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Communications  
Canada

# Table of Frequency Allocations

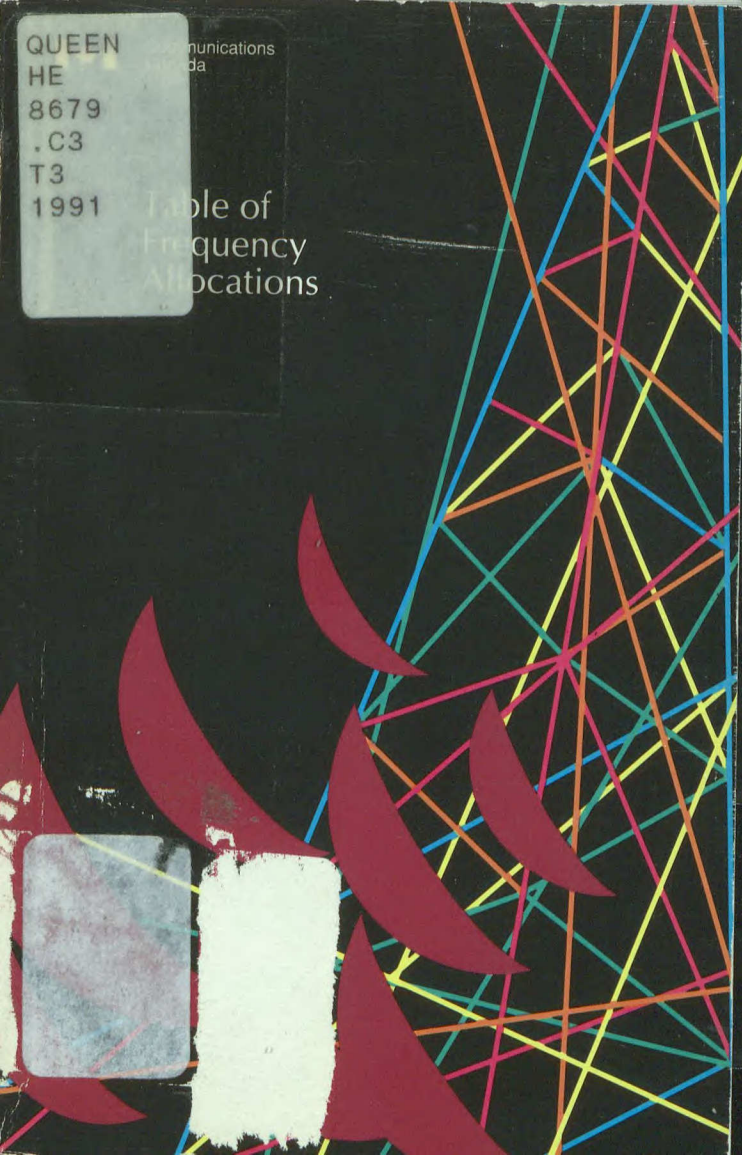


TABLE OF  
FREQUENCY ALLOCATIONS  
9 kHz TO 275 GHz

Telecommunications Policy Branch  
March 1991

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## FOREWORD

This Canadian Table of Frequency Allocations allocates the electromagnetic spectrum between 9 kHz and 275 GHz, (275-400 GHz is unallocated at this time), and is based on the provisions of the Final Acts resulting from the various World Administrative Radio Conferences, convened by the International Telecommunication Union (ITU) until 1990. The Table is intended to respond to Canadian domestic spectrum requirements, consequently it reflects the Department of Communications' spectrum allocation and utilization policies developed through public consultation procedures. It will be noted, therefore, that the Canadian Table differs, where necessary, from the ITU Table.

Portions of this Table and the associated general information will, from time to time, need to be revised. Such revisions will of necessity occur when changes to the ITU Table are made as a result of either a World Administrative Radio Conference (WARC) or a Regional Administrative Radio Conference (RARC) convened by the International Telecommunication Union. At an opportune time, the Canadian Table of Frequency Allocations will also be revised to reflect these international changes and to take into account Canadian requirements.

Information on the Canadian Table of Frequency Allocations and its interpretation with respect to various spectrum utilization policies issued by the Department can best be obtained by contacting:

.. Director  
Spectrum and Orbit Policy  
Telecommunications Policy Branch  
Department of Communications  
300 Slater Street  
Ottawa, Ontario  
Canada  
K1A 0C8

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## **DEFINITIONS**

The following is a list of those terms and definitions which are relevant to a consideration of the Canadian Table of Frequency Allocations. These terms and definitions are extracted from the International Radio Regulations of the International Telecommunication Union. The regulations should be consulted for a more comprehensive listing.

### **General Terms**

- **Administration:** Any governmental department or service responsible for discharging the obligations undertaken in the Convention of the International Telecommunication Union and the Regulations.
- **Allocation (of a frequency band):** Entry in the Table of Frequency Allocations of a given frequency band for the purpose of its use by one or more terrestrial or space radiocommunication services or the radio astronomy service under specified conditions. This term shall also be applied to the frequency band concerned.
- **Allotment (of a radio frequency or radio frequency channel):** Entry of a designated frequency channel in an agreed plan, adopted by a competent conference, for use by one or more administrations for a terrestrial or space radiocommunication service in one or more identified countries or geographical areas and under specified conditions.
- **Assignment (of a radio frequency or radio frequency channel):** Authorization given by an administration for a radio station to use a radio frequency or radio frequency channel under specified conditions.
- **Telecommunication:** Any transmission, emission or reception of signs, signals, writing, images and sounds or intelligence of any nature by wire, radio, optical or other electromagnetic systems.
- **Radio:** A general term applied to the use of radio waves.
- **Radio Waves or Hertzian Waves:** Electromagnetic waves of frequencies arbitrarily lower than 3000 GHz, propagated in space without artificial guide.

- Radiocommunication: Telecommunication by means of radio waves.

- Terrestrial Radiocommunication: Any radiocommunication other than space radiocommunication or radio astronomy.

- Space Radiocommunication: Any radiocommunication involving the use of one or more space stations or the use of one or more reflecting satellites or other objects in space.

- Radiodetermination: The determination of the position, velocity and or other characteristics of an object, or the obtaining of information relating to those parameters, by means of the propagation properties of radio waves.

- Radionavigation: Radiodetermination used for the purpose of navigation, including obstruction warning.

- Radiolocation: Radiodetermination used for purposes other than those of radionavigation.

- Radio Direction-Finding: Radiodetermination using the reception of radio waves for the purpose of determining the direction of a station or object.

- Radio Astronomy: Astronomy based on the reception of radio waves of cosmic origin.

- Coordinated Universal Time (UTC): Time scale, based on the second (SI), as defined and recommended by the CCIR, and maintained by the Bureau International de l'Heure (BIH).

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

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



## Radio Services

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

In these regulations, unless otherwise stated, any radio-communication service relates to terrestrial radiocommunication.

- Fixed Service: A radiocommunication service between specified fixed points.

- Fixed-Satellite Service: A radiocommunication service between earth stations at specified fixed points when one or more satellites are used; in some cases this service includes satellite-to-satellite links, which may also be effected in the inter-satellite service: the fixed-satellite service may also include feeder links for other space radiocommunication services.

- Aeronautical Fixed Service: A radiocommunication service between specified fixed points provided primarily for the safety of air navigation and for the regular, efficient and economical operation of air transport.

- Inter-Satellite Service: A radiocommunication service providing links between artificial earth satellites.

- Space Operation Service: A radiocommunication service concerned exclusively with the operation of spacecraft, in particular space tracking, space telemetry and space telecommand.

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

- Mobile Service: A radiocommunication service between mobile and land stations, or between mobile stations.

- Mobile-Satellite Service: A radiocommunication service:
  - between mobile earth stations and one or more space stations, or between space stations used by this service; or
  - between mobile earth stations by means of one or more space stations.

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

- Land Mobile Service: A mobile service between base stations and land mobile stations or between land mobile stations.
- Land Mobile-Satellite Service: A mobile-satellite service in which mobile earth stations are located on land.
- Maritime Mobile Service: A mobile service between coast stations and ship stations, or between ship stations, or between associated on-board communication stations; survival craft stations and emergency position-indicating radiobeacon stations may also participate in this service.
- Maritime Mobile-Satellite Service: A mobile-satellite service in which mobile earth stations are located on board ships; survival craft stations and emergency position-indicating radiobeacon stations may also participate in this service.
- Aeronautical Mobile Service: A mobile service between aeronautical stations, and aircraft stations, or between aircraft stations, in which survival craft stations may participate; emergency position-indicating radiobeacon stations may also participate in this service on designated distress and emergency frequencies.
- Aeronautical Mobile (R)<sup>1</sup> Service: An aeronautical mobile service reserved for communications relating to safety and regularity of flight, primarily along national or international civil air routes.
- Aeronautical Mobile (OR)<sup>2</sup> Service: An aeronautical mobile service intended for communications, including those relating to flight coordination, primarily outside national or international civil air routes.
- Aeronautical Mobile-Satellite Service: A mobile-satellite service in which mobile earth stations are located on board aircraft; survival craft stations and emergency position-indicating radiobeacon stations may also participate in this service.

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<sup>1</sup> (R): route

<sup>2</sup> (OR): off-route

- Aeronautical Mobile-Satellite (R)<sup>1</sup> Service: An aeronautical mobile-satellite service reserved for communications relating to safety and regularity of flights, primarily along national or international civil air routes.
- Aeronautical Mobile-Satellite (OR)<sup>2</sup> Service: An aeronautical mobile-satellite service intended for communications, including those relating to flight coordination, primarily outside national and international civil air routes.
- Broadcasting Service: A radiocommunication service in which the transmissions are intended for direct reception by the general public. This service may include sound transmissions, television transmissions or other types of transmission.
- Broadcasting-Satellite Service: A radiocommunication service in which signals transmitted or retransmitted by space stations are intended for direct reception by the general public.
- Radiodetermination Service: A radiocommunication service for the purpose of radiodetermination.
- Radiodetermination-Satellite Service: A radiocommunication service for the purpose of radiodetermination involving the use of one or more space stations. This service may also include feeder links necessary for its own operation.
- Maritime Radionavigation Service: A radionavigation service intended for the benefit and for the safe operation of ships.
- Maritime Radionavigation-Satellite Service: A radionavigation service intended in which earth stations are located on board ships.
- Aeronautical Radionavigation Service: A radionavigation service in which earth stations are located on board ships, aircraft.
- Aeronautical Radionavigation-Satellite Service: A radionavigation-satellite service in which earth stations are located on board aircraft.

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<sup>1</sup> ibid

<sup>2</sup> ibid

- Radiolocation Service: A radiodetermination service for the purpose of radiolocation.

- Meteorological Aids Service: A radiocommunication service used for meteorological, including hydrological, observations and exploration.

- Earth Exploration-Satellite Service: A radiocommunication service between earth stations and one or more space stations, which may include links between space stations, in which:

- information relating to the characteristics of the Earth and its natural phenomena is obtained from active sensors or passive sensors on earth satellites;
- similar information is collected from air-borne or earth-based platforms;
- such information may be distributed to earth stations within the system concerned;
- platform interrogation may be included.

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

- Meteorological-Satellite Service: An earth exploration-satellite service for meteorological purposes.

- Standard Frequency and Time Signal Service: A radiocommunication service for scientific, technical and other purposes, providing the transmission of specified frequencies, time signals, or both, of stated high precision, intended for general reception.

- Standard Frequency and Time Signal-Satellite Service: A radiocommunication service using space stations on earth satellites for the same purpose as those of standard frequency and time signal service.

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

- Space Research Service: A radiocommunication service in which spacecraft or other objects in space are used for scientific or technological research purposes.

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

- **Amateur-Satellite Service:** A radiocommunication service using space stations on earth satellites for the same purpose as those of amateur service.

- **Radio Astronomy Service:** A service involving the use of radio astronomy.

- **Safety Service:** Any radiocommunication service used permanently or temporarily for the safeguarding of human life and property.

#### **Categories of Services**

##### **Primary, Permitted and Secondary Services**

- Where, in this 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:

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

- b) services the names of which are printed in "capitals between oblique strokes" (example: /RADIOLOCATION/): these are called "permitted" services;

- c) services the names of which are printed in "normal characters" (example: Mobile): these are called "secondary" services.

- Additional remarks are printed in normal characters (example: MOBILE except aeronautical mobile).

- Permitted and primary services have equal rights, except that, in the preparation of frequency plans, the primary service, as compared with the permitted service, shall have prior choice of frequencies.

- Stations of a secondary service:
  - a) shall not cause harmful interference to stations of primary or permitted services to which frequencies are already assigned or to which frequencies may be assigned at a later date.
  - b) cannot claim protection from harmful interference from stations of a primary or permitted service to which frequencies are already assigned or may be assigned at a later date;
  - 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.
- The heading of the international portion of this Table includes three columns, each of which corresponds to one of the ITU Regions. Where an allocation occupies the whole of the width of the ITU Table or only one or two of the three columns, this is a worldwide allocation or a Regional allocation, respectively.
- The frequency band referred to in each allocation is indicated in the left-hand top corner of the part of the box of the Table concerned.
- The footnote references which appear in the Table below the allocated service or services apply to the whole of the allocation concerned.
- The footnote references which appear to the right of the name of a service are applicable only to that particular service.

**TABLE OF FREQUENCY ALLOCATIONS**

kHz

## ITU ALLOCATION TO SERVICES

REGION 1	REGION 2	REGION 3
Below 9	(not allocated)	
	444 445	
9-14	RADIONAVIGATION	
14-19.95	FIXED MARITIME MOBILE 448	
	446 447	
19.95-20.05	STANDARD FREQUENCY AND TIME SIGNAL (20 kHz)	
20.05-70	FIXED MARITIME MOBILE 448	
	447 449	
70-72 RADIONAVIGATION 451	70-90 FIXED MARITIME MOBILE 448 MARITIME RADIONAVIGATION 451 Radiolocation	70-72 RADIONAVIGATION 451 Fixed Maritime Mobile 448  450
72-84 FIXED MARITIME MOBILE 448 RADIONAVIGATION 451  447		72-84 FIXED MARITIME MOBILE 448 RADIONAVIGATION 451
84-86 RADIONAVIGATION 451		84-86 RADIONAVIGATION 451 Fixed Maritime Mobile 448  450
86-90 FIXED MARITIME MOBILE 448 RADIONAVIGATION  447		86-90 FIXED MARITIME MOBILE 448 RADIONAVIGATION 451
	452	



CANADIAN ALLOCATION TABLE

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## CANADIAN ALLOCATION TABLE

90-110

RADIONAVIGATION  
Fixed

454

110-130

FIXED  
MARITIME MOBILE  
MARITIME RADIONAVIGATION 451  
Radiolocation

452 454

kHz

## ITU ALLOCATION TO SERVICES

REGION 1	REGION 2	REGION 3
130-148.5 MARITIME MOBILE /FIXED/ 454 457	130-160 FIXED MARITIME MOBILE  454	130-160 FIXED MARITIME MOBILE RADIONAVIGATION  454
148.5-255 BROADCASTING   460 461 462	160-190 FIXED  459	160-190 FIXED Aeronautical Radionavigation
	190-200 AERONAUTICAL RADIONAVIGATION	
255-283.5 BROADCASTING /AERONAUTICAL RADIONAVIGATION/ 463 *	200-275 AERONAUTICAL RADIONAVIGATION Aeronautical Mobile	200-285 AERONAUTICAL RADIONAVIGATION  Aeronautical Mobile
462 464 464A	275-285 AERONAUTICAL RADIONAVIGATION Aeronautical Mobile Maritime Radionavigation (radiobeacons)	
283.5-315 MARITIME RADIONAVIGATION (radiobeacons) 466 /AERONAUTICAL RADIONAVIGATION/  465 466A	285-315 MARITIME RADIONAVIGATION (radiobeacons) 466 /AERONAUTICAL RADIONAVIGATION/	
315-325 AERONAUTICAL RADIONAVIGATION Maritime Radionavigation (radiobeacons) 466 465 467	315-325 MARITIME RADIONAVIGATION (radiobeacons) 466 Aeronautical Radionavigation	315-325 AERONAUTICAL RADIONAVIGATION MARITIME RADIONAVIGATION (radiobeacons) 466
325-405 AERONAUTICAL RADIONAVIGATION  465	325-335 AERONAUTICAL RADIONAVIGATION Aeronautical Mobile Maritime Radionavigation (radiobeacons)  335-405 AERONAUTICAL RADIONAVIGATION Aeronautical Mobile	325-405 AERONAUTICAL RADIONAVIGATION Aeronautical Mobile
405-415 RADIONAVIGATION 468 465	405-415 RADIONAVIGATION 468 Aeronautical Mobile	

KHz

CANADIAN ALLOCATION TABLE

130-160	FIXED MARITIME MOBILE  454
160-190	FIXED  459
190-200	AERONAUTICAL RADIONAVIGATION
200-285	AERONAUTICAL RADIONAVIGATION Aeronautical Mobile
285-315	MARITIME RADIONAVIGATION (radiobeacons) 466 /AERONAUTICAL RADIONAVIGATION/
315-325	MARITIME RADIONAVIGATION (radiobeacons) 466 Aeronautical Radionavigation
325-335	AERONAUTICAL RADIONAVIGATION Aeronautical Mobile Maritime Radionavigation (radiobeacons)
335-405	AERONAUTICAL RADIONAVIGATION Aeronautical Mobile
405-415	RADIONAVIGATION 468 Aeronautical Mobile

## ITU ALLOCATION TO SERVICES

REGION 1	REGION 2	REGION 3
415-435 AERONAUTICAL RADIONAVIGATION /MARITIME MOBILE/ 470  465	415-495 MARITIME MOBILE 470 Aeronautical Radionavigation 470A    469 469A 471 472A	
435-495 MARITIME MOBILE 470 Aeronautical Radionavigation 465 471 472A		
495-505	MOBILE (distress and calling)  472	
505-526.5 MARITIME MOBILE 470 /AERONAUTICAL RADIONAVIGATION/  465 471 474 475 476	505-510 MARITIME MOBILE 470  471  510-525 MOBILE AERONAUTICAL RADIONAVIGATION	505-526.5 MARITIME MOBILE 470 474 /AERONAUTICAL RADIONAVIGATION/ Aeronautical Mobile Land Mobile  471
526.5-1 606.5 BROADCASTING   478	525-535 BROADCASTING 477 AERONAUTICAL RADIONAVIGATION  535-1 605 BROADCASTING	526.5-535 BROADCASTING  479
1 606.5-1 625 MARITIME MOBILE 480A /FIXED/ /LAND MOBILE/ 483 484	1 605-1 625 BROADCASTING 480  480A 481	1 606.5-1 800 FIXED MOBILE RADIOLOCATION RADIONAVIGATION
1 625-1 635 RADIOLOCATION 487  485 486	1 625-1 705 BROADCASTING 480 /FIXED/ /MOBILE/ Radiolocation  481 480A	
1 635-1 800 MARITIME MOBILE 480A /FIXED/ /LAND MOBILE/  483 484 488	1 705-1 800 FIXED MOBILE RADIOLOCATION AERONAUTICAL RADIONAVIGATION	482

## CANADIAN ALLOCATION TABLE

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## ITU ALLOCATION TO SERVICES

REGION 1	REGION 2	REGION 3
1 800-1 810 RADIOLOCATION 487  485 486	1 800-1 850 AMATEUR  1 850-2 000 AMATEUR FIXED MOBILE except aeronautical mobile RADIOLOCATION RADIONAVIGATION	1 800-2 000 AMATEUR FIXED MOBILE except aeronautical mobile RADIONAVIGATION Radiolocation          489
1 810-1 850 AMATEUR 490 491 492 493		
1 850-2 000 FIXED MOBILE except aeronautical mobile   484 488 495	1 850-2 000 AMATEUR FIXED MOBILE except aeronautical mobile RADIOLOCATION RADIONAVIGATION  494	
2 000-2 025 FIXED MOBILE except aeronautical mobile (R)  484 495	2 000-2 065 FIXED MOBILE	
2 025-2 045 FIXED MOBILE except aeronautical mobile (R) Meteorological Aids 496 484 495		
2 045-2 160 MARITIME MOBILE /FIXED/ /LAND MOBILE/ 483 484	2 065-2 107 MARITIME MOBILE 497 498	
2 160-2 170 RADIOLOCATION 487  485 486 499	2 107-2 170 FIXED MOBILE	
2 170-2 173.5	MARITIME MOBILE	
2 173.5-2 190.5	MARITIME MOBILE (distress and calling)  500 500A 500B 501	
2 190.5-2 194	MARITIME MOBILE	



KHz

CANADIAN ALLOCATION TABLE

1 800-1 850	AMATEUR
1 850-2 000	AMATEUR RADIOLOCATION RADIONAVIGATION
2 000-2 065	FIXED MOBILE
2 065-2 107	MARITIME MOBILE 497 C3
2 107-2 170	FIXED MOBILE
2 170-2 173.5	MARITIME MOBILE
2 173.5-2 190.5	MARITIME MOBILE (distress and calling)  500 500A 500B 501
2 190.5-2 194	MARITIME MOBILE

## ITU ALLOCATION TO SERVICES

REGION 1	REGION 2	REGION 3
2 194-2 300 FIXED MOBILE except aeronautical mobile (R)	2 194-2 300 FIXED MOBILE	
484 495 502	502	
2 300-2 498 FIXED MOBILE except aeronautical mobile (R) BROADCASTING 503	2 300-2 495 FIXED MOBILE BROADCASTING 503	
495	2 495-2 501 STANDARD FREQUENCY AND TIME SIGNAL (2 500 kHz)	
2 498-2 501 STANDARD FREQUENCY AND TIME SIGNAL (2 500 kHz)		
2 501-2 502	STANDARD FREQUENCY AND TIME SIGNAL Space Research	
2 502-2 625 FIXED MOBILE except aeronautical mobile (R)	2 502-2 505 STANDARD FREQUENCY AND TIME SIGNAL	
484 495 504	2 505-2 850 FIXED MOBILE	
2 625-2 650 MARITIME MOBILE MARITIME RADIONAVIGATION		
484		
2 650-2 850 FIXED MOBILE except aeronautical mobile (R)		
484 495		
2 850-3 025	AERONAUTICAL MOBILE (R)	
	501 505	

KHz

CANADIAN ALLOCATION TABLE

2 194-2 495	FIXED MOBILE
2 495-2 501	STANDARD FREQUENCY AND TIME SIGNAL (2 500 kHz)
2 501-2 502	STANDARD FREQUENCY AND TIME SIGNAL Space Research
2 502-2 505	STANDARD FREQUENCY AND TIME SIGNAL
2 505-2 850	FIXED MOBILE
2 850-3 025	AERONAUTICAL MOBILE (R)  501 505

## ITU ALLOCATION TO SERVICES

REGION 1	REGION 2	REGION 3
3 025-3 155	AERONAUTICAL MOBILE (OR)	
3 155-3 200	FIXED MOBILE except aeronautical mobile (R) 506 507	
3 200-3 230	FIXED MOBILE except aeronautical mobile (R) BROADCASTING 503 506	
3 230-3 400	FIXED MOBILE except aeronautical mobile BROADCASTING 503 506 508	
3 400-3 500	AERONAUTICAL MOBILE (R)	
3 500-3 800 AMATEUR 510 FIXED MOBILE except aeronautical mobile 484	3 500-3 750 AMATEUR 510 509 511	3 500-3 900 AMATEUR 510 FIXED MOBILE
3 800-3 900 FIXED AERONAUTICAL MOBILE (OR) LAND MOBILE	3 750-4 000 AMATEUR 510 FIXED MOBILE except aeronautical mobile (R) 511 512 514 515	
3 900-3 950 AERONAUTICAL MOBILE (OR) 513		
3 950-4 000 FIXED BROADCASTING		
4 000-4 063	FIXED MARITIME MOBILE 517 516	
4 063-4 438	MARITIME MOBILE 500A, 500B, 520, 520A, 520B 518 519	

KHz

CANADIAN ALLOCATION TABLE

3 025-3 155	AERONAUTICAL MOBILE (OR) C5
3 155-3 230	FIXED MOBILE except aeronautical mobile (R)  506
3 230-3 400	FIXED MOBILE except aeronautical mobile Radiolocation 508  506
3 400-3 500	AERONAUTICAL MOBILE (R)
3 500-4 000	AMATEUR 510 514
4 000-4 063	FIXED MARITIME MOBILE 517
4 063-4 438	MARITIME MOBILE 500A 500B 520 520A 520B  519

kHz

## ITU ALLOCATION TO SERVICES

REGION 1	REGION 2	REGION 3
4 438-4 650 FIXED MOBILE except aeronautical mobile (R)		4 438-4 650 FIXED MOBILE except aeronautical mobile
4 650-4 700	AERONAUTICAL MOBILE (R)	
4 700-4 750	AERONAUTICAL MOBILE (OR)	
4 750-4 850 FIXED AERONAUTICAL MOBILE (OR) LAND MOBILE BROADCASTING 503	4 750-4 850 FIXED MOBILE except aeronautical mobile (R) BROADCASTING 503	4 750-4 850 FIXED BROADCASTING 503 Land Mobile
4 850-4 995	FIXED LAND MOBILE BROADCASTING 503	
4 995-5 003	STANDARD FREQUENCY AND TIME SIGNAL (5 000 kHz)	
5 003-5 005	STANDARD FREQUENCY AND TIME SIGNAL Space Research	
5 005-5 060	FIXED BROADCASTING 503	
5 060-5 250	FIXED Mobile except aeronautical mobile  521	
5 250-5 450	FIXED MOBILE except aeronautical mobile	
5 450-5 480 FIXED AERONAUTICAL MOBILE (OR) LAND MOBILE	5 450-5 480 AERONAUTICAL MOBILE (R)	5 450-5 480 FIXED AERONAUTICAL MOBILE (OR) LAND MOBILE
5 480-5 680	AERONAUTICAL MOBILE (R)  501 505	

kHz  
CANADIAN ALLOCATION TABLE

4 438-4 650	FIXED MOBILE except aeronautical mobile (R)
4 650-4 700	AERONAUTICAL MOBILE (R)
4 700-4 750	AERONAUTICAL MOBILE (OR) C5
4 750-4 850	FIXED MOBILE except aeronautical mobile (R)
4 850-4 995	FIXED LAND MOBILE
4 995-5 003	STANDARD FREQUENCY AND TIME SIGNAL (5 000 kHz)
5 003-5 005	STANDARD FREQUENCY AND TIME SIGNAL Space Research
5 005-5 060	FIXED
5 060-5 250	FIXED Mobile except aeronautical mobile
5 250-5 450	FIXED MOBILE except aeronautical mobile
5 450-5 480	AERONAUTICAL MOBILE (R)
5 480-5 680	AERONAUTICAL MOBILE (R)  501 505

## ITU ALLOCATION TO SERVICES

REGION 1	REGION 2	REGION 3
5 680-5 730	AERONAUTICAL MOBILE (OR) 501 505	
5 730-5 950 FIXED LAND MOBILE	5 730-5 950 FIXED MOBILE except aeronautical mobile (R)	5 730-5 950 FIXED Mobile except aeronautical mobile (R)
5 950-6 200	BROADCASTING	
6 200-6 525	MARITIME MOBILE 500A 500B 520 520B 522	
6 525-6 685	AERONAUTICAL MOBILE (R)	
6 685-6 765	AERONAUTICAL MOBILE (OR)	
6 765-7 000	FIXED Land Mobile 525 524	
7 000-7 100	AMATEUR 510 AMATEUR-SATELLITE 526 527	
7 100-7 300 BROADCASTING	7 100-7 300 AMATEUR 510 528	7 100-7 300 BROADCASTING
7 300-8 100	FIXED Land Mobile 529	
8 100-8 195	FIXED MARITIME MOBILE	
8 195-8 815	MARITIME MOBILE 500A 500B 520B 529A 501	
8 815-8 965	AERONAUTICAL MOBILE (R)	



## CANADIAN ALLOCATION TABLE

5 680-5 730	AERONAUTICAL MOBILE (OR) 501 505 C5
5 730-5 950	FIXED MOBILE except aeronautical mobile (R)
5 950-6 200	BROADCASTING
6 200-6 525	MARITIME MOBILE 500A 500B 520 520B C4
6 525-6 685	AERONAUTICAL MOBILE (R)
6 685-6 765	AERONAUTICAL MOBILE (OR) C5
6 765-7 000	FIXED Land Mobile 524
7 000-7 100	AMATEUR 510 AMATEUR-SATELLITE
7 100-7 300	AMATEUR 510 528
7 300-8 100	FIXED Land Mobile
8 100-8 195	FIXED MARITIME MOBILE
8 195-8 815	MARITIME MOBILE 500A 500B 520B 529A 501
8 815-8 965	AERONAUTICAL MOBILE (R)

kHz

## ITU ALLOCATION TO SERVICES

REGION 1	REGION 2	REGION 3
8 965-9 040	AERONAUTICAL MOBILE (OR)	
9 040-9 500	FIXED	
9 500-9 900	BROADCASTING 530 531	
9 900-9 995	FIXED	
9 995-10 003	STANDARD FREQUENCY AND TIME SIGNAL (10 000 kHz)  501	
10 003-10 005	STANDARD FREQUENCY AND TIME SIGNAL Space Research  501	
10 005-10 100	AERONAUTICAL MOBILE (R)  501	
10 100-10 150	FIXED Amateur 510	
10 150-11 175	FIXED Mobile except aeronautical mobile (R)	

kHz

CANADIAN ALLOCATION TABLE

8 965-9 040	AERONAUTICAL MOBILE (OR) C5
9 040-9 500	FIXED
9 500-9 900	BROADCASTING 531
9 900-9 995	FIXED
9 995-10 003	STANDARD FREQUENCY AND TIME SIGNAL (10 000 kHz)  501
10 003-10 005	STANDARD FREQUENCY AND TIME SIGNAL Space Research  501
10 005-10 100	AERONAUTICAL MOBILE (R)  501
10 100-10 150	AMATEUR 510  C6
10 150-11 175	FIXED Mobile except aeronautical mobile (R)  "

KHz

ITU ALLOCATION TO SERVICES

REGION 1	REGION 2	REGION 3
11 175-11 275	AERONAUTICAL MOBILE (OR)	
11 275-11 400	AERONAUTICAL MOBILE (R)	
11 400-11 650	FIXED	
11 650-12 050	BROADCASTING 530 531	
12 050-12 230	FIXED	
12 230-13 200	MARITIME MOBILE 500A 500B 520B 529A 532	
13 200-13 260	AERONAUTICAL MOBILE (OR)	
13 260-13 360	AERONAUTICAL MOBILE (R)	
13 360-13 410	FIXED RADIO ASTRONOMY 533	
13 410-13 600	FIXED Mobile except aeronautical mobile (R) 534	
13 600-13 800	BROADCASTING 531	
13 800-14 000	FIXED Mobile except aeronautical mobile (R)	
14 000-14 250	AMATEUR 510 AMATEUR-SATELLITE	

kHz  
CANADIAN ALLOCATION TABLE

11 175-11 275	AERONAUTICAL MOBILE (OR) C5
11 275-11 400	AERONAUTICAL MOBILE (R)
11 400-11 650	FIXED
11 650-12 050	BROADCASTING 531
12 050-12 230	FIXED
12 230-13 200	MARITIME MOBILE 500A 500B 520B 529A 532
13 200-13 260	AERONAUTICAL MOBILE (OR) C5
13 260-13 360	AERONAUTICAL MOBILE (R) 533
13 360-13 410	FIXED RADIO ASTRONOMY 533
13 410-13 600	FIXED MOBILE except aeronautical mobile (R) 534
13 600-13 800	BROADCASTING 531
13 800-14 000	FIXED Mobile except aeronautical mobile (R)
14 000-14 250	AMATEUR 510 AMATEUR-SATELLITE

kHz

## ITU ALLOCATION TO SERVICES

REGION 1	REGION 2	REGION 3
14 250-14 350	AMATEUR 510 535	
14 350-14 990	FIXED Mobile except aeronautical mobile (R)	
14 990-15 005	STANDARD FREQUENCY AND TIME SIGNAL (15 000 kHz) 501	
15 005-15 010	STANDARD FREQUENCY AND TIME SIGNAL Space Research	
15 010-15 100	AERONAUTICAL MOBILE (OR)	
15 100-15 600	BROADCASTING 531	
15 600-16 360	FIXED 536	
16 360-17 410	MARITIME MOBILE 500A 500B 520B 529A 532	
17 410-17 550	FIXED	
17 550-17 900	BROADCASTING 531	
17 900-17 970	AERONAUTICAL MOBILE (R)	
17 970-18 030	AERONAUTICAL MOBILE (OR)	
18 030-18 052	FIXED	
18 052-18 068	FIXED Space Research	

kHz  
CANADIAN ALLOCATION TABLE

14 250-14 350	AMATEUR 510
14 350-14 990	FIXED Mobile except aeronautical mobile (R)
14 990-15 005	STANDARD FREQUENCY AND TIME SIGNAL (15 000 kHz) 501
15 005-15 010	STANDARD FREQUENCY AND TIME SIGNAL Space Research
15 010-15 100	AERONAUTICAL MOBILE (OR) C5
15 100-15 600	BROADCASTING 531
15 600-16 360	FIXED 536
16 360-17 410	MARITIME MOBILE 500A 500B 520B 529A 532
17 410-17 550	FIXED
17 550-17 900	BROADCASTING 531
17 900-17 970	AERONAUTICAL MOBILE (R)
17 970-18 030	AERONAUTICAL MOBILE (OR) C5
18 030-18 052	FIXED
18 052-18 068	FIXED Space Research

kHz  
ITU ALLOCATION TO SERVICES

REGION 1	REGION 2	REGION 3
18 068-18 168	AMATEUR 510 AMATEUR-SATELLITE 537 538	
18 168-18 780	FIXED Mobile except aeronautical mobile	
18 780-18 900	MARITIME MOBILE  532	
18 900-19 680	FIXED	
19 680-19 800	MARITIME MOBILE 520B  532	
19 800-19 990	FIXED	
19 990-19 995	STANDARD FREQUENCY AND TIME SIGNAL Space Research  501	
19 995-20 010	STANDARD FREQUENCY AND TIME SIGNAL (20000 kHz)  501	
20 010-21 000	FIXED Mobile	
21 000-21 450	AMATEUR 510 AMATEUR-SATELLITE	
21 450-21 850	BROADCASTING  531	
21 850-21 870	FIXED  539	
21 870-21 924	AERONAUTICAL FIXED	



KHz  
CANADIAN ALLOCATION TABLE

18 068-18 168	AMATEUR 510 AMATEUR-SATELLITE 537
18 168-18 780	FIXED
18 780-18 900	MARITIME MOBILE 532
18 900-19 680	FIXED
19 680-19 800	MARITIME MOBILE 520B 532
19 800-19 990	FIXED
19 990-19 995	STANDARD FREQUENCY AND TIME SIGNAL Space Research 501
19 995-20 010	STANDARD FREQUENCY AND TIME SIGNAL (20 000 KHz) 501
20 010-21 000	FIXED Mobile
21 000-21 450	AMATEUR 510 AMATEUR-SATELLITE
21 450-21 850	BROADCASTING 531
21 850-21 870	FIXED
21 870-21 924	AERONAUTICAL FIXED

KHz

ITU ALLOCATION TO SERVICES

REGION 1	REGION 2	REGION 3
21 924-22 000	AERONAUTICAL MOBILE (R)	
22 000-22 855	MARITIME MOBILE 520B 532 540	
22 855-23 000	FIXED 540	
23 000-23 200	FIXED Mobile except aeronautical mobile 540	
23 200-23 350	AERONAUTICAL FIXED AERONAUTICAL MOBILE (OR)	
23 350-24 000	FIXED MOBILE except aeronautical mobile 541 542	
24 000-24 890	FIXED LAND MOBILE 542	
24 890-24 990	AMATEUR 510 AMATEUR-SATELLITE 542 543	
24 990-25 005	STANDARD FREQUENCY AND TIME SIGNAL (25 000 kHz)	
25 005-25 010	STANDARD FREQUENCY AND TIME SIGNAL Space Research	
25 010-25 070	FIXED MOBILE except aeronautical mobile	
25 070-25 210	MARITIME MOBILE 544	

## CANADIAN ALLOCATION TABLE

21 924-22 000	AERONAUTICAL MOBILE (R)
22 000-22 855	MARITIME MOBILE 520B 532
22 855-23 000	FIXED
23 000-23 200	FIXED Mobile except aeronautical mobile (R)
23 200-23 350	AERONAUTICAL FIXED AERONAUTICAL MOBILE (OR) CS
23 350-24 000	FIXED MOBILE except aeronautical mobile 541
24 000-24 890	FIXED LAND MOBILE
24 890-24 990	AMATEUR 510 AMATEUR-SATELLITE 543
24 990-25 005	STANDARD FREQUENCY AND TIME SIGNAL (25 000 kHz)
25 005-25 010	STANDARD FREQUENCY AND TIME SIGNAL Space Research
25 010-25 070	FIXED MOBILE except aeronautical mobile
25 070-25 210	MARITIME MOBILE 544

KHz

ITU ALLOCATION TO SERVICES

REGION 1	REGION 2	REGION 3
25 210-25 550	FIXED MOBILE except aeronautical mobile	
25 550-25 670	RADIO ASTRONOMY	
	545	
25 670-26 100	BROADCASTING	
26 100-26 175	• MARITIME MOBILE 520B	
	544	
26 175-27 500	FIXED MOBILE except aeronautical mobile	
	546	

kHz  
CANADIAN ALLOCATION TABLE

25 210-25 550	FIXED MOBILE except aeronautical mobile
25 550-25 670	RADIO ASTRONOMY
	545
25 670-26 100	BROADCASTING
26 100-26 175	MARITIME MOBILE <sup>49</sup> 520B
	544
26 175-27 500	FIXED MOBILE except aeronautical mobile
	546

## ITU ALLOCATION TO SERVICES

REGION 1	REGION 2	REGION 3
27.5-28	METEOROLOGICAL AIDS FIXED MOBILE	
28-29.7	AMATEUR AMATEUR-SATELLITE	
29.7-30.005	FIXED MOBILE	
30.005-30.01	SPACE OPERATION (satellite identification) FIXED MOBILE SPACE RESEARCH	
30.01-37.5	FIXED MOBILE	
37.5-38.25	FIXED MOBILE Radio Astronomy 547	
38.25-39.986	FIXED MOBILE	
39.986-40.02	FIXED MOBILE Space Research	
40.02-40.98	FIXED MOBILE 548	
40.98-41.015	FIXED MOBILE Space Research 549 550 551	

MHz  
CANADIAN ALLOCATION TABLE

27.5-28	MOBILE Fixed
28-29.7	AMATEUR AMATEUR-SATELLITE
29.7-30.005	MOBILE Fixed
30.005-30.01	MOBILE SPACE RESEARCH Fixed
30.01-37.5	MOBILE Fixed
37.5-38.25	MOBILE Fixed Radio Astronomy 547
38.25-39.986	MOBILE Fixed
39.986-40.02	MOBILE Fixed Space Research
40.02-40.9B	MOBILE Fixed 548
40.98-41.015	MOBILE Fixed Space Research

## ITU ALLOCATION TO SERVICES

REGION 1	REGION 2	REGION 3
41.015-44	FIXED MOBILE  549 550 551	
44-47	FIXED MOBILE  551 552	
47-68 BROADCASTING	47-50 FIXED MOBILE	47-50 FIXED MOBILE BROADCASTING
	50-54 AMATEUR  556 557 558 560	
	54-68 BROADCASTING Fixed Mobile	54-68 FIXED MOBILE BROADCASTING
	553 554 555 559 561	562
68-74.8 FIXED MOBILE except aeronautical mobile	68-72 BROADCASTING Fixed Mobile	68-74.8 FIXED MOBILE
	563	
	72-73  FIXED MOBILE	
	73-74.6 RADIO ASTRONOMY  569 570	
	74.6-74.8 FIXED MOBILE	
564 565 567 568 571 572	572	566 568 571 572
74.8-75.2	AERONAUTICAL RADIONAVIGATION  572 572A	



MHZ  
CANADIAN ALLOCATION TABLE

41.015-47	MOBILE Fixed
47-50	MOBILE Fixed
50-54	AMATEUR
54-68	BROADCASTING
68-72	BROADCASTING
72-73	FIXED MOBILE
73-74.6	RADIO ASTRONOMY 569
74.6-74.8	FIXED MOBILE 572
74.8-75.2	AERONAUTICAL RADIONAVIGATION 572

## ITU ALLOCATION TO SERVICES

REGION 1	REGION 2	REGION 3
75.2-87.5 FIXED MOBILE except aeronautical mobile  565 571 572 575 578	75.2-75.4 FIXED MOBILE 571 572	75.4-87 FIXED MOBILE 573 574 577 579
	75.4-76 FIXED MOBILE	
	76-88 BROADCASTING Fixed Mobile 576	
87.5-100 BROADCASTING  581 582	88-100 BROADCASTING	87-100 FIXED MOBILE BROADCASTING  580
100-108	BROADCASTING  582 584 585 586 587 588 589	
108-117.975	AERONAUTICAL RADIONAVIGATION 590A	
117.975-136	AERONAUTICAL MOBILE (R)  501 591 592 593 594	
136-137	AERONAUTICAL MOBILE (R) Fixed Mobile except aeronautical mobile (R)  591 594A 595	
137-138	SPACE OPERATION (space-to-Earth) METEOROLOGICAL-SATELLITE (space-to-Earth) SPACE RESEARCH (space-to-Earth) Fixed Mobile except aeronautical mobile (R)  596 597 598 599	
138-143.6 AERONAUTICAL MOBILE (OR)  600 601 602 604	138-143.6 FIXED MOBILE /RADIOLOCATION/ Space Research (space-to-Earth)	138-143.6 FIXED MOBILE Space Research (space-to-Earth)  599 603

MHZ  
CANADIAN ALLOCATION TABLE

75.2-76	FIXED MOBILE  572
76-108	BROADCASTING
108-117.975	AERONAUTICAL RADIONAVIGATION
117.975-137	AERONAUTICAL MOBILE (R)  501 592 593 595
137-138	SPACE OPERATION (space-to-Earth) METEOROLOGICAL-SATELLITE (space-to-Earth) space research (space-to-Earth)
138-143.6	FIXED LAND MOBILE SPACE RESEARCH (space-to-Earth)

## ITU ALLOCATION TO SERVICES

REGION 1	REGION 2	REGION 3
143.6-143.65 AERONAUTICAL MOBILE (OR) SPACE RESEARCH (space-to-Earth)  601 602 604	143.6-143.65 FIXED MOBILE SPACE RESEARCH (space-to-Earth) /RADIOLOCATION/	143.6-143.65 FIXED MOBILE SPACE RESEARCH (space-to-Earth)  599 603
143.65-144 AERONAUTICAL MOBILE (OR)  600 601 602 604	143.65-144 FIXED MOBILE /RADIOLOCATION/ SPACE RESEARCH (space-to-Earth)	143.65-144 FIXED MOBILE SPACE RESEARCH (space-to-Earth)  599 603
144-146  AMATEUR 510 AMATEUR-SATELLITE  605 606		
146-149.9 FIXED MOBILE except aeronautical mobile (R)  608	146-148 AMATEUR  607	146-148 AMATEUR FIXED MOBILE  607
	148-149.9 FIXED MOBILE  608	
149.9-150.05  RADIONAVIGATION-SATELLITE  609 609A		
150.05-153 FIXED MOBILE except aeronautical mobile RADIO ASTRONOMY  610 612	150.05-156.7625 FIXED MOBILE          611 613 613A	
153-154 FIXED MOBILE except aeronautical mobile (R) Meteorological Aids		
154-156.7625 FIXED MOBILE except aeronautical mobile (R) 613 613A		

### CANADIAN ALLOCATION TABLE

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MHz

ITU ALLOCATION TO SERVICES

REGION 1	REGION 2	REGION 3
156.7625-156.8375	MARITIME MOBILE (distress and calling)	
	501 613	
156.8375-174 FIXED MOBILE except aeronautical mobile (R)	156.8375-174 FIXED MOBILE	
613 613B 614 615	613 616 617 618	
174-223 BROADCASTING	174-216 BROADCASTING Fixed Mobile 620	174-223 FIXED MOBILE BROADCASTING
621 623 628 629	216-220 FIXED MARITIME MOBILE Radiolocation 627 627A	619 624 625 626 630
223-230 BROADCASTING Fixed Mobile	220-225 AMATEUR FIXED MOBILE Radiolocation 627	223-230 FIXED MOBILE BROADCASTING AERONAUTICAL RADIONAVIGATION Radiolocation 636 637
622 628 629 631 632 633 634 635	225-235 FIXED MOBILE	230-235 FIXED MOBILE AERONAUTICAL RADIONAVIGATION 637
230-235 FIXED MOBILE		
629 632 633 634 635 638 639		
235-267	FIXED MOBILE 501 592 635 640 641 642	
267-272	FIXED MOBILE Space Operation (space-to-Earth) 641 643	
272-273	SPACE OPERATION (space-to-Earth) FIXED MOBILE 641	

MHz  
CANADIAN ALLOCATION TABLE

156.7625-156.8375	MARITIME MOBILE (distress and calling)  501 613 613A
156.8375-174	MOBILE Fixed   613
174-216	BROADCASTING
216-220	FIXED MARITIME MOBILE
220-225	AMATEUR
225-235	FIXED MOBILE   C5
235-273	FIXED MOBILE          501 592 642 C5 C7 C8

MHz

ITU ALLOCATION TO SERVICES

REGION 1	REGION 2	REGION 3
273-322	FIXED MOBILE 641	
322-328.6	FIXED MOBILE RADIO ASTRONOMY 644	
328.6-335.4	AERONAUTICAL RADIONAVIGATION  645 645A	
335.4-399.9	FIXED MOBILE  641	
399.9-400.05	RADIONAVIGATION-SATELLITE  609 645B	
400.05-400.15	STANDARD FREQUENCY AND TIME SIGNAL-SATELLITE (400.1 MHz)  646 647	
400.15-401	METEOROLOGICAL AIDS METEOROLOGICAL-SATELLITE (space-to-Earth) SPACE RESEARCH (space-to-Earth) Space Operation (space-to-Earth)  647	
401-402	METEOROLOGICAL AIDS SPACE OPERATION (space-to-Earth) Earth Exploration-Satellite (Earth-to-space) Fixed Meteorological-Satellite (Earth-to-space) Mobile except aeronautical mobile	
402-403	METEOROLOGICAL AIDS Earth Exploration-Satellite (Earth-to-space) Fixed Meteorological-Satellite (Earth-to-space) Mobile except aeronautical mobile	
403-406	METEOROLOGICAL AIDS Fixed Mobile except aeronautical mobile  648	



## CANADIAN ALLOCATION TABLE

273-328.6	FIXED MOBILE  C5 C7 C8
328.6-335.4	AERONAUTICAL RADIONAVIGATION 645
335.4-399.9	FIXED MOBILE C5 C7
399.9-400.05	RADIONAVIGATION-SATELLITE 609 645B C19
400.05-400.15	STANDARD FREQUENCY AND TIME SIGNAL-SATELLITE (400.1 MHz) 646
400.15-401	METEOROLOGICAL AIDS METEOROLOGICAL-SATELLITE (space-to-Earth) SPACE RESEARCH (space-to-Earth) Space Operation (space-to-Earth)
401-402	METEOROLOGICAL AIDS SPACE OPERATION (space-to-Earth) Earth Exploration-Satellite (Earth-to-space) Fixed Mobile except aeronautical mobile
402-403	METEOROLOGICAL AIDS Earth Exploration-Satellite (Earth-to-space) Fixed Mobile except aeronautical mobile
403-406	METEOROLOGICAL AIDS Fixed Mobile except aeronautical mobile 648

MHz

ITU ALLOCATION TO SERVICES

REGION 1	REGION 2	REGION 3
406-406.1	MOBILE-SATELLITE (Earth-to-space)	
	649 649A	
406.1-410	FIXED MOBILE except aeronautical mobile RADIO ASTRONOMY	
	648 650	
410-420	FIXED MOBILE except aeronautical mobile	
420-430	FIXED MOBILE except aeronautical mobile Radiolocation 651 652 653	
430-440 AMATEUR RADIOLOCATION 653 654 655 656 657 658 659 661 662 663 664 665	430-440 RADIOLOCATION Amateur 653 658 659 660 660A 663 664	
440-450	FIXED MOBILE except aeronautical mobile Radiolocation 651 652 653 666 667 668	
450-460	FIXED MOBILE 653 668 669 670	
460-470	FIXED MOBILE Meteorological-Satellite (space-to-Earth) 669 670 671 672	

## CANADIAN ALLOCATION TABLE

406-406.1	MOBILE-SATELLITE (Earth-to-space)  649 649A
406.1-410	RADIO ASTRONOMY MOBILE except aeronautical mobile Fixed  648 650
410-414	MOBILE except aeronautical mobile Fixed
414-415	FIXED Mobile except aeronautical mobile
415-419	MOBILE except aeronautical mobile Fixed
419-420	FIXED Mobile except aeronautical mobile
420-430	MOBILE except aeronautical mobile Fixed  C10
430-450	RADIOLOCATION 667 Amateur 666  664 668
450-470	MOBILE 669 670 Fixed  668

## ITU ALLOCATION TO SERVICES

REGION 1	REGION 2	REGION 3
470-790 BROADCASTING    676 677A 682 683 684 685 686 686A 687 689 693 694	470-512 BROADCASTING Fixed Mobile 674 675	470-585 FIXED MOBILE BROADCASTING  673 677 679
	512-608 BROADCASTING  678	585-610 FIXED MOBILE BROADCASTING RADIONAVIGATION  688 689 690
	608-614 RADIO ASTRONOMY Mobile-Satellite except aeronautical mobile-satellite (Earth-to-space)	610-890 FIXED MOBILE BROADCASTING
	790-862 FIXED BROADCASTING  694 695 695A 696 697 702	
862-890 FIXED MOBILE except aeronautical mobile BROADCASTING 703  704	614-806 BROADCASTING Fixed Mobile  675 692 692A 693	
	806-890 FIXED MOBILE BROADCASTING  692A 700	677 688 689 690 691 693 701
890-942 FIXED MOBILE except aeronautical mobile BROADCASTING 703 Radiolocation    704	890-902 FIXED MOBILE except aeronautical mobile Radiolocation  704A 705	890-942 FIXED MOBILE BROADCASTING Radiolocation    706
	902-928 FIXED Amateur Mobile except aeronautical mobile Radiolocation  705 707 707A	
	928-942 FIXED MOBILE except aeronautical mobile Radiolocation 705	

## CANADIAN ALLOCATION TABLE

470-608	BROADCASTING
608-614	RADIO ASTRONOMY Mobile-Satellite except aeronautical mobile-satellite (Earth-to-space)
614-806	BROADCASTING
806-890	MOBILE Fixed  700 C11
890-902	FIXED MOBILE except aeronautical mobile Radiolocation C5A  704A
902-928	FIXED RADIOLOCATION C5A Amateur  707
928-942	FIXED MOBILE except aeronautical mobile Radiolocation C5A

## ITU ALLOCATION TO SERVICES

REGION 1	REGION 2	REGION 3
942-960 FIXED MOBILE except aeronautical mobile BROADCASTING 703  704	942-960 FIXED Mobile  708	942-960 FIXED MOBILE BROADCASTING  701
960-1 215	AERONAUTICAL RADIONAVIGATION   709	
1 215-1 240	RADIOLOCATION RADIONAVIGATION-SATELLITE (space-to-Earth) 710 711 712 712A 713	
1 240-1 260	RADIOLOCATION RADIONAVIGATION-SATELLITE (space-to-Earth) 710 Amateur 711 712 712A 713 714	
1 260-1 300	RADIOLOCATION Amateur 664 711 712 712A 713 714	
1 300-1 350	AERONAUTICAL RADIONAVIGATION 717 Radiolocation 715 716 718	
1 350-1 400 FIXED MOBILE RADIOLOCATION  718 719 720	1 350-1 400 RADIOLOCATION  714 718 720	
1 400-1 427	EARTH EXPLORATION-SATELLITE (passive) RADIO ASTRONOMY SPACE RESEARCH (passive) 721 722	
1 427-1 429	SPACE OPERATION (Earth-to-space) FIXED MOBILE except aeronautical mobile  722	

## CANADIAN ALLOCATION TABLE

942-960	FIXED MOBILE
960-1 215	AERONAUTICAL RADIONAVIGATION  709
1 215-1 240	RADIOLOCATION RADIONAVIGATION-SATELLITE (space-to-Earth) 710 713
1 240-1 300	RADIOLOCATION AERONAUTICAL RADIONAVIGATION 710 Amateur  664 713
1 300-1 350	AERONAUTICAL RADIONAVIGATION 717 Radiolocation 718
1 350-1 370	RADIOLOCATION AERONAUTICAL RADIONAVIGATION 714 718
1 370-1 400	RADIOLOCATION 718 720
1 400-1 427	EARTH EXPLORATION-SATELLITE (passive) RADIO ASTRONOMY SPACE RESEARCH (passive) 721 722
1 427-1 429	SPACE OPERATION (Earth-to-space) FIXED  722

## ITU ALLOCATION TO SERVICES

REGION 1	REGION 2	REGION 3
1 429-1 525 FIXED MOBILE except aeronautical mobile  722	1 429-1 525 FIXED MOBILE 723  722	
1 525-1 530 SPACE OPERATION (space-to-Earth) FIXED Earth Exploration- Satellite Mobile except aeronautical mobile 724  722 725	1 525-1 530 SPACE OPERATION (space-to-Earth) Earth Exploration- Satellite Fixed Mobile 723  722 723A	1 525-1 530 SPACE OPERATION (space-to-Earth) FIXED Earth Exploration- Satellite mobile 723 724  722
1 530-1 533 SPACE OPERATION (space-to-Earth)  MARITIME MOBILE- SATELLITE (space-to-Earth) Earth Exploration- Satellite  Fixed  Mobile except aeronautical mobile LAND MOBILE-SATELLITE (space-to-Earth)  722 726 726A	1 530-1 533 SPACE OPERATION (space-to-Earth)  MARITIME MOBILE-SATELLITE (space-to-Earth)  Earth Exploration-Satellite Fixed  Mobile 723  LAND MOBILE-SATELLITE (space-to-Earth)  722 726 726A	
1 533-1 535 SPACE OPERATION (space-to-Earth) MARITIME MOBILE- SATELLITE (space-to-Earth) Earth Exploration- Satellite Fixed Mobile except aeronautical mobile Land Mobile-Satellite (space-to-Earth) 726B  722 726 726A	1 533-1 535 SPACE OPERATION (space-to-Earth) MARITIME MOBILE-SATELLITE (space-to-Earth) Earth Exploration-Satellite Fixed Mobile 723 Land Mobile-Satellite (space-to-Earth) 726B  722 726 726A	



## CANADIAN ALLOCATION TABLE

1 429-1 525	<p>FIXED MOBILE C5 C12</p> <p>..</p> <p>722</p>
1 525-1 530	<p>SPACE OPERATION (space-to-Earth) MOBILE C5 C12 Earth Exploration-Satellite Fixed</p> <p>..</p> <p>722</p>
1 530-1 533	<p>MOBILE-SATELLITE (space-to-Earth) Earth Exploration-Satellite Fixed</p> <p>..</p> <p>722</p>
1 533-1 535	<p>MOBILE-SATELLITE (space-to-Earth) Earth Exploration-Satellite Fixed</p> <p>..</p> <p>722</p>

## ITU ALLOCATION TO SERVICES

REGION 1	REGION 2	REGION 3
1 535-1 544	MARITIME MOBILE-SATELLITE (space-to-Earth) Land Mobile-Satellite (space-to-Earth) 726B  722 726A 727	
1 544-1 545	MOBILE-SATELLITE (space-to-Earth)  722 727 727A	
1 545-1 555	AERONAUTICAL MOBILE-SATELLITE (R) (space-to-Earth) 722 726A 727 729 729A 730	
1 555-1 559	LAND MOBILE-SATELLITE (space-to-Earth)  722 726A 727 730 730A	
1 559-1 610	AERONAUTICAL RADIONAVIGATION RADIONAVIGATION-SATELLITE (space-to-Earth)  722 727 730 731 731A 731B 731C-731D	
1 610-1 626.5 AERONAUTICAL RADIONAVIGATION  722 727 730 731 731A 731B 731D 732 733 733A 733B 733E 733F 734	1 610-1 626.5 AERONAUTICAL RADIONAVIGATION  RADIODETERMINATION- SATELLITE (Earth-to-space) 733A 733E  722 731B 731C 732 733 733C 733D 734	1 610-1 626.5 AERONAUTICAL RADIONAVIGATION  Radiodetermination- satellite (Earth-to-space) 733A 733E  722 727 730 731B 731C 732 733 733B 734
1 626.5-1 631.5	MARITIME MOBILE-SATELLITE (Earth-to-space)  Land Mobile-Satellite 726B (Earth-to-space)  722 726A 727 730	
1 631.5-1 634.5	MARITIME MOBILE-SATELLITE (Earth-to-space)  LAND MOBILE-SATELLITE (Earth-to-space)  722 726A 727 730 734A	
1 634.5-1 645.5	MARITIME MOBILE-SATELLITE (Earth-to-space)  Land Mobile-Satellite (Earth-to-space) 726B  722 726A 727 730	

## MHz

1 535-1 544

MOBILE-SATELLITE (space-to-Earth)

722

1 544-1 545

MOBILE-SATELLITE (space-to-Earth)

722 727A

1 545-1 548

AERONAUTICAL MOBILE-SATELLITE (space-to-Earth)  
722 729 C12A

1 548-1 559

MOBILE-SATELLITE (space-to-Earth)

722 729 C12A

1 559-1 610

**AERONAUTICAL RADIONAVIGATION**  
**RADIONAVIGATION-SATELLITE (space-to-Earth)**

722

1 610-1 626.5

# AERONAUTICAL RADIONAVIGATION

722 732 733 734

1 626.5-1 645.5

MOBILE-SATELLITE (Earth-to-space)

722

## MHZ

## ITU ALLOCATION TO SERVICES

REGION 1	REGION 2	REGION 3
1 645.5-1 646.5	MOBILE-SATELLITE (Earth-to-space) 722 734B	
1 646.5-1 656.5	AERONAUTICAL MOBILE-SATELLITE (R) (Earth-to-space) 722 726A 727 729A 730 735	
1 656.5-1 660	LAND MOBILE-SATELLITE (Earth-to-space) 722 726A 727 730 730A 734A	
1 660-1 660.5	RADIO ASTRONOMY LAND MOBILE-SATELLITE (Earth-to-space) 722 726A 730A 736	
1 660.5-1 668.4	RADIO ASTRONOMY SPACE RESEARCH (passive) Fixed Mobile except aeronautical mobile 722 736 737 738 739	
1 668.4-1 670	METEOROLOGICAL AIDS FIXED MOBILE except aeronautical mobile RADIO ASTRONOMY 722 736	
1 670-1 690	METEOROLOGICAL AIDS FIXED METEOROLOGICAL-SATELLITE (space-to-Earth) MOBILE except aeronautical mobile 722	
1 690-1 700 METEOROLOGICAL AIDS METEOROLOGICAL-SATELLITE (space-to-Earth) Fixed Mobile except aeronautical mobile 671 722 741	1 690-1 700 METEOROLOGICAL AIDS METEOROLOGICAL-SATELLITE (space-to-Earth) 671 722 740 742	

### CANADIAN ALLOCATION TABLE

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## ITU ALLOCATION TO SERVICES

REGION 1	REGION 2	REGION 3
1 700-1 710 FIXED METEOROLOGICAL SATELLITE (space-to-Earth) Mobile except aeronautical mobile 671 722 743A	1 700-1 710 FIXED METEOROLOGICAL-SATELLITE (space-to-Earth) MOBILE except aeronautical mobile  671 722 743	
1 710-2 290 FIXED Mobile 722 743A 744 746 747 748 750	1 710-2 290 FIXED MOBILE  722 744 745 746 747 748 749 750	
2 290-2 300 FIXED SPACE RESEARCH (deep space) (space-to-Earth) Mobile except aeronautical mobile 743A	2 290-2 300 FIXED MOBILE except aeronautical mobile SPACE RESEARCH (deep space) (space-to-Earth)	
2 300-2 450 FIXED Amateur Mobile Radiolocation 664 743A 752	2 300-2 450 FIXED MOBILE RADIOLOCATION Amateur 664 751 752	
2 450-2 483.5 FIXED MOBILE Radiolocation 752 753	2 450-2 483.5 FIXED MOBILE RADIOLOCATION 752	
2 483.5-2 500 FIXED MOBILE Radiolocation  733F 752 753A 753B 753C 753E	2 483.5-2 500 FIXED MOBILE RADIODETERMINATION- SATELLITE (space-to-Earth) 753A RADIOLOCATION 752 753D	2 483.5-2 500 FIXED MOBILE RADIOLOCATION Radiodetermination- satellite (space-to-Earth) 753A 752 753C
2 500-2 655 FIXED 762 763 764 MOBILE except aeronautical mobile BROADCASTING- SATELLITE 757	2 500-2 655 FIXED 762 764 FIXED-SATELLITE (space-to-Earth) 761 MOBILE except aeronautical mobile BROADCASTING- SATELLITE 757 760	2 500-2 535 FIXED 762 764 FIXED-SATELLITE (space-to-Earth) 761 MOBILE except aeronautical mobile BROADCASTING- SATELLITE 757 760 754 754A
720 753 756 758 759	720 755	2 535-2 655 FIXED 762 764 MOBILE except aeronautical mobile BROADCASTING- SATELLITE 757 760 720

MHz

CANADIAN ALLOCATION TABLE

1 700-1 710	FIXED METEOROLOGICAL-SATELLITE (space-to-Earth)
	671 722
1 710-2 290	FIXED Mobile C5 722 744 745 747 748 750
2 290-2 300	FIXED SPACE RESEARCH (deep space) (space-to-Earth) Mobile C5
2 300-2 450	FIXED MOBILE C12 RADIOLOCATION Amateur 664 752
2 450-2 483.5	FIXED RADIOLOCATION 752
2 483.5-2 500	FIXED RADIOLOCATION RADIODETERMINATION-SATELLITE (space-to-Earth) 753A 752
2 500-2 596	FIXED 762 764 FIXED-SATELLITE (space-to-Earth) 761 BROADCASTING-SATELLITE 757 760 Broadcasting Mobile C5 720 C13
2 596-2 655	FIXED-SATELLITE (space-to-Earth) 761 BROADCASTING BROADCASTING-SATELLITE 757 760 Fixed 762 764 Mobile C5 720 C13

## ITU ALLOCATION TO SERVICES

REGION 1	REGION 2	REGION 3
2 655-2 690 FIXED 762 763 764 MOBILE except aeronautical mobile BROADCASTING- SATELLITE 757 760 Earth Exploration- Satellite (passive) Radio Astronomy Space Research (passive)	2 655-2 690 FIXED 762 764 FIXED-SATELLITE (Earth-to-space) (space-to-Earth) 761 MOBILE except aeronautical mobile BROADCASTING- SATELLITE 757 760 Earth Exploration- Satellite (passive) Radio Astronomy Space Research (passive)	2 655-2 690 FIXED 762 764 FIXED-SATELLITE (Earth-to-space) 761 MOBILE except aeronautical mobile BROADCASTING- SATELLITE 757 760 Earth Exploration- Satellite (passive) Radio Astronomy Space Research (passive)
758 759 765	765	765 766
2 690-2 700	EARTH EXPLORATION-SATELLITE (passive) RADIO ASTRONOMY SPACE RESEARCH (passive) 767 768 769	
2 700-2 900	AERONAUTICAL RADIONAVIGATION 717 Radiolocation  770 771	
2 900-3 100	RADIONAVIGATION 773 Radiolocation  772 775A	
3 100-3 300	RADIOLOCATION 713 777 778	
3 300-3 400 RADIOLOCATION  778 779 780	3 300-3 400 RADIOLOCATION Amateur Fixed Mobile 778 780	3 300-3 400 RADIOLOCATION Amateur  778 779
3 400-3 500 FIXED FIXED-SATELLITE (space-to-Earth) Mobile Radiolocation  781 782 785	3 400-3 500 FIXED FIXED-SATELLITE (space-to-Earth) Amateur Mobile Radiolocation 784  664 783	



## CANADIAN ALLOCATION TABLE

2 655-2 686	<p>FIXED-SATELLITE (Earth-to-space)  (space-to-Earth) 761  BROADCASTING-SATELLITE 757 760  BROADCASTING  Earth Exploration-Satellite  Space Research  Radio Astronomy  Fixed 762 764  Mobile C5  765 C13</p>
2 686-2 690	<p>FIXED 762 764  FIXED-SATELLITE (Earth-to-space)  (space-to-Earth) 761  BROADCASTING-SATELLITE 757 760  Earth Exploration-Satellite (passive)  Radio Astronomy  Space Research (passive)  765 C13</p>
2 690-2 700	<p>EARTH EXPLORATION-SATELLITE (passive)  RADIO ASTRONOMY  SPACE RESEARCH (passive)  768</p>
2 700-2 850	<p>AERONAUTICAL RADIONAVIGATION 717  Radiolocation  770</p>
2 850-2 900	<p>AERONAUTICAL RADIONAVIGATION 717  MARITIME RADIONAVIGATION 771 C14  Radiolocation</p>
2 900-3 100	<p>RADIONAVIGATION 773  Radiolocation  772 775A</p>
3 100-3 300	<p>RADIOLOCATION 777  713 778</p>
3 300-3 500	<p>RADIOLOCATION C5 784  Amateur 664</p>
	778

## ITU ALLOCATION TO SERVICES

REGION 1	REGION 2	REGION 3
3 500-3 600 FIXED FIXED-SATELLITE (space-to-Earth) MOBILE Radiolocation 781 782 785	3 500-3 700 FIXED FIXED-SATELLITE (space-to-Earth) MOBILE except aeronautical mobile Radiolocation 784  786	
3 600-4 200 FIXED FIXED-SATELLITE (space-to-Earth) Mobile	3 700-4 200 FIXED FIXED-SATELLITE (space-to-Earth) MOBILE except aeronautical mobile 787	
4 200-4 400	AERONAUTICAL RADIONAVIGATION 789 788 790 791	
4 400-4 500	FIXED MOBILE	
4 500-4 800	FIXED FIXED-SATELLITE (space-to-Earth) MOBILE       792A	
4 800-4 990	FIXED MOBILE 793 Radio Astronomy       720 778 794	
4 990-5 000	FIXED MOBILE except aeronautical mobile RADIO ASTRONOMY Space Research (passive)  795	

MHz

CANADIAN ALLOCATION TABLE

3 500-4 200	FIXED FIXED-SATELLITE (space-to-Earth)
4 200-4 400	AERONAUTICAL RADIONAVIGATION 789 791
4 400-4 500	FIXED C25
4 500-4 800	FIXED FIXED-SATELLITE (space-to-Earth)  C25 792A
4 800-4 825	FIXED Radio Astronomy 778
4 825-4 835	FIXED RADIO ASTRONOMY 794 778
4 835-4 950	FIXED Radio Astronomy C25
4 950-4 990	FIXED RADIO ASTRONOMY 794 720 C25
4 990-5 000	FIXED RADIO ASTRONOMY Space Research (passive)  795

## ITU ALLOCATION TO SERVICES

- 70 -

## MHz

5 000-5 250

# AERONAUTICAL RADIONAVIGATION

733 796 797

5 250-5 255

## RADIOLOCATION Space Research

713

5 255-5 350

## RADIOLOCATION

713

5 350-5 460

**AERONAUTICAL RADIONAVIGATION 799**  
**Radiolocation**

5 460-5 470

RADIONAVIGATION 799  
Radiolocation

5 470-5 650

**MARITIME RADIONAVIGATION**  
**Radiolocation**

802

## ITU ALLOCATION TO SERVICES

REGION 1	REGION 2	REGION 3
5 650-5 725	RADIOLOCATION Amateur Space Research (deep space)  664 801 803 804 805	
5 725-5 850 FIXED-SATELLITE (Earth-to-space) RADIOLOCATION Amateur  801 803 805 806 807 808	5 725-5 850 RADIOLOCATION Amateur  803 805 806 808	
5 850-5 925 FIXED FIXED-SATELLITE (Earth-to-space) MOBILE  806	5 850-5 925 FIXED FIXED-SATELLITE (Earth-to-space) MOBILE Amateur Radiolocation  806	5 850-5 925 FIXED FIXED-SATELLITE (Earth-to-space) MOBILE Radiolocation  806
5 925-7 075	FIXED FIXED-SATELLITE (Earth-to-space) MOBILE  791 809 792A	
7 075-7 250	FIXED MOBILE  809 810 811	
7 250-7 300	FIXED FIXED-SATELLITE (space-to-Earth) MOBILE  812	
7 300-7 450	FIXED FIXED-SATELLITE (space-to-Earth) MOBILE except aeronautical mobile  812	
7 450-7 550	FIXED FIXED-SATELLITE (space-to-Earth) METEOROLOGICAL-SATELLITE (space-to-Earth) MOBILE except aeronautical mobile	
7 550-7 750	FIXED FIXED-SATELLITE (space-to-Earth) MOBILE except aeronautical mobile	

## CANADIAN ALLOCATION TABLE

5 650-5 725	RADIOLOCATION Amateur Space Research (deep space)  .. 664
5 725-5 850	RADIDLOCATION Amateur  806 808
5 850-5 925	FIXED FIXED-SATELLITE (Earth-to-space) Amateur Radiolocation  806
5 925-7 075	FIXED FIXED-SATELLITE (Earth-to-space)  791 792A 809
7 075-7 250	FIXED  809 810 811
7 250-7 300	FIXED-SATELLITE (space-to-Earth) MOBILE-SATELLITE 812  C5
7 300-7 450	FIXED FIXED-SATELLITE (space-to-Earth)  812 C15
7 450-7 550	FIXED FIXED-SATELLITE (space-to-Earth) C5 METEOROLOGICAL-SATELLITE (space-to-Earth)
7 550-7 750	FIXED FIXED-SATELLITE (space-to-Earth) C5

## ITU ALLOCATION TO SERVICES

REGION 1	REGION 2	REGION 3
7 750-7 900	FIXED MOBILE except aeronautical mobile	
7 900-7 975	FIXED FIXED-SATELLITE (Earth-to-space) MOBILE 812	
7 975-8 025	FIXED FIXED-SATELLITE (Earth-to-space) MOBILE 812	
8 025-8 175 FIXED FIXED-SATELLITE (Earth-to-space) MOBILE Earth Exploration- Satellite (space-to-Earth)  813 815	8 025-8 175 EARTH EXPLORATION- SATELLITE (space-to-Earth) FIXED FIXED-SATELLITE (Earth-to-space) MOBILE 814	8 025-8 175 FIXED FIXED-SATELLITE (Earth-to-space) MOBILE Earth Exploration- Satellite (space-to-Earth)  813 815
8 175-8 215 FIXED FIXED-SATELLITE (Earth-to-space) METEOROLOGICAL- SATELLITE (Earth-to-space) MOBILE Earth Exploration- Satellite (space-to-Earth)  813 815	8 175-8 215 EARTH EXPLORATION- (space-to-Earth) FIXED FIXED-SATELLITE (Earth-to-space) METEOROLOGICAL- SATELLITE (Earth-to-space) MOBILE 814	8 175-8 215 FIXED FIXED-SATELLITE (Earth-to-space) METEOROLOGICAL- SATELLITE (Earth-to-space) MOBILE Earth Exploration- Satellite (space-to-Earth)  813 815
8 215-8 400 FIXED FIXED-SATELLITE (Earth-to-space) MOBILE Earth Exploration- Satellite (space-to-Earth)  813 815	8 215-8 400 EARTH EXPLORATION- SATELLITE (space-to-Earth) FIXED FIXED-SATELLITE (Earth-to-space) MOBILE 814	8 215-8 400 FIXED FIXED-SATELLITE (Earth-to-space) MOBILE Earth Exploration- Satellite (space-to-Earth)  813 815
8 400-8 500	FIXED MOBILE except aeronautical mobile SPACE RESEARCH (space-to-Earth) 816 817  818	
8 500-8 750	RADIOLOCATION  713 819 820	



MHZ  
CANADIAN ALLOCATION TABLE

7 750-7 900	FIXED
7 900-7 975	FIXED FIXED-SATELLITE (Earth-to-space) 812 C15
7 975-8 025	FIXED-SATELLITE (Earth-to-space) MOBILE-SATELLITE 812 C5
8 025-8 175	EARTH EXPLORATION-SATELLITE (space-to-Earth) FIXED FIXED-SATELLITE (Earth-to-space) C5  814
8 175-8 215	EARTH EXPLORATION-SATELLITE (space-to-Earth) FIXED FIXED-SATELLITE (Earth-to-space) C5 METEOROLOGICAL-SATELLITE (Earth-to-space)  814
8 215-8 400	EARTH EXPLORATION-SATELLITE (space-to-Earth) FIXED FIXED-SATELLITE (Earth-to-space) C5  814
8 400-8 500	FIXED SPACE RESEARCH (space-to-Earth) 816
8 500-8 750	RADIOLOCATION 713

MHz

ITU ALLOCATION TO SERVICES

REGION 1	REGION 2	REGION 3
8 750-8 850	RADIOLOCATION AERONAUTICAL RADIONAVIGATION 821 822	
8 850-9 000	RADIOLOCATION MARITIME RADIONAVIGATION 823 824	
9 000-9 200	AERONAUTICAL RADIONAVIGATION 717 Radiolocation 822	
9 200-9 300	RADIOLOCATION MARITIME RADIONAVIGATION 823 824 824A	
9 300-9 500	RADIONAVIGATION 825A Radiolocation 775A 824A 825	
9 500-9 800	RADIOLOCATION RADIONAVIGATION 713	
9 800-10 000	RADIOLOCATION Fixed 826 827 828	

## CANADIAN ALLOCATION TABLE

8 750-8 850	RADIOLOCATION AERONAUTICAL RADIONAVIGATION 821
8 850-9 000	RADIOLOCATION MARITIME RADIONAVIGATION 823
9 000-9 200	AERONAUTICAL RADIONAVIGATION 717 Radiolocation
9 200-9 300	RADIOLOCATION MARITIME RADIONAVIGATION 823  824A
9 300-9 500	RADIONAVIGATION 825A Radiolocation  775A 824A 825
9 500-9 800	RADIOLOCATION RADIONAVIGATION  713
9 800-10 000	RADIDLOCATION Fixed   828

## ITU ALLOCATION TO SERVICES

REGION 1	REGION 2	REGION 3
10-10.45 FIXED MOBILE RADIOLOCATION Amateur  828	10-10.45 RADIOLOCATION Amateur  828 829	10-10.45 FIXED MOBILE RADIOLOCATION Amateur  828
10.45-10.5	RADIOLOCATION Amateur Amateur-Satellite  830	
10.5-10.55 FIXED MOBILE Radiolocation	10.5-10.55 FIXED MOBILE RADIOLOCATION	
10.55-10.6	FIXED MOBILE except aeronautical mobile Radiolocation	
10.6-10.68	EARTH EXPLORATION-SATELLITE (passive) FIXED MOBILE except aeronautical mobile RADIO ASTRONOMY SPACE RESEARCH (passive) Radiolocation  831 832	
10.68-10.7	EARTH EXPLORATION-SATELLITE (passive) RADIO ASTRONOMY SPACE RESEARCH (passive)  833 834	
10.7-11.7 FIXED FIXED-SATELLITE (Earth-to-space) (space-to-Earth) MOBILE except aeronautical mobile  792A	10.7-11.7 FIXED FIXED-SATELLITE (space-to-Earth) Mobile except aeronautical mobile  792A	

## CANADIAN ALLOCATION TABLE

10-10.45	RADIOLOCATION Amateur  828
10.45-10.5	RADIOLOCATION Amateur Amateur-Satellite
10.5-10.55	FIXED RADIOLOCATION
10.55-10.6	FIXED
10.6-10.68	EARTH EXPLORATION-SATELLITE (passive) FIXED RADIO ASTRONOMY SPACE RESEARCH (passive)  831 832
10.68-10.7	EARTH EXPLORATION-SATELLITE (passive) RADIO ASTRONOMY SPACE RESEARCH (passive)  833
10.7-11.7	FIXED FIXED-SATELLITE (space-to-Earth) 792A  C16

## ITU ALLOCATION TO SERVICES

REGION 1	REGION 2	REGION 3
11.7-12.5 FIXED BROADCASTING BROADCASTING-SATELLITE Mobile except aeronautical mobile	11.7-12.1 FIXED 837 FIXED-SATELLITE (space-to-Earth) Mobile except aeronautical mobile  836 839	11.7-12.2 FIXED MOBILE except aeronautical mobile BROADCASTING BROADCASTING-SATELLITE
	12.1-12.2 FIXED-SATELLITE (space-to-Earth)  836 839 842	838
838	12.2-12.7 FIXED MOBILE except aeronautical mobile BROADCASTING BROADCASTING-SATELLITE	12.2-12.5 FIXED MOBILE except aeronautical mobile BROADCASTING  838 845
12.5-12.75 FIXED-SATELLITE (Earth-to-space) (space-to-Earth)	839 844 846	12.5-12.75 FIXED FIXED-SATELLITE (space-to-Earth) MOBILE except aeronautical mobile BROADCASTING- SATELLITE 847
848 849 850	12.7-12.75 FIXED FIXED-SATELLITE (Earth-to-space) MOBILE except aeronautical mobile	
12.75-13.25	FIXED FIXED-SATELLITE (Earth-to-space) 792A MOBILE Space Research (space-to-Earth) (deep space)	
13.25-13.4	AERONAUTICAL RADIONAVIGATION 851  852 853	
13.4-14	RADIOLOCATION Standard Frequency and Time Signal-Satellite (Earth-to-space) Space Research  713 853 854 855	

## CANADIAN ALLOCATION TABLE

11.7-12.2	FIXED-SATELLITE (space-to-Earth)
12.2-12.7	FIXED BROADCASTING BROADCASTING-SATELLITE 839, 846  844
12.7-12.75	FIXED FIXED-SATELLITE (Earth-to-space)
12.75-13.25	FIXED FIXED-SATELLITE (Earth-to-space) 792A
13.25-13.4	AERONAUTICAL RADIONAVIGATION 851  852
13.4-14	RADIOLOCATION Standard Frequency and Time Signal-Satellite (Earth-to-space) Space Research  713

## ITU ALLOCATION TO SERVICES

REGION 1	REGION 2	REGION 3
14-14.25	FIXED-SATELLITE (Earth-to-space) 858 RADIONAVIGATION 856 Space Research 857 859	
14.25-14.3	FIXED-SATELLITE (Earth-to-space) 858 RADIONAVIGATION 856 Space Research 857 859 860 861	
14.3-14.4 FIXED FIXED-SATELLITE (Earth-to-space) 858 Mobile except aeronautical mobile Radionavigation- Satellite 859	14.3-14.4 FIXED-SATELLITE (Earth-to-space) 858 Radionavigation- Satellite 859	14.3-14.4 FIXED FIXED-SATELLITE (Earth-to-space) 858 Mobile except aeronautical mobile Radionavigation- Satellite 859
14.4-14.47	FIXED FIXED-SATELLITE (Earth-to-space) 858 Mobile except aeronautical mobile Space Research (space-to-Earth) 859	
14.47-14.5	FIXED FIXED-SATELLITE (Earth-to-space) 858 MOBILE except aeronautical mobile Radio Astronomy 859 862	
14.5-14.8	FIXED FIXED-SATELLITE (Earth-to-space) 863 MOBILE Space Research	
14.8-15.35	FIXED MOBILE Space Research 720	
15.35-15.4	EARTH EXPLORATION-SATELLITE (passive) RADIO ASTRONOMY SPACE RESEARCH (passive) 864 865	



## CANADIAN ALLOCATION TABLE

14-14.3	FIXED-SATELLITE (Earth-to-space)	
14.3-14.4	FIXED-SATELLITE (Earth-to-space)	
14.4-14.47	FIXED-SATELLITE (Earth-to-space)	
14.47-14.5	FIXED-SATELLITE (Earth-to-space) Radio Astronomy	862
14.5-15.35	FIXED Mobile C5	720
15.35-15.4	RADIO ASTRONOMY EARTH EXPLORATION-SATELLITE (passive) SPACE RESEARCH (passive)	864

## ITU ALLOCATION TO SERVICES

REGION 1	REGION 2	REGION 3
15.4-15.7	AERONAUTICAL RADIONAVIGATION 733 797	
15.7-16.6	RADIOLOCATION 866 867	
16.6-17.1	RADIOLOCATION Space Research (Earth-to-space) (deep space) 866 867	
17.1-17.2	RADIOLOCATIDN 866 867	
17.2-17.3	RADIOLOCATION Earth Exploration-Satellite (active) Space Research (active) 866 867	
17.3-17.7	FIXED-SATELLITE (Earth-to-space) 869 Radiolocation 868	
17.7-18.1	FIXED FIXED-SATELLITE (Earth-to-space) (space-to-Earth) 869 MOBILE	
18.1-18.6	FIXED FIXED-SATELLITE (space-to-Earth) MOBILE  870	
18.6-18.8 FIXED FIXED-SATELLITE (space-to-Earth) 872 MOBILE except aeronautical mobile Earth Exploration- Satellite (passive) Space Research (passive) 871	18.6-18.8 EARTH EXPLORATION- SATELLITE (passive) FIXED FIXED-SATELLITE (space-to-Earth) 872 MOBILE except aeronautical mobile SPACE RESEARCH (passive) 871	18.6-18.8 FIXED FIXED-SATELLITE (space-to-Earth) 872 MOBILE except aeronautical mobile Earth Exploration Satellite (passive) Space Research (passive) 871

## CANADIAN ALLOCATION TABLE

15.4-15.7	AERONAUTICAL RADIONAVIGATION 733 797
15.7-16.6	RADIOLOCATION
16.6-17.1	RADIOLOCATION Space Research (Earth-to-space) (deep space)
17.1-17.2	RADIOLOCATION
17.2-17.3	RADIOLOCATION Earth Exploration-Satellite (active) Space Research (active)
17.3-17.7	FIXED-SATELLITE (Earth-to-space) 869 Radiolocation
17.7-18.1	FIXED FIXED-SATELLITE (Earth-to-space) (space-to-Earth) 869
18.1-18.6	FIXED FIXED-SATELLITE (space-to-Earth)  870
18.6-18.8	EARTH EXPLORATION-SATELLITE (passive) FIXED FIXED-SATELLITE (space-to-Earth) 872 SPACE RESEARCH (passive)  871

## ITU ALLOCATION TO SERVICES

REGION 1	REGION 2	REGION 3
18.8-19.7	FIXED FIXED-SATELLITE (space-to-Earth) MOBILE	
19.7-20.2	FIXED-SATELLITE (space-to-Earth) Mobile-Satellite (space-to-Earth)  873	
20.2-21.2	FIXED-SATELLITE (space-to-Earth) MOBILE-SATELLITE (space-to-Earth) Standard Frequency and Time Signal-Satellite (space-to-Earth)  873	
21.2-21.4	EARTH EXPLORATION-SATELLITE (passive) FIXED MOBILE SPACE RESEARCH (passive)	
21.4-22	FIXED MOBILE	
22-22.21	FIXED Mobile except aeronautical mobile  874	
22.21-22.5	EARTH EXPLORATION-SATELLITE (passive) FIXED MOBILE except aeronautical mobile RADIO ASTRONOMY SPACE RESEARCH (passive)  875 876	
22.5-22.55 FIXED MOBILE	22.5-22.55 FIXED MOBILE BROADCASTING-SATELLITE 877  878	
22.55-23 FIXED INTER-SATELLITE MOBILE	22.55-23 FIXED INTER-SATELLITE MOBILE BROADCASTING-SATELLITE 877  878 879	
879		

## CANADIAN ALLOCATION TABLE

18.8-19.7	FIXED FIXED-SATELLITE (space-to-Earth)
19.7-20.2	FIXED-SATELLITE (space-to-Earth) Mobile-Satellite (space-to-Earth)
20.2-21.2	FIXED-SATELLITE (space-to-Earth) C21 MOBILE-SATELLITE (space-to-Earth) C21 Standard Frequency and Time Signal-Satellite (space-to-Earth)
21.2-21.4	EARTH EXPLORATION-SATELLITE (passive) FIXED Mobile except <sup>47</sup> aeronautical mobile SPACE RESEARCH (passive)
21.4-22	FIXED MOBILE
22-22.21	FIXED Mobile except aeronautical mobile  874
22.21-22.5	EARTH EXPLORATION-SATELLITE (passive) FIXED Mobile except aeronautical mobile RADIO ASTRONOMY SPACE RESEARCH (passive)  875 876
22.5-22.55	BROADCASTING-SATELLITE 877 FIXED MOBILE
22.55-23	BROADCASTING-SATELLITE 877 FIXED INTER-SATELLITE MOBILE  879

## ITU ALLOCATION TO SERVICES

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23.6-24	EARTH EXPLORATION-SATELLITE (passive) RADIO ASTRONOMY SPACE RESEARCH (passive) 880	
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24.05-24.25	RADIOLOCATION Amateur Earth Exploration-Satellite (active)  881	
24.25-25.25	RADIONAVIGATION	
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27-27.5 FIXED MOBILE Earth Exploration-Satellite (space-to-space)	27-27.5 FIXED FIXED-SATELLITE (Earth-to-space) MOBILE Earth Exploration-Satellite (space-to-space)	
27.5-29.5	FIXED FIXED-SATELLITE (Earth-to-space) MOBILE	
29.5-30	FIXED-SATELLITE (Earth-to-space) Mobile-Satellite (Earth-to-space) 882 883	
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23.55-23.6	FIXED MOBILE
23.6-24	EARTH EXPLORATION-SATELLITE (passive) RADIO ASTRONOMY SPACE RESEARCH (passive) 880
24-24.05	AMATEUR AMATEUR-SATELLITE  881
24.05-24.25	RADIOLOCATION Amateur Earth Exploration-Satellite (active)  881
24.25-25.25	RADIONAVIGATION
25.25-27	FIXED MOBILE Earth Exploration-Satellite (space-to-space) Standard Frequency and Time Signal-Satellite (Earth-to-space)
27-27.5	FIXED FIXED-SATELLITE (Earth-to-space) MOBILE Earth Exploration-Satellite (space-to-space)
27.5-29.5	FIXED FIXED-SATELLITE (Earth-to-space)
29.5-30	FIXED-SATELLITE (Earth-to-space) Mobile-Satellite (Earth-to-space) 882
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33-33.4	RADIONAVIGATION  892	
33.4-34.2	RADIOLOCATION  892 894	
34.2-35.2	RADIOLOCATION Space Research 895 896  894	
35.2-36	METEOROLOGICAL AIDS RADIOLOCATION  894 897	



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31-31.3	FIXED MOBILE Standard Frequency and Time Signal-Satellite (space-to-Earth) Space Research 884  886
31.3-31.8	EARTH EXPLORATION-SATELLITE (passive) RADIO ASTRONOMY SPACE RESEARCH (passive)          887 888
31.8-32	RADIONAVIGATION Space Research
32-32.3	INTER-SATELLITE RADIONAVIGATION Space Research 893
32.3-33	INTER-SATELLITE RADIONAVIGATION 893
33-33.4	RADIONAVIGATION
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43.5-47	MOBILE 902 MOBILE-SATELLITE RADIONAVIGATION RADIONAVIGATION-SATELLITE  903	
47-47.2	AMATEUR AMATEUR-SATELLITE	
47.2-50.2	FIXED FIXED-SATELLITE (Earth-to-space) 901 MOBILE 905  904	

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40.5-42.5	BROADCASTING-SATELLITE /BROADCASTING/ Fixed Mobile
42.5-43.5	FIXED FIXED-SATELLITE (Earth-to-space) 901 MOBILE except aeronautical mobile RADIO ASTRONOMY 900
43.5-47	MOBILE 902 MOBILE-SATELLITE RADIONAVIGATION RADIONAVIGATION-SATELLITE 903
47-47.2	AMATEUR AMATEUR-SATELLITE
47.2-50.2	FIXED FIXED-SATELLITE (Earth-to-space) 901 MOBILE 905 904

## GHz

## ITU ALLOCATION TO SERVICES

REGION 1	REGION 2	REGION 3
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51.4-54.25	EARTH EXPLORATION-SATELLITE (passive) SPACE RESEARCH (passive)  906 907	
54.25-58.2	EARTH EXPLORATION-SATELLITE (passive) FIXED INTER-SATELLITE MOBILE 909 SPACE RESEARCH (passive)  908	
58.2-59	EARTH EXPLORATION-SATELLITE (passive) SPACE RESEARCH (passive)  906 907	
59-64	FIXED INTER-SATELLITE MOBILE 909 RADIOLOCATION 910  911	
64-65	EARTH EXPLORATION-SATELLITE (passive) SPACE RESEARCH (passive)  906 907	
65-66	EARTH EXPLORATION-SATELLITE SPACE RESEARCH Fixed Mobile	
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50.2-50.4	EARTH EXPLORATION-SATELLITE (passive) FIXED MOBILE SPACE RESEARCH (passive)
50.4-51.4	FIXED FIXED-SATELLITE (Earth-to-space) MOBILE Mobile-Satellite (Earth-to-space)
51.4-54.25	EARTH EXPLORATION-SATELLITE (passive) SPACE RESEARCH (passive)  906 907
54.25-58.2	EARTH EXPLORATION-SATELLITE (passive) FIXED INTER-SATELLITE MOBILE 909 SPACE RESEARCH (passive)
58.2-59	EARTH EXPLORATION-SATELLITE (passive) SPACE RESEARCH (passive)  906 907
59-64	FIXED INTER-SATELLITE MOBILE 909 RADIOLOCATION 910  911
64-65	EARTH EXPLORATION-SATELLITE (passive) SPACE RESEARCH (passive)  906 907
65-66	EARTH EXPLORATION-SATELLITE SPACE RESEARCH Fixed Mobile
66-71	MOBILE 902 MOBILE-SATELLITE RADIONAVIGATION RADIONAVIGATION-SATELLITE

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REGION 1	REGION 2	REGION 3
71-74	FIXED FIXED-SATELLITE (Earth-to-space) MOBILE MOBILE-SATELLITE (Earth-to-space)  906	
74-75.5	FIXED FIXED-SATELLITE (Earth-to-space) MOBILE	
75.5-76	AMATEUR AMATEUR-SATELLITE	
76-81	RADIOLOCATION Amateur Amateur-Satellite  912	
81-84	FIXED FIXED-SATELLITE (space-to-Earth) MOBILE MOBILE-SATELLITE (space-to-Earth),	
84-86	FIXED MOBILE BROADCASTING BROADCASTING-SATELLITE  913	
86-92	EARTH EXPLORATION-SATELLITE (passive) RADIO ASTRONOMY SPACE RESEARCH (passive)  907	
92-95	FIXED FIXED-SATELLITE (Earth-to-space) MOBILE RADIOLOCATION  914	
95-100	MOBILE 902 MOBILE-SATELLITE RADIONAVIGATION RADIONAVIGATION-SATELLITE Radiolocation  903 904	

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71-74	FIXED FIXED-SATELLITE (Earth-to-space) MOBILE MOBILE-SATELLITE (Earth-to-space)  906
74-75.5	FIXED FIXED-SATELLITE (Earth-to-space) MOBILE
75.5-76	AMATEUR AMATEUR-SATELLITE
76-81	RADIOLOCATION Amateur Amateur-Satellite  912
81-84	FIXED FIXED-SATELLITE (space-to-Earth) MOBILE MOBILE-SATELLITE (space-to-Earth)
84-86	FIXED MOBILE BROADCASTING BROADCASTING-SATELLITE  913
86-92	EARTH EXPLORATION-SATELLITE (passive) RADIO ASTRONOMY SPACE RESEARCH (passive)  907
92-95	FIXED FIXED-SATELLITE (Earth-to-space) MOBILE RADIOLOCATION  914
95-100	MOBILE 902 MOBILE-SATELLITE RADIONAVIGATION RADIONAVIGATION-SATELLITE Radiolocation  903 904

## ITU ALLOCATION TO SERVICES

REGION 1	REGION 2	REGION 3
100-102	EARTH EXPLORATION-SATELLITE (passive) FIXED MOBILE SPACE RESEARCH (passive)  722	
102-105	FIXED FIXED-SATELLITE (space-to-Earth) MOBILE  722	
105-116	EARTH EXPLORATION-SATELLITE (passive) RADIO ASTRONOMY SPACE RESEARCH (passive)  722 907	
116-126	EARTH EXPLORATION-SATELLITE (passive) FIXED INTER-SATELLITE MOBILE 909 SPACE RESEARCH (passive)  722 915 916	
126-134	FIXED INTER-SATELLITE MOBILE 909 RADIOLOCATION 910	
134-142	MOBILE 902 MOBILE-SATELLITE RADIONAVIGATION RADIONAVIGATION-SATELLITE Radiolocation  903 917 918	
142-144	AMATEUR AMATEUR-SATELLITE	
144-149	RADIOLOCATION Amateur Amateur-Satellite  918	
149-150	FIXED FIXED-SATELLITE (space-to-Earth) MOBILE	



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100-102	EARTH EXPLORATION-SATELLITE (passive) FIXED MOBILE SPACE RESEARCH (passive) 722
102-105	FIXED FIXED-SATELLITE (space-to-Earth) MOBILE 722
105-116	EARTH EXPLORATION-SATELLITE (passive) RADIO ASTRONOMY SPACE RESEARCH (passive) 722 907
116-126	EARTH EXPLORATION-SATELLITE (passive) FIXED INTER-SATELLITE MOBILE 909 SPACE RESEARCH (passive) 722 915 916
126-134	FIXED INTER-SATELLITE MOBILE 909 RADIOLOCATION 910
134-142	MOBILE 902 MOBILE-SATELLITE RADIONAVIGATION RADIONAVIGATION-SATELLITE Radiolocation 903 917 918
142-144	AMATEUR AMATEUR-SATELLITE
144-149	RADIOLOCATION Amateur Amateur-Satellite 918
149-150	FIXED FIXED-SATELLITE (space-to-Earth) MOBILE

## ITU ALLOCATION TO SERVICES

REGION 1	REGION 2	REGION 3
150-151	EARTH EXPLORATION-SATELLITE (passive) FIXED FIXED-SATELLITE (space-to-Earth) MOBILE SPACE RESEARCH (passive)  919	
151-164	FIXED FIXED-SATELLITE (space-to-Earth) MOBILE	
164-168	EARTH EXPLORATION-SATELLITE (passive) RADIO ASTRONOMY SPACE RESEARCH (passive)	
168-170	FIXED MOBILE	
170-174.5	FIXED INTER-SATELLITE MOBILE 909  919	
174.5-176.5	EARTH EXPLORATION-SATELLITE (passive) FIXED INTER-SATELLITE MOBILE 909 SPACE RESEARCH (passive)  919	
176.5-182	FIXED INTER-SATELLITE MOBILE 909  919	
182-185	EARTH EXPLORATION-SATELLITE (passive) RADIO ASTRONOMY SPACE RESEARCH (passive)  920 921	
185-190	FIXED INTER-SATELLITE MOBILE 909  919	

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150-151	EARTH EXPLORATION-SATELLITE (passive) FIXED FIXED-SATELLITE (space-to-Earth) MOBILE SPACE RESEARCH (passive)  919
151-164	FIXED FIXED-SATELLITE (space-to-Earth) MOBILE
164-168	EARTH EXPLORATION-SATELLITE (passive) RADIO ASTRONOMY SPACE RESEARCH (passive)
168-170	FIXED MOBILE
170-174.5	FIXED INTER-SATELLITE MOBILE 909  919
174.5-176.5	EARTH EXPLORATION-SATELLITE (passive) FIXED INTER-SATELLITE MOBILE 909 SPACE RESEARCH (passive)  919
176.5-182	FIXED INTER-SATELLITE MOBILE 909  919
182-185	EARTH EXPLORATION-SATELLITE (passive) RADIO ASTRONOMY SPACE RESEARCH (passive)  921
185-190	FIXED INTER-SATELLITE MOBILE 909  919

## ITU ALLOCATION TO SERVICES

REGION 1	REGION 2	REGION 3
190-200	MOBILE 902 MOBILE-SATELLITE RADIONAVIGATION RADIONAVIGATION-SATELLITE  722 903	
200-202	EARTH EXPLORATION-SATELLITE (passive) FIXED MOBILE SPACE RESEARCH (passive)  722	
202-217	FIXED FIXED-SATELLITE (Earth-to-space) MOBILE  722	
217-231	EARTH EXPLORATION-SATELLITE (passive) RADIO ASTRONOMY SPACE RESEARCH (passive)  722 907	
231-235	FIXED FIXED-SATELLITE (space-to-Earth) MOBILE Radiolocation	
235-238	EARTH EXPLORATION-SATELLITE (passive) FIXED FIXED-SATELLITE (space-to-Earth) MOBILE SPACE RESEARCH (passive)	
238-241	FIXED FIXED-SATELLITE (space-to-Earth) MOBILE Radiolocation	
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190-200	MOBILE 902 MOBILE-SATELLITE RADIONAVIGATION RADIONAVIGATION-SATELLITE  722 903
200-202	EARTH EXPLORATION-SATELLITE (passive) FIXED MOBILE SPACE RESEARCH (passive)  722
202-217	FIXED FIXED-SATELLITE (Earth-to-space) MOBILE  722
217-231	EARTH EXPLORATION-SATELLITE (passive) RADIO ASTRONOMY SPACE RESEARCH (passive)  722 907
231-235	FIXED FIXED-SATELLITE (space-to-Earth) MOBILE Radiolocation
235-238	EARTH EXPLORATION-SATELLITE (passive) FIXED FIXED-SATELLITE (space-to-Earth) MOBILE SPACE RESEARCH (passive)
238-241	FIXED FIXED-SATELLITE (space-to-Earth) MOBILE Radiolocation
241-248	RADIOLOCATION Amateur Amateur-Satellite  922

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## ITU ALLOCATION TO SERVICES

REGION 1	REGION 2	REGION 3
248-250	AMATEUR AMATEUR-SATELLITE	
250-252	EARTH EXPLORATION-SATELLITE (passive) SPACE RESEARCH (passive)  923	
252-265	MOBILE 902 MOBILE-SATELLITE RADIONAVIGATION RADIONAVIGATION-SATELLITE  903 923 924 925	
265-275	FIXED FIXED-SATELLITE (Earth-to-space) MOBILE RADIO ASTRONOMY  926	
275-400	(not allocated)	

GHz

CANADIAN ALLOCATION TABLE

248-250	AMATEUR AMATEUR-SATELLITE
250-252	EARTH EXPLORATION-SATELLITE (passive) SPACE RESEARCH (passive)  C23 C24
252-265	MOBILE 902 MOBILE-SATELLITE RADIONAVIGATION RADIONAVIGATION-SATELLITE  903 923 924 C23 <sup>67</sup>
265-275	FIXED FIXED-SATELLITE (Earth-to-space) MOBILE RADIO ASTRONOMY  926
275-400	(not allocated)





## INTERNATIONAL FOOTNOTES

The following is a current listing of all footnotes contained in the International Table of Frequency Allocations. It should be noted that some of the international footnotes applicable to Canada have been suppressed in the Canadian Allocation Table in favour of a specific Canadian footnote which incorporates the ITU-provisions and responds to specific Canadian spectrum requirements. In addition, other Canadian footnotes have been developed to respond to such domestic requirements.

The symbols Mob-87, HFBC-87 and ORB-88 indicate an addition, modification or deletion of a Provision, Appendix, Resolution or Recommendation by the World Administrative Radio Conference for the Mobile Services, the World Administrative Radio Conference for the planning of the HF Bands Allocated to the Broadcasting Service, Geneva, 1987 and by the World Administrative Radio Conference on the use of the Geostationary-Satellite Orbit and the planning of Space Services utilizing it, Geneva, 1988. In the case of a deletion the symbol SUP is also used. "

- 444 Administrations authorizing the use of frequencies below 9 kHz shall ensure that no harmful interference is caused thereby to the services to which the bands above 9 kHz are allocated (see No. 1816).
- 445 Administrations conducting scientific research using frequencies below 9 kHz are urged to advise other administrations that may be concerned in order that such research may be afforded all practicable protection from harmful interference.
- 446 Additional allocation: in Bulgaria, Hungary, Poland, the German Democratic Republic, Czechoslovakia and the U.S.S.R., the band 14-17 kHz is also allocated to the radionavigation service on a permitted basis.
- 447 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 Bulgaria, Hungary, Mongolia, Poland, Czechoslovakia and the U.S.S.R., the frequencies 25 kHz and 50 kHz will be used for this purpose under the same conditions.
- 448 (Mob-87) The use of the bands 14-19.95 kHz, 20.05-70 kHz, 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 bands concerned.

- 449 Additional allocation: in Bulgaria, Hungary, Poland, the German Democratic Republic, Czechoslovakia and the U.S.S.R., the band 67-70 kHz is also allocated to the radionavigation service on a permitted basis.
- 450 Different category of service: in Bangladesh, Iran 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. 425).
- 451 (Mob-87) 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 conditions that they do not cause harmful interference to other services to which these bands are allocated.
- 452 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 the procedure set forth in Article 14 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.
- 453 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.
- 453A (Mob-87) In the band 90-110 kHz, the United Kingdom may continue to use its coast radiotelegraph stations in operation on 14 September 1987, on a secondary basis.
- 454 Only classes A1A or F1B, A2C, A3C, F1C, 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.
- 455 Different category of service: in Bangladesh, Iran and Pakistan, 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. 425).

- 456 Different category of service: in the Federal Republic of Germany, the allocation of the band 115-117.6 kHz to the fixed and maritime mobile services is on a primary basis (see No. 425) and to the radionavigation service on a secondary basis (see No. 424).
- 457 Additional allocation: in Bulgaria, Hungary, Mongolia, Poland, the German Democratic Republic, Romania, Czechoslovakia and the U.S.S.R., the band 130-148.5 kHz is also allocated to the radionavigation service on a secondary basis. Within and between these countries this service shall have an equal right to operate.
- 458 SUP (Mob-87)
- 459 In the Region 2 polar areas (north of 60 degrees N and south of 60 degrees S), which are subject to auroral disturbances, the aeronautical fixed service is the primary service in the band 160-190 kHz.
- 460 Alternative allocation: in Angola, Botswana, Burundi, the Congo, Malawi, Rwanda, South Africa and Zaire, the band 160-200 kHz is allocated to the fixed service on a primary basis.
- 461 Additional allocation: in Somalia, the band 200-255 kHz is also allocated to the aeronautical radionavigation service on a primary basis.
- 462 Alternative allocation: in Angola, Botswana, Burundi, Cameroon, the Central African Republic, the Congo, Ethiopia, Kenya, Lesotho, Madagascar, Malawi, Mozambique, Namibia, Nigeria, Oman, Rwanda, South Africa, Swaziland, Tanzania, Chad, Zaire, Zambia and Zimbabwe, the band 200-283.5 kHz is allocated to the aeronautical radionavigation service on a primary basis.
- 463 Different category of service: in Sudan and Yemen (P.D.R. of), the allocation of the band 255-283.5 kHz to the aeronautical radionavigation service is on a primary basis (see No. 425).
- 464 Alternative allocation: in Tunisia, the band 255-283.5 kHz is allocated to the broadcasting service on a primary basis.
- 464A (Mob-87) In Region 1, the change of the band limit from 285 kHz to 283.5 kHz shall take place on 1 February 1990 (see Resolution 500).
- 465 Norwegian stations of the fixed service situated in northern areas (north of 60 degrees N) subject to auroral disturbances are allowed to continue operation on four frequencies in the bands 283.5-490 kHz and 510-526.5 kHz.

- 466 In the band 285-325 kHz (283.5-325 kHz in Region 1), in the maritime radionavigation service, radiobeacon stations may also transmit supplementary navigational information using narrow-band techniques, on condition that the prime function of the beacon is not significantly degraded.
- 467 Different category of service: in the U.S.S.R. and the Black Sea areas of Bulgaria, Romania and Turkey, the allocation of the band 315-325 kHz to the maritime radionavigation service is on a primary basis (see No. 425) under the following conditions:
- a) in the Black Sea and White Sea areas, the maritime radionavigation service is the primary service and the aeronautical radionavigation service is the permitted service;
  - b) 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.
- 468 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.
- 469 (Mob-87) Different category of service: in Afghanistan, Australia, China, the Overseas French Territories of Region 3, India, Indonesia, the Islamic Republic of Iran, Japan, Pakistan, Papua New Guinea and Sri Lanka, the allocation of the band 415-495 kHz to the aeronautical radionavigation service is on a permitted basis. Administrations in these countries shall take all practical steps necessary to ensure aeronautical radionavigation stations in the band 435-495 kHz do not cause interference to reception by coast stations of ship stations transmitting on frequencies designated for ship stations on a world-wide basis (see No. 4327).
- 469A (Mob-87) 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.
- 470 The use of the bands 415-495 kHz and 505-526.5 kHz (505-510 kHz in Region 2) by the maritime mobile service is limited to radiotelegraphy.
- 470A (Mob-87) 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 transmissions.

- 471 (Mob-87) The bands 490-495 kHz and 505-510 kHz shall be subject to the provisions of No. 3018 until the entry into force of the reduced guard-band in accordance with Resolution No. 206 (Mob-83).
- 472 (Mob-87) The frequency 500 kHz is an international distress and calling frequency for Morse radiotelegraphy. The conditions for its use are prescribed in Articles 37, 38, N38 and 60.
- 472A (Mob-87) In the maritime mobile service, the frequency 490 kHz is, from the date of full implementation of the GMDSS (see Resolution 331 (Mob-87)), 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 the use of this frequency are prescribed in Articles N 38 and 60, and Resolution 329 (Mob-87). In using the band 415-495 kHz for the aeronautical radionavigation service, administrations are requested to ensure that no harmful interference is caused to the frequency 490 kHz.
- 473 SUP (Mob-87)
- 474 (Mob-87) The conditions for the use of the frequency 518 kHz by the maritime mobile service are prescribed in Articles 38, N38 and 60 (see Resolution No. 324 (Mob-87) and Article 14A).
- 475 In the band 515.5-526.5 kHz, Austria may continue to operate only those broadcasting stations listed in Additional Protocol III to the Final Acts of the Regional Administrative LF/MF Broadcasting Conference (Regions 1 and 3), Geneva 1975. This operation is allowed until the entry into force of a revision of the Geneva Plan, 1975, and subject to not causing harmful interference to the maritime mobile and aeronautical radionavigation services.
- 476 Additional allocation: in the United Kingdom, the band 519.5-526.5 kHz is also allocated to the broadcasting service on a secondary basis for the transmission of public utility information.
- 477 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.
- 478 Additional allocation: in Angola, Botswana, Lesotho, Malawi, Mozambique, Namibia, South Africa, Swaziland, Zambia and Zimbabwe, the band 526.5-535 kHz is also allocated to the mobile service on a secondary basis.

479 Additional allocation: in China, the band 526.5-535 kHz is also allocated to the aeronautical radionavigation service on a secondary basis.

480 (ORB-88) In Region 2, the use of the band 1 605-1 705 kHz by stations of the broadcasting service shall be subject to a Plan established by the Regional Administrative Radio Conference (Rio de Janeiro, 1988).

In Region 2, in the band 1 625-1 705 kHz, the relationship between the broadcasting, fixed and mobile services is shown in No. 419. However, the examination of frequency assignments to stations of the fixed and mobile services in the band 1 625-1 705 kHz under No. 1241 shall take account of the allotments appearing in the Plan established by the Regional Administrative Radio Conference (Rio de Janeiro, 1988).

480A (Mob-87) 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 of Region 1 shall be limited to that provided by ground-wave propagation.

481 In Region 2, until the dates decided by the regional administrative radio conference referred to in No. 480, the band 1 605-1 705 kHz is allocated to the fixed, mobile and aeronautical radionavigation services on a primary basis and to the radiolocation service on a secondary basis (see Recommendation 504).

482 Additional allocation: in Australia, Indonesia, New Zealand, the Philippines, Singapore, Sri Lanka and Thailand, the band 1 606.5-1 705 kHz is also allocated to the broadcasting service on a secondary basis.

483 Different category of service: in Bulgaria, Hungary, Mongolia, Nigeria, Poland, the German Democratic Republic, Chad, Czechoslovakia and the U.S.S.R., the allocation of the bands 1 606.5-1 625 kHz, 1 635-1 800 kHz and 2 107-2 160 kHz to the fixed and land mobile services is on a primary basis (see No. 425).

484 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. The establishment and operation of such systems are subject to agreement obtained under the procedure set forth in Article 14. The radiated mean power of these stations shall not exceed 50 W.

- 485 Additional allocation: in Angola, Bulgaria, Hungary, Mongolia, Nigeria, Poland, the German Democratic Republic, Chad, Czechoslovakia and the U.S.S.R., the bands 1 625-1 635 kHz, 1 800-1 810 kHz and 2 160-2 170 kHz are also allocated to the fixed and land mobile services on a primary basis subject to agreement obtained under the procedure set forth in Article 14.
- 486 In Region 1, in the bands 1 625-1 635 kHz, 1 800-1 810 kHz and 2 160-2 170 kHz (except in the countries listed in No. 485 and those listed in No. 499 for the band 2 160-2 170 kHz) existing stations in the fixed and mobile, except aeronautical mobile, services (and stations of the aeronautical mobile (OR) service in the band 2 160-2 170 kHz) may continue to operate on a primary basis until satisfactory replacement assignments have been found and implemented in accordance with Resolution 38.
- 487 In Region 1, the establishment and operation of stations of the radiolocation service in the bands 1 625-1 635 kHz, 1 800-1 810 kHz and 2 160-2 170 kHz shall be subject to agreement obtained under the procedure set forth in Article 14 (see also No. 486). The radiated mean power of radiolocation stations shall not exceed 50 W. Pulse systems are prohibited.
- 488 In the Federal Republic of Germany, Denmark, Finland, Hungary, Ireland, Israel, Jordan, Malta, Norway, Poland, the German Democratic Republic, the United Kingdom, Sweden, Czechoslovakia and the U.S.S.R., administrations may allocate up to 200 kHz to their amateur service in the bands 1 745-1 800 kHz and 1 850-2 000 kHz. However, when allocating the bands within this range to their amateur service, administrations shall, after prior consultation with administrations of neighbouring countries, take such steps as may be necessary to prevent harmful interference from their amateur service to the fixed and mobile service of other countries. The mean power of any amateur station shall not exceed 10 W.
- 489 (Mob-87) In Region 3, Loran stations operating 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.
- 490 Alternative allocation: in the Federal Republic of Germany, Angola, Austria, Belgium, Bulgaria, Cameroon, the Congo, Denmark, Egypt, Spain, Ethiopia, France, Greece, Italy, Lebanon, Luxembourg, Malawi, the Netherlands, Portugal, Syria, the German Democratic Republic, Somalia,

Tanzania, Tunisia, Turkey and the U.S.S.R, the band 1 810-1 830 kHz is allocated to the fixed and mobile, except aeronautical mobile, services on a primary basis.

491 Additional allocation: in Saudi Arabia, Iraq, Israel, Libya, Poland, Romania, Chad, Czechoslovakia, Togo and Yugoslavia, the band 1 810-1 830 kHz is also allocated to the fixed and mobile, except aeronautical mobile, services on a primary basis.

492 In Region 1, the use of the band 1 810-1 850 kHz by the amateur service is subject to the condition that satisfactory replacement assignments have been found and implemented in accordance with Resolution 38, for frequencies to all existing stations of the fixed and mobile, except aeronautical mobile, services operating in this band (except for the stations of the countries listed in Nos. 490, 491 and 493). On completion of satisfactory transfer, the authorization to use the band 1 810-1 830 kHz by the amateur service in countries situated totally or partially north of 40 degrees N shall be given only after consultation with the countries mentioned in Nos. 490 and 491 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. 490 and 491.

493 Alternative allocation: in Burundi and Lesotho, the band 1 810-1 850 kHz is allocated to the fixed and mobile, except aeronautical mobile, services on a primary basis.

494 Alternative allocation: in Argentina, Bolivia, Chile, Mexico, Paraguay, Peru, Uruguay and Venezuela, the band 1 850-2 000 kHz is allocated to the fixed mobile, except aeronautical mobile, radiolocation and radionavigation services on a primary basis.

495 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.

496 In Region 1, the use of the band 2 025-2 045 kHz by the meteorological aids service is limited to oceanographic buoy stations.

497 (Mob-87) 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 R3E or J3E emissions and to 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, Brazil 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. 4323 BD.

- 498 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 International Frequency Registration Board should be drawn to these provisions.
- 499 Additional allocation: in Saudi Arabia, Botswana, Ethiopia, Iraq, Lesotho, Libya, Malawi, Somalia, Swaziland and Zambia, the band 2 160-2 170 kHz is also allocated to the fixed and mobile, except aeronautical mobile (R), services on a primary basis. The mean power of stations in these services shall not exceed 50 W.
- 500 (Mob-87) 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 37, 38, N 38 and 60.
- 500A (Mob-87) 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 N 38.
- 500B (Mob-87) 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 N 38.
- 501 (Mob-87) The carrier frequencies 2 182 kHz, 3 023 kHz, 5 680 kHz, 8 364 kHz and the frequencies 121.5 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 Articles 38 and N 38.

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  $\pm 3$  kHz about the frequency.

- 502 Alternative allocation: in Belgium, Cyprus, Denmark, Spain, France, Greece, Iceland, Italy, Malta, Norway, the Netherlands, Portugal, the United Kingdom, Singapore, Sri Lanka, Sweden, Turkey and Yugoslavia, the band 2 194-2 300 kHz is allocated to the maritime mobile service on a primary basis and to the fixed and land mobile services on a permitted basis.
- 503 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. 406 to 410, 411 and 2666 to 2673.
- 504 Alternative allocation: in Belgium, Cyprus, Denmark, Spain, France, Greece, Iraq, Italy, Malta, Norway, the Netherlands, Portugal, the United Kingdom, Sweden, Turkey and Yugoslavia, the band 2 502-2 625 kHz is allocated to the maritime mobile service on a primary basis and to the fixed and land mobile services on a permitted basis.
- 505 (Mob-87) The carrier (reference) frequencies 3 023 kHz and 5 680 kHz may also be used, in accordance with Articles 38 and N 38 by stations of the maritime mobile service engaged in coordinated search and rescue operations.
- 506 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.
- 507 Alternative allocation: in Belgium, Cameroon, Côte d'Ivoire, Cyprus, Denmark, Egypt, Spain, France, Greece, Iceland, Italy, Liberia, Malta, Norway, the Netherlands, the United Kingdom, Singapore, Sri Lanka, Sweden, Togo, Turkey and Yugoslavia, the band 3 155-3 200 kHz is allocated to the maritime mobile service on a primary basis and to the fixed and land mobile services on a permitted basis.
- 508 Additional allocation: in Australia, Brazil, Canada, the United States, Japan, Mexico, New Zealand, Peru and Uruguay, the band 3 230-3 400 kHz is also allocated to the radiolocation service on a secondary basis.
- 509 Additional allocation: in Honduras, Mexico, Peru and Venezuela, the band 3 500-3 750 kHz is also allocated to the fixed and mobile services on a primary basis.

- 510 For the use of the bands allocated to the amateur service 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).
- 511 Additional allocation: in Brazil, the band 3 700-4 000 kHz is also allocated to the radiolocation service on a primary basis.
- 512 Alternative allocation: in Argentina, Bolivia, Chile, Ecuador, Paraguay, Peru and Uruguay, the band 3 750-4 000 kHz is allocated to the fixed and mobile, except aeronautical mobile, services on a primary basis.
- 513 Alternative allocation: in Botswana, Lesotho, Malawi, Mozambique, Namibia, South Africa, Swaziland, Zambia and Zimbabwe, the band 3 900-3 950 kHz is allocated to the broadcasting service on a primary basis. The use of this band by the broadcasting service is subject to agreement obtained under the procedure set forth in Article 14 with neighbouring countries having services operating in accordance with the Table.
- 514 Additional allocation: in Canada, the band 3 950-4 000 kHz is also allocated to the broadcasting service on a primary basis. The power of broadcasting stations operating in this band shall not exceed that necessary national service within the frontier of this country and shall not cause harmful interference to other services operating in accordance with the Table.
- 515 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.
- 516 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.
- 517 (Mob-87) The use of the band 4 000-4 063 kHz by the maritime mobile service is limited to ship stations using radiotelephony (see No. 4374 and Appendix 16).
- 518 In Afghanistan, Argentina, Australia, Botswana, China, India, Swaziland, Chad, and the U.S.S.R., in the bands 4 063-4 123 kHz, 4 130-4 133 kHz and 4 408-4 438 kHz, stations of limited power in the fixed service which are situated at least 600 km from the coast may operate on condition that harmful interference is not caused to the maritime mobile service.

- 519 On condition that harmful interference is not caused to the maritime mobile service, the 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.
- 520 (Mob-87) The conditions for the use of the carrier frequencies 4 125 kHz and 6 215.5 kHz are prescribed in Articles 37, 38, N 38 and 60.
- 520A (Mob-87) 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 (see Resolutions 332 (Mob-87)).
- 520B (Mob-87) 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 Resolution 333 (Mob-87) and Appendix 31).
- 521 Different category of service: in the U.S.S.R., the allocation of the band 5 130-5 250 kHz to the mobile, except aeronautical mobile, service is on a primary basis (see No. 425).
- 522 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 International Frequency Registration Board will be drawn to the above conditions.
- 523 SUP
- 524 The band 6 765-6 795 kHz (centre frequency 6 780 kHz) is designated for industrial, scientific and medical (ISM) applications. The use of this frequency band 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 CCIR Recommendations.
- 525 Different category of service: in Mongolia and the U.S.S.R., the allocation of the band 6 765-7 000 kHz to the land mobile service is on a primary basis (see No. 425).

- 526 Additional allocation: in Angola, Iraq, Kenya, Rwanda, Somalia and Togo, the band 7 000-7 050 kHz is also allocated to the fixed service on a primary basis.
- 527 Alternative allocation: in Egypt, Ethiopia, Guinea, Libya, Madagascar, Malawi and Tanzania, the band 7 000-7 050 kHz is allocated to the fixed service on a primary basis.
- 528 The use of the band 7 100-7 300 kHz in Region 2 by the amateur service shall not impose constraints on the broadcasting service intended for use within Region 1 and Region 3.
- 529 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.
- 529A (Mob-87) The conditions for the use of the carrier frequencies 8 291 kHz, 12 290 kHz and 16 420 kHz are prescribed in Articles 38, N 38 and 60.
- 530 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 not using a total radiated power exceeding 24 dBW.
- 531 (HFBC-87) The bands 9 775-9 900 kHz, 11 650-11 700 kHz, 11 975-12 050 kHz, 13 600-13 800 kHz, 15 450-15 600 kHz, 17 550-17 700 kHz and 21 750-21 850 kHz are allocated to the fixed service on a primary basis subject to the procedure described in Resolution 8. The use of these bands by the broadcasting service shall be subject to provisions to be established by the World Administrative Radio Conference for the planning of HF Bands allocated to the Broadcasting Service (see Resolution 508). The provisions of Resolution 512 (HFBC-87) also apply. Within these bands, the date of commencement of operations in the broadcasting service on a planned channel shall not be earlier than the date of completion of satisfactory transfer, according to the procedures described in Resolution 8, of all assignments to stations in the fixed service operating in accordance with the Table and other provisions of the Radio Regulations, which are recorded in the Master Register and which may be affected by broadcasting operations on that channel.

- 532 The bands 12 230-12 330 kHz, 16 360-16 460 kHz, 17 360-17 410 kHz, 18 780-18 900 kHz, 19 680-19 800 kHz and 22 720-22 855 kHz are allocated to the fixed service on a primary basis subject to the procedure described in Resolution 8. The use of these bands by the maritime mobile service shall be subject to provisions to be decided by a competent World Administrative Radio Conference. The date of commencement of operations in the maritime mobile service on a frequency in accordance with the above mentioned provisions shall not be earlier than the date of completion of satisfactory transfer, in accordance with the procedure described in Resolution 8, of all assignments to stations in the fixed service operating in accordance with the Table and other provisions of the Radio Regulations which are recorded in the Master Register and which may be affected by maritime mobile operations on that frequency.
- 533 In making assignments to stations of other services to which the band 13 360-13 410 kHz is 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. 343 and 344 and Article 36).
- 534 The band 13 553-13 567 kHz (centre frequency 13 560 kHz) is designated for industrial, scientific and medical (ISM) applications. Radiocommunication services 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. 1815.
- 535 Additional allocation: in Afghanistan, China, Côte d'Ivoire, Iran and the U.S.S.R., 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.
- 536 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.
- 537 The band 18 068-18 168 kHz is allocated to the fixed service on a primary basis subject to the procedure described in Resolution 8. The use of this band by the amateur and amateur-satellite services shall be subject to the completion of satisfactory transfer of all assignments to stations in the service operating in this band and recorded in the Master Register, in accordance with the procedure described in Resolution 8.

- 538 Additional allocation: in the U.S.S.R., the band 18 068-18 168 kHz is also allocated to the fixed service on a primary basis for use within the boundaries of the U.S.S.R. with a peak envelope power not exceeding 1 kW.
- 539 Alternative allocation: in Bulgaria, Hungary, Mongolia, Poland, Czechoslovakia and the U.S.S.R., the band 21 850-21 870 kHz is allocated to the aeronautical fixed and the aeronautical mobile (R) services on a primary basis.
- 540 Additional allocation: in Nigeria, the band 22 720-23 200 kHz is also allocated to the meteorological aids service (radiosondes) on a primary basis.
- 541 The use of the band 23 350-24 000 kHz by the maritime mobile service is limited to inter-ship radiotelegraphy.
- 542 Additional allocation: in Kenya, the band 23 600-24 900 kHz is also allocated to the meteorological aids service (radiosondes) on a primary basis.
- 543 The band 24 890-24 990 kHz is allocated to the fixed and land mobile services on a primary basis subject to the procedure described in Resolution 8. The use of this band by the amateur and amateur-satellite services shall be subject to the completion of the satisfactory transfer of all assignments to fixed and land mobile stations operating in this band and recorded in the Master Register, in accordance with the procedure described in Resolution 8.
- 544 The bands 25 110-25 210 kHz and 26 100-26 175 kHz are also allocated to the fixed and land mobile services on a primary basis subject to the procedure described in Resolution 8. The use of these bands on an exclusive basis by the maritime mobile services shall be subject to provisions to be decided by a competent World Administrative Radio Conference. The date of commencement of operations in the maritime mobile service on a frequency in accordance with the above-mentioned provisions shall not be earlier than the date of completion of satisfactory transfer, accordance with the procedure described in Resolution 8, of all assignments to stations in the fixed and land mobile services operating in accordance with the Table and other provisions of the Radio Regulations recorded in the Master Register and which may be affected by such maritime mobile operations on that frequency.

- 545 The band 25 550-25 600 kHz is allocated to the fixed and mobile, except aeronautical mobile, service on a primary basis subject to the procedure described in Resolution 8. The use of this band by the radio astronomy service shall be subject to the completion of the satisfactory transfer of all assignments to stations in the fixed and mobile, except aeronautical mobile, services operating in this band and recorded in the Master Register, in accordance with the procedure described in Resolution 8. The band 25 600-25 670 kHz is allocated to the broadcasting service on a primary basis, subject to provisions to be established by the World Administrative Radio Conference for the planning of HF bands allocated to the broadcasting service (see Resolution 508). After completion of all the above-mentioned provisions, all emissions capable of causing harmful interference to the radio astronomy service in the band 25 550-25 670 kHz shall be avoided. The use of passive sensors by other services will also be authorized.
- 546 The band 26 957-27 283 kHz (centre frequency 27 120 kHz) is designated for industrial, scientific and medical (ISM) applications. Radiocommunication services 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. 1815.
- 547 In making assignments to stations of other services to which the band 37.5-38.25 MHz is 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. 343 and 344 and Article 36).
- 548 The band 40.66-40.70 MHz (centre frequency 40.68 MHz) is designated for industrial, scientific and medical (ISM) applications. Radiocommunication services 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. 1815.
- 549 Additional allocation: in Botswana, Burundi, Lesotho, Malawi, Namibia, Rwanda, South Africa, Swaziland, Zaire, Zambia and Zimbabwe, the band 41-44 MHz is also allocated to the aeronautical radionavigation service on a primary basis.
- 550 Additional allocation: in Iran and Japan, the band 41-44 MHz is also allocated to the radiolocation service on a secondary basis.
- 551 Additional allocation: in France and Monaco, the band 41-47 MHz is also allocated to the broadcasting service on a primary basis until 1 January 1986 and, in the United Kingdom, until 1 January 1987.



- 552 Additional allocation: in Australia and New Zealand, the band 44-47 MHz is also allocated to the broadcasting service on a primary basis.
- 553 Additional allocation: in Hungary, Kenya, Mongolia, Czechoslovakia and the U.S.S.R., the band 47-48.5 MHz and 56.5-58 MHz are also allocated to the fixed and land mobile services on a secondary basis.
- 554 (Mob-87) Additional allocation: in Albania, the Federal Republic of Germany, Austria, Belgium, Bulgaria, Côte d'Ivoire, Denmark, Finland, France, Gabon, Greece, Israel, Italy, Jordan, Lebanon, Libya, Liechtenstein, Luxembourg, Madagascar, Mali, Malta, Morocco, Mauritania, Monaco, Nigeria, Norway, the Netherlands, Poland, the German Democratic Republic, the United Kingdom, Senegal, Spain, Sweden, Switzerland, Tunisia, Turkey and Yugoslavia, the band 47-68 MHz, and in Romania, the band 45-58 MHz are also allocated to the land mobile service on a permitted basis. However, stations of the land mobile service in 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.
- 555 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 permitted basis.
- 556 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.
- 557 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.
- 558 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.
- 559 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.
- 560 Additional allocation: in New Zealand, the band 51-53 MHz is also allocated to the fixed and mobile services on a primary basis.

- 561 Additional allocation: in Botswana, Burundi, Lesotho, Malawi, Mali, Namibia, Rwanda, South Africa, Swaziland, Zaire, Zambia and Zimbabwe, the band 54-68 MHz is also allocated to the fixed and mobile, except aeronautical mobile, services on a primary basis.
- 562 Different category of service: in the French overseas Departments in Region 2, Guyana, Jamaica and Mexico, the allocation of the band 54-68 MHz to the fixed and mobile services is on a primary basis (see No. 425).
- 563 Different category of service: in Cuba, the French overseas Departments in Region 2, Guyana, Jamaica and Mexico, the allocation of the band 68-72 MHz to the fixed and mobile services is on a primary basis (see No. 425).
- 564 Alternative allocation: in Bulgaria, Hungary, Poland, Romania and Czechoslovakia, the band 68-73 MHz is allocated to the broadcasting service on a primary basis and used in accordance with the decisions in the Final Acts of the Special Regional Conference, Geneva, 1960.
- 565 Alternative allocation: in Mongolia and the U.S.S.R., the bands 68-73 MHz and 76-87.5 MHz are allocated to the broadcasting service on a primary basis. The services to which these bands are allocated in other countries and the broadcasting service in Mongolia and the U.S.S.R., are subject to agreements with the neighbouring countries concerned.
- 566 Additional allocation: in Australia, China, the Republic of Korea, the Philippines, the Democratic People's Republic of Korea and Western Samoa, the band 68-74 MHz is also allocated to the broadcasting service on a primary basis.
- 567 Additional allocation: in Bulgaria, Hungary, Mongolia, Poland, Czechoslovakia and the U.S.S.R., the band 73-74 MHz is also allocated to the broadcasting service on a primary basis. The use of this band by the broadcasting service in Bulgaria, Hungary, Mongolia, Poland, Czechoslovakia and the U.S.S.R. is subject to agreement obtained under the procedure set forth in Article 14.
- 568 In making assignments to stations of other services to which the band 73-74.6 MHz is 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. 343 and 344 and Article 36).

- 569 In Region 2, the fixed, mobile and broadcasting services previously authorized in the band 73-74.6 MHz may continue to operate on a non-interference basis to the radio astronomy service until 31 December 1985.
- 570 Additional allocation: in Colombia, Costa Rica, Cuba, El Salvador, Ecuador, Guatemala, Guyana, Honduras and Nicaragua, the band 73-74.6 MHz is also allocated to the fixed and mobile services on a secondary basis.
- 571 Additional allocation: in Bulgaria, China, Hungary, Mongolia, Poland, Czechoslovakia and the U.S.S.R., 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.
- 572 The frequency 75 MHz is assigned to aeronautical 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. Until 31 December 1989, administrations in Regions 2 and 3 should refrain from assigning frequencies to stations of other services in the bands 74.6-74.8 MHz and 75.2-75.4 MHz. In the future 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.
- 572A (Mob-87) Additional allocation: in Afghanistan, the Federal Republic of Germany, Austria, Belgium, Cyprus, Denmark, Egypt, France, Greece, Israel, Italy, Japan, Jordan, Lebanon, Malta, Morocco, Monaco, Norway, the Netherlands, Portugal, the United Kingdom, Spain, Sweden, Switzerland, Syria and Turkey, the band 74.8-75.2 MHz is also allocated to the mobile service on a secondary basis subject to agreement obtained under the procedure set forth in Article 14. 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 Article 14.
- 573 Additional allocation: in Western Samoa, the band 75.4-87 MHz is also allocated to the broadcasting service on a primary basis.
- 574 Additional allocation: in China, the Republic of Korea, Japan, the Philippines and the Democratic People's Republic of Korea, the band 76-87 MHz is also allocated to the broadcasting service on a primary basis.

- 575 Additional allocation in Bulgaria, Hungary, Poland, Romania and Czechoslovakia, the band 76-87.5 MHz is also 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.
- 576 Different category of service: in the United States, the French Overseas Departments in Region 2, Guyana, Jamaica, Mexico and Paraguay, the allocation of the band 76-88 MHz to the fixed and mobile services is on a primary basis (see No. 425).
- 577 In Region 3 (except in the Republic of Korea, India, Japan, Malaysia, the Philippines, Singapore and Thailand), the band 79.75-80.25 MHz is also allocated to the radio astronomy service on a primary basis. In making assignments to stations of other services, administrations are urged to take all practicable steps in the band 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. 343 and 344 and Article 36).
- 578 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.
- 579 Additional allocation: in Afghanistan and Australia, the band 85-87 MHz is also allocated to the broadcasting service on a primary basis. The introduction of the broadcasting service in these countries is subject to special agreements between the administrations concerned.
- 580 Alternative allocation: in New Zealand, the band 87-88 MHz is allocated to the land mobile service on a primary basis.
- 581 Additional allocation: in the Federal Republic of Germany, France, Ireland, Italy, Liechtenstein, Monaco, the United Kingdom, Spain, Switzerland and Yemen (P.D.R. of), the band 87.5-88 MHz is also allocated to the land mobile service on a permitted basis and subject to agreement obtained under the procedure set forth in Article 14.
- 582 Additional allocation: in the United Kingdom, the band 97.6-102.1 MHz is also allocated to the land mobile service on a permitted basis until 31 December 1989. The use of this band by the land mobile service is restricted to those stations in operation on 1 January 1980. The withdrawal of land mobile stations will be arranged in consultation with the administrations concerned.

583 (Mob-87) SUP

584 Broadcasting stations in the band 100-108 MHz in Region 1 shall be established and operated in accordance with an agreement and associated plan for the band 87.5-108 MHz to be drawn up by a regional broadcasting conference (see Resolution 510). Prior to the date of entry into force of this agreement, broadcasting stations may be introduced subject to agreement between administrations concerned, on the understanding that such an operation shall in no case prejudice the establishment of the plan.

585 Additional allocation: in China, the Republic of Korea, the Philippines and Singapore, the band 100-108 MHz is also allocated to the fixed and mobile services on a permitted basis.

586 Alternative allocation: in New Zealand, the band 100-108 MHz is allocated to the land mobile service on a primary basis and to the broadcasting service on a secondary basis.

587 (Mob-87) Additional allocation: in Austria, Bulgaria, Hungary, Israel, Kenya, Mongolia, Poland, Syria, the German Democratic Republic, the United Kingdom, Somalia, Czechoslovakia and the U.S.S.R., the band 104-108 MHz is also allocated to the mobile, except aeronautical mobile (R), service on a permitted basis until 31 December 1995 and, thereafter, on a secondary basis.

588 Additional allocation: in Finland and Yugoslavia, the band 104-108 MHz is also allocated to the fixed service on a permitted basis, until 31 December 1995. The effective radiated power of any station shall not exceed 25 W.

589 (Mob-87) Additional allocation: in France, Romania, Sweden, Turkey and Yugoslavia, the band 104-108 MHz is also allocated to the mobile, except aeronautical mobile (R), service on a permitted basis until 31 December 1995.

590 (Mob-87) SUP

590A (Mob-87) Additional allocation: in Afghanistan, the Federal Republic of Germany, Austria, Cyprus, Denmark, Egypt, France, Israel, Italy, Japan, Jordan, Lebanon, Malta, Morocco, Monaco, Norway, Pakistan, Portugal, the United Kingdom, Spain, Sweden, Switzerland, Syria and Turkey, the band 108-111.975 MHz is also allocated to the mobile service on a secondary basis subject to agreement obtained under the procedure set forth in Article 14. 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 administrations which may be identified in the application of Article 14.

- 591 Subject to agreement obtained under the procedure set forth in Article 14, the band 117.975-137 MHz is also allocated to the aeronautical mobile-satellite (R) service on a secondary basis and on the condition that harmful interference is not caused to the aeronautical mobile (R) service.
- 592 The bands 121.45-121.55 MHz and 242.95-243.05 MHz are also allocated to the mobile-satellite service for the reception on board satellites of emissions from emergency position-indicating radiobeacons transmitting at 121.5 MHz and 243 MHz (see Nos. 3259 and 3267).
- 593 (Mob-87) In the band 117.975-136 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 38 and N 38 for distress and safety purposes with stations of the aeronautical mobile service.
- 594 Additional allocation: in Angola, Bulgaria, Hungary, Iran, Iraq, Japan, Mongolia, Mozambique, Papua New Guinea, Poland, the German Democratic Republic, Romania, Czechoslovakia and the U.S.S.R., the band 132-136 MHz is also allocated to the aeronautical mobile (OR) service on a permitted basis.
- 594A (Mob-87) Different category of service: as of 1 January 1990, in Bulgaria, Poland, German Democratic Republic, Romania, Czechoslovakia, Turkey and USSR, the allocation of the band 136-137 MHz to the aeronautical mobile (OR) service is on a permitted basis.
- 595 (Mob-87) Until 1 January 1990, the band 136-137 MHz is also allocated to the space operation service (space-to-Earth), meteorological-satellite service (space-to-Earth) and the space research service (space-to-Earth) on a primary basis. The introduction of stations of the aeronautical mobile (R) service shall only occur after that date. After 1 January 1990, the band 136-137 MHz will also be allocated to the above-mentioned space radiocommunication service on a secondary basis (see Recommendation 408 (Mob-97)).

- 596 Different category of service: in Afghanistan, Saudi Arabia, Bahrain, Brunei, China, the United Arab Emirates, India, Indonesia, Iran, Iraq, Kuwait, Malaysia, Oman, Pakistan, Qatar, Singapore, Thailand, Yemen A.R. and Yemen (P.D.R. of), the allocation of the band 137-138 MHz to the fixed and mobile, except aeronautical mobile (R), services is on a primary basis (see No. 425).
- 597 Different category of service: in Israel, Jordan and Syria, the allocation of the band 137-138 MHz to the fixed and mobile, except aeronautical mobile, services is on a primary basis (see No. 425).
- 598 Different category of service: in Austria, Bulgaria, Egypt, Finland, Greece, Hungary, Lebanon, Mongolia, Poland, the German Democratic Republic, Romania, Czechoslovakia, the U.S.S.R. and Yugoslavia, the allocation of the band 137-138 MHz to the aeronautical mobile (OR) service is on a primary basis (see No. 425).
- 599 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.
- 600 Additional allocation: in the Federal Republic of Germany, Austria, Belgium, France, Israel, Italy, Liechtenstein, Luxembourg, the United Kingdom, Sweden, Switzerland and Czechoslovakia, 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.
- 601 Additional allocation: in the Federal Republic of Germany, Saudi Arabia, Austria, Bahrain, Belgium, Denmark, the United Arab Emirates, Finland, Greece, Ireland, Israel, Kenya, Kuwait, Liechtenstein, Luxembourg, Mali, Malta, Norway, the Netherlands, Qatar, the United Kingdom, Spain, Sweden, Switzerland, Somalia, Tanzania, Tunisia, Turkey and Yugoslavia, the band 138-144 MHz is also allocated to the maritime mobile and land mobile services on a primary basis.
- 602 Alternative allocation: in Angola, Botswana, Burundi, Cameroon, the Central-African Republic, the Congo, Gabon, Gambia, Ghana, Guinea, Iraq, Jordan, Lesotho, Liberia, Libya, Malawi, Mozambique, Namibia, Nigeria, Oman, Rwanda, Sierra Leone, South Africa, Swaziland, Chad, Togo, Zaire, Zambia and Zimbabwe, the band 138-144 MHz is allocated to the fixed and mobile services on a primary basis.
- 603 Additional allocation: in China, the band 138-144 MHz is also allocated to the radiolocation service on a primary basis.

- 604 Additional allocation: in Ethiopia, Finland, Kenya, Malta, Somalia, Sudan, Tanzania, Yemen A.R. and Yugoslavia, the band 138-144 MHz is also allocated to the fixed service on a primary basis.
- 605 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 on or before 1 January 1980, which in any case shall cease by 31 December 1995.
- 606 Additional allocation: in China, the band 144-146 MHz is also allocated to the aeronautical mobile (OR) service on a secondary basis.
- 607 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.
- 608 Subject to agreement obtained under the procedures set forth in Article 14, the band 148-149.9 MHz may be used by the space operation service (Earth-to-space). The bandwidth of an individual transmission shall not exceed  $\pm 25$  kHz.
- 609 Emissions of the radionavigation-satellite service in the bands 149.9-150.05 MHz and 399.9-400.05 MHz may also be used by receiving earth stations of the space research service.
- 609A (Mob-87) Recognizing that the use of the band 149.9-150.05 MHz by the fixed and mobile services may cause harmful interference to the radionavigation-satellite service, administrations are urged not to authorize such use in application of No. 342.
- 610 In making assignments to stations of other services to which the band 150.05-153 MHz is 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. 343 and 344 and Article 36).
- 611 Additional allocation: in Australia and India, the band 150.05-153 MHz is also allocated to the radio astronomy service on a primary basis.
- 612 Additional allocation: in Sweden and Switzerland, the band 150.05-153 MHz is also allocated to the aeronautical mobile (OR) service on a secondary basis.



- 613 (Mob-87) 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 are contained in Articles 38 and N 38.

In the bands 156-156.7625 MHz, 156.8375-157.45 MHz, 160.6-160.975 MHz and 161.475-162.06 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 that administration (see Articles 38, N 38 and 60).

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 radio-communication service.

However, the frequency 156.8 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.

- 613A (Mob-87) In the maritime mobile VHF service, the frequency 156.525 MHz is to be used exclusively for digital selective calling for distress, safety and calling (see Resolution 323 (Mob-87)). The conditions for the use of these frequencies are prescribed in Articles 38, N 38 and 60 in Appendix 18.

- 613B (Mob-87) Additional allocation: in Ireland and in the United Kingdom, the band 161.3875-161.4125 MHz is also allocated to the maritime radionavigation service on a primary basis, subject to agreement obtained under the procedure set forth in Article 14.

- 614 Alternative allocation: in France and Monaco, the band 162-174 MHz is allocated to the broadcasting service on a primary basis until 1 January 1985.

- 615 Alternative allocation: in Morocco, the band 162-174 MHz is allocated to the broadcasting service on a primary basis. The use of this band shall be subject to agreement with administrations having services, operating or planned, in accordance with the Table which are likely to be affected. Stations in existence on 1 January 1981, with their technical characteristics as of that date, are not affected by such agreement.

- 616 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 the procedure set forth in Article 14.
- 617 Additional allocation: in Afghanistan, China and Pakistan, the band 167-174 MHz is also allocated to the broadcasting service on a primary basis. The introduction of the broadcasting service into this band shall be subject to agreement with the neighbouring countries in Region 3 whose services are likely to be affected.
- 618 Additional allocation: in Japan, the band 170-174 MHz is also allocated to the broadcasting service on a primary basis.
- 619 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 the procedure set forth in Article 14. These services shall not cause harmful interference to, or claim protection from, existing or planned broadcasting stations.
- 620 Different category of service: in Mexico, the allocation of the band 174-216 MHz to the fixed and mobile services is on a primary basis (see No. 425).
- 621 (Mob-87) Additional allocation: in Austria, Belgium, Denmark, the Federal Republic of Germany, Finland, France, Italy, Liechtenstein, Monaco, Norway, the Netherlands, the United Kingdom, Spain, Sweden, Switzerland and Yemen (P.D.R. of), the band 174-223 MHz is also allocated to the land mobile service on a permitted 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.
- 622 Different category of service: in Austria, Belgium, Denmark, the Federal Republic of Germany, Finland, France, Israel, Italy, Liechtenstein, Luxembourg, Monaco, Norway, the Netherlands, Portugal, the United Kingdom, Spain, Sweden, Switzerland and Yemen (P.D.R. of), the band 223-230 MHz is allocated to the land mobile service on a permitted basis (see No. 425). 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.

- 623 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.
- 624 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.
- 625 Additional allocation: in Australia and Papua New Guinea, the bands 204-208 MHz and 222-223 MHz are also allocated to the aeronautical radionavigation service on a primary basis.
- 626 Additional allocation: in China, India and Thailand, 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.
- 627 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.
- 627A (Mob-87) Additional allocation: in Canada, the band 216-220 MHz is also allocated to the land mobile service on a primary basis.
- 628 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.
- 629 Additional allocation: in Oman, the United Kingdom and Turkey, the band 216-235 MHz is also allocated to the radiolocation service on a secondary basis.
- 630 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.
- 631 Different category of service: in Spain and Portugal, the band 223-230 MHz is allocated to the fixed service on a permitted basis (see No. 425). Stations of this service shall not cause harmful interference to, or claim protection from, broadcasting stations of other countries, whether existing or planned, that operate in accordance with the Table.

- 632 Additional allocation: in Saudi Arabia, Bahrain, the United Arab Emirates, Israel, Jordan, Oman, Qatar and Syria, the band 223-235 MHz is also allocated to the aeronautical radionavigation service on a permitted basis.
- 633 Additional allocation: in Spain and Portugal, the band 223-235 MHz is also allocated to the aeronautical radionavigation service on a permitted basis until 1 January 1990, subject to not causing harmful interference to existing or planned broadcasting stations in other countries.
- 634 Additional allocation: in Sweden, the band 223-235 MHz is also allocated to the aeronautical radionavigation service on a permitted basis until 1 January 1990, subject to agreement obtained under the procedure set forth in Article 14, and on condition that no harmful interference is caused to existing and planned broadcasting stations in other countries.
- 635 Alternative allocation: in Botswana, Lesotho, Namibia, South Africa, Swaziland and Zambia, the bands 223-238 MHz and 246-254 MHz are allocated to the broadcasting service on a primary basis subject to agreement obtained under the procedures set forth in Article 14.
- 636 Alternative allocation: in New Zealand, Western Samoa and the Niue and Cook Islands, the band 225-230 MHz is allocated to the fixed, mobile and aeronautical radionavigation services on a primary basis.
- 637 Additional allocation: in China, the band 225-235 MHz is also allocated to the radio astronomy service on a secondary basis.
- 638 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 the procedure set forth in Article 14.
- 639 Additional allocation: in Yugoslavia, the band 230-235 MHz is also allocated to the aeronautical radionavigation service on a primary basis, until 1 January 1995. The use of this band by the aeronautical radionavigation service in Yugoslavia is restricted to the stations in operation by 1 January 1980.
- 640 Additional allocation: in New Zealand, the band 235-239.5 MHz is also allocated to the aeronautical radionavigation service on a primary basis.

- 641 Subject to agreement obtained under the procedure set forth in Article 14, the bands 235-322 MHz and 335.4-399.9 MHz may be used by the mobile-satellite service, 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.
- 642 (Mob-87) The frequency 243 MHz is the frequency in this band for use by survival craft stations and equipment used for survival purposes (see Article 38).
- 643 Subject to agreement obtained under the procedure set forth in Article 14, the band 267-272 MHz may be used by administrations for space telemetry in their countries on a primary basis.
- 644 In making assignments to stations of other services to which the band 322-328.6 MHz is 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. 343 and 344 and Article 36).
- 645 Limited to Instrument Landing Systems (glide path).
- 645A (Mob-87) Additional allocation: in Afghanistan, Austria, Belgium, Cyprus, Denmark, Egypt, the Federal Republic of Germany, France, Greece, Israel, Italy, Japan, Jordan, Malta, Morocco, Monaco, Norway, the Netherlands, Portugal, the United Kingdom, Spain, Sweden, Switzerland, Syria and Turkey, the band 328.6-335.4 MHz is also allocated to the mobile service on a secondary basis subject to agreement obtained under the procedure set forth in Article 14. 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 Article 14.
- 645B (Mob-87) Recognizing that the use of the band 399.9-400.05 MHz by the fixed and mobile services may cause harmful interference to the radionavigation satellite service, administrations are urged not to authorize such use in application of No. 342.
- 646 Emissions shall be confined in a band of  $\pm 25$  kHz about the standard frequency 400.1 MHz.

- 647 Additional allocation: in Afghanistan, Saudi Arabia, Bahrain, Bulgaria, Colombia, Costa Rica, Cuba, Egypt, the United Arab Emirates, Ecuador, Hungary, Indonesia, Iran, Iraq, Israel, Kuwait, Liberia, Malaysia, Nigeria, Oman, Pakistan, the Philippines, Poland, Qatar, Syria, the German Democratic Republic, Romania, Singapore, Somalia, Sri Lanka, Czechoslovakia, Thailand, the U.S.S.R. and Yugoslavia, the band 400.05-401 MHz is also allocated to the fixed and mobile services on a primary basis.
- 648 Additional allocation: in Canada, the bands 405.5-406 MHz and 406.1-410 MHz are also allocated to the mobile-satellite, except aeronautical mobile-satellite, service (Earth-to-space), on a primary basis, subject to agreement obtained under the procedure set forth in Article 14.
- 649 (Mob-S7) 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 Articles 38 and N 38).
- 649A (Mob-S7) Any emission capable of causing harmful interference to the authorized uses of the band 406-406.1 MHz is prohibited.
- 650 In making assignments to stations of other services to which the band 406.1-410 MHz is 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. 343 and 344 and Article 36).
- 651 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. 425).
- 652 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.
- 653 Additional allocation: in China, India, the German Democratic Republic, the United Kingdom and the U.S.S.R., the band 420-460 MHz is also allocated to the aeronautical radionavigation service (radio altimeters) on a secondary basis.
- 654 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. 424).

- 655 Different category of service: in Denmark, Libya, Norway and Sweden, the allocation of the bands 430-432 MHz and 438-440 MHz to the radiolocation service is on a secondary basis (see No. 424).
- 656 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.
- 657 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.
- 658 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, Lebanon, Liechtenstein, Libya, Malaysia, Malta, Nigeria, 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.
- 659 Additional allocation: in Angola, Bulgaria, Cameroon, the Congo, Gabon, the German Democratic Republic, Hungary, Mali, Mongolia, Niger, Poland, Romania, Rwanda, Chad, Czechoslovakia and the U.S.S.R., the band 430-440 MHz is also allocated to the fixed service on a primary basis.
- 660 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).
- 660A (Mob-87) Additional allocation: in Mexico, the bands 430-435 MHz and 438-440 MHz are also allocated on a primary basis to the land mobile service, subject to agreement obtained under the procedure set forth in Article 14.
- 661 In Region 1, except in the countries mentioned in No. 662, the band 433.05-434.79 MHz (centre frequency 433.92 MHz) is designated for industrial, scientific and medical (ISM) applications. The use of this frequency band 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 CCIR Recommendations.

- 662 In Austria, the Federal Republic of Germany, 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. Radiocommunication services of these countries operating within this band must accept harmful interference which may be caused by these applications. ISM equipment operating in this band is subject to the provisions of No. 1815.
- 663 Additional allocation: in Brazil, France and the French Overseas Department 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 until 1 January 1990, subject to agreement obtained under the procedure set forth in Article 14. After 1 January 1990, the band 433.75-434.25 MHz will be allocated in the same countries to the same service on a secondary basis.
- 664 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. 435). 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. 2741. 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.
- 665 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.
- 666 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.
- 667 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. 425).
- 668 Subject to agreement obtained under the procedure set forth in Article 14, 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).



- 669 In the maritime mobile service, the frequencies 457.525 MHz, 457.550 MHz, 457.575 MHz, 467.525 MHz, 467.550 MHz and 467.575 MHz may be used by on-board communication stations. The use of these frequencies in territorial waters may be subject to the national regulations of the administration concerned. The characteristics of the equipment used shall conform to those specified in Appendix 20..
- 670 In the territorial waters of Canada, 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 Appendix 20.
- 671 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.
- 672 Different category of service: in Afghanistan, Bulgaria, China, Cuba, Hungary, Japan, Mongolia, Poland, Czechoslovakia and the U.S.S.R., the allocation of the band 460-470 MHz to the meteorological-satellite service (space-to-Earth) is on a primary basis (see No. 425) and is subject to agreement obtained under the procedure set forth in Article 14.
- 673 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 the procedure set forth in Article 14, subject to not causing harmful interference to existing and planned broadcasting stations.
- 674 (Mob-87) Different category of service: in Mexico and Venezuela, the allocation of the band 470-512 MHz to the fixed and mobile services and in Argentina and Uruguay to the mobile service, is on a primary basis (see No. 425), subject to agreement obtained under the procedure set forth in Article 14.
- 675 Different category of service: in Chile, Colombia, Ecuador, the United States, Guyana and Jamaica, the allocation of the bands 470-512 MHz and 614-806 MHz to the fixed and mobile services is on a primary basis (see No. 425), subject to agreement obtained under the procedure set forth in Article 14.

- 676 Additional allocation: in Burundi, Cameroon, the Congo, Ethiopia, Israel, Kenya, Libya, Senegal, Sudan, Syria and Yemen (P.D.R. of), the band 470-582 MHz is also allocated to the fixed service on a secondary basis.
- 677 Alternative allocation: in Pakistan, the bands 470-582 MHz and 610-890 MHz are allocated to the broadcasting service on a primary basis.
- 677A (Mob-87) Additional allocation: Austria, Belgium, Cyprus, Denmark, the Federal Republic of Germany, Finland, France, Ireland, Israel, Italy, Libya, Malta, Morocco, Monaco, Norway, the Netherlands, Portugal, the United Kingdom, Spain, Sweden, Switzerland, Swaziland, Syria, Tunisia and Turkey, the band 470-790 MHz is also allocated on a secondary basis to the land mobile service in the countries mentioned in this footnote, shall not cause harmful interference to existing or planned stations operating in accordance with the Table of Frequency Allocations in countries other than those listed in this footnote.
- 678 Additional allocation: in Costa Rica, El Salvador, Ecuador, the United States, Guatemala, Guyana, Honduras, Jamaica and Venezuela, the band 512-608 MHz is also allocated to the fixed and mobile services on a primary basis, subject to agreement obtained under the procedure set forth in Article 14.
- 679 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.
- 680 (Mob-87) SUP
- 681 (Mob-87) SUP
- 682 Additional allocation: in France and Italy, the band 582-606 MHz is also allocated to the radionavigation service on a permitted basis until 1 January 1990.
- 683 Additional allocation: in Oman, the band 582-606 MHz is also allocated to the radionavigation service on a secondary basis.
- 684 Additional allocation: in Israel, Libya, Syria and Sudan, the band 582-790 MHz is also allocated to the fixed and mobile, except aeronautical mobile, services on a secondary basis.

- 685 Additional allocation: in Denmark and Kuwait, the band 590-598 MHz is also allocated to the aeronautical radionavigation service on a primary basis until 1 January 1995.
- 686 Additional allocation: in the United Kingdom, the band 590-598 MHz is also allocated to the aeronautical radionavigation service on a primary basis. All new assignments to stations in the aeronautical radionavigation service, including those transferred from the adjacent bands, shall be subject to coordination with the Administrations of the following countries: Belgium, Denmark, the Federal Republic of Germany, France, Ireland, Luxembourg, Morocco, Norway, the Netherlands and Spain.
- 686A (Mob-87) Additional allocation: in the United Kingdom, the band 598-606 MHz is also allocated to the aeronautical radionavigation service on a primary basis until 31 December 1994. All new assignments to stations in the aeronautical radionavigation service in this band are subject to the agreement of the Administrations of the following countries: Belgium, Denmark, the Federal Republic of Germany, France, Ireland, Luxembourg, Morocco, Norway, the Netherlands and Spain.
- 687 Additional allocation: in the African Broadcasting Area (see Nos. 400 to 403), the band 606-614 MHz is also allocated to the radio astronomy service on a permitted basis.
- 688 Additional allocation: in China, the band 606-614 MHz is also allocated to the radio astronomy service on a primary basis.
689. In Region 1, except in the African Broadcasting Area (see Nos. 400-403), and in Region 3, the band 608-614 MHz is also allocated to the radio astronomy service on a secondary basis. In making assignments to stations of other services to which the band is 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. 343 and 344 and Article 36).
- 690 Additional allocation: in India, the band 608-614 MHz is also allocated to the radio astronomy service on a primary basis.
- 691 Additional allocation: in New Zealand, the band 610-620 MHz is also allocated to the amateur service on a secondary basis.
- 692 Different category of service: in Costa Rica, El Salvador and Honduras, the allocation of the band 614-806 MHz to the fixed service is on a primary basis (see No. 425), subject to agreement obtained under the procedure set forth in Article 14.

- 692A (Mob-87) Additional allocation: in Cuba, the band 614-890 MHz is also allocated to the radionavigation service on a primary basis, subject to agreement obtained under the procedure set forth in Article 14.
- 693 Within the frequency band 620-790 MHz, assignments may be made to television stations using frequency modulation in the broadcasting-satellite service subject to agreement between the administrations concerned and those having services, operating in accordance with the Table, which may be affected (see Resolutions 33 and 507). Such stations shall not produce a power flux-density in excess of the value-129 dB (W/m<sup>2</sup>) for angles of arrival less than 20 degrees (see Recommendation 705) within the territories of other countries without the consent of the administrations of those countries.
- 694 Additional allocation: in Bulgaria, the German Democratic Republic, Hungary, Mongolia, Poland, Romania, Czechoslovakia and the U.S.S.R., the band 645-862 MHz is also allocated to the aeronautical radio-navigation service on a permitted basis.
- 695 Alternative allocation: in France and Spain, the band 790-830 MHz is allocated to the broadcasting service on a primary basis.
- 695A (Mob-87) Additional allocation: in Austria, Italy, the United Kingdom and Swaziland, the band 790-862 MHz is also allocated to the land mobile service on a secondary basis.
- 696 Alternative allocation: in Greece, Italy, Morocco and Tunisia, the band 790-838 MHz is allocated to the broadcasting service on a primary basis.
- 697 (Mob-87) Additional allocation: Denmark, Egypt, the Federal Republic of Germany, Finland, Israel, Kenya, Liechtenstein, Monaco, Norway, the Netherlands, Sweden, Switzerland and Yugoslavia, the band 790-830 MHz, and in these same countries and in France and Spain, Malta and Syria, the band 830-862 MHz are also allocated to the mobile, except aeronautical mobile, service on a primary basis. However, stations of the mobile service in the countries mentioned in connection with each band referred to in this footnote shall not cause harmful interference to, or claim protection from, stations of services operating in accordance with the Table in countries other than those mentioned in connection with the band.
- 698 (Mob-87) SUP
- 699 (Mob-87) SUP

- 700 (Mob-87) Additional allocation: in Region 2, the band 806-890 MHz is also allocated to the mobile-satellite on a primary basis. The use of this service is intended for operation within national boundaries and subject to agreement obtained under the procedure set forth in Article 14.
- 701 (Mob-87) 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. The use of this service is limited to operation within national boundaries and subject to agreement obtained under the procedure set forth in Article 14. 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.
- 702 Alternative allocation: in Italy, the band 838-854 MHz is allocated to the broadcasting service on a primary basis as of 1 January 1995.
- 703 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. 400 to 403) excluding Algeria, Egypt, Libya and Morocco. Such operations shall be in accordance with the Final Acts of the African VHF/UHF Broadcasting Conference, Geneva, 1963.
- 704 Additional allocation: in Bulgaria, the German Democratic Republic, Hungary, Mongolia, Poland, Romania, Czechoslovakia and the U.S.S.R., the band 862-960 MHz is also allocated to the aeronautical radio-navigation service on a permitted basis until 1 January 1998. Up to this date, the aeronautical radionavigation service may use the band, subject to agreement obtained under the procedure set forth in Article 14. After this date, the aeronautical radionavigation service may continue to operate on a secondary basis.
- 704A (Mob-87) Additional allocation: in Brazil, Canada and the United States of America, the band 890-896 MHz is also allocated to the mobile-satellite service on a primary basis. The use of this service is intended for operation within national boundaries and subject to agreement obtained under the procedure set forth in Article 14. In seeking such agreement, appropriate protection shall be afforded to services operating in accordance with the Table.
- 705 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. 425) and subject to agreement obtained under the procedure set forth in Article 14.

- 706 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. 425).
- 707 In Region 2, the band 902-928 MHz (centre frequency 915 MHz) is designated for industrial, scientific and medical (ISM) applications. Radiocommunication services 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. 1815.
- 707A (Mob-87) Different category of service: in Chile, the band 903-905 MHz is allocated to the mobile, except aeronautical mobile, service on a primary basis and is subject to agreement obtained under the procedure set forth in Article 14.
- 708 Different category of service: in the United States, the allocation of the bands 942-947 MHz and 952-960 MHz to the mobile service is on a primary basis (see No. 425) and subject to agreement obtained under the procedure set forth in Article 14.
- 709 The band 960-1 215 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 facilities.
- 710 Use of the radionavigation-satellite service in the band 1 215-1 260 MHz shall be subject to the condition that no harmful interference is caused to the radionavigation service authorized under No. 712.
- 711 Additional allocation: in Afghanistan, Angola, Bahrain, Bangladesh, Cameroon, Chad, China, Ethiopia, Guinea, Guyana, India, Indonesia, Iran, Iraq, Israel, Japan, Jordan, Kuwait, Lebanon, Libya, Malawi, Morocco, Mozambique, Nepal, Nigeria, Oman, Pakistan, the Philippines, Qatar, Saudi Arabia, Syria, Somalia, Sudan, Sri Lanka, Thailand, Togo, the United Arab Emirates and Yemen (P.D.R. of), the band 1 215-1 300 MHz is also allocated to the fixed and mobile services on a primary basis.
- 712 Additional allocation: in Algeria, Austria, Bahrain, Belgium, Benin, Burundi, Cameroon, China, Denmark, the Federal Republic of Germany, France, Greece, India, Iran, Iraq, Kenya, Liechtenstein, Luxembourg, Mali, Mauritania, Norway, Oman, Pakistan, the Netherlands, Portugal, Qatar, Senegal, Somalia, Sudan, Sri Lanka, Sweden, Switzerland, Tanzania, Turkey, the United Arab Emirates and Yugoslavia, the band 1 215-1 300 MHz is also allocated to the radionavigation service on a primary basis.

- 712A (Mob-87) Additional allocation: in Cuba, the band 1 215-1 300 MHz is also allocated to the radionavigation service on a primary basis subject to the agreement obtained under the procedure set forth in Article 14.
- 713 In the bands 1 215-1 300 MHz, 3 100-3 300 MHz, 5 250-5 350 MHz, 8 550-8 650 MHz, 9 500-9 800 MHz and 13.4-14.0 GHz, radiolocation stations installed on spacecraft may also be employed for the earth exploration-satellite and space research services on a secondary basis.
- 714 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.
- 715 Additional allocation: in Indonesia, the band 1 300-1 350 MHz is also allocated to the fixed and mobile services on a primary basis.
- 716 Alternative allocation: in Ireland and the United Kingdom, the band 1 300-1 350 MHz is allocated to the radiolocation service on a primary basis.
- 717 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.
- 718 In making assignments to stations of other services, administrations are urged to take all practicable steps to protect the spectral line observations of the radio astronomy service from harmful interference in the band 1 330-1 400 MHz. Emissions from space or airborne stations can be particularly serious sources of interference to the radio astronomy service (see Nos. 343 and 344 and Article 36).
- 719 In Bulgaria, the German Democratic Republic, Hungary, Mongolia, Poland, Romania, Czechoslovakia and the U.S.S.R., the existing installation of the radionavigation service may continue to operate in the band 1 350-1 400 MHz.
- 720 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.
- 721 All emissions, in the band 1 400-1 427 MHz are prohibited.

- 722 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 extra-terrestrial origin.
- 723 In Region 2, in Australia and Papua New Guinea, 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.
- 723A (Mob-87) Different category of service: in Cuba, the band 1 525-1 530 MHz is allocated to the aeronautical mobile service on a primary basis, under the conditions specified in No. 723.
- 724 Different category of service: in Afghanistan, Bahrain, Bulgaria, Cameroon, Egypt, France, the German Democratic Republic, Hungary, Iran, Iraq, Israel, Kuwait, Lebanon, Morocco, Mongolia, Oman, Poland, Qatar, Saudi Arabia, Syria, Romania, Czechoslovakia, the United Arab Emirates, the U.S.S.R., Yemen (P.D.R. of) and Yugoslavia, the allocation of the band 1 525-1 530 MHz to the mobile, except aeronautical mobile, service is on a primary basis (see No. 425).
- 725 Additional allocation: in the U.S.S.R., the band 1 525-1 530 MHz is also allocated to the aeronautical mobile service on a primary basis.
- 726 The allocation to the maritime mobile-satellite service in the band 1 530-1 535 MHz shall be effective from 1 January 1990. Up to that date the allocation to the fixed service shall be on a primary basis in Regions 1 and 3.
- 726A (Mob-87) The bands 1 530-1 544 MHz, 1 545-1 559 MHz, 1 626.5-1 656.5 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.
- 726B (Mob-87) The use of the bands 1 533-1 544 MHz, 1 626.5-1 631.5 MHz and 1 634.5-1 645.5 MHz by the land mobile-satellite service is limited to non-speech low bit-rate data transmissions.
- 727 Additional allocation: in Afghanistan, Bahrain, Bangladesh, Chad, the Congo, Egypt, Ethiopia, Iran, Iraq, Israel, Jordan, Kuwait, Lebanon, Malta, Morocco, Niger, Oman, Pakistan, Qatar, Saudi Arabia, Sudan, Sri Lanka, Syria, Somalia, Thailand, Togo, the United Arab Emirates, Yemen (P.D.R. of) and Zambia, the bands 1 540-1 645.5 MHz and 1 646.5-1 660 MHz are also allocated to the fixed service on a secondary basis.



- 727A (Mob-87) 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 N 38).
- 728 (Mob-87) SUP
- 729 (Mob-87) Transmissions in the band 1 545-1 559 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.
- 729A (Mob-87) Notwithstanding any other provision of the Radio Regulations relating to restrictions in the use of the bands allocated to the aeronautical mobile-satellite (R) service for public correspondence, the band 1 545-1 656.5 MHz may be authorized by administrations for public correspondence with aircraft earth stations. Such communications must cease immediately, if necessary, to permit transmission of messages with priority 1 to 3 in Article 51.
- 730 Additional allocation: in Austria, Bulgaria, Cameroon, the Federal Republic of Germany, the German Democratic Republic, Guinea, Hungary, Indonesia, Libya, Mali, Mongolia, Nigeria, Poland, Romania, Senegal, Czechoslovakia and the U.S.S.R., the bands 1 550-1 645.5 MHz and 1 646.5-1 660 MHz are also allocated to the fixed service on a primary basis.
- 730A (Mob-87) In the bands 1 555-1 559 MHz and 1 656-1 660.5 MHz, administrations may also authorize aircraft earth stations and ship earth stations to communicate with space stations in the land mobile-satellite service (see Resolution 208 (Mob-87)).
- 731 (Mob-87) Alternative allocation: in Sweden, the band 1 590-1 626.5 MHz is allocated to the aeronautical radionavigation service on a primary basis.
- 731A (Mob-87) In Region 1, stations of the aeronautical mobile service using the bands 1 593-1 594 MHz and 1 625-1 626.5 MHz shall not claim "protection from, or cause harmful interference to, stations of the aeronautical radionavigation and radionavigation services, as applicable.

731B (Mob-87) Additional allocation: the bands 1 593-1 594 MHz and 1 625.5-1 626.5 MHz are also allocated to the aeronautical mobile service in Region 1 (except in Syria and Tunisia) on a primary basis, and in Regions 2 and 3 (and in Syria and Tunisia) on a secondary basis. The use of these bands in the aeronautical mobile service is limited to public correspondence with aircraft (see Recommendation 408 (Mob-87)). The use of the band 1 593-1 594 MHz is limited to transmissions from aeronautical stations and the use of the band 1 625.5-1 626.5 MHz is limited to transmissions from aircraft stations.

731C (Mob-87) Different category of service: the bands listed in No. 731B are allocated, subject to agreement obtained in accordance with the procedures set forth in Article 14, to the aeronautical mobile service on a primary basis in Greenland, the French Overseas Territories in Regions 2 and 3, Bermuda, British Virgin Islands, Cayman Islands, Montserrat and Pitcairn Island (see Recommendation 408 (Mob-87)).

731D (Mob-87) In Region 1, stations of the aeronautical mobile service using the bands 1 593-1 594 MHz and 1 625.5-1 626.5 MHz shall not cause harmful interference to stations of the fixed service operating in the countries listed in No. 730.

732 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 the procedure set forth in Article 14.

733 The bands 1 610-1 626.5 MHz, 5 000-5 250 MHz and 15.4-15.7 GHz are also allocated to the aeronautical mobile-satellite (R) service on a primary basis. Such use is subject to agreement obtained under the procedure set forth in Article 14.

733A (Mob-87) In respect of the radiodetermination-satellite service the provisions of No. 953 do not apply in the frequency band 1 610-1 626.5 MHz.

733B (Mob-87) Different category of service: In Angola, Australia, Burundi, Côte d'Ivoire, Ethiopia, India, Islamic Republic of Iran, Israel, Italy, Jordan, Kenya, Lebanon, Liberia, Libya, Madagascar, Mali, Pakistan, Papua New Guinea, Senegal, Sudan, Swaziland, Syria, Tanzania, Thailand, Togo, Zaire 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. 425), subject to agreement obtained under the procedure set forth in Article 14 with other countries not listed in this provision.

- 733C (Mob-87) Different category of service: in Venezuela, the allocation to the radiodetermination-satellite service in the band 1 610-1 626.5 MHz (Earth-to-space) is on a secondary basis.
- 733D (Mob-87) Alternative allocation: in Cuba, the band 1 610-1 626.5 MHz is allocated exclusively to the aeronautical radionavigation service on a primary basis.
- 733E (Mob-87) In Regions 1 and 3, harmful interference shall not be caused to stations of the radioastronomy service using the band 1 610.6-1 613.8 MHz by stations of the radiodetermination-satellite service.
- 733F (Mob-87) In Region 1, the bands 1 610-1 626.5 MHz (Earth-to-space) and 2 483.5-2 500 MHz (space-to-Earth) are also allocated to the radiodetermination-satellite service on a secondary basis.
- 734 The band 1 610.6-1 613.8 MHz is also allocated to the radio astronomy service on a secondary basis for spectral line observations. In making assignments to stations of other service to which the band is allocated, administrations are urged to take all practicable steps to protect the radioastronomy service from harmful interference. Emissions from space or airborne stations can be particularly serious sources of interference to the radio astronomy service (see Nos. 343 and 344 and Article 36).
- 734A (Mob-87) Land earth stations and ship earth stations in the mobile-satellite services operating in the bands 1 631.5-1 634.5 MHz and 1 656.5-1 660 MHz shall not cause harmful interference to the stations in the fixed service operating in the countries listed in No. 730.
- 734B (Mob-87) 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 N 38).
- 735 (Mob-87) 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.
- 736 In making assignments to stations of other services to which the band 1 660-1 670 MHz is 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. 343 and 344 and Article 36).

- 737 Different category of service: in Afghanistan, Bahrain, Benin, Bulgaria, Cameroon, the Central African Republic, Chad, the Congo, Cuba, Czechoslovakia, Egypt, Ethiopia, Hungary, India, Indonesia, Iran, Israel, Kenya, Kuwait, Lebanon, Malaysia, Mongolia, Oman, Uganda, Pakistan, Poland, Qatar, Syria, the German Democratic Republic, Saudi Arabia, Singapore, Somalia, Sri Lanka, Thailand, Tunisia, the United Arab Emirates, the U.S.S.R., Yemen A.R., Yemen (P.D.R. of) and Yugoslavia, the allocation of the band 1 660.5-1 668.4 MHz to the fixed and the mobile, except aeronautical mobile, services are on a primary basis until 1 January 1990 (see No. 425).
- 738 Additional allocation: in Bangladesh, India, Indonesia, Nigeria, Pakistan, Sri Lanka and Thailand, the band 1 660.5-1 668.4 MHz is also allocated to the meteorological aids service on a secondary basis.
- 739 In view of the successful detection by radio astronomers of two hydroxyl spectral lines in the region of 1 665 MHz and 1 667 MHz, 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.
- 740 Additional allocation: in Afghanistan, Costa Rica, Cuba, India, Iran, Malaysia, Pakistan, Singapore, Sri Lanka and Thailand, the band 1 690-1 700 MHz is also allocated to the fixed and mobile, except aeronautical mobile, services on a primary basis.
- 741 Different category of service: in Austria, Bahrain, Bulgaria, the Congo, Czechoslovakia, Egypt, Ethiopia, Guinea, The German Democratic Republic, Hungary, Iraq, Israel, Jordan, Kenya, Kuwait, Lebanon, Mauritania, Mongolia, Oman, Poland, Qatar, Saudi Arabia, Syria, Romania, Somalia, Tanzania, the United Arab Emirates, the U.S.S.R., Yemen A.R., Yemen (P.D.R. of) and Yugoslavia, the allocation of the band 1 690-1 700 MHz to the fixed and mobile, except aeronautical mobile, service is on a primary basis (see No. 425).
- 742 Additional allocation: in Australia and Indonesia, the band 1 690-1 700 MHz is also allocated to the fixed and mobile, except aeronautical mobile, services on a secondary basis.
- 743 Additional allocation: in India, Indonesia, Japan and Thailand, the band 1 700-1 710 MHz is also allocated to the space research service (space-to-Earth) on a primary basis.

- 743A (Mob-87) Different category of service: in Austria, Denmark, the Federal Republic of Germany, Finland, Israel, Norway, the Netherlands, the United Kingdom, Switzerland and Syria, in the band 1 700-2 450 MHz, in Sweden in the bands 1 700-1 710 MHz and 2 290-2 450 MHz and in Yugoslavia in the band 2 300-2 450 MHz, the allocation to the land mobile service is on a primary basis (see No. 425), subject to agreement obtained under the procedure set forth in Article 14.
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- 744 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. In making assignments to stations of other services to which the band is 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. 343 and 344 and Article 36).
- 745 Subject to agreement obtained under the procedure set forth in Article 14 and having particular regard to tropospheric scatter systems, the band 1 750-1 850 MHz may also be used for space operation (Earth-to-space) and space research (Earth-to-space) services in Region 2, in Afghanistan, Australia, India, Indonesia, Japan and Thailand.
- 746 Additional allocation: in Bulgaria, Cuba, the German Democratic Republic, Hungary, Mali, Mongolia, Poland, Romania, Czechoslovakia and the U.S.S.R., the band 1 770-1 790 MHz is also allocated to the meteorological-satellite service on a primary basis, subject to agreement obtained under the procedure set forth in Article 14.
- 747 Subject to agreement obtained under the procedure set forth in Article 14, the band 2 025-2 110 MHz may also be used for Earth-to-space and space-to-space transmissions in the space research, space operation and earth exploration-satellite services. The services using space-to-space transmissions shall operate in accordance with the provisions of Nos. 2557 to 2560 and shall not cause harmful interference to the other space services.
- 748 Subject to agreement obtained under the procedure set forth in Article 14, the band 2 110-2 120 MHz may also be used for Earth-to-space transmissions in the space research (deep space) service.
- 749 Subject to agreement obtained under the procedure set forth in Article 14, the band 2 110-2 120 MHz may also be used in Japan for the space research (Earth-to-space) and space operation (Earth-to-space) services until 31 December 1990.

- 750 Subject to agreement obtained under the procedure set forth in Article 14, the band 2 200-2 290 MHz may also be used for space-to-Earth and space-to-space transmissions in the space research, space operations and earth exploration-satellite services. These services shall operate in accordance with the provisions of Nos. 2557 to 2560; the space-to-space transmissions shall not cause harmful interference to the other space services.
- 751 In Australia, the United States and Papua New Guinea, the use of the band 2 310-2 390 MHz by the aeronautical mobile service for telemetry has priority over other uses by the mobile services.
- 752 The band 2 400-2 500 MHz (centre frequency 2 450 MHz) is designated for industrial, scientific and medical (ISM) applications. Radio services 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. 1815.
- 753 (Mob-87) Alternative allocation: in France, the bands 2 450-2 483.5 MHz and 2 500-2 550 MHz are allocated on a primary basis to the radiolocation service and on a secondary basis to the fixed and mobile services (see Nos. 424 and 425). Such use is subject to agreement with the administrations having services, operating or planned to operate in accordance with the Table, which may be affected.
- 753A (Mob-87) In respect of the radiodetermination-satellite service in the band 2 483.5-2 500 MHz, the provisions of No. 953 do not apply.
- 753B (Mob-87) In Region 1, in countries other than those listed in No. 753C, harmful interference shall not be caused to, or protection shall not be claimed from, stations of the radiolocation service by stations of the radiodetermination-satellite service.
- 753C (Mob-87) Different category of service: in Angola, Australia, Burundi, Côte d'Ivoire, Ethiopia, India, Islamic Republic of Iran, Israel, Italy, Jordan, Kenya, Lebanon, Liberia, Libya, Madagascar, Mali, Pakistan, Papua New Guinea, Senegal, Sudan, Swaziland, Syria, Tanzania, Thailand, Togo, Zaire and Zambia, the allocation of the band 2 483.5-2 500 MHz to the radiodetermination-satellite service (space-to-Earth) is on a primary basis (see No. 425), subject to agreement obtained under the procedure of Article 14 with other countries not listed in this provision.
- 753D (Mob-87) Alternative allocation: in Cuba, the band 2 483.5-2 500 MHz is allocated only to the fixed, mobile and radiolocation services on a primary basis.

- 753E (Mob-87) Alternative allocation: in France, the band 2 483.5-2 500 MHz is allocated on a primary basis to the radiolocation service and on a secondary basis to the mobile service ( see Nos. 424 and 425). Such use is subject to agreement with the administrations having services operating or planned to operate in accordance with the Table which may be affected.
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- 754 Subject to agreement obtained under the procedure set forth in Article 14, the band 2 500-2 535 MHz may also be used in Region 3 for the mobile-satellite (space-to-Earth), except aeronautical mobile-satellite, service for operation limited to within national boundaries.
- 754A (Mob-87) Additional allocation: subject to agreement obtained under the procedure set forth in Article 14, the band 2 500-2 516.5 MHz may also be used in India, the Islamic Republic of Iran, Papua New Guinea and Thailand for the radiodetermination-satellite service (space-to-Earth) for operation limited to within national boundaries.
- 755 Additional allocation: in Canada, the band 2 500-2 550 MHz is also allocated to the radiolocation service on a primary basis.
- 756 Additional allocation: in the United Kingdom, the band 2 500-2 600 MHz is also allocated to the radiolocation service on a secondary basis.
- 757 The use of the band 2 500-2 690 MHz by the broadcasting-satellite service is limited to national and regional systems for community reception and such use shall be subject to agreement obtained under the procedure set forth in Article 14. The power flux-density at the Earth's surface shall not exceed the values given in Nos. 2561 to 6564.
- 758 Alternative allocation: in the Federal Republic of Germany and Greece, the band 2 500-2 690 MHz is allocated to the fixed service on a primary basis.
- 759 Alternative allocation: in Bulgaria and the U.S.S.R., the band 2 500-2 690 MHz is allocated to the fixed and mobile, except aeronautical mobile, services on a primary basis.
- 760 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.
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- 761 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; such use shall be subject to agreement obtained under the procedure set forth in Article 14, giving particular attention to the broadcasting-satellite service in Region 1. In the direction space-to-Earth, the power flux-density at the Earth's surface shall not exceed the values given in Nos. 2561 to 2564.
- 762 Administrations shall make all practicable efforts to avoid developing new tropospheric scatter systems in the band 2 500-2 690 MHz.
- 763 Subject to agreement obtained under the procedure set forth in Article 14, the band 2 500-2 690 MHz may be used for tropospheric scatter systems in Region 1.
- 764 When planning new tropospheric scatter radio-relay links in the band 2 500-2 690 MHz, all possible measures shall be taken to avoid directing the antennae of these links towards the geostationary-satellite orbit.
- 765 In making assignments to stations of other services, administrations are urged to take all practicable steps to protect the radio astronomy service from harmful interference in the band 2 655-2 690 MHz. Emissions from space or airborne stations can be particularly serious sources of interference to the radio astronomy service (see Nos. 343 and 344 and Article 36).
- 766 Subject to agreement obtained under the procedure set forth in Article 14, the band 2 655-2 690 MHz may also be used in Region 3 for the mobile-satellite (Earth-to-space), except aeronautical mobile-satellite, service for operation limited to within national boundaries.
- 767 Additional allocation: in Austria and the Federal Republic of Germany, the band 2 690-2 695 MHz is also allocated to the fixed service on a primary basis. Such use is limited to equipment in operation by 1 January 1985.
- 768 All emissions in the band 2 690-2 700 MHz are prohibited, except those provided for by Nos. 767 and 769.
- 769 Additional allocation: in Afghanistan, Bahrain, Bulgaria, Cameroon, The Central African Republic, the Congo, Côte d'Ivoire, Czechoslovakia, the German Democratic Republic, Cuba, Egypt, Ethiopia, Gabon, Guinea, Guinea-Bissau, Hungary, Iran, Iraq, Israel, Lebanon, Malaysia, Malawi, Mali, Morocco, Mauritania, Mongolia, Nigeria, Oman, Pakistan, the Philippines, Poland, Qatar, Saudi Arabia, Syria, Romania, Singapore, Somalia, Sri Lanka, Thailand, Tunisia, the United Arab Emirates, the



U.S.S.R., Yemen A.R., Yemen (P.D.R. of), Yugoslavia, Zaire and Zambia, 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.

- 770 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.
- 771 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.
- 772 (Mob-87) In the band 2 900-3 100 MHz, the use of shipborne interrogator-transponder systems (SIT) shall be confined to the sub-band 2 930-2 950 MHz.
- 773 The use of the band 2 900-3 100 MHz by the aeronautical radionavigation service is limited to ground-based radars.
- 774 (Mob-87) SUP
- 775 (Mob-87) SUP
- 775A (Mob-87) 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. 347 of these Regulations.
- 776 (Mob-87) SUP
- 777 Additional allocation: in Bulgaria, Canada, Cuba, Czechoslovakia, the German Democratic Republic, Hungary, Mongolia, Poland, Romania, and the U.S.S.R., the band 3 100-3 300 MHz is also allocated to the radionavigation service on a primary basis.
- 778 In making assignments to stations of other services, administrations are urged to take all practicable steps to protect the spectral line observations of the radio astronomy service from harmful interference in the bands 3 260-3 267 MHz, 3 332-3 339 MHz, 3 345.8-3 352.5 MHz and 4 825-4 835 MHz. Emissions from space or airborne stations can be particularly serious sources of interference to the radio astronomy service (see Nos. 343 and 344 and Article 36).

- 779 Additional allocation: in Afghanistan, Bahrain, Bangladesh, China, the Congo, India, Indonesia, Iran, Iraq, Israel, Japan, Kuwait, Lebanon, Libya, Malaysia, Oman, Pakistan, Qatar, Saudi Arabia, Syria, Singapore, Sri Lanka, Thailand and the United Arab Emirates, the band 3 300-3 400 MHz is also allocated to the fixed and mobile services on a primary basis. The countries bordering the Mediterranean shall not claim protection for their fixed and mobile services from the radiolocation service.
- 780 Additional allocation: in Bulgaria, Cuba, Czechoslovakia, the German Democratic Republic, Hungary, Mongolia, Poland, Romania, and the U.S.S.R., the band 3 300-3 400 MHz is also allocated to the radionavigation service on a primary basis.
- 781 Additional allocation: in the Federal Republic of Germany, Israel, Nigeria and the United Kingdom, the band 3 400-3 475 MHz is also allocated to the amateur service on a secondary basis.
- 782 Different category of service: in Austria, the allocation of the band 3 400-3 500 MHz to the radiolocation service is on a primary basis (see No. 425), subject to the agreement of the administrations of the following countries: Czechoslovakia, the German Democratic Republic, Hungary, Italy and Yugoslavia. Such use is limited to ground-based stations. However, this administration is urged to cease operations by 1985. After this date this administration shall take all practicable steps to protect the fixed-satellite service, and coordination requirements shall not be imposed on the fixed-satellite service.
- 783 Different category of service: in Indonesia, Japan, Pakistan and Thailand, the allocation of the band 3 400-3 500 MHz to the mobile, except aeronautical mobile, service is on a primary basis (see No.425).
- 784 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.
- 785 In Denmark, Norway and the United Kingdom, the fixed, radiolocation and fixed-satellite services operate on a basis of equality of rights in the band 3 400-3 600 MHz. However, these administrations operating radiolocation systems in this band are urged to cease operations by 1985. After this date these administrations shall take all practicable steps to protect the fixed-satellite service, and coordination requirements shall not be imposed on the fixed-satellite service.

- 786 In Japan, in the band 3 620-3 700 MHz, the radiolocation service is excluded.
- 787 Additional allocation: in New Zealand, the band 3 700-3 770 MHz is also allocated to the radiolocation service on a secondary basis.
- 788 Additional allocation: in Denmark, the Federal Republic of Germany, Norway and Sweden, the band 4 200-4 210 MHz is also allocated to the fixed service on a secondary basis.
- 789 Use of the band 4 200-4 400 MHz by the aeronautical radionavigation service is reserved exclusively for radio altimeters installed on board aircraft and for the associated transponders on the ground. However, passive sensing in the earth exploration-satellite and space research services may be authorized in this band on a secondary basis (no protection is provided by the radio altimeters).
- 790 Additional allocation: in China, Iran, Libya, the Philippines and Sri Lanka, the band 4 200-4 400 MHz is also allocated to the fixed service on a secondary basis.
- 791 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  $\pm 2$  MHz of these frequencies and shall be subject to agreement obtained under the procedure set forth in Article 14.
- 792 (Orb-88) SUP
- 792A (Orb-88) The use of the bands 4 500-4 800 MHz, 6 725-7 025 MHz, 10.7-10.95 GHz, 11.2-11.45 GHz and 12.75-13.25 GHz by the fixed-satellite service shall be in accordance with the provisions of Appendix 30B.
- 793 In the bands 4 825-4 835 MHz and 4 950-4 990 MHz, the allocation to the mobile service is restricted to the mobile, except aeronautical mobile service.
- 794 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. 425). In making assignments to stations of other services to which these bands 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. 343 and 344 and Article 36).

795 In making assignments to stations of other services to which the band 4 990-5 000 MHz is 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. 343 and 344 and Article 36).

796 The band 5 000-5 250 MHz 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 take precedence over other uses of this band.

797 The bands 5 000-5 250 MHz and 15.4-15.7 GHz are also allocated to the fixed-satellite service and the inter-satellite service, for connection between one or more earth stations at specified fixed points on the Earth and space stations, when these services are used in conjunction with the aeronautical radionavigation and/or aeronautical mobile (R) service. Such use shall be subject to agreement obtained under the procedure set forth in Article 14.

797A (Mob-87) Additional allocation: in the countries listed in Nos. 733B and 753C and subject to agreement obtained under the procedure set forth in Article 14, the band 5 150-5 216 MHz is also allocated to the radiodetermination-satellite service (space-to-Earth) on a primary basis. In Region 2, the band is also allocated to the radiodetermination-satellite service (space-to-Earth) on a primary basis. In Regions 1 and 3, except those countries listed in Nos. 733B and 753C, the band is also allocated to the radiodetermination-satellite service (space-to-Earth) on a secondary basis. The use by the radiodetermination-satellite service operating in the bands 1 610-1 626.5 MHz and/or 2 483.5-2 500 MHz. The total power flux-density at the Earth's surface shall in no case exceed -159 dBW/m<sup>2</sup> in any 4 kHz band for all angles of arrival.

797B (Mob-87) Additional allocation: in Austria, Denmark, the Federal Republic of Germany, France, Finland, Israel, Italy, Jordan, Morocco, Norway, the Netherlands, Pakistan, the United Kingdom, Spain, Sweden, Switzerland, Syria and Tunisia, the band 5 150-5 150 MHz is also allocated to the mobile service, on a primary basis, subject to the agreement obtained under the procedure set forth in Article 14.

- 798 Additional allocation: in Austria, Bulgaria, Czechoslovakia, Hungary, Libya, Mongolia, Poland, the German Democratic Republic, Romania, and the U.S.S.R., the band 5 250-5 350 MHz is also allocated to the radio-navigation service on a primary basis.
- 799 The use of the band 5 350-5 470 MHz by the aeronautical radionavigation service is limited to airborne radars and associated airborne beacons.
- 800 Additional allocation: in Afghanistan, Austria, Bulgaria, Czechoslovakia, the German Democratic Republic, Hungary, Iran, Mongolia, Poland, Romania and the U.S.S.R., the band 5 470-5 650 MHz is also allocated to the aeronautical radionavigation service on a primary basis.
- 801 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. 2502, 2505, 2506 and 2507 shall apply in the band 5 725-5 850 MHz.
- 802 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.
- 803 Additional allocation: in Afghanistan, Bahrain, Bangladesh, Cameroon, the Central African Republic, Chad, China, the Congo, the Republic of Korea, Egypt, Gabon, Guinea, India, Indonesia, Iran, Iraq, Israel, Japan, Jordan, Kuwait, Lebanon, Libya, Madagascar, Malaysia, Malawi, Malta, Niger, Nigeria, Pakistan, the Philippines, Qatar, Saudi Arabia, Syria, Singapore, Sri Lanka, Tanzania, Thailand, the United Arab Emirates and Yemen (P.D.R. of), the band 5 650-5 850 MHz is also allocated to the fixed and mobile services on a primary basis.
- 804 Different category of service: in Bulgaria, Cuba, Czechoslovakia, the German Democratic Republic, Hungary, Mongolia, Poland and the U.S.S.R., the allocation of the band 5 670-5 725 MHz to the space research service is on a primary basis (see No. 425).
- 805 Additional allocation: in Bulgaria, Cuba, Czechoslovakia, the German Democratic Republic, Hungary, Mongolia, Poland and the U.S.S.R., the band 5 670-5 850 MHz is also allocated to the fixed service on a primary basis.

- 806 The band 5 725-5 875 MHz (centre frequency 5 800 MHz) is designated for industrial, scientific and medical (ISM) applications. Radiocommunication services 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. 1815.
- 807 Additional allocation: in Cameroon and the Federal Republic of Germany, the band 5 755-5 850 MHz is also allocated to the fixed service on a primary basis.
- 808 The band 5 830-5 850 MHz is also allocated to the amateur-satellite service (space-to-Earth) on a secondary basis.
- 809 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 this band.
- 810 Subject to agreement obtained under the procedure set forth in Article 14, in Region 2, the band 7 125-7 155 MHz may be used for Earth-to-space transmissions in the space operation service.
- 811 Subject to agreement obtained under the procedure set forth in Article 14, the band 7 145-7 235 MHz may be used for Earth-to-space transmissions in the space research service. The use of the band 7 145-7 190 MHz is restricted to deep space; no emissions to deep space shall be effected in the band 7 190-7 235 MHz.
- 812 The bands 7 250-7 375 MHz (space-to-Earth) and 7 900-8 025 MHz (Earth-to-space) may also be used by the mobile-satellite service. The use of these bands by this service shall be subject to agreement obtained under the procedure set forth in Article 14.
- 813 In the band 8 025-8 400 MHz, the power flux-density limits specified in No. 2570 shall apply in Regions 1 and 3 to the earth exploration-satellite service.
- 814 In Region 2, aircraft stations are not permitted to transmit in the band 8 025-8 400 MHz.
- 815 Subject to agreement obtained under the procedure set forth in Article 14, the band 8 025-8 400 MHz may be used for the earth exploration-satellite service (space-to-Earth) in Bangladesh, Benin, Cameroon, China, the Central African Republic, Côte d'Ivoire, Egypt, France, Guinea, India, Iran, Israel, Italy, Japan, Kenya, Lybia, Mali,

Niger, Pakistan, Senegal, Somalia, Sudan, Sweden, Tanzania, Upper Volta, Zaire and Zambia, on a primary basis.

- 816 In the space research service, the use of the band 8 400-8 450 MHz is limited to deep space.
- 817 Different category of service: in Belgium, Israel, Luxembourg, Malaysia, 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. 424).
- 818 Alternative allocation: in the United Kingdom, the band 8 400-8 500 MHz is allocated to the radiolocation and space research services on a primary basis.
- 819 Additional allocation: in Bahrain, Bangladesh, Burundi, Cameroon, Chad, China, the Congo, Costa Rica, Egypt, Gabon, Guinea, Guyana, Indonesia, Iran, Iraq, Israel, Jamaica, Kuwait, Libya, Malaysia, Mali, Morocco, Mauritania, Nepal, Niger, Nigeria, Oman, Pakistan, Qatar, Saudi Arabia, Syria, Senegal, Singapore, Somalia, Sri Lanka, Tanzania, Thailand, Togo, Tunisia and the United Arab Emirates, the band 8 500-8 750 MHz is also allocated to the fixed and mobile services on a primary basis.
- 820 Additional allocation: in Bulgaria, Czechoslovakia, Hungary, Mongolia, Poland, the German Democratic Republic, Romania and the U.S.S.R., the band 8 500-8 750 MHz is also allocated to the land mobile and radio-navigation services on a primary basis.
- 821 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.
- 822 Additional allocation: in Algeria, Bahrain, Belgium, China, the Federal Republic of Germany, France, Greece, Indonesia, Iran, Libya, the Netherlands, Qatar, Sudan, the United Arab Emirates and Thailand, the bands 8 825-8 850 MHz and 9 000-9 200 MHz are also allocated to the maritime radionavigation service, on a primary basis for use by shore-based radars only.
- 823 In the bands 8 850-9 000 MHz and 9 200-9 225 MHz, the maritime radio-navigation service is limited to shore-based radars.
- 824 Additional allocation: in Austria, Bulgaria, Cuba, Czechoslovakia, the German Democratic Republic, Hungary, Mongolia, Poland, Romania, and the U.S.S.R., the bands 8 850-9 000 MHz and 9 200-9 300 MHz are also allocated to the radionavigation service on a primary basis.

- 824A (Mob-87) In the band 9 200-9 500 MHz, search and rescue transponders (SART) may be used, having due regard to the appropriate CCIR Recommendation (see also Article N 38).
- 825 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. In the band 9 300-9 500 MHz, ground-based radars used for meteorological purposes have priority over other radiolocation devices.
- 825A (Mob-87) In the band 9 300-9 320 MHz in the radionavigation service, the use of shipborne radars, other than those existing on 1 January 1976, is not permitted until 1 January 2001.
- 826 Different category of service: in Afghanistan, Algeria, Austria, Bahrain, Bangladesh, Cameroon, the Republic of Korea, Egypt, Ethiopia, Guyana, India, Indonesia, Iran, Iraq, Israel, Jamaica, Japan, Jordan, Kuwait, Lebanon, Liberia, Malaysia, Nigeria, Pakistan, Qatar, Saudi Arabia, Singapore, Somalia, Sudan, Sri Lanka, Sweden, Thailand, Trinidad and Tobago, the United Arab Emirates and Yemen (P.D.R. of), the allocation of the band 9 800-10 000 MHz to the fixed service is on a primary basis (see No. 425).
- 827 Additional allocation: in Bulgaria, Czechoslovakia, Hungary, Mongolia, Poland, the German Democratic Republic, Romania and the U.S.S.R., the band 9 800-10 000 MHz is also allocated to the radionavigation service on a primary basis.
- 828 The band 9 975-10 025 MHz is also allocated to the meteorological-satellite service on a secondary basis for use by weather radars.
- 829 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.
- 830 Additional allocation: in Angola, China, Ecuador, the Federal Republic of Germany, Japan, Kenya, Morocco, Nigeria, Spain, Sweden, Tanzania and Thailand, the band 10.45-10.5 GHz is also allocated to the fixed and mobile services on a primary basis.



- 831 In the band 10.6-10.68 GHz, stations of the fixed and mobile, except aeronautical mobile, services shall be limited to a maximum equivalent isotropically radiated power of 40 dBW and the power delivered to the antenna shall not exceed -3 dBW. These limits may be exceeded, subject to agreement obtained under the procedure set forth in Article 14. However, in Afghanistan, Bahrain, Bangladesh, China, Finland, India, .. Indonesia, Iran, Iraq, Japan, Kuwait, Lebanon, Nigeria, Pakistan, the Philippines, Qatar, Saudi Arabia, Syria, the United Arab Emirates and the U.S.S.R., the restrictions on the fixed and mobile except aeronautical mobile, services are not applicable.
- 832 In making assignments to stations of other services to which the band 10.6-10.68 GHz is allocated, administrations are urged to take all practicable steps to protect the radio astronomy services from harmful interference. Emissions from space or airborne stations can be particularly serious sources of interference to the radio astronomy service (see Nos. 343 and 344 and Article 36).
- 833 All emissions in the band 10.68-10.7 GHz are prohibited, except for those provided for by No. 834.
- 834 Additional allocation: in Bahrain, Bulgaria, Cameroon, China, Colombia, Czechoslovakia, the Republic of Korea, Costa Rica, Cuba, Egypt, Ecuador, the German Democratic Republic, Hungary, Iran, Iraq, Israel, Japan, Kuwait, Lebanon, Mongolia, Pakistan, Poland, Qatar, Romania, Saudi Arabia, the United Arab Emirates, the U.S.S.R. and Yugoslavia, the band 10.68-10.7 GHz is also allocated to the fixed and mobile, except aeronautical mobile, service on a primary basis. Such use is limited to equipment in operation by 1 January 1985.
- 835 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.
- 836 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.
- 837 Different category of service: in Canada, Mexico and the United States, the allocation of the band 11.7-12.1 GHz to the fixed service is on a secondary basis (see No. 424).

- 838 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 broadcasting-satellite stations operating in accordance with the provisions of Appendix 30.
- 839 (Mob-85 and 88) The use of the band 11.7-12.7 GHz in Region 2 by the fixed-satellite service in Region 2 and 12.2-12.7 GHz by the broadcasting-satellite service in Region 2 is limited to national and subregional systems. The use of the band 11.7-12.2 GHz by the fixed-satellite service in Region 2 is subject to previous agreement between the administrations concerned and those having services, operating or planned to operate in accordance with the Table, which may be affected (see Articles 11, 13, 14). For the use of the band 12.2-12.7 GHz by the broadcasting-satellite service in Region 2, see Article 15.
- 840 (Mob-87) SUP
- 841 (Mob-87) SUP
- 842 (Mob-87) Additional allocation: the band 12.1-12.2 GHz in Brazil and Peru, is also allocated to the fixed service on a primary basis.
- 843 (Mob-87) SUP
- 844 (Orb-88) In Region 2, in the band 12.1-12.7 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 (Orb-85).
- 845 In Region 3, the band 12.2-12.5 GHz is also allocated to the fixed-satellite (space-to-Earth) service limited to national and subregional systems. The power flux-density limits in No. 2574 shall apply to this frequency band. The introduction of the service in relation to the broadcasting-satellite service in Region 1 shall follow the procedures specified in Article 7 of Appendix 30, with the applicable frequency band extended to cover 12.2-12.5 GHz.
- 846 In Region 2, in the band 12.2-12.7 GHz, assignments to stations of the broadcasting-satellite service in the Plan for Region 2 contained in the Appendix 30 (Orb-85) 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 Region 2 Plan. With respect to the space services, this band shall be used principally for the broadcasting-satellite service.

- 847 (Orb-88) The broadcasting-satellite service in the band 12.5-12.75 GHz in Region 3 is limited to community reception with a power flux-density not exceeding - 111 dB(W/m<sup>2</sup>) as defined in Annex 5 of Appendix 30. (Orb-85). See also Resolution 34.
- 848 Additional allocation: in Algeria, Angola, Bahrain, Cameroon, the Central African Republic, Chad, the Congo, Côte d'Ivoire, Egypt, Ethiopia, Gabon, Ghana, Guinea, Iraq, Israel, Jordan, Kenya, Kuwait, Lebanon, Libya, Madagascar, Mali, Morocco, Mongolia, Niger, Nigeria, Qatar, Saudi Arabia, Syria, Senegal, Somalia, Sudan, Togo, the United Arab Emirates, Yemen (P.D.R. of) and Zaire, the band 12.5-12.75 GHz is also allocated to the fixed and mobile, except aeronautical mobile, services on a primary basis.
- 849 Additional allocation: in Belgium, Denmark, the Federal Republic of Germany, Finland, France, Greece, Liechtenstein, Luxembourg, Monaco, Norway, Uganda, the Netherlands, Portugal, Romania, Spain, Sweden, Switzerland, Tanzania, Tunisia and Yugoslavia, the band 12.5-12.75 GHz is also allocated to the fixed and mobile, except aeronautical mobile, services on a secondary basis.
- 850 Additional allocation: in Austria, Bulgaria, Czechoslovakia, the German Democratic Republic, Hungary, Poland and the U.S.S.R., 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 earth stations of countries in Region 1 other than those mentioned in this footnote. Coordination of these earth stations is not required with stations of the fixed and mobile services of the countries mentioned in this footnote. The power flux-density limit at the Earth's surface given in No. 2574 for the fixed-satellite service shall apply on the territory of the countries mentioned in this footnote.
- 851 The use of the band 13.25-13.4 GHz by the aeronautical radionavigation service is limited to Doppler navigation aids.
- 852 Subject to agreement obtained under the procedure set forth in Article 14, the band 13.25-13.4 GHz may also be used by the space research service (Earth-to-space) on a secondary basis.
- 853 Additional allocation: in Bangladesh, India and Pakistan, the band 13.25-14 GHz is also allocated to the fixed service on a primary basis.

- 854 Additional allocation: in Afghanistan, Algeria, Angola, Bahrain, Cameroon, Chad, the Republic of Korea, Egypt, Finland, Gabon, Guinea, Indonesia, Iran, Iraq, Israel, Jordan, Kuwait, Lebanon, Madagascar, Malaysia, Malawi, Mali, Malta, Morocco, Mauritania, Niger, Nigeria, Pakistan, Qatar, Saudi Arabia, Syria, Senegal, Singapore, Sri Lanka, Sudan, Sweden, Thailand, Tunisia and the United Arab Emirates, the band 13.4-14 GHz is also allocated to the fixed and mobile services on a primary basis.
- 855 Additional allocation: in Austria, Bulgaria, Czechoslovakia, the German Democratic Republic, Hungary, Japan, Mongolia, Poland, Romania, the United Kingdom, and the U.S.S.R., the band 13.4-14 GHz is also allocated to the radionavigation service on a primary basis.
- 856 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 (see Recommendation 708).
- 857 Additional allocation: in Afghanistan, Algeria, Angola, Australia, Bahrain, Bangladesh, Botswana, Cameroon, Chad, China, the Republic of Korea, Egypt, Gabon, Guatemala, Guinea, India, Indonesia, Iran, Iraq, Israel, Japan, Kenya, Kuwait, Lesotho, Lebanon, Malaysia, Malawi, Mali, Malta, Morocco, Mauritania, Niger, Pakistan, the Philippines, Qatar, Saudi Arabia, Syria, Senegal, Singapore, Somalia, Sudan, Sri Lanka, Swaziland, Tanzania, Thailand, the United Arab Emirates and Yemen (P.D.R. of), the band 14-14.3 GHz is also allocated to the fixed service on a primary basis.
- 858 (orb-88) 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.
- 859 The band 14-14.5 GHz is also allocated to the land mobile-satellite service (Earth-to-space) on a secondary basis.
- 860 Additional allocation: in Austria, Belgium, Denmark, the Federal Republic of Germany, Finland, France, Greece, Ireland, Iceland, Italy, Jordan, Libya, Liechtenstein, Luxembourg, Norway, the Netherlands, Portugal, Spain, Sweden, Switzerland, Turkey, the United Kingdom and Yugoslavia, the band 14.25-14.3 GHz is also allocated to the fixed service on a primary basis.

- 861 Additional allocation: in Japan, Pakistan, Thailand and the United Kingdom, the band 14.25-14.3 GHz is also allocated to the mobile, except aeronautical mobile, service on a primary basis.
- 862 In making assignments to stations of other services to which the band 14.47-14.5 GHz is allocated, administrations are urged to take all practicable steps to protect spectral line observations of 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. 343 and 344 and Article 36).
- 863 (Orb-88) The use of the band 14.5-14.8 GHz by the fixed-satellite (Earth-to-space) is limited to feeder links for the broadcasting-satellite service. This use is reserved for countries outside Europe.
- 864 All emissions in the band 15.35-15.4 GHz are prohibited, except those provided for by No. 865.
- 865 Additional allocation: in Afghanistan, Bahrain, Cameroon, Egypt, Guinea, Iran, Iraq, Israel, Kuwait, Lebanon, Libya, Pakistan, Qatar, Saudi Arabia, Syria, Somalia, the United Arab Emirates and Yugoslavia, the band 15.35-15.4 GHz is also allocated to the fixed and mobile services on a secondary basis.
- 866 Additional allocation: in Afghanistan, Algeria, Angola, Austria, Bahrain, Bangladesh, Cameroon, Chad, Costa Rica, Egypt, El Salvador, Finland, Guatemala, India, Indonesia, Iran, Kuwait, Libya, Malaysia, Malawi, Malta, Morocco, Mozambique, Nepal, Nicaragua, Oman, Pakistan, Qatar, Saudi Arabia, Singapore, Somalia, Sudan, Sri Lanka, Sweden, Tanzania, Thailand, the United Arab Emirates, Yemen (P.D.R. of) and Yugoslavia, the band 15.7-17.3 GHz is also allocated to the fixed and mobile services on a primary basis.
- 867 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. 866.
- 868 Additional allocation: in Afghanistan, Algeria, Angola, Austria, Bahrain, Bangladesh, Cameroon, Costa Rica, El Salvador, the Federal Republic of Germany, Finland, Guatemala, Honduras, India, Indonesia, Iraq, the Islamic Republic of Iran, Israel, Japan, Kuwait, Libya, Nepal, Nicaragua, Oman, Pakistan, Qatar, Saudi Arabia, Sudan, Sri Lanka, Sweden, Thailand, the United Arab Emirates and Yugoslavia, the band 17.3-17.7 GHz is also allocated to the fixed and mobile services on a

secondary basis. The power limits given in Nos. 2505 and 2508 shall apply.

869 (Orb-88) The use of the band 17.3-18.1 GHz by the fixed-satellite service (Earth-to-space) is limited to feeder links for the broadcasting-satellite service. For the use of the band 17.3-17.8 GHz in Region 2 by the feeder links for the broadcasting-satellite service in the band 12.2-12.7 GHz, see Article 15A.

870 The band 18.1-18.3 GHz is also allocated to the meteorological=satellite service (space-to-Earth) on a primary basis. Its use is limited to geostationary satellites and shall be in accordance with the provisions of No. 2578.

871 In making assignments to stations in the fixed and mobile services, administrations are invited to take account of passive sensors in the earth-exploration satellite and space research services operating in the band 18.6-18.8 GHz. In this band, administrations should endeavour to limit as far as possible both the power delivered by the transmitter to the antenna and the e.i.r.p. in order to reduce the risk of interference to passive sensors to the minimum.

872 In assigning frequencies to stations in the fixed-satellite service in the direction space-to-Earth, administrations are requested to limit as far as practicable the power flux-density at the Earth's surface in the band 18.6-18.8 GHz, in order to reduce the risk of interference to passive sensors in the earth exploration-satellite and space research service.

873 Additional allocation: in Afghanistan, Algeria, Angola, Bahrain, Bangladesh, Brazil, Cameroon, Chad, China, the Congo, the Republic of Korea, Costa Rica, Egypt, Gabon, Guatemala, Guinea, India, Indonesia, Iran, Iraq, Israel, Japan, Kenya, Kuwait, Malaysia, Mali, Morocco, Mauritania, Nepal, Niger, Nigeria, Pakistan, the Philippines, Qatar, Saudi Arabia, Syria, Singapore, Somalia, Sudan, Sri Lanka, Tanzania, Thailand, Togo, Tunisia, the United Arab Emirates and Zaire, the band 19.7-21.2 GHz is also allocated to the fixed and mobile services on a primary basis. This additional use shall not impose any limitation on the power flux-density of space stations in the fixed-satellite service.

874 In making assignments to stations of other services, administrations are urged to take all practicable steps to protect the spectral line observations of the radio astronomy service in the band 22.01-22.21 GHz from harmful interference. Emissions from space or airborne stations can be particularly serious sources of interference to the radio astronomy service (see Nos. 343 and 344 and Article 36).

- 875 In making assignments to stations of other services, administrations are urged to take all practicable steps to protect the radio astronomy service from harmful interference in the band 22.21-22.5 GHz. Emissions from space or airborne stations can be particularly serious sources of interference to the radio astronomy service (see Nos. 343 and 344 and Article 36).
- 876 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.
- 877 In Regions 2 and 3, the broadcasting-satellite service is authorized in the band 22.5-23 GHz, subject to agreement obtained under the procedure set forth in Article 14.
- 878 Additional allocation: in Japan, the band 22.5-23 GHz is also allocated to the broadcasting service on a primary basis.
- 879 In making assignments to stations of other services, administrations are urged to take all practicable steps to protect the spectral line observations of the radio astronomy service in the bands 22.81-22.86 GHz and 23.07-23.12 GHz from harmful interference. Emissions from space or airborne stations can be particularly serious sources of interference to the radio astronomy service (see Nos. 343 and 344 and Article 36).
- 880 All emissions in the band 23.6-24 GHz are prohibited.
- 881 The band 24-24.25 GHz (centre frequency 24.125 GHz) is designated for industrial, scientific and medical (ISM) applications. Radiocommunication services 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. 1815.
- 882 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.
- 883 Additional allocation: in Afghanistan, Bahrain, Cameroon, Chad, China, the Republic of Korea, Ethiopia, India, Indonesia, Iran, Iraq, Israel, Japan, Kenya, Kuwait, Lebanon, Malaysia, Mali, Morocco, Mauritania, Nepal, Pakistan, Qatar, Saudi Arabia, Syria, Singapore, Somalia, Sudan, Sri Lanka, Thailand and the United Arab Emirates, 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. 2505 and 2508 shall apply.

- 884 (Orb-88) In the band 31-31.3 GHz, the power flux-density limits specified in No. 2582 shall apply to the space research service.
- 885 Different category of service: in Bulgaria, Cuba, Czechoslovakia, the German Democratic Republic, Hungary, Mongolia, Poland and the U.S.S.R., the allocation of the band 31-31.3 GHz to the space research service is on a primary basis (see No. 425).
- 886 In making assignments to stations of other services, administrations are urged to take all practicable steps to protect the radio astronomy service from harmful interference in the band 31.2-31.3 GHz. Emissions from space or airborne stations can be particularly serious sources of interference to the radio astronomy service (see Nos. 343 and 344 and Article 36).
- 887 All emissions in the band 31.3-31.5 GHz are prohibited.
- 888 In Regions 1 and 3, in making assignments to stations of other services to which the band 31.5-31.8 GHz is 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. 343 and 344 and Article 36). In Region 2, all emissions in the band 31.5-31.8 GHz are prohibited.
- 889 Different category of service: in Bulgaria, Czechoslovakia, Egypt, the German Democratic Republic, Hungary, Mongolia, Poland, Romania, and the U.S.S.R., the allocation of the band 31.5-31.8 GHz to the fixed and mobile, except aeronautical mobile, services is on a primary basis (see No. 425).
- 890 Different category of service: in Australia, Spain and the United States, the allocation of the band 31.8-32.3 GHz to the space research service (deep space) in the space-to-Earth direction is on a primary basis (see No. 425). This use shall not impose power flux-density constraints on the inter-satellite service in the band 32-32.3 GHz.
- 891 Different category of service: in Bulgaria, Cuba, Czechoslovakia, the German Democratic Republic, Hungary, Mongolia, Poland and the U.S.S.R., the allocation of the band 31.8-32.3 GHz to the space research service is on a primary basis (see No. 425).
- 892 Subject to agreement obtained under the procedure set forth in Article 14, the band 31.8-33.8 GHz may also be used in Japan for space-to-Earth transmissions in the fixed-satellite service up to 31 December 1990.



- 893 In designing systems for the inter-satellite and radionavigation services in the band 32-33 GHz, administrations shall take all necessary measures to prevent harmful interference between these two services, bearing in mind the safety aspects of the radionavigation service (see Recommendation 707).
- 894 Additional allocation: in Afghanistan, Bahrain, Bangladesh, Egypt, Finland, Gabon, Guinea, Indonesia, Iran, Iraq, Israel, Kenya, Kuwait, Lebanon, Libya, Malaysia, Malawi, Mali, Malta, Morocco, Mauritania, Nepal, Niger, Nigeria, Oman, Pakistan, the Philippines, Qatar, Saudi Arabia, Spain, Syria, Senegal, Singapore, Somalia, Sudan, Sri Lanka, Sweden, Tanzania, Thailand, Togo, Tunisia, the United Arab Emirates, Yemen A.R. and Zaire, the band 33.4-36 GHz is also allocated to the fixed and mobile services on a primary basis.
- 895 Different category of service: in Australia, Spain and the United States, the allocation of the band 34.2-34.7 GHz to the space research (deep space) (Earth-to-space) service is on a primary basis (see No. 425).
- 896 Different category of service: in Bulgaria, Cuba, the German Democratic Republic, Hungary, Poland, Mongolia, and the U.S.S.R., the allocation of the band 34.2-35.2 GHz to the space research service is on a primary basis (see No. 425).
- 897 Radars located on spacecraft may be operated on a primary basis in the band 35.5-35.6 GHz.
- 898 In making assignments to stations of other services, administrations are urged to take all practicable steps to protect the spectral line observations of the radio astronomy service in the band 36.43-36.5 GHz from harmful interference. Emissions from space or airborne stations can be particularly serious sources of interference to the radio astronomy service (see Nos. 343 and 344 and Article 36).
- 899 Subject to agreement obtained under the procedure set forth in Article 14, the band 37-39 GHz may also be used in Japan for Earth-to-space transmissions in the fixed-satellite service up to 31 December 1990.
- 900 In making assignments to stations of other services to which the band 42.5-43.5 GHz is allocated, administrations are urged to take all practicable steps to protect the radio astronomy service from harmful interference, especially in the bands 42.77-42.87 GHz, 43.07-43.17 GHz, and 43.37-43.47 GHz, which are used for spectral line observations of

silicon monoxide. Emissions from space or airborne stations can be particularly serious sources of interference to the radio astronomy service (see Nos. 343 and 344 and Article 36).

- 901 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.
- 902 In the bands 43.5-47 GHz, 66-71 GHz, 95-100 GHz, 134-142 GHz, 190-200 GHz and 252-265 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. 435).
- 903 In the bands 43.5-47 GHz, 66-71 GHz, 95-100 GHz, 134-142 GHz, 190-200 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.
- 904 The bands 48.94-49.04 GHz and 97.88-98.08 GHz are also allocated to the radio astronomy service on a primary basis for spectral line observations. In making assignments to stations of other services to which these bands 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. 343 and 344 and Article 36).
- 905 In the band 48.94-49.04 GHz, all emissions from airborne stations are prohibited.
- 906 In the bands 51.4-54.25 GHz, 58.2-59 GHz, 64-65 GHz and 72.77-72.91 GHz, radio astronomy observations may be carried out under national arrangements. Administrations are urged to take all practicable steps to protect radio astronomy observations in these bands from harmful interference.
- 907 In the bands 51.4-54.25 GHz, 58.2-59 GHz, 64-65 GHz, 86-92 GHz, 105-116 GHz and 217-231 GHz, all emissions are prohibited.

- 908 Additional allocation: in the Federal Republic of Germany, Japan and the United Kingdom, the band 54.25-58.2 GHz is also allocated to the radiolocation service on a primary basis.
- 909 In the bands 54.25-58.2 GHz, 59-64 GHz, 116-134 GHz, 170-182 GHz and 185-190 GHz, stations in the aeronautical mobile service may be operated, subject to not causing harmful interference to the inter-satellite service (see No. 435).
- 910 In the bands 59-64 GHz and 126-134 GHz, airborne radars in the radiolocation service may be operated, subject to not causing harmful interference to the inter-satellite service (see No. 435).
- 911 The band 61-61.5 GHz (centre frequency 61.25 GHz) is designated for industrial, scientific and medical (ISM) applications. The use of this frequency band 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 CCIR Recommendations.
- 912 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.
- 913 In the band 84-86 GHz, stations in the fixed, mobile and broadcasting services shall not cause harmful interference to broadcasting-satellite stations operating in accordance with the decisions of the appropriate frequency assignment planning conference for the broadcasting-satellite service.
- 914 The band 93.07-93.27 GHz is also used by the radio astronomy service for spectral line observations. In making assignments to stations of the services to which this band is allocated, administrations are urged to take all practicable steps to protect radio astronomy observations from harmful interference. Emissions from space or airborne stations can be particularly serious sources of interference to the radio astronomy service (see Nos. 343 and 344 and Article 36).
- 915 The band 119.98-120.02 GHz is also allocated to the amateur service on a secondary basis.
- 916 The band 122-123 GHz (centre frequency 122.5 GHz) is designated for industrial, scientific and medical (ISM) applications. The use of this frequency band 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 CCIR Recommendations.

917 In the band 140.69-140.98 GHz, all emissions from airborne stations and from space stations in the space-to-Earth direction are prohibited.

918 The bands 140.69-140.98 GHz, 144.68-144.98 GHz, 145.45-145.75 GHz and 146.82-147.12 GHz are also allocated to the radio astronomy service on a primary basis for spectral line observations. In making assignments to stations of other services to which the bands 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. 343 and 344 and Article 36).

919 The bands 150-151 GHz, 174.42-175.02 GHz, 177-177.4 GHz, 178.2-178.6 GHz, 181-181.46 GHz and 186.2-186.6 GHz are also allocated to the radio astronomy service on a secondary basis for spectral line observations. In making assignments to stations of other services to which these bands 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. 343 and 344 and Article 36).

920 Additional allocation: in the United Kingdom, the band 182-185 GHz is also allocated to the fixed and mobile services on a primary basis.

921 In the band 182-185 GHz, all emissions are prohibited except for those under the provisions of No. 920.

922 The band 244-246 GHz (centre frequency 245 GHz) is designated for industrial, scientific and medical (ISM) applications. The use of this frequency band 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 CCIR Recommendations.

923 The bands 250-251 GHz and 262.24-262.76 GHz are also allocated to the radio astronomy service on a primary basis for spectral line observations. In making assignments to stations of other services to which these bands 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 parti-

cularly serious sources of interference to the radio astronomy service (See Nos. 343 and 344 and Article 36).

924 The band 257.5-258 GHz is also allocated to the radio astronomy service on a secondary basis for spectral line observations. In making assignments to stations of other services to which the band is 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. 343 and 344 and Article 36).

925 In Argentina, the Federal Republic of Germany, Finland, France, India, Italy, the Netherlands, Spain and Sweden, the band 261-265 GHz is also allocated to the radio astronomy service on a primary basis. In making assignments to stations of other services to which the band is 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. 343 and 344 and Article 36).

926 In making assignments to stations of other services to which the band 265-275 GHz is allocated, administrations are urged to take all practicable steps to protect the radio astronomy service from harmful interference, especially in the bands 265.64-266.16 GHz, 267.34-267.86 GHz and 271.74-272.26 GHz, which are used for spectral line observations. Emissions from space or airborne stations can be particularly serious sources of interference to the radio astronomy service (see Nos. 343 and 344 and Article 36).

927 The frequency band 275-400 GHz may be used by administrations for experimentation with, and development of various active and passive services. In this band, a need has been identified for the following spectral line measurements for passive services:

Radio astronomy service: 278-280 GHz and 343-348 GHz;

Space research service (passive) and earth exploration-satellite service (passive): 275-277 GHz, 300-302 GHz, 324-326 GHz, 345-347 GHz, 363-365 GHz and 379-381 GHz.

Future research in this largely unexplored spectral region may yield additional spectral lines and continuum bands of interest to the passive services. Administrations are urged to take all practicable steps to protect these passive services from harmful interference until the next competent world administrative radio conference.



## CANADIAN FOOTNOTES

- C001 Users of frequencies below 9 kHz shall ensure that no harmful interference is caused to the services to which the bands above 9 kHz are allocated.
- C002 Scientific researchers using frequencies below 9 kHz are urged to advise the Department in order that such research may be afforded all practicable protection from harmful interference.
- C003 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 Canada's national borders, and whose mean power does not exceed 50 W.
- C004 Provided no harmful interference is 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 of the fixed service communicating only within Canada's national borders, and whose mean power does not exceed 50 W.
- C005 For the exclusive use of the Government of Canada.
- C005A The use of the radiolocation service is limited to Government of Canada shipborne radars. These operations are not permitted on inland waters of Canada.
- C006 The band 10 100-10 150 kHz is allocated to the fixed service on a primary basis worldwide. In Canada, the band is allocated exclusively to the Amateur service. Canadian Amateur operations shall not cause interference to fixed service operations of other administrations and if such interference should occur, the Amateur service may be required to cease operations. The Amateur service in Canada may not claim protection from interference by the fixed service operations of other administrations.
- C007 Subject to agreement obtained under the procedure set forth in Article 14, the bands 235-322 MHz and 335.4-399.9 MHz may be used by the mobile-satellite service.
- C008 Radio astronomy observations are carried out in the band 322-328.6 MHz and such operations will be protected from interference to the extent possible.
- C009 SUP

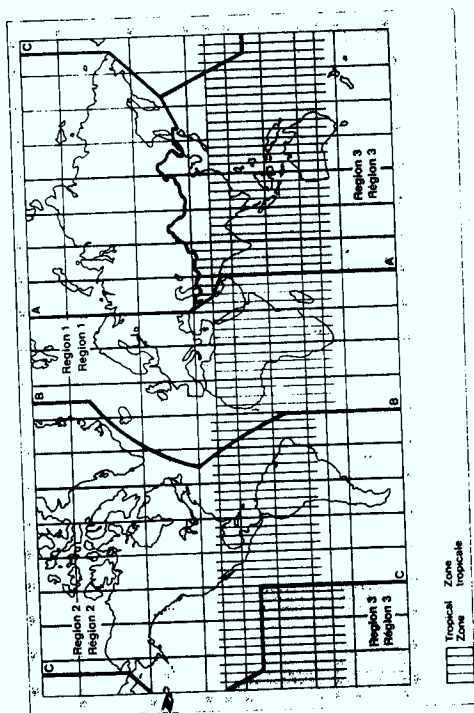
- C010 On the condition that harmful interference is not caused to the mobile or the fixed services, the Department may authorize frequencies between 420 and 430 MHz for use on a non-protected basis by the radiolocation service in coastal and off-shore regions of Canada where such radiolocation operations may not be fully accommodated in the 430-450 MHz frequency band.
- C011 Television broadcast stations licensed prior to January 1, 1979, to operate in the frequency band 806-890 MHz (channels 70 to 83) will continue to operate on a primary basis until their reassignment to a lower frequency.
- C012 The use of the bands 1 435-1 530 MHz and 2 310-2 390 MHz by the aeronautical mobile service for telemetry has priority over other uses in the mobile service.
- C012A Aeronautical mobile satellite (R) distress and safety (including Air Traffic Control) operations would normally be accommodated in the 1 545-1 548 MHz bands. If required by operational conditions outside of these bands, such operations shall have priority access, with a real time pre-emptive capability, in the 1 548-1 559 MHz and 1 649.5-1 660.5 MHz frequency bands.
- C013 Government of Canada radars may continue to operate in the band 2 550-2 690 MHz on a non-interfering basis.
- C014 Maritime radionavigation operations in this band are limited to shore based radars.
- C015 The allocation to the fixed-satellite and mobile-satellite services in this band are designated for the exclusive use of the Government of Canada.
- C016 Users are urged, in their planning of operations in the band 10.7-10.95 GHz for the fixed-satellite service, to give all practicable protection to the passive operations in the adjacent band 10.6-10.7 GHz.
- C017 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. The upper limit of this band shall be modified in accordance with the decisions of the 1983 regional administrative radio conference for Regional 2 (See No. 841).

- C018 In Region 3, the band 12.1-12.5 GHz is also allocated to the fixed-satellite (space-to-Earth) service limited to national and sub-regional systems. The power flux-density limits in No.2574 shall apply to this frequency band. The introduction of the service in relation to the broadcasting-satellite service in Region 1 shall follow the procedures specified in Article 7 or Appendix 30, with the applicable frequency band extended to cover 12.1-12.5 GHz.
- C019 The operation of low-power mobile or fixed communications equipment is permitted in the band but, this equipment must not cause interference to the Radionavigation-Satellite Service.
- C020 In Region 2, in the band 12.2-12.7 GHz, assignments to stations of the broadcasting-satellite service made available in the plan to be established by the 1983 regional administrative radio conference for Region 2 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 accordance with the plan. With respect to the space services, this band shall be used principally for the broadcasting-satellite service. The lower limit of this band shall be modified in accordance with the decisions of that conference for Region 2 (see No. 841).
- C021 The allocations to the fixed-satellite and mobile-satellite services or a portion of these allocations will be designated for the exclusive use of the Government of Canada.
- C022 In the band 164-168 GHz, all emissions are prohibited.
- C023 The bands 250-251 GHz and 262.24-262.76 GHz are also allocated to the radioastronomy service on a primary basis for spectral line observations.
- C024 In the band 250-252 GHz, all emissions are prohibited.
- C025 The bands 4 460-4 540 MHz and 4 900-4 990 MHz are also allocated to the mobile service on a primary basis, for the exclusive use of the Government of Canada.

# CHART OF ITU REGIONS



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