
RADIONAVIGATION-SATELLITE 5.149 5.341 5.554	RADIONAVIGATION-SATELLITE UAE5	
200-209 GHz		
EARTH EXPLORATION-SATELLITE (passive)	EARTH EXPLORATION-SATELLITE (passive)	
RADIO ASTRONOMY	RADIO ASTRONOMY	
SPACE RESEARCH (passive) 5.340 5.341 5.563A	SPACE RESEARCH (passive) UAE4	
209-217 GHz		
FIXED	FIXED	
FIXED-SATELLITE (Earth-to-space)	FIXED-SATELLITE (Earth-to-space)	
MOBILE	MOBILE	

Region 1	UAE Allocation	Remarks & References
RADIO ASTRONOMY 5.149 5.341	RADIO ASTRONOMY UAE5	
217-226 GHz		
FIXED	FIXED	
FIXED-SATELLITE (Earth-to-space)	FIXED-SATELLITE (Earth-to-space)	
MOBILE	MOBILE	
RADIO ASTRONOMY	RADIO ASTRONOMY	
SPACE RESEARCH (passive) 5.562B 5.149 5.341	SPACE RESEARCH (passive) UAE5	
226-231.5 GHz		
EARTH EXPLORATION-SATELLITE (passive)	EARTH EXPLORATION-SATELLITE (passive)	
RADIO ASTRONOMY	RADIO ASTRONOMY	
SPACE RESEARCH (passive) 5.340	SPACE RESEARCH (passive) UAE4	
231.5-232 GHz		
FIXED	FIXED	
MOBILE	MOBILE	
Radiolocation	Radiolocation	

Region 1	UAE Allocation	Remarks & References
232-235 GHz		
FIXED	FIXED	
FIXED-SATELLITE (space-to-Earth)	FIXED-SATELLITE (space-to-Earth)	
MOBILE	MOBILE	
Radiolocation	Radiolocation	
235-238 GHz		
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		
238-240 GHz		
FIXED	FIXED	
FIXED-SATELLITE (space-to-Earth)	FIXED-SATELLITE (space-to-Earth)	
MOBILE	MOBILE	
RADIOLOCATION	RADIOLOCATION	
RADIONAVIGATION	RADIONAVIGATION	
RADIONAVIGATION-SATELLITE	RADIONAVIGATION-SATELLITE	

Region 1	UAE Allocation	Remarks & References
240-241 GHz		
FIXED	FIXED	
MOBILE	MOBILE	
RADIOLOCATION	RADIOLOCATION	
241-248 GHz		
RADIO ASTRONOMY	RADIO ASTRONOMY	
RADIOLOCATION	RADIOLOCATION	
Amateur	Amateur	
Amateur-satellite 5.138 5.149	Amateur-satellite UAE5 UAE8 UAE14	
248-250 GHz		
AMATEUR	AMATEUR	
AMATEUR-SATELLITE	AMATEUR-SATELLITE	
Radio astronomy 5.149	Radio astronomy UAE5 UAE8	
250-252 GHz		
EARTH EXPLORATION-SATELLITE (passive)	EARTH EXPLORATION-SATELLITE (passive)	
RADIO ASTRONOMY	RADIO ASTRONOMY	
SPACE RESEARCH (passive) 5.340 5.563A	SPACE RESEARCH (passive)	

Region 1	UAE Allocation	Remarks & References
252-265 GHz		
FIXED	FIXED	
MOBILE	MOBILE	
MOBILE-SATELLITE (Earth-to-space)	MOBILE-SATELLITE (Earth-to-space)	
RADIO ASTRONOMY	RADIO ASTRONOMY	
RADIONAVIGATION	RADIONAVIGATION	
RADIONAVIGATION-SATELLITE 5.149 5.554	RADIONAVIGATION-SATELLITE UAE5	
265-275 GHz		
FIXED	FIXED	
FIXED-SATELLITE (Earth-to-space)	FIXED-SATELLITE (Earth-to-space)	
MOBILE	MOBILE	
RADIO ASTRONOMY 5.149 5.563A	RADIO ASTRONOMY UAE5	
275-3 000 GHz		
(Not allocated) 5.564A 5.565	(Not allocated) UAE13	

UAE

Footnotes

UAE 1: 8.3 kHz

Assignment and allocation of frequencies below 8.3 kHz is possible with adequate protection to services allocated for frequencies above 8.3 kHz in accordance with this Plan. (Refer to ITU Radio Regulations Articles 5.53, 5.54, 5.54A and 5.54B)

UAE 2: Distress and emergency frequencies

a) 490 kHz / 518 kHz / 4 209.5 kHz

For NAVTEX in GMDSS (Refer to ITU Radio Regulations Articles 5.79A and 5.84)

b) 500 kHz

For digital broadcasting of maritime safety and security NAVDAT, related information from shore-to-ship. (Refer to ITU Radio Regulation Articles 5.82C)

c) 490 kHz / 4 209.5 kHz

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. (Refer to ITU Radio Regulations Articles 5.82 and 5.131)

d) 518 kHz

Supplementary frequency for Maritime Mobile Service (Refer to ITU Radio Regulations Articles 5.84, 33, 51, 52 and Appendix 15).

e) 2 182 kHz

International distress and calling frequency for radiotelephony are prescribed in ITU Radio Regulations Articles 5.108, 28, 30, 32, 51, 52 and 57.

f) 2 187.5 kHz / 4 207.5 kHz / 6 312 kHz / 8 414.5 / kHz 12 577 kHz / 16 804.5 kHz / 156.525 MHz

International distress frequencies for digital selective calling (Refer to ITU Radio Regulations Articles 5.109 and 5.226)

g) 2 174.5 kHz / 4 177.5 kHz / 6 268 kHz / 8 376.5 kHz / 12 520 kHz / 16 695 kHz

International distress frequencies for narrow–band direct–printing telegraphy. (Refer to ITU Radio Regulations Article 5.110)

h) 2 182 kHz / 3 023 kHz / 5 680 kHz / 8 364 kHz / 10 003 kHz / 14 993 / kHz 19 993 kHz

The frequencies 121.5 MHz, 156.525 MHz, 156.8 MHz and 243 MHz may also be used, for search and rescue operations concerning manned space vehicles (Refer to ITU
Radio Regulations Article 5.111)

i) 3 023 kHz / 4 125 kHz / 5 680 kHz / 6 215 kHz / 8 291 kHz / 12 290 kHz / 16 420 kHz

These frequencies may also be used, by stations of the Maritime Mobile Service engaged in coordinated search and rescue operations (Refer to ITU Radio Regulations Articles 5.115, 5.130 and 5.145)

j) 4 210 kHz / 6 314 kHz / 8 416.5 kHz / 12 579 kHz / 16 806.5 kHz / 19 680.5 kHz / 22 376 kHz / 26 100.5 kHz

The international frequencies for the transmission of Maritime Safety Information (MSI) (Refer to ITU Radio Regulations Article 5.132)

k) 121.5 MHz

Is aeronautical emergency frequency and 123.1 MHz is the auxiliary to 121.5 MHz, Mobile Stations of the Maritime Mobile Service may communicate on these frequencies for distress and safety purposes with stations of the Aeronautical Mobile Service. (Refer to ITU Radio Regulation Article 5.200)

l) 156.8 MHz

International distress, safety and calling frequency for the maritime mobile VHF radiotelephone service (Refer to ITU Radio Regulations Articles 5.149, 5.226, 5.458A)

m) 243 MHz

The frequency for use by survival craft stations and equipment used for survival purposes (Refer to ITU Radio Regulations Article 5.256)

n) 406 – 406.1 MHz

Used by the Mobile Satellite Service is limited to low power satellite Emergency Position–Indicating Radiobeacons (EPIRB) (Refer to ITU Radio Regulations Articles 5.266 and 5.267)

o) 1 530–1 544 MHz / 1 626.5 – 1 645.5 MHz

These Bands shall have priority to accommodate the spectrum requirements for Maritime Mobile–Satellite distress, urgency and safety communications of the Global Maritime Distress and Safety System (GMDSS). (Refer to ITU Radio Regulations Article 5.353A)

p) 1 544 – 1 545 MHz

Used by the Mobile–Satellite Service (space–to–earth) is limited to distress and safety communications (Refer to ITU Radio Regulations Article 5.356).

q) 1 645.5 – 1 646.5 MHz

Used by the Mobile–Satellite Service (Earth–to–space) and for inter–satellite links is limited to distress and safety communications. (Refer to ITU Radio Regulations Article 5.375)

r) 9 200 – 9 500 MHz

For Search And Rescue Transponders (SART) may be used. (Refer to ITU Radio Regulations Article 5.474)

UAE 3: Aircraft Flight safety

a) 21 870–21 924 kHz 23 200–23 350 kHz

The bands 21 870-21 924 kHz and 23 200-23 350 kHz are used by the Fixed Service for provision of services related to aircraft flight safety. (Refer to ITU Radio Regulations Articles 5.155B and 5.156A)

b) 75 MHz

The frequency 75 MHz is assigned to marker beacons and needs protection in the frequency range of 74.8 MHz and 75.2 MHz (Refer to ITU Radio Regulations Article 5.180)

c) 328.6 – 335.4 MHz

The use of the band 328.6 – 335.4 MHz by the Aeronautical Radionavigation Service is limited to Instrument Landing Systems (ILS) (glide path). (Refer to ITU Radio Regulation Article 5.258)

d) 5 030 – 5 150 MHz

This band is to be used for the operation of the international standard system (microwave landing system) for precision approach and landing. The requirements of this system shall have priority over other uses of this frequency band. For the use of the frequency band 5 091–5 150 MHz, No. 5.444A and Resolution 114 (Rev. WRC–15) apply. (Refer to ITU Radio Regulations Articles 5.444 and 5.444A)

UAE 4: Prohibited ranges for transmitting

To protect the passive services, all emissions are prohibited in the following bands:

1 400 – 1 427 MHz
2 690 – 2 700 MHz except those provided for by ITU Radio Regulation Article 5.422
10.68 – 10.7 GHz except those provided for by ITU Radio Regulation Article 5.483
15.35 – 15.4 GHz except those provided for by ITU Radio Regulation Article 5.511
23.6 – 24 GHz
31.3 – 31.5 GHz
48.94 – 49.04 GHz from airborne stations
50.2 – 50.4 GHz
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

Refer to ITU Radio Regulation Article 5.340
Aircraft transmissions are prohibited in the following bands:

- 1 664.4 – 1 668.4 MHz for air to ground transmissions (ITU Radio Regulation Article 5.379A)
- 8 025 – 8 400 MHz (ITU Radio Regulation Article 5.463)

UAE 5: Restrictive use

To protect Radio Astronomy due attention shall be made while assigning frequencies in the following bands:

13 360-13 410 kHz,
25 550-25 670 kHz,
37.5-38.25 MHz,
73-74.6 MHz in Regions 1 and 3,
150.05-153 MHz in Region 1,
322-328.6 MHz,
406.1-410 MHz,
608-614 MHz in Regions 1 and 3,
1 330-1 400 MHz,
1 610.6-1 613.8 MHz,
1 660-1 670 MHz,
1 718.8-1 722.2 MHz,
2 655-2 690 MHz,
3 260-3 267 MHz,
3 332-3 339 MHz,
3 345.8-3 352.5 MHz,
4 825-4 835 MHz,
4 950-4 990 MHz,
4 990-5 000 MHz,
6 650-6 675.2 MHz,
10.6-10.68 GHz,
14.47-14.5 GHz,
22.01-22.21 GHz,
22.21-22.5 GHz,
22.81-22.86 GHz,
23.07-23.12 GHz,
31.2-31.3 GHz,
31.5-31.8 GHz in Regions 1 and 3,
36.43-36.5 GHz,
42.5-43.5 GHz,
48.94-49.04 GHz,
76-86 GHz,
92-94 GHz,
94.1-100 GHz,
102-109.5 GHz,
111.8-114.25 GHz,
128.33-128.59 GHz,
129.23-129.49 GHz,
130-134 GHz,
136-148.5 GHz,
151.5-158.5 GHz,
168.59-168.93 GHz,
171.11-171.45 GHz,
172.31-172.65 GHz,
173.52-173.85 GHz,
195.75-196.15 GHz,
209-226 GHz,
241-250 GHz,
252-275 GHz
(Refer to ITU Radio Regulations Articles 5.149, 5.458A)

The following frequency band is used for passive measurements, which need protection, due attention shall be made while assigning frequencies in this range:

6650- 6675.2 MHz
This band is used by Radio astronomy for spectral line observations and needs protection from space stations of Fixed Satellite Service in 6700-7075 MHz (refer to ITU Radio Regulations 5.458A).

UAE 6: Exclusive use

a) 960 – 1 215 MHz

Used 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. (Refer to ITU Radio Regulation Article 5.328)

b) 1 610 – 1 626.5 MHz

This band 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. (Refer to ITU Radio Regulations Article 5.366)

UAE 7: Aeronautical Radionavigation and Radiodetermination

Refer to TRA Aeronautical Radio Systems Regulations the frequency ranges are:

255 – 526.5 kHz
2850 – 3155 KHz
3 400 – 3 500 kHz
3 800 – 3 950 kHz
4 650 – 4 850 kHz
5 450 – 5 730 kHz
6 525 – 6 765 kHz
8 815 – 9 040 kHz
10 005 – 10 100 kHz
11 175 – 11 400 kHz
13 200 – 13 360 kHz
15 010 – 15 100 kHz
17 900 – 18 030 kHz
21 924 – 22 000 kHz
23 200 – 23 350 kHz
74.8 – 75.2 MHz
108 – 137 MHz
230 – 335.4 MHz
406 – 406.1 MHz
960 – 1 400 MHz
1 518 – 1 660.5 MHz
1 668 – 1 675 MHz
1 710 – 1 785 MHz
1 805 – 1 880 MHz
1 920 – 2010 MHz
2 110 – 2 200 MHz
2400 – 2483.5 MHz
2 700 – 3 300 MHz
4 200 – 4 400 MHz
5 030 – 5 091 MHz
5 030 – 5 150 MHz
5 150 – 5 350 MHz
5 350 – 5 470 MHz
5 470 – 5 600 MHz
5 650 – 5875 MHz
8 750 – 8 850 MHz
9 000 – 9 500 MHz
10.7 – 12.75 GHz
13.25 – 13.4 GHz
14 – 14.5 GHz
15.4 – 15.7 GHz
19.7 – 20.2 GHz
24.25 – 24.65 GHz
29.5 – 30 GHz
31.8 – 33.4 GHz
77 GHz
94 GHz

The TRA Spectrum Regulations provides further information on the utilization of the bands, technical constraints, channel utilization, related usage conditions of any Radio Services and systems and pectrum coordination and notification.

UAE 8: Amateur

Refer to TRA Amateur Regulations, the frequency ranges are:

1 810 – 1 850 kHz
3 500 – 3 800 kHz
5 351.5 – 5 366.5 kHz
7 000 – 7 200 kHz
10 100 – 10 150 kHz
14 000 – 14 350 kHz
18 068 – 18 168 kHz
21 000 – 21 450 kHz
24 890 – 24 990 kHz
28 – 29.7 MHz
50 – 54 MHz
70 – 70.5 MHz
144 – 146 MHz
432 – 438 MHz
1 240 – 1 300 MHz
2 400 – 2 450 MHz
10 – 10.5 GHz
24 – 24.25 GHz
47 – 47.2 GHz
76 – 81 GHz
122.25 – 123 GHz
134 – 250 GHz

UAE 9: Earth Stations

Refer to TRA Earth Stations Regulations, the frequency ranges are:

Very Small Aperture Terminal (VSAT)

- **Frequency ranges in C–Band**
  3 800 – 4 200 MHz (space-to-Earth)
  4 500 – 4 800 MHz (space-to-Earth)
  5 150 – 5 250 MHz (Earth-to-space)
  5 725 – 6 725 MHz (Earth-to-space)
- **Frequency ranges in Ku – Band**
  10.7 – 11.7 GHz (space-to-Earth) / (Earth-to-space)
  12.5 – 13.25 GHz (space-to-Earth) / (Earth-to-space)
  13.4 –13.65 GHz (Earth-to-space)
- **Frequency ranges in Ka–Band**
  19.7 – 21.2 GHz (space-to-Earth)
  27.5 – 31 GHz (Earth-to-space)

Digital Satellite News Gathering (DSNG)

- **Frequency ranges in Ku – Band**
  10.7 – 11.7 GHz (space-to-Earth) / (Earth-to-space)
  12.5 – 13.25 GHz (space-to-Earth) / (Earth-to-space)
  13.75 –14.8 GHz (Earth-to-space)

- **Frequency ranges in Ka–Band**
  19.7 – 21.2 GHz (space-to-Earth)
  27.5 – 31 GHz (Earth-to-space)

Earth Stations In Motion (ESIM)

- **Frequency ranges in Ka–band**
  17.7-19.7 GHz (space-to-Earth)
  19.7–20.2 GHz (space-to-Earth)
  27.5-29.5 GHz (Earth-to-space)
  29.5–30.0 GHz (Earth-to-space)

Earth Station installed on Vessel (ESV)

- **Frequency Ranges in C–Band**
  3 800 – 4 200 MHz (space-to-Earth)
  5 925 – 6 425 MHz (Earth-to-space)
- **Frequency Ranges in Ku – Band**
  10.70 – 12.75 GHz (space-to-Earth)
  14.0 –14.5 GHz (Earth-to-space)

Mobile Satellite Service (MSS)

- **Frequency Ranges in L-Band**
  1 518 - 1 559 MHz
  1 626.5 - 1 660.5 MHz
  1 668 - 1 675 MHz
- **Frequency Ranges in S-Band**
  1 980 - 2 010 MHz
  2 170 – 2 200 MHz

Global Navigation Satellite System (GNSS)

- **Frequency Ranges in L-Band**
  1 559 - 1 626.5 MHz

UAE 10: Fixed

Refer to TRA Fixed Radio Service Regulations the frequency ranges are:

230 – 380 MHz
406.1 – 450 MHz
2 025 – 2 110 MHz
2 200 – 2 290 MHz
2 400 – 2 483.5 MHz
4 400 - 5 000 MHz
5 650 – 8 750 MHz
10 – 10.68 GHz
10.7 – 13.25 GHz
13.4 – 15.35 GHz
15.7 – 17.3 GHz
17.7 – 19.7 GHz
21.2 - 23.6 GHz
27.5 – 29.5 GHz
31 – 31.3 GHz
31.8 – 33.4 GHz
36 – 43.5 GHz
47.2 – 50.2 GHz
50.4 – 52.6 GHz
55.78 – 66 GHz
71 – 76 GHz
81 – 86 GHz
92 – 94 GHz
94.1 – 95 GHz

UAE 11: Maritime

Refer to TRA Maritime Radio Systems Regulations the frequency ranges are:

415 – 526.5 kHz
1600 – 27500 kHz
42 – 44 MHz
121.5 / 123.1 MHz
156 – 162.025 MHz
406 – 406.1 MHz
457.5125 – 457.5875 MHz
467.5125 – 467.5875 MHz
1530 – 1545 MHz
1626.5 – 1646.5 MHz
2 900 – 3 100 MHz
5 460 – 5 650 MHz
9 200 – 9 500 MHz
13.4 – 14 GHz

UAE 12: Private Mobile Radio (PMR)

Refer to TRA Private Mobile Radio (PMR) Regulations the frequency ranges are:

415 – 526.5 kHz
1.6 – 47 MHz
66 – 87.5 MHz
118 – 144 MHz
146 – 174 MHz
350 – 400 MHz
400.15 – 406 MHz
406.1 – 433.05 MHz
434.79 – 470 MHz
868–870 MHz
915–921 MHz

UAE 13: Radio Astronomy

a) 48.94 – 49.04 GHz

Also allocated to the Radio Astronomy Service on a primary basis. (Refer to ITU Radio Regulations Article 5.555)

b) 51.4 – 54.25 GHz 58.2 – 59 GHz 64 – 65 GHz

Radio Astronomy observations may be carried out under national arrangements. (Refer to ITU Radio Regulations Article 5.556)

c) 105 – 109.5 GHz 111.8 – 114.25 GHz 155.5 – 158.5 GHz

217 – 226 GHz
The use of this allocation is limited to space–based Radio Astronomy only (Refer to ITU Radio Regulations Article 5.562B)

d) 275 – 1 000 GHz

Band portions as given in ITU Radio Regulations Article 5.565 are identified for various active and passive services, which need protection.

UAE 14: Ultra–Wide Band (UWB) and Short Range Devices (SRD)

Refer to TRA Ultra–Wide Band (UWB) and Short Range Devices (SRD) Regulations the frequency ranges are:

9 kHz – 47 MHz
87.5 – 108 MHz
1 38.2 – 1 38.45 MHz
169.4 – 174 MHz
312 – 315 MHz
401 – 406 MHz
433.05 MHz – 434.79 MHz
446 – 446.2 MHz
823 – 832 MHz
863 – 876 MHz
915 – 921 MHz
1 785 - 1 804.8 MHz
1795 - 1900 MHz
2 400 – 2 500 MHz
4 500 – 7 000 MHz
8 500 – 10 600 MHz
13.4 – 14 GHz
17.1 – 17.3 GHz
24 – 27 GHz
57 – 66 GHz
75 – 85 GHz
122 – 123 GHz
244 – 246 GHz

UAE 15: International Mobile Telecommunication (IMT)

450 – 470 MHz
694 – 790 MHz
791 – 862 MHz
880 – 960 MHz
1 427–1 492MHz (To protect MSS in adjacent band)
1710 – 1785 MHz / 1805 – 1880 MHz
1920 – 1980 MHz / 2110 – 2170 MHz
1980 – 2010MHz / 2170–2200MHz
2 300 – 2 400 MHz
2 496 – 2 690 MHz
3 300 – 3 400 MHz
3 400 – 3 800 MHz (To protect FSS earth stations notified before 31 Dec 2019)
24.25 – 27.5 GHz
37 – 43.5 GHz
45.5-47 GHz
47.2 – 48.2 GHz
66 – 71 GHz

UAE 16: Service Ancillary to Broadcasting Production Making & Special Events (PMSE)

Refer to TRA Program Making & Special Event (PMSE) Regulations, the frequency ranges are:

66 – 74.8 MHz
138 – 156 MHz
174 – 230 MHz
406.1 – 450 MHz
470 – 694 MHz
823 – 832 MHz
863 – 870 MHz
1 350 – 1 400 MHz
1 675 – 1 710 MHz
1 785 – 1 804.8 MHz
1 880 – 1 900 MHz
1 980 – 2 110 MHz
2 170 – 2 500 MHz
3 100 – 3 300 MHz
3 800 – 4 200 MHz
4 400 – 4 900 MHz
5 150 – 5 925 MHz
6 700 – 8 025MHz
8 600 – 9 200 MHz
9 800 – 10 600 MHz
11.7 – 12.5 GHz
13.4 – 14 GHz, 17.1 – 17.3 Hz
21.2 – 23.6 GHz, 24 – 24.5 GHz
47.2 – 50.2 GHz, 57 – 64 GHz

International

Footnotes

5.53
Administrations authorizing the use of frequencies below 8.3 kHz shall ensure that no harmful interference is caused to services to which the bands above 8.3 kHz are allocated. (WRC-12)

5.54
Administrations conducting scientific research using frequencies below 8.3 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. (WRC-12)

5.54A
Use of the 8.3-11.3 kHz frequency band by stations in the meteorological aids service is limited to passive use only. In the band 9-11.3 kHz, meteorological aids stations shall not claim protection from stations of the radionavigation service submitted for notification to the Bureau prior to 1 January 2013. For sharing between stations of the meteorological aids service and stations in the radionavigation service submitted for notification after this date, the most recent version of Recommendation ITU R RS.1881 should be applied. (WRC-12)

5.54B
Additional allocation: in Algeria, Saudi Arabia, Bahrain, Egypt, the United Arab Emirates, the Russian Federation, Iran (Islamic Republic of), Iraq, Kuwait, Lebanon, Morocco, Qatar, the Syrian Arab Republic, Sudan and Tunisia, the frequency band 8.3-9 kHz is also allocated to the radionavigation, fixed and mobile services on a primary basis. (WRC-15)

5.54C
Additional allocation: in China, the frequency band 8.3-9 kHz is also allocated to the maritime radionavigation and maritime mobile services on a primary basis. (WRC-12)

5.55
Additional allocation: in Armenia, the Russian Federation, Georgia, Kyrgyzstan, Tajikistan and Turkmenistan, the frequency band 14-17 kHz is also allocated to the radionavigation service on a primary basis. (WRC-15)

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, the Russian Federation, Georgia, Kazakhstan, Kyrgyzstan, Tajikistan and Turkmenistan, the frequencies 25 kHz and 50 kHz will be used for this purpose under the same conditions. (WRC-12)

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 Kyrgyzstan and Turkmenistan, the frequency 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-19)

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 frequency band 135.7-137.8 kHz in Algeria, Egypt, Iraq, Lebanon, Syrian Arab Republic, Sudan, South 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 frequency band 135.7-137.8 kHz, and this should be taken into account by the countries authorizing such use. (WRC-19)

5.68
Alternative allocation: in Congo (Rep. of the), the Dem. Rep. of the Congo and South Africa, the frequency band 160-200 kHz is allocated to the fixed service on a primary basis. (WRC-15)

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), Eswatini, Ethiopia, Kenya, Lesotho, Madagascar, Malawi, Mozambique, Namibia, Nigeria, Oman, the Dem. Rep. of the Congo, South Africa, Tanzania, Chad, Zambia and Zimbabwe, the frequency band 200-283.5 kHz is allocated to the aeronautical radionavigation service on a primary basis. (WRC-19)

5.71
(SUP - WRC-19)

5.72
(SUP - WRC-12)

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, Korea (Rep. of), India, Iran (Islamic Republic of), Japan, Pakistan, Papua New Guinea, the Dem. People's Rep. of Korea and Sri Lanka, the allocation of the frequency band 415-495 kHz to the aeronautical radionavigation service is on a primary basis. In Armenia, Azerbaijan, Belarus, the Russian Federation, Kazakhstan, Latvia, Uzbekistan and Kyrgyzstan, theallocation of the frequency band 435-495 kHz to the aeronautical radionavigation service is on a primary basis. Administrations in all the aforementioned countries shall take all practical steps necessary to ensure that aeronautical radionavigation stations in the frequency band 435-495 kHz do not cause interference to reception by coast stations of transmissions from ship stations on frequencies designated for ship stations on a worldwide basis. (WRC-19)

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
In the maritime mobile service, the frequency bands 415-495 kHz and 505-526.5 kHz are limited to radiotelegraphy and may also be used for the NAVDAT system in accordance with the most recent version of Recommendation ITU-R M.2010, subject to agreement between interested and affected administrations. NAVDAT transmitting stations are limited to coast stations. (WRC-19)

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.

5.80A
The maximum equivalent isotropically radiated power (e.i.r.p.) of stations in the amateur service using frequencies in the band 472-479 kHz shall not exceed 1 W. Administrations may increase this limit of e.i.r.p. to 5 W in portions of their territory which are at a distance of over 800 km from the borders of Algeria, Saudi Arabia, Azerbaijan, Bahrain, Belarus, China, Comoros, Djibouti, Egypt, United Arab Emirates, the Russian Federation, Iran (Islamic Republic of), Iraq, Jordan, Kazakhstan, Kuwait, Lebanon, Libya, Morocco, Mauritania, Oman, Uzbekistan, Qatar, Syrian Arab Republic, Kyrgyzstan, Somalia, Sudan, Tunisia, Ukraine and Yemen. In this frequency band, stations in the amateur service shall not cause harmful interference to, or claim protection from, stations of the aeronautical radionavigation service. (WRC-12)

5.80B
The use of the frequency band 472-479 kHz in Algeria, Saudi Arabia, Azerbaijan, Bahrain, Belarus, China, Comoros, Djibouti, Egypt, United Arab Emirates, the Russian Federation, Iraq, Jordan, Kazakhstan, Kuwait, Lebanon, Libya, Mauritania, Oman, Uzbekistan, Qatar, Syrian Arab Republic, Kyrgyzstan, Somalia, Sudan, Tunisia and Yemen is limited to the maritime mobile and aeronautical radionavigation services. The amateur service shall not be used in the above-mentioned countries in this frequency band, and this should be taken into account by the countries authorizing such use. (WRC-12)

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 frequency 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. In using the frequency band 472-479 kHz for the amateur service, administrations shall ensure that no harmful interference is caused to the frequency 490 kHz. (WRC-12)

5.82A
(SUP - WRC -12)

5.82B
(SUP - WRC-12)

5.82C
The frequency band 495-505 kHz is used for the international NAVDAT system as described in the most recent version of Recommendation ITU-R M.2010. NAVDAT transmitting stations are limited to coast stations. (WRC-19)

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)

5.86
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, Eswatini, Lesotho, Malawi, Mozambique, Namibia and Niger, the frequency band 526.5-535 kHz is also allocated to the mobile service on a secondary basis. (WRC-19)

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 Armenia, Azerbaijan, Belarus, the Russian Federation, Georgia, Hungary, Kazakhstan, Latvia, Lithuania, Mongolia, Nigeria, Uzbekistan, Poland, Kyrgyzstan, Slovakia, Tajikistan, Chad, Turkmenistan and Ukraine, the frequency 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-15)

5.96
In Germany, Armenia, Austria, Azerbaijan, Belarus, Croatia, 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 frequency bands 1 715-1 800 kHz and 1 850 2 000 kHz. However, when allocating the frequency 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-15)

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 Armenia, Azerbaijan, Belarus, Belgium, Cameroon, Congo (Rep. of the), Denmark, Egypt, Eritrea, Spain, Ethiopia, the Russian Federation, Georgia, Greece, Italy, Kazakhstan, Lebanon, Lithuania, the Syrian Arab Republic, Kyrgyzstan, Somalia, Tajikistan, Tunisia, Turkmenistan and Turkey, the frequency band 1 810-1 830 kHz is allocated to the fixed and mobile, except aeronautical mobile, services on a primary basis. (WRC-15)

5.99
Additional allocation: in Saudi Arabia, Austria, Iraq, Libya, Uzbekistan, Slovakia, Romania, 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-12)

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
(SUP - WRC-12)

5.102
Alternative allocation: in Bolivia, Chile, Paraguay and Peru, the frequency band 1 850-2 000 kHz is allocated to the fixed, mobile except aeronautical mobile, radiolocation and radionavigation services on a primary basis. (WRC-15)

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, Eswatini, Ethiopia, Iraq, Libya and Somalia, the frequency 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-19)

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 Sri Lanka, the frequency band 2 194-2 300 kHz is allocated to the fixed and mobile, except aeronautical mobile, services on a primary basis. (WRC-19)

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 Iraq, the frequency band 2 502-2 625 kHz is allocated to the fixed and mobile, except aeronautical mobile, services on a primary basis. (WRC-19)

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, Egypt, Liberia, Sri Lanka and Togo, the frequency band 3 155-3 200 kHz is allocated to the fixed and mobile, except aeronautical mobile, services on a primary basis. (WRC-19)

5.118
Additional allocation: in the United States, Mexico and Peru, the frequency band 3 230-3 400 kHz is also allocated to the radiolocation service on a secondary basis. (WRC-19)

5.119
Additional allocation: in Peru, the frequency band 3 500 3 750 kHz is also allocated to the fixed and mobile services on a primary basis. (WRC-15)

5.120
(SUP - WRC-2000)

5.122
Alternative allocation: in Bolivia, Chile, Ecuador, Paraguay and Peru, the frequency band 3 750-4 000 kHz is allocated to the fixed and mobile, except aeronautical mobile, services on a primary basis. (WRC-15)

5.123
Additional allocation: in Botswana, Eswatini, Lesotho, Malawi, Mozambique, Namibia, South Africa, Zambia and Zimbabwe, the frequency 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. (WRC-19)

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, Belarus, Botswana, Burkina Faso, the Central African Rep., China, the Russian Federation, Georgia, India, Kazakhstan, Mali, Niger, Pakistan, Kyrgyzstan, Tajikistan,Chad, Turkmenistan and Ukraine, in the frequency 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-19)

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).

5.132A
Stations in the radiolocation service shall not cause harmful interference to, or claim protection from, stations operating in the fixed or mobile services. Applications of the radiolocation service are limited to oceanographic radars operating in accordance with Resolution 612 (Rev.WRC 12). (WRC-12)

5.132B
Alternative allocation: in Armenia, Belarus, Moldova and Kyrgyzstan, the frequency band 4 438-4 488 kHz is allocated to the fixed and mobile, except aeronautical mobile (R), services on a primary basis. (WRC-19)

5.133
Different category of service: in Armenia, Azerbaijan, Belarus, the Russian Federation, Georgia, Kazakhstan, Latvia, Lithuania, Niger, 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-12)

5.133A
Alternative allocation: in Armenia, Belarus, Moldova and Kyrgyzstan, the frequency bands 5 250-5 275 kHz and 26 200-26 350 kHz are allocated to the fixed and mobile, except aeronautical mobile, services on a primary basis. (WRC-19)

5.133B
Stations in the amateur service using the frequency band 5 351.5-5 366.5 kHz shall not exceed a maximum radiated power of 15 W (e.i.r.p.). However, in Region 2 in Mexico, stations in the amateur service using the frequency band 5 351.5-5 366.5 kHz shall not exceed a maximum radiated power of 20 W (e.i.r.p.). In the following Region 2 countries: Antigua and Barbuda, Argentina, Bahamas, Barbados, Belize, Bolivia, Brazil, Chile, Colombia, Costa Rica, Cuba,Dominican Republic, Dominica, El Salvador, Ecuador, Grenada, Guatemala, Guyana, Haiti,Honduras, Jamaica, Nicaragua, Panama, Paraguay, Peru, Saint Lucia, Saint Kitts

and Nevis, SaintVincent and the Grenadines, Suriname, Trinidad and Tobago, Uruguay, Venezuela, as well as the overseas countries and territories within the Kingdom of the Netherlands in Region 2, stations in the amateur service using the frequency band 5 351.5-5 366.5 kHz shall not exceed a maximum radiated power of 25 W (e.i.r.p.). (WRC-19)

5.134
The use of the frequency 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 frequency bands to facilitate the introduction of digitally modulated emissions in accordance with the provisions of Resolution 517 (Rev.WRC-19). (WRC-19)

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
(SUP - WRC-12)

5.139
(SUP - WRC-12)

5.140
Additional allocation: in Angola, Iraq, Somalia and Togo, the frequency band 7 000-7 050 kHz is also allocated to the fixed service on a primary basis. (WRC-15)

5.141
Alternative allocation: in Egypt, Eritrea, Ethiopia, Guinea, Libya, Madagascar and Niger, the band 7 000 7 050 kHz is allocated to the fixed service on a primary basis. (WRC-12)

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: in Algeria, Saudi Arabia, Australia, Bahrain, Botswana, Brunei Darussalam, China, Comoros, Korea (Rep. of), Diego Garcia, Djibouti, Egypt, United Arab Emirates, Eritrea, Guinea, Indonesia, Iran (Islamic Republic of), Japan, Jordan, Kuwait, Libya,Mali, Morocco, Mauritania, Niger, New Zealand, Oman, Papua New Guinea, Qatar, the Syrian Arab Republic, the Dem. People's Rep. of Korea, Singapore, Sudan, South Sudan, Tunisia,Viet Nam and Yemen, the frequency 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-19)

5.141C
(SUP - WRC-12)

5.142
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-12)

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, frequencies in the band 7 350-7 450 kHz may be used by stations in the fixed service on a primary basis and land mobile service on a secondary basis, 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-12)

5.143B
In Region 1, 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 on condition that harmful interference is not caused to the broadcasting service. The total radiated power of each station shall not exceed 24 dBW. (WRC-12)

5.143C
Additional allocation: in Algeria, Saudi Arabia, Bahrain, Comoros, Djibouti, Egypt, United Arab Emirates, Iran (Islamic Republic of), Jordan, Kuwait, Libya, Morocco, Mauritania, Niger, Oman, Qatar, the Syrian Arab Republic, Sudan, South 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-12)

5.143D
In Region 2, frequencies in the band 7 350-7 400 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-12)

5.143E
(SUP - WRC-12)

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)

5.145A
Stations in the radiolocation service shall not cause harmful interference to, or claim protection from, stations operating in the fixed service. Applications of the radiolocation service are limited to oceanographic radars operating in accordance with Resolution 612 (Rev.WRC-12). (WRC-12)

5.145B
Alternative allocation: in Armenia, Belarus, Moldova and Kyrgyzstan, the frequency bands 9 305-9 355 kHz and 16 100-16 200 kHz are allocated to the fixed service on a primary basis. (WRC-19)

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

5.149A
Alternative allocation: in Armenia, Belarus, Moldova and Kyrgyzstan, the frequency band 13 450-13 550 kHz is allocated to the fixed service on a primary basis and to the mobile, except aeronautical mobile (R), service on a secondary basis. (WRC-19)

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
Alternative allocation: in Armenia, Belarus, Moldova and Kyrgyzstan, the frequency band 24 450-24 600 kHz is allocated to the fixed and land mobile services on a primary basis. (WRC-19)

5.159
Alternative allocation: in Armenia, Belarus, Moldova and Kyrgyzstan, the frequency band 39-39.5 MHz is allocated to the fixed and mobile services on a primary basis. (WRC-19)

5.160
Additional allocation: in Botswana, Burundi, Dem. Rep. of the Congo and Rwanda, the band 41-44 MHz is also allocated to the aeronautical radionavigation service on a primary basis. (WRC-12)

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.

5.161A
Additional allocation: in Korea (Rep. of), the United States and Mexico, the frequency bands 41.015-41.665 MHz and 43.35-44 MHz are also allocated to the radiolocation service on a primary basis. Stations in the radiolocation service shall not cause harmful interference to, or claim protection from, stations operating in the fixed or mobile services. Applications of the radiolocation service are limited to oceanographic radars operating in accordance with Resolution 612 (Rev.WRC-12). (WRC-19)

5.161B
Alternative allocation: in Albania, Germany, Armenia, Austria, Belarus, Belgium, Bosnia and Herzegovina, Cyprus, Vatican, Croatia, Denmark, Spain, Estonia, Finland, France, Greece, Hungary, Ireland, Iceland, Italy, Latvia, Liechtenstein, Lithuania, Luxembourg, North Macedonia, Malta, Moldova, Monaco, Montenegro, Norway, Uzbekistan, Netherlands, Portugal, Kyrgyzstan, Slovakia, Czech Rep., Romania, United Kingdom, San Marino, Slovenia, Sweden, Switzerland, Turkey and Ukraine, the frequency band 42-42.5 MHz is allocated to the fixed and mobile services on a primary basis. (WRC-19)

5.162
Additional allocation: in Australia, the band 44-47 MHz is also allocated to the broadcasting service on a primary basis. (WRC-12)

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, Liechtenstein, Lithuania, Luxembourg, North Macedonia, Monaco, Montenegro, Norway, the Netherlands, Poland, Portugal, the Czech Rep., the United Kingdom, Serbia, Slovenia, Sweden and Switzerland the frequency 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-19)

5.163
Additional allocation: in Armenia, Belarus, the Russian Federation, Georgia, Kazakhstan, Latvia, Moldova, Uzbekistan, Kyrgyzstan, Tajikistan, Turkmenistan and Ukraine, the frequency 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-19)

5.164
Additional allocation: in Albania, Algeria, Germany, Austria, Belgium, Bosnia and Herzegovina, Botswana, Bulgaria, Côte d'Ivoire, Croatia, Denmark, Spain, Estonia, Eswatini, Finland, France, Gabon, Greece, Hungary, Ireland, Israel, Italy, Jordan, Lebanon, Libya, Liechtenstein, Lithuania, Luxembourg, Madagascar, Mali, Malta, Morocco, Mauritania, Monaco, Montenegro, Nigeria, Norway, the Netherlands, Poland, Syrian Arab Republic, Slovakia, Czech Rep., Romania, the United Kingdom, Serbia, Slovenia, Sweden, Switzerland, Chad, Togo, Tunisia and Turkey, the frequency band 47-68 MHz, in South Africa the frequency band 47-50 MHz, and in Latvia the frequency bands 48.5-56.5 MHz and 58-68 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 frequency 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 frequency band. (WRC-19)

5.165
Additional allocation: in Angola, Cameroon, Congo (Rep. of the), Egypt, Madagascar, Mozambique, Niger, Somalia, Sudan, South Sudan, Tanzania and Chad, the frequency band 47- 68 MHz is also allocated to the fixed and mobile, except aeronautical mobile, services on a primary basis. (WRC-19)

5.166
(SUP - WRC-15)

5.166A
Different category of service: in Austria, Cyprus, the Vatican, Croatia, Denmark, Spain, Finland, Hungary, Latvia, the Netherlands, the Czech Republic, the United Kingdom, Slovakia and Slovenia, the frequency band 50.0-50.5 MHz is allocated to the amateur service on a primary basis. Stations in the amateur service in these countries shall not cause harmful interference to, or claim protection from, stations of the broadcasting, fixed and mobile services operating in accordance with the Radio Regulations in the frequency band 50.0-50.5 MHz in the countries not listed in this provision. For a station of these services, the protection criteria in No. 5.169B shall also apply. In Region 1, with the exception of those countries listed in No. 5.169, wind profiler radars operating in the radiolocation service under No. 5.162A are authorized to operate on the basis of equality with stations in the amateur service in the frequency band 50.0-50.5 MHz. (WRC-19)

5.166B
In Region 1, stations in the amateur service operating on a secondary basis shall not cause harmful interference to, or claim protection from, stations of the broadcasting service. The field strength generated by an amateur station in Region 1 in the frequency band 50-52 MHz shall not exceed a calculated value of +6 dB(μV/m) at a height of 10 m above ground for more than 10% of time along the border of a country with operational analogue broadcasting stations in Region 1 and of neighbouring countries with broadcasting stations in Region 3 listed in Nos. 5.167 and 5.168. (WRC-19)

5.166C
In Region 1, stations in the amateur service in the frequency band 50-52 MHz, with the exception of those countries listed in No. 5.169, shall not cause harmful interference to, or claim protection from, wind profiler radars operating in the radiolocation service under No. 5.162A. (WRC-19)

5.166D
Different category of service: in Lebanon, the frequency band 50-52 MHz is allocated to the amateur service on a primary basis. Stations in the amateur service in Lebanon shall not cause harmful interference to, or claim protection from, stations of the broadcasting, fixed and mobile services operating in accordance with the Radio Regulations in the frequency band 50-52 MHz in the countries not listed in this provision. (WRC-19)

5.166E
In the Russian Federation, only the frequency band 50.080-50.280 MHz is allocated to the amateur service on a secondary basis. The protection criteria for the other services in the countries not listed in this provision are specified in Nos. 5.166B and 5.169B. (WRC-19)

5.167
Alternative allocation: in Bangladesh, Brunei Darussalam, India, Iran (Islamic Republic of), Pakistan and Singapore, the frequency band 50-54 MHz is allocated to the fixed, mobile and broadcasting services on a primary basis. (WRC-15)

5.167A
Additional allocation: in Indonesia and Thailand, the frequency band 50-54 MHz is also allocated to the fixed, mobile and broadcasting services on a primary basis. (WRC-15)

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, Eswatini, Lesotho, Malawi, Namibia, , Rwanda, South Africa, Zambia and Zimbabwe, the frequency band 50-54 MHz is allocated to the amateur service on a primary basis. In Senegal, the frequency band 50-51 MHz is allocated to the amateur service on a primary basis. (WRC-19)

5.169A
Alternative allocation: in the following countries in Region 1: Angola, Saudi Arabia, Bahrain, Burkina Faso, Burundi, the United Arab Emirates, Gambia, Jordan, Kenya, Kuwait, Mauritius, Mozambique, Oman, Uganda, Qatar, South Sudan and Tanzania, the frequency band 50-54 MHz is allocated to the amateur service on a primary basis. In Guinea-Bissau, the frequency band 50.0-50.5 MHz is allocated to the amateur service on a primary basis. In Djibouti, the frequency band 50-52 MHz is allocated to the amateur service on a primary basis. With the exception of those countries listed in No. 5.169, stations in the amateur service operating in Region 1 under this footnote, in all or part of the frequency band 50-54 MHz, shall not cause harmful interference to, or claim protection from, stations of other services operating in accordance with the Radio Regulations in Algeria, Egypt, Iran (Islamic Republic of), Iraq, Israel, Libya, Palestine[1], the Syrian Arab Republic, the Dem. People's Republic of Korea, Sudan and Tunisia. The field strength generated by an amateur station in the frequency band 50-54 MHz shall not exceed a value of +6 dB(μV/m) at a height of 10 m above ground for more than 10% of time along the borders of listed countries requiring protection. (WRC-19)

5.169B
Except countries listed under No. 5.169, stations in the amateur service used in Region 1, in all or part of the 50-54 MHz frequency band, shall not cause harmful interference to, or claim protection from, stations of other services used in accordance with the Radio Regulations in Algeria, Armenia, Azerbaijan, Belarus, Egypt, Russian Federation, Iran (Islamic Republic of), Iraq, Kazakhstan, Kyrgyzstan, Libya, Uzbekistan, Palestine[1], the Syrian Arab Republic, Sudan, Tunisia and Ukraine. The field strength generated by an amateur station in the frequency band 50-54 MHz shall not exceed a value of +6 dB(μV/m) at a height of 10 m above ground for more than 10% of time along the borders of the countries listed in this provision. (WRC-19)

1 Pursuant to Resolution 99 (Rev. Dubai, 2018) and taking into account the Israeli-Palestinian Interim Agreement of 28 September 1995.

5.170
Additional allocation: in New Zealand, the frequency band 51-54 MHz is also allocated to the fixed and mobile services on a primary basis. (WRC-15)

5.171
Additional allocation: in Botswana, Eswatini, Lesotho, Malawi, Mali, Namibia, Dem. Rep. of the Congo, Rwanda, South Africa, Zambia and Zimbabwe, the frequency band 54-68 MHz is also allocated to the fixed and mobile, except aeronautical mobile, services on a primary basis. (WRC-19)

5.172
Different category of service: in the French overseas departments and communities in Region 2 and Guyana, the allocation of the frequency band 54-68 MHz to the fixed and mobile services is on a primary basis (see No. 5.33). (WRC-15)

5.173
Different category of service: in the French overseas departments and communities in Region 2 and Guyana, the allocation of the frequency band 68-72 MHz to the fixed and mobile services is on a primary basis (see No. 5.33). (WRC-15)

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, 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. (WRC-12)

5.179
Additional allocation: in Armenia, Azerbaijan, Belarus, China, the Russian Federation, Georgia, Kazakhstan, Lithuania, Mongolia, Kyrgyzstan, 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-12)

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 and communities in Region 2, Guyana and Paraguay, the allocation of the frequency band 76 88 MHz to the fixed and mobile services is on a primary basis (see No. 5.33). (WRC-15)

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 Kyrgyzstan, Somalia and Turkmenistan, the frequency band 104-108 MHz is also allocated to the mobile, except aeronautical mobile (R), service on a secondary basis. (WRC-19)

5.195
Not used.

5.197
Additional allocation: in 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-12)

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)[2]. 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)

2 Note by the Secretariat: This Resolution was revised by WRC-15.

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 Armenia, Azerbaijan, Belarus, Bulgaria, Estonia, the Russian Federation, Georgia, Hungary, Iran (Islamic Republic of), Iraq (Republic of), Japan, Kazakhstan, Mali, Mongolia, Mozambique, Uzbekistan, Papua New Guinea, Poland, Kyrgyzstan, Romania, Senegal, Tajikistan, Turkmenistan and Ukraine, the frequency 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-19)

5.202
Additional allocation: in Saudi Arabia, Armenia, Azerbaijan, Bahrain, Belarus, Bulgaria, the United Arab Emirates, the Russian Federation, Georgia, Iran (Islamic Republic of), Jordan, Mali, Oman, Uzbekistan, Poland, the Syrian Arab Republic, Kyrgyzstan, Romania, Senegal, Tajikistan, Turkmenistan and Ukraine, the frequency 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-19)

5.203
(SUP - WRC-07)

5.203A
(SUP - WRC-07)

5.203B
(SUP - WRC-07)

5.203C
The use of the space operation service (space-to-Earth) with non-geostationary satellite short-duration mission systems in the frequency band 137-138 MHz is subject to Resolution 660 (WRC-19). Resolution 32 (WRC-19) applies. These systems shall not cause harmful interference to, or claim protection from, the existing services to which the frequency band is allocated on a primary basis. (WRC-19)

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, Singapore, Thailand and Yemen, the frequency 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-19)

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 frequency bands 137-138 MHz, 387-390 MHz and 400.15-401 MHz and in the maritime mobile-satellite service (space-to-Earth) in the frequency bands 157.1875-157.3375 MHz and 161.7875- 161.9375 MHz, administrations shall take all practicable steps to protect the radio astronomy service in the frequency bands 150.05-153 MHz, 322-328.6 MHz, 406.1-410 MHz and 608- 614 MHz from harmful interference from unwanted emissions as shown in the most recent version of Recommendation ITU-R RA.769. (WRC-19)

5.208B[3]
In the frequency bands:
137-138 MHz,
157.1875-157.3375 MHz,
161.7875-161.9375 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-19) applies. (WRC-19)

3 This provision was previously numbered as No. 5.347A. It was renumbered to preserve the sequential order.

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)

5.209A
The use of the frequency band 137.175-137.825 MHz by non-geostationary satellite systems in the space operation service identified as short-duration mission in accordance with Appendix 4 is not subject to No. 9.11A. (WRC-19)

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, Guinea, Ireland, Israel, Kenya, Kuwait, Lebanon, Liechtenstein, Luxembourg, North Macedonia, Mali, Malta, Montenegro, Norway, the Netherlands, Qatar, Slovakia, the United Kingdom, Serbia, Slovenia, Somalia, Sweden, Switzerland, Tanzania, Tunisia and Turkey, the frequency band 138-144 MHz is also allocated to the maritime mobile and land mobile services on a primary basis. (WRC-19)

5.212
Alternative allocation: in Angola, Botswana, Cameroon, the Central African Rep., Congo (Rep. of the), Eswatini, Gabon, Gambia, Ghana, Guinea, Iraq, Jordan, Lesotho, Liberia, Libya, Malawi, Mozambique, Namibia, Niger, Oman, Uganda, Syrian Arab Republic, the Dem. Rep. of the Congo, Rwanda, Sierra Leone, South Africa, Chad, Togo, Zambia and Zimbabwe, the frequency band 138-144 MHz is allocated to the fixed and mobile services on a primary basis. (WRC-19)

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, North Macedonia, Montenegro, Serbia, Somalia, Sudan, South Sudan and Tanzania, the frequency band 138-144 MHz is also allocated to the fixed service on a primary basis. (WRC-19)

5.215
Not used.

5.216
Additional allocation: in China, the band 144-146 MHz is also allocated to the aeronautical mobile (OR) 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.

5.218A
The frequency band 148-149.9 MHz in the space operation service (Earth-to-space) may be used by nongeostationary- satellite systems with short-duration missions. Non-geostationary-satellite systems in the space operation service used for a short-duration mission in accordance with Resolution 32 (WRC-19) of the Radio Regulations are not subject to agreement under No. 9.21. At the stage of coordination, the provisions of Nos. 9.17 and 9.18 also apply. In the frequency band 148-149.9 MHz, non-geostationary-satellite systems with short-duration missions shall not cause unacceptable interference to, or claim protection from, existing primary services within this frequency band, or impose additional constraints on the space operation and mobile-satellite services. In addition, earth stations in non-geostationary-satellite systems in the space operation service with short-duration missions in the frequency band 148-149.9 MHz shall ensure that the power flux-density does not exceed –149 dB(W/(m^2 . 4 kHz)) for more than 1% of time at the border of the territory of the following countries: Armenia, Azerbaijan, Belarus, China, Korea (Rep. of), Cuba, Russian Federation, India, Iran (Islamic Republic of), Japan, Kazakhstan, Malaysia, Uzbekistan, Kyrgyzstan, Thailand and Viet Nam. In case this power flux-density limit is exceeded, agreement under No. 9.21 is required to be obtained from countries mentioned in this footnote. (WRC-19)

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 frequency 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 frequency band 148-149.9 MHz. The use of the frequency band 148-149.9 MHz by nongeostationary- satellite systems in the space operation service identified as short-duration mission is not subject to No. 9.11A. (WRC-19)

5.220
The use of the frequency 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. (WRC-15)

5.221
Stations of the mobile-satellite service in the frequency 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, Djibouti, Egypt, the United Arab Emirates, Eritrea, Spain, Estonia,

Eswatini, Ethiopia, the Russian Federation, Finland, France, Gabon, Georgia, Ghana, Greece, Guinea, Guinea Bissau, Hungary, India, Iran (Islamic Republic of), Ireland, Iceland, Israel, Italy, Jamaica, Japan, Jordan, Kazakhstan, Kenya, Kuwait, Lesotho, Latvia, Lebanon, Libya,Liechtenstein, Lithuania, Luxembourg, North Macedonia, 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, Sudan, Sri Lanka, South Africa, Sweden, Switzerland, Tanzania, Chad, Togo, Tonga, Trinidad and Tobago, Tunisia, Turkey, Ukraine, Viet Nam, Yemen, Zambia and Zimbabwe. (WRC-19)

5.222
(SUP - WRC-15)

5.223
(SUP - WRC-15)

5.224
(SUP - WRC-97)

5.224A
(SUP - WRC-15)

5.224B
(SUP - WRC-15)

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.

5.225A
Additional allocation: in Algeria, Armenia, Azerbaijan, Belarus, China, the Russian Federation, France, Iran (Islamic Republic of), Kazakhstan, Uzbekistan, Kyrgyzstan, Tajikistan, Turkmenistan, Ukraine and Viet Nam, the frequency band 154-156 MHz is also allocated to the radiolocation service on a primary basis. The usage of the frequency band 154-156 MHz by the radiolocation service shall be limited to space-object detection systems operating from terrestrial locations. The operation of stations in the radiolocation service in the frequency band 154-156 MHz shall be subject to agreement obtained under No. 9.21. For the identification of potentially affected administrations in Region 1, the instantaneous field-strength value of 12 dB(μV/m) for 10% of the time produced at 10 m above ground level in the 25 kHz reference frequency band at the border of the territory of any other administration shall be used. For the identification of potentially affected administrations in Region 3, the interference-to-noise ratio (I/N) value of –6 dB (N = –161 dBW/4 kHz), or –10 dB for applications with greater protection requirements, such as public protection and disaster relief (PPDR (N = –161 dBW/4 kHz)), for 1% of the time produced at 60 m above ground level at the border of the territory of any other administration shall be used. In the

frequency bands 156.7625-156.8375 MHz, 156.5125 156.5375 MHz, 161.9625-161.9875 MHz, 162.0125-162.0375 MHz, out-of-band e.i.r.p. of space surveillance radars shall not exceed –16 dBW. Frequency assignments to the radiolocation service under this allocation in Ukraine shall not be used without the agreement of Moldova. (WRC-12)

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
(SUP - WRC-12)

5.228
The use of the frequency bands 156.7625-156.7875 MHz and 156.8125-156.8375 MHz by the mobile-satellite service (Earth-to-space) is limited to the reception of automatic identification system (AIS) emissions of long-range AIS broadcast messages (Message 27, see the most recent version of Recommendation ITU R M.1371). With the exception of AIS emissions, emissions in these frequency bands by systems operating in the maritime mobile service for communications shall not exceed 1 W. (WRC-12)

5.228A
The frequency bands 161.9625-161.9875 MHz and 162.0125-162.0375 MHz may be used by aircraft stations for the purpose of search and rescue operations and other safety-related communications. (WRC-12)

5.228AA
The use of the frequency bands 161.9375-161.9625 MHz and 161.9875-162.0125 MHz by the maritime mobile-satellite (Earth-to-space) service is limited to the systems which operate in accordance with Appendix 18. (WRC-15)

5.228AB
The use of the frequency bands 157.1875-157.3375 MHz and 161.7875-161.9375 MHz by the maritime mobile-satellite service (Earth-to-space) is limited to non-geostationary-satellite systems operating in accordance with Appendix 18. (WRC-19)

5.228AC
The use of the frequency bands 157.1875-157.3375 MHz and 161.7875-161.9375 MHz by the maritime mobile-satellite service (space-to-Earth) is limited to non-geostationary-satellite systems operating in accordance with Appendix 18. Such use is subject to agreement obtained under No. 9.21 with respect to the terrestrial services in Azerbaijan, Belarus, China, Korea (Rep. of), Cuba, the Russian Federation, the Syrian Arab Republic, the Dem. People's Rep. of Korea, South Africa and Viet Nam. (WRC-19)

5.228B
The use of the frequency bands 161.9625-161.9875 MHz and 162.0125-162.0375 MHz by the fixed and land mobile services shall not cause harmful interference to, or claim protection from, the maritime mobile service. (WRC-12)

5.228C
The use of the frequency bands 161.9625-161.9875 MHz and 162.0125-162.0375 MHz by the maritime mobile service and the mobile-satellite (Earth-to-space) service is limited to the automatic identification system (AIS). The use of these frequency bands by the aeronautical mobile (OR) service is limited to AIS emissions from search and rescue aircraft operations. The AIS operations in these frequency bands shall not constrain the development and use of the fixed and mobile services operating in the adjacent frequency bands. (WRC-12)

5.228D
The frequency bands 161.9625-161.9875 MHz (AIS 1) and 162.0125-162.0375 MHz (AIS 2) may continue to be used by the fixed and mobile services on a primary basis until 1 January 2025, at which time this allocation shall no longer be valid. Administrations are encouraged to make all practicable efforts to discontinue the use of these bands by the fixed and mobile services prior to the transition date. During this transition period, the maritime mobile service in these frequency bands has priority over the fixed, land mobile and aeronautical mobile services. (WRC-12)

5.228E
The use of the automatic identification system in the frequency bands 161.9625-161.9875 MHz and 162.0125-162.0375 MHz by the aeronautical mobile (OR) service is limited to aircraft stations for the purpose of search and rescue operations and other safety-related communications. (WRC-12)

5.228F
The use of the frequency bands 161.9625-161.9875 MHz and 162.0125-162.0375 MHz by the mobile-satellite service (Earth-to-space) is limited to the reception of automatic identification system emissions from stations operating in the maritime mobile service. (WRC-12)

5.229
oAlternative 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 and China, 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. (WRC-12)

5.232
(SUP - WRC-15)

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
(SUP - WRC-15)

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.

5.237
Additional allocation: in Congo (Rep. of the), Egypt, Eritrea, Ethiopia, Gambia, Guinea, Libya, 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-12)

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 and Mexico, the frequency band 216-220 MHz is also allocated to the land mobile service on a primary basis. (WRC-19)

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
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, Eswatini, Lesotho, Malawi, Mozambique, Namibia, South Africa, Zambia and Zimbabwe, the frequency 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. (WRC-19)

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 and Kazakhstan, the frequency 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, or claim protection from, or constrain the use and development of, the mobile service systems and mobile-satellite service systems operating in the frequency 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-15)

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 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-12)

5.260
(SUP - WRC-15)

5.260A
In the frequency band 399.9-400.05 MHz, the maximum e.i.r.p. of any emission of earth stations in the mobile-satellite service shall not exceed 5 dBW in any 4 kHz band and the maximum e.i.r.p. of each earth station in the mobile-satellite service shall not exceed 5 dBW in the whole 399.9-400.05 MHz frequency band. Until 22 November 2022, this limit shall not apply to satellite systems for which complete notification information has been received by the Radiocommunication Bureau by 22 November 2019 and that have been brought into use by that date. After 22 November 2022, these limits shall apply to all systems within the mobile-satellite service operating in this frequency band.

In the frequency band 399.99-400.02 MHz, the e.i.r.p. limits as specified above shall apply after 22 November 2022 to all systems within the mobile-satellite service. Administrations are requested that their mobilesatellite service satellite links in the 399.99-400.02 MHz frequency band comply with the e.i.r.p. limits as specified above, after 22 November 2019. (WRC-19)

5.260B
In the frequency band 400.02-400.05 MHz, the provisions of No. 5.260A are not applicable for telecommand uplinks within the mobile-satellite service. (WRC-19)

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, Cuba, Egypt, the United Arab Emirates, Ecuador, the Russian Federation, Georgia, Hungary, Iran (Islamic Republic of), Iraq, Israel, Jordan, Kazakhstan, Kuwait, Liberia, Malaysia, Moldova, Oman, Uzbekistan, Pakistan, the Philippines, Qatar, the Syrian Arab Republic, Kyrgyzstan, Singapore, Somalia, Tajikistan, Chad, Turkmenistan and Ukraine, the band 400.05-401 MHz is also allocated to the fixed and mobile services on a primary basis. (WRC-12)

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.

5.264A
In the frequency band 401-403 MHz, the maximum e.i.r.p. of any emission of each earth station in the meteorological-satellite service and the Earth exploration-satellite service shall not exceed 22 dBW in any 4 kHz band for geostationary-satellite systems and non-geostationary-satellite systems with an orbit of apogee equal or greater than 35 786 km.

The maximum e.i.r.p. of any emission of each earth station in the meteorological-satellite service and the Earth exploration-satellite service shall not exceed 7 dBW in any 4 kHz band for non-geostationary-satellite systems with an orbit of apogee lower than 35 786 km.

The maximum e.i.r.p. of each earth station in the meteorological-satellite service and the Earth explorationsatellite service shall not exceed 22 dBW for geostationary-satellite systems and non-geostationary-satellite systems with an orbit of apogee equal or greater than 35 786 km in the whole 401-403 MHz frequency band. The maximum e.i.r.p. of each earth station in the meteorological-satellite service and the Earth exploration-satellite service shall not exceed 7 dBW for non-geostationary-satellite systems with an orbit of apogee lower than 35 786 km in the whole 401-403 MHz frequency band.

Until 22 November 2029, these limits shall not apply to satellite systems for which complete notification information has been received by the Radiocommunication Bureau by 22 November 2019 and that have been brought into use by that date. After 22 November 2029, these limits shall apply to all systems within the meteorological-satellite service and the Earth exploration-satellite service operating in this frequency band. (WRC-19)

5.264B
Non-geostationary-satellite systems in the meteorological-satellite service and the Earth explorationsatellite service for which complete notification information has been received by the Radiocommunication Bureau before 28 April 2007 are exempt from provisions of No. 5.264A and may continue to operate in the frequency band 401.898 - 402.522 MHz on a primary basis without exceeding a maximum e.i.r.p. level of 12 dBW. (WRC-19)

5.265
In the frequency band 403-410 MHz, Resolution 205 (Rev.WRC-19) applies. (WRC-19)

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 frequency band 410-420 MHz by the space research service is limited to space-to-space communication links with an orbiting, manned space vehicle. The power flux-density at the surface of the Earth produced by emissions from transmitting stations of the space research service (space-to-space) in the frequency band 410-420 MHz shall not exceed

-153 dB(W/m^2) for $0° \le \partial \le 5°$,
$-153 + 0.077\ (\partial - 5)$ dB(W/m^2) for $5° \le \partial \le 70°$ and
-148 dB(W/m^2) for $70° \le \partial \le 90°$,

where ∂ is the angle of arrival of the radio-frequency wave and the reference bandwidth is 4 kHz. In this frequency band, stations of the space research service (space-to-space) shall not claim protection from, nor constrain the use and development of, stations of the fixed and mobile services. No. 4.10 does not apply. (WRC-15)

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
(SUP - WRC-12)

5.273
(SUP - WRC-12)

5.274
Alternative allocation: in Denmark, Norway, Sweden and Chad, the bands 430 432 MHz and 438 440 MHz are allocated to the fixed and mobile, except aeronautical mobile, services on a primary basis. (WRC 12)

5.275
Additional allocation: in Croatia, Estonia, Finland, Libya, North Macedonia, Montenegro and Serbia, the frequency 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-19)

5.276
Additional allocation: in Afghanistan, Algeria, Saudi Arabia, Bahrain, Bangladesh, Brunei Darussalam, Burkina Faso, Djibouti, Egypt, the United Arab Emirates, Ecuador, Eritrea, Ethiopia, Greece, Guinea, India, Indonesia, Iran (Islamic Republic of), Iraq, Israel, Italy, Jordan, Kenya, Kuwait, Libya, Malaysia, Niger, Nigeria, Oman, Pakistan, the Philippines, Qatar, the Syrian Arab Republic, the Dem. People's Rep. of Korea, Singapore, Somalia, Sudan, Switzerland, Thailand, Togo, Turkey and Yemen, the frequency band 430-440 MHz is also allocated to the fixed service on a primary basis and the frequency bands 430-435 MHz and 438-440 MHz are also allocated, except in Ecuador, to the mobile, except aeronautical mobile, service on a primary basis. (WRC-15)

5.277
Additional allocation: in Angola, Armenia, Azerbaijan, Belarus, Cameroon, Congo (Rep. of the), Djibouti, the Russian Federation, Georgia, Hungary, Israel, Kazakhstan, Mali, Uzbekistan, Poland, the Dem. Rep. of the Congo, Kyrgyzstan, Slovakia, Romania, Rwanda, Tajikistan, Chad, Turkmenistan and Ukraine, the frequency band 430-440 MHz is also allocated to the fixed service on a primary basis. (WRC-19)

5.278
Different category of service: in Argentina, Brazil, Colombia, Costa Rica, Cuba, Guyana, Honduras, Panama, Paraguay, Uruguay and Venezuela, the allocation of the frequency band 430-440 MHz to the amateur service is on a primary basis (see No. 5.33). (WRC-19)

5.279
Additional allocation: in Mexico, the frequency bands 430-435 MHz and 438-440 MHz are also allocated on a primary basis to the mobile, except aeronautical mobile, service, and on a secondary basis to the fixed service, subject to agreement obtained under No. 9.21. (WRC-19)

5.279A
The use of the frequency band 432-438 MHz by sensors in the Earth exploration-satellite service (active) shall be in accordance with Recommendation ITU-R RS.1260-2. Additionally, the Earth exploration-satellite service (active) in the frequency 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-19)

5.280
In Germany, Austria, Bosnia and Herzegovina, Croatia, Liechtenstein, North Macedonia, Montenegro, Portugal, Serbia, Slovenia and Switzerland, the frequency 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 frequency band must accept harmful interference which may be caused by these applications. ISM equipment operating in this frequency band is subject to the provisions of No. 15.13. (WRC-19)

5.281
Additional allocation: in the French overseas departments and communities 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 frequency band 450-470 MHz is identified for use by administrations wishing to implement International Mobile Telecommunications (IMT) - see Resolution 224 (Rev.WRC-19). This identification does not preclude the use of this frequency band by any application of the services to which it is allocated and does not establish priority in the Radio Regulations. (WRC-19)

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 of 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
Use of the frequency bands 457.5125-457.5875 MHz and 467.5125-467.5875 MHz by the maritime mobile service is limited to on-board communication stations. The characteristics of the equipment and the channelling arrangement shall be in accordance with Recommendation ITU-R M.1174-4. The use of these frequency bands in territorial waters is subject to the national regulations of the administration concerned. (WRC-19)

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.1174-4. (WRC-19)

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, Kyrgyzstan, Tajikistan and Turkmenistan, 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-12)

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, Liechtenstein, the Czech Rep., Serbia and Switzerland, the frequency 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-15)

5.292
Different category of service: in Argentina, Uruguay and Venezuela, the allocation of the frequency band 470-512 MHz to the mobile service is on a primary basis (see No. 5.33), subject to agreement obtained under No. 9.21. (WRC-15)

5.293
Different category of service: in Canada, Chile, Cuba, the United States, Guyana, Jamaica and Panama, the allocation of the frequency 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 the Bahamas, Barbados, Canada, Chile, Cuba, the United States, Guyana, Jamaica, Mexico and Panama, the allocation of the frequency 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 frequency 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-15)

5.294
Additional allocation: in Saudi Arabia, Cameroon, Côte d'Ivoire, Egypt, Ethiopia, Israel, Libya, the Syrian Arab Republic, Chad and Yemen, the frequency band 470-582 MHz is also allocated to the fixed service on a secondary basis. (WRC-15)

5.295
In the Bahamas, Barbados, Canada, the United States and Mexico, the frequency band 470-608 MHz, or portions thereof, is identified for International Mobile Telecommunications (IMT) – see Resolution 224 (Rev.WRC-19). This identification does not preclude the use of these frequency bands by any application of the services to which they are allocated and does not establish priority in the Radio Regulations. Mobile service stations of the IMT system within the frequency band are subject to agreement obtained under No. 9.21 and shall not cause harmful interference to, or claim protection from, the broadcasting service of neighbouring countries. Nos. 5.43 and 5.43A apply. (WRC-19)

5.296
Additional allocation: in Albania, Germany, Angola, Saudi Arabia, Austria, Bahrain, Belgium, Benin, Bosnia and Herzegovina, Botswana, Bulgaria, Burkina Faso, Burundi, Cameroon, Vatican, Congo (Rep. of the), Côte d'Ivoire, Croatia, Denmark, Djibouti, Egypt, United Arab Emirates, Spain, Estonia, Eswatini, Finland, France, Gabon, Georgia, Ghana, Hungary, Iraq, Ireland, Iceland, Israel, Italy, Jordan, Kenya, Kuwait, Lesotho, Latvia, Lebanon, Libya, Liechtenstein, Lithuania, Luxembourg, North Macedonia, Malawi, Mali, Malta, Morocco, Mauritius, Mauritania, Moldova, Monaco, Mozambique, Namibia, Niger, Nigeria, Norway, Oman, Uganda, the Netherlands, Poland, Portugal, Qatar, the Syrian Arab Republic, Slovakia, the Czech Republic, Romania, the United Kingdom, Rwanda, San Marino, Serbia, Sudan, South Africa, Sweden, Switzerland, Tanzania, Chad, Togo, Tunisia, Turkey, Ukraine, Zambia and Zimbabwe, the frequency band 470-694 MHz is also allocated on a secondary basis to the land mobile service, intended for applications ancillary to broadcasting and programme-making. 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-19)

5.296A
In Micronesia, the Solomon Islands, Tuvalu and Vanuatu, the frequency band 470-698 MHz, or portions thereof, and in Bangladesh, Maldives and New Zealand, the frequency band 610-698 MHz, or portions thereof, are identified for use by these administrations wishing to implement International Mobile Telecommunications (IMT) – see Resolution 224 (Rev.WRC-19). This identification does not preclude the use of these frequency bands by any application of the services to which they are allocated and does not establish priority in the Radio Regulations. The mobile allocation in this frequency band shall not be used for IMT systems unless subject to agreement obtained under No. 9.21 and shall not cause harmful

interference to, or claim protection from, the broadcasting service of neighbouring countries. Nos. 5.43 and 5.43A apply. (WRC-19)

5.297
Additional allocation: in Canada, Costa Rica, Cuba, El Salvador, the United States, Guatemala, Guyana and Jamaica, the frequency 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. In the Bahamas, Barbados and Mexico, the frequency band 512-608 MHz is also allocated to the mobile service on a primary basis, subject to agreement obtained under No. 9.21. In Mexico, the frequency band 512-608 MHz is also allocated on a secondary basis to the fixed service (see No. 5.32). (WRC-19)

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.

5.300
Additional allocation: in Saudi Arabia, Cameroon, Egypt, United Arab Emirates, Israel, Jordan, Libya, Oman, Qatar, the Syrian Arab Republic and Sudan, the frequency band 582-790 MHz is also allocated to the fixed and mobile, except aeronautical mobile, services on a secondary basis. (WRC-15)

5.302
(SUP - WRC-12)

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
Additional allocation: in Belize, Colombia and Guatemala, the frequency band 614-698 MHz is alsoallocated to the mobile service on a primary basis. Stations of the mobile service within the frequency band are subject to agreement obtained under No. 9.21. (WRC-19)

5.308A
In the Bahamas, Barbados, Belize, Canada, Colombia, the United States, Guatemala and Mexico, the frequency band 614-698 MHz, or portions thereof, is identified for International Mobile Telecommunications

(IMT) – see Resolution 224 (Rev.WRC-19). This identification does not preclude the use of these frequency bands by any application of the services to which they are allocated and does not establish priority in the Radio Regulations. Mobile service stations of the IMT system within the frequency band are subject to agreement obtained under No. 9.21 and shall not cause harmful interference to, or claim protection from, the broadcasting service of neighbouring countries. Nos. 5.43 and 5.43A apply. (WRC-19)

5.309
Different category of service: in El Salvador, the allocation of the frequency 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. (WRC-15)

5.310
(SUP - WRC-97)

5.311
(SUP - WRC-07)

5.311A
(SUP - WRC-19)

5.312
Additional allocation: in Armenia, Azerbaijan, Belarus, the Russian Federation, Georgia, Kazakhstan, Uzbekistan, Kyrgyzstan, Tajikistan, Turkmenistan and Ukraine, the frequency band 645-862 MHz, and in Bulgaria the frequency bands 646-686 MHz, 726-753 MHz, 778-811 MHz and 822-852 MHz, are also allocated to the aeronautical radionavigation service on a primary basis. (WRC-19)

5.312A
In Region 1, the use of the frequency band 694-790 MHz by the mobile, except aeronautical mobile, service is subject to the provisions of Resolution 760 (Rev.WRC-19). See also Resolution 224 (Rev.WRC-19). (WRC-19)

5.313
(SUP - WRC-97)

5.313A
The frequency band, or portions of the frequency band 698-790 MHz, in Australia, Bangladesh, Brunei Darussalam, Cambodia, China, Korea (Rep. of), Fiji, India, Indonesia, Japan, Kiribati, Lao P.D.R., Malaysia, Myanmar (Union of), New Zealand, Pakistan, Papua New Guinea, the Philippines, the Dem. People's Rep. of Korea, Solomon Islands, Samoa, Singapore, Thailand, Tonga, Tuvalu, Vanuatu and Viet Nam, are identified for use by these administrations wishing to implement International Mobile Telecommunications (IMT). This identification does not preclude the use of these frequency bands by any application of the services to which they are allocated and does not establish priority in the Radio Regulations. (WRC-19)

5.313B
(SUP - WRC-15)

5.314
(SUP - WRC-15)

5.315
(SUP - WRC-15)

5.316
(SUP - WRC-15)

5.316A
(SUP - WRC-15)

5.316B
In Region 1, the allocation to the mobile, except aeronautical mobile, service in the frequency band 790-862 MHz is 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-19) and 749 (Rev.WRC-19) shall apply, as appropriate. (WRC-19)

5.317
Additional allocation: in Region 2 (except Brazil, the United States and Mexico), the frequency 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. (WRC-15)

5.317A
The parts of the frequency band 698-960 MHz in Region 2 and the frequency bands 694-790 MHz in Region 1 and 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-19), 760 (Rev.WRC-19) and 749 (Rev.WRC-19), where applicable. This identification does not preclude the use of these frequency bands by any application of the services to which they are allocated and does not establish priority in the Radio Regulations. (WRC-19)

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, Burundi, Egypt, Spain, Lesotho, Libya, Morocco, Malawi, Namibia, Nigeria, South Africa, Tanzania, Zimbabwe and Zambia, subject to agreement obtained under No. 9.21. (WRC-12)

5.323
Additional allocation: in Armenia, Azerbaijan, Belarus, the Russian Federation, Kazakhstan, Uzbekistan, Kyrgyzstan, Tajikistan, Turkmenistan and Ukraine, the frequency band 862-960 MHz, in Bulgaria the frequency bands 862-880 MHz and 915-925 MHz, and in Romania the frequency bands 862-880 MHz and 915-925 MHz, are 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-19)

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 Argentina, Brazil, Costa Rica, Cuba, Dominican Republic, El Salvador, Ecuador, the French overseas departments and communities in Region 2, Guatemala, Paraguay, Uruguay and Venezuela, the frequency band 902-928 MHz is allocated to the land mobile service on a primary basis. In Mexico, the frequency band 902-928 MHz is allocated to the mobile, except aeronautical mobile, service on a primary basis. In Colombia, the frequency band 902-905 MHz is allocated to the land mobile service on a primary basis. (WRC-19)

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 frequency 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 (Rev.WRC 15). (WRC-15)

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)

5.328AA
The frequency band 1 087.7-1 092.3 MHz is also allocated to the aeronautical mobile-satellite (R) service (Earth-to-space) on a primary basis, limited to the space station reception of Automatic Dependent Surveillance-Broadcast (ADS-B) emissions from aircraft transmitters that operate in accordance with recognized international aeronautical standards. Stations operating in the aeronautical mobile-satellite (R) service shall not claim protection from stations operating in the aeronautical radionavigation service. Resolution 425 (Rev.WRC-19) shall apply. (WRC-19)

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 frequency 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 frequency 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 (Rev.WRC-19) shall apply. (WRC-19)

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, Djibouti, Egypt, the United Arab Emirates, Eritrea, Ethiopia, Guyana, India, Indonesia, Iran (Islamic Republic of), Iraq, Israel, Japan, Jordan, Kuwait, Nepal, Oman, Pakistan, the Philippines, Qatar, the Syrian Arab Republic, Somalia, Sudan, South 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-12)

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, Lesotho, Latvia, Lebanon, Liechtenstein, Lithuania, Luxembourg, North Macedonia, Madagascar, Mali, Mauritania, Montenegro, Nigeria, Norway, Oman, Pakistan, the Kingdom of the Netherlands, Poland, Portugal, Qatar, the Syrian Arab Republic, Dem. People's Rep. of Korea, Slovakia, the United Kingdom, Serbia, Slovenia, Somalia, Sudan, South Sudan, Sri Lanka, South Africa, Sweden, Switzerland, Thailand, Togo, Turkey, Venezuela and Viet Nam, the frequency band 1 215-1 300 MHz is also allocated to the radionavigation service on a primary basis. In Canada and the United States, the frequency 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-19)

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 Kyrgyzstan, Slovakia and Turkmenistan, existing installations of the radionavigation service may continue to operate in the band 1 350-1 400 MHz. (WRC-12)

5.338A
In the frequency bands 1 350-1 400 MHz, 1 427-1 452 MHz, 22.55-23.55 GHz, 24.25-27.5 GHz, 30-31.3 GHz, 49.7-50.2 GHz, 50.4-50.9 GHz, 51.4-52.4 GHz, 52.4-52.6 GHz, 81-86 GHz and 92-94 GHz, Resolutio 750 (Rev.WRC-19) applies. (WRC-19)

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,
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.

5.341A
In Region 1, the frequency bands 1 427-1 452 MHz and 1 492-1 518 MHz are identified for use by administrations wishing to implement International Mobile Telecommunications (IMT) in accordance with Resolution 223 (Rev.WRC 15). This identification does not preclude the use of these frequency bands by any other application of the services to which it is allocated and does not establish priority in the Radio Regulations. The use of IMT stations is subject to agreement obtained under No. 9.21 with respect to the aeronautical mobile service used for aeronautical telemetry in accordance with No. 5.342. (WRC-15)

5.341B
In Region 2, the frequency band 1 427-1 518 MHz is identified for use by administrations wishing to implement International Mobile Telecommunications (IMT) in accordance with Resolution 223 (Rev.WRC 15). This identification does not preclude the use of this frequency band by any application of the services to which they are allocated and does not establish priority in the Radio Regulations. (WRC-15)

5.341C
The frequency bands 1 427-1 452 MHz and 1 492-1 518 MHz are identified for use by administrations in Region 3 wishing to implement International Mobile Telecommunications (IMT) in accordance with Resolution 223 (Rev.WRC-15). The use of these frequency bands by the above administrations for the implementation of IMT in the frequency bands 1 429-1 452 MHz and 1 492 1 518 MHz is subject to agreement obtained under No. 9.21 from countries using stations of the aeronautical mobile service. This identification does not preclude the use of these frequency bands by any application of the services to which it is allocated and does not establish priority in the Radio Regulations. (WRC-15)

5.342
Additional allocation: in Armenia, Azerbaijan, Belarus, the Russian Federation, Uzbekistan, Kyrgyzstan and Ukraine, the frequency 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 frequency band 1 452-1 492 MHz is subject to agreement between the administrations concerned. (WRC-15)

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 frequency 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 (Rev. WRC-19). (WRC-19)

5.346
In Algeria, Angola, Saudi Arabia, Bahrain, Benin, Botswana, Burkina Faso, Burundi, Cameroon, Central African Republic, Congo (Rep. of the), Côte d'Ivoire, Djibouti, Egypt, United Arab Emirates, Eswatini, Gabon, Gambia, Ghana, Guinea, Iraq, Jordan, Kenya, Kuwait, Lesotho, Lebanon, Liberia, Madagascar, Malawi, Mali, Morocco, Mauritius, Mauritania, Mozambique, Namibia, Niger, Nigeria, Oman, Uganda, Palestine[4], Qatar, Dem. Rep. of the Congo, Rwanda, Senegal, Seychelles, Sudan, South Sudan, South Africa, Tanzania, Chad, Togo, Tunisia, Zambia, and Zimbabwe, the frequency band 1 452-1 492 MHz is identified for use by administrations listed above wishing to implement International Mobile Telecommunications (IMT) in accordance with Resolution 223 (Rev.WRC-19). This identification does not preclude the use of this frequency band by any other application of the services to which it is allocated and does not establish priority in the Radio Regulations. The use of this frequency band for the implementation of IMT is subject to agreement obtained under No. 9.21 with respect to the aeronautical mobile service used for aeronautical telemetry in accordance with No. 5.342. See also Resolution 761 (Rev.WRC-19). (WRC-19)

5.346A
The frequency band 1 452-1 492 MHz is identified for use by administrations in Region 3 wishing to implement International Mobile Telecommunications (IMT) in accordance with Resolution 223 (Rev. WRC-19) and Resolution 761 (Rev.WRC-19). The use of this frequency band by the above administrations for the implementation of IMT is subject to agreement obtained under No. 9.21 from countries using stations of the aeronautical mobile service. This identification does not preclude the use of this frequency band by any application of the services to which it is allocated and does not establish priority in the Radio Regulations. (WRC-19)

5.347
(SUP - WRC-07)

5.347A
(SUP - WRC-07)

4 The use by Palestine of the allocation to the mobile service in the frequency band 1 452-1 492 MHz identified for IMT is noted, pursuant to Resolution 99 (Rev. Dubai, 2018) and taking into account the Israeli-Palestinian Interim Agreement of 28 September 1995.

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)

5.348A
In the band 1518-1525 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/m^2) in any 4 kHz band for all angles of arrival, instead of those given in Table 5-2 of Appendix 5. In the band 1518-1525 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)

5.349
Different category of service: in Saudi Arabia, Azerbaijan, Bahrain, Cameroon, Egypt, Iran (Islamic Republic of), Iraq, Israel, Kazakhstan, Kuwait, Lebanon, North Macedonia, Morocco, Qatar, Syrian Arab Republic, Kyrgyzstan, Turkmenistan and Yemen, the allocation of the frequency band 1 525-1 530 MHz to the mobile, except aeronautical mobile, service is on a primary basis (see No. 5.33). (WRC-19)

5.350
Additional allocation: in Kyrgyzstan and Turkmenistan, the frequency band 1 525-1 530 MHz is also allocated to the aeronautical mobile service on a primary basis. (WRC-19)

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)[5] and 225 (Rev.WRC-07)[6]. (WRC-07)

5 Note by the Secretariat: This Resolution was revised by WRC-15.
6 Note by the Secretariat: This Resolution was revised by WRC-12.

5.352A
In the frequency 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 Algeria, Saudi Arabia, Egypt, Guinea, India, Israel, Italy, Jordan, Kuwait, Mali, Morocco, Mauritania, Nigeria,Oman, Pakistan, the Philippines, Qatar, Syrian Arab Republic, Viet Nam and Yemen notified prior to1 April 1998. (WRC-19)

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)[7] 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), Djibouti, Egypt, Eritrea, Iraq, Israel, Kuwait, Qatar, Syrian Arab Republic, Somalia, Sudan, South 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-12)

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.

7 Note by the Secretariat: This Resolution was revised by WRC-07 and WRC-12.

5.357A
In applying the procedures of Section II of Article 9 to the mobile-satellite service in the frequency 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 (Rev.WRC-12)[8] shall apply.) (WRC-12)

5.358
(SUP - WRC-97)

5.359
Additional allocation: in Germany, Saudi Arabia, Armenia, Azerbaijan, Belarus, Cameroon, the Russian Federation, Georgia, Guinea, Guinea-Bissau, Jordan, Kazakhstan, Kuwait, Lithuania, Mauritania, Uganda, Uzbekistan, Pakistan, Poland, the Syrian Arab Republic, Kyrgyzstan, the Dem. People's Rep. of Korea, Romania, Tajikistan, Tunisia, Turkmenistan and Ukraine, the frequency 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 frequency bands. (WRC-19)

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
(SUP - WRC-15)

5.362C
(SUP - WRC-15)

5.363
(SUP - WRC-07)

8 Note by the Secretariat: This Resolution was revised by WRC-07 and WRC-12.

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 frequency band 1 610-1 626.5 MHz is also allocated to the aeronautical mobile-satellite (R) service on a primary basis, subject to agreement obtained under No. 9.21. (WRC-12)

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.

5.368
The provisions of No. 4.10 do not apply with respect to the radiodetermination-satellite and mobile-satellite services in the frequency band 1 610-1 626.5 MHz. However, No. 4.10 applies in the frequency band 1 610-1 626.5 MHz with respect to the aeronautical radionavigation-satellite service when operating in accordance with No. 5.366, the aeronautical mobile satellite (R) service when operating in accordance with No. 5.367, and in the frequency band 1 621.35-1 626.5 MHz with respect to the maritime mobile-satellite service when used for GMDSS. (WRC-19)

5.369
Different category of service: in Angola, Australia, China, Eritrea, Ethiopia, India, Iran (Islamic Republic of), Israel, Lebanon, Liberia, Madagascar, Mali, Pakistan, Papua New Guinea, Syrian Arab Republic, the Dem. Rep. of the Congo, Sudan, South Sudan, 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-12)

5.370
Different category of service: in Venezuela, the allocation to the radiodetermination-satellite service in the band 1610-1626.5 MHz (Earth-to-space) is on a secondary basis.

5.371
Additional allocation: in Region 1, the band 1610-1626.5 MHz (Earth-to-space) is also allocated to the radiodetermination-satellite service on a secondary basis, subject to agreement obtained under No. 9.21. (WRC-12)

5.372
Harmful interference shall not be caused to stations of the radio astronomy service using the frequency band 1 610.6-1 613.8 MHz by stations of the radiodetermination-satellite and mobile-satellite services (No. 29.13 applies). The equivalent power flux-density (epfd) produced in the frequency band 1 610.6-1 613.8 MHz by all space stations of a non-geostationary-satellite system in the mobile-satellite service (space-to-Earth) operating in frequency band 1 613.8-1 626.5 MHz shall be in compliance with the protection criteria provided in Recommendations ITU-R RA.769-2 and ITU-R RA.1513-2, using the methodology given in Recommendation ITU-R M.1583-1, and the radio astronomy antenna pattern described in Recommendation ITU-R RA.1631-0. (WRC-19)

5.373A
(SUP - WRC-97)

5.373
Maritime mobile earth stations receiving in the frequency band 1 621.35-1 626.5 MHz shall not impose additional constraints on earth stations operating in the maritime mobile-satellite service or maritime earth stations of the radiodetermination-satellite service operating in accordance with the Radio Regulations in the frequency band 1 610 -1 621.35 MHz or on earth stations operating in the maritime mobile-satellite service operating in accordance with the Radio Regulations in the frequency band 1626.5-1660.5 MHz, unless otherwise agreed between the notifying administrations. (WRC-19)

5.373A
Maritime mobile earth stations receiving in the frequency band 1 621.35-1 626.5 MHz shall not impose constraints on the assignments of earth stations of the mobile-satellite service (Earth-to-space) and the radiodeterminationsatellite service (Earth-to-space) in the frequency band 1 621.35-1 626.5 MHz in networks for which complete coordination information has been received by the Radiocommunication Bureau before 28 October 2019. (WRC-19)

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)

5.379
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/m^2) in 10 MHz and -194 dB(W/m^2) 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, 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-12)

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, Lebanon, North Macedonia, Mauritania, Moldova, Mongolia, Oman, Uzbekistan, Poland, Qatar, the Syrian Arab Republic, Kyrgyzstan, Somalia, Tajikistan, Turkmenistan, Ukraine and Yemen, the allocation of the frequency 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 frequency 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-19)

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)

5.385
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 frequency 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 (except in Mexico), 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-15)

5.387
Additional allocation: in Belarus, Georgia, Kazakhstan, Kyrgyzstan, 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-12)

5.388
The frequency 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 (IMT). Such use does not preclude the use of these frequency bands by other services to which they are allocated. The frequency bands should be made available for IMT in accordance with Resolution 212 (Rev.WRC 15) (see also Resolution 223 (Rev.WRC 15)). (WRC-15)

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 (IMT), in accordance with Resolution 221 (Rev.WRC 07). Their use by IMT 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-12)

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, Jordan, Kenya, Kuwait, Lebanon, Libya, Mali, Morocco, Mauritania, Nigeria, Oman, Uganda, Pakistan, Qatar, the Syrian Arab Republic, Senegal, Singapore, Sudan, South Sudan, Tanzania, Chad, Togo, Tunisia, Yemen, Zambia and Zimbabwe, for the purpose of protecting fixed and mobile services, including IMT mobile stations, in their territories from co-channel interference, a high altitude platform station (HAPS) operating as an IMT base station in neighbouring countries, in the frequency bands referred to in No. 5.388A, shall not exceed a co-channel power flux-density of –127 dB(W/(m^2 · 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-19)

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)[9]. (WRC-07)

5.389B
The use of the frequency 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, Paraguay, Peru, Suriname, Trinidad and Tobago, Uruguay andVenezuela. (WRC-19)

5.389C
The use of the bands 2010-2025 MHz and 2160-2170 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)[10]. (WRC-07)

5.389D
(SUP - WRC 03)

9 Note by the Secretariat: This Resolution was revised by WRC-12.
10 Note by the Secretariat: This Resolution was revised by WRC-12.

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, Cape Verde, Egypt, Iran (Islamic Republic of), Mali, Syrian Arab Republic and Tunisia, the use of the frequency 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-19)

5.390
(SUP - WRC-07)

5.391
In making assignments to the mobile service in the frequency 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 0, and shall take that Recommendation into account for the introduction of any other type of mobile system. (WRC-15)

5.392
Administrations are urged to take all practicable measures to ensure that space-to-space transmissions between two or more non-geostationary satellites, in the space research, space operations and Earth exploration-satellite services in the bands 2 025-2 110 MHz and 2 200-2 290 MHz, shall not impose any constraints on Earth-to-space, space-to-Earth and other space-to-space transmissions of those services and in those bands between geostationary and non-geostationary satellites.

5.392A
(SUP - WRC-07)

5.393
Additional allocation: in Canada, the United States and India, the frequency 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-19), with the exception of resolves 3 in regard to the limitation on broadcasting-satellite systems in the upper 25 MHz. Complementary terrestrial sound broadcasting stations shall be subject to bilateral coordination with neighbouring countries prior to their bringing into use. (WRC-19)

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
(SUP - WRC-19)

5.397
(SUP - WRC-12)

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.

5.398A
Different category of service: in Armenia, Azerbaijan, Belarus, the Russian Federation, Kazakhstan, Uzbekistan, Kyrgyzstan, Tajikistan and Ukraine, the band 2 483.5-2 500 MHz is allocated on a primary basis to the radiolocation service. The radiolocation stations in these countries shall not cause harmful interference to, or claim protection from, stations of the fixed, mobile and mobile-satellite services operating in accordance with the Radio Regulations in the frequency band 2 483.5-2 500 MHz. (WRC 12)

5.399
Except for cases referred to in No. 5.401, stations of the radiodetermination-satellite service operating in the frequency band 2 483.5-2 500 MHz for which notification information is received by the Bureau after 17 February 2012, and the service area of which includes Armenia, Azerbaijan, Belarus, the Russian Federation, Kazakhstan, Uzbekistan, Kyrgyzstan, Tajikistan and Ukraine, shall not cause harmful interference to, and shall not claim protection from stations of the radiolocation service operating in these countries in accordance with No. 5.398A. (WRC-12)

5.400
(SUP - WRC-12)

5.401
In Angola, Australia, Bangladesh, China, Eritrea, Eswatini, Ethiopia, India, Lebanon, Liberia, Libya,Madagascar, Mali, Pakistan, Papua New Guinea, Syrian Arab Republic, Dem. Rep. of the Congo, Sudan, Togo and Zambia, the frequency band 2 483.5-2 500 MHz was already allocated on a primary basis to the radiodeterminationsatellite service before WRC-12, subject to agreement obtained under No. 9.21 from countries not listed in this provision. Systems in the radiodetermination-satellite service for which complete coordination information has been received by the Radiocommunication Bureau before 18 February 2012 will retain their regulatory status, as of the date of receipt of the coordination request information. (WRC-19)

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
(SUP - WRC-12)

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 dB(W/(m^2.4 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. No. 9.21 does not apply to tropospheric scatter links situated entirely outside Region 1. 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-12)

5.411
(SUP - WRC-07)

5.412
Alternative allocation: in 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-12)

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 dB(W/(m^2 • MHz))	for $0° \le \varnothing \le 5°$
$-136 + 0.55\ (\varnothing - 5)$ dB(W/(m^2 • MHz))	for $5° < \varnothing \le 25°$
-125 dB(W/(m^2 • MHz))	for $25° < \varnothing \le 90°$

where ø 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
(SUP - WRC-15)

5.417B
(SUP - WRC-15)

5.417C
(SUP - WRC-15)

5.417D
(SUP - WRC-15)

5.418
Additional allocation: in India, the frequency band 2 535-2 655 MHz is also allocated to the broadcastingsatellite 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-19). 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-19). 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 frequency 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 $0° \le \varnothing \le 5°$

– 130 + 0.4 (ø - 5) dB(W/(m^2 • MHz)) for $5° < \varnothing \le 25°$

– 122 dB(W/(m^2 · MHz)) for $25° < \varnothing \le 90°$

where ø 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/(m^2 · 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-19)

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, Djibouti, Egypt, the United Arab Emirates, Eritrea, Ethiopia, Gabon, Georgia, Guinea, Guinea-Bissau, Iran (Islamic Republic of), Iraq, Israel, Jordan, Kuwait, Lebanon, Mauritania, 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-12)

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 Kyrgyzstan and Turkmenistan, the frequency band 3 100-3 300 MHz is also allocated to the radionavigation service on a primary basis. (WRC-19)

5.429
Additional allocation: in Saudi Arabia, Bahrain, Bangladesh, Benin, Brunei Darussalam, Cambodia, Cameroon, China, Congo (Rep. of the), Korea (Rep. of), Côte d'Ivoire, Egypt, the United Arab Emirates, India, Indonesia, Iran (Islamic Republic of), Iraq, Japan, Jordan, Kenya, Kuwait, Lebanon, Libya, Malaysia, New Zealand, Oman, Uganda, Pakistan, Qatar, the Syrian Arab Republic, the Dem. Rep. of the Congo, the Dem. People's Rep. of Korea, Sudan and Yemen, the frequency band 3 300-3 400 MHz is also allocated to the fixed and mobile services on a primary basis. New Zealand and the countries bordering the Mediterranean shall not claim protection for their fixed and mobile services from the radiolocation service. (WRC-19)

5.429A
Additional allocation: in Angola, Benin, Botswana, Burkina Faso, Burundi, Djibouti, Eswatini, Ghana, Guinea, Guinea-Bissau, Lesotho, Liberia, Malawi, Mauritania, Mozambique, Namibia, Niger, Nigeria, Rwanda, Sudan, South Sudan, South Africa, Tanzania, Chad, Togo, Zambia and Zimbabwe, the frequency band 3 300-3 400 MHz is allocated to the mobile, except aeronautical mobile, service on a primary basis. Stations in the mobile service operating in the frequency band 3 300-3 400 MHz shall not cause harmful interference to, or claim protection from, stations operating in the radiolocation service. (WRC-19)

5.429B
In the following countries of Region 1 south of 30° parallel north: Angola, Benin, Botswana, Burkina Faso, Burundi, Cameroon, Congo (Rep. of the), Côte d'Ivoire, Egypt, Eswatini, Ghana, Guinea, Guinea-Bissau, Kenya, Lesotho, Liberia, Malawi, Mauritania, Mozambique, Namibia, Niger, Nigeria, Uganda, the Dem. Rep. of the Congo, Rwanda, Sudan, South Sudan, South Africa, Tanzania, Chad, Togo, Zambia and Zimbabwe, the frequency band 3 300- 3 400 MHz is identified for the implementation of International Mobile Telecommunications (IMT). The use of this frequency band shall be in accordance with Resolution 223 (Rev.WRC-19). The use of the frequency band 3 300- 3 400 MHz by IMT stations in the mobile service shall not cause harmful interference to, or claim protection from, systems in the radiolocation service, and administrations wishing to implement IMT shall obtain the agreement of neighbouring countries to protect operations within the radiolocation service. This identification does not preclude the use of this frequency band by any application of the services to which it is allocated and does not establish priority in the Radio Regulations. (WRC-19)

5.429C
Different category of service: in Argentina, Belize, Brazil, Chile, Colombia, Costa Rica, the Dominican Republic, El Salvador, Ecuador, Guatemala, Mexico, Paraguay and Uruguay, the frequency band 3300-3400 MHz is allocated to the mobile, except aeronautical mobile, service on a primary basis. In Argentina, Brazil, the Dominican Republic, Guatemala, Mexico, Paraguay and Uruguay, the frequency band 3300-3400 MHz is also allocated to the fixed service on a primary basis. Stations in the fixed and mobile services operating in the frequency band 3 300-3 400 MHz shall not cause harmful interference to, or claim protection from, stations operating in the radiolocation service. (WRC-19)

5.429D
In the following countries in Region 2: Argentina, Belize, Brazil, Chile, Colombia, Costa Rica, theDominican Republic, El Salvador, Ecuador, Guatemala, Mexico, Paraguay and Uruguay, the use of the frequency band 3300-3400 MHz is identified for the implementation of International Mobile Telecommunications (IMT). Such use shall be in accordance with Resolution 223 (Rev.WRC-19). This use in Argentina, Paraguay and Uruguay is subject to the application of No. 9.21. The use of the frequency band 3 300-3 400 MHz by IMT stations in the mobile service shall notm cause harmful interference to, or claim protection from, systems in the radiolocation service, and administrations wishing to implement IMT shall obtain the agreement of neighbouring countries to protect operations within the radiolocation service. This identification does not preclude the use of this frequency band by any application of the services to which it is allocated and does not establish priority in the Radio Regulations. (WRC-19)

5.429E
Additional allocation: in Papua New Guinea, the frequency band 3 300-3 400 MHz is allocated to the mobile, except aeronautical mobile, service on a primary basis. Stations in the mobile service operating in the frequency band 3 300-3 400 MHz shall not cause harmful interference to, or claim protection from, stations operating in the radiolocation service. (WRC-15)

5.429F
In the following countries in Region 3: Cambodia, India, Indonesia, Lao P.D.R., Pakistan, the Philippines and Viet Nam, the use of the frequency band 3 300-3 400 MHz is identified for the implementation of International Mobile Telecommunications (IMT). Such use shall be in accordance with Resolution 223 (Rev.WRC-19). The use of the frequency band 3 300-3 400 MHz by IMT stations in the mobile service shall not cause harmful interference to, or claim protection from, systems in the radiolocation service.

Before an administration brings into use a base or mobile station of an IMT system in this frequency band, it shall seek agreement under No. 9.21 with neighbouring countries to protect the radiolocation service. This identification does not preclude the use of this frequency band by any application of the services to which it is allocated and does not establish priority in the Radio Regulations. (WRC-19)

5.430

Additional allocation: in Kyrgyzstan and Turkmenistan, the frequency band 3 300-3 400 MHz is also allocated to the radionavigation service on a primary basis. (WRC-19)

5.430A

The allocation of the frequency band 3 400-3 600 MHz to the mobile, except aeronautical mobile, service is subject to agreement obtained under No. 9.21. This frequency band is identified for International Mobile Telecommunications (IMT). This identification does not preclude the use of this frequency band by any application of the services to which it is allocated and does not establish priority in the Radio Regulations. The provisions of Nos. 9.17 and 9.18 shall also apply in the coordination phase. Before an administration brings into use a (base or mobile) station of the mobile service in this frequency band, it shall ensure that the power flux-density (pfd) produced at 3 m above ground does not exceed –154.5 dB (W/(m^2 . 4 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) and with the assistance of the Bureau if so requested. In case of disagreement, 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 frequency 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). (WRC-15)

5.431

Additional allocation: in Germany, the frequency band 3 400-3 475 MHz is also allocated to the amateur service on a secondary basis. (WRC-19)

5.431A

In Region 2, the allocation of the frequency band 3 400-3 500 MHz to the mobile, except aeronautical mobile, service on a primary basis is subject to agreement obtained under No. 9.21. (WRC-15)

5.431B

In Region 2, the frequency band 3 400-3 600 MHz is identified for use by administrations wishing to implement International Mobile Telecommunications (IMT). This identification does not preclude the use of this frequency 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 an IMT system, it shall seek agreement under No. 9.21 with other administrations and ensure that the power flux-density (pfd) produced at 3 m above ground does not exceed –154.5 dB(W/(m^2 . 4 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, including IMT systems, in the frequency 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). (WRC-15)

5.432
Different category of service: in Korea (Rep. of), Japan, Pakistan and the Dem. People's Rep. of Korea, the allocation of the frequency band 3 400-3 500 MHz to the mobile, except aeronautical mobile, service is on a primary basis (see No. 5.33). (WRC-19)

5.432A
In Korea (Rep. of), Japan, Pakistan and the Dem. People's Rep. of Korea, the frequency band 3400-3500 MHz is identified for International Mobile Telecommunications (IMT). This identification does not preclude the use of this frequency 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 frequency band it shall ensure that the power fluxdensity (pfd) produced at 3 m above ground does not exceed –154.5 dB(W/(m^2 . 4 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 frequency 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-19)

5.432B
Different category of service: in Australia, Bangladesh, Brunei Darussalam, China, French overseas communities of Region 3, India, Indonesia, Iran (Islamic Republic of), Malaysia, New Zealand, the Philippines, Singapore and Thailand, the frequency 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 frequency 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 frequency band it shall ensure that the power flux-density (pfd) produced at 3 m above ground does not exceed –154.5 dB(W/(m^2.4 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 frequency 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-19)

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 Australia, Bangladesh, Brunei Darussalam, China, French overseas communities of Region 3, Korea (Rep. of), India, Indonesia, Iran (Islamic Republic of), Japan, New Zealand, Pakistan, the Philippines and the Dem. People's Rep. of Korea, the frequency band 3 500-3 600 MHz is identified for International Mobile Telecommunications (IMT). This identification does not preclude the use of this frequency 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 frequency band it shall ensure that the power flux-density (pfd) produced at 3 m above ground does not exceed –154.5 dB(W/(m^2.4 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 frequency 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-19)

5.434

In Canada, Chile, Colombia, Costa Rica, El Salvador, the United States and Paraguay, the frequency band 3 600-3 700 MHz, or portions thereof, is identified for use by these administrations wishing to implement International Mobile Telecommunications (IMT). This identification does not preclude the use of this frequency 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 an IMT system, it shall seek agreement under No. 9.21 with other administrations and ensure that the power flux-density (pfd) produced at 3 m above ground does not exceed –154.5 dB(W/(m^2 .4 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,

including IMT systems, in the frequency band 3 600-3 700 MHz shall not claim more protection from space stations than that provided in Table 21-4 of the Radio Regulations (Edition of 2004). (WRC-19)

5.435
In Japan, in the band 3 620-3 700 MHz, the radiolocation service is excluded.

5.436
Use of the frequency band 4 200-4 400 MHz by stations in the aeronautical mobile (R) service is reserved exclusively for wireless avionics intra-communication systems that operate in accordance with recognized international aeronautical standards. Such use shall be in accordance with Resolution 424 (WRC-15). (WRC-15)

5.437
Passive sensing in the Earth exploration-satellite and space research services may be authorized in the frequency band 4 200-4 400 MHz on a secondary basis. (WRC-15)

5.438
Use of the frequency 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. (WRC-15)

5.439
Additional allocation: in Iran (Islamic Republic of), the band 4 200-4 400 MHz is also allocated to the fixed service on a secondary basis. (WRC-12)

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 this band by other mobile service applications or by other services to which this band is 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)

5.441A

In Brazil, Paraguay and Uruguay, the frequency band 4 800-4 900 MHz, or portions thereof, is identified for the implementation of International Mobile Telecommunications (IMT). This identification does not preclude the use of this frequency band by any application of the services to which it is allocated and does not establish priority in the Radio Regulations. The use of this frequency band for the implementation of IMT is subject to agreement obtained with neighbouring countries, and IMT stations shall not claim protection from stations of other applications of the mobile service. Such use shall be in accordance with Resolution 223 (Rev.WRC-19). (WRC-19)

5.441B

In Angola, Armenia, Azerbaijan, Benin, Botswana, Brazil, Burkina Faso, Burundi, Cambodia, Cameroon, China, Côte d'Ivoire, Djibouti, Eswatini, Russian Federation, Gambia, Guinea, Iran (Islamic Republic of), Kazakhstan, Kenya, Lao P.D.R., Lesotho, Liberia, Malawi, Mauritius, Mongolia, Mozambique, Nigeria, Uganda, Uzbekistan, the Dem. Rep. of the Congo, Kyrgyzstan, the Dem. People's Rep. of Korea, Sudan, South Africa, Tanzania, Togo, Viet Nam, Zambia and Zimbabwe, the frequency band 4 800-4 990 MHz, or portions thereof, is identified for use by administrations wishing to implement International Mobile Telecommunications (IMT). This identification does not preclude the use of this frequency band by any application of the services to which it is allocated and does not establish priority in the Radio Regulations. The use of IMT stations is subject to agreement obtained under No. 9.21 with concerned administrations, and IMT stations shall not claim protection from stations of other applications of the mobile service. In addition, before an administration brings into use an IMT station in the mobile service, it shall ensure that the power flux-density (pfd) produced by this station does not exceed –155 dB(W/(m^2 · 1 MHz)) produced up to 19 km above sea level at 20 km from the coast, defined as the low-water mark, as officially recognized by the coastal State. This pfd criterion is subject to review at WRC-23. Resolution 223 (Rev.WRC-19) applies. This identification shall be effective after WRC-19. (WRC-19)

5.442

In the frequency 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, Mexico, Paraguay, Uruguay and Venezuela), and in Australia, the frequency 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-15)

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)

5.443AA
In the frequency bands 5 000-5 030 MHz and 5 091-5 150 MHz, the aeronautical mobile-satellite (R) service is subject to agreement obtained under No. 9.21. The use of these bands by the aeronautical mobile-satellite (R) service is limited to internationally standardized aeronautical systems. (WRC-12)

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 frequency band 5 030-5 150 MHz by all the space stations within any radionavigation-satellite service system (space-to-Earth) operating in the frequency band 5 010 5 030 MHz shall not exceed –124.5 dB(W/m^2) in a 150 kHz band. In order not to cause harmful interference to the radio astronomy service in the frequency band 4 990-5 000 MHz, radionavigation-satellite service systems operating in the frequency band 5 010-5 030 MHz shall comply with the limits in the frequency band 4 990-5 000 MHz defined in Resolution 741 (Rev.WRC-15). (WRC-15)

5.443C
The use of the frequency band 5 030-5 091 MHz by the aeronautical mobile (R) service is limited to internationally standardized aeronautical systems. Unwanted emissions from the aeronautical mobile (R) service in the frequency band 5 030-5 091 MHz shall be limited to protect RNSS system downlinks in the adjacent 5 010-5 030 MHz band. Until such time that an appropriate value is established in a relevant ITU R Recommendation, the e.i.r.p. density limit of –75 dBW/MHz in the frequency band 5 010-5 030 MHz for any AM(R)S station unwanted emission should be used. (WRC-12)

5.443D
In the frequency band 5 030-5 091 MHz, the aeronautical mobile-satellite (R) service is subject to coordination under No. 9.11A. The use of this frequency band by the aeronautical mobile-satellite (R) service is limited to internationally standardized aeronautical systems. (WRC-12)

5.444
The frequency 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 frequency band 5 030-5 091 MHz, the requirements of this system shall have priority over other uses of this frequency band. For the use of the frequency band 5 091-5 150 MHz, No. 5.444A and Resolution 114 (Rev.WRC-15) apply. (WRC-15)

5.444A
The use of the allocation to the fixed-satellite service (Earth-to-space) in the frequency band 5 091 5 150 MHz is limited to feeder links of non geostationary satellite systems in the mobile-satellite service and is subject to coordination under No. 9.11A. The use of the frequency band 5 091-5 150 MHz by feeder links of non geostationary satellite systems in the mobile-satellite service shall be subject to application of Resolution 114 (Rev.WRC 15). Moreover, to ensure that the aeronautical radionavigation service is

protected from harmful interference, coordination is required for feeder-link earth stations of the non-geostationary satellite systems in the mobile-satellite service which are separated by less than 450 km from the territory of an administration operating ground stations in the aeronautical radionavigation service. (WRC-15)

5.444B
The use of the frequency 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 (Rev.WRC-19);
– aeronautical telemetry transmissions from aircraft stations (see No. 1.83) in accordance with Resolution 418 (Rev.WRC-19). (WRC-19)

5.446
Additional allocation: in the countries listed in No. 5.369, the frequency 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 (except in Mexico), the frequency 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 No. 5.369 and Bangladesh, the frequency 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 frequency 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/m^2) in any 4 kHz band for all angles of arrival. (WRC-15)

5.446A
The use of the frequency 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 (Rev.WRC-19). (WRC-19)

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, Iraq, Jordan, Kuwait, Lebanon, Morocco, Oman, Qatar, Syrian Arab Republic, Sudan, South Sudan and Tunisia), the frequency 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 (Rev.WRC-19). These stations shall not claim protection from other stations operating in accordance with Article 5. No. 5.43A does not apply. (WRC-19)

5.446D
Additional allocation: 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 (Rev.WRC-19). (WRC-19)

5.447
Additional allocation: in Côte d'Ivoire, Egypt, Lebanon, the Syrian Arab Republic and Tunisia, the frequency band 5150-5250 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 (Rev.WRC-19) do not apply. (WRC-19)

5.447A
The allocation to the fixed-satellite service (Earth-to-space) in the band 5 150-5 250 MHz 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/m^2) 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 frequency 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 frequency band by the fixed service is intended for the implementation of fixed wireless access systems and shall comply with Recommendation ITU R F.1613 0. 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-15)

5.447F
In the frequency 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). The radiolocation service, the Earth exploration-satellite service (active) and the space research service (active) shall not impose more stringent conditions upon the mobile service than those stipulated in Resolution 229 (Rev.WRC-19). (WRC-19)

5.448
Additional allocation: in Kyrgyzstan, Romania and Turkmenistan, the frequency band 5 250-5 350 MHz is also allocated to the radionavigation service on a primary basis. (WRC-19)

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 5350-5570 MHz and space research service (active) operating in the band 5460-5570 MHz shall not cause harmful interference to the aeronautical radionavigation service in the band 5350-5460 MHz, the radionavigation service in the band 5 460-5 470 MHz and the maritime radionavigation service in the band 5470-5570 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), 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-12)

5.450A
In the frequency band 5 470-5 725 MHz, stations in the mobile service shall not claim protection from radiodetermination services. The radiodetermination services shall not impose more stringent conditions upon the mobile service than those stipulated in Resolution 229 (Rev.WRC-19). (WRC-19)

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, Djibouti, Egypt, the United Arab Emirates, Eswatini, Gabon, Guinea, Equatorial Guinea, India, Indonesia, Iran (Islamic Republic of), Iraq, Japan, Jordan, Kenya, Kuwait, Lebanon, Libya, Madagascar, Malaysia, Niger, Nigeria, Oman, Uganda, Pakistan, the Philippines, Qatar, the Syrian Arab Republic, the Dem. People's Rep. of Korea, Singapore, Sri Lanka, Tanzania, Chad, Thailand, Togo, Viet Nam and Yemen, the frequency 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 (Rev.WRC-19) do not apply. In addition, in Afghanistan, Angola, Benin, Bhutan, Botswana, Burkina Faso, Burundi, Dem. Rep. of the Congo, Fiji, Ghana, Kiribati, Lesotho, Malawi, Maldives, Mauritius, Micronesia, Mongolia, Mozambique, Myanmar, Namibia, Nauru, New Zealand, Papua New Guinea, Rwanda, Solomon Islands, South Sudan, South Africa, Tonga, Vanuatu, Zambia and Zimbabwe, the frequency band 5725-5850 MHz is allocated to the fixed service on a primary basis, and stations operating in the fixed service shall not cause harmful interference to and shall not claim protection from other primary services in the frequency band. (WRC-19)

5.454
Different category of service: in Azerbaijan, the Russian Federation, Georgia, 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-12)

5.455
Additional allocation: in Armenia, Azerbaijan, Belarus, Cuba, the Russian Federation, Georgia, Hungary, Kazakhstan, Moldova, Uzbekistan, Kyrgyzstan, Romania, Tajikistan, Turkmenistan and Ukraine, the frequency band 5 670-5 850 MHz is also allocated to the fixed service on a primary basis. (WRC-19)

5.456
(SUP - WRC-15)

5.457
In Australia, Burkina Faso, Cote d'Ivoire, Mali and Nigeria, the allocation to the fixed service in the bands 6 440-6 520 MHz (HAPS-to-ground direction) and 6 560-6 640 MHz (ground-to-HAPS direction) may also be used by gateway links for high-altitude platform stations (HAPS) within the territory of these

countries. Such use is limited to operation in HAPS gateway links and shall not cause harmful interference to, and shall not claim protection from, existing services, and shall be in compliance with Resolution 150 (WRC 12). Existing services shall not be constrained in future development by HAPS gateway links. The use of HAPS gateway links in these bands requires explicit agreement with other administrations whose territories are located within 1 000 kilometres from the border of an administration intending to use the HAPS gateway links. (WRC-12)

5.457A

In the frequency 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). In the frequency band 5 925-6 425 MHz, earth stations located on board vessels and communicating with space stations of the fixed-satellite service may employ transmit antennas with minimum diameter of 1.2 m and operate without prior agreement of any administration if located at least 330 km away from the low-water mark as officially recognized by the coastal State. All other provisions of Resolution 902 (WRC-03) shall apply. (WRC-15)

5.457B

In the frequency 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, Jordan, Kuwait, Libya, 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-15)

5.457C

In Region 2 (except Brazil, Cuba, French overseas departments and communities, Guatemala, Mexico, Paraguay, Uruguay and Venezuela), the frequency 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, or claim protection from, the fixed-satellite and fixed services. Any such use does not preclude the use of this frequency band by other mobile service applications or by other services to which this frequency band is allocated on a co-primary basis and does not establish priority in the Radio Regulations. (WRC-15)

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 6 425-7 075 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
(SUP - WRC-15)

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. In the frequency band 7 190-7 235 MHz, with respect to the Earth exploration-satellite service (Earth-to-space), No. 9.21 does not apply. (WRC-15)

5.460
No emissions from space research service (Earth-to-space) systems intended for deep space shall be effected in the frequency band 7 190-7 235 MHz. Geostationary satellites in the space research service operating in the frequency 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-15)

5.460A
The use of the frequency band 7 190-7 250 MHz (Earth-to-space) by the Earth exploration-satellite service shall be limited to tracking, telemetry and command for the operation of spacecraft. Space stations operating in the Earth exploration-satellite service (Earth-to-space) in the frequency band 7 190-7 250 MHz shall not claim protection from existing and future stations in the fixed and mobile services, and No. 5.43A does not apply. No. 9.17 applies. Additionally, to ensure protection of the existing and future deployment of fixed and mobile services, the location of earth stations supporting spacecraft in the Earth exploration-satellite service in non-geostationary orbits or geostationary orbit shall maintain a separation distance of at least 10 km and 50 km, respectively, from the respective border(s) of neighbouring countries, unless a shorter distance is otherwise agreed between the corresponding administrations. (WRC-15)

5.460B
Space stations on the geostationary orbit operating in the Earth exploration-satellite service (Earth-to-space) in the frequency band 7 190-7 235 MHz shall not claim protection from existing and future stations of the space research service, and No. 5.43A does not apply. (WRC-15)

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)

5.461AA
The use of the frequency band 7 375-7 750 MHz by the maritime mobile-satellite service is limited to geostationary-satellite networks. (WRC-15)

5.461AB
In the frequency band 7 375-7 750 MHz, earth stations in the maritime mobile-satellite service shall not claim protection from, nor constrain the use and development of, stations in the fixed and mobile, except aeronautical mobile, services. No. 5.43A does not apply. (WRC-15)

5.461B
The use of the band 7 750-7 900 MHz by the meteorological-satellite service (space-to-Earth) is limited to non-geostationary satellite systems. (WRC-12)

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 values for angles of arrival (ø), without the consent of the affected administration:

–135 dB(W/m^2) in a 1 MHz band	for	0 ≤ ø < 5°	
–135 + 0.5 (ø – 5) dB(W/m^2) in a 1 MHz band	for	5 ≤ ø < 25°	
–125 dB(W/m^2) in a 1 MHz band	for	25 ≤ ø ≤ 90°	(WRC-12)

5.463
Aircraft stations are not permitted to transmit in the band 8 025-8 400 MHz. (WRC-97)

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 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-12)

5.467
(SUP - WRC-03)

5.468
Additional allocation: in Saudi Arabia, Bahrain, Bangladesh, Brunei Darussalam, Burundi, Cameroon,China, Congo (Rep. of the), Djibouti, Egypt, the United Arab Emirates, Eswatini, Gabon, Guyana, Indonesia, Iran (Islamic Republic of), Iraq, Jamaica, Jordan, Kenya, Kuwait, Lebanon, Libya, Malaysia, Mali, Morocco, Mauritania, Nepal, Nigeria, Oman, Uganda, Pakistan, Qatar, Syrian Arab Republic, the Dem. People's Rep. of Korea, Senegal, Singapore, Somalia, Sudan, Chad, Togo, Tunisia and Yemen, the frequency band 8 500-8 750 MHz is also allocated to the fixed and mobile services on a primary basis. (WRC-19)

5.469
Additional allocation: in Armenia, Azerbaijan, Belarus, the Russian Federation, Georgia, Hungary, Lithuania, 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-12)

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), Libya, the Netherlands, Qatar and Sudan, the frequency 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-15)

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, Uzbekistan, Poland, Kyrgyzstan, Romania, Tajikistan, Turkmenistan and Ukraine, the frequency bands 8850-9000 MHz and 9200-9300 MHz are also allocated to the radionavigation service on a primary basis. (WRC-19)

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).

5.474A
The use of the frequency bands 9 200-9 300 MHz and 9 900-10 400 MHz by the Earth exploration-satellite service (active) is limited to systems requiring necessary bandwidth greater than 600 MHz that cannot be fully accommodated within the frequency band 9 300-9 900 MHz. Such use is subject to agreement to be obtained under No. 9.21 from Algeria, Saudi Arabia, Bahrain, Egypt, Indonesia, Iran (Islamic Republic of), Lebanon and Tunisia. An administration that has not replied under No. 9.52 is

considered as not having agreed to the coordination request. In this case, the notifying administration of the satellite system operating in the Earth exploration-satellite service (active) may request the assistance of the Bureau under Sub-Section IID of Article 9. (WRC-15)

5.474B
Stations operating in the Earth exploration-satellite (active) service shall comply with Recommendation ITU R RS.2066 0. (WRC-15)

5.474C
Stations operating in the Earth exploration-satellite (active) service shall comply with Recommendation ITU R RS.2065 0. (WRC-15)

5.474D
Stations in the Earth exploration-satellite service (active) shall not cause harmful interference to, or claim protection from, stations of the maritime radionavigation and radiolocation services in the frequency band 9 200 9 300 MHz, the radionavigation and radiolocation services in the frequency band 9 900-10 000 MHz and the radiolocation service in the frequency band 10.0-10.4 GHz. (WRC-15)

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, Djibouti, Egypt, the United Arab Emirates, Eritrea, Ethiopia, Guyana, India, Indonesia, Iran (Islamic Republic of), Iraq, Jamaica, Japan, Jordan, Kuwait, Lebanon, Liberia, Malaysia, Nigeria, Oman, Uganda, Pakistan,

Qatar, Syrian Arab Republic, the Dem. People's Rep. of Korea, Singapore, Somalia, Sudan, South Sudan, Trinidad and Tobago, and Yemen, the allocation of the frequency band 9 800-10 000 MHz to the fixed service is on a primary basis (see No. 5.33). (WRC-15)

5.478
Additional allocation: in Azerbaijan, Kyrgyzstan, Romania, Turkmenistan and Ukraine, the frequency band 9 800-10 000 MHz is also allocated to the radionavigation service on a primary basis. (WRC-19)

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, Cuba, El Salvador, Ecuador, Guatemala, Honduras, Paraguay, the overseas countries and territories within the Kingdom of the Netherlands in Region 2, Peru and Uruguay, the frequency band 10-10.45 GHz is also allocated to the fixed and mobile services on a primary basis. In Colombia, Costa Rica, Mexico and Venezuela, the frequency band 10-10.45 GHz is also allocated to the fixed service on a primary basis. (WRC-19)

5.481
Additional allocation: in Algeria, Germany, Angola, Brazil, China, Côte d'Ivoire, Egypt, El Salvador, Ecuador, Spain, Guatemala, Hungary, Japan, Kenya, Morocco, Nigeria, Oman, Uzbekistan, Pakistan, Paraguay, Peru, the Dem. People's Rep. of Korea, Romania, Tunisia and Uruguay, the frequency band 10.45-10.5 GHz is also allocated to the fixed and mobile services on a primary basis. In Costa Rica, the frequency band 10.45-10.5 GHz is also allocated to the fixed service on a primary basis. (WRC-19)

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, Kazakhstan, Kuwait, Lebanon, Libya, 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, services 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), 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, Tajikistan, Turkmenistan and Yemen, the frequency 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-19)

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)

5.484B
Resolution 155 (WRC 15) shall apply. (WRC-15)

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 the United States, the allocation of the frequency band 11.7 12.1 GHz to the fixed service is on a secondary basis (see No. 5.32). (WRC-15)

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 dB(W/(m^2 . 27 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, Saudi Arabia, Bahrain, Cameroon, the Central African Rep., Congo (Rep. of the), Côte d'Ivoire, Djibouti, Egypt, the United Arab Emirates, Eritrea, Ethiopia, Gabon, Ghana, Guinea, Iraq, Israel, Jordan, Kuwait, Lebanon, Libya, Madagascar, Mali, Morocco, Mongolia, Nigeria, Oman, Qatar, the Syrian Arab Republic, the Dem. Rep. of the Congo, Somalia, Sudan, South Sudan, Chad, Togo and Yemen, the frequency band 12.5 12.75 GHz is also allocated to the fixed and mobile, except aeronautical mobile, services on a primary basis. (WRC-15)

5.495
Additional allocation: in Greece, Monaco, Montenegro, Uganda and Tunisia, the frequency band 12.5-12.75 GHz is also allocated to the fixed and mobile, except aeronautical mobile, services on a secondary basis. (WRC-19)

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 and India, the band 13.25-14 GHz is also allocated to the fixed service on a primary basis. In Pakistan, the band 13.25-13.75 GHz is allocated to the fixed service on a primary basis. (WRC-12)

5.499A
The use of the frequency band 13.4-13.65 GHz by the fixed-satellite service (space-to-Earth) is limited to geostationary-satellite systems and is subject to agreement obtained under No. 9.21 with respect

to satellite systems operating in the space research service (space-to-space) to relay data from space stations in the geostationary-satellite orbit to associated space stations in non-geostationary satellite orbits for which advance publication information has been received by the Bureau by 27 November 2015. (WRC-15)

5.499B
Administrations shall not preclude the deployment and operation of transmitting earth stations in the standard frequency and time signal-satellite service (Earth-to-space) allocated on a secondary basis in the frequency band 13.4-13.65 GHz due to the primary allocation to FSS (space-to-Earth). (WRC-15)

5.499C
The allocation of the frequency band 13.4-13.65 GHz to the space research service on a primary basis is limited to:

- satellite systems operating in the space research service (space-to-space) to relay data from space stations in the geostationary-satellite orbit to associated space stations in non-geostationary satellite orbits for which advance publication information has been received by the Bureau by 27 November 2015,
- active spaceborne sensors,
- satellite systems operating in the space research service (space-to-Earth) to relay data from space stations in the geostationary-satellite orbit to associated earth stations.

Other uses of the frequency band by the space research service are on a secondary basis. (WRC-15)

5.499D
In the frequency band 13.4-13.65 GHz, satellite systems in the space research service (space-to-Earth) and/or the space research service (space-to-space) shall not cause harmful interference to, nor claim protection from, stations in the fixed, mobile, radiolocation and Earth exploration-satellite (active) services. (WRC-15)

5.499E
In the frequency band 13.4-13.65 GHz, geostationary-satellite networks in the fixed-satellite service (space-to-Earth) shall not claim protection from space stations in the Earth exploration-satellite service (active) operating in accordance with these Regulations, and No. 5.43A does not apply. The provisions of No. 22.2 do not apply to the Earth exploration-satellite service (active) with respect to the fixed-satellite service (space-to-Earth) in this frequency band. (WRC-15)

5.500
Additional allocation: in Algeria, 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, Morocco, Mauritania, Niger, Nigeria, Oman, Qatar, the Syrian Arab Republic, Singapore, Sudan, South Sudan, Chad and Tunisia, the frequency band 13.4-14 GHz is also allocated to the fixed and mobile services on a primary basis. In Pakistan, the frequency band 13.4-13.75 GHz is also allocated to the fixed and mobile services on a primary basis. (WRC-15)

5.501
Additional allocation: in Azerbaijan, Hungary, Japan, Kyrgyzstan, Romania and Turkmenistan, the band 13.4-14 GHz is also allocated to the radionavigation service on a primary basis. (WRC-12)

5.501A
The allocation of the frequency band 13.65-13.75 GHz to the space research service on a primary basis is limited to active spaceborne sensors. Other uses of the frequency band by the space research service are on a secondary basis. (WRC-15)

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/(m^2 • 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/(m^2 • 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 frequency band 14 14.5 GHz shall comply with the provisions of Annex 1, Part C of Recommendation ITU R M.1643 0, with respect to any radio astronomy station performing observations in the 14.47-14.5 GHz frequency band located on the territory of Spain, France, India, Italy, the United Kingdom and South Africa. (WRC-15)

5.504C
In the frequency band 14-14.25 GHz, the power flux-density produced on the territory of the countries of Saudi Arabia, Bahrain, Botswana, Côte d'Ivoire, Egypt, Guinea, India, Iran (Islamic Republic of), Kuwait, 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.1643-0, 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-15)

5.505
Additional allocation: in Algeria, Saudi Arabia, Bahrain, Botswana, Brunei Darussalam, Cameroon, China, Congo (Rep. of the), Korea (Rep. of), Djibouti, Egypt, the United Arab Emirates, Eswatini, Gabon, Guinea, India, Indonesia, Iran (Islamic Republic of), Iraq, Israel, Japan, Jordan, Kuwait, Lebanon, Malaysia, Mali, Morocco, Mauritania, Oman, the Philippines, Qatar, the Syrian Arab Republic, the Dem. People's Rep. of Korea, Singapore, Somalia, Sudan, South Sudan, Chad, Viet Nam and Yemen, the frequency band 14-14.3 GHz is also allocated to the fixed service on a primary basis. (WRC-19)

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 and Malta, within the minimum distance given in Resolution 902 (WRC-03) from these countries. (WRC-15)

5.508
Additional allocation: in Germany, France, Italy, Libya, North Macedonia and the United Kingdom, the frequency band 14.25-14.3 GHz is also allocated to the fixed service on a primary basis. (WRC-19)

5.508A
In the frequency band 14.25-14.3 GHz, the power flux-density produced on the territory of the countries of Saudi Arabia, Bahrain, Botswana, China, Côte d'Ivoire, Egypt, France, Guinea, India, Iran (Islamic Republic of), Italy, Kuwait, 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.1643-0, 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-15)

5.509
(SUP - WRC-07)

5.509A
In the frequency band 14.3-14.5 GHz, the power flux-density produced on the territory of the countries of Saudi Arabia, Bahrain, Botswana, Cameroon, China, Côte d'Ivoire, Egypt, France, Gabon, Guinea, India, Iran (Islamic Republic of), Italy, Kuwait, 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.1643-0, 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-15)

5.509B
The use of the frequency bands 14.5-14.75 GHz in countries listed in Resolution 163 (WRC-15) and 14.5 14.8 GHz in countries listed in Resolution 164 (WRC 15) by the fixed-satellite service (Earth-to-space) not for feeder links for the broadcasting-satellite service is limited to geostationary-satellites. (WRC-15)

5.509C
For the use of the frequency bands 14.5-14.75 GHz in countries listed in Resolution 163 (WRC-15) and 14.5-14.8 GHz in countries listed in Resolution 164 (WRC 15) by the fixed-satellite service (Earth-to-space) not for feeder links for the broadcasting-satellite service, the fixed-satellite service earth stations shall have a minimum antenna diameter of 6 m and a maximum power spectral density of –44.5 dBW/Hz at the input of the antenna. The earth stations shall be notified at known locations on land. (WRC-15)

5.509D
Before an administration brings into use an earth station in the fixed-satellite service (Earth-to-space) not for feeder links for the broadcasting-satellite service in the frequency bands 14.5-14.75 GHz (in countries listed in Resolution 163 (WRC 15)) and 14.5 14.8 GHz (in countries listed in Resolution 164 (WRC 15)), it shall ensure that the power flux-density produced by this earth station does not exceed –151.5 dB(W/(m^2 • 4 kHz)) produced at all altitudes from 0 m to 19 000 m above sea level at 22 km seaward from all coasts, defined as the low-water mark, as officially recognized by each coastal State. (WRC-15)

5.509E
In the frequency bands 14.50-14.75 GHz in countries listed in Resolution 163 (WRC-15) and 14.50 14.8 GHz in countries listed in Resolution 164 (WRC 15), the location of earth stations in the fixed-satellite service (Earth-to-space) not for feeder links for the broadcasting-satellite service shall maintain a separation distance of at least 500 km from the border(s) of other countries unless shorter distances are explicitly agreed by those administrations. No. 9.17 does not apply. When applying this provision, administrations should consider the relevant parts of these Regulations and the latest relevant ITU R Recommendations. (WRC-15)

5.509F
In the frequency bands 14.50-14.75 GHz in countries listed in Resolution 163 (WRC 15) and 14.50 14.8 GHz in countries listed in Resolution 164 (WRC 15), earth stations in the fixed-satellite service (Earth-to-space) not for feeder links for the broadcasting-satellite service shall not constrain the future deployment of the fixed and mobile services. (WRC-15)

5.509G
The frequency band 14.5-14.8 GHz is also allocated to the space research service on a primary basis. However, such use is limited to the satellite systems operating in the space research service (Earth-to-space) to relay data to space stations in the geostationary-satellite orbit from associated earth stations. Stations in the space research service shall not cause harmful interference to, or claim protection from, stations in the fixed and mobile services and in the fixed-satellite service limited to feeder links for the broadcasting-satellite service and associated space operations functions using the guardbands under Appendix 30A and feeder links for the broadcasting-satellite service in Region 2. Other uses of this frequency band by the space research service are on a secondary basis. (WRC-15)

5.510
Except for use in accordance with Resolution 163 (WRC 15) and Resolution 164 (WRC 15), the use of the frequency 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. Uses other than feeder links for the broadcasting-satellite service are not authorized in Regions 1 and 2 in the frequency band 14.75-14.8 GHz. (WRC-15)

5.511
Additional allocation: in Saudi Arabia, Bahrain, Cameroon, Egypt, the United Arab Emirates, Guinea, Iran (Islamic Republic of), Iraq, Israel, Kuwait, Lebanon, Oman, 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-12)

5.511A
Use of the frequency band 15.43-15.63 GHz by the fixed-satellite service (Earth-to-space) is limited to feeder links of non-geostationary systems in the mobile-satellite service, subject to coordination under No. 9.11A. (WRC-15)

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 0. 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 0. (WRC-15)

5.511D
(SUP - WRC-15)

5.511E
In the frequency band 15.4-15.7 GHz, stations operating in the radiolocation service shall not cause harmful interference to, or claim protection from, stations operating in the aeronautical radionavigation service. (WRC-12)

5.511F
In order to protect the radio astronomy service in the frequency band 15.35-15.4 GHz, radiolocation stations operating in the frequency band 15.4 15.7 GHz shall not exceed the power flux-density level of –156 dB(W/m^2) in a 50 MHz bandwidth in the frequency band 15.35-15.4 GHz, at any radio astronomy observatory site for more than 2 per cent of the time. (WRC-12)

5.512
Additional allocation: in Algeria, Saudi Arabia, Austria, Bahrain, Bangladesh, Brunei Darussalam, Cameroon, Congo (Rep. of the), Egypt, El Salvador, the United Arab Emirates, Eritrea, Finland, Guatemala, India, Indonesia, Iran (Islamic Republic of), Jordan, Kenya, Kuwait, Lebanon, Libya, Malaysia, Mali, Morocco,

Mauritania, Montenegro, Nepal, Nicaragua, Niger, Oman, Pakistan, Qatar, Syrian Arab Republic, the Dem. Rep. of the Congo, Singapore, Somalia, Sudan, South Sudan, Chad, Togo and Yemen, the frequency band 15.7 17.3 GHz is also allocated to the fixed and mobile services on a primary basis. (WRC-15)

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. (WRC-97)

5.514
Additional allocation: in Algeria, Saudi Arabia, Bahrain, Bangladesh, Cameroon, El Salvador, the United Arab Emirates, Guatemala, India, Iran (Islamic Republic of), Iraq, Israel, Italy, Japan, Jordan, Kuwait, Libya, Lithuania, Nepal, Nicaragua, Nigeria, Oman, Uzbekistan, Pakistan, Qatar, Kyrgyzstan, Sudan and South Sudan, the frequency 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-15)

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 frequency bands by other fixed-satellite service applications or by other services to which these frequency bands are allocated on a co-primary basis and does not establish priority in these Radio Regulations among users of the frequency bands. Administrations should take this into account when considering regulatory provisions in relation to these frequency bands. See Resolution 143 (Rev.WRC-19). (WRC-19)

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)

5.517A
The operation of earth stations in motion communicating with geostationary fixed-satellite service space stations within the frequency bands 17.7-19.7 GHz (space-to-Earth) and 27.5-29.5 GHz (Earth-to-space) shall be subject to the application of Resolution 169 (WRC-19). (WRC-19)

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 the United Arab Emirates and Greece, the frequency 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-15)

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, Jordan, Lebanon, Libya, 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, 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, South Sudan, Chad, Togo and Tunisia, the frequency 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 frequency band 19.7-21.2 GHz and of space stations in the mobile-satellite service in the frequency band 19.7 20.2 GHz where the allocation to the mobile-satellite service is on a primary basis in the latter frequency band. (WRC-15)

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.

5.527A
The operation of earth stations in motion communicating with the FSS is subject to Resolution 156 (WRC 15). (WRC-15)

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
(SUP - WRC-12)

5.530A
Unless otherwise agreed between the administrations concerned, any station in the fixed or mobile services of an administration shall not produce a power flux-density in excess of –120.4 dB(W/(m^2 • MHz)) at 3 m above the ground of any point of the territory of any other administration in Regions 1 and 3 for more than 20% of the time. In conducting the calculations, administrations should use the most recent version of Recommendation ITU R P.452 (see also the most recent version of Recommendation ITU R BO.1898). (WRC-15)

5.530B
In the band 21.4-22 GHz, in order to facilitate the development of the broadcasting-satellite service, administrations in Regions 1 and 3 are encouraged not to deploy stations in the mobile service and are encouraged to limit the deployment of stations in the fixed service to point-to-point links. (WRC-12)

5.530C
(SUP - WRC-15)

5.530D
(SUP - WRC-19)

5.530E
The allocation to the fixed service in the frequency band 21.4-22 GHz is identified for use in Region 2 by high-altitude platform stations (HAPS). This identification does not preclude the use of this frequency band by other fixed-service applications or by other services to which it is allocated on a co-primary basis, and does not establish priority in the Radio Regulations. Such use of the fixed-service allocation by HAPS is limited to the HAPS-to-ground direction, and shall be in accordance with the provisions of Resolution 165 (WRC-19). (WRC-19)

5.532AA
The allocation to the fixed service in the frequency band 24.25-25.25 GHz is identified for use in Region 2 by high-altitude platform stations (HAPS). This identification does not preclude the use of this frequency band by other fixed-service applications or by other services to which this frequency band is allocated on a co-primary basis, and does not establish priority in the Radio Regulations. Such use of the fixed-service allocation by HAPS is limited to the HAPSto - ground direction and shall be in accordance with the provisions of Resolution 166 (WRC-19). (WRC-19)

5.532AB
The frequency band 24.25-27.5 GHz is identified for use by administrations wishing to implement the terrestrial component of International Mobile Telecommunications (IMT). This identification does not preclude the use of this frequency band by any application of the services to which it is allocated and does not establish priority in the Radio Regulations. Resolution 242 (WRC-19) applies. (WRC-19)

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.

5.532A
The location of earth stations in the space research service shall maintain a separation distance of at least 54 km from the respective border(s) of neighbouring countries to protect the existing and future deployment of fixed and mobile services unless a shorter distance is otherwise agreed between the corresponding administrations. Nos. 9.17 and 9.18 do not apply. (WRC-12)

5.532B
Use of the band 24.65-25.25 GHz in Region 1 and the band 24.65-24.75 GHz in Region 3 by the fixed-satellite service (Earth-to-space) is limited to earth stations using a minimum antenna diameter of 4.5 m. (WRC-12)

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)

5.534A
The allocation to the fixed service in the frequency band 25.25-27.5 GHz is identified in Region 2 for use by high-altitude platform stations (HAPS) in accordance with the provisions of Resolution 166 (WRC-19). Such use of the fixed-service allocation by HAPS shall be limited to the ground-to-HAPS direction in the

frequency band 25.25-27.0 GHz and to the HAPS-to-ground direction in the frequency band 27.0-27.5 GHz. Furthermore, the use of the frequency band 25.5-27.0 GHz by HAPS shall be limited to gateway links. This identification does not preclude the use of this frequency band by other fixed-service applications or by other services to which this band is allocated on a coprimary basis, and does not establish priority in the Radio Regulations. (WRC-19)

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 the most recent version of Recommendation ITU-R SA.1862. Resolution 242 (WRC-19) applies. (WRC-19)

5.536B
In Algeria, Saudi Arabia, Austria, Bahrain, Belgium, Brazil, China, Korea (Rep. of), Denmark, Egypt, United Arab Emirates, Estonia, Finland, Hungary, India, Iran (Islamic Republic of), Iraq, Ireland, Israel, Italy, Jordan, Kenya, Kuwait, Lebanon, Libya, Lithuania, Moldova, Norway, Oman, Uganda, Pakistan, the Philippines, Poland, Portugal, Qatar, the Syrian Arab Republic, Dem. People's Rep. of Korea, Slovakia, the Czech Rep., Romania, the United Kingdom, Singapore, Slovenia, Sudan, Sweden, Tanzania, Turkey, Viet Nam and Zimbabwe, earth stations operating in the Earth exploration-satellite service in the frequency band 25.5-27 GHz shall not claim protection from, or constrain the use and deployment of, stations of the fixed and mobile services. Resolution 242 (WRC-19) applies. (WRC-19)

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, South 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-12)

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, China, Korea (Rep. of), the Russian Federation, India, Indonesia, Iran (Islamic Republic of), Iraq, Japan, Kazakhstan, Malaysia, Maldives, Mongolia, Myanmar, Uzbekistan, Pakistan, the Philippines, Kyrgyzstan, the Dem. People's Rep. of Korea, Sudan, Sri Lanka, Thailand and Viet Nam, the allocation to the fixed service in the frequency 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-19). (WRC-19)

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, Oman, Pakistan, Philippines, Qatar, the Syrian Arab Republic, the Dem. People's Rep. of Korea, Somalia, Sudan, South 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-12)

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
(SUP - WRC-19)

5.543B
The allocation to the fixed service in the frequency band 31-31.3 GHz is identified for worldwide use by high-altitude platform stations (HAPS). This identification does not preclude the use of this frequency band by other fixed-service applications or by other services to which this frequency band is allocated on a co-primary basis, and does not establish priority in the Radio Regulations. Such use of the fixed-service allocation by HAPS shall be in accordance with the provisions of Resolution 167 (WRC-19). (WRC-19)

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, 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-12)

5.546
Different category of service: in Saudi Arabia, Armenia, Azerbaijan, Bahrain, Belarus, Egypt, the United Arab Emirates, Spain, Estonia, the Russian Federation, Georgia, Hungary, Iran (Islamic Republic of), Israel, Jordan, Lebanon, Moldova, Mongolia, Oman, Uzbekistan, Poland, the Syrian Arab Republic, Kyrgyzstan, Romania, the United Kingdom, South Africa, Tajikistan, Turkmenistan and Turkey, the allocation of the frequency 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-19)

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)[11]). 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, Jordan, Kuwait, Lebanon, Libya, Malaysia, Mali, Morocco, Mauritania, Nepal, Nigeria, Oman, Pakistan, the Philippines, Qatar, the Syrian Arab Republic, the Dem. Rep. of the Congo, Singapore, Somalia, Sudan, South 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-12)

11 Note by the Secretariat: This Resolution was revised by WRC-12.

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/m^2) in this band. (WRC-03)

5.550
Different category of service: in Armenia, Azerbaijan, Belarus, the Russian Federation, Georgia, 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-2000)

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)

5.550B
The frequency band 37-43.5 GHz, or portions thereof, is identified for use by administrations wishing to implement the terrestrial component of International Mobile Telecommunications (IMT). This identification does not preclude the use of this frequency band by any application of the services to which it is allocated and does not establish priority in the Radio Regulations. Because of the potential deployment of FSS earth stations within the frequency range 37.5-42.5 GHz and high-density applications in the fixed-satellite service in the frequency bands 39.5-40 GHz in Region 1, 40-40.5 GHz in all Regions and 40.5-42 GHz in Region 2 (see No. 5.516B), administrations should further take into account potential constraints to IMT in these frequency bands, as appropriate. Resolution 243 (WRC-19)applies. (WRC-19)

5.550C
The use of the frequency bands 37.5-39.5 GHz (space-to-Earth), 39.5-42.5 GHz (space-to-Earth), 47.2-50.2 GHz (Earth-to-space) and 50.4-51.4 GHz (Earth-to-space) by a non-geostationary-satellite system in the fixedsatellite service is subject to the application of the provisions of No. 9.12 for coordination with other non-geostationarysatellite systems in the fixed-satellite service but not with non-geostationary-satellite systems in other services. Resolution 770 (WRC-19) shall also apply, and No. 22.2 shall continue to apply. (WRC-19)

5.550D
The allocation to the fixed service in the frequency band 38-39.5 GHz is identified for worldwide use by administrations wishing to implement high-altitude platform stations (HAPS). In the HAPS-to-ground direction, the HAPS ground station shall not claim protection from stations in the fixed, mobile and fixed-satellite services; and No. 5.43A does not apply. This identification does not preclude the use of this frequency band by other fixed-service applications or by other services to which this frequency band is allocated on a co-primary basis and does not establish priority in the Radio Regulations. Furthermore, the development of the fixed-satellite, fixed and mobile services shall not be unduly constrained by HAPS. Such use of the fixed-service allocation by HAPS shall be in accordance with the provisions of Resolution 168 (WRC-19). (WRC-19)

5.550E
The use of the frequency bands 39.5-40 GHz and 40-40.5 GHz by non-geostationary-satellite systems in the mobile-satellite service (space-to-Earth) and by non-geostationary-satellite systems in the fixed-satellite service (space-to-Earth) is subject to the application of the provisions of No. 9.12 for coordination with other non-geostationarysatellite systems in the fixed-satellite and mobile-satellite services but not with non-geostationary-satellite systems in other services. No. 22.2 shall continue to apply for non-geostationary-satellite-systems. (WRC-19)

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 frequency 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 frequency band 42-42.5 GHz, shall not exceed the following values at the site of any radio astronomy station for more than 2% of the time:

–230 dB(W/m^2) in 1 GHz and –246 dB(W/m^2) in any 500 kHz of the frequency band 42.5-43.5 GHz at the site of any radio astronomy station registered as a single-dish telescope; and
–209 dB(W/m^2) in any 500 kHz of the frequency band 42.5-43.5 GHz at the site of any radio astronomy station registered as a very long baseline interferometry station.

These epfd 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 0 and shall apply over the whole sky and for elevation angles higher than the minimum operating angle θmin 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-15)

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/m^2) in 1 GHz and –153 dB(W/m^2) 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/m^2) 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 frequency bands 47.2-47.5 GHz and 47.9-48.2 GHz is identified for use by high-altitude platform stations (HAPS). This identification does not preclude the use of this frequency band by any application of the services to which it is allocated on a co-primary basis, and does not establish priority in the Radio Regulations. Such use of the fixed-service allocation in the frequency bands 47.2-47.5 GHz and 47.9-48.2 GHz by HAPS shall be in accordance with the provisions of Resolution 122 (Rev.WRC-19). (WRC-19)

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)

5.553A
In Algeria, Angola, Bahrain, Belarus, Benin, Botswana, Brazil, Burkina Faso, Cabo Verde, Korea (Rep. of), Côte d'Ivoire, Croatia, United Arab Emirates, Estonia, Eswatini, Gabon, Gambia, Ghana, Greece, Guinea, Guinea - Bissau, Hungary, Iran (Islamic Republic of), Iraq, Jordan, Kuwait, Lesotho, Latvia, Liberia, Lithuania, Madagascar, Malawi, Mali, Morocco, Mauritius, Mauritania, Mozambique, Namibia, Niger, Nigeria, Oman, Qatar, Senegal, Seychelles, Sierra Leone, Slovenia, Sudan, South Africa, Sweden, Tanzania, Togo, Tunisia, Zambia and Zimbabwe, the frequency band 45.5-47 GHz is identified for use by administrations wishing to implement the terrestrial component of International Mobile Telecommunications (IMT), taking into account No. 5.553. With respect to the aeronautical mobile service and radionavigation service, the use of this frequency band for the implementation of IMT is subject to agreement obtained under No. 9.21 with concerned administrations and shall not cause harmful interference to, or claim protection from these services. This identification does not preclude the use of this frequency band by any application of the services to which it is allocated and does not establish priority in the Radio Regulations. Resolution 244 (WRC-19) applies. (WRC-19)

5.553B
In Region 2 and Algeria, Angola, Saudi Arabia, Australia, Bahrain, Benin, Botswana, Burkina Faso, Burundi, Cameroon, Central African Rep., Comoros, Congo (Rep. of the), Korea (Rep. of), Côte d'Ivoire, Djibouti, Egypt, United Arab Emirates, Eswatini, Ethiopia, Gabon, Gambia, Ghana, Guinea, Guinea-Bissau, Equatorial Guinea, India, Iran (Islamic Republic of), Iraq, Japan, Jordan, Kenya, Kuwait, Lesotho, Liberia, Libya, Lithuania, Madagascar, Malaysia, Malawi, Mali, Morocco, Mauritius, Mauritania, Mozambique, Namibia, Niger, Nigeria, Oman, Uganda, Qatar, the Syrian Arab Republic, the Dem. Rep. of the Congo, Rwanda, Sao Tome and Principe, Senegal, Seychelles, Sierra Leone, Singapore, Slovenia, Somalia, Sudan, South Sudan, South Africa, Sweden, Tanzania, Chad, Togo, Tunisia, Zambia and Zimbabwe, the frequency band 47.2-48.2 GHz is identified for use by administrations wishing to implement International Mobile Telecommunications (IMT). This identification does not preclude the use of this frequency band by any application of the services to which it is allocated, and does not establish any priority in the Radio Regulations. Resolution 243 (WRC-19) applies. (WRC-19)

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/m^2) in any 500 kHz band at the site of any radio astronomy station. (WRC-03)

5.555C
The use of the frequency band 51.4-52.4 GHz by the fixed-satellite service (Earth-to-space) is limited to geostationary-satellite networks. The earth stations shall be limited to gateway earth stations with aminimum antenna diameter of 2.4 metres. (WRC-19)

5.559AA
The frequency band 66-71 GHz is identified for use by administrations wishing to implement the terrestrial component of International Mobile Telecommunications (IMT). This identification does not preclude the use of this frequency band by any application of the services to which this frequency band is allocated and does not establish priority in the Radio Regulations. Resolution 241 (WRC-19) applies. (WRC-19)

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 dB(W/(m^2 . 100 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 dB(W/(m^2 . 100 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)

5.559B
The use of the frequency band 77.5-78 GHz by the radiolocation service shall be limited to short-range radar for ground-based applications, including automotive radars. The technical characteristics of these radars are provided in the most recent version of Recommendation ITU R M.2057. The provisions of No. 4.10 do not apply. (WRC-15)

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 frequency bands 105-109.5 GHz, 111.8-114.25 GHz and 217-226 GHz, the use of this allocation is limited to space-based radio astronomy only. (WRC-19)

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 dB(W/(m^2 . MHz)) for all angles of arrival. (WRC-2000)

5.562D
Additional allocation: In Korea (Rep. of), the frequency 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. Radio astronomy stations in Korea (Rep. of) operating in the frequency bands referred to in this footnote shall not claim protection from, or constrain the use and development of, services in other countries operating in accordance with the Radio Regulations. (WRC-15)

5.562E
The allocation to the Earth exploration-satellite service (active) is limited to the band 133.5-134 GHz. (WRC-2000)

5.562F
(SUP - WRC-19)

5.562G
(SUP - WRC-19)

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 dB(W/(m^2 . 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)

5.564A
For the operation of fixed and land mobile service applications in frequency bands in the range 275- 450 GHz: The frequency bands 275-296 GHz, 306-313 GHz, 318-333 GHz and 356-450 GHz are identified for use by administrations for the implementation of land mobile and fixed service applications, where no specific conditions are necessary to protect Earth exploration-satellite service (passive) applications.
The frequency bands 296-306 GHz, 313-318 GHz and 333-356 GHz may only be used by fixed and land mobile service applications when specific conditions to ensure the protection of Earth exploration-satellite service (passive) applications are determined in accordance with Resolution 731 (Rev.WRC-19).
In those portions of the frequency range 275-450 GHz where radio astronomy applications are used, specific conditions (e.g. minimum separation distances and/or avoidance angles) may be necessary to ensure protection of radio astronomy sites from land mobile and/or fixed service applications, on a case-by-case basis in accordance with Resolution 731 (Rev.WRC-19).
The use of the above-mentioned frequency bands by land mobile and fixed service applications does not preclude use by, and does not establish priority over, any other applications of radio services in the range of 275-450 GHz. (WRC-19)

5.565
The following frequency bands in the range 275-1 000 GHz are identified for use by administrations for passive service applications:

- 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): 275-286 GHz, 296-306 GHz, 313-356 GHz, 361-365 GHz, 369-392 GHz, 397 399 GHz, 409-411 GHz, 416 434 GHz, 439-467 GHz, 477-502 GHz, 523 527 GHz, 538-581 GHz, 611-630 GHz, 634 654 GHz, 657-692

GHz, 713 718 GHz, 729-733 GHz, 750-754 GHz, 771-776 GHz, 823 846 GHz, 850 854 GHz, 857-862 GHz, 866-882 GHz, 905-928 GHz, 951-956 GHz, 968 973 GHz and 985-990 GHz.

The use of the range 275-1 000 GHz by the passive services does not preclude use of this range by active services. Administrations wishing to make frequencies in the 275-1 000 GHz range available for active service applications are urged to take all practicable steps to protect these passive services from harmful interference until the date when the Table of Frequency Allocations is established in the above-mentioned 275-1 000 GHz frequency range. All frequencies in the range 1 000-3 000 GHz may be used by both active and passive services. (WRC-12)

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