

Notes : a. The changes made by WRC-03 are applied
 b. In the CEPT countries some deviations apply, which are listed in the European Common Allocation Table (ECA) of which the latest version can be found at www.ero.dk

THE AMATEUR SERVICES: FREQUENCY ALLOCATIONS

1. ITU definitions

The ITU Regulations define the Amateur Services as follows:

1.56 Amateur Service:

A radiocommunication service for the purpose of self-training, intercommunication and technical investigations carried out by amateurs, that is, by duly authorized persons interested in radio technique solely with a personal aim and without pecuniary interest.

1.57 Amateur-Satellite Service:

A radiocommunication service using space stations on earth satellites for the same purposes as those of the amateur service.

Art. 1.30 of the Regulations, attached as Appendix 1, gives more detailed regulations on these Amateur Services.

The ITU has reserved the right for national Administrations to use some frequency bands allocated to the Amateur Services in the event of natural disasters. As set out in footnote 5.120 to the Table of frequency allocations this only refers to the 3.5 MHz, 7.0 MHz, 10.1 MHz, 14.0 MHz, 18.068 MHz, 21.0 MHz, 24.89 MHz and 145 MHz bands. Resolution no. 640 in the Radio Regulations gives details on this use.

2. ITU Radio Regulations: Frequency allocations

4.8 Where, in adjacent Regions or sub-Regions, a band of frequencies is allocated to different services of the same category (see Sections I and II of Article 5), the basic principle is the equality of right to operate. Accordingly, the stations of each service in one Region or sub-Region must operate so as not to cause harmful interference to any service of the same or higher category in the other Regions or sub-Regions. (WRC-03)

a. Categories of services and allocations

5.23 Primary and Secondary Services

5.24 Where, in a box of the allocation Table, a band is indicated as allocated to more than one service, either on a worldwide or regional basis, such services are listed in the following order:

5.25 a. services, the names of which are printed in "capitals" (example: FIXED); these are called "primary" services;

5.26 b. services, the names of which are printed in "normal characters" (example: Mobile); these are called "secondary" services (see Nos. 420 to 423).

5.27 Additional remarks shall be printed in normal characters (example: MOBILE except aeronautical mobile).

note : In this handbook the items directly related to the Amateur (Satellite) Service are printed using bold lettering

5.28 Stations of secondary service:

5.29 a. shall not cause harmful interference to stations of primary services to which frequencies are already assigned or to which frequencies may be assigned

at a later date;

- 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 service(s) to which frequencies may be assigned at a later date.
- 5.32 Where a band is indicated in a footnote of the Table as allocated to a service "on a secondary basis" in an area smaller than a Region, or in a particular country, this is a secondary service (see Nos. 420 - 423).
- 5.33 Where a band is indicated in a footnote of the Table as allocated to a service on a "primary basis", in an area smaller than a Region, or in a particular country, this is a primary service only in that area or country .
- 5.34 Additional Allocations
- 5.35 Where a band is indicated in a footnote of the Table as "also allocated" to a service in an area smaller than a Region, or in a particular country, this is an "additional" allocation, i.e. an allocation which is added in this area or in this country to the service or services which are indicated in the Table (see No. 428).
- 5.36 If the footnote does not include any restriction on the service or services concerned apart from the restriction to operate only in a particular area or country, stations of this service or these services shall have equality of right to operate with stations of the other primary service or services indicated in the Table.
- 5.37 If restrictions are imposed on an additional allocation in addition to the restriction only to operate in a particular area or country, this is indicated in the footnote in the Table.
- 5.38 Alternative Allocations
- 5.39 Where a band is indicated in a footnote of the Table as "allocated" to one or more services in an area smaller than a Region, or in a particular country, this is an "alternative" allocation, i.e. an allocation which replaces, in this area or in this country, the allocation indicated in the Table (see No. 432).
- 5.40 If the footnote does not include any restriction on stations of the service or services concerned, apart from the restriction to operate only in a particular area or country, these stations of such a service or services shall have an equality of right to operate with stations of the primary service or services, indicated in the Table, to which the band is allocated in other areas or countries.
- 5.41 If restrictions are imposed on stations of a service to which an alternative allocation is made, in addition to the restriction to operate only in a particular country or area, this is indicated in the footnote.
- 5.42 Miscellaneous Provisions
- 5.43 Where it is indicated in these Regulations that a service may operate in a specific frequency band subject to not causing harmful interference, this means also that this service cannot claim protection from harmful interference caused by other services to which the band is allocated according to the Table.
- 5.44 Except if otherwise specified in a footnote, the term "fixed service", where appearing in the Table, does not include systems using ionospheric scatter propagation.
- 5.45 Before bringing into use and notifying the Bureau of any assignment in a service which is subject to this regulation, the procedure of Article S9 shall be applied; such an assignment shall be considered to be in conformity with the Table of Frequency Allocations only after the successful application of Article S9

b. Description of the Table of Frequency Allocations

- 5.46 The heading of the Table includes three columns, each of which corresponds to one of the Regions (see section c). Where an allocation occupies the whole of the width of the Table or only one or two of the three columns, this is a worldwide or a Regional allocation, respectively.
- 5.47 The frequency band referred to in each allocation is indicated in the left-hand top corner of the part of the Table concerned.
- 5.48 Within each of the categories specified in Nos. 415 to 417, services are listed in alphabetical order according to the French language. The order of listing does not indicate relative priority within each category.
- 5.49 In the case where there is a parenthetical addition to an allocation in the Table, that service allocation is restricted to the type of operation so indicated.
- 5.50 The footnote references which appear in the Table below the allocated service or services apply to the whole of the allocation concerned.
- 5.51 The footnote references which appear to the right of the name of a service are applicable only to that particular service.
- 5.52 In certain cases, the names of countries appearing in the footnotes have been simplified in order to shorten the text.

c. Regions and Areas

For the allocation of frequencies the world has been divided into three Regions, labelled Regions 1, 2 and 3. A chart showing these Regions is shown in Appendix 2.

d. Extract from the Table of frequency allocations above 30 MHz

The following pages contain an extract from the Table in the ITU Radio Regulations with the allocations of frequencies above 30 MHz to the Amateur Service and the Amateur-Satellite Service, with the footnotes relevant for the Amateur and Amateur-Satellite Service.

General footnotes, not related to a single band:

5.120 **For the use of the bands allocated to the amateur services at 3.5 MHz, 7.0 MHz, 10.1 MHz, 14.0 MHz, 18.068 MHz, 21.0 MHz, 24.89 MHz and 144 MHz in the event of natural disasters, see Resolution 640**

5.138 The following bands:
 6765 - 6796 kHz (centre frequency 6780 kHz)
433.05 - 434.79 MHz (centre frequency 433.92 MHz) in Region 1 except in the countries mentioned in 662,
 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 and shall be subject to special authorization by the administration concerned, in agreement with other administrations whose radiocommunications services might be affected. In applying this provision, administrations shall have due regard to the latest relevant ITU-R Recommendations.

5.149 (note : in this handbook only the frequencies in or near to the amateur bands above 30 MHz are given)

In making assignments to stations of other services to which the bands 10.6 - 10.68 GHz, 23.07 - 23.12 GHz, **76-78** Ghz, 111.8-114.25 Ghz, 130-134 Ghz, **136-148.5** Ghz, **241-250** Ghz are allocated, administrations are urged to take all practicable steps to protect the radio astronomy service from harmful interference. Emissions from space- 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**).

5.150

The following bands:

13 533 - 13 567 kHz (centre frequency 13 560 kHz),
 26 957 - 27 283 MHz (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),
2400 - 2500 MHz (centre frequency 2450 MHz),
5725 - 5875 MHz (centre frequency 5800 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**.

MHz
47 - 68

Allocation to services		
Region 1	Region 2	Region 3
47 -68 BROADCASTING	50 - 54 AMATEUR	
5.164 5.165 5.169	5.166 5.167 5.168 5.170	

- 5.164** *Additional allocation* : in Albania, the Federal Republic of Germany, Austria, Belgium, Bulgaria, Denmark, Finland, France, Gabon, Greece, Israel, Italy, the Libanon, Liechtenstein, Luxembourg, Mali, Malta, Morocco, Nigeria, Norway, the Netherlands, Poland, the German Democratic Republic, the United Kingdom, Senegal, Sweden, Switzerland, Tunisia, Turkey and Yugoslavia, the band 47 - 68 MHz, and in Romania, the band 47 - 58 MHz, are also allocated to the land mobile service on a primary basis. However, stations of the land mobile service in the countries mentioned in connection with each band referred to in this footnote shall not cause harmful interference to, or claim protection from, existing or planned broadcasting stations of countries other than those mentioned in connection with the band
- 5.165** *Additional allocation* : in Angola, Cameroon, the Congo, Madagascar, Mozambique, Somalia, Sudan, Tanzania, Chad and Yemen (P.D.R. of) the band 47 - 68 MHz is also allocated to the fixed and mobile, except aeronautical mobile, services on a primary basis
- 5.166** *Alternative allocation* : in New Zealand, the band 50 -51 MHz is allocated to the fixed, mobile and broadcasting services on a primary basis; the band 53 - 54 MHz is allocated to the fixed and mobile services on a primary basis
- 5.167** *Alternative allocation* : in Afghanistan, Bangladesh, Brunei, India, Indonesia, Iran, Malaysia, Pakistan, Singapore and Thailand, the band 50 - 54 MHz is allocated to the fixed, mobile and broadcasting services on a primary basis.
- 5.168** *Additional allocation* : in Australia, China and the Democratic People's Republic of Korea, the band 50 - 54 MHz is also allocated to the broadcasting service on a primary basis.
- 5.169** *Alternative allocation* : in Botswana, Burundi, Lesotho, Malawi, Namibia, Rwanda, South Africa, Swaziland, Zaire, Zambia and Zimbabwe, the band 50 - 54 MHz is allocated to the amateur service on a primary basis.

MHz
144 - 149.9

Allocation to services		
Region 1	Region 2	Region 3
144 - 146 AMATEUR 5.120 AMATEUR-SATELLITE 5.215 .216		
146 - 149.9 FIXED MOBILE except aeronautical mobile(R)	146 - 148 AMATEUR 5.217	146 - 148 AMATEUR FIXED MOBILE 5.216 5.217

5.215 *Additional allocation* :in Singapore, the band 144 - 145 MHz is also allocated to the fixed and mobile services on a primary basis. Such use is limited to systems in operation before or on 1 January 1980, which in any case shall cease by 31 December 1995.

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.

MHz
174 - 230

Allocation to services		
Region 1	Region 2	Region 3
174 - 223 BROADCASTING 5.235 5.237 5.243	220 - 225 AMATEUR FIXED MOBILE Radiolocation 5.241	174 - 223 FIXED MOBILE BROADCASTING
223 - 230 BROADCASTING Fixed Mobile 5.236 5.243		223 - 230 FIXED MOBILE BROADCASTING AERONAUTICAL RADIONAVIGATION Radiolocation

5.235

Additional allocation :in Austria, the Federal Republic of Germany, Belgium, Denmark, France, Italy, Liechtenstein, Monaco, Norway, the Netherlands, the United Kingdom, Sweden, Switzerland and Yemen (P.D.R. of), 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, nor claim protection from, broadcasting stations,existing or planned, in countries other than those listed in this footnote.

5.236

Different category of service: in Austria, the Federal Republic of Germany, Belgium, Denmark, Spain, Finland, Israel, Italy, Liechtenstein, Luxembourg, Monaco, Norway, the Netherlands, Portugal, the United Kingdom, Sweden, Switzerland and Yemen(P.D.R.of), the band 223 - 230 MHz is allocated to the land mobile service on a primary basis (see No. **5.33**). However, the stations of the land mobile service shall not cause harmful interference to, nor claim protection from, broadcasting stations, existing or planned, in countries other than those listed in this footnote.

5.237

Additional allocation : in the Congo, Ethiopia, Gambia, Guinea, Kenya, Libya, Malawi, Mali, Uganda, Senegal, Sierra Leone, Somalia, Tanzania and Zimbabwe, the band 174 - 223 Mhz is also allocated to the fixed and mobile services on a secondary basis.

5.241

In Region 2, the band 216 - 225 MHz is allocated to the radiolocation service on a primary basis until 1 January 1990. On and after 1 January 1990, no new stations in that service may be authorized. Stations authorized prior to 1 January 1990 may continue to operate on a secondary basis.

5.243

Additional allocation: in Somalia, the band 216 - 225 MHz is also allocated to the aeronautical radionavigation service on a primary basis, subject to not causing harmful interference to existing or planned broadcasting services in other countries.

**MHz
430 - 450**

Allocation to services		
Region 1	Region 2	Region 3
430-432 AMATEUR RADIOLOCATION 5.271 5.272 5.273 5.274 5.275 5.276 5.277	430-432 RADIOLOCATION Amateur 5.271 5.276 5.277 5.278 5.279	
432-438 AMATEUR RADIOLOCATION Earth exploration-satellite (active) 5.138 5.271 5.272 5.276 5.277 5.279A 5.280 5.281 5.282	432-438 RADIOLOCATION Amateur Earth exploration-satellite (active) 5.271 5.276 5.277 5.278 5.279 5.279A 5.281 5.282	
438-440 AMATEUR RADIOLOCATION 5.271 5.273 5.274 5.275 5.276 5.277 5.283	438-440 RADIOLOCATION Amateur 5.271 5.276 5.277 5.278 5.279	
440 - 450 FIXED MOBILE except aeronautical mobile Radiolocation 5.268 .270 .271 .274 .284 .285 .286		

5.268 *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 Azerbaijan, Belarus, China, India, Latvia, Lithuania, Kyrgyzstan and Turkmenistan, the band 420-460 MHz is also allocated to the aeronautical radionavigation service (radio altimeters) on a secondary basis. (WRC-03)

5.272 *Different category of service* : in France, the allocation of the band 430 - 434 MHz to the amateur service is on a secondary basis (see no.5.32).

- 5.273** *Different category of service:* in Libyan Arab Jamahiriya, the allocation of the bands 430-432 MHz and 438-440 MHz to the radiolocation service is on a secondary basis (see No. 5.32). (WRC-03)
- 5.274** *Alternative allocation :* in Denmark, Norway and Sweden, the bands 430 - 432 MHz and 438 - 440 MHz are allocated to the fixed and mobile, except aeronautical mobile, services on a primary basis.
- 5.275** *Additional allocation :* in Finland, Libya and Yugoslavia, the bands 430- 432 MHz and 438 - 440 MHz are also allocated to the fixed and mobile, except aeronautical mobile, services on a primary basis.
- 5.276** *Additional allocation :* in Afghanistan, Algeria, Saudi Arabia, Bahrain, Bangladesh, Brunei, Burundi, Egypt, the United Arab Emirates, Ecuador, Ethiopia, Greece, Guinea, India, Indonesia, Iran, Iraq, Israel , Italy, Jordan, Kenya, Kuwait, the Libanon, Liechtenstein, Libya, Malaysia, Malta, Oman, Pakistan, the Philippines, Qatar, Syria, Singapore, Somalia, Switzerland, Tanzania, Thailand and Togo, the band 430 - 440 MHz is also allocated to the fixed service on a primary basis and the bands 430 - 435 MHz and 438 - 440 MHz are also allocated to the mobile, except aeronautical mobile, service on a primary basis.
- 5.277** *Additional allocation:* in Angola, Armenia, Azerbaijan, Belarus, Cameroon, Congo, Djibouti, Georgia, Hungary, Israel, Kazakhstan, Mali, Moldova, Mongolia, Uzbekistan, Poland, Kyrgyzstan, Slovakia, the Czech Rep., Romania, the Russian Federation, Rwanda, Tajikistan, Chad, Turkmenistan and Ukraine, the band 430-440 MHz is also allocated to the fixed service on a primary basis. (WRC-03)
- 5.278** *Different category of service :* in Argentina, Colombia, Costa Rica, Cuba, Guyana, Honduras, Panama and Venezuela, the allocation of the band 430 - 440 MHz to the amateur service is on a primary basis (see No.425).
- 5.279** *Additional allocation:* in Mexico, the bands 430 - 435 MHz and 438 - 440 MHz are also allocated to the land mobile service on a primary basis. No.5.45 shall apply.
- 5.279A** The use of this band by sensors in the Earth exploration-satellite service (EESS) (active) shall be in accordance with Recommendation ITU-R SA.1260-1. Additionally, the EESS (active) in the band 432-438 MHz shall not cause harmful interference to the aeronautical radionavigation service in China. The provisions of this footnote in no way diminish the obligation of the EESS (active) to operate as a secondary service in accordance with Nos. 5.29 and 5.30 (WRC-03)
- 5.280** In the Federal Republic of Germany, Austria, Liechtenstein, Portugal, Switzerland and Yugoslavia, the band 433.05 - 434.79 MHz (centre frequency 433.92 MHz) is designated for industrial, scientific and medical (ISM) applications. Radiocommunications services of those countries operating within this band must accept harmful interference which may be caused by these applications. ISM equipment operating in this band is subject to the provisions of No. S15.13.
- 5.281** *Additional allocation :* in the French Overseas Departments in Region 2, and India, the band 433.75 - 434.25 MHz is also allocated to the space operation service(Earth to Space) on a primary basis. In France and in Brazil, the band is allocated to the same service on a secondary basis.
- 5.282** In the bands 435 - 438 MHz, 1260 - 1270 MHz, 2400 - 2450 MHz, 3400 - 3410 MHz (in Regions 2 and 3) and 5650 - 5670 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.S25.11. The use of the bands 1260 - 1270 MHz and 5650 - 5670 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, New Zealand and Papua New Guinea, 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). No. 5.45 shall apply.

**MHz
890 - 942**

Allocation to services		
Region 1	Region 2	Region 3
890 - 942	902 - 928	890 - 942
FIXED	FIXED	FIXED
MOBILE except aeronautical mobile	Amateur	MOBILE
BROADCASTING	Mobile except aeronautical mobile	BROADCASTING
Radiolocation	Radiolocation	Radiolocation
	5.325	5.326

- 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). No. 5.45 shall apply.

- 5.326** *Different category of service* : in Australia, the allocation of the band 890 - 942 MHz to the radiolocation service is on a primary basis (see No.5.33).

**MHz
1240 - 1300**

Allocation to services		
Region 1	Region 2	Region 3
1 240-1 300 EARTH EXPLORATION-SATELLITE (active) RADIOLOCATION RADIONAVIGATION-SATELLITE (space-to-Earth) (space-to-space) SPACE RESEARCH (active) Amateur 5.282 5.329 5.329a 5.330 5.331 5.332 5.335 5.335A		

- 5.329** Use of the radionavigation-satellite service in the band 1 215-1 300 MHz shall be subject to the condition that no harmful interference is caused to, and no protection is claimed from, the radionavigation service authorized under No. **5.331**. Furthermore, use of the radionavigation-satellite service in the band 1 215-1 300 MHz shall be subject to the condition that no harmful interference is caused to the radiolocation service. No. **5.43** shall not apply in respect of the radiolocation service. Resolution **[COM5/5] (WRC-03)** shall apply. (WRC-03)

- 5.329A** Use of systems in the radionavigation-satellite service (space-to-space) operating in the bands 1 215-1 300 MHz and 1 559-1 610 MHz is not intended to provide safety service applications, and shall not impose any additional constraints on other systems or services operating in accordance with the Table. (WRC-2000)

- 5.330** *Additional allocation*: in Angola, Saudi Arabia, Bahrain, Bangladesh, Cameroon, China, the United Arab Emirates, Eritrea, Ethiopia, Guyana, India, Indonesia, Iran (Islamic Republic of), Iraq, Israel, Japan, Jordan, Kuwait, Lebanon, Libyan Arab Jamahiriya, Mozambique, Nepal, Pakistan, the

Philippines, Qatar, Syrian Arab Republic, Somalia, Sudan, Chad, Togo and Yemen, the band 1 215-1 300 MHz is also allocated to the fixed and mobile services on a primary basis. (WRC-03)

5.331 *Additional allocation:* in Algeria, Germany, Saudi Arabia, Australia, Austria, Bahrain, Belarus, Belgium, Benin, Bosnia and Herzegovina, Brazil, Burkina Faso, Burundi, Cameroon, China, Korea (Rep. of), Croatia, Denmark, Egypt, the United Arab Emirates, Estonia, the Russian Federation, Finland, France, Ghana, Greece, Guinea, Equatorial Guinea, Hungary, India, Indonesia, Iran (Islamic Republic of), Iraq, Ireland, Israel, Jordan, Kenya, Kuwait, Lesotho, Latvia, The Former Yugoslav Republic of Macedonia, Liechtenstein, Lithuania, Luxembourg, Madagascar, Mali, Mauritania, Nigeria, Norway, Oman, the Netherlands, Poland, Portugal, Qatar, Syrian Arab Republic, Slovakia, United Kingdom, Serbia and Montenegro, Slovenia, Somalia, Sudan, Sri Lanka, South Africa, Sweden, Switzerland, Thailand, Togo, Turkey, Venezuela and Viet Nam, the band 1 215-1 300 MHz is also allocated to the radionavigation service on a primary basis. In Canada and the United States, the band 1 240-1 300 MHz is also allocated to the radionavigation service, and use of the radionavigation service shall be limited to the aeronautical radionavigation service. (WRC-03)

5.332 In the band 1 215-1 300 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, the radionavigation-satellite service and other services allocated on a primary basis. (WRC-97)

5.334 *Additional allocation:* in Canada and the United States, the bands 1 240-1 300 MHz and 1 350-1 370 MHz are also allocated to the aeronautical radionavigation service on a primary basis.

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)

**MHz
2300 - 2450**

Allocation to Services		
Region 1	Region 2	Region 3
2300 - 2450 FIXED MOBILE Amateur Radiolocation 5.150 .282 .395	2300 - 2450 FIXED MOBILE RADIOLOCATION Amateur 5.150 .282 .393 .394 .396	

5.393 *Additional allocation:* in the United States of America and India, the band 2310 - 2360 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 COM4/W (WARC 92).

5.394 In Australia, the United States and Papua New Guinea, the use of the band 2310 - 2390 MHz by the aeronautical mobile service for telemetry has priority over other uses by mobile services.

5.395 In France the use of the band 2310 - 2360 MHz by the aeronautical mobile service for telemetry has priority over other uses by the mobile service

5.396 Space stations of the broadcasting-satellite service in the band 2310 - 2360 MHz operating in accordance with No. **5.393** that may affect the services to which this band is allocated in other countries shall be coordinated and notified in accordance with Resolution **33**(WARC79). Complementary terrestrial broadcasting stations shall be subject to bilateral coordination with neighbouring countries prior to bringing into use.

MHz
3300 - 3600

Allocation to Services		
Region 1	Region 2	Region 3
3300 - 3400 RADIOLOCATION 5.149 .429 .430	3300 - 3400 RADIOLOCATION Amateur Fixed Mobile 5.149 .430	3300 - 3400 RADIOLOCATION Amateur 5.149 .429
3400 - 3600 FIXED FIXED-SATELLITE (space-to-earth) Mobile Radiolocation 5.431 .434	3400 - 3500 FIXED FIXED-SATELLITE (space-to-Earth) Amateur Mobile Radiolocation 5.433 5.282 .432	

- 5.429** *Additional allocation :* in Afghanistan, Saudi Arabia, Bahrain, Bangladesh, China, the Congo, the United Arab Emirates, India, Indonesia, Iran, Iraq, Israel, Japan, Kuwait, the Lebanon, Libya, Malaysia, Oman, Pakistan, Qatar, Syria, Singapore, Sri Lanka and Thailand, the band 3300 - 3400 MHz is also allocated to the fixed and mobile services on a primary basis. The countries bordering the Mediterranean shall not claim protection for their fixed and mobile services from the radiolocation service.
- 5.430** *Additional allocation:* in Bulgaria, Cuba, Hungary, Mongolia, Poland, the German Democratic Republic, Roumania, Czechoslovakia and the U.S.S.R., the band 3300 - 3400 MHz is also allocated to the radionavigation service on a primary basis
- 5.431** *Additional allocation :* in the Federal Republic of Germany, Israel and the United Kingdom, the band 3400 - 3475 MHz is also allocated to the amateur service on a secondary basis.
- 5.432** *Different category of service :* in Indonesia, Japan, Pakistan and Thailand, the allocation of the band 3400 - 3500 MHz to the mobile, except aeronautical mobile, service is on a primary basis (see No.5.33)
- 5.433** In Regions 2 and 3 , in the band 3400 - 3600 MHz the radiolocation services 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.

MHz
5650 - 5850

Allocation to Services		
Region 1	Region 2	Region 3
5 650-5 725 RADIOLOCATION MOBILE except aeronautical mobile Amateur Space research (deep space) 5.282 5.446A 5.450A 5.451 5.453 5.454 5.455		
5725 - 5850 FIXED-SATELLITE (Earth-to-space) RADIOLOCATION Amateur 5.150 .451 .453 5.455 .456 .457	5725 - 5850 RADIOLOCATION Amateur 5.150 .453 .455 .457	
5850 - 5925 FIXED FIXED-SATELLITE (Earth-to-space) MOBILE 5.150	5850 - 5925 FIXED FIXED-SATELLITE (Earth-to-space) MOBILE Amateur Radiolocation 5.150	5850 - 5925 FIXED FIXED-SATELLITE (Earth-to-space) MOBILE Radiolocation 5.150

5.446A The use of the bands 5 150-5 350 MHz and 5 470-5 725 MHz by the stations in the mobile service shall be in accordance with Resolution 229. (WRC-03)

5.450A In the band 5 470-5 725 MHz, stations in the mobile service shall not claim protection from radiodetermination services. Radiodetermination services shall not impose on the mobile service more stringent protection criteria, based on system characteristics and interference criteria, than those stated in Recommendation ITU-R M.1638. (WRC-03)

5.451 *Additional allocation* : in the United Kingdom, the band 5470 - 550 MHz is also allocated to the land mobile service on a secondary basis. The power limits specified in Nos. **S21.2, S31.3, S21.4** and **S21.5** shall apply in the band 5725 - 5850 MHz.

5.453 *Additional allocation*: in Saudi Arabia, Bahrain, Bangladesh, Brunei Darussalam, Cameroon, China, Congo, Côte d'Ivoire, Korea (Rep. of), Egypt, the United Arab Emirates, Gabon, Guinea, Equatorial Guinea, India, Indonesia, Iran (Islamic Republic of), Iraq, Israel, Japan, Jordan, Kenya, Kuwait, Lebanon, the Libyan Arab Jamahiriya, Madagascar, Malaysia, Nigeria, Oman, Pakistan, the Philippines, Qatar, the Syrian Arab Republic, the Dem. People's Rep. of Korea, Singapore, Sri Lanka, Swaziland, Tanzania, Chad, Thailand, Togo, Viet Nam and Yemen, the band 5 650-5 850 MHz is also allocated to the fixed and mobile services on a primary basis. In this case, the provisions of Resolution 229 do not apply. (WRC-03)

5.454 *Different category of service*: in Azerbaijan, Georgia, Mongolia, Uzbekistan, Kyrgyzstan, the Russian Federation, 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-03)

5.455 *Additional allocation:* in Armenia, Azerbaijan, Belarus, Cuba, Georgia, Hungary, Kazakhstan, Latvia, Moldova, Mongolia, Uzbekistan, Kyrgyzstan, the Russian Federation, Tajikistan, Turkmenistan and Ukraine, the band 5 670-5 850 MHz is also allocated to the fixed service on a primary basis. (WRC-03)

5.456 *Additional allocation:* in Cameroon, the band 5 755-5 850 MHz is also allocated to the fixed service on a primary basis. (WRC-03)

5.457 **The band 5830 - 5850 MHz is also allocated to the amateur-satellite service(space-to-Earth) on a secondary basis.**

**GHz
10.0 - 10.5**

Allocation to Services		
Region 1	Region 2	Region 3
10- 10.45 FIXED MOBILE RADIOLOCATION Amateur 5.479	10 - 10.45 RADIOLOCATION Amateur 5.479 .480	10 - 10.45 FIXED MOBILE RADIOLOCATION Amateur 5.479
10.45 - 10.5 RADIOLOCATION Amateur Amateur-Satellite 5.481		

5.479 The band 9975 - 10025 MHz is also allocated to the meteorological-satellite service on a secondary basis for use by weather radars

5.480 *Additional allocation :* in Costa Rica, Ecuador, Guatemala and Honduras, the band 10 - 10.45 GHz is also allocated to the fixed and mobile services on a primary basis.

5.481 *Additional allocation :* in the Federal Republic of Germany, Angola, China, Ecuador, Spain, Japan, Kenya, Morocco, Nigeria, Sweden, Tanzania and Thailand, the band 10.45 - 10.5 GHz is also allocated to the fixed and mobile services on a primary basis.

GHz
24 - 24.25

Allocation to Services		
Region 1	Region 2	Region 3
24 - 24.05 AMATEUR AMATEUR-SATELLITE 5.150		
24.05 - 24.25 RADIOLOCATION Amateur Earth Exploration-Satellite (active) 5.150		

GHz
47 - 47.2

Allocation to Services		
Region 1	Region 2	Region 3
47 - 47.2 AMATEUR AMATEUR-SATELLITE		

**GHz
75.5 - 81.5**

Allocation to services		
Region 1	Region 2	Region 3
75.5 - 76 FIXED FIXED-SATELLITE MOBILE BROADCASTING BROADCASTING-SATELLITE Space Research (space-to-Earth) <u>5.559A</u>		
76-77.5 RADIO ASTRONOMY RADIO LOCATION Amateur Amateur-Satellite Space Research (space-to-Earth) 5.149		
77.5 - 78 AMATEUR AMATEUR-SATELLITE Radio astronomy Space Research (space-to-Earth) 5.560		
78 - 79 RADIOLOCATION Amateur Amateur-Satellite Radio Astronomy Space Research (space-to-Earth) 5.149 5.560		

Allocation to services		
Region 1	Region 2	Region 3
79 - 81 RADIO ASTRONOMY RADIOLOCATION Amateur Amateur-Satellite Space Research (space-to-Earth) 5.149		
81-84 FIXED FIXED-SATELLITE(Earth to Space) MOBILE MOBILE-SATELLITE(Earth to Space) RADIO ASTRONOMY Space Research (Space to Earth) 5.149, 5.561A		

- 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.
- 5.559A** The band 75.5-76 Ghz is also allocated to the amateur and amateur-satellite services on a primary basis until the year 2006.(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)

GHz
122.25- 123

Allocation to Services		
Region 1	Region 2	Region 3
122.25 - 123 FIXED INTER-SATELLITE MOBILE (5.558) Amateur 5.138		

**GHz
134 - 141**

Allocation to Services		
Region 1	Region 2	Region 3
134-136 AMATEUR AMATEUR-SATELLITE Radio Astronomy		
136-141 RADIO ASTRONOMY RADIOLOCATION Amateur Amateur-Satellite		
144 - 148.5 RADIOLOCATION FIXED MOBILE RADIO ASTRONOMY 5.149		
148.5 - 149 EARTH EXPLORATION SATELLITE (passive) RADIO ASTRONOMY SPACE RESEARCH (passive) 5.340		

GHz
241 - 250

Allocation to Services		
Region 1	Region 2	Region 3
241 - 248 RADIOLOCATION RADIO ASTRONOMY Amateur Amateur-satellite 5.138 5.149		
248 - 250 AMATEUR AMATEUR-SATELLITE 5.149		