OFFICE FOR COMMUNICATIONS
PRINCIPALITY OF LIECHTENSTEIN

Liechtenstein
Frequency Allocation Plan (FAP) and Specific Assignments

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1 Introduction

This Frequency Allocation Plan (FAP) serves as a binding basis for the respective national authority responsible for frequency assignment so that it can fulfil its responsibilities in relation to frequency assignments. Frequency allocations in the FAP includes the allocation of the frequency spectrum to the various radio services categories in accordance with the Radio Regulations of the International Telecommunication Union (ITU). This process is reviewed and updated on a regular basis.

The processes and mechanisms relevant to the preparation of the FAP are presented and explained in the following chapters.

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2 Principles of spectrum management

2.1 National level

As radio frequencies are scarce resources, efficient use of these resources are indispensable for the functioning of modern communication societies. The Communications Act (Kommunikationsgesetz; KomG, LR 784.10) therefore includes a direct mandate for the body responsible for frequency management to take into account the principles of radio spectrum, especially to ensure efficient and interference-free use (Art. 32 KomG).

Frequency regulation is fundamentally concerned with marrying the various interests of the population and the economy (Art. 31 KomG) within the aforementioned legal mandate.

In order for frequency regulations to be as target-oriented as possible, the conflicting interests of the various frequency users must be recorded as accurately as possible and weighed against each other. The requirements of industry and the associated civil uses are largely brought in through the international working groups of the CEPT and the ITU. The reported requirements are then examined by individual project groups; the relevant bodies then draw up and adopt appropriate basic documentation. These jointly developed principles then serve to allow European-wide and internationally harmonised use of frequency resources. The activity of these working groups is usually limited to civil frequency use.

The aforementioned activities are ultimately reflected in the FAP, which as mentioned above, must be considered as a legal basis document for the assignment of individual frequency rights by the relevant authorities (Office for Communications, Art. 33 KomG).

In its management of the radio spectrum, the Government shall also take into account frequency coordination (Art. 32 KomG). Article 83, paragraph 3 IFV (Verordnung über die Identifikationsmittel und Frequenzen im Bereich der elektronischen Kommunikation, LR 784.101.8) describes the content design and the associated international orientation of the FAP. The strategic orientation of Liechtenstein in relation to frequency allocation is based on the aforementioned article, specifically linked to international developments. Participation in the relevant international working groups is therefore indispensable in order to influence and shape the frequency use.

Due to propagation of the radio signals across international borders, cross-border agreements regarding frequency use are essential both between neighbouring countries and between economical stakeholders on a global scale. The use of all frequency resources is harmonised at the international level during the ITU World Radiocommunication Conferences in order to ensure efficient and interference-free use of the frequency spectrum. The respective decisions of the World Radiocommunication Conferences are stipulated in the Radio Regulations of ITU, specifically in Article 5 “Frequency allocations”. The decisions of the World Radiocommunication Conferences and related harmonisation efforts at the global level (ITU) are ultimately expressed in European bodies, such as the CEPT, which develops technical implementation scenarios. National frequency allocations and the resulting frequency use is ultimately derived from and determined by this international harmonisation.

2.2 International level

Spectrum requirements are analysed and examined on a regular basis for existing and planned radio services in Liechtenstein. This is necessary for efficient and equitable planning and coordination of frequencies in order to avoid interference as frequencies are subject to international harmonization.

The Liechtenstein strategy aims to regulate access to the frequency spectrum (for both commercial and non-commercial radio services) on a national and international level in a coordinated manner. It aims to ensure that Liechtenstein rights are respected in accordance with international law. International bodies aim to harmonise the use of the spectrum by the various radio services. Any international decisions taken therefore play a part in national spectrum management.

The regional contact for harmonisation of the frequency spectrum in Europe is the European Conference of Postal and Telecommunications Administrations (CEPT). The CEPT Electronic Communications Committee (ECC) provides a framework within administrations (together with industry and the sector stakeholders) which can develop provisions according to which the conditions for spectrum use could be

harmonised with regard to market demand and technological developments. These activities specifically lead to consensus resolutions made by the member states. Their compliance is however voluntary.

The International Telecommunication Union, Sector Radiocommunication (ITU-R) allocates worldwide frequencies to radio services in accordance with the Radio Regulations (RR). The RR is an international agreement which regulates the use of frequency resources for all radio applications, as well as the orbital positions of geostationary and non-geostationary satellites. The RR is revised in the World Radiocommunication Conferences (WRC) to adapt the existing framework to spectrum requirements in order to refine existing applications or facilitate the introduction of new applications. The FAP assumes and supplements the relevant provisions of the RR for Liechtenstein.

International planning and harmonisation work within the CEPT and the ITU results in “resolutions” and “recommendations”. The results of ITU World Conferences are set forth in the “final acts”. The results of both ITU World Conferences and resolutions endorsed by Liechtenstein within the CEPT as well as recommendations or directives within the European Economic Area (EEA) therefore periodically affect the FAP.

Liechtenstein actively participates in the activities of the ECC, the work of the ITU-R and the European Commission (EC). The main aim is to safeguard Liechtenstein interests in the reports and resolutions of the ECC and to safeguard the Liechtenstein positions on various levels.

Decisions of the European Commission are binding to EU member states and are subject to be transposed into the EEA. In addition to this, harmonisation of frequencies with neighbouring countries is necessary in order to meet the needs of the internal Liechtenstein market.

3 Explanatory notes to the Frequency Allocation Plan

Example:

Frequency Band	Liechtenstein Allocations			
	National Allocation	Main Use	Notes	Strategy
880-915 MHz	MOBILE except aeronautical mobile 5.317A	880-915 MHz / 925-960 MHz MFCN primary.	880-915 MHz (UL), paired with 925 - 960 MHz: Harmonised frequencies: Annex4 GSM: RIR0501-01, ERC/DEC/(97)02, ECC/REC/(05)08 IMT: ECC/DEC/(06)13 ECC/DEC/(08)02 UWB Applications, Annex 1	Continued intensive use for digital cellular networks (GSM and IMT systems) in the FDD mode..

This table includes a number of columns with the following contents:

Column 1: Frequency Band

Indicates the frequency band referred to in that row of the table.
For a better overview, the whole spectrum is divided into three ranges:

- 8.3 kHz - 30 000 kHz
- 30 MHz - 10 000 MHz
- 10 GHz - 3 000 GHz

Column 2: National Allocation

Contains in each frequency band:

1. The allocations of radiocommunication service(s) specified for Liechtenstein, based on ITU Radio Regulations and the European Common Allocation (ECA) table.
   Names of services are based on the definitions in the ITU Radio Regulations.
2. RR Art. 5 footnotes, relevant to Liechtenstein with hyperlinks to Appendix FN, RR footnote number and text.
3. European-footnotes included in the ECA Table, relevant to Liechtenstein with hyperlinks to Appendix FN, European Common Allocation Table (ECA) footnote number and text. This are supporting explanatory notes and instructions for the assignment and use of frequencies for European (CEPT) administrations.

For explanations concerning the status of radiocommunication services, see the end of this chapter.

Column 3: Main Use

Contains the main application(s) of this frequency band or a part of it and indicate his (their) status of frequency use (not to confound with "primary" or "secondary" status of a radio service in the column "National Allocation").
If the use covers more than one frequency band or concerns only one part of the band, the frequency range is indicated.

Column 4: Notes

Contains various information concerning the use of the frequency range:

- Hyperlinks to Annex 2 "specific assignments"
- possible applications according to ECO Frequency Information System (EFIS) application list and hyperlinks to their corresponding technical interface regulations (RIR)
- relevant ERC/ECC/Recommendations and Decisions
- Comments etc.

Column 5: Strategy

Long-term planning

Explanations concerning the status of radiocommunication services:

Primary

Where a band is indicated as allocated to more than one service and the name of the service is printed in “capitals“ (example: FIXED) these are called “primary“ services.

Within a band, primary services shall have prior choice of frequencies.

Where a band is indicated in a footnote of the Table as allocated to a service “on a primary basis“ in an area smaller than a Region, or in a particular country, this is a primary service only in that area or country.

Secondary

Where a band is indicated as allocated to more than one service and the name of the service is printed in "normal characters" (example: Fixed) these are called "secondary services".

Stations of a secondary service:

a) shall not cause harmful interference to stations of primary services to which the frequencies are already assigned or to which stations may be assigned at a later date.

b) cannot claim protection from harmful interference from stations of a primary service to which frequencies are already assigned or may be assigned at a later date.

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.

Where a band is indicated in a footnote of the table as allocated to a service “on a secondary basis“ in an area smaller than a Region, or in a particular country, this is a secondary service."

4 Frequency Allocation Plan

Frequency Band	Liechtenstein Allocations			
	National Allocation	Main Use	Notes	Strategy
0 - 8.3 kHz	Not allocated 5.53 5.54	Inductive loop systems. Various applications.	2.275 kHz Avalanche victim search. 100 Hz - 148.5 kHz: Wideband SRD, Annex 1	This frequency band is no longer available for new Avalanche victim search equipment.
8.3 - 9 kHz	METEOROLOGICAL AIDS 5.54A	Inductive loop systems. Various applications.	100 Hz - 148.5 kHz: Wideband SRD, Annex 1	Future use by METEOROLOGICAL AIDS.
9 - 11.3 kHz	METEOROLOGICAL AIDS 5.54A RADIONAVIGATION	Short range devices Inductive loop systems. Various applications.	Short range devices: Harmonised frequencies: Annex4 9-148.5 kHz: Inductive applications: RIR1005-01, ERC/REC 70-03, 9-315 kHz: Active medical implants: ULP-AMI RIR1006-01, ERC/REC 70-03 100 Hz - 148.5 kHz: Wideband SRD, Annex 1	Future use by METEOROLOGICAL AIDS.
11.3 - 14 kHz	RADIONAVIGATION	Short range devices Inductive loop systems. Various applications.		
14 - 16 kHz	FIXED 5.56			
16 - 19.95 kHz		Paging. Short range devices Inductive loop systems.	On-site paging (16-40 kHz): RIR0506-11, RIR0506-12, RIR0506-13. Short range devices: Harmonised frequencies: Annex4 9-148.5 kHz: Inductive applications: RIR1005-01, ERC/REC 70-03, 9-315 kHz: Active medical implants: ULP-AMI RIR1006-01, ERC/REC 70-03 100 Hz - 148.5 kHz: Wideband SRD, Annex 1	
19.95 - 20.05 kHz	STANDARD FREQUENCY AND TIME SIGNAL (20 kHz)			
20.05 - 40 kHz	FIXED			

Frequency Band	Liechtenstein Allocations			
	National Allocation	Main Use	Notes	Strategy
40 - 70 kHz	FIXED	Short range devices Inductive loop systems. Various applications.	Short range devices: Harmonised frequencies: Annex4 9-148.5 kHz: Inductive applications: RIR1005-01, ERC/REC 70-03, 9-315 kHz: Active medical implants: ULP-AMI RIR1006-01, ERC/REC 70-03 100 Hz - 148.5 kHz: Wideband SRD, Annex 1	Be aware of interference caused by data transmission on high tension power lines in the frequency range of 40-148 kHz.
70 - 72 kHz	RADIONAVIGATION 5.60			
72 - 84 kHz	FIXED RADIONAVIGATION 5.60 STANDARD FREQUENCY AND TIME SIGNAL 5.56		Short range devices: Harmonised frequencies: Annex4 9-148.5 kHz: Inductive applications: RIR1005-01, ERC/REC 70-03, 9-315 kHz: Active medical implants: ULP-AMI RIR1006-01, ERC/REC 70-03 100 Hz - 148.5 kHz: Wideband SRD, Annex 1	
84 - 86 kHz	RADIONAVIGATION 5.60		Short range devices: Harmonised frequencies: Annex4 9-148.5 kHz: Inductive applications: RIR1005-01, ERC/REC 70-03, 9-315 kHz: Active medical implants: ULP-AMI RIR1006-01, **Will be continued...**	
86 - 90 kHz	FIXED RADIONAVIGATION 5.56			
90 - 110 kHz	Fixed RADIONAVIGATION 5.62 5.64			
110 - 112 kHz	FIXED RADIONAVIGATION 5.64			
112 - 115 kHz	RADIONAVIGATION 5.60			

Frequency Band	Liechtenstein Allocations			
	National Allocation	Main Use	Notes	Strategy
115 - 117.6 kHz	RADIONAVIGATION 5.60 Fixed 5.64	Data above.	Continuation... ERC/REC 70-03 100 Hz - 148.5 kHz: Wideband SRD, Annex 1	
117.6 - 126 kHz	FIXED RADIONAVIGATION 5.60 5.64			
126 - 129 kHz	RADIONAVIGATION 5.60			
129 - 130 kHz	FIXED RADIONAVIGATION 5.60 5.64			
130 - 135 kHz	FIXED 5.64			
135 - 135.7 kHz		Short range devices	Short range devices: Harmonised frequencies: Annex4 9-148.5 kHz: Inductive applications: RIR1005-01, 9-315 kHz: Active medical implants: ULP-AMI RIR1006-01, ERC/REC 70-03 100 Hz - 148.5 kHz: Wideband SRD, Annex 1	
135.7 - 137.8 kHz	Amateur 5.67A 5.67B FIXED 5.64	Amateur. Short range devices	Amateur: RIR1101-02 Short range devices: Harmonised frequencies: Annex4 9-148.5 kHz: Inductive applications: RIR1005-01, 9-315 kHz: Active medical implants: ULP-AMI RIR1006-01, ERC/REC 70-03 100 Hz - 148.5 kHz: Wideband SRD, Annex 1	

Frequency Band	Liechtenstein Allocations			
	National Allocation	Main Use	Notes	Strategy
137.8 - 148.5 kHz	FIXED 5.64	Short range devices	Short range devices: Harmonised frequencies: Annex4 9-148.5 kHz: Inductive applications: RIR1005-01, ERC/REC 70-03 9-315 kHz: Active medical implants: ULP-AMI RIR1006-01, ERC/REC 70-03 100 Hz - 148.5 kHz: Wideband SRD, Annex 1	
148.5 - 255 kHz	BROADCASTING	Broadcasting primary. Short range devices.	Short range devices: Harmonised frequencies: Annex4 9-315 kHz: Active medical implants: ULP-AMI: RIR1006-01, ERC/REC 70-03 148.5 kHz - 5 MHz: Wideband SRD, Annex 1	Be aware of interference caused by data transmission on high tension power lines in the frequency range of 148 -300 kHz in particular in the bands 255-266 KHz, 280-282 kHz and 282-300 kHz.
255 - 283.5 kHz	BROADCASTING AERONAUTICAL RADIONAVIGATION	Broadcasting primary. Short range devices.		
283.5 - 300 kHz	AERONAUTICAL RADIONAVIGATION	Short range devices.		
300 - 315 kHz		Short range devices.	**Will be continued...**	

Frequency Band	Liechtenstein Allocations			
	National Allocation	Main Use	Notes	Strategy
315 - 405 kHz			**Continuation...** 300 - 405 kHz: Aeronautical navigation Beacons (NDB, aeronautical): RIR0102-01, Short range devices: Harmonised frequencies: Annex4 9-315 kHz: Active medical implants: ULP-AMI: RIR1006-01, 315 - 600 kHz: Active medical implants: ULP-AID: RIR1006-03, 400 - 600 kHz: Inductive applications: RFID only: RIR1005-14, ERC/REC 70-03 148.5 kHz - 5 MHz: Wideband SRD, Annex 1	
405 - 415 kHz	RADIONAVIGATION 5.76	Short range devices.	Short range devices: Harmonised frequencies: Annex4 315 - 600 kHz: Active medical implants: ULP-AID: RIR1006-03, 400 - 600 kHz: Inductive applications: RFID only: RIR1005-14, ERC/REC 70-03 148.5 kHz - 5 MHz: Wideband SRD, Annex 1	
415 - 435 kHz	AERONAUTICAL RADIONAVIGATION	Short range devices.		Be aware of interference caused by data transmission on high tension power lines in the frequency range of 416-492 kHz.
435 - 472 kHz	Aeronautical radionavigation 5.82	Short range devices.	**Will be continued...**	

Frequency Band	Liechtenstein Allocations			
	National Allocation	Main Use	Notes	Strategy
472 - 479 kHz	Amateur 5.80A Aeronautical radionavigation 5.82	Amateur secondary. Short range devices.	**Continuation...** Short range devices: Harmonised frequencies: Annex4	
479 - 495 kHz	Aeronautical radionavigation 5.82	Short range devices.	315 - 600 kHz: Active medical implants: ULP-AID: 400 - 600 kHz: RIR1006-03, Inductive applications: RFID only: RIR1005-14, ERC/REC 70-03 442.2 - 450 kHz: Person detection and collision avoidance: RIR1003-15, ERC/REC 70-03 457 kHz: Detection of avalanche victims: RIR1003-01, ERC/REC 70-03 472 - 479 kHz: Amateur: RIR1101-02 148.5 kHz - 5 MHz: Wideband SRD, Annex 1	
495 - 505 kHz	MARITIME MOBILE 5.82C	Short range devices.	Short range devices: Harmonised frequencies: Annex4 315 - 600 kHz: Active medical implants: ULP-AID: RIR1006-03, 400 - 600 kHz: Inductive applications: RFID only: RIR1005-14, ERC/REC 70-03 148.5 kHz - 5 MHz: Wideband SRD, Annex 1	

Frequency Band	Liechtenstein Allocations			
	National Allocation	Main Use	Notes	Strategy
505 - 526.5 kHz	AERONAUTICAL RADIONAVIGATION	Short range devices.	505.0 - 526.5 kHz: Aeronautical navigation Beacons (NDB, aeronautical): RIR0102-01, Short range devices: Harmonised frequencies: Annex4 315 - 600 kHz: Active medical implants: ULP-AID: RIR1006-03, 400 - 600 kHz: Inductive applications: RFID only: RIR1005-14, ERC/REC 70-03 148.5 kHz - 5 MHz: Wideband SRD, Annex 1	
526.5 - 1'606.5 kHz	BROADCASTING	Broadcasting primary.	AM sound analogue: RIR0201-11 Short range devices: Harmonised frequencies: Annex4 315 - 600 kHz: Active medical implants: ULP-AID: RIR1006-03, 400 - 600 kHz: Inductive applications: RFID only: RIR1005-14, ERC/REC 70-03 148.5 kHz - 5 MHz: Wideband SRD, Annex 1	
1'606.5 - 1'625 kHz	MARITIME MOBILE 5.90 LAND MOBILE 5.92		148.5 kHz - 5 MHz: Wideband SRD, Annex 1 Harmonised frequencies: Annex4	
1'625 - 1'635 kHz	RADIOLOCATION			
1'635 - 1'800 kHz	MARITIME MOBILE 5.90 LAND MOBILE 5.92 5.96			

Frequency Band	Liechtenstein Allocations			
	National Allocation	Main Use	Notes	Strategy
1'800 - 1'810 kHz	RADIOLOCATION		Data above.	
1'810 - 1'850 kHz	AMATEUR 5.98 5.99 5.100	Amateur primary	Amateur: RIR1101-02 148.5 kHz - 5 MHz: Wideband SRD, Annex 1 Harmonised frequencies: Annex4	
1'850 - 2'000 kHz	MOBILE except aeronautical mobile 5.92 5.96 5.103	Amateur secondary		
2'000 - 2'025 kHz	MOBILE except aeronautical mobile (R) 5.92 5.103		148.5 kHz - 5 MHz: Wideband SRD, Annex 1 Harmonised frequencies: Annex4	
2'025 - 2'045 kHz	FIXED MOBILE except aeronautical mobile (R) 5.92 5.103			
2'045 - 2'160 kHz	FIXED MARITIME MOBILE LAND MOBILE 5.92			
2'160 - 2'170 kHz	RADIOLOCATION			
2'170 - 2'173.5 kHz	MARITIME MOBILE			
2'173.5 - 2'190.5 kHz	MOBILE (distress and calling) 5.108 5.109 5.110 5.111		2182.0 kHz : international distress and calling frequency for radiotelephony. 2187.5 kHz: international distress frequency for digital selective calling. 148.5 kHz - 5 MHz: Wideband SRD, Annex 1 Harmonised frequencies: Annex4	
2'190.5 - 2'194 kHz	MARITIME MOBILE		148.5 kHz - 5 MHz: Wideband SRD, Annex 1 Harmonised frequencies: Annex4	
2'194 - 2'300 kHz	FIXED MOBILE except aeronautical mobile (R) 5.92 5.103			
2'300 - 2'498 kHz	FIXED MOBILE except aeronautical mobile (R) 5.103			
2'498 - 2'501 kHz	STANDARD FREQUENCY AND TIME SIGNAL (2 500 kHz)			
2'501 - 2'502 kHz	STANDARD FREQUENCY AND TIME SIGNAL Space research			

Frequency Band	Liechtenstein Allocations			
	National Allocation	Main Use	Notes	Strategy
2'502 - 2'625 kHz	FIXED MOBILE except aeronautical mobile (R) 5.92 5.103		Data above.	
2'625 - 2'650 kHz	MARITIME MOBILE MARITIME RADIONAVIGATION 5.92			
2'650 - 2'850 kHz	FIXED MOBILE except aeronautical mobile (R) 5.92 5.103			
2'850 - 3'025 kHz	AERONAUTICAL MOBILE (R) 5.111 5.115	Aeronautical mobile (R) primary.	3010 kHz Annex 2 Aeronautical communications: RIR0101-05 148.5 kHz - 5 MHz: Wideband SRD, Annex 1 Harmonised frequencies: Annex4	
3'025 - 3'155 kHz	AERONAUTICAL MOBILE (OR)		Aeronautical communications: RIR0101-05 148.5 kHz - 5 MHz: Wideband SRD, Annex 1 Harmonised frequencies: Annex4	
3'155 - 3'200 kHz	FIXED MOBILE except aeronautical mobile (R) 5.116		Short range devices: Harmonised frequencies: Annex4 3155 - 3400 kHz: Inductive applications: RIR1005-10, ERC/REC 70-03 148.5 kHz - 5 MHz: Wideband SRD, Annex 1	
3'200 - 3'230 kHz	FIXED MOBILE except aeronautical mobile (R) 5.116			
3'230 - 3'400 kHz	FIXED MOBILE except aeronautical mobile 5.116	Various fixed services (e.g. Security, CICR) secondary.		
3'400 - 3'500 kHz	AERONAUTICAL MOBILE (R)		Aeronautical communications: RIR0101-05 148.5 kHz - 5 MHz: Wideband SRD, Annex 1 Harmonised frequencies: Annex4	
3'500 - 3'800 kHz	AMATEUR FIXED MOBILE except aeronautical mobile 5.92	Amateur	Amateur: RIR1101-02 148.5 kHz - 5 MHz: Wideband SRD, Annex 1 Harmonised frequencies: Annex4	

Frequency Band	Liechtenstein Allocations			
	National Allocation	Main Use	Notes	Strategy
3'800 - 3'900 kHz	FIXED AERONAUTICAL MOBILE (OR) LAND MOBILE	Various fixed services (e.g. Security, CICR) secondary.	3820 kHz Tests and development. Aeronautical communications: RIR0101-05 148.5 kHz - 5 MHz: Wideband SRD, Annex 1 Harmonised frequencies: Annex4	
3'900 - 3'950 kHz	AERONAUTICAL MOBILE (OR)		Aeronautical communications: RIR0101-05 148.5 kHz - 5 MHz: Wideband SRD, Annex 1 Harmonised frequencies: Annex4	
3'950 - 4'000 kHz	BROADCASTING	Broadcasting primary.	148.5 kHz - 5 MHz: Wideband SRD, Annex 1 Harmonised frequencies: Annex4	
4'000 - 4'063 kHz	FIXED MARITIME MOBILE 5.127	Various fixed services (e.g. Security) secondary.		
4'063 - 4'438 kHz	MARITIME MOBILE 5.79A 5.109 5.110 5.130 5.131 5.132 5.128	Maritime mobile primary. Various fixed services (e.g. Security) secondary.	4207.5 kHz Annex 2 4207.5 kHz: international distress frequency for digital selective calling. 148.5 kHz - 5 MHz: Wideband SRD, Annex 1 Harmonised frequencies: Annex4	
4'438 - 4'488 kHz	FIXED MOBILE except aeronautical mobile (R) Radiolocation 5.132A	Various fixed services (e.g. Security) secondary.	148.5 kHz - 5 MHz: Wideband SRD, Annex 1 Harmonised frequencies: Annex4	
4'488 - 4'650 kHz	FIXED MOBILE except aeronautical mobile (R)			
4'650 - 4'700 kHz	AERONAUTICAL MOBILE (R)	Aeronautical mobile primary.	4654 kHz Annex 2 Aeronautical communications: RIR0101-05 148.5 kHz - 5 MHz: Wideband SRD, Annex 1 Harmonised frequencies: Annex4	
4'700 - 4'750 kHz	AERONAUTICAL MOBILE (OR)		Aeronautical communications: RIR0101-05 148.5 kHz - 5 MHz: Wideband SRD, Annex 1 Harmonised frequencies: Annex4	

Frequency Band	Liechtenstein Allocations			
	National Allocation	Main Use	Notes	Strategy
4'750 - 4'850 kHz	AERONAUTICAL MOBILE (OR) FIXED LAND MOBILE	Various fixed services (e.g. Security) secondary.	4763 kHz Annex 2 Aeronautical communications: RIR0101-05 148.5 kHz - 5 MHz: Wideband SRD, Annex 1 Harmonised frequencies: Annex4	
4'850 - 4'995 kHz	FIXED LAND MOBILE	Various fixed services (e.g. Security) secondary.	148.5 kHz - 5 MHz: Wideband SRD, Annex 1 Harmonised frequencies: Annex4	
4'995 - 5'003 kHz	STANDARD FREQUENCY AND TIME SIGNAL (5 000 kHz)		5 - 30 MHz: Wideband SRD, Annex 1 Harmonised frequencies: Annex4	
5'003 - 5'005 kHz	STANDARD FREQUENCY AND TIME SIGNAL Space research		5 - 30 MHz: Wideband SRD, Annex 1 Harmonised frequencies: Annex4	
5'005 - 5'060 kHz	FIXED			
5'060 - 5'250 kHz	FIXED Mobile except aeronautical mobile			
5'250 - 5'275 kHz	FIXED MOBILE except aeronautical mobile Radiolocation 5.132A	Various fixed services (e.g. Security) secondary.		
5'275 - 5'351.5 kHz	FIXED MOBILE except aeronautical mobile		5 - 30 MHz: Wideband SRD, Annex 1 Harmonised frequencies: Annex4	
5'351.5 - 5'366.5 kHz	FIXED MOBILE except aeronautical mobile Amateur 5.133B	Various fixed services (e.g. Security) secondary. Amateur secondary.	Amateur: RIR1101-02 5 - 30 MHz: Wideband SRD, Annex 1 Harmonised frequencies: Annex4	
5'366.5 - 5'450 kHz	FIXED MOBILE except aeronautical mobile	Various fixed services (e.g. Security) secondary.	5 - 30 MHz: Wideband SRD, Annex 1 Harmonised frequencies: Annex4	
5'450 - 5'480 kHz	AERONAUTICAL MOBILE (OR) FIXED LAND MOBILE	Various fixed services (e.g. Security) secondary.	Aeronautical communications: RIR0101-05 5450.5 kHz Annex 2 5 - 30 MHz: Wideband SRD, Annex 1 Harmonised frequencies: Annex4	
5'480 - 5'680 kHz	AERONAUTICAL MOBILE (R) 5.111 5.115	Various fixed services (e.g. Security) secondary.	**Will be continued...**	

Frequency Band	Liechtenstein Allocations			
	National Allocation	Main Use	Notes	Strategy
5'680 - 5'730 kHz	AERONAUTICAL MOBILE (OR) 5.111 5.115	Data above.	Continuation... Aeronautical communications: RIR0101-05 5 - 30 MHz: Wideband SRD, Annex 1 Harmonised frequencies: Annex4	
5'730 - 5'900 kHz	FIXED LAND MOBILE		5 - 30 MHz: Wideband SRD, Annex 1 Harmonised frequencies: Annex4	
5'900 - 5'950 kHz	BROADCASTING 5.134 5.136	Broadcasting primary		
5'950 - 6'200 kHz	BROADCASTING			
6'200 - 6'525 kHz	MARITIME MOBILE 5.109 5.110 5.130 5.132 5.137	Various fixed services (e.g. Security) secondary.	6312.0 kHz Annex 2 6312.0 kHz: international distress frequency for digital selective calling. 5 - 30 MHz: Wideband SRD, Annex 1 Harmonised frequencies: Annex4	
6'525 - 6'685 kHz	AERONAUTICAL MOBILE (R)	Aeronautical mobile primary	6643 kHz Annex 2 Aeronautical communications: RIR0101-05 5 - 30 MHz: Wideband SRD, Annex 1 Harmonised frequencies: Annex4	
6'685 - 6'765 kHz	AERONAUTICAL MOBILE (OR)		Aeronautical communications: RIR0101-05 5 - 30 MHz: Wideband SRD, Annex 1 Harmonised frequencies: Annex4	
6'765 - 7'000 kHz	FIXED MOBILE except aeronautical mobile (R) 5.138	Various fixed services (e.g. Security) secondary.	6765-6795 kHz: ISM Band, Short range devices: Inductive applications: Harmonised frequencies: Annex4 RIR1005-02, ERC/REC 70-03 5 - 30 MHz: Wideband SRD, Annex 1	

Frequency Band	Liechtenstein Allocations			
	National Allocation	Main Use	Notes	Strategy
7'000 - 7'100 kHz	AMATEUR AMATEUR-SATELLITE	Amateur / Amateur-satellite primary.	Amateur: RIR1101-02 5 - 30 MHz: Wideband SRD, Annex 1 Harmonised frequencies: Annex4	
7'100 - 7'200 kHz	AMATEUR 5.141A 5.141B	Amateur primary.	Amateur: RIR1101-02 5 - 30 MHz: Wideband SRD, Annex 1 Harmonised frequencies: Annex4	
7'200 - 7'300 kHz	BROADCASTING		5 - 30 MHz: Wideband SRD, Annex 1 Harmonised frequencies: Annex4	
7'300 - 7'350 kHz	BROADCASTING 5.134 5.143 5.143B	Broadcasting primary	7345 kHz Tests and development. 5 - 30 MHz: Wideband SRD, Annex 1 Harmonised frequencies: Annex4	
7'350 - 7'400 kHz	BROADCASTING 5.134 5.143 5.143B	Broadcasting primary.	5 - 30 MHz: Wideband SRD, Annex 1 Harmonised frequencies: Annex4	
7'400 - 7'450 kHz	BROADCASTING 5.143B	Broadcasting primary.	Short range devices: Harmonised frequencies: Annex4 7400-8800 kHz: Inductive applications: RIR1005-03, ERC/REC 70-03 5 - 30 MHz: Wideband SRD, Annex 1	
7'450 - 8'100 kHz	FIXED MOBILE except aeronautical mobile (R)		Short range devices: Harmonised frequencies: Annex4 7400-8800 kHz: Inductive applications: RIR1005-03, ERC/REC 70-03 5 - 30 MHz: Wideband SRD, Annex 1	

Frequency Band	Liechtenstein Allocations			
	National Allocation	Main Use	Notes	Strategy
8'100 - 8'195 kHz	FIXED MARITIME MOBILE		Short range devices: Harmonised frequencies: Annex4 7400-8800 kHz: Inductive applications: RIR1005-03, ERC/REC 70-03 5 - 30 MHz: Wideband SRD, Annex 1	
8'195 - 8'815 kHz	MARITIME MOBILE 5.109 5.110 5.132 5.145 5.111	Maritime mobile primary.	Maritime mobile: 8201-8809 kHz Annex 2 8414.5 kHz: international distress frequency for digital selective calling. Short range devices: Harmonised frequencies: Annex4 7400-8800 kHz: Inductive applications: RIR1005-03, ERC/REC 70-03 5 - 30 MHz: Wideband SRD, Annex 1	
8'815 - 8'965 kHz	AERONAUTICAL MOBILE (R)	Aeronautical mobile primary.	8936 kHz Annex 2 Aeronautical communications: RIR0101-05 5 - 30 MHz: Wideband SRD, Annex 1 Harmonised frequencies: Annex4	
8'965 - 9'040 kHz	AERONAUTICAL MOBILE (OR)		Aeronautical communications: RIR0101-05 5 - 30 MHz: Wideband SRD, Annex 1 Harmonised frequencies: Annex4	
9'040 - 9'305 kHz	FIXED		5 - 30 MHz: Wideband SRD, Annex 1 Harmonised frequencies: Annex4	
9'305 - 9'355 kHz	FIXED Radiolocation 5.145A			
9'355 - 9'400 kHz	FIXED			
9'400 - 9'500 kHz	BROADCASTING 5.134 5.146	Broadcasting primary.	5 - 30 MHz: Wideband SRD, Annex 1 Harmonised frequencies: Annex4	
9'500 - 9'900 kHz	BROADCASTING 5.147			

Frequency Band	Liechtenstein Allocations			
	National Allocation	Main Use	Notes	Strategy
9'900 - 9'995 kHz	FIXED		Data above.	
9'995 - 10'003 kHz	STANDARD FREQUENCY AND TIME SIGNAL (10 000 kHz) 5.111			
10'003 - 10'005 kHz	STANDARD FREQUENCY AND TIME SIGNAL Space research 5.111			
10'005 - 10'100 kHz	AERONAUTICAL MOBILE (R) 5.111	Aeronautical mobile primary.	10069 kHz Annex 2 Aeronautical communications: RIR0101-05 5 - 30 MHz: Wideband SRD, Annex 1 Harmonised frequencies: Annex4	
10'100 - 10'150 kHz	FIXED Amateur	Amateur.	Amateur: RIR1101-02 5 - 30 MHz: Wideband SRD, Annex 1 Harmonised frequencies: Annex4	
10'150 - 11'175 kHz	FIXED Mobile except aeronautical mobile (R)		11172 kHz Annex 2 Short range devices: Harmonised frequencies: Annex4 10200-11000 kHz: Inductive applications: RIR1005-11, ERC/REC 70-03 5 - 30 MHz: Wideband SRD, Annex 1	
11'175 - 11'275 kHz	AERONAUTICAL MOBILE (OR)		Aeronautical communications: RIR0101-05 5 - 30 MHz: Wideband SRD, Annex 1 Harmonised frequencies: Annex4	
11'275 - 11'400 kHz	AERONAUTICAL MOBILE (R)			
11'400 - 11'600 kHz	FIXED		5 - 30 MHz: Wideband SRD, Annex 1 Harmonised frequencies: Annex4	
11'600 - 11'650 kHz	BROADCASTING 5.134 5.146	Broadcasting primary.		
11'650 - 12'050 kHz	BROADCASTING 5.147			

Frequency Band	Liechtenstein Allocations			
	National Allocation	Main Use	Notes	Strategy
12'050 - 12'100 kHz	BROADCASTING 5.134 5.146	Data above.	Data above.	
12'100 - 12'230 kHz	FIXED		5 - 30 MHz: Wideband SRD, Annex 1 Harmonised frequencies: Annex4	
12'230 - 13'200 kHz	MARITIME MOBILE 5.109 5.110 5.132 5.145	Maritime mobile primary.	12233-13205 kHz Annex 2 12577.0 kHz: international distress frequency for digital selective calling. 5 - 30 MHz: Wideband SRD, Annex 1 Harmonised frequencies: Annex4	
13'200 - 13'260 kHz	AERONAUTICAL MOBILE (OR)	Aeronautical mobile primary.	12233-13205 kHz Annex 2 Aeronautical communications: RIR0101-05 5 - 30 MHz: Wideband SRD, Annex 1 Harmonised frequencies: Annex4	
13'260 - 13'360 kHz	AERONAUTICAL MOBILE (R)		Aeronautical communications: RIR0101-05 5 - 30 MHz: Wideband SRD, Annex 1 Harmonised frequencies: Annex4	
13'360 - 13'410 kHz	FIXED RADIO ASTRONOMY 5.149		5 - 30 MHz: Wideband SRD, Annex 1 Harmonised frequencies: Annex4	
13'410 - 13'450 kHz	FIXED Mobile except aeronautical mobile (R)		5 - 30 MHz: Wideband SRD, Annex 1 Harmonised frequencies: Annex4	
13'450 - 13'550 kHz	FIXED Mobile except aeronautical mobile (R) Radiolocation 5.132A		5 - 30 MHz: Wideband SRD, Annex 1 Harmonised frequencies: Annex4	

Frequency Band	Liechtenstein Allocations			
	National Allocation	Main Use	Notes	Strategy
13'550 - 13'570 kHz	FIXED Mobile except aeronautical mobile (R) 5.150		13553-13567 kHz: ISM-Band: Short range devices: Harmonised frequencies: Annex4 Inductive applications: RIR1005-04, ERC/REC 70-03 Inductive applications for RFID: RIR1005-12, ERC/REC 70-03 Non-specific SRDs: RIR1008-02, ERC/REC 70-03 Higher power SRD: RIR1021-01 5 - 30 MHz: Wideband SRD, Annex 1	
13'570 - 13'600 kHz	BROADCASTING 5.134 5.151	Broadcasting primary.	5 - 30 MHz: Wideband SRD, Annex 1 Harmonised frequencies: Annex4	
13'600 - 13'800 kHz	BROADCASTING			
13'800 - 13'870 kHz	BROADCASTING 5.134 5.151			
13'870 - 14'000 kHz	FIXED Mobile except aeronautical mobile (R)		13990 kHz Annex 2 5 - 30 MHz: Wideband SRD, Annex 1 Harmonised frequencies: Annex4	
14'000 - 14'250 kHz	AMATEUR AMATEUR-SATELLITE	Amateur primary. Amateur-satellite primary.	Amateur: RIR1101-02 5 - 30 MHz: Wideband SRD, Annex 1 Harmonised frequencies: Annex4	
14'250 - 14'350 kHz	AMATEUR	Amateur primary.		
14'350 - 14'990 kHz	FIXED Mobile except aeronautical mobile (R)		14900 kHz Tests and development. 5 - 30 MHz: Wideband SRD, Annex 1 Harmonised frequencies: Annex4	
14'990 - 15'005 kHz	STANDARD FREQUENCY AND TIME SIGNAL (15 000 kHz) 5.111		5 - 30 MHz: Wideband SRD, Annex 1 Harmonised frequencies: Annex4	

Frequency Band	Liechtenstein Allocations			
	National Allocation	Main Use	Notes	Strategy
15'005 - 15'010 kHz	STANDARD FREQUENCY AND TIME SIGNAL Space research		**Data above.**	
15'010 - 15'100 kHz	AERONAUTICAL MOBILE (OR)	Aeronautical mobile primary.	Aeronautical communications: RIR0101-05 5 - 30 MHz: Wideband SRD, Annex 1 Harmonised frequencies: Annex4	
15'100 - 15'600 kHz	BROADCASTING	Broadcasting primary.	5 - 30 MHz: Wideband SRD, Annex 1 Harmonised frequencies: Annex4	
15'600 - 15'800 kHz	BROADCASTING 5.134 5.146			
15'800 - 16'100 kHz	FIXED			
16'100 - 16'200 kHz	FIXED Radiolocation 5.145A			
16'200 - 16'360 kHz	FIXED			
16'360 - 17'410 kHz	MARITIME MOBILE 5.109 5.110 5.132 5.145	Maritime mobile primary.	16390-17407 kHz Annex 2 16804.5kHz: international distress frequency for digital selective calling. 5 - 30 MHz: Wideband SRD, Annex 1 Harmonised frequencies: Annex4	
17'410 - 17'480 kHz	FIXED		5 - 30 MHz: Wideband SRD, Annex 1 Harmonised frequencies: Annex4	
17'480 - 17'550 kHz	BROADCASTING 5.134 5.146	Broadcasting primary.		
17'550 - 17'900 kHz	BROADCASTING			
17'900 - 17'970 kHz	AERONAUTICAL MOBILE (R)		Aeronautical communications: RIR0101-05 5 - 30 MHz: Wideband SRD, Annex 1 Harmonised frequencies: Annex4	
17'970 - 18'030 kHz	AERONAUTICAL MOBILE (OR)	Aeronautical mobile primary.	18023 kHz Annex 2 Aeronautical communications: RIR0101-05 5 - 30 MHz: Wideband SRD, Annex 1 Harmonised frequencies: Annex4	
18'030 - 18'052 kHz	FIXED		**Will be continued...**	

Frequency Band	Liechtenstein Allocations			
	National Allocation	Main Use	Notes	Strategy
18'052 - 18'068 kHz	FIXED Space research		Continuation... 5 - 30 MHz: Wideband SRD, Annex 1 Harmonised frequencies: Annex4	
18'068 - 18'168 kHz	AMATEUR AMATEUR-SATELLITE	Amateur primary. Amateur-satellite primary.	Amateur: RIR1101-02 5 - 30 MHz: Wideband SRD, Annex 1 Harmonised frequencies: Annex4	
18'168 - 18'780 kHz	FIXED Mobile except aeronautical mobile		18230 kHz Annex 2 5 - 30 MHz: Wideband SRD, Annex 1 Harmonised frequencies: Annex4	
18'780 - 18'900 kHz	MARITIME MOBILE	Maritime mobile primary.	18804 / 19779 kHz Annex 2 5 - 30 MHz: Wideband SRD, Annex 1 Harmonised frequencies: Annex4	
18'900 - 19'020 kHz	BROADCASTING 5.134 5.146	Broadcasting primary.	5 - 30 MHz: Wideband SRD, Annex 1 Harmonised frequencies: Annex4	
19'020 - 19'680 kHz	FIXED		19100 kHz Tests and development. 5 - 30 MHz: Wideband SRD, Annex 1 Harmonised frequencies: Annex4	
19'680 - 19'800 kHz	MARITIME MOBILE 5.132	Maritime mobile primary.	18804 / 19779 kHz Annex 2 5 - 30 MHz: Wideband SRD, Annex 1 Harmonised frequencies: Annex4	
19'800 - 19'990 kHz	FIXED		5 - 30 MHz: Wideband SRD, Annex 1 Harmonised frequencies: Annex4	
19'990 - 19'995 kHz	STANDARD FREQUENCY AND TIME SIGNAL Space research 5.111			
19'995 - 20'010 kHz	STANDARD FREQUENCY AND TIME SIGNAL (20 000 kHz) 5.111			
20'010 - 21'000 kHz	FIXED Mobile		20090 kHz Annex 2 5 - 30 MHz: Wideband SRD, Annex 1 Harmonised frequencies: Annex4	

Frequency Band	Liechtenstein Allocations			
	National Allocation	Main Use	Notes	Strategy
21'000 - 21'450 kHz	AMATEUR AMATEUR-SATELLITE	Amateur primary. Amateur-satellite primary.	Amateur: RIR1101-02 5 - 30 MHz: Wideband SRD, Annex 1 Harmonised frequencies: Annex4	
21'450 - 21'850 kHz	BROADCASTING	Broadcasting primary.	5 - 30 MHz: Wideband SRD, Annex 1 Harmonised frequencies: Annex4	
21'850 - 21'870 kHz	FIXED			
21'870 - 21'924 kHz	FIXED 5.155B			
21'924 - 22'000 kHz	AERONAUTICAL MOBILE (R)	Aeronautical mobile primary.	Aeronautical communications: RIR0101-05 5 - 30 MHz: Wideband SRD, Annex 1 Harmonised frequencies: Annex4	
22'000 - 22'855 kHz	MARITIME MOBILE 5.132	Maritime mobile primary.	22039-22831 kHz Annex 2 5 - 30 MHz: Wideband SRD, Annex 1 Harmonised frequencies: Annex4	
22'855 - 23'000 kHz	FIXED		5 - 30 MHz: Wideband SRD, Annex 1 Harmonised frequencies: Annex4	
23'000 - 23'200 kHz	FIXED Mobile except aeronautical mobile (R)			
23'200 - 23'350 kHz	FIXED 5.156A AERONAUTICAL MOBILE (OR)	Aeronautical mobile primary.	Aeronautical communications: RIR0101-05 5 - 30 MHz: Wideband SRD, Annex 1 Harmonised frequencies: Annex4	
23'350 - 24'000 kHz	FIXED MOBILE except aeronautical mobile 5.157		5 - 30 MHz: Wideband SRD, Annex 1 Harmonised frequencies: Annex4	
24'000 - 24'450 kHz	FIXED LAND MOBILE			
24'450 - 24'600 kHz	FIXED LAND MOBILE Radiolocation 5.132A			
24'600 - 24'890 kHz	FIXED LAND MOBILE			

Frequency Band	Liechtenstein Allocations			
	National Allocation	Main Use	Notes	Strategy
24'890 - 24'990 kHz	AMATEUR AMATEUR-SATELLITE	Amateur primary. Amateur-satellite primary.	Amateur: RIR1101-02 5 - 30 MHz: Wideband SRD, Annex 1 Harmonised frequencies: Annex4	
24'990 - 25'005 kHz	STANDARD FREQUENCY AND TIME SIGNAL (25 000 kHz)		5 - 30 MHz: Wideband SRD, Annex 1 Harmonised frequencies: Annex4	
25'005 - 25'010 kHz	STANDARD FREQUENCY AND TIME SIGNAL Space research			
25'010 - 25'070 kHz	FIXED MOBILE except aeronautical mobile			
25'070 - 25'210 kHz	MARITIME MOBILE	Maritime mobile primary.	25076 / 26151 kHz Annex 2 5 - 30 MHz: Wideband SRD, Annex 1 Harmonised frequencies: Annex4	
25'210 - 25'550 kHz	FIXED MOBILE except aeronautical mobile	Mobile except aeronautical mobile primary.	5 - 30 MHz: Wideband SRD, Annex 1 Harmonised frequencies: Annex4	
25'550 - 25'670 kHz	RADIO ASTRONOMY 5.149			
25'670 - 26'100 kHz	BROADCASTING	Broadcasting primary.		
26'100 - 26'175 kHz	MARITIME MOBILE 5.132	Maritime mobile primary.	25076 / 26151 kHz Annex 2 5 - 30 MHz: Wideband SRD, Annex 1 Harmonised frequencies: Annex4	
26'175 - 26'200 kHz	FIXED MOBILE except aeronautical mobile	Various fixed services secondary.	5 - 30 MHz: Wideband SRD, Annex 1 Harmonised frequencies: Annex4	
26'200 - 26'350 kHz	FIXED MOBILE except aeronautical mobile Radiolocation 5.132A			

Frequency Band	Liechtenstein Allocations			
	National Allocation	Main Use	Notes	Strategy
26'350 - 27'500 kHz	FIXED MOBILE except aeronautical mobile 5.150	26550-26910 kHz Mobile primary (On-site paging). 26960-27410 kHz CB radio primary. 26990-27800 kHz SRD primary (Model control, Non-specific SRDs, Higher power SRDs, Inductive applications, Wireless Audio Applications). 27420-28000 kHz PMR/PAMR primary. Various fixed services secondary.	26550-26910 kHz: On-site paging: RIR0506-21 26965-27405 kHz Annex 2: CB radio (PR 27, AM/SSB CB): RIR1102-02, ECC/DEC/(11)03 26957-27283 kHz: ISM-Band Short range devices: Harmonised frequencies: Annex4 27095 kHz: Railway applications: RIR1002-02, ERC/REC 70-03 26995-27195 kHz: Model control: RIR1007-01, Non-specific SRDs: RIR1008-38, 26957-27283 kHz: Non-specific SRDs: RIR1008-03, ERC/REC 70-03 26995-27755 kHz: Higher power SRDs: RIR1021-02 5 - 30 MHz: Wideband SRD, Annex 1 27425-27925 kHz Annex 2: PMR/PAMR: RIR0507-31	

Frequency Band	Liechtenstein Allocations			
	National Allocation	Main Use	Notes	Strategy
27'500 - 28'000 kHz	METEOROLOGICAL AIDS FIXED LAND MOBILE	26990-27800 kHz SRD primary. 27500-28000 kHz Meteorological aids primary. 27420-28000 kHz PMR/PAMR primary. Various fixed services secondary.	26995 - 27755 kHz: Higher power SRDs: RIR1021-02 27425-27925 kHz Annex 2: PMR/PAMR: RIR0507-31, RIR0507-32, RIR0507-33, RIR0507-34, 27815-27875 kHz: Baby monitoring: RIR1013-02 5 - 30 MHz: Wideband SRD, Annex 1 Harmonised frequencies: Annex4	
28'000 - 29'700 kHz	AMATEUR AMATEUR-SATELLITE	Amateur primary. Amateur-satellite primary.	Amateur: RIR1101-02 5 - 30 MHz: Wideband SRD, Annex 1 Harmonised frequencies: Annex4	
29'700 - 30'000 kHz	MOBILE		5 - 30 MHz: Wideband SRD, Annex 1 Harmonised frequencies: Annex4	
30 - 30.005 MHz	MOBILE		30 MHz - 12.4 GHz UWB Applications, Annex 1	
30.005 - 30.01 MHz	MOBILE		UWB Applications, Annex 1	
30.01 - 37.5 MHz	MOBILE	31.4-39.6 MHz Radio microphones. 34.995-35.225 MHz Flying Model control.	Short range devices: Harmonised frequencies: Annex4 30-37.5 MHz: Medical implants: RIR1006-04, 34.995-35.225 MHz: Flying Model control: RIR1007-02, ERC/DEC/(01)11, **Will be continued...**	
37.5 - 38.25 MHz	MOBILE except aeronautical mobile Radio astronomy 5.149			
38.25 - 39 MHz	MOBILE			
39 - 39.5 MHz	MOBILE Radiolocation 5.132A			
39.5 - 39.986 MHz	MOBILE			
39.986 - 40.02 MHz	MOBILE Space research			

Frequency Band	Liechtenstein Allocations			
	National Allocation	Main Use	Notes	Strategy
40.02 - 40.66 MHz	MOBILE	Data above.	Continuation... 31.4-39.6 MHz: Radio microphones: RIR1009-01, ERC/REC 70-03 UWB Applications, Annex 1 39.0-39.2 MHz: Meteor Burst Communications, NIB/NPB, ERC/REC 00-04	
40.66 - 40.7 MHz	MOBILE 5.150	40.66-40.99 MHz Short Range Devices.	40.66-40.70 MHz: ISM-Band, Short range devices Harmonised frequencies: Annex4 Non-specific SRDs: RIR1008-04, Model control: RIR1007-03, ERC/DEC/(01)12, ERC/REC 70-03 Higher power SRDs: RIR1021-03 UWB Applications, Annex 1	
40.7 - 40.98 MHz	MOBILE	40.71-40.99 MHz Short Range Devices secondary.	40.71-40.99 MHz: Short Range Devices: Model control (terrestrial): RIR1007-05 UWB Applications, Annex 1	
40.98 - 41.015 MHz	MOBILE Space research			
41.015 - 42 MHz	MOBILE		46-68 MHz Geographical sharing with wind profiler radars (RR 5.162A). UWB Applications, Annex 1	46-68 MHz: Wind profiler radars to have due regard to minimising interference to other services, dependent on the status of those services.
42 - 42.5 MHz	MOBILE 5.161B			
42.5 - 44 MHz	MOBILE			
44 - 47 MHz	MOBILE 5.162A			

Frequency Band	Liechtenstein Allocations			
	National Allocation	Main Use	Notes	Strategy
47 - 50 MHz	LAND MOBILE 5.164 5.162A	Land mobile primary.	46-68 MHz Geographical sharing with wind profiler radars (RR 5.162A). UWB Applications, Annex 1	The Stockholm 1961 Agreement remains in force and should be respected. Wind profiler radars to have due regard to minimising interference to other services, dependent on the status of those services.
50 - 52 MHz	Amateur 5.166A 5.166C LAND MOBILE 5.162A 5.164	Amateur secondary. Land mobile primary.	50-52 MHz Amateur: RIR1101-11 46-68 MHz Geographical sharing with wind profiler radars (RR 5.162A). UWB Applications, Annex 1	The Stockholm 1961 Agreement remains in force and should be respected. Wind profiler radars to have due regard to minimising interference to other services, dependent on the status of those services.
52 - 68 MHz	LAND MOBILE 5.162A 5.164	Land mobile primary.	46-68 MHz Geographical sharing with wind profiler radars (RR 5.162A). UWB Applications, Annex 1	The Stockholm 1961 Agreement remains in force and should be respected. Wind profiler radars to have due regard to minimising interference to other services, dependent on the status of those services.
68 - 70.45 MHz	MOBILE Amateur ECA9	70 - 70.5 MHz: Amateur secondary. PMR primary.	68 - 87.5 MHz PMR: PMR (analogue): RIR0507-01, PMR (digital): RIR0507-11 T/R 25-08 70 - 70.5 MHz: Amateur: RIR1101-25. UWB Applications, Annex 1	

Frequency Band	Liechtenstein Allocations			
	National Allocation	Main Use	Notes	Strategy
70.45 - 74.8 MHz	MOBILE except aeronautical mobile Amateur ECA9 Radio astronomy 5.149	Data above.	68 - 87.5 MHz PMR: PMR (analogue): RIR0507-01, PMR (digital): RIR0507-11, T/R 25-08 70 - 70.5 MHz: Amateur: RIR1101-25. 72.250 MHz: Higher Power SRD RIR1021-08 UWB Applications, Annex 1	
74.8 - 75.2 MHz	AERONAUTICAL RADIONAVIGATION 5.180	Aeronautical radionavigation primary.	Marker beacons RIR0102-06 UWB Applications, Annex 1	
75.2 - 87.5 MHz	MOBILE	PMR primary.	68 - 87.5 MHz PMR: PMR (analogue): RIR0507-01, PMR (digital): RIR0507-11, T/R 25-08 UWB Applications, Annex 1	
87.5 - 108 MHz	BROADCASTING Land mobile 4.4	Broadcasting primary. Land mobile secondary.	Broadcasting (terrestrial): FM sound analog: RIR0201-30 audio PMSE: RIR0203-20 Short range devices: Harmonised frequencies: Annex4 Wireless audio applications RIR1013-19, ERC/REC 70-03 UWB Applications, Annex 1	

Frequency Band	Liechtenstein Allocations			
	National Allocation	Main Use	Notes	Strategy
108 - 117.975 MHz	AERONAUTICAL RADIONAVIGATION AERONAUTICAL MOBILE (R) 5.197A	Aeronautical radionavigation primary.	Aeronautical navigation: VOR: RIR0102-02 ILS: RIR0102-04 GBAS: RIR0102-07 UWB Applications, Annex 1	
117.975 - 121.45 MHz	AERONAUTICAL MOBILE (R) 5.200 ECA5	Aeronautical Communication.	Aeronautical Communication: RIR0101-01, RIR0101-02, RIR0101-03, RIR0101-04	
121.45 - 121.55 MHz	AERONAUTICAL MOBILE (R) MOBILE-SATELLITE (Earth-to-space) 5.111 5.200			
121.55 - 137 MHz	AERONAUTICAL MOBILE (R) 5.200 ECA5		121.500 MHz: Emergency Position Indication Radio Beacons: ELT: RIR0104-01, PLB: RIR0504-02, EPIRBs: RIR0601-16, RIR0601-20 UWB Applications, Annex 1	
137 - 137.025 MHz	METEOROLOGICAL-SATELLITE (space-to-Earth) MOBILE MOBILE-SATELLITE (space-to-Earth) 5.208A 5.208B 5.209 SPACE OPERATION (space-to-Earth) 5.203C SPACE RESEARCH (space-to-Earth) 5.206 5.208 ECA6	Meteo primary. MSS secondary.	137 - 138 MHz: Downlinks in the MSS. For corresponding uplink transmitter frequencies see: RIR0808-13 ERC/DEC/(99)06 UWB Applications, Annex 1	

Frequency Band	Liechtenstein Allocations			
	National Allocation	Main Use	Notes	Strategy
137.025 - 137.175 MHz	METEOROLOGICAL-SATELLITE (space-to-Earth) MOBILE Mobile-satellite (space-to-Earth) 5.208A 5.208B 5.209 SPACE OPERATION (space-to-Earth) 5.203C SPACE RESEARCH (space-to-Earth) 5.206 5.208 ECA6	Data above.	Data above.	
137.175 - 137.825 MHz	METEOROLOGICAL-SATELLITE (space-to-Earth) MOBILE MOBILE-SATELLITE (space-to-Earth) 5.208A 5.208B 5.209 SPACE OPERATION (space-to-Earth) 5.203C 5.209A SPACE RESEARCH (space-to-Earth) 5.206 5.208			
137.825 - 138 MHz	METEOROLOGICAL-SATELLITE (space-to-Earth) MOBILE Mobile-satellite (space-to-Earth) 5.208A 5.208B 5.209 SPACE OPERATION (space-to-Earth) 5.203C SPACE RESEARCH (space-to-Earth) 5.206 5.208 ECA6			
138 - 143.6 MHz	AERONAUTICAL MOBILE (OR) LAND MOBILE 5.211		UWB Applications, Annex 1	
143.6 - 143.65 MHz	AERONAUTICAL MOBILE (OR) LAND MOBILE SPACE RESEARCH (space-to-Earth) 5.211			
143.65 - 144 MHz	AERONAUTICAL MOBILE (OR) LAND MOBILE 5.211			
144 - 146 MHz	AMATEUR AMATEUR-SATELLITE	Amateur primary. Amateur-satellite primary.	Amateur: RIR1101-12 UWB Applications, Annex 1	

Frequency Band	Liechtenstein Allocations			
	National Allocation	Main Use	Notes	Strategy
146 - 146.8 MHz	MOBILE		UWB Applications, Annex 1	
146.8 - 147.6 MHz	MOBILE	PMR primary.	147.300-147.400 MHz Paging: Annex 2 RIR0506-02 PMR/PAMR: PMR (analogue): RIR0507-02, PMR (digital): RIR0507-12 T/R 25-08 UWB Applications, Annex 1	
147.6 - 148 MHz	MOBILE ECA7	147.9-148.2 / 152.5-152.8 MHz PAMR primary.	PAMR: Fixed - Wireless subscriber connection: 147.9-148.2 / 152.5-152.8 MHz RIR0507-09 148.100-148.775 MHz: Animal Tracking: RIR1003-02 MSS Earth stations 148.0-150.05 MHz RIR0808-13 ERC/DEC/(99)06 UWB Applications, Annex 1	
148 - 149.9 MHz	MOBILE MOBILE-SATELLITE (Earth-to-space) 5.209 5.218 5.218A 5.219 5.221 ECA6 ECA7			
149.9 - 150.05 MHz	MOBILE-SATELLITE (Earth-to-space) 5.209 5.220 ECA6			
150.05 - 150.4 MHz	MOBILE except aeronautical mobile RADIO ASTRONOMY 5.149			
150.4 - 151.4 MHz	MOBILE except aeronautical mobile RADIO ASTRONOMY 5.149	PMR primary	PMR: Mobile, paired with 155-156 MHz PMR (analogue): RIR0507-02, PMR (digital): RIR0507-12, T/R 25-08 UWB Applications, Annex 1	
151.4 - 153 MHz	MOBILE except aeronautical mobile RADIO ASTRONOMY 5.149 ECA7	152.5-152.8 / 147.9-148.2 MHz PAMR primary.	PAMR: Fixed - Wireless subscriber connection: 152.5-152.8 / 147.9 - 148.2 MHz RIR0507-09 UWB Applications, Annex 1	
153 - 154 MHz	MOBILE except aeronautical mobile			

Frequency Band	Liechtenstein Allocations			
	National Allocation	Main Use	Notes	Strategy
154 - 155 MHz	MOBILE except aeronautical mobile 5.225A			
155 - 156 MHz	MOBILE except aeronautical mobile 5.225A	PMR primary.	PMR: Mobile, paired with 150.4-151.4 MHz PMR (analogue): RIR0507-02, PMR (digital): RIR0507-12, T/R 25-08 UWB Applications, Annex 1	
156 - 156.4875 MHz	MOBILE except aeronautical mobile 5.225A 5.226	PMR primary.	156-174 MHz PMR: Annex 2 PMR (analogue): RIR0507-02, PMR (digital): RIR0507-12, T/R 25-08 Inland waterway communications: RIR0603-10, 156-174 MHz PMR: Annex 2 UWB Applications, Annex 1	
156.4875 - 156.5125 MHz	MARITIME MOBILE (distress and calling via DSC) LAND MOBILE 5.111 5.226 5.227			
156.5125 - 156.5375 MHz	MARITIME MOBILE (distress and calling via DSC) 5.111 5.226			
156.5375 - 156.5625 MHz	MARITIME MOBILE (distress and calling via DSC) LAND MOBILE 5.227 5.111 5.226			
156.5625 - 156.7625 MHz	MOBILE except aeronautical mobile 5.226			
156.7625 - 156.7875 MHz	MOBILE except aeronautical mobile MARITIME MOBILE Mobile-satellite (Earth-to-space) 5.111 5.226 5.228			
156.7875 - 156.8125 MHz	MOBILE except aeronautical mobile MARITIME MOBILE (distress and calling) 5.111 5.226			
156.8125 - 156.8375 MHz	MOBILE except aeronautical mobile MARITIME MOBILE Mobile-satellite (Earth-to-space) 5.111 5.226 5.228			

Frequency Band	Liechtenstein Allocations			
	National Allocation	Main Use	Notes	Strategy
156.8375 - 157.1875 MHz	MOBILE except aeronautical mobile 5.226	PMR primary.	156-174 MHz PMR: Annex 2 PMR (analogue): RIR0507-02, PMR (digital): RIR0507-12, T/R 25-08 Maritime communications AIS: RIR0603-01 Inland waterway communications: RIR0603-10, 156-174 MHz PMR: Annex 2 161.300 MHz Emergency services: RIR0504-01 UWB Applications, Annex 1	
157.1875 - 157.3375 MHz	MOBILE except aeronautical mobile Maritime mobile-satellite 5.208A 5.208B 5.228AB 5.226			
157.3375 - 161.7875 MHz	MOBILE except aeronautical mobile 5.226			
161.7875 - 161.9375 MHz	MOBILE except aeronautical mobile Maritime mobile-satellite 5.208A 5.208B 5.228AB 5.226			
161.9375 - 161.9625 MHz	MOBILE except aeronautical mobile Maritime mobile-satellite (Earth-to-space) 5.228AA 5.226			
161.9625 - 161.9875 MHz	MOBILE except aeronautical mobile Mobile-satellite (Earth-to-space) 5.228F 5.226 5.228A 5.228B			
161.9875 - 162.0125 MHz	MOBILE except aeronautical mobile Maritime mobile-satellite (Earth-to-space) 5.228AA 5.226			
162.0125 - 162.0375 MHz	MOBILE except aeronautical mobile Mobile-satellite (Earth-to-space) 5.228F 5.226 5.228A 5.228B			
162.0375 - 162.05 MHz	MOBILE except aeronautical mobile 5.226			
162.05 - 165.2 MHz	MOBILE except aeronautical mobile			
165.2 - 169.4 MHz	MOBILE except aeronautical mobile	PMR primary.	156-174 MHz PMR: Annex 2 PMR (analogue): RIR0507-02, PMR (digital): RIR0507-12, T/R 25-08 UWB Applications, Annex 1	

Frequency Band	Liechtenstein Allocations			
	National Allocation	Main Use	Notes	Strategy
169.4 - 169.825 MHz	MOBILE except aeronautical mobile	169.400 - 169.600 MHz: SRDs and paging. 169.6125 - 169.8125 MHz: Paging and tracking and tracing systems primary.	169.400 - 169.825 MHz: Harmonised frequencies: Annex 4 regulated by: ECC/DEC/(05)02, ERC/REC 70-03, EC Decision 2006/771/EC SRD and its amendments. 169.400-169.7875 MHz: Paging: Annex 2 RIR0506-01, ECC/DEC/(05)02 Short range devices: 169.400-169.475 MHz: Aids for hearing impaired (500 mW): RIR1009-14, Meter reading (500 mW, ≤ 10% DC): RIR1003-03, Non-specific SRDs (500 mW, ≤ 1% DC): RIR1008-32, 169.400 - 169.4875 MHz: Non-specific SRDs (10 mW, ≤ 0.1% DC): RIR1008-33, 169.4875 - 169.5875 MHz: Aids for hearing impaired (500 mW): RIR1009-15, Non-specific SRDs (10 mW, ≤ 0.001% DC): RIR1008-34, 169.5875 - 169.8125 MHz: Non-specific SRDs (10 mW, ≤ 0.1% DC): RIR1008-35, ERC/REC 70-03, ECC/DEC/(05)02 169.6125 - 169.6375 MHz and 169.7125 - 169.7625 MHz and 169.7875 - 169.8125 MHz: Asset tracking and tracing: Annex 2 RIR1003-05, ECC/DEC/(05)02, UWB Applications, Annex 1	169.4-169.600 MHz: According to ECC/DEC/(05)02 no new assignements to paging systems. Short Range Devices including Aids for hearing impaired, Social alarms, Meter reading and Asset tracking and tracing applications have to accept interference from Paging services.

Frequency Band	Liechtenstein Allocations			
	National Allocation	Main Use	Notes	Strategy
169.825 - 174 MHz	MOBILE except aeronautical mobile	PMR primary.	156-174 MHz PMR: Annex 2 PMR (analogue): RIR0507-02, PMR (digital): RIR0507-12, T/R 25-08 Alarms: 170.500 MHz: 1 mW RIR1001-01 Higher power SRDs: 173.100-173.350 MHz: 500 mW RIR1021-04 173.100 MHz: 2.5 W RIR1021-09 UWB Applications, Annex 1	
174 - 216 MHz	BROADCASTING Land mobile 5.235	Broadcasting primary. Short range devices secondary.	Broadcasting (terrestrial): Band III, channel 5 - 10: 174-230 MHz: Annex 2 T-DAB: RIR0201-31 T-DAB Retransmitter: RIR0201-32 T-DAB low power indoor repeater: RIR0201-35 Short range devices: Radio Microphones: RIR1009-02, Personal hearing aids: RIR1009-12, ERC/REC 70-03 Medical Telemetry: RIR1006-06 UWB Applications, Annex 1	T-DAB+ according to Regional Agreement GE06.

Frequency Band	Liechtenstein Allocations			
	National Allocation	Main Use	Notes	Strategy
216 - 223 MHz	BROADCASTING Land mobile 5.235	Broadcasting primary. Short range devices secondary.	Broadcasting (terrestrial): Band III, channel 11: 174-230 MHz: Annex 2 T-DAB: RIR0201-31 T-DAB Retransmitter: RIR0201-32 T-DAB low power indoor repeater: RIR0201-35 Short range devices: Radio Microphones: RIR1009-02, Personal hearing aids: RIR1009-12, ERC/REC 70-03 UWB Applications, Annex 1	T-DAB+ according to Regional Agreement GE06.
223 - 230 MHz	BROADCASTING	Broadcasting primary. T-DAB primary.	Broadcasting (terrestrial): Band III, channel 12: 174-230 MHz: Annex 2 T-DAB: RIR0201-31 T-DAB Retransmitter: RIR0201-32 T-DAB low power indoor repeater: RIR0201-35 UWB Applications, Annex 1	T-DAB+ according to Regional Agreement GE06.
230 - 235 MHz	MOBILE		230-231.5 MHz: Below 231.5 MHz only for local or regional use. The use of that band by frequency hopping systems should be avoided. UWB Applications, Annex 1	No T-DAB assignments according to Wiesbaden 1995 Special Arrangement, as revised in Constanta 2007.
235 - 240 MHz	MOBILE 5.254			
240 - 242.95 MHz	MOBILE 5.254			

Frequency Band	Liechtenstein Allocations			
	National Allocation	Main Use	Notes	Strategy
242.95 - 243.05 MHz	AERONAUTICAL MOBILE 5.111 5.254 5.256		243.0 MHz: Search and rescue, Emergency Position Indication Radio Beacons: ELT: RIR0104-01, PLB: RIR0504-02, EPIRBs: RIR0601-16, RIR0601-20 UWB Applications, Annex 1	
243.05 - 267 MHz	MOBILE 5.254		UWB Applications, Annex 1	
267 - 272 MHz	MOBILE 5.254 5.257			
272 - 273 MHz	MOBILE 5.254			
273 - 312 MHz	MOBILE 5.254			
312 - 315 MHz	MOBILE 5.254 5.255			
315 - 322 MHz	MOBILE 5.254			
322 - 328.6 MHz	MOBILE RADIO ASTRONOMY 5.149			
328.6 - 335.4 MHz	AERONAUTICAL RADIONAVIGATION 5.258	ILS primary.	Aeronautical navigation: ILS: RIR0102-04 UWB Applications, Annex 1	
335.4 - 380 MHz	MOBILE 5.254		UWB Applications, Annex 1	

Frequency Band	Liechtenstein Allocations			
	National Allocation	Main Use	Notes	Strategy
380 - 385 MHz	MOBILE 5.254	PMR/PAMR primary	Digital Land Mobile System for Emergency Services: RIR0507-16, ERC/DEC/(01)19, ECC/DEC/(06)05 380 - 470 MHz: Tuning range for PPDR: ECC/DEC/(08)05 UWB Applications, Annex 1	Emergency Services CH and FL.
385 - 387 MHz	MOBILE 5.254		380 - 470 MHz: Tuning range for PPDR: ECC/DEC/(08)05 UWB Applications, Annex 1	
387 - 390 MHz	MOBILE 5.254 5.255			
390 - 395 MHz	MOBILE 5.254	PMR/PAMR primary	Digital Land Mobile System for Emergency Services: RIR0507-16, ERC/DEC/(01)19, ECC/DEC/(06)05 380 - 470 MHz: Tuning range for PPDR: ECC/DEC/(08)05 UWB Applications, Annex 1	Emergency Services CH and FL.
395 - 399.9 MHz	MOBILE 5.254		380 - 470 MHz: Tuning range for PPDR: ECC/DEC/(08)05 UWB Applications, Annex 1	
399.9 - 400.05 MHz	MOBILE-SATELLITE (Earth-to-space) 5.220 5.209 5.260A 5.260B		MSS Earth stations RIR0808-13 ERC/DEC/(99)06 380 - 470 MHz: Tuning range for PPDR: ECC/DEC/(08)05 UWB Applications, Annex 1	
400.05 - 400.15 MHz	STANDARD FREQUENCY AND TIME SIGNAL-SATELLITE (400.1 MHz) 5.261		380 - 470 MHz: Tuning range for PPDR: ECC/DEC/(08)05 UWB Applications, Annex 1	

Frequency Band	Liechtenstein Allocations			
	National Allocation	Main Use	Notes	Strategy
400.15 - 401 MHz	METEOROLOGICAL AIDS METEOROLOGICAL-SATELLITE (space-to-Earth) MOBILE-SATELLITE (space-to-Earth) 5.208A 5.208B 5.209 SPACE OPERATION (space-to-Earth) SPACE RESEARCH (space-to-Earth) 5.263 5.264	Various meteorological aids and meteorological-satellite applications primary.	Meteorology: Sondes: RIR0702-01, RIR0702-02 380 - 470 MHz: Tuning range for PPDR: ECC/DEC/(08)05 Downlinks in the MSS, For corresponding uplink transmitter frequencies see: RIR0808-13 ERC/DEC/(99)06 UWB Applications, Annex 1	Future use of this band by MSS and MET-Satellite services will probably effectively exclude the use of this band by MET AIDS. Protection of other band 401-406 MHz should be ensured for MET AIDS.
401 - 402 MHz	METEOROLOGICAL AIDS EARTH EXPLORATION-SATELLITE (Earth-to-space) METEOROLOGICAL-SATELLITE (Earth-to-space) 5.264A 5.264B	Various meteorological aids and meteorological-satellite applications primary. ULP-AMI secondary.	Meteorology: Sondes: RIR0702-01, RIR0702-02 Harmonised frequencies: Annex4 Ultra Low Power Active Medical Implant communication systems (ULP-AMI): RIR1006-07, ERC/DEC/(01)17 380 - 470 MHz: Tuning range for PPDR: ECC/DEC/(08)05 UWB Applications, Annex 1	

Frequency Band	Liechtenstein Allocations			
	National Allocation	Main Use	Notes	Strategy
402 - 403 MHz	METEOROLOGICAL AIDS EARTH EXPLORATION-SATELLITE (Earth-to-space) METEOROLOGICAL-SATELLITE (Earth-to-space) 5.264A 5.264B	Various meteorological aids and meteorological-satellite applications primary. ULP-AMI secondary.	Meteorology: Sondes: RIR0702-01, RIR0702-02 Harmonised frequencies: Annex4 Ultra Low Power Active Medical Implant communication systems (ULP-AMI): 402-405 MHz: RIR1006-02, ERC/DEC/(01)17 380 - 470 MHz: Tuning range for PPDR: ECC/DEC/(08)05 UWB Applications, Annex 1	
403 - 406 MHz	METEOROLOGICAL AIDS 5.265	Various meteorological aids primary. ULP-AMI secondary.	Meteorology: Sondes: RIR0702-01, RIR0702-02 Harmonised frequencies: Annex4 Ultra Low Power Active Medical Implant communication systems (ULP-AMI): 402-405 MHz: RIR1006-02, 405-406 MHz: RIR1006-08, ERC/DEC/(01)17 380 - 470 MHz: Tuning range for PPDR: ECC/DEC/(08)05 UWB Applications, Annex 1	

Frequency Band	Liechtenstein Allocations			
	National Allocation	Main Use	Notes	Strategy
406 - 406.1 MHz	MOBILE-SATELLITE (Earth-to-space) 5.265 5.266 5.267	Satellite emergency position-indicating radio beacons primary.	Search and rescue, Emergency Position Indication Radio Beacons: ELT: RIR0104-01, PLB: RIR0504-02, EPIRBs: RIR0601-16 380 - 470 MHz: Tuning range for PPDR: ECC/DEC/(08)05 UWB Applications, Annex 1	Ensure protection of satellite EPIRBs use.
406.1 - 410 MHz	LAND MOBILE RADIO ASTRONOMY 5.149 5.265	PMR primary.	PMR: Railways, Various private multiple use networks PMR (analogue): RIR0507-03, PMR (digital): RIR0507-13, T/R 25-08 380 - 470 MHz: Tuning range for PPDR: ECC/DEC/(08)05 UWB Applications, Annex 1	

Frequency Band	Liechtenstein Allocations			
	National Allocation	Main Use	Notes	Strategy
410 - 418 MHz	MOBILE except aeronautical mobile	PMR/PAMR primary.	410 - 428 MHz PMR/PAMR: PMR (analogue): RIR0507-03, PMR (digital): RIR0507-13, T/R 25-08 Trunking radio: TETRAPOL: RIR0507-17, ECC/DEC/(19)02, T/R 25-08 TETRA: RIR0507-20, ECC/DEC/(19)02, T/R 25-08 380 - 470 MHz: Tuning range for PPDR: ECC/DEC/(08)05 UWB Applications, Annex 1	The frequencies for the digital technology are available.
418 - 420 MHz			380 - 470 MHz: Tuning range for PPDR: ECC/DEC/(08)05 UWB Applications, Annex 1	

Frequency Band	Liechtenstein Allocations			
	National Allocation	Main Use	Notes	Strategy
420 - 428 MHz	MOBILE except aeronautical mobile Radiolocation	PMR/PAMR primary.	410 - 428 MHz PMR/PAMR: PMR (analogue): RIR0507-03, PMR (digital): RIR0507-13, T/R 25-08 Trunking radio: TETRAPOL: RIR0507-17, ECC/DEC/(19)02, T/R 25-08 TETRA: RIR0507-20, ECC/DEC/(19)02, T/R 25-08 380 - 470 MHz: Tuning range for PPDR: ECC/DEC/(08)05 UWB Applications, Annex 1	The frequencies for the digital technology are available.
428 - 430 MHz			380 - 470 MHz: Tuning range for PPDR: ECC/DEC/(08)05 UWB Applications, Annex 1	
430 - 432 MHz	AMATEUR Land mobile 5.276	Amateur	Amateur: RIR1101-13 380 - 470 MHz: Tuning range for PPDR: ECC/DEC/(08)05 Short range devices: ULP-WMCE: Harmonised frequencies: Annex4 RIR1006-12 UWB Applications, Annex 1	

Frequency Band	Liechtenstein Allocations			
	National Allocation	Main Use	Notes	Strategy
432 - 433.05 MHz	AMATEUR Land mobile 5.276 Earth exploration-satellite (active) 5.279A	Amateur primary.	Amateur: RIR1101-13 380 - 470 MHz: Tuning range for PPDR: ECC/DEC/(08)05 Short range devices: ULP-WMCE: Harmonised frequencies: Annex4 RIR1006-12 UWB Applications, Annex 1	
433.05 - 434.79 MHz	AMATEUR Land mobile 5.276 Earth exploration-satellite (active) 5.279A 5.138 5.280	SRD primary. Amateur secondary. 433.25-434.50 MHz: Higher power short range devices.	433.05-434.79 MHz: ISM-Band, Short range devices: Harmonised frequencies: Annex4 ULP-WMCE: RIR1006-12 Non-specific SRDs: 10 mW, < 10% Duty Cycle: RIR1008-05, 1 mW, ≤ 100 % Duty Cycle: RIR1008-18, 434.04-434.79 MHz: Non-specific SRDs: 10 mW, ≤ 100 % Duty Cycle: RIR1008-19, ERC/REC 70-03 Higher power SRDs: 433.25-434.50 MHz: ≤ 0.5 W, ≤ 1% Duty Cycle RIR1021-05, 433.65-434.20 MHz: ≤ 2.5 W, ≤ 1% Duty Cycle RIR1021-06. Amateur: RIR1101-13 380 - 470 MHz: Tuning range for PPDR: ECC/DEC/(08)05 UWB Applications, Annex 1	

Frequency Band	Liechtenstein Allocations			
	National Allocation	Main Use	Notes	Strategy
434.79 - 438 MHz	AMATEUR AMATEUR-SATELLITE 5.282 Earth exploration-satellite (active) 5.279A 5.276	434.79-438 MHz Amateur primary. 435-438 MHz Amateur Satellite secondary.	Amateur: RIR1101-13 380 - 470 MHz: Tuning range for PPDR: ECC/DEC/(08)05 Short range devices: ULP-WMCE: Harmonised frequencies: Annex4 RIR1006-12 UWB Applications, Annex 1	
438 - 440 MHz	AMATEUR 5.276	438 - 440 MHz: Amateur primary.	Amateur: RIR1101-13 380 - 470 MHz: Tuning range for PPDR: ECC/DEC/(08)05 Short range devices: ULP-WMCE: Harmonised frequencies: Annex4 RIR1006-12 UWB Applications, Annex 1	
440 - 450 MHz	MOBILE except aeronautical mobile	446.0-446.1 MHz PMR 446 446.1-446.2 MHz Digital PMR 446 449.8-449.9 MHz On site Paging.	PMR: PMR (analogue): RIR0507-04, PMR (digital): RIR0507-14 446.0 - 446.2 MHz: Harmonised frequencies: Annex4 PMR 446 analog and digital: Annex 2, RIR0507-35, ERC/DEC/(15)05 Paging: RIR0506-03 449.8 - 449.9 MHz: On site Paging: RIR0506-22 380 - 470 MHz: Tuning range for PPDR: ECC/DEC/(08)05 UWB Applications, Annex 1	

Frequency Band	Liechtenstein Allocations			
	National Allocation	Main Use	Notes	Strategy
450 - 460 MHz	MOBILE 5.287	PMR primary.	450 - 470 MHz PMR: PMR (analogue): RIR0507-04, PMR (digital): RIR0507-14, RIR0507-18, PMR/PAMR, RIR0507-21, TETRA, T/R 25-08 PMR Railways: RIR0507-05, T/R 25-08 Paging: RIR0506-03 380 - 470 MHz: Tuning range for PPDR: ECC/DEC/(08)05 UWB Applications, Annex 1	
460 - 470 MHz	MOBILE 5.287 5.289	PMR primary.	450 - 470 MHz PMR: PMR (analogue): RIR0507-04, PMR (digital): RIR0507-14, RIR0507-18, PMR/PAMR, RIR0507-21, TETRA, T/R 25-08 PMR Railways: RIR0507-05, T/R 25-08 Paging: RIR0506-03 380 - 470 MHz: Tuning range for PPDR: ECC/DEC/(08)05 UWB Applications, Annex 1	

Frequency Band	Liechtenstein Allocations			
	National Allocation	Main Use	Notes	Strategy
470 - 608 MHz	BROADCASTING Land mobile 5.296 5.291A	Broadcasting primary. Land mobile secondary.	Broadcasting (terrestrial): Band IV, channel 21 - 34: 470-582 MHz: Annex 2, Lower part of band V, channel 35 - 37: 582-608 MHz: Annex 2, DVB-T: RIR0201-71 DVB-T Retransmitter: RIR0201-72 470-518 MHz: Land mobile applications, inside shielded rooms only: RIR0507-08 Radio microphones and in-ear monitor systems: 470-694 MHz (max. 50 mW): RIR1009-10, ERC/REC 70-03, EC Decision 2014/641/EU 477-694 MHz (max. 250 mW): RIR1009-11 Wireless audio applications: 477-694 MHz: RIR1013-20 UWB Applications, Annex 1	Terrestrial digital television broadcasting (DVB-T) or mobile multimedia services (as DVB-H) according to Regional Agreement GE06. 470-494 MHz: Wind profilers: Geographical sharing with wind profiler radars (RR 5.291A).
608 - 614 MHz	BROADCASTING Radio astronomy 5.306 Land mobile 5.296	Radio astronomy secondary. Land mobile secondary.	Land mobile applications: Radio microphones and in-ear monitor systems: 470-694 MHz (max. 50 mW): RIR1009-10, ERC/REC 70-03, EC Decision 2014/641/EU UWB Applications, Annex 1	No assignments of broadcast transmitters. Protection of radio astronomy service from harmful interference must be ensured (see RR 5.149).

Frequency Band	Liechtenstein Allocations			
	National Allocation	Main Use	Notes	Strategy
614 - 694 MHz	BROADCASTING Land mobile 5.296	Broadcasting primary. Land mobile secondary.	Broadcasting (terrestrial): Lower part of band V, channel 39 - 48: 614-694 MHz: Annex 2, DVB-T: RIR0201-71 DVB-T Retransmitter: RIR0201-72 Land mobile: Radio microphones and in-ear monitor systems: 470-694 MHz (max. 50 mW): RIR1009-10, 477-694 MHz (max. 250 mW): RIR1009-11, ERC/REC 70-03 EC Decision 2014/641/EU Wireless audio applications: 477-694 MHz: RIR1013-20 UWB Applications, Annex 1	Terrestrial digital television broadcasting (DVB-T) or mobile multimedia services (as DVB-H) according to Regional Agreement GE06.

Frequency Band	Liechtenstein Allocations			
	National Allocation	Main Use	Notes	Strategy
694 - 790 MHz	MOBILE except aeronautical mobile 5.312A 5.317A	698 - 703 MHz / 753 - 758 MHz: 703 - 733 MHz / 758 - 788 MHz: 733 - 736 MHz / 788 - 791 MHz: 738 - 753 MHz SDL: MFCN primary. Land mobile secondary.	PPDR (IMT): 698-703 MHz (UL) paired with 753-758 MHz (DL): RIR0504-06 (UL) RIR0504-07 (DL) ECC/DEC/(16)02, ECC/REC/(16)03, ECC Report 218 option B. The frequency resources in the bands 698-703 MHz / 753-758 and 733-736 MHz / 788-791 MHz are foreseen for the implementation of PPDR transmitters complementary to the public mobile networks. MFCN (IMT): 703-733 MHz (UL) paired with 758-788 MHz (DL): RIR0501-28 (DL) RIR0501-29 (UL) ECC/DEC/(15)01, ECC/REC/(15)01, EC Decision (EU) 2017/899 PPDR (IMT): 733-736 MHz (UL) paired with 788-791 MHz (DL): RIR0504-04 (UL) RIR0504-05 (DL) ECC/DEC/(16)02, ECC/REC/(16)03, ECC Report 218 option B, EC Decision (EU) 2016/687 MFCN (SDL) (IMT): 738-753 MHz: RIR0501-30 (SDL) ECC/DEC/(15)01, ECC/REC/(15)01, ECC Report 218 option B, EC Decision (EU) 2017/899 UWB Applications, Annex 1	

Frequency Band	Liechtenstein Allocations			
	National Allocation	Main Use	Notes	Strategy
790 - 862 MHz	MOBILE except aeronautical mobile 5.316B 5.317A	791 - 821 MHz / 832 - 862 MHz: MFCN primary.	791-821 MHz (DL) paired with 832-862 MHz: MFCN (IMT): RIR0501-19, 832-862 MHz (UL) paired with 791-821 MHz: MFCN (IMT): RIR0501-20, ECC/DEC/(09)03, ECC/REC/(11)04, EC Decision 2010/267/EU Land mobile: Radio microphones and in-ear monitor systems: 823-826 MHz (max. 20 / 100 mW e.i.r.p.): RIR1009-18, 826-832 MHz (max. 100 mW e.i.r.p.): RIR1009-13, ERC/REC 70-03 EC Decision 2014/641/EU UWB Applications, Annex 1	

Frequency Band	Liechtenstein Allocations			
	National Allocation	Main Use	Notes	Strategy
862 - 870 MHz	MOBILE	862 - 870 MHz SRD primary: Band A: 863-865 MHz. Band C: 865-868 MHz. Band B: 868-870 MHz.	Harmonised frequencies: Annex4 862-863 MHz: Non-specific SRDs: RIR1008-43, 25 mW, ≤ 0.1% DC, BW max. 350 kHz **SRD A: 863-865 MHz** Harmonised frequencies: Annex4 Wireless audio applications: RIR1013-01, Radio microphones: RIR1009-05, Non-specific SRDs: RIR1008-44, 25 mW, ≤ 0.1% DC, 864.8-865.0 MHz: Wireless audio applications: RIR1013-17, SRD 863-868 MHz Tracking, tracing and data acquisition: RIR1003-11, 25 mW, ≤ 2.8% DC, RIR1003-12: 25 mW, ≤ 10% DC for network access points only. **SRD C: 865-868 MHz** Harmonised frequencies: Annex4 Tracking, tracing and data acquisition: RIR1003-09, 500 mW, ≤ 2.5% DC, RIR1003-10: 500 mW, ≤ 10% DC for network access points only. RFID: 865.6-867.6 MHz: 2 W, RIR1011-07, 866.885-866.915 MHz: Detection of avalanche victims: RIR1003-06 **Will be continued...**	862 - 870 MHz: Within CEPT harmonised band for short range devices (SRD).

Frequency Band	Liechtenstein Allocations			
	National Allocation	Main Use	Notes	Strategy
862 - 870 MHz	MOBILE	862 - 870 MHz SRD primary: Band A: 863-865 MHz. Band C: 865-868 MHz. Band B: 868-870 MHz.	**Continuation...** **SRD B: 868-870 MHz** Harmonised frequencies: Annex4 Non-specific SRDs: 868.0-868.6 MHz: 25 mW, ≤ 1 % Duty Cycle, RIR1008-06, 868.7-869.2 MHz: 25 mW, ≤ 0.1 % Duty Cycle, RIR1008-07, 869.40-869.65 MHz: 500 mW, ≤ 10 % Duty Cycle, 25 kHz BW, RIR1008-09, 869.7-870.0 MHz: 25 mW, ≤ 1 % Duty Cycle, RIR1008-27, 869.7-870.0 MHz: 5 mW, ≤ 100 % Duty Cycle, RIR1008-10, Alarms: 868.6-868.7 MHz: 10 mW, ≤ 1 % Duty Cycle, RIR1001-02, 869.25-869.3 MHz: 10 mW, ≤ 0.1 % Duty Cycle, RIR1001-03, 869.3-869.4 MHz: 10 mW, ≤ 1 % Duty Cycle, RIR1001-06, 869.65-869.70 MHz: 25 mW, ≤ 10 % Duty Cycle, RIR1001-04, Social alarms: 869.2-869.25 MHz: 10 mW, ≤ 0.1 % Duty Cycle, RIR1001-05, **Will be continued...**	862 - 870 MHz: Within CEPT harmonised band for short range devices (SRD).

Frequency Band	Liechtenstein Allocations			
	National Allocation	Main Use	Notes	Strategy
862 - 870 MHz	MOBILE	862 - 870 MHz SRD primary: Band A: 863-865 MHz. Band C: 865-868 MHz. Band B: 868-870 MHz.	Continuation... **SRD A, B, C: 863-870 MHz** Harmonised frequencies: Annex4 Non-specific SRDs: Modulation: FHSS: 863-870 MHz: FHSS, 25 mW, ≤ 0.1 % Duty Cycle, RIR1008-20, Modulation: Wide band DSSS and other non FHSS: 863-870 MHz: wide band non FHSS, 25 mW, ≤ 0.1 % Duty Cycle, RIR1008-22, 865-868 MHz: 25 mW, ≤ 1 % Duty Cycle, RIR1008-30, **Reference for SRDs in band A, B and C:** ERC/REC 70-03, EC Decision 2006/771/EC SRD and its amendments. UWB Applications, Annex 1	862 - 870 MHz: Within CEPT harmonised band for short range devices (SRD).
870 - 876 MHz	MOBILE	870 - 873 MHz: SRD primary. 873 - 876 MHz / 918 - 921 MHz: GSM-R extension band primary.	870 - 873 MHz: SRD Tracking, tracing and data acquisition: RIR1003-07: 500 mW, ≤ 2.5% DC, RIR1003-08: 500 mW, ≤ 10% DC, for network access points only. Non-specific SRDs: RIR1008-42: 25 mW, ≤ 1% DC, BW max. 600 kHz ERC/REC 70-03 873 - 876 MHz (UL) paired with 918-921 MHz: GSM-R extension band: RIR0501-16, GSM-R Repeater: RIR0501-18, ECC/DEC/(20)02 EC Decision (EU) 2021/1730 on RMR UWB Applications, Annex 1	870 - 873 MHz: SRD use. 873 - 876 MHz: Railway use.

Frequency Band	Liechtenstein Allocations			
	National Allocation	Main Use	Notes	Strategy
876 - 880 MHz	MOBILE	876 - 880 MHz / 921 - 925 MHz: GSM-R primary.	876-880 MHz (UL) paired with 921-925 MHz Harmonised frequencies: Annex4 GSM-R: RIR0501-16, GSM-R Repeater: RIR0501-18, ECC/DEC/(20)02 EC Decision (EU) 2021/1730 on RMR UWB Applications, Annex 1	
880 - 915 MHz	MOBILE except aeronautical mobile 5.317A	880 - 915 MHz / 925 - 960 MHz: MFCN primary.	880-915 MHz (UL) paired with 925-960 MHz Harmonised frequencies: Annex4 GSM: RIR0501-01, EC Directive 87/372/EEC on GSM, EC Decision 2010/166/EU on MCV GSM-Repeater: RIR0501-05, ERC/DEC/(97)02, ECC/REC/(05)08, IMT: RIR0501-26, ECC/DEC/(06)13, ECC/REC/(08)02, EC Directive 2009/114/EC amending EC Directive 87/372/EEC, EC Decision (EU) 2017/191 amending Decision 2010/166/EU on MCV. EC Decision (EU) 2022/173 on 900 and 1800 MHz MFCN UWB Applications, Annex 1	Continued intensive use for digital cellular networks (GSM and IMT systems) in the FDD mode.

Frequency Band	Liechtenstein Allocations			
	National Allocation	Main Use	Notes	Strategy
915 - 921 MHz	LAND MOBILE	915 - 918 MHz: SRD primary. 918 - 921 MHz / 873 - 876 MHz: GSM-R extension band primary.	915 - 918 MHz: Non-specific SRDs: RIR1008-40: 25 mW, 1% DC, BW max. 600 kHz 916.1 - 916.5 MHz and 917.3 - 917.7 MHz: Non-specific SRDs: RIR1008-41: 100 mW, 1% DC, BW max. 400 kHz, RFID: RIR1011-08: 4 W, BW max. 400 kHz, 917.3 - 917.7 MHz: SRD data networks: RIR1003-13, 500 mW, ≤ 2.5% DC, BW max. 200 kHz, RIR1003-14, 500 mW, ≤ 10% DC, BW max. 200 kHz for network access points only. Reference for SRD: ERC/REC 70-03 918-921 MHz (DL) paired with 873-876 MHz: GSM-R extension band: RIR0501-17, GSM-R Repeater: RIR0501-18, ECC/DEC/(20)02 EC Decision (EU) 2021/1730 on RMR UWB Applications, Annex 1	915 - 918 MHz: SRD use. 918 - 921 MHz: Railway use.
921 - 925 MHz	LAND MOBILE	921 - 925 MHz / 876 - 880 MHz: GSM-R primary.	921-925 MHz (DL) paired with 876-880 MHz Harmonised frequencies: Annex4 GSM-R: RIR0501-17, GSM-R Repeater: RIR0501-18, ECC/DEC/(20)02, ECC/REC/(05)08. EC Decision (EU) 2021/1730 on RMR UWB Applications, Annex 1	

Frequency Band	Liechtenstein Allocations			
	National Allocation	Main Use	Notes	Strategy
925 - 960 MHz	MOBILE except aeronautical mobile 5.317A	925 - 960 MHz / 880 - 915 MHz: MFCN primary.	925-960 MHz (DL) paired with 880 - 915 MHz Harmonised frequencies: Annex4 GSM: RIR0501-03, GSM onboard vessels: RIR0501-14, GSM-Repeater: RIR0501-05, ERC/DEC/(97)02, ECC/REC/(05)08, EC Decision 2010/166/EU on MCV IMT: RIR0501-27, ECC/DEC/(06)13, ECC/REC/(08)02, EC Directive 2009/114/EC amending EC Directive 87/372/EEC, EC Decision (EU) 2017/191 amending Decision 2010/166/EU on MCV. EC Decision (EU) 2022/173 on 900 and 1800 MHz MFCN UWB Applications, Annex 1	Continued intensive use for digital cellular networks (GSM and IMT systems) in the FDD mode.
960 - 1'164 MHz	AERONAUTICAL MOBILE (R) 5.327A AERONAUTICAL RADIONAVIGATION 5.328 5.328AA	Aer Nav equipment primary.	Aeronautical surveillance: SSR: RIR0103-05, RIR0103-06 Aeronautical navigation: RIR0102-03 UWB Applications, Annex 1	1087.7 - 1092.3 MHz is used for space station reception of ADS-B emissions from aircraft transmitters (GFT).
1'164 - 1'215 MHz	AERONAUTICAL RADIONAVIGATION 5.328 RADIONAVIGATION-SATELLITE (space-to-Earth) (space-to-space) 5.328B 5.328A	Aer Nav equipment primary. RNSS primary.	Aeronautical navigation: RIR0102-03 GNSS Repeaters: RIR0809-01, ECC/REC/(10)02 UWB Applications, Annex 1	

Frequency Band	Liechtenstein Allocations			
	National Allocation	Main Use	Notes	Strategy
1'215 - 1'240 MHz	RADIONAVIGATION 5.331 RADIOLOCATION RADIONAVIGATION-SATELLITE (space-to-Earth) (space-to-space) 5.328B 5.329 5.329A EARTH EXPLORATION-SATELLITE (active) SPACE RESEARCH (active) 5.332	RNSS primary.	GNSS Repeaters: RIR0809-01, ECC/REC/(10)02 UWB Applications, Annex 1	
1'240 - 1'260 MHz	RADIONAVIGATION 5.331 RADIOLOCATION RADIONAVIGATION-SATELLITE (space-to-Earth) (space-to-space) 5.328B 5.329 5.329A EARTH EXPLORATION-SATELLITE (active) SPACE RESEARCH (active) Amateur 5.332	RNSS primary. Amateur secondary.	GNSS Repeaters: RIR0809-01, ECC/REC/(10)02 Amateur: RIR1101-14 UWB Applications, Annex 1	
1'260 - 1'270 MHz	RADIONAVIGATION 5.331 RADIOLOCATION RADIONAVIGATION-SATELLITE (space-to-Earth) (space-to-space) 5.328B 5.329 5.329A EARTH EXPLORATION-SATELLITE (active) SPACE RESEARCH (active) Amateur Amateur-satellite 5.282 5.335A	RNSS primary. Amateur secondary. Amateur Satellite secondary.	GNSS Repeaters: RIR0809-01, ECC/REC/(10)02 Amateur: RIR1101-14 UWB Applications, Annex 1	
1'270 - 1'300 MHz	RADIONAVIGATION 5.331 RADIOLOCATION RADIONAVIGATION-SATELLITE (space-to-Earth) (space-to-space) 5.328B 5.329 5.329A EARTH EXPLORATION-SATELLITE (active) SPACE RESEARCH (active) Amateur 5.282 5.335A	RNSS primary. Amateur secondary.	GNSS Repeaters: RIR0809-01, ECC/REC/(10)02 1270-1295 MHz: Wind profilers RIR0705-01 Resolution 217. Amateur: RIR1101-14 UWB Applications, Annex 1	Wind profiler radars to have due regard to minimising interference to other services, dependent on the status of those services.

Frequency Band	Liechtenstein Allocations			
	National Allocation	Main Use	Notes	Strategy
1'300 - 1'350 MHz	AERONAUTICAL RADIONAVIGATION 5.337 RADIOLOCATION RADIONAVIGATION-SATELLITE (Earth-to-space) 5.149 5.337A	Aeronautical radionavigation primary Radiolocation secondary	Aeronautical surveillance: Primary radar: RIR0103-01 UWB Applications, Annex 1	
1'350 - 1'375 MHz	FIXED MOBILE RADIOLOCATION 5.149 5.338A 5.339		Protection of EESS according to ECC/DEC/(11)01. Short range devices: Radio microphones indoor: RIR1009-20, ERC/REC 70-03 UWB Applications, Annex 1	Protection of EESS according to ECC/DEC/(11)01.
1'375 - 1'389.5 MHz			Protection of EESS according to ECC/DEC/(11)01. Short range devices: Radio microphones indoor: RIR1009-20, UWB Applications, Annex 1	
1'389.5 - 1'400 MHz			Protection of EESS according to ECC/DEC/(11)01. Short range devices: Radio microphones indoor: RIR1009-20, ERC/REC 70-03 UWB Applications, Annex 1	
1'400 - 1'427 MHz	EARTH EXPLORATION-SATELLITE (passive) RADIO ASTRONOMY SPACE RESEARCH (passive) 5.340 5.341	All emissions are prohibited.	UWB Applications, Annex 1	Protection of EESS according to ECC/DEC/(11)01.

Frequency Band	Liechtenstein Allocations			
	National Allocation	Main Use	Notes	Strategy
1'427 - 1'429 MHz	SPACE OPERATION (Earth-to-space) FIXED MOBILE except aeronautical mobile 5.341A 5.338A 5.341	1427 - 1518 MHz SDL: MFCN primary.	1427 - 1452 MHz: MFCN SDL: RIR0501-31, ECC/DEC/(17)06, EC Decision (EU) 2018/661 amending Decision (EU) 2015/750 Protection of EESS according to ECC/DEC/(11)01. UWB Applications, Annex 1	
1'429 - 1'452 MHz	FIXED MOBILE except aeronautical mobile 5.341A 5.338A 5.341	1427 - 1518 MHz SDL: MFCN primary.	1427 - 1452 MHz: MFCN SDL: RIR0501-31, ECC/DEC/(17)06, EC Decision (EU) 2018/661 amending Decision (EU) 2015/750 Protection of EESS according to ECC/DEC/(11)01. UWB Applications, Annex 1	
1'452 - 1'492 MHz	BROADCASTING BROADCASTING-SATELLITE 5.208B Fixed MOBILE except aeronautical mobile 5.341 5.345	1427 - 1518 MHz SDL: MFCN primary.	MFCN SDL: RIR0501-24, ECC/REC/(15)01, ECC/DEC/(13)03, EC Decision (EU) 2015/750, EC Decision (EU) 2018/661 amending Decision (EU) 2015/750 UWB Applications, Annex 1	1452.0-1479.5 MHz: according to Wiesbaden 1995 / revised Maastricht 2002 special agreement / revised in Constanta in 2007.
1'492 - 1'518 MHz	FIXED MOBILE except aeronautical mobile 5.341A 5.341	1427 - 1518 MHz SDL: MFCN primary.	MFCN SDL: RIR0501-31, ECC/DEC/(17)06, EC Decision (EU) 2018/661 amending Decision (EU) 2015/750 UWB Applications, Annex 1	

Frequency Band	Liechtenstein Allocations			
	National Allocation	Main Use	Notes	Strategy
1'518 - 1'525 MHz	FIXED MOBILE except aeronautical mobile MOBILE-SATELLITE (space-to-Earth) 5.348 5.348A 5.348B 5.351A 5.341	Fixed primary. MSS (S/E) secondary.	Fixed: Point-to-Point unidirectional analogue links: RIR0302-03, T/R 13-01 Downlinks (S/E) in the MSS: For corresponding uplink transmitter frequencies see: Land Mobile Earth Stations (LMESs): RIR0808-17, S-PCS: RIR0808-07, ECC/DEC/(04)09 UWB Applications, Annex 1	1518 - 1525 MHz: Radiomicrophones according ERC/REC 70-03 Annex 10 restricted to indoor use under study.
1'525 - 1'530 MHz	SPACE OPERATION (space-to-Earth) FIXED MOBILE-SATELLITE (space-to-Earth) 5.351A 5.208B 5.341 5.351 5.354	MSS primary.	Harmonised frequencies: Annex4 MSS Earth stations: Downlinks (S/E) in the MSS: For corresponding uplink transmitter frequencies see: RIR0808-02, Land Mobile Earth Stations (LMESs): RIR0808-17, S-PCS: RIR0808-07, Maritime GMDSS INMARSAT: RIR0601-06 UWB Applications, Annex 1	Possible expansion of MSS. No new fixed link assignments in this band.
1'530 - 1'533 MHz	SPACE OPERATION (space-to-Earth) MOBILE-SATELLITE (space-to-Earth) 5.351A 5.353A 5.208B Earth exploration-satellite Fixed Mobile except aeronautical mobile 5.341 5.351 5.354	MSS primary.	Harmonised frequencies: Annex4 MSS Earth stations: Downlinks (S/E) in the MSS: For corresponding uplink transmitter frequencies see: RIR0808-02, Land Mobile Earth Stations (LMESs): RIR0808-17, S-PCS: RIR0808-07, Maritime GMDSS INMARSAT: RIR0601-06 UWB Applications, Annex 1	Priority to GMDSS (space-to Earth) Distress and safety communications.

Frequency Band	Liechtenstein Allocations			
	National Allocation	Main Use	Notes	Strategy
1'533 - 1'535 MHz	SPACE OPERATION (space-to-Earth) MOBILE-SATELLITE (space-to-Earth) 5.351A 5.353A 5.208B Earth exploration-satellite Mobile except aeronautical mobile 5.341 5.351 5.354	MSS primary.	Harmonised frequencies: Annex4 MSS Earth stations: Downlinks (S/E) in the MSS: For corresponding uplink transmitter frequencies see: RIR0808-02, Land Mobile Earth Stations (LMESs): RIR0808-17, S-PCS: RIR0808-07, Maritime GMDSS INMARSAT: RIR0601-06 UWB Applications, Annex 1	Priority to GMDSS (space-to Earth) Distress and safety communications.
1'535 - 1'544 MHz	MOBILE-SATELLITE (space-to-Earth) 5.208B 5.351A 5.341 5.351 5.353A 5.354	MSS primary.	Harmonised frequencies: Annex4 MSS Earth stations: Downlinks (S/E) in the MSS: For corresponding uplink transmitter frequencies see: RIR0808-02, Land Mobile Earth Stations (LMESs): RIR0808-17, S-PCS: RIR0808-07, Maritime GMDSS INMARSAT: RIR0601-06 UWB Applications, Annex 1	Priority to GMDSS (space-to Earth) Distress and safety communications.
1'544 - 1'545 MHz	MOBILE-SATELLITE (space-to-Earth) 5.208B 5.351A 5.341 5.354 5.356	MSS primary for distress and safety communications.	COSPAS-SARSAT Downlinks (S/E) in the MSS: For corresponding uplink transmitter frequencies see: Maritime GMDSS INMARSAT: RIR0601-06 SAR-Downlink (GALILEO, L6 band) UWB Applications, Annex 1	

Frequency Band	Liechtenstein Allocations			
	National Allocation	Main Use	Notes	Strategy
1'545 - 1'555 MHz	MOBILE-SATELLITE (space-to-Earth) 5.208B 5.351A 5.341 5.351 5.354 5.357 5.357A	MSS primary.	MSS Earth stations Downlinks (S/E) in the MSS: For corresponding uplink transmitter frequencies see: RIR0808-02, Land Mobile Earth Stations (LMESs): RIR0808-17, S-PCS: RIR0808-07, UWB Applications, Annex 1	Priority to AMS(R)S
1'555 - 1'559 MHz	MOBILE-SATELLITE (space-to-Earth) 5.208B 5.351A 5.341 5.351 5.354	MSS primary.	Harmonised frequencies: Annex4 MSS Earth stations: Downlinks (S/E) in the MSS: For corresponding uplink transmitter frequencies see: RIR0808-02, Land Mobile Earth Stations (LMESs): RIR0808-17, S-PCS: RIR0808-07, UWB Applications, Annex 1	
1'559 - 1'610 MHz	AERONAUTICAL RADIONAVIGATION RADIONAVIGATION-SATELLITE (space-to-Earth) (space-to-space) 5.208B 5.328B 5.329A 5.341	RNSS primary.	GNSS Repeaters: RIR0809-01, ECC/REC/(10)02 UWB Applications, Annex 1	
1'610 - 1'610.6 MHz	AERONAUTICAL RADIONAVIGATION MOBILE-SATELLITE (Earth-to-space) 5.351A 5.341 5.364 5.366 5.367 5.368 5.371 5.372	MSS primary.	Harmonised frequencies: Annex4 MSS Earth stations: S-PCS: RIR0808-05, ECC/DEC/(09)02, AES: RIR0808-20 UWB Applications, Annex 1	

Frequency Band	Liechtenstein Allocations			
	National Allocation	Main Use	Notes	Strategy
1'610.6 - 1'613.8 MHz	AERONAUTICAL RADIONAVIGATION MOBILE-SATELLITE (Earth-to-space) 5.351A RADIO ASTRONOMY 5.149 5.341 5.364 5.366 5.367 5.368 5.371 5.372	MSS primary.	Harmonised frequencies: Annex4 MSS Earth stations: S-PCS: RIR0808-05, ECC/DEC/(09)02 AES: RIR0808-20 UWB Applications, Annex 1	
1'613.8 - 1'621.35 MHz	AERONAUTICAL RADIONAVIGATION MOBILE-SATELLITE (Earth-to-space) 5.351A Mobile-satellite (space-to-Earth) 5.208B 5.341 5.364 5.365 5.366 5.367 5.368 5.371 5.372	MSS primary.	Harmonised frequencies: Annex4 MSS Earth stations: S-PCS: RIR0808-05, ECC/DEC/(09)02 AES: RIR0808-20 Non-voice transmit-only mobile satellite terminals: RIR0808-08, ECC/DEC/(09)04 UWB Applications, Annex 1	
1'621.35 - 1'626.5 MHz	AERONAUTICAL RADIONAVIGATION MOBILE-SATELLITE (Earth-to-space) 5.351A MARITIME MOBILE-SATELLITE (space-to-Earth) 5.373 5.373A Mobile-satellite (space-to-Earth) 5.208B 5.341 5.364 5.365 5.366 5.367 5.368 5.371 5.372			
1'626.5 - 1'631.5 MHz	MOBILE-SATELLITE (Earth-to-space) 5.351A 5.341 5.351 5.353A 5.354	MSS primary.	Harmonised frequencies: Annex4 MSS Earth stations: RIR0808-02, Land Mobile Earth Stations (LMESs): RIR0808-17, S-PCS: RIR0808-07, AES: RIR0808-20, Maritime Mobile Earth Stations (MMES): RIR0808-21 Maritime GMDSS INMARSAT: RIR0601-06 UWB Applications, Annex 1	MSS: Priority to GMDSS (Earth-to-Space) Distress and safety communications.

Frequency Band	Liechtenstein Allocations			
	National Allocation	Main Use	Notes	Strategy
1'631.5 - 1'636.5 MHz	MOBILE-SATELLITE (Earth-to-space) 5.351A 5.341 5.351 5.353A 5.354 5.374	MSS primary.	Harmonised frequencies: Annex4 MSS Earth stations: RIR0808-02, Land Mobile Earth Stations (LMESs): RIR0808-17, S-PCS: RIR0808-07, AES: RIR0808-20, Maritime Mobile Earth Stations (MMES): RIR0808-21 Maritime GMDSS INMARSAT: RIR0601-06 UWB Applications, Annex 1	MSS: Priority to GMDSS (Earth-to-Space) Distress and safety communications.
1'636.5 - 1'645.5 MHz	MOBILE-SATELLITE (Earth-to-space) 5.351A 5.341 5.351 5.353A 5.354	MSS primary.	Harmonised frequencies: Annex4 MSS Earth stations: RIR0808-02, Land Mobile Earth Stations (LMESs): RIR0808-17, S-PCS: RIR0808-07, AES: RIR0808-20, Maritime Mobile Earth Stations (MMES): RIR0808-21 Maritime GMDSS INMARSAT: RIR0601-06 UWB Applications, Annex 1	MSS: Priority to GMDSS (Earth-to-Space) Distress and safety communications.
1'645.5 - 1'646.5 MHz	MOBILE-SATELLITE (Earth-to-space) 5.341 5.354 5.375	MSS primary.	UWB Applications, Annex 1	

Frequency Band	Liechtenstein Allocations			
	National Allocation	Main Use	Notes	Strategy
1'646.5 - 1'656.5 MHz	MOBILE-SATELLITE (Earth-to-space) 5.351A 5.341 5.351 5.354 5.357A 5.376	MSS primary.	MSS Earth stations: RIR0808-02, Land Mobile Earth Stations (LMESs): RIR0808-17, S-PCS: RIR0808-07 AES: RIR0808-20, Maritime Mobile Earth Stations (MMES): RIR0808-21 UWB Applications, Annex 1	MSS: Priority to AMS(R)S.
1'656.5 - 1'660 MHz	MOBILE-SATELLITE (Earth-to-space) 5.351A 5.341 5.351 5.354 5.374	MSS primary.	Harmonised frequencies: Annex4 MSS Earth stations: RIR0808-02, Land Mobile Earth Stations (LMESs): RIR0808-17, S-PCS: RIR0808-07, AES: RIR0808-20, Maritime Mobile Earth Stations (MMES): RIR0808-21 UWB Applications, Annex 1	
1'660 - 1'660.5 MHz	MOBILE-SATELLITE (Earth-to-space) 5.351A RADIO ASTRONOMY 5.149 5.341 5.351 5.354 5.376A	MSS primary.	MSS Earth stations: RIR0808-02, Land Mobile Earth Stations (LMESs): RIR0808-17, S-PCS: RIR0808-07, AES: RIR0808-20, Maritime Mobile Earth Stations (MMES): RIR0808-21 UWB Applications, Annex 1	Protection of radio astronomy service from undue interference from Mobile Satellite service.
1'660.5 - 1'668 MHz	RADIO ASTRONOMY SPACE RESEARCH (passive) Fixed Mobile except aeronautical mobile 5.149 5.341 5.379A		UWB Applications, Annex 1	Protection of radio astronomy service should be ensured.

Frequency Band	Liechtenstein Allocations			
	National Allocation	Main Use	Notes	Strategy
1'668 - 1'668.4 MHz	MOBILE-SATELLITE (Earth-to-space) 5.351A 5.379B 5.379C RADIO ASTRONOMY SPACE RESEARCH (passive) Fixed Mobile except aeronautical mobile 5.379D 5.149 5.341 5.379A		UWB Applications, Annex 1	Protection of radio astronomy service should be ensured.
1'668.4 - 1'670 MHz	FIXED METEOROLOGICAL AIDS MOBILE-SATELLITE (Earth-to-space) 5.351A 5.379B 5.379C RADIO ASTRONOMY Mobile except aeronautical mobile 5.149 5.341 5.379D 5.379E		UWB Applications, Annex 1	Protection of radio astronomy service should be ensured.
1'670 - 1'675 MHz	METEOROLOGICAL AIDS METEOROLOGICAL-SATELLITE (space-to-Earth) MOBILE MOBILE-SATELLITE (Earth-to-space) 5.351A 5.379B Fixed 5.341 5.379D 5.379E 5.380A	Meteorological satellite primary. Mobile primary. MSS (E/S).	MSS Earth stations: RIR0808-02, Land Mobile Earth Stations (LMESs): RIR0808-17, S-PCS: RIR0808-07, AES: RIR0808-20, ECC/DEC/(04)09 Maritime Mobile Earth Stations (MMES): RIR0808-21 UWB Applications, Annex 1	
1'675 - 1'690 MHz	METEOROLOGICAL AIDS FIXED METEOROLOGICAL-SATELLITE (space-to-Earth) MOBILE except aeronautical mobile 5.341	Meteorological aids / Meteorological satellite primary.	1675 - 1683 MHz: Meteorology: Sondes: RIR0702-03, RIR0702-04 UWB Applications, Annex 1	
1'690 - 1'700 MHz	METEOROLOGICAL AIDS METEOROLOGICAL-SATELLITE (space-to-Earth) Fixed Mobile except aeronautical mobile 5.289 5.341	Meteorological aids / Meteorological satellite primary.	UWB Applications, Annex 1	

Frequency Band	Liechtenstein Allocations			
	National Allocation	Main Use	Notes	Strategy
1'700 - 1'710 MHz	FIXED METEOROLOGICAL-SATELLITE (space-to-Earth) Mobile except aeronautical mobile 5.289 5.341		UWB Applications, Annex 1	
1'710 - 1'785 MHz	MOBILE 5.384A 5.149 5.341 5.385	1710 - 1785 MHz / 1805 - 1880 MHz: MFCN primary.	1710-1785 MHz (UL) paired with 1805-1880 MHz: Harmonised frequencies: Annex4 GSM: RIR0501-02, GSM-Repeater: RIR0501-06, ERC/DEC/(95)03, ECC/REC/(05)08, ECC/DEC/(06)07, EC Decision 2010/166/EU on MCV, IMT: RIR0501-21, ECC/DEC/(06)13, ECC/REC/(08)02, EC Decision (EU) 2017/191 amending Decision 2010/166/EU on MCV. EC Decision (EU) 2022/173 on 900 and 1800 MHz MFCN UWB Applications, Annex 1	Continued intensive use for digital cellular networks (GSM and IMT systems) in the FDD mode.
1'785 - 1'800 MHz	MOBILE 5.384A	Mobile primary.	Short range devices: 1785-1800 MHz: Radio microphones: RIR1009-09, 1795-1800 MHz: Wireless audio/multimedia applications: RIR1013-18, ERC/REC 70-03 EC Decision 2014/641/EU UWB Applications, Annex 1	This band is identified for IMT in the RRs (5.384A), but within CEPT this band is not planned for the harmonised introduction of IMT.

Frequency Band	Liechtenstein Allocations			
	National Allocation	Main Use	Notes	Strategy
1'800 - 1'805 MHz	MOBILE 5.384A	Mobile primary.	1800 - 1804.8 MHz: Short range devices: Radio microphones: RIR1009-09, ERC/REC 70-03 EC Decision 2014/641/EU UWB Applications, Annex 1	This band is identified for IMT in the RRs (5.384A), but within CEPT this band is not planned for the harmonised introduction of IMT.
1'805 - 1'880 MHz	MOBILE 5.384A	1805 - 1880 MHz / 1710 - 1785 MHz: MFCN primary.	1805-1880 MHz (DL) paired with 1710-1785 MHz: Harmonised frequencies: Annex4 GSM: RIR0501-04, GSM onboard vessels: RIR0501-15, EC Decision 2010/166/EU on MCS on board Vessels, GSM-Repeater: RIR0501-06, Airborne GSM/LTE: RIR0501-10, EC Decision 2008/294/EC, MCA services, EC Decision (EU) 2016/2317 amending Decision 2008/294/EC, MCA services, ERC/DEC/(95)03, ECC/REC/(05)08, ECC/DEC/(06)07, IMT: RIR0501-22, ECC/DEC/(06)13, ECC/REC/(08)02, EC Decision (EU) 2022/173 on 900 and 1800 MHz MFCN EC Decision (EU) 2017/191 amending Decision 2010/166/EU on MCV. UWB Applications, Annex 1	Continued intensive use for digital cellular networks (GSM and IMT systems) in the FDD mode.
1'880 - 1'885 MHz	MOBILE 5.384A	Mobile primary.	**Will be continued...**	Continued intensive use of DECT frequencies.

Frequency Band	Liechtenstein Allocations			
	National Allocation	Main Use	Notes	Strategy
1'885 - 1'900 MHz	MOBILE 5.388A 5.388	Mobile primary.	**Continuation...** Harmonised frequencies: Annex4 DECT: RIR0503-01, ERC/DEC/(94)03 UWB Applications, Annex 1	
1'900 - 1'980 MHz	MOBILE 5.388A 5.388	1900 - 1910 MHz: RMR 1920 - 1980 MHz / 2110 - 2170 MHz: MFCN primary.	1900 - 1910 MHz: RMR: RIR0501-32, ECC/DEC/(20)02 EC Decision (EU) 2021/1730 on RMR 1920 - 1980 MHz paired with 2110 - 2170 MHz: MFCN including terrestrial IMT (FDD Uplink): FDD- Terminal: RIR0501-07, Repeater: RIR0501-09, ECC/DEC/(06)01, ERC/REC 01-01, EC Decision 2012/688/EU on 2 GHz ECS, EC Decision (EU) 2020/667 amending Decision 2012/688/EU UWB Applications, Annex 1	1910 - 1920 MHz: Under study in CEPT. 1920 - 1980 MHz: continued intensive use for digital cellular public mobile networks (IMT systems) in the FDD mode.

Frequency Band	Liechtenstein Allocations			
	National Allocation	Main Use	Notes	Strategy
1'980 - 2'010 MHz	MOBILE MOBILE-SATELLITE (Earth-to-space) 5.351A 5.388 5.389A	MSS primary. PMSE secondary.	Harmonised frequencies: Annex4 MSS Earth stations: IMT-2000 Sat component: RIR0808-10, MSS including Complementary Ground Component (CGC): ECC/DEC/(06)09, ECC/DEC/(06)10, EC Decision 2007/98/EC on 2 GHz MSS, Aeronautical CGC: RIR0808-18 AES: RIR0808-20 PMSE: Cordless cameras indoor: RIR0203-11 UWB Applications, Annex 1	PMSE for indoor use only.
2'010 - 2'025 MHz	MOBILE 5.388A 5.388	PMSE.	PMSE: Cordless cameras: RIR0203-11, ERC/REC 25-10 EC Decision 2016/339 on PMSE 2010-2025 MHz UWB Applications, Annex 1	
2'025 - 2'110 MHz	FIXED MOBILE 5.391 SPACE RESEARCH (Earth-to-space) (space-to-space) SPACE OPERATION (Earth-to-space) (space-to-space) EARTH EXPLORATION-SATELLITE (Earth-to-space) (space-to-space) 5.392	PMSE.	PMSE: Cordless cameras: RIR0203-11, ERC/REC 25-10, UWB Applications, Annex 1	

Frequency Band	Liechtenstein Allocations			
	National Allocation	Main Use	Notes	Strategy
2'110 - 2'120 MHz	MOBILE 5.388A SPACE RESEARCH (deep space) (Earth-to-space) 5.388	2110 - 2170 MHz / 1920 - 1980 MHz: MFCN primary.	2110 - 2170 MHz paired with 1920 - 1980 MHz: MFCN including terrestrial IMT (FDD Downlink): RIR0501-08, Repeater: RIR0501-09, ECC/DEC/(06)01, ERC/REC 01-01, EC Decision 2012/688/EU on 2 GHz ECS, EC Decision (EU) 2020/667 amending Decision 2012/688/EU Airborne UMTS: RIR0501-10, ECC/DEC/(06)07 EC Decision (EU) 2016/2317 amending Decision 2008/294/EC, MCA services, UWB Applications, Annex 1	2110 - 2170 MHz: continued intensive use for digital cellular public mobile networks (IMT systems) in the FDD mode.
2'120 - 2'170 MHz	FIXED MOBILE 5.388A 5.388	2110 - 2170 MHz / 1920 - 1980 MHz: MFCN primary.	2110 - 2170 MHz paired with 1920 - 1980 MHz: MFCN including terrestrial IMT (FDD Downlink): RIR0501-08, Repeater: RIR0501-09, ECC/DEC/(06)01, ERC/REC 01-01, EC Decision 2012/688/EU on 2 GHz ECS, EC Decision (EU) 2020/667 amending Decision 2012/688/EU Airborne UMTS: RIR0501-10, ECC/DEC/(06)07 EC Decision (EU) 2016/2317 amending Decision 2008/294/EC, MCA services, UWB Applications, Annex 1	

Frequency Band	Liechtenstein Allocations			
	National Allocation	Main Use	Notes	Strategy
2'170 - 2'200 MHz	MOBILE MOBILE-SATELLITE (space-to-Earth) 5.351A 5.388 5.389A	MSS primary. PMSE secondary.	Harmonised frequencies: Annex4 IMT-2000 Sat component: Downlinks (S/E) in the MSS. For corresponding uplink transmitter frequencies see: RIR0808-10, MSS including Complementary Ground Component (CGC): ECC/DEC/(06)09, ECC/DEC/(06)10, ECC/REC/(10)01, EC Decision 2007/98/EC on 2 GHz MSS, Ground Station in aeronautical-CGC: RIR0808-19 PMSE: Cordless cameras indoor: RIR0203-11, UWB Applications, Annex 1	PMSE for indoor use only.
2'200 - 2'290 MHz	SPACE OPERATION (space-to-Earth) (space-to-space) EARTH EXPLORATION-SATELLITE (space-to-Earth) (space-to-space) FIXED MOBILE 5.391 SPACE RESEARCH (space-to-Earth) (space-to-space) 5.392	PMSE.	PMSE: Cordless cameras: RIR0203-11, ERC/REC 25-10, UWB Applications, Annex 1	
2'290 - 2'300 MHz	FIXED MOBILE except aeronautical mobile SPACE RESEARCH (deep space) (space-to-Earth)	Mobile primary. PMSE primary.	PMSE: Cordless cameras: RIR0203-11, RIR0203-16, RIR0203-17, RIR0203-18, ERC/REC 25-10 UWB Applications, Annex 1	

Frequency Band	Liechtenstein Allocations			
	National Allocation	Main Use	Notes	Strategy
2'300 - 2'400 MHz	FIXED MOBILE Amateur Radiolocation	Mobile primary. PMSE primary. Amateur secondary.	PMSE: Cordless cameras: RIR0203-11, RIR0203-16, RIR0203-17, RIR0203-18, ERC/REC 25-10 2300 - 2450 MHz: Amateur: RIR1101-15 UWB Applications, Annex 1	
2'400 - 2'450 MHz	FIXED MOBILE Amateur Amateur-satellite 5.150 5.282	SRD primary. Amateur secondary. Amateur-Satellite secondary.	2400-2500 MHz: ISM-Band. 2400-2483.5 MHz: Harmonised frequencies: Annex4 Short range devices: Non-specific SRDs: RIR1008-11, Wideband data transmission systems: RIR1010-01, Radiodetermination applications: RIR1004-01, ERC/REC 70-03 2446-2454 MHz: Short Range Devices: RFID: RIR1011-01, ERC/REC 70-03 2300-2450 MHz: Amateur: RIR1101-15 UWB Applications, Annex 1	

Frequency Band	Liechtenstein Allocations			
	National Allocation	Main Use	Notes	Strategy
2'450 - 2'483.5 MHz	FIXED MOBILE 5.150	SRD primary.	2400-2500 MHz: ISM-Band. 2400-2483.5 MHz: Harmonised frequencies: Annex4 Short Range Devices: Non-specific SRDs: RIR1008-11, Wideband data transmission systems: RIR1010-01, Radiodetermination applications: RIR1004-01, ERC/REC 70-03 2446-2454 MHz: Short Range Devices: RFID: RIR1011-01, ERC/REC 70-03 UWB Applications, Annex 1	
2'483.5 - 2'500 MHz	FIXED MOBILE MOBILE-SATELLITE (space-to-Earth) 5.351A RADIODETERMINATION-SATELLITE (space-to-Earth) 5.398 5.150 5.402	Mobile primary. MSS primary.	2400-2500 MHz: ISM-Band. Harmonised frequencies: Annex4 Downlinks (S/E) in the MSS. For corresponding uplink transmitter frequencies see: RIR0808-05, ECC/DEC/(09)02 Short Range Devices: Active medical implants: LP-AMI: RIR1006-09, ERC/REC/(70)03 Medical Body Area Network Systems MBANS: 1 mW within healthcare facilities: RIR1006-10, 10 mW, within patient's home: RIR1006-11, ERC/REC/(70)03 UWB Applications, Annex 1	

Frequency Band	Liechtenstein Allocations			
	National Allocation	Main Use	Notes	Strategy
2'500 - 2'520 MHz	Fixed MOBILE except aeronautical mobile 5.384A	2500 - 2570 MHz / 2620 - 2690 MHz: MFCN primary.	MFCN (IMT): 2500 - 2570 MHz paired with 2620 - 2690 MHz: User Equipment: RIR0501-11, Repeater: RIR0501-13, ECC/DEC/(05)05, ECC/REC/(11)05, EC Decision 2008/477/EC, EC services, EC Decision (EU) 2020/636 amending Decision 2008/477/EC UWB Applications, Annex 1	2500 - 2690 MHz: continued intensive use for digital cellular networks (IMT systems) in the FDD mode.
2'520 - 2'655 MHz	FIXED MOBILE except aeronautical mobile 5.384A 5.339 5.418B 5.418C	2500 - 2570 MHz / 2620 - 2690 MHz: 2570 - 2620 MHz unpaired: MFCN primary.	MFCN (IMT): 2500 - 2570 MHz paired with 2620 - 2690 MHz: User Equipment: RIR0501-11, Base station: RIR0501-12, Repeater: RIR0501-13, EC Decision 2010/166/EU on MCV, EC Decision (EU) 2017/191 amending Decision 2010/166/EU 2570 - 2620 MHz unpaired: RIR0501-25, ECC/DEC/(05)05, ECC/REC/(11)05, EC Decision 2008/477/EC, EC services, EC Decision (EU) 2020/636 amending Decision 2008/477/EC UWB Applications, Annex 1	
2'655 - 2'670 MHz	FIXED MOBILE except aeronautical mobile 5.384A Earth exploration-satellite (passive) Radio astronomy Space research (passive) 5.149 5.208B	2620 - 2690 MHz / 2500 - 2570 MHz: MFCN primary.		

Frequency Band	Liechtenstein Allocations			
	National Allocation	Main Use	Notes	Strategy
2'670 - 2'690 MHz	Fixed MOBILE except aeronautical mobile 5.384A Radio astronomy 5.149	2620 - 2690 MHz / 2500 - 2570 MHz: MFCN primary.	MFCN (IMT): 2500 - 2570 MHz paired with 2620 - 2690 MHz: Base station: RIR0501-12, Repeater: RIR0501-13, ECC/DEC/(05)05, ECC/REC/(11)05, ERC/REC 01-01, EC Decision 2008/477/EC, EC services, EC Decision (EU) 2020/636 amending Decision 2008/477/EC UWB Applications, Annex 1	
2'690 - 2'700 MHz	EARTH EXPLORATION-SATELLITE (passive) RADIO ASTRONOMY SPACE RESEARCH (passive) 5.340	All emissions are prohibited.	UWB Applications, Annex 1	
2'700 - 2'900 MHz	AERONAUTICAL RADIONAVIGATION 5.337 Radiolocation 5.423	Aeronautical surveillance Primary radar Radiolocation	Aeronautical surveillance: Primary radar: RIR0103-02 UWB Applications, Annex 1	
2'900 - 3'100 MHz	RADIOLOCATION 5.424A RADIONAVIGATION 5.426 5.425 5.427	Radiolocation	Radar UWB Applications, Annex 1	
3'100 - 3'300 MHz	RADIOLOCATION Earth exploration-satellite (active) Space research (active) 5.149	Radiolocation	Radar UWB Applications, Annex 1	
3'300 - 3'400 MHz	RADIOLOCATION 5.149	Radiolocation	Radar UWB Applications, Annex 1	

Frequency Band	Liechtenstein Allocations			
	National Allocation	Main Use	Notes	Strategy
3'400 - 3'410 MHz	FIXED FIXED-SATELLITE (space-to-Earth) MOBILE except aeronautical mobile 5.430A		UWB Applications, Annex 1	
3'410 - 3'500 MHz		MFCN primary.	MFCN: RIR0501-23, ECC/DEC/(11)06, ECC/REC/(21)02, ECC/REC/(15)01. EC Decision 2008/411/EC, EC services, EC Decision 2014/276/EU on amending Decision 2008/411/EC, EC Decision 2019/235/EU on amending Decision 2008/411/EC. UWB Applications, Annex 1	
3'500 - 3'600 MHz	FIXED FIXED-SATELLITE (space-to-Earth) MOBILE except aeronautical mobile 5.430A	MFCN primary.	MFCN: RIR0501-23, ECC/DEC/(11)06, ECC/REC/(21)02, ECC/REC/(20)03, ECC/REC/(15)01. EC Decision 2008/411/EC, EC services, EC Decision 2014/276/EU on amending Decision 2008/411/EC, EC Decision 2019/235/EU on amending Decision 2008/411/EC. UWB Applications, Annex 1	

Frequency Band	Liechtenstein Allocations			
	National Allocation	Main Use	Notes	Strategy
3'600 - 3'800 MHz	FIXED FIXED-SATELLITE (space-to-Earth) MOBILE	MFCN primary. FSS primary.	MFCN: RIR0501-23, ECC/DEC/(11)06, ECC/REC/(21)02, ECC/REC/(20)03, ECC/REC/(15)01. EC Decision 2008/411/EC, EC services, EC Decision 2014/276/EU on amending Decision 2008/411/EC, EC Decision 2019/235/EU on amending Decision 2008/411/EC. Downlinks (S/E) in the FSS. For corresponding uplink transmitter frequencies see: RIR0806-15 UWB Applications, Annex 1	MFCN / FSS: Co-ordination required.
3'800 - 4'200 MHz	FIXED FIXED-SATELLITE (space-to-Earth)	FSS primary. 3800-4200 MHz Fixed primary.	Fixed Point-to-Point: RIR0302-05, ERC/REC 12-08 Downlinks (S/E) in the FSS: For corresponding uplink transmitter frequencies see: RIR0806-15, RIR0805-01, Feeder links GSO UWB Applications, Annex 1	Fixed / FSS: Co-primary use with the terms of sufficient geographical separation.
4'200 - 4'400 MHz	AERONAUTICAL MOBILE (R) 5.436 AERONAUTICAL RADIONAVIGATION 5.438 5.437 5.440	Aeronautical navigation	Aeronautical communications: WAIC Aeronautical navigation: Altimeters RIR0102-09 UWB Applications, Annex 1	Protection of critical safety systems.
4'400 - 4'500 MHz	FIXED MOBILE		UWB Applications, Annex 1	
4'500 - 4'800 MHz	FIXED FIXED-SATELLITE (space-to-Earth) 5.441 MOBILE	FSS primary.		

Frequency Band	Liechtenstein Allocations			
	National Allocation	Main Use	Notes	Strategy
4'800 - 4'990 MHz	FIXED MOBILE except aeronautical mobile Radio astronomy 5.149 5.339			
4'990 - 5'000 MHz	FIXED MOBILE except aeronautical mobile RADIO ASTRONOMY 5.149			
5'000 - 5'010 MHz	AERONAUTICAL MOBILE-SATELLITE (R) 5.443AA AERONAUTICAL RADIONAVIGATION RADIONAVIGATION-SATELLITE (Earth-to-space) Radio astronomy Space research (passive)		5000-5010 MHz (up) / 5010-5030 MHz (down): Possible use by RNSS (e.g. Galileo). UWB Applications, Annex 1	
5'010 - 5'030 MHz	AERONAUTICAL MOBILE-SATELLITE (R) 5.443AA AERONAUTICAL RADIONAVIGATION RADIONAVIGATION-SATELLITE (space-to-Earth) (space-to-space) 5.328B 5.443B Radio astronomy Space research (passive)		5000-5010 MHz (up) / 5010-5030 MHz (down): Possible use by RNSS (e.g. Galileo). UWB Applications, Annex 1	
5'030 - 5'091 MHz	AERONAUTICAL MOBILE (R) 5.443C AERONAUTICAL MOBILE-SATELLITE (R) 5.443D AERONAUTICAL RADIONAVIGATION 5.444		UWB Applications, Annex 1	
5'091 - 5'150 MHz	FIXED-SATELLITE (Earth-to-space) 5.444A AERONAUTICAL MOBILE 5.444B AERONAUTICAL MOBILE-SATELLITE (R) 5.443AA AERONAUTICAL RADIONAVIGATION 5.444	Aeronautical telemetry.	Aeronautical telemetry: RIR0105-01 UWB Applications, Annex 1	Use for Aeronautical telemetry according 5.444B.

Frequency Band	Liechtenstein Allocations			
	National Allocation	Main Use	Notes	Strategy
5'150 - 5'250 MHz	FIXED-SATELLITE (Earth-to-space) 5.447A MOBILE except aeronautical mobile 5.446A 5.446B 5.446 5.446C 5.447B 5.447C	FSS primary. SRD: Wireless Access Systems / Radio Local Area Networks (WAS/RLANs) secondary.	5150 - 5250 MHz: BBDR: RIR0504-03, ECC/REC 08-04 5150 - 5350 MHz: Harmonised frequencies: Annex4 Short range devices: Wide band data transmission systems: RIR1010-05, ECC/DEC/(04)08, EC Decision (EU) 2022/179 on WAS/RLAN UWB Applications, Annex 1	Preferred band for the deployment of BBDR radio applications. Wide band data transmission systems for indoor and limited outdoor use.
5'250 - 5'255 MHz	EARTH EXPLORATION-SATELLITE (active) MOBILE except aeronautical mobile 5.446A 5.447F RADIOLOCATION SPACE RESEARCH 5.447D 5.448A	SRD: Wireless Access Systems / Radio Local Area Networks (WAS/RLANs) secondary.	5250 - 5850 MHz: Meteorology: Weather radar: RIR0703-01 5150 - 5350 MHz: Harmonised frequencies: Annex4 Wide band data transmission systems: RIR1010-05, ECC/DEC/(04)08, EC Decision (EU) 2022/179 on WAS/RLAN UWB Applications, Annex 1	Wide band data transmission systems for indoor use only.
5'255 - 5'350 MHz	EARTH EXPLORATION-SATELLITE (active) MOBILE except aeronautical mobile 5.446A 5.447F RADIOLOCATION SPACE RESEARCH (active) 5.448A	SRD: Wireless Access Systems / Radio Local Area Networks (WAS/RLANs) secondary.	5250 - 5850 MHz: Meteorology: Weather radar: RIR0703-01 5150 - 5350 MHz: Harmonised frequencies: Annex4 Wide band data transmission systems: RIR1010-05, ECC/DEC/(04)08, EC Decision (EU) 2022/179 on WAS/RLAN UWB Applications, Annex 1	Wide band data transmission systems for indoor use only.

Frequency Band	Liechtenstein Allocations			
	National Allocation	Main Use	Notes	Strategy
5'350 - 5'450 MHz	EARTH EXPLORATION-SATELLITE (active) 5.448B RADIOLOCATION 5.448D AERONAUTICAL RADIONAVIGATION 5.449 SPACE RESEARCH (active) 5.448C Fixed	Radiolocation primary.	5250 - 5850 MHz: Meteorology: Weather radar: RIR0703-01 UWB Applications, Annex 1	
5'450 - 5'460 MHz	EARTH EXPLORATION-SATELLITE (active) 5.448B RADIOLOCATION 5.448D AERONAUTICAL RADIONAVIGATION 5.449 SPACE RESEARCH (active) 5.448C	Radiolocation primary.	5250 - 5850 MHz: Meteorology: Weather radar: RIR0703-01 UWB Applications, Annex 1	
5'460 - 5'470 MHz	EARTH EXPLORATION-SATELLITE (active) RADIOLOCATION 5.448D RADIONAVIGATION 5.449 SPACE RESEARCH (active) 5.448B			
5'470 - 5'570 MHz	EARTH EXPLORATION-SATELLITE (active) MOBILE except aeronautical mobile 5.446A 5.450A RADIOLOCATION 5.450B MARITIME RADIONAVIGATION SPACE RESEARCH (active) 5.448B	Wireless Access Systems / Radio Local Area Networks (WAS/RLANs) secondary.	5250 - 5850 MHz: Meteorology: Weather radar: RIR0703-01 5470-5725 MHz: Harmonised frequencies: Annex4 Wide band data transmission systems: RIR1010-04, ECC/DEC/(04)08, EC Decision (EU) 2022/179 on WAS/RLAN UWB Applications, Annex 1	Wide band data transmission systems for indoor and outdoor use.
5'570 - 5'650 MHz	MOBILE except aeronautical mobile 5.446A 5.450A RADIOLOCATION 5.450B MARITIME RADIONAVIGATION 5.452	Wireless Access Systems / Radio Local Area Networks (WAS/RLANs) secondary.	5250 - 5850 MHz: Meteorology: Weather radar: RIR0703-01 5470-5725 MHz: Harmonised frequencies: Annex4 Wide band data transmission systems: RIR1010-04, ECC/DEC/(04)08, EC Decision (EU) 2022/179 on WAS/RLAN UWB Applications, Annex 1	Wide band data transmission systems for indoor and outdoor use. 5600 - 5650 MHz: Preferred band for ground based weather radar in Europe.

Frequency Band	Liechtenstein Allocations			
	National Allocation	Main Use	Notes	Strategy
5'650 - 5'725 MHz	MOBILE except aeronautical mobile 5.446A 5.450A RADIOLOCATION Amateur Amateur-satellite (Earth-to-space) 5.282 ECA17 ECA23	Wireless Access Systems / Radio Local Area Networks (WAS/RLANs) secondary. Amateur secondary. 5650-5670 MHz: Amateur-Satellite secondary.	5250 - 5850 MHz: Meteorology: Weather radar: RIR0703-01 5470-5725 MHz: Harmonised frequencies: Annex4 Wide band data transmission systems: RIR1010-04, ECC/DEC/(04)08, EC Decision (EU) 2022/179 on WAS/RLAN Amateur: RIR1101-16 UWB Applications, Annex 1	Wide band data transmission systems for indoor and outdoor use.

Frequency Band	Liechtenstein Allocations			
	National Allocation	Main Use	Notes	Strategy
5'725 - 5'830 MHz	FIXED-SATELLITE (Earth-to-space) RADIOLOCATION Amateur Mobile Fixed 5.150	5725 - 5795 MHz and 5815 - 5875 MHz: BFWA. SRD. 5795 - 5815 MHz: TTT. Amateur secondary.	5250 - 5850 MHz: Meteorology: Weather radar: RIR0703-01 5725-5875 MHz: ISM-Band, Harmonised frequencies: Annex4 Short range devices: Non-Specific SRDs: RIR1008-12 ERC/REC 70-03 5725 - 5795 MHz and 5815 - 5875 MHz: BFWA: RIR0301-05, ECC/REC 06-04 5795 - 5805 MHz: TTT: RIR1012-01 5805 - 5815 MHz: TTT: RIR1012-06 Amateur: RIR1101-16 UWB Applications, Annex 1	

Frequency Band	Liechtenstein Allocations			
	National Allocation	Main Use	Notes	Strategy
5'830 - 5'850 MHz	FIXED-SATELLITE (Earth-to-space) RADIOLOCATION Amateur Amateur-satellite (space-to-Earth) Mobile Fixed 5.150	BFWA. SRD. Amateur secondary.	5250 - 5850 MHz: Meteorology: Weather radar: RIR0703-01 5725-5875 MHz: ISM-Band, Harmonised frequencies: Annex4 Short range devices: Non-Specific SRDs: RIR1008-12 ERC/REC 70-03 5725 - 5795 MHz and 5815 - 5875 MHz: BFWA: RIR0301-05, ECC/REC 06-04 Amateur: RIR1101-16 UWB Applications, Annex 1	

Frequency Band	Liechtenstein Allocations			
	National Allocation	Main Use	Notes	Strategy
5'850 - 5'925 MHz	FIXED FIXED-SATELLITE (Earth-to-space) MOBILE 5.150	5850 - 5875 MHz BFWA. 5850 - 5875 MHz SRD. FSS primary.	5725 - 5875 MHz: ISM-Band, Harmonised frequencies: Annex4 Short range devices: Non-Specific SRDs: RIR1008-12 ERC/REC 70-03 5725 - 5795 MHz and 5815 - 5875 MHz: BFWA: RIR0301-05, ECC/REC/(06)04 ITS: 5855 - 5875 MHz Non safety applications: ECC/REC/(08)01, RIR0510-02, 5875 - 5925 MHz: Safety applications: RIR0510-01, ECC/DEC/(08)01, EC Decision (EU) 2020/1426 on ITS. 5850 - 6650 MHz: FSS: VSAT: RIR0806-15, Feeder links GSO (E/S): RIR0805-01 UWB Applications, Annex 1	

Frequency Band	Liechtenstein Allocations			
	National Allocation	Main Use	Notes	Strategy
5'925 - 6'425 MHz	FIXED FIXED-SATELLITE (Earth-to-space) 5.457A MOBILE	Fixed primary. FSS primary. SRD: Wireless Access Systems / Radio Local Area Networks (WAS/RLANs) secondary.	5850-6650 MHz: FSS: VSAT: RIR0806-15 Feeder links GSO (E/S): RIR0805-01 5945 - 6425 MHz: Wideband data transmission systems: RIR1010-11, ECC/DEC/(20)01 EC Decision (EU) 2021/1067 on WAS/RLANs. Fixed: RIR0302-06, ERC/REC 14-01 UWB Applications, Annex 1	Fixed / FSS: Co-primary with the terms of sufficient geographical separation.
6'425 - 6'700 MHz	FIXED FIXED-SATELLITE (Earth-to-space) Earth exploration-satellite (passive) MOBILE 5.149 5.440 5.458	Fixed primary. FSS primary.	6425 - 7125 MHz: Fixed: RIR0302-07, ERC/REC 14-02 5850-6650 MHz: FSS: VSAT: RIR0806-15 Feeder links GSO (E/S): RIR0805-01 UWB Applications, Annex 1	Fixed / FSS: Co-primary with the terms of sufficient geographical separation. 6650 - 6675.2 MHz: Radio astronomy according 5.149
6'700 - 7'075 MHz	FIXED FIXED-SATELLITE (Earth-to-space) (space-to-Earth) 5.441 Earth exploration-satellite (passive) 5.458 5.458A 5.458B	Fixed primary. 6725 - 7025 FSS planned.	FSS; Feeder links GSO (E/S): RIR0805-01 6425 - 7125 MHz: Fixed: RIR0302-07, ERC/REC 14-02 UWB Applications, Annex 1	Fixed / FSS: Co-primary with the terms of sufficient geographical separation.

Frequency Band	Liechtenstein Allocations			
	National Allocation	Main Use	Notes	Strategy
7'075 - 7'145 MHz	FIXED Earth exploration-satellite (passive) 5.458	Fixed primary.	6425 - 7125 MHz: Fixed: RIR0302-07, ERC/REC 14-02 UWB Applications, Annex 1	
7'145 - 7'190 MHz	FIXED MOBILE SPACE RESEARCH (deep space) (Earth-to-space) 5.460 Space operation (Earth-to-space) 5.458	Fixed primary.	UWB Applications, Annex 1	
7'190 - 7'235 MHz	EARTH EXPLORATION-SATELLITE (Earth-to-space) 5.460A 5.460B FIXED MOBILE SPACE RESEARCH (Earth-to-space) 5.460 5.458			
7'235 - 7'250 MHz	EARTH EXPLORATION-SATELLITE (Earth-to-space) 5.460A FIXED MOBILE 5.458	Fixed primary.	UWB Applications, Annex 1	
7'250 - 7'300 MHz	FIXED FIXED-SATELLITE (space-to-Earth) MOBILE 5.461	Fixed primary.	UWB Applications, Annex 1	
7'300 - 7'375 MHz	FIXED FIXED-SATELLITE (space-to-Earth) MOBILE except aeronautical mobile 5.461	Fixed primary.	UWB Applications, Annex 1	
7'375 - 7'450 MHz	FIXED FIXED-SATELLITE (space-to-Earth) MOBILE except aeronautical mobile MARITIME MOBILE-SATELLITE (space-to-Earth) 5.461AA 5.461AB			

Frequency Band	Liechtenstein Allocations			
	National Allocation	Main Use	Notes	Strategy
7'450 - 7'550 MHz	FIXED FIXED-SATELLITE (space-to-Earth) METEOROLOGICAL-SATELLITE (space-to-Earth) MOBILE except aeronautical mobile MARITIME MOBILE-SATELLITE (space-to-Earth) 5.461AA 5.461AB 5.461A	Fixed primary.	UWB Applications, Annex 1	
7'550 - 7'750 MHz	FIXED FIXED-SATELLITE (space-to-Earth) MOBILE except aeronautical mobile MARITIME MOBILE-SATELLITE (space-to-Earth) 5.461AA 5.461AB	Fixed primary.	UWB Applications, Annex 1	
7'750 - 7'900 MHz	FIXED METEOROLOGICAL-SATELLITE (space-to-Earth) 5.461B MOBILE except aeronautical mobile		UWB Applications, Annex 1	
7'900 - 8'025 MHz	FIXED FIXED-SATELLITE (Earth-to-space) MOBILE 5.461		UWB Applications, Annex 1	
8'025 - 8'175 MHz	EARTH EXPLORATION-SATELLITE (space-to-Earth) FIXED FIXED-SATELLITE (Earth-to-space) MOBILE 5.463 5.462A		UWB Applications, Annex 1	
8'175 - 8'215 MHz	EARTH EXPLORATION-SATELLITE (space-to-Earth) FIXED FIXED-SATELLITE (Earth-to-space) METEOROLOGICAL-SATELLITE (Earth-to-space) MOBILE 5.463 5.462A		UWB Applications, Annex 1	

Frequency Band	Liechtenstein Allocations			
	National Allocation	Main Use	Notes	Strategy
8'215 - 8'400 MHz	EARTH EXPLORATION-SATELLITE (space-to-Earth) FIXED FIXED-SATELLITE (Earth-to-space) 5.462A 5.463		UWB Applications, Annex 1	
8'400 - 8'500 MHz	FIXED SPACE RESEARCH (space-to-Earth) 5.465 Radiolocation		UWB Applications, Annex 1	
8'500 - 8'550 MHz	RADIOLOCATION 5.469	Radiolocation primary.	UWB Applications, Annex 1	
8'550 - 8'650 MHz	EARTH EXPLORATION-SATELLITE (active) RADIOLOCATION SPACE RESEARCH (active) 5.469 5.469A	Radiolocation primary.		
8'650 - 8'750 MHz	RADIOLOCATION 5.469	Radiolocation primary.		
8'750 - 8'850 MHz	RADIOLOCATION AERONAUTICAL RADIONAVIGATION 5.470 Space research	Radiolocation primary.	UWB Applications, Annex 1	
8'850 - 9'000 MHz	RADIOLOCATION MARITIME RADIONAVIGATION 5.472 Space research 5.473	Radiolocation primary.		
9'000 - 9'200 MHz	RADIOLOCATION AERONAUTICAL RADIONAVIGATION 5.337 Space research 5.471 5.473A	Aeronautical surveillance Primary radar	Aeronautical surveillance: Primary radar: RIR0103-03 ASDE: RIR0103-07. UWB Applications, Annex 1	

Frequency Band	Liechtenstein Allocations			
	National Allocation	Main Use	Notes	Strategy
9'200 - 9'300 MHz	EARTH EXPLORATION-SATELLITE (active) 5.474A 5.474B 5.474C RADIOLOCATION MARITIME RADIONAVIGATION 5.472 Space research 5.473 5.474 5.474D	Radiodetermination applications primary. Short Range Devices secondary.	Aeronautical surveillance: ASDE: RIR0103-07. 9200 - 9500 MHz: Short Range Devices: Radiodetermination applications: RIR1004-02, ERC/REC 70-03 UWB Applications, Annex 1	
9'300 - 9'500 MHz	EARTH EXPLORATION-SATELLITE (active) RADIOLOCATION RADIONAVIGATION 5.475 SPACE RESEARCH (active) 5.427 5.474 5.475A 5.475B 5.476A	Radiodetermination applications primary. Short Range Devices secondary.	Maritime and Inland waterways radars: RIR0604-01 RIR0604-02 RIR0604-03 RIR0604-04 Airborne weather radar: RIR0102-08 Radiolocation: Bird migration radar: RIR1108-05 9200 - 9500 MHz: Short Range Devices: Radiodetermination applications: RIR1004-02, ERC/REC 70-03 UWB Applications, Annex 1 Aeronautical surveillance: ASDE: RIR0103-07.	
9'500 - 9'800 MHz	EARTH EXPLORATION-SATELLITE (active) RADIOLOCATION SPACE RESEARCH (active) 5.476A	Radiodetermination applications primary. Short Range Devices secondary.	9500 - 9975 MHz: Short Range Devices: Radiodetermination applications: RIR1004-03, ERC/REC 70-03 UWB Applications, Annex 1	

Frequency Band	Liechtenstein Allocations			
	National Allocation	Main Use	Notes	Strategy
9'800 - 9'900 MHz	RADIOLOCATION Earth exploration-satellite (active) Space research (active) 5.478A 5.478B	Radiodetermination applications primary. Short Range Devices secondary.	9500 - 9975 MHz: Short Range Devices: Radiodetermination applications: RIR1004-03, ERC/REC 70-03 UWB Applications, Annex 1	
9'900 - 10'000 MHz	EARTH EXPLORATION-SATELLITE (active) 5.474A 5.474B 5.474C RADIOLOCATION 5.474D 5.479	Radiodetermination applications primary. Short Range Devices secondary.	9500 - 9975 MHz: Short Range Devices: Radiodetermination applications: RIR1004-03, ERC/REC 70-03 UWB Applications, Annex 1	
10 - 10.15 GHz	EARTH EXPLORATION-SATELLITE (active) 5.474A 5.474B 5.474C FIXED MOBILE RADIOLOCATION Amateur 5.474D 5.479	Mobile primary. Fixed primary. Radiolocation primary. Amateur secondary.	10.00-10.68 GHz: PMSE: RIR0203-12, RIR0203-51, ERC/REC 25-10 Radiolocation: Long range radar (LRR, Puls): RIR1108-03 Medium range radar (MRR, FM/CW) RIR1108-06 Short range radar (SRR): RIR1108-04 Amateur: RIR1101-17 UWB Applications, Annex 1	Preferred band for PMSE (Cordless cameras and video links) and specific radar applications (landslide monitoring and avalanche detection).

Frequency Band	Liechtenstein Allocations			
	National Allocation	Main Use	Notes	Strategy
10.15 - 10.3 GHz	EARTH EXPLORATION-SATELLITE (active) 5.474A 5.474B 5.474C FIXED MOBILE RADIOLOCATION Amateur 5.474D 5.479	Fixed primary. Amateur secondary.	10.15-10.30 GHz paired with 10.50-10.65 GHz: Fixed: RIR0302-11, ERC/REC 12-05 10.00-10.68 GHz: PMSE: RIR0203-12, RIR0203-51 Amateur: RIR1101-17 UWB Applications, Annex 1	
10.3 - 10.4 GHz	EARTH EXPLORATION-SATELLITE (active) 5.474A 5.474B 5.474C FIXED MOBILE RADIOLOCATION Amateur 5.474D 5.479			
10.4 - 10.45 GHz	FIXED RADIOLOCATION Amateur Mobile			
10.45 - 10.5 GHz	FIXED RADIOLOCATION MOBILE Amateur Amateur-satellite ECA17 ECA23	Radiodetermination applications primary. Amateur / Amateur-Satellite secondary.	Short Range Devices: Radiodetermination applications: RIR1004-04 10.00-10.68 GHz: PMSE: RIR0203-12, RIR0203-51 Amateur: RIR1101-17 UWB Applications, Annex 1	See remarks to 10.5-10.6 GHz Radiodetermination applications.
10.5 - 10.55 GHz	FIXED MOBILE Radiolocation	Fixed primary. 10.5-10.6 GHz Radiodetermination applications secondary.	10.50-10.65 paired with 10.15-10.30 GHz: Fixed: RIR0302-11, ERC/REC 12-05, **Will be continued...**	10.5-10.6 GHz: Radiodetermination applications according to ERC/REC 70-03 instead of or in addition to 10.45-10.50 GHz. Monitor development in other CEPT countries.
10.55 - 10.6 GHz	FIXED MOBILE except aeronautical mobile Radiolocation			

Frequency Band	Liechtenstein Allocations			
	National Allocation	Main Use	Notes	Strategy
10.6 - 10.65 GHz	EARTH EXPLORATION-SATELLITE (passive) FIXED MOBILE except aeronautical mobile RADIO ASTRONOMY SPACE RESEARCH (passive) Radiolocation 5.149 5.482 5.482A	Data above.	Continuation... ECC/DEC/(10)01 10.5 - 10.6 GHz: Short Range Devices: Radiodetermination applications: RIR1004-05, ERC/REC 70-03	
10.65 - 10.68 GHz	EARTH EXPLORATION-SATELLITE (passive) FIXED MOBILE except aeronautical mobile RADIO ASTRONOMY SPACE RESEARCH (passive) 5.149 5.482 5.482A		10.00-10.60 / 10.68 GHz: PMSE: RIR0203-12, RIR0203-51, ECC/DEC/(10)01 UWB Applications, Annex 1	
10.68 - 10.7 GHz	EARTH EXPLORATION-SATELLITE (passive) RADIO ASTRONOMY SPACE RESEARCH (passive) 5.340	All emissions are prohibited.	UWB Applications, Annex 1	

Frequency Band	Liechtenstein Allocations			
	National Allocation	Main Use	Notes	Strategy
10.7 - 10.95 GHz	FIXED FIXED-SATELLITE (space-to-Earth) 5.441 FIXED-SATELLITE (Earth-to-space) 5.484 Mobile except aeronautical mobile Mobile-satellite (space-to-Earth)	FSS primary. Fixed primary. AES Downlinks (S/E) in the FSS and MSS secondary.	Harmonised frequencies: Annex4 Downlinks (S/E) for SNG/VSAT, SIT/SUT, HEST, ESIM and Feeder links GSO in the FSS: For corresponding uplink transmitter frequencies see: RIR0806-01, RIR0806-05, RIR0806-17, RIR0806-18, ERC/DEC/(00)08, RIR0806-23, ECC/DEC/(18)04 RIR0805-01 Fixed: RIR0302-12, ERC/REC 12-06, ERC/DEC/(00)08 Downlinks (S/E) for SIT/SUT and AES in the MSS: For corresponding uplink transmitter frequencies see: RIR0808-16, ECC/DEC/(05)11. Downlinks (S/E) for AES in the GSO FSS and NGSO FSS: For corresponding uplink transmitter frequencies see: RIR0806-25, ECC/DEC/(19)04 Downlinks (S/E) for Earth stations and ESIM in NGSO FSS: For corresponding uplink transmitter frequencies see: RIR0806-22, ECC/DEC/(17)04, RIR0806-24, ECC/DEC/(18)05 UWB Applications, Annex 1	Fixed / FSS: Co-primary use with the terms of sufficient geographical separation.
10.95 - 11.2 GHz	FIXED FIXED-SATELLITE (space-to-Earth) 5.484A 5.484B FIXED-SATELLITE (Earth-to-space) 5.484 Mobile except aeronautical mobile Mobile-satellite (space-to-Earth)			
11.2 - 11.45 GHz	FIXED FIXED-SATELLITE (space-to-Earth) 5.484A 5.484B FIXED-SATELLITE (Earth-to-space) 5.484 Mobile except aeronautical mobile Mobile-satellite (space-to-Earth)			
11.45 - 11.7 GHz	FIXED FIXED-SATELLITE (space-to-Earth) 5.441 FIXED-SATELLITE (Earth-to-space) 5.484 Mobile except aeronautical mobile Mobile-satellite (space-to-Earth)			

Frequency Band	Liechtenstein Allocations			
	National Allocation	Main Use	Notes	Strategy
11.7 - 12.5 GHz	MOBILE except aeronautical mobile BROADCASTING-SATELLITE 5.492 5.487 5.487A	BSS primary. FSS secondary.	BSS according to RR, see Appendix 30, Downlinks (S/E) for Earth stations and ESIM in NGSO FSS: For corresponding uplink transmitter frequencies see: RIR0806-22, ECC/DEC/(17)04, RIR0806-24, ECC/DEC/(18)05 Downlinks (S/E) for AES in the GSO FSS and NGSO FSS: For corresponding uplink transmitter frequencies see: RIR0806-25, ECC/DEC/(19)04 30 MHz - 12.4 GHz UWB Applications, Annex 1	

Frequency Band	Liechtenstein Allocations			
	National Allocation	Main Use	Notes	Strategy
12.5 - 12.75 GHz	FIXED-SATELLITE (space-to-Earth) 5.484A 5.484B	FSS primary.	Harmonised frequencies: Annex4 Downlinks (S/E) for SNG/VSAT, SIT/SUT, HEST, ESIM and Feeder links GSO in the FSS: For corresponding uplink transmitter frequencies see: RIR0806-01, RIR0806-05, RIR0806-17, RIR0806-18, RIR0806-23, ECC/DEC/(18)04 RIR0805-01 Downlinks (S/E) for SIT/SUT and AES in the MSS: For corresponding uplink transmitter frequencies see: RIR0808-16, ECC/DEC/(05)11 Downlinks (S/E) for AES in the GSO FSS and NGSO FSS: For corresponding uplink transmitter frequencies see: RIR0806-25, ECC/DEC/(19)04 Downlinks (S/E) for Earth stations and ESIM in NGSO FSS: For corresponding uplink transmitter frequencies see: RIR0806-22, ECC/DEC/(17)04, RIR0806-24, ECC/DEC/(18)05	

Frequency Band	Liechtenstein Allocations			
	National Allocation	Main Use	Notes	Strategy
12.75 - 13.25 GHz	FIXED FIXED-SATELLITE (Earth-to-space) 5.441	FSS primary. Fixed primary.	FSS: SNG: RIR0806-01, Feeder links GSO (E/S): RIR0805-01 Uplinks (E/S) for AES in the GSO FSS and NGSO FSS: RIR0806-25, ECC/DEC/(19)04 Fixed: RIR0302-13, ERC/REC 12-02	Fixed / FSS: Co-primary use with the terms of sufficient geographical separation.
13.25 - 13.4 GHz	AERONAUTICAL RADIONAVIGATION 5.497 EARTH EXPLORATION-SATELLITE (active) SPACE RESEARCH (active) 5.498A			
13.4 - 13.65 GHz	EARTH EXPLORATION-SATELLITE (active) FIXED-SATELLITE (space-to-Earth) 5.499A 5.499B RADIOLOCATION SPACE RESEARCH 5.499C 5.499D 5.499E 5.501B	Radiodetermination applications.	13.4-14.0 GHz: Short Range Devices: Radiodetermination applications: RIR1004-06, ERC/REC 70-03	
13.65 - 13.75 GHz	EARTH EXPLORATION-SATELLITE (active) RADIOLOCATION SPACE RESEARCH 5.501A 5.501B			
13.75 - 14 GHz	FIXED-SATELLITE (Earth-to-space) 5.484A RADIOLOCATION Earth exploration-satellite Space research 5.502 5.503	FSS. Radiodetermination applications.	FSS: SNG: RIR0806-01, VSAT: RIR0806-19, Feeder links GSO (E/S): RIR0805-01 13.4-14.0 GHz: Short Range Devices: Radiodetermination applications: RIR1004-06, ERC/REC 70-03	No new assignments according to RIR0806-19.

Frequency Band	Liechtenstein Allocations			
	National Allocation	Main Use	Notes	Strategy
14 - 14.25 GHz	FIXED-SATELLITE (Earth-to-space) 5.457A 5.484A 5.506B 5.484B Mobile-satellite (Earth-to-space) 5.506A Space research 5.504 5.504A	FSS primary.	Harmonised frequencies: Annex4 FSS: SNG: RIR0806-01, ERC/REC 13-03, VSAT and HEST: RIR0806-18, ECC/DEC/(03)04, ECC/DEC/(06)03, ESIM: RIR0806-23, ECC/DEC/(18)04, Feeder links GSO (E/S): RIR0805-01 NGSO FSS: Fixed Earth stations: RIR0806-22, ECC/DEC/(17)04, ESIM: RIR0806-24, ECC/DEC/(18)05 Uplinks for AES in the MSS: RIR0808-16, ECC/DEC/(05)11	
14.25 - 14.3 GHz	FIXED-SATELLITE (Earth-to-space) 5.457A 5.484A 5.506B 5.484B Mobile-satellite (Earth-to-space) 5.506A Space research 5.504 5.504A 5.508	FSS primary.		
14.3 - 14.4 GHz	FIXED-SATELLITE (Earth-to-space) 5.457A 5.484A 5.506B 5.484B Mobile-satellite (Earth-to-space) 5.504B 5.506A 5.509A 5.504 5.508	FSS primary.		
14.4 - 14.47 GHz	FIXED-SATELLITE (Earth-to-space) 5.457A 5.484A 5.506B 5.484B Mobile-satellite (Earth-to-space) 5.504B 5.506A 5.504A	FSS primary.		
14.47 - 14.5 GHz	FIXED-SATELLITE (Earth-to-space) 5.457A 5.484A 5.506B Mobile-satellite (Earth-to-space) 5.504B 5.506A 5.509A Radio astronomy 5.149 5.504A	FSS primary.		
14.5 - 14.62 GHz	FIXED MOBILE Radio astronomy	14.50-14.62 / 15.229-15.350 GHz: Fixed primary.	Fixed: RIR0302-14, ERC/REC 12-07	
14.62 - 14.8 GHz				
14.8 - 15.23 GHz	FIXED MOBILE Radio astronomy 5.339		15.229-15.350 GHz; Fixed: RIR0302-14, ERC/REC 12-07.	
15.23 - 15.35 GHz		15.229-15.350 / 14.50-14.62 GHz: Fixed primary.	Fixed: RIR0302-14, ERC/REC 12-07 15.34 GHz: Experiments.	

Frequency Band	Liechtenstein Allocations			
	National Allocation	Main Use	Notes	Strategy
15.35 - 15.4 GHz	EARTH EXPLORATION-SATELLITE (passive) RADIO ASTRONOMY SPACE RESEARCH (passive) 5.340	All emissions are prohibited.		
15.4 - 15.43 GHz	RADIOLOCATION 5.511E 5.511F AERONAUTICAL RADIONAVIGATION	Radar secondary.		
15.43 - 15.63 GHz	FIXED-SATELLITE (Earth-to-space) 5.511A RADIOLOCATION 5.511E 5.511F AERONAUTICAL RADIONAVIGATION 5.511C	Radar secondary.		
15.63 - 15.7 GHz	RADIOLOCATION 5.511E 5.511F AERONAUTICAL RADIONAVIGATION	Radar secondary.		
15.7 - 16.6 GHz	RADIOLOCATION	Radar.	15.77-16.13 GHz Radar.	Drone detection radar systems planned for police.
16.6 - 17.1 GHz	RADIOLOCATION Space research (Earth-to-space)	Radar.		Drone detection radar systems planned for police.
17.1 - 17.2 GHz	RADIOLOCATION Mobile	Radar.	17.1 - 17.3 GHz: Harmonised frequencies: Annex4 Short range devices: Radiodetermination applications: GBSAR: RIR1004-14, ERC/REC 70-03	Drone detection radar systems planned for police.
17.2 - 17.3 GHz	EARTH EXPLORATION-SATELLITE (active) MOBILE RADIOLOCATION SPACE RESEARCH (active) 5.513A	Radar.		
17.3 - 17.7 GHz	FIXED-SATELLITE (Earth-to-space) 5.516 FIXED-SATELLITE (space-to-Earth) 5.516A 5.516B Radiolocation	FSS primary. Radiolocation secondary.	Downlinks (S/E) in the FSS: For corresponding uplink transmitter frequencies see: HDFSS (S/E), ECC/DEC/(05)08, and: 17.3-20.2 GHz: GSO ESOMPs (S/E): RIR0806-20, ECC/DEC/(13)01 NGSO ESOMPs (S/E): RIR0806-21, ECC/DEC/(15)04	

Frequency Band	Liechtenstein Allocations			
	National Allocation	Main Use	Notes	Strategy
17.7 - 18.1 GHz	FIXED FIXED-SATELLITE (space-to-Earth) 5.484A 5.517A FIXED-SATELLITE (Earth-to-space) 5.516	Fixed primary. FSS primary.	Fixed: RIR0302-15, RIR0302-16, RIR0302-17, ERC/REC 12-03, ERC/DEC/(00)07 Downlinks (S/E) in the FSS: For corresponding uplink transmitter frequencies see: RIR0806-05, RIR0806-17, RIR0805-01, Feeder links GSO, and: 17.3-20.2 GHz: GSO ESOMPs (S/E): RIR0806-20, ECC/DEC/(13)01 NGSO ESOMPs (S/E): RIR0806-21, ECC/DEC/(15)04	Fixed: FS P-P links. FS has priority to FSS.
18.1 - 18.3 GHz	FIXED FIXED-SATELLITE (space-to-Earth) 5.484A 5.517A FIXED-SATELLITE (Earth-to-space) 5.520 5.519	Fixed primary.	Fixed: RIR0302-15, RIR0302-16, RIR0302-17, ERC/REC 12-03, ERC/DEC/(00)07 Downlinks (S/E) in the FSS: For corresponding uplink transmitter frequencies see: RIR0806-05, RIR0806-17, RIR0805-01, Feeder links GSO, and: 17.3-20.2 GHz: GSO ESOMPs (S/E): RIR0806-20, ECC/DEC/(13)01 NGSO ESOMPs (S/E): RIR0806-21, ECC/DEC/(15)04	Fixed: FS P-P links. FS has priority to FSS.

Frequency Band	Liechtenstein Allocations			
	National Allocation	Main Use	Notes	Strategy
18.3 - 18.4 GHz	FIXED FIXED-SATELLITE (space-to-Earth) 5.484A 5.517A FIXED-SATELLITE (Earth-to-space) 5.520 METEOROLOGICAL-SATELLITE (space-to-Earth) 5.519	Fixed primary.	Fixed: RIR0302-15, RIR0302-16, RIR0302-17, ERC/REC 12-03, ERC/DEC/(00)07 Downlinks (S/E) in the FSS: For corresponding uplink transmitter frequencies see: RIR0806-05, RIR0806-17, RIR0805-01, Feeder links GSO, and: 17.3-20.2 GHz: GSO ESOMPs (S/E): RIR0806-20, ECC/DEC/(13)01 NGSO ESOMPs (S/E): RIR0806-21, ECC/DEC/(15)04	Fixed: FS P-P links. FS has priority to FSS.
18.4 - 18.6 GHz	FIXED FIXED-SATELLITE (space-to-Earth) 5.484A 5.517A	Fixed primary.	Fixed: RIR0302-15, RIR0302-16, RIR0302-17, ERC/REC 12-03, ERC/DEC/(00)07 Downlinks (S/E) in the FSS: For corresponding uplink transmitter frequencies see: RIR0806-05, RIR0806-17, RIR0805-01, Feeder links GSO, and: 17.3-20.2 GHz: GSO ESOMPs (S/E): RIR0806-20, ECC/DEC/(13)01 NGSO ESOMPs (S/E): RIR0806-21, ECC/DEC/(15)04	Fixed: FS P-P links. FS has priority to FSS.

Frequency Band	Liechtenstein Allocations			
	National Allocation	Main Use	Notes	Strategy
18.6 - 18.8 GHz	FIXED FIXED-SATELLITE (space-to-Earth) 5.517A 5.522B EARTH EXPLORATION-SATELLITE (passive) 5.522A	Fixed primary. Earth Exploration Satellite co-primary.	Fixed: RIR0302-15, RIR0302-16, RIR0302-17, ERC/REC 12-03, ERC/DEC/(00)07 Downlinks (S/E) in the FSS: For corresponding uplink transmitter frequencies see: RIR0806-05, RIR0806-17, RIR0805-01, Feeder links GSO, and: 17.3-20.2 GHz: GSO ESOMPs (S/E): RIR0806-20, ECC/DEC/(13)01 NGSO ESOMPs (S/E): RIR0806-21, ECC/DEC/(15)04	Fixed: FS P-P links. FS has priority to FSS. Limitation of FS and FSS emissions according to RR 5.522A.
18.8 - 19.3 GHz	FIXED FIXED-SATELLITE (space-to-Earth) 5.517A 5.523A	Fixed primary.	Fixed: RIR0302-15, RIR0302-16, RIR0302-17, ERC/REC 12-03, ERC/DEC/(00)07 Downlinks (S/E) in the FSS: For corresponding uplink transmitter frequencies see: RIR0806-05, RIR0806-17, RIR0805-01, Feeder links GSO, and: 17.3-20.2 GHz: GSO ESOMPs (S/E): RIR0806-20, ECC/DEC/(13)01 NGSO ESOMPs (S/E): RIR0806-21, ECC/DEC/(15)04	Fixed: FS P-P links. FS has priority to FSS.
19.3 - 19.7 GHz	FIXED FIXED-SATELLITE (space-to-Earth) (Earth-to-space) 5.517A 5.523B 5.523C 5.523D 5.523E			

Frequency Band	Liechtenstein Allocations			
	National Allocation	Main Use	Notes	Strategy
19.7 - 20.1 GHz	FIXED-SATELLITE (space-to-Earth) 5.484A 5.484B 5.516B 5.527A Mobile-satellite (space-to-Earth)	FSS primary. MSS (secondary) planned.	Downlinks (S/E) in the FSS: HDFSS (S/E) ECC/DEC/(05)08, HEST (S/E): ECC/DEC/(06)03 For corresponding uplink transmitter frequencies see: RIR0806-05, RIR0806-17, RIR0805-01, Feeder links GSO, and: 17.3-20.2 GHz: GSO ESOMPs (S/E): RIR0806-20, ECC/DEC/(13)01 NGSO ESOMPs (S/E): RIR0806-21, ECC/DEC/(15)04	
20.1 - 20.2 GHz	FIXED-SATELLITE (space-to-Earth) 5.484A 5.484B 5.516B 5.527A MOBILE-SATELLITE (space-to-Earth) 5.525 5.526 5.527 5.528	FSS primary. MSS (primary) planned.	Downlinks (S/E) in the FSS: HDFSS (S/E) ECC/DEC/(05)08, HEST (S/E): ECC/DEC/(06)03 For corresponding uplink transmitter frequencies see: RIR0806-05, RIR0806-17, RIR0805-01, Feeder links GSO, and: 17.3-20.2 GHz: GSO ESOMPs (S/E): RIR0806-20, ECC/DEC/(13)01 NGSO ESOMPs (S/E): RIR0806-21, ECC/DEC/(15)04	
20.2 - 21.2 GHz	FIXED-SATELLITE (space-to-Earth) MOBILE-SATELLITE (space-to-Earth)			

Frequency Band	Liechtenstein Allocations			
	National Allocation	Main Use	Notes	Strategy
21.2 - 21.4 GHz	EARTH EXPLORATION-SATELLITE (passive) FIXED MOBILE SPACE RESEARCH (passive)	PMSE secondary.	video PMSE: RIR0203-14	
21.4 - 22 GHz	FIXED BROADCASTING-SATELLITE 5.208B 5.530A 5.530B	Fixed primary. PMSE secondary.	Fixed: Various systems. video PMSE: RIR0203-52 Harmonised frequencies: Annex4 SRD: Automotive SRR: RIR1012-05, ECC/DEC/(04)10 EC Decision 2005/50/EC, Automotive SRR, EC Dec. 2011/485/EU, amending Decision 2005/50/EC, EC Decision (EU) 2017/2077 amending Decision 2005/50/EC.	21.65 - 26.65 GHz: No new installation of wideband SRR devices since 1.1.2022. Existing 24 GHz devices (within 21.65-26.65 GHz) may still operate to the end of lifetime of the vehicles (RIR1012-05).
22 - 22.21 GHz	FIXED MOBILE except aeronautical mobile RADIO ASTRONOMY SPACE RESEARCH (passive) 5.149 ECA39	Fixed primary.	Fixed: 22.0-22.6 GHz paired with 23.0-23.6 GHz: HDFS, P-P links: RIR0302-21, T/R 13-02, Harmonised frequencies: Annex4 SRD: Automotive radar: RIR1012-05, ECC/DEC/(04)10 EC Decision 2005/50/EC, Automotive SRR, EC Dec. 2011/485/EU, amending Decision 2005/50/EC, EC Decision (EU) 2017/2077 amending Decision 2005/50/EC.	21.65 - 26.65 GHz: No new installation of wideband SRR devices since 1.1.2022. Existing 24 GHz devices (within 21.65-26.65 GHz) may still operate to the end of lifetime of the vehicles (RIR1012-05).
22.21 - 22.5 GHz	FIXED MOBILE except aeronautical mobile RADIO ASTRONOMY SPACE RESEARCH (passive) Earth exploration-satellite (passive) 5.532 ECA39			
22.5 - 22.55 GHz	FIXED MOBILE RADIO ASTRONOMY SPACE RESEARCH (passive) ECA39			
22.55 - 23.15 GHz	FIXED INTER-SATELLITE 5.338A MOBILE RADIO ASTRONOMY SPACE RESEARCH (Earth-to-space) 5.532A 5.149 ECA39			

Frequency Band	Liechtenstein Allocations			
	National Allocation	Main Use	Notes	Strategy
23.15 - 23.55 GHz	FIXED INTER-SATELLITE 5.338A MOBILE ECA39		Data above.	
23.55 - 23.6 GHz	FIXED INTER-SATELLITE MOBILE ECA39			
23.6 - 24 GHz	EARTH EXPLORATION-SATELLITE (passive) RADIO ASTRONOMY SPACE RESEARCH (passive) 5.340	All emissions are prohibited.	Harmonised frequencies: Annex4 SRD: Automotive radar: RIR1012-05, ECC/DEC/(04)10 EC Decision 2005/50/EC, Automotive SRR, EC Dec. 2011/485/EU, amending Decision 2005/50/EC, EC Decision (EU) 2017/2077 amending Decision 2005/50/EC.	21.65 - 26.65 GHz: No new installation of wideband SRR devices since 1.1.2022. Existing 24 GHz devices (within 21.65-26.65 GHz) may still operate to the end of lifetime of the vehicles (RIR1012-05).
24 - 24.05 GHz	AMATEUR AMATEUR-SATELLITE 5.150	Amateur / Amateur-Satellite primary.	24.00-24.25 GHz: ISM-Band. Amateur: RIR1101-18 Harmonised frequencies: Annex4 Short range devices: Non-specific SRDs: RIR1008-13, ERC/REC 70-03 Automotive radar: RIR1012-05, ECC/DEC/(04)10 EC Decision 2005/50/EC, Automotive SRR, EC Dec. 2011/485/EU, amending Decision 2005/50/EC, EC Decision (EU) 2017/2077 amending Decision 2005/50/EC. 24.00-24.25 GHz: Radiolocation: RIR1108-01	21.65 - 26.65 GHz: No new installation of wideband SRR devices since 1.1.2022. Existing 24 GHz devices (within 21.65-26.65 GHz) may still operate to the end of lifetime of the vehicles (RIR1012-05).

Frequency Band	Liechtenstein Allocations			
	National Allocation	Main Use	Notes	Strategy
24.05 - 24.25 GHz	RADIOLOCATION Amateur Earth exploration-satellite (active) Fixed Mobile 5.150	SRD primary. Amateur secondary.	24.00-24.25 GHz: ISM Band. Harmonised frequencies: Annex4 Short range devices: Non-specific SRDs: RIR1008-13, ERC/REC 70-03 Automotive radar: RIR1012-05, ECC/DEC/(04)10 EC Decision 2005/50/EC, Automotive SRR, EC Dec. 2011/485/EU, amending Decision 2005/50/EC, EC Decision (EU) 2017/2077 amending Decision 2005/50/EC. RIR1012-11 Amateur: RIR1101-18 24.00-24.25 GHz: Radiolocation: RIR1108-01 Radiolocation: Micro-rain radar: RIR0703-02	

Frequency Band	Liechtenstein Allocations			
	National Allocation	Main Use	Notes	Strategy
24.25 - 24.45 GHz	FIXED MOBILE 5.338A 5.532AB	PMSE primary.	PMSE: RIR0203-14, RIR0203-52 Harmonised frequencies: Annex4 SRD: Automotive radar: RIR1012-05, RIR1012-07, ECC/DEC/(04)10 EC Decision 2005/50/EC, Automotive SRR, EC Dec. 2011/485/EU, amending Decision 2005/50/EC, EC Decision (EU) 2017/2077 amending Decision 2005/50/EC.	21.65 - 26.65 GHz: No new installation of wideband SRR devices since 1.1.2022. Existing 24 GHz devices (within 21.65-26.65 GHz) may still operate to the end of lifetime of the vehicles (RIR1012-05). 24.25 - 26.65 GHz: No new installation of wideband SRR devices since 1.1.2022. Existing 24 GHz devices (within 24.25-26.65 GHz) may still operate to the end of lifetime of the vehicles (RIR1012-07). MFCN (IMT) planned according to ECC/DEC/(18)06, EC Decision (EU) 2019/784, EC Decision (EU) 2020/590 amending Decision (EU) 2019/784
24.45 - 24.5 GHz	FIXED MOBILE 5.338A 5.532AB			
24.5 - 24.65 GHz	FIXED MOBILE except aeronautical mobile 5.338A 5.532AB	Fixed primary.	24.549 - 25.445 GHz paired with 25.557 - 26.453 GHz: Fixed links Point-to-Point RIR0302-23, T/R 13-02. Harmonised frequencies: Annex4 SRD: Automotive radar: RIR1012-05, RIR1012-07, ECC/DEC/(04)10 EC Decision 2005/50/EC, Automotive SRR, EC Dec. 2011/485/EU, amending Decision 2005/50/EC, EC Decision (EU) 2017/2077 amending Decision 2005/50/EC.	21.65 - 26.65 GHz: No new installation of wideband SRR devices since 1.1.2022. Existing 24 GHz devices (within 21.65-26.65 GHz) may still operate to the end of lifetime of the vehicles (RIR1012-05). 24.25 - 26.65 GHz: No new installation of wideband SRR devices since 1.1.2022. Existing 24 GHz devices (within 24.25-26.65 GHz) may still operate to the end of lifetime of the vehicles (RIR1012-07). 24.65 - 25.25 GHz: ECC/REC/(20)01 25.5 - 27 GHz ECC/REC/(19)01 MFCN (IMT) planned according to **Will be continued...**
24.65 - 24.75 GHz	FIXED FIXED-SATELLITE (Earth-to-space) 5.532B MOBILE except aeronautical mobile 5.338A 5.532AB	Fixed primary.		
24.75 - 25.25 GHz	FIXED FIXED-SATELLITE (Earth-to-space) 5.532B	Fixed primary.		
25.25 - 25.5 GHz	FIXED INTER-SATELLITE 5.536 MOBILE 5.338A 5.532AB	Fixed primary.		
25.5 - 26.5 GHz	EARTH EXPLORATION-SATELLITE (space-to-Earth) FIXED INTER-SATELLITE 5.536 MOBILE 5.338A 5.532AB SPACE RESEARCH (space-to-Earth) 5.536C 5.536A	Fixed primary.		

Frequency Band	Liechtenstein Allocations			
	National Allocation	Main Use	Notes	Strategy
26.5 - 27 GHz	EARTH EXPLORATION-SATELLITE (space-to-Earth) FIXED INTER-SATELLITE 5.536 MOBILE 5.338A 5.532AB SPACE RESEARCH (space-to-Earth) 5.536C 5.536A		Harmonised frequencies: Annex4 SRD: Automotive radar: RIR1012-05, RIR1012-07, ECC/DEC/(04)10 EC Decision 2005/50/EC, Automotive SRR, EC Dec. 2011/485/EU, amending Decision 2005/50/EC, EC Decision (EU) 2017/2077 amending Decision 2005/50/EC.	Continuation... ECC/DEC/(18)06, EC Decision (EU) 2019/784, EC Decision (EU) 2020/590 amending Decision (EU) 2019/784
27 - 27.5 GHz	FIXED INTER-SATELLITE 5.536 MOBILE 5.338A 5.532AB Earth exploration-satellite (space-to-Earth)			MFCN (IMT) planned according to ECC/DEC/(18)06, EC Decision (EU) 2019/784, EC Decision (EU) 2020/590 amending Decision (EU) 2019/784
27.5 - 28.5 GHz	FIXED FIXED-SATELLITE (Earth-to-space) 5.484A 5.516B 5.517A 5.539 5.538 5.540	27.5000-27.8285 GHz and 28.4445-28.9485 GHz and 29.4525-29.5000 GHz: FSS primary. 27.9405-28.4445 GHz paired with 28.9485-29.4525 GHz: FS primary.	Fixed (HDFS) and FSS: ECC/DEC/(05)01: FS: 27.9405-28.4445 GHz paired with 28.9485-29.4525 GHz RIR0302-24, T/R 13-02 FSS: 27.5000-27.8285 GHz, 28.4445-28.9485 GHz, 29.4525-29.5000 GHz, RIR0806-05, GSO ESOMPs (E/S): RIR0806-20, ECC/DEC/(13)01 NGSO ESOMPs (E/S): RIR0806-21, ECC/DEC/(15)04 Feeder links GSO (E/S): RIR0805-01	
28.5 - 29.1 GHz	FIXED FIXED-SATELLITE (Earth-to-space) 5.484A 5.516B 5.517A 5.523A 5.539 Earth exploration-satellite (Earth-to-space) 5.541 5.540			
29.1 - 29.5 GHz	FIXED FIXED-SATELLITE (Earth-to-space) 5.516B 5.517A 5.523C 5.523E 5.535A 5.539 5.541A Earth exploration-satellite (Earth-to-space) 5.541 5.540			

Frequency Band	Liechtenstein Allocations			
	National Allocation	Main Use	Notes	Strategy
29.5 - 29.9 GHz	FIXED-SATELLITE (Earth-to-space) 5.484A 5.516B 5.539 5.527A 5.484B Earth exploration-satellite (Earth-to-space) 5.541 Mobile-satellite (Earth-to-space) 5.540	FSS primary. MSS (secondary) planned.	HDFSS (E/S) ECC/DEC/(05)08: SIT/SUT and HEST: RIR0806-17, ECC/DEC/(06)03	
29.9 - 30 GHz	FIXED-SATELLITE (Earth-to-space) 5.484A 5.516B 5.539 5.484B 5.527A MOBILE-SATELLITE (Earth-to-space) Earth exploration-satellite (Earth-to-space) 5.541 5.543 5.526 5.527 5.538 5.540 5.525	FSS primary. MSS (primary) planned.	GSO ESOMPs (E/S): RIR0806-20, ECC/DEC/(13)01 NGSO ESOMPs (E/S): RIR0806-21, ECC/DEC/(15)04 Feeder links GSO (E/S): RIR0805-01	
30 - 31 GHz	FIXED-SATELLITE (Earth-to-space) 5.338A MOBILE-SATELLITE (Earth-to-space)			If fixed satellite service will be planned ECC/DEC/(10)02 should be considered.
31 - 31.3 GHz	FIXED 5.338A 5.543B MOBILE 5.149			Available for HAPS. If fixed links will be planned, ECC/REC/(02)02 should be considered.
31.3 - 31.5 GHz	EARTH EXPLORATION-SATELLITE (passive) RADIO ASTRONOMY SPACE RESEARCH (passive) 5.340	All emissions are prohibited.		
31.5 - 31.8 GHz	EARTH EXPLORATION-SATELLITE (passive) RADIO ASTRONOMY SPACE RESEARCH (passive) Fixed Mobile except aeronautical mobile 5.149			
31.8 - 32 GHz	FIXED 5.547A RADIONAVIGATION SPACE RESEARCH (space-to-Earth) 5.547 5.548	Fixed primary. Radionavigation secondary.	Fixed: 31.8 - 32.571 GHz paired with 32.627 - 33.4 GHz **Will be continued...**	

Frequency Band	Liechtenstein Allocations			
	National Allocation	Main Use	Notes	Strategy
32 - 32.3 GHz	FIXED 5.547A RADIONAVIGATION SPACE RESEARCH (space-to-Earth) 5.547 5.548	Data above.	Continuation... HDFS, P-P links: RIR0302-31, ERC/REC 01-02	
32.3 - 33 GHz	FIXED 5.547A INTER-SATELLITE RADIONAVIGATION 5.547 5.548			
33 - 33.4 GHz	FIXED 5.547A RADIONAVIGATION INTER-SATELLITE 5.547			
33.4 - 34.2 GHz	RADIOLOCATION	Radiolocation primary.	33.4 - 35.2 GHz Radiolocation: Cloud Radar: RIR0703-03.	
34.2 - 34.7 GHz	RADIOLOCATION SPACE RESEARCH (deep space) (Earth-to-space)	Radiolocation primary.	34.2-34.5 GHz: Radiolocation RIR1108-02 33.4 - 35.2 GHz Radiolocation: Cloud Radar: RIR0703-03.	
34.7 - 35.2 GHz	RADIOLOCATION Space research	Radiolocation primary.	33.4 - 35.2 GHz Radiolocation: Cloud Radar: RIR0703-03.	
35.2 - 35.5 GHz	METEOROLOGICAL AIDS RADIOLOCATION			
35.5 - 36 GHz	EARTH EXPLORATION-SATELLITE (active) METEOROLOGICAL AIDS RADIOLOCATION SPACE RESEARCH (active) 5.549A			

Frequency Band	Liechtenstein Allocations			
	National Allocation	Main Use	Notes	Strategy
36 - 37 GHz	EARTH EXPLORATION-SATELLITE (passive) FIXED MOBILE SPACE RESEARCH (passive) Radio astronomy 5.149 5.550A			
37 - 37.5 GHz	FIXED MOBILE except aeronautical mobile 5.550B SPACE RESEARCH (space-to-Earth) 5.547	Fixed primary.	Fixed: 37.0 - 38.178 GHz paired with 38.318 - 39.5 GHz HDFS, P-P links: RIR0302-32, T/R 12-01, ERC/DEC/(00)02	
37.5 - 38 GHz	FIXED FIXED-SATELLITE (space-to-Earth) 5.550C MOBILE except aeronautical mobile 5.550B SPACE RESEARCH (space-to-Earth) Earth exploration-satellite (space-to-Earth) 5.547			
38 - 39.5 GHz	FIXED 5.550D FIXED-SATELLITE (space-to-Earth) 5.550C MOBILE 5.550B Earth exploration-satellite (space-to-Earth) 5.547			
39.5 - 40 GHz	FIXED FIXED-SATELLITE (space-to-Earth) 5.550C 5.516B MOBILE 5.550B MOBILE-SATELLITE (space-to-Earth) Earth exploration-satellite (space-to-Earth) 5.550E 5.547			FSS according to ERC/DEC/(00)02
40 - 40.5 GHz	FIXED FIXED-SATELLITE (space-to-Earth) 5.550C 5.516B MOBILE 5.550B MOBILE-SATELLITE (space-to-Earth) SPACE RESEARCH (Earth-to-space) Earth exploration-satellite (space-to-Earth) 5.550E			

Frequency Band	Liechtenstein Allocations			
	National Allocation	Main Use	Notes	Strategy
40.5 - 41 GHz	FIXED FIXED-SATELLITE (space-to-Earth) 5.550C LAND MOBILE 5.550B BROADCASTING BROADCASTING-SATELLITE Aeronautical mobile Maritime mobile 5.547	MWS primary.	MWS: RIR0201-80, ERC/DEC/(99)15, ECC/REC/(01)04 BSS: ECC/DEC/(02)04	
41 - 42 GHz	FIXED FIXED-SATELLITE (space-to-Earth) 5.550C LAND MOBILE 5.550B BROADCASTING BROADCASTING-SATELLITE Aeronautical mobile Maritime mobile 5.547	Fixed primary.	Fixed: 41-42 GHz paired with 42.5 – 43.5 GHz: HDFS, P-P links: RIR0302-48, ERC/DEC/(99)15, ECC/REC/(01)04 BSS: ECC/DEC/(02)04	
42 - 42.5 GHz	FIXED FIXED-SATELLITE (space-to-Earth) 5.550C LAND MOBILE 5.550B BROADCASTING BROADCASTING-SATELLITE Aeronautical mobile Maritime mobile 5.547 5.551H 5.551I	MWS primary.	MWS: RIR0201-80, ERC/DEC/(99)15, ECC/REC/(01)04 BSS: ECC/DEC/(02)04	
42.5 - 43.5 GHz	FIXED FIXED-SATELLITE (Earth-to-space) 5.552 MOBILE except aeronautical mobile 5.550B RADIO ASTRONOMY 5.149 5.547	Fixed primary.	Fixed: 42.5 – 43.5 GHz paired with 41-42 GHz: HDFS, P-P links: RIR0302-48, ERC/DEC/(99)15, ECC/REC/(01)04	
43.5 - 45.5 GHz	MOBILE 5.553 MOBILE-SATELLITE Fixed-satellite 5.554			
45.5 - 47 GHz	MOBILE 5.553 MOBILE-SATELLITE RADIONAVIGATION RADIONAVIGATION-SATELLITE 5.554			

Frequency Band	Liechtenstein Allocations			
	National Allocation	Main Use	Notes	Strategy
47 - 47.2 GHz	AMATEUR AMATEUR-SATELLITE	Amateur / Amateur-Satellite primary.	Amateur: RIR1101-19	
47.2 - 47.5 GHz	FIXED FIXED-SATELLITE (Earth-to-space) 5.552 5.550C MOBILE 5.552A			
47.5 - 47.9 GHz	FIXED FIXED-SATELLITE (Earth-to-space) 5.550C 5.552 FIXED-SATELLITE (space-to-Earth) 5.516B 5.554A MOBILE	FSS	HDFSS (E/S) ECC/DEC/(05)08	
47.9 - 48.2 GHz	FIXED FIXED-SATELLITE (Earth-to-space) 5.550C 5.552 MOBILE 5.552A			
48.2 - 48.54 GHz	FIXED FIXED-SATELLITE (Earth-to-space) 5.550C 5.552 FIXED-SATELLITE (space-to-Earth) 5.516B 5.554A 5.555B MOBILE	FSS	HDFSS (E/S) ECC/DEC/(05)08	If fixed links will be planned in the band 48.5 - 50.2 / 50.9 - 52.6 GHz ERC/REC 12-11 (Annex 3) should be considered.
48.54 - 49.44 GHz	FIXED FIXED-SATELLITE (Earth-to-space) 5.550C 5.552 MOBILE RADIO ASTRONOMY 5.149 5.340 5.555			
49.44 - 50.2 GHz	FIXED FIXED-SATELLITE (Earth-to-space) 5.338A 5.550C 5.552 FIXED-SATELLITE (space-to-Earth) 5.516B 5.554A 5.555B MOBILE	FSS	HDFSS (E/S) ECC/DEC/(05)08	
50.2 - 50.4 GHz	EARTH EXPLORATION-SATELLITE (passive) SPACE RESEARCH (passive) 5.340	All emissions are prohibited.		

Frequency Band	Liechtenstein Allocations			
	National Allocation	Main Use	Notes	Strategy
50.4 - 51.4 GHz	FIXED FIXED-SATELLITE (Earth-to-space) 5.338A 5.550C Mobile-satellite (Earth-to-space)			If fixed links will be planned in the band 50.9 - 52.6 / 48.5 - 50.2 GHz ERC/REC 12-11 (Annex 3) should be considered.
51.4 - 52.4 GHz	FIXED 5.338A FIXED-SATELLITE (Earth-to-space) 5.555C MOBILE RADIO ASTRONOMY 5.547 5.556	Fixed primary.	Fixed: HDFS, P-P links: RIR0302-41, ERC/REC 12-11	If fixed links will be planned in the band 50.9 - 52.6 / 48.5 - 50.2 GHz ERC/REC 12-11 (Annex 3) should be considered. Fixed P-P links only.
52.4 - 52.6 GHz	FIXED 5.338A MOBILE 5.547 5.556			
52.6 - 54.25 GHz	EARTH EXPLORATION-SATELLITE (passive) SPACE RESEARCH (passive) 5.340 5.556	All emissions are prohibited.		
54.25 - 55.78 GHz	EARTH EXPLORATION-SATELLITE (passive) SPACE RESEARCH (passive)			
55.78 - 56.9 GHz	EARTH EXPLORATION-SATELLITE (passive) FIXED 5.557A INTER-SATELLITE 5.556A SPACE RESEARCH (passive) 5.547 5.558	Fixed primary.	Fixed: HDFS, P-P links: RIR0302-42, ERC/REC 12-12 Passive applications.	
56.9 - 57 GHz	EARTH EXPLORATION-SATELLITE (passive) FIXED MOBILE 5.558 SPACE RESEARCH (passive) 5.547 5.558A	Fixed primary.	Fixed: HDFS, P-P links: RIR0302-42, ERC/REC 12-12 Passive applications.	
57 - 58 GHz	EARTH EXPLORATION-SATELLITE (passive) FIXED INTER-SATELLITE 5.556A MOBILE 5.558 SPACE RESEARCH (passive) 5.547	Fixed primary.	Fixed: RIR0302-43 Passive applications. **Will be continued...**	Fixed TDD P-P links: No new Assignments.

Frequency Band	Liechtenstein Allocations			
	National Allocation	Main Use	Notes	Strategy
58 - 58.2 GHz	EARTH EXPLORATION-SATELLITE (passive) FIXED INTER-SATELLITE 5.556A MOBILE 5.558 SPACE RESEARCH (passive) 5.547	Fixed secondary.	**Continuation...** Harmonised frequencies: Annex 4 Short range devices: 57-64 GHz: Non-specific SRDs: RIR1008-31, 57-71 GHz: Wideband data transmission systems: RIR1010-07, RIR1010-09, RIR1010-10, ERC/REC 70-03	
58.2 - 59 GHz	EARTH EXPLORATION-SATELLITE (passive) FIXED RADIO ASTRONOMY SPACE RESEARCH (passive) 5.547 5.556 ECA19	Fixed secondary.		
59 - 59.3 GHz	EARTH EXPLORATION-SATELLITE (passive) FIXED INTER-SATELLITE 5.556A MOBILE 5.558 RADIOLOCATION 5.559 SPACE RESEARCH (passive)	Fixed secondary.		
59.3 - 62 GHz	FIXED INTER-SATELLITE MOBILE 5.558 RADIOLOCATION 5.559 5.138	61.0-61.5 GHz SRD secondary. Fixed secondary.	Fixed: RIR0302-47 61.0-61.5 GHz: ISM Band: Harmonised frequencies: Annex 4 Short range devices: 61.0-61.5 GHz: Non-specific SRDs: RIR1008-14, 57-64 GHz: Non-specific SRDs: RIR1008-31, 57-71 GHz: Wideband data transmission systems: RIR1010-07, RIR1010-09, RIR1010-10, ERC/REC 70-03	

Frequency Band	Liechtenstein Allocations			
	National Allocation	Main Use	Notes	Strategy
62 - 63 GHz	FIXED INTER-SATELLITE MOBILE 5.558 RADIOLOCATION 5.559	Fixed secondary.	Fixed: RIR0302-47 Harmonised frequencies: Annex 4 Short range devices: 57-64 GHz: Non-specific SRDs: RIR1008-31, 57-71 GHz: Wideband data transmission systems: RIR1010-07, RIR1010-09, RIR1010-10, ERC/REC 70-03	
63 - 64 GHz	FIXED INTER-SATELLITE MOBILE 5.558 RADIOLOCATION 5.559	ITS.	63.72 - 65.88 GHz: ITS: RIR0510-04 ECC/DEC/(09)01 Harmonised frequencies: Annex 4 Short range devices: 57-64 GHz: Non-specific SRDs: RIR1008-31, 57-71 GHz: Wideband data transmission systems: RIR1010-07, RIR1010-09, RIR1010-10, ERC/REC 70-03	
64 - 65 GHz	FIXED INTER-SATELLITE MOBILE except aeronautical mobile 5.547 5.556	Fixed secondary.	63.72 - 65.88 GHz: ITS: **Will be continued...**	64 - 66 GHz: Fixed links Point-to-Point.

Frequency Band	Liechtenstein Allocations			
	National Allocation	Main Use	Notes	Strategy
65 - 66 GHz	EARTH EXPLORATION-SATELLITE FIXED INTER-SATELLITE MOBILE except aeronautical mobile SPACE RESEARCH 5.547	Fixed secondary.	**Continuation...** RIR0510-04 ECC/DEC/(09)01 Fixed links: RIR0302-45 57-71 GHz: Harmonised frequencies: Annex4 Short range devices: Wideband data transmission systems: RIR1010-07, RIR1010-09, RIR1010-10, ERC/REC 70-03	**Data above.**
66 - 71 GHz	INTER-SATELLITE MOBILE 5.553 5.558 5.559AA MOBILE-SATELLITE RADIONAVIGATION RADIONAVIGATION-SATELLITE 5.554		57-71 GHz: Harmonised frequencies: Annex4 Short range devices: Wideband data transmission systems: RIR1010-07, RIR1010-09, RIR1010-10, ERC/REC 70-03	
71 - 74 GHz	FIXED FIXED-SATELLITE (space-to-Earth) MOBILE MOBILE-SATELLITE (space-to-Earth)	Fixed primary.	71 - 76 GHz paired with 81 - 86 GHz: Fixed links: RIR0302-46, ECC/REC/(05)07	
74 - 75.5 GHz	FIXED FIXED-SATELLITE (space-to-Earth) MOBILE BROADCASTING BROADCASTING-SATELLITE Space research (space-to-Earth) 5.561	Fixed primary.		
75.5 - 76 GHz	FIXED FIXED-SATELLITE (space-to-Earth) MOBILE BROADCASTING BROADCASTING-SATELLITE Space research (space-to-Earth) 5.561	Fixed primary.		

Frequency Band	Liechtenstein Allocations			
	National Allocation	Main Use	Notes	Strategy
76 - 77.5 GHz	RADIO ASTRONOMY RADIOLOCATION Amateur Amateur-satellite Space research (space-to-Earth) 5.149	Amateur / Amateur-Satellite secondary. 76.00 - 77.00 GHz TTT secondary.	Harmonised frequencies: Annex4 Short range devices: 76 - 77 GHz: TTT: RIR1012-03, Railway applications: RIR1002-06, ERC/REC 70-03 Drone detection radar: RIR1004-20 Obstacle detection radars for rotorcraft use: RIR1004-19, ECC/DEC/(16)01 77-81 GHz: Automotive SRR: RIR1012-04, ECC/DEC/(04)03, EC Decision 2004/545/EC, Automotive SRR Amateur: RIR1101-20	
77.5 - 78 GHz	AMATEUR AMATEUR-SATELLITE RADIOLOCATION 5.559B Radio astronomy Space research (space-to-Earth) 5.149	Amateur / Amateur-Satellite primary.	Harmonised frequencies: Annex4 77-81 GHz: Short range devices: Automotive SRR: RIR1012-04, ECC/DEC/(04)03 EC Decision 2004/545/EC, Automotive SRR Amateur: RIR1101-20	
78 - 79 GHz	RADIOLOCATION Amateur Amateur-satellite Radio astronomy Space research (space-to-Earth) 5.149 5.560	Amateur / Amateur-Satellite secondary.	Harmonised frequencies: Annex4 77-81 GHz: Short range devices: Automotive SRR: RIR1012-04, ECC/DEC/(04)03 EC Decision 2004/545/EC, Automotive SRR Amateur: RIR1101-20	

Frequency Band	Liechtenstein Allocations			
	National Allocation	Main Use	Notes	Strategy
79 - 81 GHz	RADIO ASTRONOMY RADIOLOCATION Amateur Amateur-satellite Space research (space-to-Earth) 5.149	Amateur / Amateur-Satellite secondary.	Harmonised frequencies: Annex4 77-81 GHz: Short range devices: Automotive SRR: RIR1012-04, ECC/DEC/(04)03 EC Decision 2004/545/EC, Automotive SRR Amateur: RIR1101-20	
81 - 84 GHz	FIXED 5.338A FIXED-SATELLITE (Earth-to-space) MOBILE MOBILE-SATELLITE (Earth-to-space) RADIO ASTRONOMY Space research (space-to-Earth) 5.149 5.561A	Fixed primary. 81 - 81.5 GHz Amateur / Amateur-Satellite secondary (RR 5.561A).	81 - 86 GHz paired with 71 - 76 GHz: Fixed links: RIR0302-46, ECC/REC/(05)07 81 - 81.5 GHz Amateur: RIR1101-20	
84 - 86 GHz	FIXED 5.338A FIXED-SATELLITE (Earth-to-space) MOBILE RADIO ASTRONOMY 5.149	Fixed primary.	81 - 86 GHz paired with 71 - 76 GHz: Fixed links: RIR0302-46, ECC/REC/(05)07	
86 - 92 GHz	EARTH EXPLORATION-SATELLITE (passive) RADIO ASTRONOMY SPACE RESEARCH (passive) 5.340	All emissions are prohibited.		
92 - 94 GHz	FIXED 5.338A MOBILE RADIO ASTRONOMY RADIOLOCATION 5.149	Fixed primary planned.	Fixed planned.	92 - 94.0 and 94.1 - 95 GHz: Fixed (Point to Point) according to ECC/REC/(14)01 planned.
94 - 94.1 GHz	EARTH EXPLORATION-SATELLITE (active) RADIOLOCATION SPACE RESEARCH (active) Radio astronomy 5.562 5.562A			

Frequency Band	Liechtenstein Allocations			
	National Allocation	Main Use	Notes	Strategy
94.1 - 95 GHz	FIXED MOBILE RADIO ASTRONOMY RADIOLOCATION 5.149	Fixed primary planned.	Fixed planned.	92 - 94.0 and 94.1 - 95 GHz: Fixed (Point to Point) according to ECC/REC/(14)01 planned.
95 - 100 GHz	FIXED MOBILE RADIO ASTRONOMY RADIOLOCATION RADIONAVIGATION RADIONAVIGATION-SATELLITE 5.149 5.554	Planned according to National Allocation.		
100 - 102 GHz	EARTH EXPLORATION-SATELLITE (passive) RADIO ASTRONOMY SPACE RESEARCH (passive) 5.340 5.341	All emissions are prohibited.		
102 - 105 GHz	FIXED MOBILE RADIO ASTRONOMY 5.149 5.341			
105 - 109.5 GHz	FIXED MOBILE RADIO ASTRONOMY SPACE RESEARCH (passive) 5.562B 5.149 5.341			
109.5 - 111.8 GHz	EARTH EXPLORATION-SATELLITE (passive) RADIO ASTRONOMY SPACE RESEARCH (passive) 5.149 5.341	All emissions are prohibited.		
111.8 - 114.25 GHz	FIXED MOBILE RADIO ASTRONOMY SPACE RESEARCH (passive) 5.562B 5.149 5.341			
114.25 - 116 GHz	EARTH EXPLORATION-SATELLITE (passive) RADIO ASTRONOMY SPACE RESEARCH (passive) 5.340 5.341	All emissions are prohibited.		

Frequency Band	Liechtenstein Allocations			
	National Allocation	Main Use	Notes	Strategy
116 - 119.98 GHz	EARTH EXPLORATION-SATELLITE (passive) INTER-SATELLITE 5.562C SPACE RESEARCH (passive) 5.341			
119.98 - 120.02 GHz	EARTH EXPLORATION-SATELLITE (passive) SPACE RESEARCH (passive) INTER-SATELLITE 5.562C 5.341			
120.02 - 122.25 GHz	EARTH EXPLORATION-SATELLITE (passive) INTER-SATELLITE 5.562C SPACE RESEARCH (passive) 5.138	EESS primary. 122.0-123.0 GHz SRD secondary.	122.0-123.0 GHz: ISM Band Short Range Devices: Non-specific SRDs: 122.00-122.25 GHz: RIR1008-36, ERC/REC 70-03	
122.25 - 123 GHz	FIXED INTER-SATELLITE MOBILE 5.558 Amateur 5.138	Amateur secondary. SRD secondary.	122.0-123.0 GHz: ISM Band Short Range Devices: Non-specific SRDs: RIR1008-15, ERC/REC 70-03 Amateur: RIR1101-21	
123 - 126 GHz	FIXED-SATELLITE (space-to-Earth) MOBILE-SATELLITE (space-to-Earth) RADIONAVIGATION RADIONAVIGATION-SATELLITE Radio astronomy 5.554			
126 - 130 GHz	FIXED-SATELLITE (space-to-Earth) MOBILE-SATELLITE (space-to-Earth) RADIONAVIGATION RADIONAVIGATION-SATELLITE Radio astronomy 5.149 5.554			

Frequency Band	Liechtenstein Allocations			
	National Allocation	Main Use	Notes	Strategy
130 - 134 GHz	EARTH EXPLORATION-SATELLITE (active) 5.562E FIXED INTER-SATELLITE MOBILE 5.558 RADIO ASTRONOMY 5.149 5.562A			130 - 134 GHz: Point-to-Point (PP) and Point-to-Multipoint (PMP) according to ECC/REC/(18)01 planned.
134 - 136 GHz	AMATEUR AMATEUR-SATELLITE Radio astronomy		Amateur: RIR1101-22	
136 - 141 GHz	RADIO ASTRONOMY RADIOLOCATION Amateur Amateur-satellite 5.149		Amateur: RIR1101-22	
141 - 148.5 GHz	FIXED MOBILE RADIO ASTRONOMY RADIOLOCATION 5.149			141 - 148.5 GHz: Point-to-Point (PP) and Point-to-Multipoint (PMP) according to ECC/REC/(18)01 planned.
148.5 - 151.5 GHz	EARTH EXPLORATION-SATELLITE (passive) RADIO ASTRONOMY SPACE RESEARCH (passive) 5.340	All emissions are prohibited.		
151.5 - 155.5 GHz	FIXED MOBILE RADIO ASTRONOMY RADIOLOCATION 5.149			151.5 - 164 GHz: Point-to-Point (PP) and Point-to-Multipoint (PMP) according to ECC/REC/(18)01 planned.
155.5 - 158.5 GHz	FIXED MOBILE RADIO ASTRONOMY 5.149			
158.5 - 164 GHz	FIXED FIXED-SATELLITE MOBILE MOBILE-SATELLITE (space-to-Earth)			

Frequency Band	Liechtenstein Allocations			
	National Allocation	Main Use	Notes	Strategy
164 - 167 GHz	EARTH EXPLORATION-SATELLITE (passive) RADIO ASTRONOMY SPACE RESEARCH (passive) 5.340	All emissions are prohibited.		
167 - 168 GHz	FIXED FIXED-SATELLITE (space-to-Earth) INTER-SATELLITE MOBILE 5.558			167 - 174.8 GHz: Point-to-Point (PP) and Point-to-Multipoint (PMP) according to ECC/REC/(18)01 planned.
168 - 170 GHz	FIXED FIXED-SATELLITE (space-to-Earth) INTER-SATELLITE MOBILE 5.558 5.149			
170 - 174.5 GHz	FIXED FIXED-SATELLITE (space-to-Earth) INTER-SATELLITE MOBILE 5.558 5.149			
174.5 - 174.8 GHz	FIXED INTER-SATELLITE MOBILE 5.558			
174.8 - 182 GHz	EARTH EXPLORATION-SATELLITE (passive) INTER-SATELLITE 5.562H SPACE RESEARCH (passive)			
182 - 185 GHz	EARTH EXPLORATION-SATELLITE (passive) RADIO ASTRONOMY SPACE RESEARCH (passive) 5.340	All emissions are prohibited.		
185 - 190 GHz	EARTH EXPLORATION-SATELLITE (passive) INTER-SATELLITE 5.562H SPACE RESEARCH (passive)			
190 - 191.8 GHz	EARTH EXPLORATION-SATELLITE (passive) SPACE RESEARCH (passive) 5.340	All emissions are prohibited.		

Frequency Band	Liechtenstein Allocations			
	National Allocation	Main Use	Notes	Strategy
191.8 - 200 GHz	FIXED INTER-SATELLITE MOBILE 5.558 MOBILE-SATELLITE RADIONAVIGATION RADIONAVIGATION-SATELLITE 5.149 5.341 5.554			
200 - 202 GHz	EARTH EXPLORATION-SATELLITE (passive) RADIO ASTRONOMY SPACE RESEARCH (passive) 5.340 5.341 5.563A	All emissions are prohibited.		
202 - 209 GHz	EARTH EXPLORATION-SATELLITE (passive) RADIO ASTRONOMY SPACE RESEARCH (passive) 5.340 5.341 5.563A	All emissions are prohibited.		
209 - 217 GHz	FIXED FIXED-SATELLITE (Earth-to-space) MOBILE RADIO ASTRONOMY 5.149 5.341			
217 - 226 GHz	FIXED FIXED-SATELLITE (Earth-to-space) MOBILE RADIO ASTRONOMY SPACE RESEARCH (passive) 5.562B 5.149 5.341			
226 - 231.5 GHz	EARTH EXPLORATION-SATELLITE (passive) RADIO ASTRONOMY SPACE RESEARCH (passive) 5.340	All emissions are prohibited.		
231.5 - 232 GHz	FIXED MOBILE Radiolocation			
232 - 235 GHz	FIXED FIXED-SATELLITE (space-to-Earth) MOBILE Radiolocation			

Frequency Band	Liechtenstein Allocations			
	National Allocation	Main Use	Notes	Strategy
235 - 238 GHz	EARTH EXPLORATION-SATELLITE (passive) FIXED-SATELLITE (space-to-Earth) SPACE RESEARCH (passive) 5.563A 5.563B			
238 - 240 GHz	FIXED FIXED-SATELLITE (space-to-Earth) MOBILE RADIOLOCATION RADIONAVIGATION RADIONAVIGATION-SATELLITE			
240 - 241 GHz	FIXED MOBILE RADIOLOCATION			
241 - 248 GHz	RADIO ASTRONOMY RADIOLOCATION Amateur Amateur-satellite 5.138 5.149	Amateur / Amateur-Satellite. Short Range Devices.	244-246 GHz: ISM band: Short Range Devices: Non-specific SRDs: RIR1008-16, ERC/REC 70-03 241-250 GHz Amateur: RIR1101-23	
248 - 250 GHz	AMATEUR AMATEUR-SATELLITE Radio astronomy 5.149	Amateur / Amateur-Satellite primary.	Amateur: RIR1101-23	
250 - 252 GHz	EARTH EXPLORATION-SATELLITE (passive) RADIO ASTRONOMY SPACE RESEARCH (passive) 5.340 5.563A	All emissions are prohibited.		
252 - 265 GHz	FIXED MOBILE MOBILE-SATELLITE (Earth-to-space) RADIO ASTRONOMY RADIONAVIGATION RADIONAVIGATION-SATELLITE 5.149 5.554			

Frequency Band	Liechtenstein Allocations			
	National Allocation	Main Use	Notes	Strategy
265 - 275 GHz	FIXED FIXED-SATELLITE (Earth-to-space) MOBILE RADIO ASTRONOMY 5.149 5.563A			
275 - 3'000 GHz	Not allocated 5.564A 5.565	Not allocated.	Not allocated.	

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5 Annexes and Appendices

5.1 Annex 1: List of frequency bands for UWB and Wideband SRD applications

Ultra Wide Band (UWB) technology means technology for short-range radiocommunication, involving the intentional generation and transmission of radio-frequency energy that spreads over a very large frequency range, which may overlap several frequency bands allocated to radiocommunication services.
Short Range Devices (SRD) using UWB technology can be used for communications, measurement, location, imaging, surveillance and medical systems.
Devices using UWB technology and Short Range Devices (SRD) operate on a non-interference and non-protected basis.

Frequency Range / Main operating	**Applications**	**ECC Decision / Recommendations**	**Technical interface regulations**
148.5 - 5 000 kHz	Inductive applications	ERC/REC70-03	RIR1005-09
984 - 7 484 kHz	Eurobalise 4 234 kHz	ERC/REC70-03	RIR1002-04
516 - 8 516 kHz	Euroloop 4 516 kHz		RIR1002-03
5 000 - 30 000 kHz	Inductive applications	ERC/REC70-03	RIR1005-13
7 300 - 23 000 kHz	Euroloop 13 547 kHz	ERC/REC70-03	RIR1002-05
12 500 – 20 000 kHz	ULP active Animal Implant Devices (ULP-AID)	ERC/REC 70 -03	RIR1006-05
30 MHz - 12.4 GHz	GPR/WPR (Ground- and Wall Probing Radar imaging systems using Ultra-Wideband (UWB) technology).	ECC/DEC/(06)08	RIR1023-04
2 200 - 8 000 MHz	BMA (Building Material Analysis and classification applications and specific Material Sensing devices using Ultra-Wideband (UWB) technology)	ECC/DEC/(07)01	RIR1023-05
1 600 MHz - 10.6 GHz Main bands: 3 100 - 4 800 MHz 6 000 - 8 500 MHz 8 500 - 9 000 MHz	Communication applications. (Generic UWB usage)	ECC/DEC/(06)04	RIR1023-02
1 600 MHz - 10.6 GHz Main bands: 3 100 - 4 800 MHz 6 000 - 8 500 MHz 8 500 - 9 000 MHz	Communication applications. (Installed in automotive and railway vehicles)	ECC/DEC/(06)04	RIR1023-03
6 000 - 8 500 MHz	Devices using UWB technology onboard aircraft operating in the frequency band from 6 GHz to 8.5 GHz.	ECC/DEC/(12)03	RIR1023-06
21.65 - 26.65 GHz	24 GHz Automotive Short Range Radar (SRR)	ECC/DEC/(04)10	RIR1012-05
24.25 - 26.65 GHz	24 GHz Automotive Short Range Radar (SRR)	ECC/DEC/(04)10	RIR1012-07
76 - 77 GHz	76 GHz Vehicle and infrastructure radar	ERC/REC70-03	RIR1012-03
77 - 81 GHz	79 GHz Automotive Short Range Radar (SRR)	ECC/DEC/(04)03	RIR1012-04
100 Hz – 130 MHz	NMR	ERC/REC70-03	RIR1004-22
4 500 - 7 000 MHz	Tank level probing radar (TLPR)	ERC/REC70-03	RIR1004-09
8 500 - 10 600 MHz	Tank level probing radar (TLPR)	ERC/REC70-03	RIR1004-10

Frequency Range / Main operating	Applications	ECC Decision / Recommendations	Technical interface regulations
24.05 - 27.00 GHz	Tank level probing radar (TLPR)	ERC/REC70-03	RIR1004-11
57.00 - 64.00 GHz	Tank level probing radar (TLPR)	ERC/REC70-03	RIR1004-12
75.00 - 85.00 GHz	Tank level probing radar (TLPR)	ERC/REC70-03	RIR1004-13
6 000 - 8 500 MHz	Level probing radar (LPR)	ECC/DEC/(11)02	RIR1004-15
24.05 - 26.5 GHz	Level probing radar (LPR)	ECC/DEC/(11)02	RIR1004-16
57 - 64 GHz	Level probing radar (LPR)	ECC/DEC/(11)02	RIR1004-17
75 - 85 GHz	Level probing radar (LPR)	ECC/DEC/(11)02	RIR1004-18

5.2 Annex 2: List of specific assignments

Frequency - Range	TX Fix	TX Mobile	Applications
3010 kHz	3010.0	3010.0	Automatic DTS-Mail and voice
4086 - 4426 kHz	4207.5	4207.5	International distress frequency for DSC
	4215.5	4178.0	Automatic Radiotelex (Sitor)
	4378.0	4086.0	Maritime Duplex
	4420.0	4128.0	Maritime Duplex
	4426.0	4134.0	Maritime Duplex
4654 kHz	4654.0	4654.0	Aeronautical Simplex
4763 kHz	4763.0	4763.0	Automatic DTS-Mail and voice
5450.5 kHz	5450.5	5450.5	Automatic DTS-Mail and voice
6312.0 kHz	6312.0	6312.0	International distress frequency for DSC
6643 kHz	6643.0	6643.0	Aeronautical Simplex
8201 - 8809 kHz	8414.5	8414.5	International distress frequency for DSC
	8420.5	8380.5	Automatic Radiotelex (Sitor)
	8425.5	8385.5	Automatic Radiotelex (Sitor)
	8710.0	On request	Maritime Duplex
	8725.0	8201.0	Maritime Duplex
	8782.0	8258.0	Maritime Duplex
	8788.0	8264.0	Maritime Duplex
	8809.0	8285.0	Maritime Duplex
8936 kHz	8936,0	8936,0	Aeronautical Simplex
10069 kHz	10069.0	10069.0	Aeronautical Simplex
11172 kHz	11172.0	11172.0	Automatic DTS-Mail and voice
12233 - 13205 kHz	12577.0	12577.0	International distress frequency for DSC
	12588.0	12485.5	Automatic Radiotelex (Sitor)
	12600.5	12498.0	Automatic Radiotelex (Sitor)
	13080.0	12233.0	Maritime Duplex
	13104.0	12257.0	Maritime Duplex
	13155.0	12308.0	Maritime Duplex
	13164.0	12317.0	Maritime Duplex
	13185.0	12338.0	Maritime Duplex
	13205.0	13205.0	Aeronautical Simplex
13990 kHz	13990.0	13990.0	Automatic DTS-Mail and voice
16390 - 17407 kHz	16804.0	16804.0	International distress frequency for DSC
	16814.5	16691.0	Automatic Radiotelex (Sitor)
	16830.0	16707.0	Automatic Radiotelex (Sitor)
	17272.0	16390.0	Maritime Duplex
	17284.0	16402.0	Maritime Duplex
	17305.0	16423.0	Maritime Duplex
	17332.0	16450.0	Maritime Duplex

Frequency - Range	TX Fix	TX Mobile	Applications
	17407.0	16525.0	Maritime Duplex
18023 kHz	18023.0	18023.0	Aeronautical Simplex
18230 kHz	18230.0	18230.0	Automatic DTS-Mail and voice
18804 / 19779 kHz	19779.0	18804.0	Maritime Duplex
20090 kHz	20090.0	20090.0	Automatic DTS-Mail and voice
22039 - 22831 kHz	22381.5	22289.5	Automatic Radiotelex (Sitor)
	22401.0	22309.0	Automatic Radiotelex (Sitor)
	22735.0	22039.0	Maritime Duplex
	22753.0	22057.0	Maritime Duplex
	22789.0	22093.0	Maritime Duplex
	22831.0	22135.0	Maritime Duplex
25076 / 26151 kHz	26151.0	25076.0	Maritime Duplex

Frequency - Range	Frequency 1	Frequency 2	Frequency 3	Frequency 4	Frequency 5	Applications
26965 - 27405 kHz	26965	26975	26985	27005	27015	**CB radio**
	27025	27035	27055	27065	27075	CB radio
	27085	27105	27115	27125	27135	CB radio
	27155	27165	27175	27185	27205	CB radio
	27215	27225	27235	27245	27255	CB radio
	27265	27275	27285	27295	27305	CB radio
	27315	27325	27335	27345	27355	CB radio
	27365	27375	27385	27395	27405	CB radio
27425 - 27925 kHz						**Professional radio**
	27425	27435	27455	27465	27475	Private companies
	27485	27905				Private companies
	27805	27885				Public police services
	27845	27925				Firebrigades
	27455					Rescue services
147.300 - 147.400 MHz	147.300	147.325	147.375	147.400		**Paging**
156 - 174 MHz						**PMR**
	156.800					Rescue on lakes
	156.900	paired with	161.500	channel	Nr. 18	Rhine service
	156.975	paired with	161.575	channel	Nr. 79	Rhine service
	157.100	paired with	161.700	channel	Nr. 22	Rhine service
	157.200	paired with	161.800	channel	Nr. 24	Rhine service
	157.250	paired with	191.850	channel	Nr. 25	Rhine service
	157.300	paired with	161.900	channel	Nr. 26	Rhine service
	157.350	paired with	191.950	channel	Nr. 27	Rhine service

Frequency - Range	Frequency 1	Frequency 2	Frequency 3	Frequency 4	Frequency 5	Applications
156 - 174 MHz	158.075 (channel Nr. 1)	158.325 (channel Nr. 2)	158.400 (channel Nr. 3)	170.550 (channel Nr. 10)	170.900 (channel Nr. 11)	Fire-brigade service
	158.625 (channel Nr. 5)					Rescue coordination / Fire-brigade service
	158.675 (channel Nr. 7)	158.775 (channel Nr. 4)	158.950 (channel Nr. 6)	160.200 (channel Nr. 8)		Fire-brigade service
	158.825	and	158.700			Securo 1+ 2 (Ambulance)
	159.675	and	159.850			Heli 1 and 2
	161.300					Emergency
	161.975	162.025	**NIB/NPB**			Automatic Identification and Surveillance System (AIS). **Maritime AIS equipment shall not be operated on Swiss territory with the exception on the Rhine, between Rheinfelden and Kembs!**
169 - 174 MHz						**PMR**
	169.425					Paging
	169.500	169.650	169.675	169.700	169.775	Paging
	169.625	169.725	169.750	169.800		Asset tracking and tracing
174 - 230 MHz						**Broadcasting band III**
	174	to	181			Channel 5
	181	to	188			Channel 6
	|	|	|			|
	216	to	223			Channel 11
	223	to	230			Channel 12
439.550 - 439.650 MHz	439.550	439.650				**Civil defence**
446.0 - 446.2 MHz	Analogue / 12.5 kHz. Digital / 6.25 kHz or 12.5 kHz.					**PMR 446**
	446.003125	446.009375	to	446.190625	446.196875	6.25 kHz raster
	446.00625	446.01875	to	446.18125	446.19375	12.5 kHz raster

Frequency - Range	Frequency 1	Frequency 2	Frequency 3	Frequency 4	Frequency 5	Applications
470 - 582 MHz						**Broadcasting band IV**
	470	to	478			channel 21
	478	to	486			channel 22
	|	|	|			|
	574	to	582			channel 34
582 - 782 MHz						**Broadcasting band V**
	582	to	590			channel 35
	590	to	598			channel 36
	598	to	606			channel 37
	606	to	614			channel 38
	|	|	|			|
	686	to	694			channel 48
	|	|	|			|
	774	to	782			channel 59
11'746.66 - 12'091.90 MHz						**BSS channels according to RR Apendix 30 at orbital position -18.8º**
	2	4	6	8	10	Channel Nr.
	11746.66	11785.02	11823.38	11861.74	11900.10	Center frequency
	12	14	16	18	20	Channel Nr.
	11938.46	11976.82	12015.18	12053.54	12091.90	Center frequency

5.3 Annex 3: List of technical interface regulations

Generality

Technical interface regulations (RIR) define the requirements for the frequency use by radiocommunication equipment in the frequency range up to 3000 GHz.

RIR include the technical parameters, the frequency bands as well as the obligation for individual frequency assignment.

RIR indicate the technical standards which, when they are fulfilled, pose a presumption of conformity to the essential requirements.

The fulfilling of the essential requirements constitutes one of the conditions for offering and making available on the market of radiocommunication equipment in the Principality of Liechtenstein.

Legal base

The present technical interface requirements (RIR) are based on Art. 31 et seq. of the Communications Act (LR 784.10, in its current version) in combination with Art. 82 et seq. of the Ordinance concerning Means of Identification and Frequencies in the Field of Electronic Communication (LR 784.101.8, in its current version) and Art. 28, 29 of the Ordinance concerning tasks and authorization of the administration in area of electronic communication (LR 784.101.4, in its current version) and Art. 4 Para. 1 part 'b' and protocol II of agreement between the government of Principality of Liechtenstein and Parliament of Switzerland on matters regarding telecommunication area (LR 0.784.189.101.1, in its current version).

They also rely upon Art. 3 of the Swiss decree concerning telecommunication equipment (SR 784.101.2) in virtue of the Customs Treaty regarding the direct applicability of certain Swiss regulations (LR 170.551.631, in its current version).

The technical interface regulations (RIR) can be obtained from the undermentioned addresses*) and are referred in this document with hyperlinks.

At present the following technical interface regulations are published:

Basis document RIR0000	Explanations	RIR0000

Aeronautical	Aeronautical communications	RIR0101
	Aeronautical navigation	RIR0102
	Aeronautical surveillance	RIR0103
	Aeronautical emergency	RIR0104
	Aeronautical telemetry/telecommand	RIR0105
Broadcasting	Broadcasting (terrestrial)	RIR0201
PMSE	PMSE	RIR0203
Fixed links	Point-to-Multipoint	RIR0301
	Point-to-Point	RIR0302
Land mobile	Digital cellular	RIR0501
	Cordless telephones	RIR0503
	Emergency services	RIR0504
	Paging	RIR0506
	PMR/PAMR	RIR0507
	ITS	RIR0510
Maritime	GMDSS	RIR0601
	Maritime communications	RIR0603
	Maritime navigation	RIR0604
Meteorology	Sondes	RIR0702
	Weather radar	RIR0703
	Wind profilers	RIR0705
Satellite systems (civil)	Feeder links	RIR0805
	FSS Earth stations	RIR0806
	MSS Earth stations	RIR0808
	Radionavigation-satellite systems (RNSS)	RIR0809

Short Range Devices	Alarms	RIR1001
	Railway applications	RIR1002
	Tracking, tracing and data acquisition	RIR1003
	Radiodetermination applications	RIR1004
	Inductive applications	RIR1005
	Wireless applications in healthcare	RIR1006
	Model control	RIR1007
	Non-specific SRDs	RIR1008
	Radio microphones and ALD	RIR1009
	Wideband data transmission systems	RIR1010
	RFID	RIR1011
	TTT	RIR1012
	Wireless audio applications	RIR1013
	Telecommand, telemetry and data transmission with higher power	RIR1021
	UWB applications	RIR1023
Other	Amateur	RIR1101
	CB Radio	RIR1102
	Radiolocation (civil)	RIR1108

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5.4 Annex 4: Harmonised frequency ranges

Indicative list of harmonised frequency ranges and applications in Switzerland (CH) and the Principality of Liechtenstein (FL) and in Europe.

Frequency band	Application	Regulation in CH and FL	Difference in regulation	Harmonised regulation in Europe *)
9 - 315 kHz	SRD / Active medical implants	RIR1006-01	-	81 (2020_01_subcl_1), (EU) 2022/180
9 - 20.05 kHz	SRD / Inductive applications	RIR1005-01	-	36 (2020_01_subcl_1), (EU) 2022/180
20.05 - 135 kHz	SRD / Inductive applications	RIR1005-01	-	36, 37, 39, 40a-e, 41, 42a-b (2020_01_subcl_1), (EU) 2022/180
135 - 140 kHz	SRD / Inductive applications	RIR1005-01	-	106 (2020_01_subcl_1), (EU) 2022/180
140 - 148.5 kHz	SRD / Inductive applications	RIR1005-01	-	73 (2020_01_subcl_1), (EU) 2022/180
148.5 - 5000 kHz	SRD / Inductive applications	RIR1005- 09	-	74 (2020_01_subcl_1), (EU) 2022/180
400 - 600 kHz	SRD / Inductive applications	RIR1005- 14	-	75 (2020_01_subcl_1), (EU) 2022/180
457 kHz	SRD / Detection of avalanche victims	RIR1003-01	-	49 (2020_01_subcl_1), (EU) 2022/180
984-7484 kHz	Transport and Traffic Telematics, for Eurobalise only	RIR1002-04	-	109 (2020_01_subcl_1), (EU) 2022/180
3155 - 3400 kHz	SRD / Inductive applications	RIR1005-10	-	76 (2020_01_subcl_1), (EU) 2022/180
5000 - 30000 kHz	SRD / Inductive applications	RIR1005-13	-	77 (2020_01_subcl_1), (EU) 2022/180
6765 - 6795 kHz	SRD / Inductive applications	RIR1005-02	-	44 (2020_01_subcl_1), (EU) 2022/180
7300 - 23000 kHz	Transport and Traffic Telematics, for Euroloop only	RIR1002-05	-	110 (2020_01_subcl_1), (EU) 2022/180
7400 - 8800 kHz	SRD / Inductive applications	RIR1005-03	-	45 (2020_01_subcl_1), (EU) 2022/180
10200 - 11000 kHz	SRD / Inductive applications	RIR1005-11	-	78 (2020_01_subcl_1), (EU) 2022/180
13.553 - 13.567 MHz	SRD / Inductive applications	RIR1005-04	-	116 (2020_01_subcl_1), (EU) 2022/180
13.553 - 13.567 MHz	SRD / Inductive applications	RIR1005-12	-	79 (2020_01_subcl_1), (EU) 2022/180
13.553 - 13.567 MHz	SRD / Non Specific Short Range Devices	RIR1008-02	-	24 (2020_01_subcl_1), (EU) 2022/180
26.957 - 27.283 MHz	SRD / Non Specific Short Range Devices	RIR1008-03	-	25 (2020_01_subcl_1), (EU) 2022/180
26.990 - 27.000 MHz	SRD / Model control	RIR1007-01	-	94 (2020_01_subcl_1), (EU) 2022/180

Frequency band	Application	Regulation in CH and FL	Difference in regulation	Harmonised regulation in Europe *)
26.990 - 27.000 MHz	SRD / Non Specific Short Range Devices	RIR1008-38	-	118 (2020_01_subcl_1), (EU) 2022/180
27.040 - 27.050 MHz	SRD / Model control	RIR1007-01	-	95 (2020_01_subcl_1), (EU) 2022/180
27.040 - 27.050 MHz	SRD / Non Specific Short Range Devices	RIR1008-38	-	119 (2020_01_subcl_1), (EU) 2022/180
27.090 - 27.100 MHz	SRD / Model control	RIR1007-01	-	96 (2020_01_subcl_1), (EU) 2022/180
27.090 - 27.100 MHz	SRD / Non Specific Short Range Devices	RIR1008-38	-	120 (2020_01_subcl_1), (EU) 2022/180
27.140 - 27.150 MHz	SRD / Model control	RIR1007-01	-	97 (2020_01_subcl_1), (EU) 2022/180
27.140 - 27.150 MHz	SRD / Non Specific Short Range Devices	RIR1008-38	-	121 (2020_01_subcl_1), (EU) 2022/180
27.190 - 27.200 MHz	SRD / Model control	RIR1007-01	-	98 (2020_01_subcl_1), (EU) 2022/180
27.190 - 27.200 MHz	SRD / Non Specific Short Range Devices	RIR1008-38	-	122 (2020_01_subcl_1), (EU) 2022/180
30 - 37.5 MHz	SRD / Medical implants	RIR1006-04	-	82 (2020_01_subcl_1), (EU) 2022/180
40.660 - 40.700 MHz	SRD / Non Specific Short Range Devices	RIR1008-04	-	19 (2020_01_subcl_1), (EU) 2022/180
87.5 - 108 MHz	SRD / Wireless audio application	RIR1013-19	-	86 (2020_01_subcl_1), (EU) 2022/180
169.4 - 169.475 MHz	SRD / Public hearing aids	RIR1009-14	-	68 (2020_01_subcl_1), (EU) 2022/180
169.4 - 169.475 MHz	SRD / Meter reading systems	RIR1003-03	-	123 (2020_01_subcl_1), (EU) 2022/180
169.4 - 169.475 MHz	SRD / Non Specific Short Range Devices	RIR1008-32	-	80 (2020_01_subcl_1), (EU) 2022/180
169.4 - 169.4875 MHz	SRD / Non Specific Short Range Devices	RIR1008-33	-	128 (2020_01_subcl_1), (EU) 2022/180
169.4875 - 169.5875 MHz	SRD / Public hearing aids	RIR1009-15	-	64 (2020_01_subcl_1), (EU) 2022/180
169.4875 - 169.5875 MHz	SRD / Non Specific Short Range Devices	RIR1008-34	-	124 (2020_01_subcl_1), (EU) 2022/180
169.5875 - 169.8125 MHz	SRD / Non Specific Short Range Devices	RIR1008-35	-	129 (2020_01_subcl_1), (EU) 2022/180
401 - 402 MHz	Ultra Low Power Active Medical Implant communication systems (ULP-AMI)	RIR1006-07	-	83 (2020_01_subcl_1), (EU) 2022/180
402 - 405 MHz	Ultra Low Power Active Medical Implant communication systems (ULP-AMI)	RIR1006-02	-	47 (2020_01_subcl_1), (EU) 2022/180
405 - 406 MHz	Ultra Low Power Active Medical Implant communication systems (ULP-AMI)	RIR1006-08	-	84 (2020_01_subcl_1), (EU) 2022/180

Frequency band	Application	Regulation in CH and FL	Difference in regulation	Harmonised regulation in Europe *)
430 - 440 MHz	Ultra-Low Power Wireless Medical Capsule Endoscopy (ULP- WMCE)	RIR1006-12	-	137 (2020_01_subcl_1), (EU) 2022/180
433.05 - 434.04 MHz	SRD / Non Specific Short Range Devices	RIR1008-18	-	61 (2020_01_subcl_1), (EU) 2022/180
433.05 - 434.04 MHz	SRD / Non Specific Short Range Devices	RIR1008-05	-	20 (2020_01_subcl_1), (EU) 2022/180
434.04 - 434.79 MHz	SRD / Non Specific Short Range Devices	RIR1008-18	-	63 (2020_01_subcl_1), (EU) 2022/180
434.04 - 434.79 MHz	SRD / Non Specific Short Range Devices	RIR1008-05	-	20 (2020_01_subcl_1), (EU) 2022/180
434.04 - 434.79 MHz	SRD / Non Specific Short Range Devices	RIR1008-19	-	65 (2020_01_subcl_1), (EU) 2022/180
446.0 - 446.2 MHz	Land mobile / PMR446 analog and digital	RIR0507-35	-	51 (2020_01_subcl_1), (EU) 2022/180
862 - 863 MHz	SRD / Non Specific Short Range Devices	RIR1008-43	-	138 (2020_01_subcl_1), (EU) 2022/180
863 - 865 MHz	SRD / Radio Microphones	RIR1009-05	-	48 (2020_01_subcl_1), (EU) 2022/180
863 - 865 MHz	SRD / Wireless Audio applications	RIR1013-01	-	48 (2020_01_subcl_1), (EU) 2022/180
863 - 865 MHz	SRD / Non Specific Short Range Devices	RIR1008- 44	-	66 (2020_01_subcl_1), (EU) 2022/180
865 - 868 MHz	SRD / Non Specific Short Range Devices	RIR1008-30	-	67 (2020_01_subcl_1), (EU) 2022/180
865 - 868 MHz	SRD / Radio Frequency Identification (RFID) Devices	RIR1011-07	-	56 (2020_01_subcl_1), (EU) 2022/180
868.0 - 868.6 MHz	SRD / Non Specific Short Range Devices	RIR1008-06	-	28 (2020_01_subcl_1), (EU) 2022/180
868.6 - 868.7 MHz	SRD / Alarms	RIR1001-02	-	32 (2020_01_subcl_1), (EU) 2022/180
868.7 - 869.2 MHz	SRD / Non Specific Short Range Devices	RIR1008-07	-	29 (2020_01_subcl_1), (EU) 2022/180
869.2 - 869.25 MHz	SRD / Social Alarms	RIR1001-05	-	35 (2020_01_subcl_1), (EU) 2022/180
869.25 - 869.3 MHz	SRD / Alarms	RIR1001-03	-	33 (2020_01_subcl_1), (EU) 2022/180
869.3 - 869.4 MHz	SRD / Alarms	RIR1001-06	-	72 (2020_01_subcl_1), (EU) 2022/180
869.4 - 869.65 MHz	SRD / Non Specific Short Range Devices	RIR1008-09	-	30 (2020_01_subcl_1), (EU) 2022/180
869.65 - 869.7 MHz	SRD / Alarms	RIR1001-04	-	34 (2020_01_subcl_1), (EU) 2022/180
869.7 - 870 MHz	SRD / Non Specific Short Range Devices	RIR1008-27	-	69 (2020_01_subcl_1), (EU) 2022/180
869.7 - 870 MHz	SRD / Non Specific Short Range Devices	RIR1008-10	-	31 (2020_01_subcl_1), (EU) 2022/180

Frequency band	Application	Regulation in CH and FL	Difference in regulation	Harmonised regulation in Europe *)
876 - 880 / 921 - 925 MHz	Land mobile / GSM-R	RIR0501-16	-	9a (2020_01_subcl_1)
880 - 915 / 925 - 960 MHz	Land mobile / GSM	RIR0501-01	-	9a (2020_01_subcl_1), (EU) 2022/173
1525.0 - 1544.0 MHz	Satellite systems / Land Mobile Earth Stations	RIR0808-17	-	11 (2020_01_subcl_1)
1525.0 - 1544.0 MHz	Satellite systems / Land Mobile Satellite Service	RIR0808-07	-	16 (2020_01_subcl_1)
1555.0 - 1559.0 MHz	Satellite systems / Land Mobile Earth Stations	RIR0808-17	-	11 (2020_01_subcl_1)
1555.0 - 1559.0 MHz	Satellite systems / Land Mobile Satellite Service	RIR0808-07	-	16 (2020_01_subcl_1)
1610 - 1613.5 MHz	Satellite systems / Satellite-Personal Communications (PCN) earth stations	RIR0808-05	Frequency range	14 (2020_01_subcl_1)
1613.8 - 1626.5 MHz	Satellite systems / Satellite-Personal Communications (PCN) earth stations	RIR0808-05	Frequency range	14 (2020_01_subcl_1)
1626.5 - 1645.5 MHz	Satellite systems / Land Mobile Satellite Service	RIR0808-07	Frequency range	16 (2020_01_subcl_1)
1631.5 - 1634.5 MHz	Satellite systems / Land Mobile Earth Stations	RIR0808-17	Frequency range	11 (2020_01_subcl_1)
1656.5 - 1660.5 MHz	Satellite systems / Land Mobile Satellite Service	RIR0808-02	Frequency range	16 (2020_01_subcl_1)
1656.5 - 1660.5 MHz	Satellite systems / Land Mobile Earth Stations	RIR0808-17	Frequency range	11 (2020_01_subcl_1)
1710 - 1785 / 1805 - 1880 MHz	Land mobile / GSM	RIR0501-02	Frequency range	9a (2020_01_subcl_1), (EU) 2022/173
1880 - 1900 MHz	Land mobile / DECT	RIR0503-01	-	18 (2020_01_subcl_1)
1880 - 1900 MHz	Land mobile / DECT	RIR0503-01	-	H10 (2014_12_subcl_2)
1900 – 1910 MHz	RMR	RIR0501-32		(EU) 2021/1730
1980 - 2010 MHz	Satellite systems / Satellite-Personal Communications (PCN) earth stations	RIR0808-10	-	15 (2020_01_subcl_1)
2170 - 2200 MHz	Satellite systems / Satellite-Personal Communications (PCN) earth stations	RIR0808-10	-	15 (2020_01_subcl_1)
2400 - 2483.5 MHz	SRD / Non Specific Short Range Devices	RIR1008-11	-	21 (2020_01_subcl_1), (EU) 2022/180
2400 - 2483.5 MHz	SRD / Wideband Data Transmission Systems	RIR1010-01	-	22 (2020_01_subcl_1), (EU) 2022/180
2400 - 2483.5 MHz	SRD / Radio determination applications	RIR1004-01	-	26 (2020_01_subcl_1), (EU) 2022/180
2446 - 2454 MHz	SRD / Radio Frequency Identification (RFID)	RIR1011-01	-	100 (2020_01_subcl_1), (EU) 2022/180

Frequency band	Application	Regulation in CH and FL	Difference in regulation	Harmonised regulation in Europe *)
2483.5 - 2500 MHz	Satellite systems / Satellite-Personal Communications (PCN) earth stations	RIR0808-05	-	14 (2020_01_subcl_1)
2483.5 - 2500 MHz	SRD / Active medical implants (not for peripheral master units)	RIR1006-09	-	117 (2020_01_subcl_1), (EU) 2022/180
2483.5 - 2500 MHz	SRD / Active medical implants (peripheral master units)	RIR1006-09	-	H09 (2014_ 12 _subcl_2), (EU) 2022/180
2483.5 - 2500 MHz	SRD / Medical body area network systems, within healtcare facilities	RIR1006-10	-	H09 (2014_12_subcl_2), (EU) 2022/180
2483.5 - 2500 MHz	SRD / Medical body area network systems, within patient's home	RIR1006-11	-	H09 (2014_12_subcl_2), (EU) 2022/180
2500 - 2570 MHz	Land mobile / IMT User Equipment	RIR0501-11	-	EC Decision (EU) 2020/636, 2008/477/EC
2620 - 2690 MHz	Land mobile / IMT Base Station	RIR0501-12	-	EC Decision (EU) 2020/636, 2008/477/EC
4500 - 7000 MHz	SRD / Tank level probing radar (TLPR)	RIR1004-09	-	89 (2020_01_subcl_1), (EU) 2022/180
5150 - 5350 MHz	Wideband Data Transmission Systems	RIR1010-05	-	H01 (2014_12_subcl_2), (EU) 2022/179
5470 - 5725 MHz	Wideband Data Transmission Systems	RIR1010-04	-	54 (2020_01_subcl_1), (EU) 2022/179
5725 - 5875 MHz	SRD / Non Specific Short Range Devices	RIR1008-12	-	43 (2020_01_subcl_1), (EU) 2022/180
5795 - 5805 MHz	Transport and Traffic Telematics. For Road Toll Systems only.	RIR1012-01	-	H05 (2014_12_subcl_2), (EU) 2022/180
5875 - 5925 MHz	Intelligent Transport Systems (ITS)	RIR0501-01	Frequency range	135 (2020_01_subcl_1), (EU) 2020/1426
5945 - 6425 MHz	Wideband data transmission systems	RIR1010- 11		(EU) 2021/1067
6000 - 8500 MHz	SRD / Level probing radar (LPR)	RIR1004-15	-	H06 (2014_12_subcl_2), (EU) 2022/180
8500 - 10600 MHz	SRD / Tank level probing radar (TLPR)	RIR1004-10	-	90 (2020_01_subcl_1), (EU) 2022/180
10.7 - 11.7 GHz	Satellite systems / Land Mobile Earth Stations	RIR0808-16	-	12 (2020_01_subcl_1)
12.5 - 12.75 GHz	Satellite systems / Land Mobile Earth Stations	RIR0808-16	-	12 (2020_01_subcl_1)
14.0 - 14.25 GHz	Satellite systems / Land Mobile Earth Stations	RIR0808-16	-	12 (2020_01_subcl_1)
17.1 - 17.3 GHz	SRD / Radio determination applications	RIR1004-14	-	88 (2020_01_subcl_1), (EU) 2022/180
21.65 - 26.65 GHz	SRD / Automotive short-range radar 24 GHz	RIR1012-05	-	52 (2020_01_subcl_1), (EU) 2017/2077, 2011/485/EU, 2005/50/EC

Frequency band	Application	Regulation in CH and FL	Difference in regulation	Harmonised regulation in Europe *)
24.05 - 24.25 GHz	SRD / Automotive radar	RIR1012-11		101, 102, 103, 104 (2020_01_subcl_1), (EU) 2022/180
24.05 - 26.5 GHz	SRD / Level probing radar (LPR)	RIR1004-16	-	H07 (2014_12_subcl_2), (EU) 2022/180
24.05 - 27.00 GHz	SRD / Tank level probing radar (TLPR)	RIR1004-11	-	91 (2020_01_subcl_1), (EU) 2022/180
24.15 - 24.25 GHz	SRD / Movement Detection / Non Specific Short Range Devices	RIR1008-13	Frequency range	27 (2020_01_subcl_1), (EU) 2022/180
24.25 - 26.65 GHz	SRD / Automotive short-range radar 24 GHz	RIR1012-07	-	52 (2020_01_subcl_1), (EU) 2017/2077, (2011/485/EU), 2005/50/EC
57 - 64 GHz	SRD / Tank level probing radar (TLPR)	RIR1004-12	-	92 (2020_01_subcl_1), (EU) 2022/180
57 - 71 GHz	SRD / Wideband Data Transmission Systems	RIR1010-07, RIR1010-09, RIR1010-10	-	141, 142, 143 (2020_01_subcl_1), (EU) 2022/180
61.0 - 61.5 GHz	SRD / Non Specific Short Range Devices	RIR1008-14	-	71 (2020_01_subcl_1), (EU) 2022/180
63.72 - 65.88 GHz	Intelligent Transport Systems (ITS)	RIR0510-04	-	105 (2020_01_subcl_1)
75 - 85 GHz	SRD / Level probing radar (LPR)	RIR1004-18	-	H08 (2014_12_subcl_2), (EU) 2022/180
75 - 85 GHz	SRD / Tank level probing radar (TLPR)	RIR1004-13	-	93 (2020_01_subcl_1), (EU) 2022/180
76 - 77 GHz	SRD / Vehicle and infrastructure radar	RIR1012-03	-	50a (2020_01_subcl_1), (EU) 2022/180
76 - 77 GHz	SRD / Obstacle detection systems for rotorcraft use	RIR1004-19	-	50b (2020_01_subcl_1), (EU) 2022/180
77 - 81 GHz	SRD / Vehicle and infrastructure radar	RIR1012-04	-	53 (2020_01_subcl_1), 2004/545/EC
122 - 122.25 GHz	SRD / Non Specific Short Range Devices	RIR1008-36	-	107a (2020_01_subcl_1), (EU) 2022/180
122.25 - 123 GHz	SRD / Non Specific Short Range Devices	RIR1008-15	-	107b (2020_01_subcl_1), (EU) 2022/180
1.6 - 10.6 GHz	SRD using ultra-wideband technology	RIR1023	-	H02 a-f (2014_12_subcl_2), (EU) 2022/180

*) Sub- classes of Class 1 according to Art. 1(1) of Commission Decision 2000/299/EC and Art. 8(2) of Directive 2014/53/EU and relevant EC Decisions.

5.5 Appendix 1: Abbreviations

ACLR	Adjacent Channel Leakage Ratio
ACP	Adjacent Channel Power
ACRR	Adjacent Channel Rejection Ratio
ADS	Automatic Dependant Surveillance (Aeronautical)
Aer Mob (OR)	Aeronautical Radiocommunication
Aer Mob (R)	Aeronautical Mobile (off route)
Aer Nav	Aeronautical Radionavigation
AES	Aircraft Earth Stations
AF	Air Forces
AFA	Adaptive Frequency Agility
AGA	Air-Ground-Air
AIP	Aeronautical Information Publication (CH)
AIS	"Automatic Identification and Surveillance System" or "Universal shipborne Automatic Identification System"
ALD	Assistive Listening Devices
AM	Amplitude Modulation
AMS(R)S	Aeronautical Mobile-Satellite (Route) Service
ASDE	Airport Surface Detection Equipment
ATIS	Automatic Transmitter Identification System
ATPC	Automatic Transmit Power Control
BBDR	Broad Band Disaster Relief
BC	Broadcasting
BEM	Block Edge Mask
BFWA	Broadband Fixed Wireless Access
BMA	Building Material Analysis
BSS	Broadcasting Satellite Service
BTS	Base Transceiver Station
BW	Bandwidth
BWA	Broadband Wireless Access
CB	Citizen's Band
CDMA	Code Division Multiple Access
CEPT	European Conference of Postal and Telecommunications Administrations
CGC	Complementary Ground Component
CH	Switzerland
CICR	Comité International de la Croix Rouge
CIV	Civil
CNPC	Control and Non-Payload Communication
COM	Communication
CW	Continous Waves
DA2GC	Direct Air-to-Ground Communications

DAA	Detect and Avoid
DAB	Digital Audio Broadcasting
dB	Decibel
dBd	Antenna gain in decibels relative to a dipole antenna
dBi	Antenna gain in decibels relative to an isotropic antenna
dBm	dB relative to the power of 1 mW
dBW	dB relative to the power of 1 W
DC	Duty Cycle
DEC	Decision
DECT	Digital Enhanced Cordless Telecommunications
D-GPS	Differential Global Positioning System
DL	Down Link (Base station to Mobile station)
DME	Distance Measuring Equipment
DMO	Direct Mode Operation (PMR)
DMR	Digital Mobile Radio
DRM	Digital Radio Mondiale
DRS	Digital Radio System
DSC	Digital Selective Calling
DSRR	Digital Short- Range Radio
DSSS	Direct Sequence Spread Spectrum
DVB-T	Digital Video Broadcasting - Terrestrial
DVB-H	Digital Video Broadcasting - Handheld
(E/S)	Earth to space, (E/S) as addition to space services and applications
EAS	Electronic Article Surveillance
ECA	European Common Allocation
ECC	Electronic Communications Committee (of CEPT)
ECC/DEC	Decision from the ECC
ECC/REC	Recommendation from the ECC
ECO	European Communications Office (former ERO)
EESS	Earth Exploration-Satellite Service
EFIS	ECO Frequency Information System
EIRP or e.i.r.p.	Equivalent Isotropically Radiated Power
ELT	Emergency Locator Transmitter
EMC	Electromagnetic Compatibility
EN	European Standard (Telecommunications series)
ENG/OB	Electronic News Gathering / Outside Broadcasting
EPIRBs	Emergency Position Indicating Radio Beacon
ERC	European Radiocommunications Committee
ERC/DEC	Decision from the ERC
ERC/REC	Recommendation from the ERC
ERMES	Enhanced Radio Messaging System
ERO	European Radiocommunications Office (now ECO)

ERP or e.r.p.	Effective Radiated Power
ERPEP or e.r.p.e.p.	Effective Radiated Peak Envelope Power
ES	Earth Station
ESIM	Earth Station In Motion (in satellite systems)
ESV	Earth Stations on-board Vessels
ETSI	European Telecommunications Standards Institut
FB	Base station (in a mobile radio system)
FHSS	Frequency Hopping Spread Spectrum
FL	Principality of Liechtenstein
FM	Frequency Modulation
FMCW	Frequency Modulated Continuous Wave
FOCA	Federal Office of Civil Aviation
FHSS	Frequency Hopping Spread Spectrum
FRMCS	Future Railway Mobile Communication System
FS	Fixed Service
FSS	Fixed-Satellite Service
FWA	Fixed Wireless Access
GALILEO	European Global Navigation Satellite System
GBAS	Ground Based Augmentation System
GBSAR	Ground Based Synthetic Aperture Radar
GBR	Ground Based Radar
GFT	Global Flight Tracking
GLONASS	Global Orbiting Navigation Satellite System (Globalnaya Navigatsionnaya Sputnikovaya Sistema)
GMDSS	Global Maritime Distress and Safety System
GNSS	Global Navigation Satellite System
GNSS Pseudolites	Global Navigation Satellite System Pseudolites
GPR	Ground Probing Radar
GPS	Global Positioning System
GSM	Global System for Mobile Communications
GSM 1800	Global System for Mobile Communications at 1800 MHz
GSM 900	Global System for Mobile Communications at 900 MHz
GSMOBA	Global System for Mobile Communications On Board Aircraft
GSMOBV	Global System for Mobile Communications On Board Vessels
GSM-R	Global System for Mobile Communications on Railways
GSO ESOMPs	Earth Stations On Mobile Platforms (ESOMPs) operating with Geostationary Satellite Orbit systems
HAPS	High Altitude Platform Station
HDFS	High Density applications in the Fixed Service
HEST	High EIRP Satellite Terminal
HIPERLAN	High Performance Radio Local Area Network
HRPD	High Rate Packet Data

ICAO	International Civil Aviation Organisation
IEEE	Institute of Electrical and Electronics Engineers
IFF	Identification Friend or Foe
ILS	Instrument Landing Systems
IMT	International Mobile Telecommunications (generic term used for broadband mobile systems)
IMT-2000	International Mobile Telecommunications-2000
IoT	Internet of Things
ISM	Industrial, Scientific and Medical Applications
ITS	Intelligent Transport Systems
ITU	International Telecommunication Union
JTIDS	Joint Tactical Information and Distribution System
LAN	Local Area Network
LBRDC	Low Bit Rate Data Communications
LBT	Listen Before Talk, Listen Before Transmit
LEO	Low Earth Orbiting
LEST	Low EIRP Satellite Terminal
Links	Radio Connections
LMES	Land Mobile satellite Earth Station
LPD	Low Power Device
LPR	Level Probing Radar
LRR	Long Range Radar
LTE	Long Term Evolution
Mar Mob	Maritime Mobile
MAC	Medium Access Control
MBR	Maritime Broadband Radio
MFCN	Mobile/Fixed Communications Networks
MEDS	Medical Data Service Systems
MIDS	Multifunctional Information Distribution System
MIL	Military
Misc. applic.	Miscellaneous applications
ML	Mobile station (in a mobile radio system)
MLS	Microwave Landing System
MMES	Maritime Mobile Earth Stations
mmwFS	millimetre wave applications in the Fixed Service
MP-MP	Multipoint to Multipoint
MSI	Maritime Safety Information
MSS	Mobile-Satellite Service
MWS	Multimedia Wireless System
NAVTEX	Narrow-band direct-printing telegraphy system for transmission of navigational and meteorological warnings and urgent information to ships
NCU	Network Control Unit

NDB	Non Directional Radio Beacon
NGSO	Non Geostationary Satellite Orbit
NGSO ESOMPs	Land and Maritime Earth Stations On Mobile Platforms (ESOMPs) operating with Non Geostationary Satellite Orbit systems
NIB	Non Interference Basis (in connection with frequency assignement)
NMT	Nordic Mobile Telephone
NPB	Non Protected Basis (in connection with frequency assignement)
NP2M	Narrowband Point to Multipoint system
OB	Outside Broadcasting
OBTS	On Board Transceiver Station
OFCOM	Federal Office of Communications
OFDM	Orthogonal Frequency Division Multiplexing
PAMR	Public Access Mobile Radio
PLB	Personal Locator Beacon
PLC	Powerline Communications
P-MP	Point to Multipoint
PMR	Private (Professional) Mobile Radio
PMSE	Programme Making and Special Events
POCSAG	Post Office Code Standard Advisory Group
PPDR	Public Protection and Disaster Relief
Primary	Where a band is indicated as allocated to more than one service and the name of the service is printed in "capitals" (example: FIXED) these are called "primary" services. Within a band, primary services shall have prior choice of frequencies. Where a band is indicated in a footnote of the Table as allocated to a service "on a primary basis" in an area smaller than a Region, or in a particular country, this is a primary service only in that area or country.
P-P	Point to Point
ppm	parts per million
PRF	Pulse Repetition Frequency
PSD	Power Spectral Density
R Tags	Radio Tags
R&TTE	Radio and Telecommunications Terminal Equipment
RA	Radio Astronomy
RAS	Radio Astronomy Service
RBW	Resolution Bandwidth
REC	Recommendation
REGA	Swiss Air-Rescue
RF	Radio frequency
RFID	Radio Frequency Identification
RIR	Radio Interface Regulation
RLAN	Radio Local Area Networks
RMR	Railway Mobile Radio
RNSS	Radionavigation Satellite Service

RR	Radio Regulations
RR xxx	Radio Regulations, Note xxx (see NaFZ Annex 1)
RSBN	Radiolocation Systems for Short Range Navigation
RSU	Road Site Units
RTE	Radar Target Enhancer
RTPC	Remote Transmit Power Control
RX	Receiver (Receiving frequency)
(S/E)	Space to Earth, (S/E) as addition to space services and applications
SAB	Service Ancillary to Broadcasting
SAP	Service Ancillary to Programme making
SAR	Search and Rescue
SARSAT	Search and Rescue Satellite
SDL	Supplementary Down Link
S-DAB	Satellite Digital Audio Broadcasting
Secondary	Where a band is indicated as allocated to more than one service and the name of the service is printed in "normal characters" (example: Fixed) these are called "secondary services". Stations of a secondary service: a) shall not cause harmful interference to stations of primary services to which thefrequencies are already assigned or to which stations may be assigned at a later date; b) cannot claim protection from harmful interference from stations of a primary service to which frequencies are already assigned or may be assigned at a later date; 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. Where a band is indicated in a footnote of the table as allocated to a service "on a secondary basis" in an area smaller than a Region, or in a particular country, this is a secondary service.
SF-CW Radar	Stepped Frequency CW Radar
SIT/SUT	Satellite Interactive Terminal / Satellite User Terminal
SNG	Satellite News Gathering
SOLAS	Safety of Life at Sea
SPA	Self Provided Applications
S-PCS	Satellite Personal Communication System
SRD	Short Range Device
SRR	Short Range Radars
SS	Spread Spectrum
SSR	Secondary Surveillance Radar
TACAN	Tactical Air Navigation
TACS	Total Access Communications System
TAPS	TETRA Advanced Packet Service
T-DAB	Terrestrial Digital Audio Broadcasting
TETRA	Trans European Trunked Radio System, Terrestrial Trunked Radio
TETRAPOL	Digital PMR technology

TLPR	Tank Level Probing Radar
TRA-ECS	Terrestrial radio applications capable of providing electronic communications services
TRA-ECS	Terrestrial radio applications capable of providing electronic communications services
TTT	Transport and Traffic Telematics
TV	Television
TX	Transmitter (Transmitting frequency)
UA	Unmanned Aircraft
UAS	Unmanned Aircraft System
UAV	Unmanned Aerial Vehicle
UL	Up Link (Mobile station to Base station)
ULP-AID	Ultra Low Power Animal Implantable Devices
ULP-AMI	Ultra Low Power Active Medical Implants
ULP-MMI	Ultra Low Power Medical Membrane Implants
ULP-WMCE	Ultra Low Power Wireless Medical Capsule Endoscopy
UMTS	Universal Mobile Telecommunication System
UNO	United Nations Organisation
UWB	Ultra Wide Band
VBW	Video BandWidth
VLBI	Very Long Baseline Interferometry
VOR	VHF Omnidirectional Radio Range
v-BS	Vessel Base Station
v-MS	Vessel Mobile Station
VSAT	Very Small Aperture Terminal
VSWR	Voltage Standing Wave Ratio
VTS	Vessel Traffic System (radar)
WAIC	Wireless Avionics Intra-Communications systems
WAS	Wireless Access Systems
WAS/RLAN	Wireless Access Systems including Radio Local Area Networks
WB	Wide Band
WIA	Wireless Industrial Applications
WiMAX	Worldwide Interoperability for Microwave Access
WPR	Wall Probing Radar
WRC	World Radiocommunication Conference
WTO	World Trade Organization

5.6 Appendix 2: Relevant CEPT ERC or ECC Decisions and Recommendations

Note: The mere fact that a Decision or a Recommendation is listed in the column "Notes" does not mean that the document has been approved in Switzerland. The official publication of the CEPT Electronic Communications Committee (http://www.cept.org/ecc) contains information on the implementation status.

Decisions:

- ECC/DEC/(22)01 Free circulation and use of Mobile/Fixed Communication Networks (MFCN) terminals operating under the control of terrestrial networks. Approved 4 March 2022.
- ECC/DEC/(21)02 The harmonised frequency band 76-77 GHz, technical characteristics, exemption from individual licensing and free circulation and use of High Definition Ground Based Synthetic Aperture Radar (HD-GBSAR). Approved 5 November 2021.
- ECC/DEC/(21)01 The use of the bands 47.2-50.2 GHz and 50.4-52.4 GHz by the fixed-satellite service (Earth-to-space). Approved 5 November 2021. Updated 4 March 2022.
- ECC/DEC/(20)02 Harmonised use of the paired frequency bands 874.4-880.0 MHz and 919.4-925.0 MHz and of the unpaired frequency band 1900-1910 MHz for Railway Mobile Radio (RMR). Approved 20 November 2020.
- ECC/DEC/(20)01 The harmonised use of the frequency bands 5945 to 6425 MHz for the implementation of Wireless Access Systems including Radio Local Area Networks (WAS/RLANs). Approved 20 November 2020.
- ECC/DEC/(19)04 The harmonised use of spectrum, free circulation and use of earth stations on-board aircraft operating with GSO FSS networks and NGSO FSS systems in the frequency bands 12.75-13.25 GHz (Earth-to-space) and 10.7-12.75 GHz (space-to-Earth). Approved 6 March 2020. Editorial update 28 May 2021.
- ECC/DEC/(19)03 The harmonised usage of the channels of the radio regulations appendix 18 (transmitting frequencies in the VHF maritime mobile band). Approved 8 March 2019.
- ECC/DEC/(19)02 Land mobile systems in the frequency ranges 68-87.5 MHz, 146-174 MHz, 406.1-410 MHz, 410-430 MHz, 440-450 MHz and 450-470 MHz. Approved 8 March 2019.
- ECC/DEC/(18)06 The harmonised technical conditions for Mobile/Fixed Communications Networks (MFCN) in the band 24.25-27.5 GHz. Approved 06 July 2018. Corrected 26 October 2018. Amended 20 November 2020.
- ECC/DEC/(18)05 The harmonised use, exemption from individual licensing and free circulation and use of Earth Stations In-Motion (ESIM) operating with NGSO FSS satellite systems in the frequency bands 10.7-12.75 GHz and 14.0-14.5 GHz. Approved 6 July 2018. Editorial update 28 May 2021. Updated 5 November 2021.
- ECC/DEC/(18)04 The harmonised use, exemption from individual licensing and free circulation and use of land based Earth Stations In-Motion (ESIM) operating with GSO FSS satellite systems in the frequency bands 10.7-12.75 GHz and 14.0-14.5 GHz. Approved 6 July 2018.
- ECC/DEC/(17)06 The harmonised use of the frequency bands 1427-1452 MHz and 1492-1518 MHz for Mobile/Fixed Communications Networks Supplemental Downlink (MFCN SDL). Approved 17 November 2017.
- ECC/DEC/(17)04 The harmonised use and exemption from individual licensing of fixed earth stations operating with NGSO FSS satellite systems in the frequency bands 10.7-12.75 GHz and 14.0-14.5 GHz. Approved 30 June 2017. Amended 8 March 2019. Updated 2 July 2021. Amended 5 November 2021.
- ECC/DEC/(16)02 Harmonised technical conditions and frequency bands for the implementation of Broadband Public Protection and Disaster Relief (BB-PPDR) systems. Approved 17 June 2016. Amended 8 March 2019.
- ECC/DEC/(16)01 The harmonised frequency band 76-77 GHz, technical characteristics, exemption from individual licensing and free carriage and use of obstacle detection radars for rotorcraft use. Approved 04 March 2016. Corrected 18 November 2016.
- ECC/DEC/(15)05 The harmonised frequency range 446.0-446.2 MHz, technical characteristics, exemption from individual licensing and free carriage and use of analogue and digital PMR 446 applications. Approved 3 July 2015. Amended 02 March 2018.
- ECC/DEC/(15)04 The harmonised use, free circulation and exemption from individual licensing of Land and Maritime Earth Stations On Mobile Platforms (ESOMPs) operating with NGSO FSS satellite systems in the frequency ranges 17.3-20.2 GHz, 27.5-29.1 GHz and 29.5-30.5 GHz. Approved 3 July 2015. Amended 8 March 2019. Amended 20 November 2020.

- ECC/DEC/(15)01 Harmonised technical conditions for mobile/fixed communications networks (MFCN) in the band 694-790 MHz including a paired frequency arrangement (Frequency Division Duplex 2x30 MHz) and an optional unpaired frequency arrangement (Supplemental Downlink). Approved 06 March 2015.
- ECC/DEC/(13)03 The harmonised use of the frequency band 1452-1492 MHz for Mobile/Fixed Communications Networks Supplemental Downlink (MFCN SDL). Approved 8 November 2013. Amended 3 July 2015. Amended 02 March 2018.
- ECC/DEC/(13)01 The harmonised use, free circulation, and exemption from individual licensing of Earth Stations On Mobile Platforms (ESOMPs) in the frequency bands available for use by uncoordinated FSS Earth stations within the ranges 17.3-20.2 GHz and 27.5-30.0 GHz. Approved 8 March 2013. Amended 26 October 2018. Amended 2 July 2021.
- ECC/DEC/(12)04 ECC Decision of 2 November 2012 on the withdrawal of ECC Decision (02)01. Approved 02 November 2012.
- ECC/DEC/(12)03 The harmonised conditions for UWB applications onboard aircraft. Approved 02 November 2012. Corrected on 6 March 2015. Corrected 6 March 2020.
- ECC/DEC/(12)01 Exemption from individual licensing and free circulation and use of satellite mobile terminals operating under the control of networks in the range 1 to 3 GHz. Approved 01 June 2012. Corrected 3 July 2015. Amended 18 November 2016. Amended 4 March 2022.
- ECC/DEC/(11)06 Harmonised frequency arrangements and least restrictive technical conditions (LRTC) for mobile/fixed communications networks (MFCN) operating in the bands 3400-3800 MHz. Approved 09 December 2011. Amended 14 March 2014. Amended 26 October 2018.
- ECC/DEC/(11)03 The harmonised use of frequencies for Citizens' Band (CB) radio equipment. Approved 24 June 2011. Amended 17 June 2016.
- ECC/DEC/(11)02 Industrial Level Probing Radars (LPR) operating in frequency bands 6 - 8.5 GHz, 24.05 - 26.5 GHz, 57 - 64 GHz and 75 - 85 GHz. Approved 11 March 2011. Updated 17 November 2017. Amended 5 July 2019.
- ECC/DEC/(11)01 ECC Decision of 11 March 2011 on the protection of the Earth exploration satellite service (passive) in the 1400 - 1427 MHz band. Amended 03 March 2017.
- ECC/DEC/(10)02 ECC Decision of 12 November 2010 on compatibility between the Fixed Satellite Service in the 30-31 GHz band and the Earth Exploration Satellite Service (passive) in the 31.3-31.5 GHz band.
- ECC/DEC/(10)01 ECC Decision of 12 November 2010 on sharing conditions in the 10.6-10.68 GHz band between the fixed service, mobile service and Earth exploration satellite service (passive).
- ECC/DEC/(09)04 ECC Decision of 30 October 2009 on exemption from individual licensing and the free circulation and use of transmit-only mobile satellite terminals operating in the Mobile-Satellite Service allocations in the 1613.8 - 1626.5 MHz band.
- ECC/DEC/(09)03 ECC Decision of 30 October 2009 on the harmonised conditions for Mobile/Fixed Communications Networks (MFCN) operating in the band 790-862 MHz.
- ECC/DEC/(09)02 The harmonisation of the bands 1610 - 1626.5 MHz and 2483.5 - 2500 MHz for use by systems in the Mobile Satellite Service. Approved 26 June 2009, amended 02 November 2012.
- ECC/DEC/(09)01 Harmonised use of the 63.72 - 65.88 GHz frequency band for Intelligent Transport Systems (ITS). Approved 13 March 2009. Amended 04 March 2016. Amended 5 July 2019.
- ECC/DEC/(08)05 The harmonisation of frequency bands for the implementation of digital Public Protection and Disaster Relief (PPDR) narrow band and wide band radio applications in bands within the 380-470 MHz range. Approved 27 June 2008. Amended 17 June 2016. Amended 8 March 2019.
- ECC/DEC/(08)01 The harmonised use of the 5875-5935 MHz frequency band for Intelligent Transport Systems (ITS). Approved 14 March 2008. Amended 3 July 2015. Amended 6 March 2020.
- ECC/DEC/(07)01 The harmonised use, exemption from individual licensing and free circulation of Material Sensing Devices using Ultra-Wideband (UWB) technology. Approved 3 March 2007. Amended 26 June 2009. Corrected 18 November 2016. Amended 8 March 2019. Updated on 1 July 2022.
- ECC/DEC/(06)13 Harmonised technical conditions for mobile/fixed communications networks (MFCN) including terrestrial IMT systems, other than GSM and EC-GSM IoT, in the bands 880-915/925-960 MHz and 1710-1785/1805-1880 MHz. Approved 1 December 2006. Amended 21 June 2013. Amended 2 March 2018. Amended 8 March 2019. Amended 4 March 2022.
- ECC/DEC/(06)10 Transition of terrestrial service operations from in the bands 1980 - 2010 MHz and 2170 - 2200 MHz in order to facilitate the harmonised introduction and development of systems in the Mobile Satellite Service including

those supplemented by a Complementary Ground Component. Approved 01 December 2006. Amended 03 March 2017. Amended 4 March 2022.

- ECC/DEC/(06)09 ECC Decision of 1 December 2006 on the designation of the bands 1980-2010 MHz and 2170-2200 MHz for use by systems in the Mobile-Satellite Service including those supplemented by a Complementary Ground Component (CGC) amended 5 September 2007.
- ECC/DEC/(06)08 ECC Decision of 1 December 2006 on the conditions for use of the radio spectrum by Ground- and Wall- Probing Radar (GPR/WPR) imaging systems.
- ECC/DEC/(06)07 The harmonised use of airborne GSM,-LTE and 5G NR non-AAS systems in the frequency bands 1710-1785 MHz and 1805-1880 MHz, and airborne UMTS systems in the frequency bands 1920-1980 MHz and 2110-2170 MHz. Approved 1 December 2006, amended 13 March 2009, amended 14 March 2014. Updated 30 June 2017. Amended 1 July 2022.
- ECC/DEC/(06)05 ECC Decision of 7 July 2006 on the harmonised frequency bands to be designated for Air-Ground-Air operation (AGA) of the Digital Land Mobile Systems for the Emergency Services.
- ECC/DEC/(06)04 The harmonised use, exemption from individual licensing and free circulation of devices using Ultra-Wideband (UWB) technology in bands below 10.6 GHz. Approved 24 March 2006, amended 6 July 2007, amended 9 December 2011. Amended 8 March 2019.
- ECC/DEC/(06)03 ECC Decision of 24 March 2006 on Exemption from Individual Licensing of high e.i.r.p. satellite terminals (HEST) operating within the frequency bands 10.70 - 12.75 GHz or 19.70 - 20.20 GHz space-to-Earth and 14.00 -14.25 GHz or 29.50 - 30.00 GHz Earth-to-space. Amended 8 March 2019.
- ECC/DEC/(06)02 Exemption from Individual Licensing of Low e.i.r.p. Satellite Terminals (LEST) operating within the frequency bands 10.70-12.75 GHz or 19.70-20.20 GHz space-to-Earth and 14.00-14.25 GHz or 29.50-30.00 GHz Earth-to-Space. Approved 24 March 2006.
- ECC/DEC/(06)01 The harmonised utilisation of the bands 1920-1980 MHz and 2110-2170 MHz for mobile/fixed communications networks (MFCN) including terrestrial IMT systems. Approved 24 March 2006, amended 02 November 2012. Amended 8 March 2019.
- ECC/DEC/(05)11 The free circulation and use of Aircraft Earth Stations (AES) in the frequency bands 14.0-14.5 GHz (Earth-to-space), 10.7-11.7 GHz (space-to-Earth) and 12.5-12.75 GHz (space-to-Earth). Approved 24 June 2005. Amended 6 March 2015. Amended 8 March 2019.
- ECC/DEC/(05)10 Free circulation and use of Earth Stations on board Vessels (ESV) operating in fixed satellite service networks in the frequency bands 14-14.5 GHz (Earth-to-space), 10.7-11.7 GHz (space-to-Earth) and 12.5-12.75 GHz (space-to-Earth). Approved 24 June 2005. Amended 8 March 2019.
- ECC/DEC/(05)09 Free circulation and use of Earth Stations on board Vessels (ESV) operating in Fixed Satellite service networks in the frequency bands 5 925-6 425 MHz (Earth-to-space) and 3 700-4 200 MHz (space-to-Earth). Approved 24 June 2005. Amended on 4 March 2016. Updated 30 June 2017. Amended 8 March 2019.
- ECC/DEC/(05)08 The availability of frequency bands for high density applications in the Fixed-Satellite Service (space-to-Earth and Earth-to-space). Approved 24 June 2005. Amended 8 March 2013.
- ECC/DEC/(05)05 Harmonised utilisation of spectrum for Mobile/Fixed Communications Networks (MFCN) operating within the band 2500-2690 MHz. Approved 18 March 2005. Amended 03 July 2015. Amended 5 July 2019. Corrected 4 March 2022.
- ECC/DEC/(05)02 ECC Decision of 18 March 2005 on a harmonised frequency plan for the use of the band 169.4 - 169.8125 MHz (ECC/DEC/(05)02). Amended 5 September 2007, amended 12 November 2010, updated 17 November 2017. Amended 5 July 2019.
- ECC/DEC/(05)01 The use of the band 27.5-29.5 GHz by the Fixed Service and uncoordinated Earth stations of the Fixed-Satellite Service (Earth-to-space). Approved 18 March 2005. Amended 8 March 2013. Amended 8 March 2019.
- ECC/DEC/(04)10 The frequency bands to be designated for the temporary introduction of Automotive Short Range Radars (SRR). Approved 12 November 2004. Amended Annex 1 July 2005. Amended 5 September 2007. Amended 1 June 2012. Corrected 6 March 2015. Updated 2 March 2018. Amended 5 March 2021. Amended 4 March 2022.
- ECC/DEC/(04)09 ECC Decision of 12 November 2004 on the designation of the bands 1518 - 1525 MHz and 1670 - 1675 MHz for the Mobile-Satellite Service. Amended 26 June 2009.
- ECC/DEC/(04)08 The harmonised use of the 5 GHz frequency bands for Wireless Access Systems including Radio Local Area Networks (WAS/RLAN). Approved 9 July 2004. Amended 12 November 2004, 5 September 2007, 30 October 2009, 2 July 2021. Amended 1 July 2022.

- ECC/DEC/(04)03 The frequency band 77-81 GHz to be designated for the use of Automotive Short Range Radars. Approved 19 March 2004. Corrected 6 March 2015.
- ECC/DEC/(03)04 The Exemption from Individual Licensing of Very Small Aperture Terminals (VSAT) operating in the frequency bands 14.25 - 14.50 GHz Earth-to-space and 10.70-11.70 GHz space-to-Earth. Approved 17 October 2003. Amended 8 March 2019.
- ECC/DEC/(02)04 ECC Decision of 15 March 2002 on the use of the band 40.5 - 42.5 GHz by terrestrial (fixed service/ broadcasting service) systems and uncoordinated Earth stations in the fixed satellite service and broadcasting-satellite service (space to Earth).
- ERC/DEC/(01)19 ERC Decision of 12 March 2001 on harmonised frequency bands to be designated for the Direct Mode Operation (DMO) of the Digital Land Mobile Systems for the Emergency Services.
- ERC/DEC/(01)17 Harmonised frequencies, technical characteristics and exemption from individual licensing of Ultra Low Power Active Medical Implant communication systems (ULP-AMI) operating in the frequency band 401 - 406 MHz on a secondary basis. Approved 12 March 2001, Amended 9 December 2011. Updated 17 November 2017.
- ERC/DEC/(01)12 Harmonised frequencies, technical characteristics and exemption from individual licensing of Short Range Devices used for Model control operating in the frequencies 40.665, 40.675, 40.685 and 40.695 MHz. Approved 12 March 2001. Updated 17 November 2017.
- ERC/DEC/(01)11 Harmonised frequencies, technical characteristics and exemption from individual licensing of Short Range Devices used for Flying Model control operating in the frequency band 34.995- 35.225 MHz. Approved 12 March 2001. Updated 17 November 2017.
- ERC/DEC/(00)08 The use of the band 10.7- 12.5 GHz by the fixed service and Earth stations of the broadcasting-satellite and fixed-satellite Service (space-to-Earth). Approved 19 October 2000.
- ERC/DEC/(00)07 The shared use of the band 17.7- 19.7 GHz by the fixed service and earth stations of the fixed-satellite service (space-to-Earth). Approved 19 October 2000. Amended: 04 March 2016.
- ERC/DEC/(00)02 Use of the band 37.5-39.5 GHz by the fixed service and by earth stations of the fixed-satellite service (space-to-Earth) and use of the band 39.5-40.5 GHz by earth stations of the fixed-satellite service and the mobile-satellite service (space-to-Earth). Approved 27 March 2000. Amended 4 March 2022.
- ERC/DEC/(99)26 ERC Decision of 29 November 1999 on Exemption from Individual Licensing of Receive Only Earth Stations (ROES).
- ERC/DEC/(99)15 ERC Decision of 1 June 1999 on the designation of the harmonised frequency band 40.5 to 43.5 GHz for the introduction of Multimedia Wireless Systems (MWS) and Point-to-Point (P-P) Fixed Wireless Systems, amended by ECC 5 March 2010.
- ERC/DEC/(99)06 The harmonised introduction of satellite personal communication systems operating in the bands below 1 GHz (S-PCS<1GHz). Approved 10 March 1999. Annex 1 and 2 amended on 20 November 2020. Amended on 5 March 2021. Amended 2 July 2021. Amended on 4 March 2022. Amended 1 July 2022.
- ERC/DEC/(99)05 Free circulation, Use and Exemption from Individual Licensing of Mobile Earth Stations.(S-PCS < 1GHz). Approved 10 March 1999.
- ERC/DEC/(97)02 ERC Decision of 21 March 1997 on the extended frequency bands to be used for the GSM Digital Pan-European Communication System.
- ERC/DEC/(95)03 ERC Decision of 1 December 1995 on the frequency bands to be designated for the introduction of DCS 1800.
- ERC/DEC/(94)03 ERC Decision of 24th October 1994 on the frequency band to be designated for the coordinated introduction of the Digital European Cordless Telecommunications system.
- ERC/DEC/(94)01 ERC Decision of 24th October 1994 on the frequency bands to be designated for the coordinated introduction of the GSM digital pan-European communications system.

Recommendations:

- ECC/REC/(21)02 Guidance on the application of the least restrictive technical conditions (LRTC) in ECC Decision (11)06 (amended 26 October 2018) to ensure protection of the military radiolocation systems operating below 3400 MHz from indoor non-AAS small cells operating in the band 3400-3800 MHz. Approved 5 November 2021.
- ECC/REC/(20)03 Frame structures to facilitate cross-border coordination of TDD MFCN in the frequency band 3400-3800 MHz. Approved 23 October 2020.

- ECC/REC/(20)01 Guidelines to support the introduction of 5G while ensuring, in a proportionate way, the use of existing and planned FSS transmitting earth stations in the frequency band 24.65-25.25 GHz and the possibility for future deployment of these earth stations. Approved 6 March 2020.
- ECC/REC/(19)01 Technical toolkit to support the introduction of 5G while ensuring, in a proportionate way, the use of existing and planned EESS/SRS receiving earth stations in the 26 GHz band and the possibility for future deployment of these earth stations. Approved 8 March 2019.
- ECC/REC/(18)02 Radio frequency channel/block arrangements for Fixed Service systems operating in the bands 92-94 GHz, 94.1-100 GHz, 102-109.5 GHz and 111.8-114.25 GHz. Approved 14 September 2018.
- ECC/REC/(18)01 Radio frequency channel/block arrangements for Fixed Service systems operating in the bands 130-134 GHz, 141-148.5 GHz, 151.5-164 GHz and 167-174.8 GHz. Approved 27 April 2018.
- ECC/REC/(16)03 Cross-border coordination for Broadband Public Protection and Disaster Relief (BB-PPDR) systems in the frequency band 698 to 791 MHz. Approved 17 October 2016.
- ECC/REC/(15)01 Cross-border coordination for mobile / fixed communications networks (MFCN) in the frequency bands: 694-790 MHz, 1452-1492 MHz, 3400-3600 MHz and 3600-3800 MHz. Approved 13 February 2015. Amended 5 February 2016. Amended 14 February 2020.
- ECC/REC/(14)06 Implementation of Fixed Service Point-to-Point narrow channels (3.5 MHz, 1.75 MHz, 0.5 MHz, 0.25 MHz, 0.025 MHz) in the guard bands and center gaps of the lower 6 GHz (5925 to 6425 MHz) and upper 6 GHz (6425 to 7125 MHz) bands. Approved 19 September 2014. Amended May 2015.
- ECC/REC/(14)01 Radio frequency channel arrangements for fixed service systems operating in the band 92-95 GHz, Approved 31 January 2014. Amended May 2015. Updated 14 September 2018.
- ECC/REC/(11)10 Location tracking application for emergency and disaster situations. Approved 21 October 2011.
- ECC/REC/(11)09 UWB Location Tracking Systems TYPE 2 (LT2). Approved 21 October 2011. Amended 22 May 2015.
- ECC/REC/(11)08 Framework for authorisation regime of indoor global navigation satellite system (GNSS) pseudolites in the band 1559-1610 MHz. Approved 21 October 2011.
- ECC/REC/(11)06 Block Edge Mask Compliance Measurements for Base Stations. Approved October 2011. Approved Annex 3 - October 2013. Approved Annex 4 - October 2016.
- ECC/REC/(11)05 Frequency planning and frequency coordination for terrestrial systems for Mobile Fixed Communications Networks in the frequency band 2500-2690 MHz. Approved 26 May 2011. Amended 3 February 2017.
- ECC/REC/(11)04 Frequency planning and frequency coordination for terrestrial systems for Mobile Fixed Communications Networks (MFCN) capable of providing electronic communications services in the frequency band 790-862 MHz. Approved 26 May 2011. Amended 3 February 2017.
- ECC/REC/(10)02 A framework for authorisation regime of Global Navigation Satellite Systems (GNSS) repeaters.
- ECC/REC/(10)01 Guidelines for compatibility between Complementary Ground Components (CGC) operating in the band 2170-2200 MHz and EESS/SOS/SRS earth stations operating in the band 2200-2290 MHz.
- ECC/REC/(08)04 The identification of frequency bands for the implementation of Broad Band Disaster Relief (BBDR) radio applications in the 5 GHz frequency range.
- ECC/REC/(08)02 Frequency planning and frequency coordination for GSM / UMTS / LTE / WiMAX Land Mobile systems operating within the 900 and 1800 MHz bands. 21 February 2008. Amended 27 April 2012. Amended 8 February 2019. Amended on 8 October 2021.
- ECC/REC/(08)01 Use of the band 5855-5875 MHz for Intelligent Transport Systems (ITS). Approved 21 February 2008. Amended 3 July 2015. Amended 6 March 2020.
- ECC/REC/(06)04 Use of the band 5725-5875 MHz for Broadband Fixed Wireless Access (BFWA).
- ECC/REC/(05)08 Frequency planning and frequency coordination for the GSM 900, GSM 1800, E-GSM and GSM-R Land Mobile Systems (Except direct mode operation (DMO) channels). Approved 01 February 2006. Amended 03 February 2017. Amended 8 October 2021.
- ECC/REC/(05)07 (Revised Dublin 2009 and Lugano 2013) Radio frequency channel arrangements for Fixed Service Systems operating in the bands 71 - 76 GHz and 81 - 86.
- ECC/REC/(02)06 (revised June 2007 and May 2011 and June 2015) Channel arrangements for digital Fixed Service Systems operating in the frequency range 7125-8500 MHz.
- ECC/REC/(02)02 (Revised, Rottach Egern, February 2010) Preferred channel arrangement for fixed service systems (point-to-point and point-to-multipoint) operating in the frequency band 31 - 31.3 GHz.

- ECC/REC/(01)04 Recommended guidelines for the accommodation and assignment of Multimedia Wireless Systems (MWS) and Point-to-Point (P-P) Fixed Wireless Systems in the frequency band 40.5 - 43.5 GHz. Approved 10 October 2001. Amended 5 February 2010. Amended 13 May 2014.
- ERC/REC/(01)02 (revised Rottach Egern, February 2010) Preferred channel arrangement for digital fixed service systems operating in the frequency band 31.8- 33.4 GHz. Approved 23 February 2010. Revised February 2010. Amended 29 May 2019.
- ERC/REC/(01)01 (revised Dublin 2003, Helsinki 2007, Cluj-Napoca 2016). Cross-border coordination for mobile/fixed communications networks (MFCN) in the frequency bands: 1920-1980 MHz and 2110-2170 MHz.
- ERC/REC/(00)04 Harmonised frequencies and free circulation and use for meteor scatter applications.
- ERC/REC 70-03 Relating to the use of Short Range Devices (SRD). Tromsø 1997. Subsequent amendments. Latest amended on 10 June 2022.
- ERC/REC 62-02 Harmonised frequency band for Civil and Military Airborne Telemetry applications. Tromsø 1997.
- ERC/REC 25-10 Frequency ranges for the use of terrestrial audio and video Programme Making and Special Events (PMSE) applications. Approved 01 May 1995. Amended 11 February 2003. Amended 18 October 2016. Amended 28 May 2021. Editorial update 28 May 2021.
- ERC/REC 14-02 Radio frequency channel arrangements for medium and high capacity analogue or high capacity digital radio-relay systems operating in the band 6'425 MHz- 7'125 MHz. Approved Bonn 1995. Amended 19 September 2014.
- ERC/REC 14-01 Radio frequency channel arrangements for high capacity analogue and digital radio-relay systems operating in the band 5'925 MHz- 6'425 MHz. Approved Bonn 1995. Amended May 2015.
- ERC/REC 13-03 (The Hague 1996) The use of the band 14.0- 14.5 GHz for Very Small Aperture Terminals (VSAT) and Satellite News Gathering (SNG).
- ERC/REC 12-12 Radio frequency channel arrangement for fixed service systems operating in the band 55.78- 57.0 GHz. Approved 29 October 1999. Amended 30 January 2015.
- ERC/REC 12-11 Radio frequency channel arrangement for fixed service systems operating in the band 51.4- 52.6 GHz. Approved 29 October 1999. Amended May 2015.
- ERC/REC 12-08 (Podebrady 1997, Saariselkä 1998) Harmonised radio frequency channel arrangements and block allocations for medium and high capacity systems in the band 3'600 MHz to 4'200 GHz.
- ERC/REC 12-07 (Rome 1996) Harmonised radio frequency channel arrangements for digital terrestrial fixed systems operating in the band 15.23 GHz to 15.35 GHz.
- ERC/REC 12-06 (Rome 1996, revised Rottach Egern, February 2010) Preferred channel arrangements for fixed systems operating in the band 10.7 - 11.7 GHz. Amended 29 May 2019.
- ERC/REC 12-05 (Rome 1996, revised June 2007) Harmonised radio frequency channel arrangements for digital terrestrial fixed systems operating in the band 10.0- 10.68 GHz.
- ERC/REC 12-03 (Bonn 1994) Harmonised radio frequency channel arrangements for digital terrestrial fixed systems operating in the band 17.7 GHz to 19.7 GHz. Amended 29 May 2019.
- ERC/REC 12-02 (Bonn 1994, revised June 2007) Harmonised radio frequency channel arrangements for analogue and digital terrestrial fixed systems operating in the band 12.75 GHz to 13.25 GHz.
- T/R 25-08 Planning criteria and coordination of frequencies for land mobile systems in the range 29.7-470 MHz. Approved 15 January 1990. Amended 27 May 2016. Amended 28 September 2018.
- T/R 13-02 Preferred channel arrangements for fixed service systems in the frequency range 22.0 - 29.5 GHz. Approved Montreux 1993. Amended Tromsø, May 2010. Amended 29 May 2019.
- T/R 13-01 (Montreux 1993, Revised Rottach-Egern, February 2010) Preferred channel arrangements for fixed service systems operating in the frequency range 1 - 2.3 GHz.
- T/R 12-01 Preferred channel arrangements for fixed service systems operating in the frequency band 37.0 - 39.5 GHz. Approved Helsinki 1991. Revised Rottach-Egern, February 2010. Amended 29 May 2019.

5.7 Appendix 3: Relevant EU legal Acts

Note: The list contains all relevant EU legal acts that have been taken into the EEA Agreement on the effective date of the FAP.

- (EU) 2022/179 Commission Implementing Decision (EU) 2022/179 of 8 February 2022 on the harmonised use of radio spectrum in the 5 GHz frequency band for the implementation of wireless access systems including radio local area networks and repealing Decision 2005/513/EC.
- (EU) 2022/180 Commission Implementing Decision (EU) 2022/180 of 8 February 2022 amending Decision 2006/771/EC as regards the update of harmonised technical conditions in the area of radio spectrum use for short-range devices
- (EU) 2022/173 Commission Implementing Decision (EU) 2022/173 of 7 February 2022 on the harmonisation of the 900 MHz and 1800 MHz frequency bands for terrestrial systems capable of providing electronic communications services in the Union and repealing Decision 2009/766/EC
- (EU) 2021/1730 Commission Implementing Decision (EU) 2021/1730 of 28 September 2021 on the harmonised use of the paired frequency bands 874,4-880,0 MHz and 919,4-925,0 MHz and of the unpaired frequency band 1 900-1 910 MHz for Railway Mobile Radio.
- (EU) 2021/1067 Commission Implementing Decision (EU) 2021/1067 of 17 June 2021 on the harmonised use of radio spectrum in the 5945-6425 MHz frequency band for the implementation of wireless access systems including radio local area networks (WAS/RLANs).
- (EU) 2020/1426 Commission Implementing Decision (EU) 2020/1426 of 7 October 2020 on the harmonised use of radio spectrum in the 5 875-5 935 MHz frequency band for safety-related applications of intelligent transport systems (ITS) and repealing Decision 2008/671/EC.
- (EU)2020/667 Commission Implementing Decision (EU) 2020/667 of 6 May 2020 amending Decision 2012/688/EU as regards an update of relevant technical conditions applicable to the frequency bands 1 920-1 980 MHz and 2 110-2 170 MHz
- (EU) 2020/636 Commission Implementing Decision (EU) 2020/636 of 8 May 2020 amending Decision 2008/477/EC as regards an update of relevant technical conditions applicable to the 2 500-2 690 MHz frequency band
- (EU) 2020/590 Commission Implementing Decision (EU) 2020/590 of 24 April 2020 amending Decision (EU) 2019/784 as regards an update of relevant technical conditions applicable to the 24,25-27,5 GHz frequency band.
- (EU) 2019/1345 Commission Implementing Decision (EU) 2019/1345 of 2 August 2019 amending Decision 2006/771/EC updating harmonised technical conditions in the area of radio spectrum use for short-range devices
- (EU) 2019/785 Commission Implementing Decision (EU) 2019/785 of 14 May 2019 on the harmonisation of radio spectrum for equipment using ultra-wideband technology in the Union and repealing Decision 2007/131/EC.
- (EU) 2019/784 Commission Implementing Decision (EU) 2019/784 of 14 May 2019 on harmonisation of the 24,25-27,5 GHz frequency band for terrestrial systems capable of providing wireless broadband electronic communications services in the Union.
- (EU) 2019/235 Commission Implementing Decision (EU) 2019/235 of 24 January 2019 on amending Decision 2008/411/EC as regards an update of relevant technical conditions applicable to the 3400-3800 MHz frequency band.
- (EU) 2018/661 Commission Implementing Decision (EU) 2018/661 of 26 April 2018 amending Implementing Decision (EU) 2015/750 on the harmonisation of the 1452-1492 MHz frequency band for terrestrial systems capable of providing electronic communications services in the Union as regards its extension in the harmonised 1427-1452 MHz and 1492-1517 MHz frequency bands.
- (EU) 2017/2077 Commission Implementing Decision (EU) 2017/2077 of 10 November 2017 amending Decision 2005/50/EC on the harmonisation of the 24 GHz range radio spectrum band for the time-limited use by automotive short-range radar equipment in the Community.
- (EU) 2017/1483 Commission Implementing Decision (EU) 2017/1483 of 8 August 2017 amending Decision 2006/771/EC on harmonisation of the radio spectrum for use by short-range devices and repealing Decision 2006/804/EC.
- (EU) 2017/899 Decision of the European Parliament and of the Council of 17 May 2017 on the use of the 470-790 MHz frequency band in the Union.
- (EU) 2017/191 Commission Implementing Decision (EU) 2017/191 of 1 February 2017 amending Decision 2010/166/EU, in order to introduce new technologies and frequency bands for mobile communication services on board vessels (MCV services) in the European Union.

- (EU) 2016/2317 Commission Implementing Decision (EU) 2016/2317 of 16 December 2016 amending Decision 2008/294/EC and Implementing Decision 2013/654/EU, in order to simplify the operation of mobile communications on board aircraft (MCA services) in the Union.
- (EU) 2016/687 Commission Implementing Decision (EU) 2016/687 of 28 April 2016 on the harmonisation of the 694-790 MHz frequency band for terrestrial systems capable of providing wireless broadband electronic communications services and for flexible national use in the Union.
- (EU) 2016/339 Commission Implementing Decision (EU) 2016/339 of 8 March 2016 on the harmonisation of the 2 010-2 025 MHz frequency band for portable or mobile wireless video links and cordless cameras used for programme making and special events.
- (EU) 2015/750 Commission Implementing Decision (EU) 2015/750 of 8 May 2015 on the harmonisation of the 1'452-1'492 MHz frequency band for terrestrial systems capable of providing electronic communications services in the Union. Amended by Commission Implementing Decision (EU) 2018/661.
- 2014/641/EU Commission Implementing Decision of 1 September 2014 on harmonised technical conditions of radio spectrum use by wireless audio programme making and special events equipment in the Union (2014/641/EU).
- 2014/276/EU Commission Implementing Decision of 2 May 2014 on amending Decision 2008/411/EC on the harmonisation of the 3400-3800 MHz frequency band for terrestrial systems capable of providing electronic communications services in the Community (2014/276/EU).
- 2013/752/EU Commission Implementing Decision of 11 December 2013 amending Decision 2006/771/EC on harmonisation of the radio spectrum for use by short-range devices and repealing Decision 2005/928/EC (2013/752/EU).
- 2013/654/EU Commission Implementing Decision of 12 November 2013 amending Decision 2008/294/EC to include additional access technologies and frequency bands for mobile communications services on aircraft (MCA services) (2013/654/EU). Amended by (EU) 2016/2317.
- 2012/688/EU Commission Implementing Decision of 5 November 2012 on the harmonisation of the frequency bands 1920 - 1980 MHz and 2110 - 2170 MHz for terrestrial systems capable of providing electronic communications services in the Union (2012/688/EU).
- 2011/829/EU Commission Implementing Decision of 8 December 2011 amending Decision 2006/771/EC on harmonisation of the radio spectrum for use by short-range devices (2011/829/EU).
- 2011/485/EU Commission Implementing Decision of 29 July 2011 amending Decision 2005/50/EC on the harmonisation of the 24 GHz range radio spectrum band for the time-limited use by automotive short-range radar equipment in the Community (2011/485/EU). Amended by (EU) 2017/2077.
- 2010/368/EU Commission Implementing Decision of 30 June 2010 amending Decision 2006/771/EC on harmonisation of the radio spectrum for use by short-range devices (2010/368/EU).
- 2010/267/EU Commission Decision of 6 May 2010 on harmonised technical conditions of use in the 790-862 MHz frequency band for terrestrial systems capable of providing electronic communications services in the European Union (2010/267/EU).
- 2010/166/EU Commission Decision of 19 March on harmonised conditions of use of radio spectrum for mobile communication services on board vessels (MCV services) in the European Union (2010/166/EU). Amended by (EU) 2017/191.
- 2009/381/EC Commission Decision of 13 May 2009 amending Decision 2006/771/EC on harmonisation of the radio spectrum for use by short-range devices (2009/381/EC).
- 2009/114/EC Directive 2009/114/EC of the european parliament and the council of 16 September 2009 amending Council Directive 87/372/EEC on the frequency bands to be reserved for the coordinated introduction of public pan-European cellular digital land-based mobile communications in the Community (2009/114/EC).
- 2008/477/EC Commission Decision of 13 June 2008 on the harmonisation of the 2500 - 2690 MHz frequency band for terrestrial systems capable of providing electronic communications services in the Community (2008/477/EC).
- 2008/432/EC Commission Decision of 23 May 2008 amending Decision 2006/771/EC on harmonisation of the radio spectrum for use by short-range devices (2008/432/EC).
- 2008/411/EC Commission Decision of 21 May 2008 on the harmonisation of the 3400 - 3800 MHz frequency band for terrestrial systems capable of providing electronic communications services in the Community (2008/411/EC). Amended by Commission Implementing Decision 2014/276/EU of 2 May 2014.

- 2008/294/EC Commission Decision of 7 April 2008 on harmonised conditions of spectrum use for the operation of mobile communication services on aircraft (MCA services) in the Community (2008/294/EC). Amended by Commission Implementing Decision 2013/654/EU of 12 November 2013 and (EU) 2016/2317.
- 2007/98/EC Commission Decision of 14 February 2007 on the harmonised use of radio spectrum in the 2 GHz frequency bands for the implementation of systems providing mobile satellite services (2007/98/EC).
- 2006/771/EC Commission Decision of 9 November 2006 on harmonisation of the radio spectrum for use by short-range devices (2006/771/EC). Amended by Commission Decision 2009/381/EC of 13 May 2009, Commission Implementing Decision 2010/368/EU of 30 June 2010, Commission Implementing Decision 2011/829/EU of 8 December 2011, Commission Implementing Decision 2013/752/EU of 11 December 2013, Commission Implementing Decision (EU) 2017/1483 of 8 August 2017, Commission Implementing Decision (EU) 2019/1345 of 2 August 2019, Commission Implementing Decision (EU) 2022/180 of 8 February 2022.
- 2005/50/EC Commission Decision of 17 January 2005 on the harmonisation of the 24 GHz range radio spectrum band for the time-limited use by automotive short-range radar equipment in the Community (2005/50/EC). Amended by Commission Implementing Decision 2011/485/EU and 2011/485/EU.
- 2004/545/EC Commission Decision of 8 July 2004 on the harmonisation of radio spectrum in the 79 GHz range for the use of automotive short-range radar equipment in the Community (2004/545/EC).
- 87/372/EEC Council Directive of 25 June 1987 on the frequency bands to be reserved for the coordinated introduction of public pan-European cellular digital land-based mobile communications in the Community. (87/372/EEC). Amended by Directive 2009/114/EC of the european parliament and the council of 16 September 2009.

5.8 Appendix FN: Relevant Footnotes of RR and ECA

Relevant footnotes of Radio Regulations, Article 5 and relevant ECA footnotes included in the European Common Allocation (ECA)

a) Relevant Footnotes of Radio Regulations, Article 5

RR footnote No	RR footnote text
4.4	Administrations of the Member States shall not assign to a station any frequency in derogation of either the Table of Frequency Allocations in this Chapter or the other provisions of these Regulations, except on the express condition that such a station, when using such a frequency assignment, shall not cause harmful interference to, and shall not claim protection from harmful interference caused by, a station operating in accordance with the provisions of the Constitution, the Convention and these Regulations.
4.10	Member States recognize that the safety aspects of radionavigation and other safety services require special measures to ensure their freedom from harmful interference; it is necessary therefore to take this factor into account in the assignment and use of frequencies.
5.43	1) Where it is indicated in these Regulations that a service or stations in a service may operate in a specific frequency band subject to not causing harmful interference to another service or to another station in the same service, this means also that the service which is subject to not causing harmful interference cannot claim protection from harmful interference caused by the other service or other station in the same service. (WRC2000)
5.43A	1*bis*) Where it is indicated in these Regulations that a service or stations in a service may operate in a specific frequency band subject to not claiming protection from another service or from another station in the same service, this means also that the service which is subject to not claiming protection shall not cause harmful interference to the their service or other station in the same service. (WRC2000)
5.53	Administrations authorizing the use of frequencies below 8.3 kHz shall ensure that no harmful interference is caused thereby to the services to which the bands above 8.3 kHz are allocated.
5.54	Administrations conducting scientific research using frequencies below 8.3 kHz are urged to advise other administrations that may be concerned in order that such research may be afforded all practicable protection from harmful interference. (WRC-12)
5.54A	Use of the 8.3-11.3 kHz frequency band by stations in the meteorological aids service is limited to passive use only. In the band 9-11.3 kHz, meteorological aids stations shall not claim protection from stations of the radionavigation service submitted for notification to the Bureau prior to 1 January 2013. For sharing between stations of the meteorological aids service and stations in the radionavigation service submitted for notification after this date, the most recent version of Recommendation ITU R RS.1881 should be applied. (WRC-12)
5.56	The stations of services to which the bands 14-19.95 kHz and 20.05-70 kHz and in Region 1 also the bands 72-84 kHz and 86-90 kHz are allocated may transmit standard frequency and time signals. Such stations shall be afforded protection from harmful interference. In Armenia, Azerbaijan, Belarus, the Russian Federation, Georgia, Kazakhstan, Kyrgyzstan, Tajikistan and Turkmenistan, the frequencies 25 kHz and 50 kHz will be used for this purpose under the same conditions. (WRC-12)
5.60	In the bands 70- 90 kHz (70- 86 kHz in Region 1) and 110- 130 kHz (112- 130 kHz in Region 1), pulsed radionavigation systems may be used on condition that they do not cause harmful interference to other services to which these bands are allocated.
5.62	Administrations which operate stations in the radionavigation service in the band 90- 110 kHz are urged to coordinate technical and operating characteristics in such a way as to avoid harmful interference to the services provided by these stations.
5.64	Only classes A1A or F1B, A2C, A3C, F1C or F3C emissions are authorized for stations of the fixed service in the bands allocated to this service between 90 kHz and 160 kHz (148.5 kHz in Region 1) and for stations of the maritime mobile service in the bands allocated to this service between 110 kHz and 160 kHz (148.5 kHz in Region 1). Exceptionally, class J2B or J7B emissions are also authorized in the bands between 110 kHz and 160 kHz (148.5 kHz in Region 1) for stations of the maritime mobile service.

RR footnote No	RR footnote text
5.67A	Stations in the amateur service using frequencies in the band 135.7-137.8 kHz shall not exceed a maximum radiated power of 1 W (e.i.r.p.) and shall not cause harmful interference to stations of the radionavigation service operating in countries listed in No. **5.67**. (WRC-07)
5.67B	The use of the frequency band 135.7-137.8 kHz in Algeria, Egypt, Iraq, Lebanon, Syrian Arab Republic, Sudan, South Sudan and Tunisia is limited to the fixed and maritime mobile services. The amateur service shall not be used in the above-mentioned countries in the frequency band 135.7-137.8 kHz, and this should be taken into account by the countries authorizing such use. (WRC-19)
5.76	The frequency 410 kHz is designated for radio direction-finding in the maritime radionavigation service. The other radionavigation services to which the band 405- 415 kHz is allocated shall not cause harmful interference to radio direction-finding in the band 406.5- 413.5 kHz.
5.79A	When establishing coast stations in the NAVTEX service on the frequencies 490 kHz, 518 kHz and 4 209.5 kHz, administrations are strongly recommended to coordinate the operating characteristics in accordance with the procedures of the International Maritime Organization (IMO) (see Resolution **339 (Rev.WRC-07)**). (WRC-07)
5.80A	The maximum equivalent isotropically radiated power (e.i.r.p.) of stations in the amateur service using frequencies in the band 472-479 kHz shall not exceed 1 W. Administrations may increase this limit of e.i.r.p. to 5 W in portions of their territory which are at a distance of over 800 km from the borders of Algeria, Saudi Arabia, Azerbaijan, Bahrain, Belarus, China, Comoros, Djibouti, Egypt, United Arab Emirates, the Russian Federation, Iran (Islamic Republic of), Iraq, Jordan, Kazakhstan, Kuwait, Lebanon, Libya, Morocco, Mauritania, Oman, Uzbekistan, Qatar, Syrian Arab Republic, Kyrgyzstan, Somalia, Sudan, Tunisia, Ukraine and Yemen. In this frequency band, stations in the amateur service shall not cause harmful interference to, or claim protection from, stations of the aeronautical radionavigation service. (WRC-12)
5.82	In the maritime mobile service, the frequency 490 kHz is to be used exclusively for the transmission by coast stations of navigational and meteorological warnings and urgent information to ships, by means of narrow-band direct-printing telegraphy. The conditions for use of the frequency 490 kHz are prescribed in Articles 31 and 52. In using the frequency band 415-495 kHz for the aeronautical radionavigation service, administrations are requested to ensure that no harmful interference is caused to the frequency 490 kHz. In using the frequency band 472-479 kHz for the amateur service, administrations shall ensure that no harmful interference is caused to the frequency 490 kHz. (WRC 12)
5.82C	The frequency band 495-505 kHz is used for the international NAVDAT system as described in the most recent version of Recommendation ITU-R M.2010. NAVDAT transmitting stations are limited to coast stations. (WRC-19)
5.90	In the band 1'605- 1'705 kHz, in cases where a broadcasting station of Region 2 is concerned, the service area of the maritime mobile stations in Region 1 shall be limited to that provided by ground-wave propagation.
5.92	Some countries of Region 1 use radiodetermination systems in the bands 1'606.5- 1'625 kHz, 1'635- 1'800 kHz, 1'850- 2'160 kHz, 2'194- 2'300 kHz, 2'502- 2'850 kHz and 3'500- 3'800 kHz, subject to agreement obtained under No. **9.21**. The radiated mean power of these stations shall not exceed 50 W.
5.96	In Germany, Armenia, Austria, Azerbaijan, Belarus, Croatia, Denmark, Estonia, the Russian Federation, Finland, Georgia, Hungary, Ireland, Iceland, Israel, Kazakhstan, Latvia, Liechtenstein, Lithuania, Malta, Moldova, Norway, Uzbekistan, Poland, Kyrgyzstan, Slovakia, the Czech Rep., the United Kingdom, Sweden, Switzerland, Tajikistan, Turkmenistan and Ukraine, administrations may allocate up to 200 kHz to their amateur service in the frequency bands 1'715- 1'800 kHz and 1'850- 2'000 kHz. However, when allocating the frequency bands within this range to their amateur service, administrations shall, after prior consultation with administrations of neighbouring countries, take such steps as may be necessary to prevent harmful interference from their amateur service to the fixed and mobile services of other countries. The mean power of any amateur station shall not exceed 10 W. (WRC-15)
5.98	Alternative allocation: in , Armenia, Azerbaijan, Belarus, Belgium, Cameroon, Congo (Rep. of the), Denmark, Egypt, Eritrea, Spain, Ethiopia, the Russian Federation, Georgia, Greece, Italy, Kazakhstan, Lebanon, Lithuania, the Syrian Arab Republic, Kyrgyzstan, Somalia, Tajikistan, Tunisia, Turkmenistan and Turkey, the frequency band 1'810-1'830 kHz is allocated to the fixed and mobile, except aeronautical mobile, services on a primary basis. (WRC-15)

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5.99	Additional allocation: in Saudi Arabia, Austria, Iraq, Libya, Uzbekistan, Slovakia, Romania, Slovenia, Chad, and Togo, the band 1'810-1'830 kHz is also allocated to the fixed and mobile, except aeronautical mobile, services on a primary basis. (WRC-12)
5.100	In Region 1, the authorization to use the band 1'810- 1'830 kHz by the amateur service in countries situated totally or partially north of 40° N shall be given only after consultation with the countries mentioned in Nos. **5.98** and **5.99** to define the necessary steps to be taken to prevent harmful interference between amateur stations and stations of other services operating in accordance with Nos. **5.98** and **5.99**.
5.103	In Region 1, in making assignments to stations in the fixed and mobile services in the bands 1'850-2'045 kHz, 2'194-2'498 kHz, 2'502-2'625 kHz and 2'650-2'850 kHz, administrations should bear in mind the special requirements of the maritime mobile service.
5.108	The carrier frequency 2'182 kHz is an international distress and calling frequency for radiotelephony. The conditions for the use of the band 2'173.5-2'190.5 kHz are prescribed in Articles 31 and 52. (WRC-07)
5.109	The frequencies 2'187.5 kHz, 4'207.5 kHz, 6'312 kHz, 8'414.5 kHz, 12'577 kHz and 16'804.5 kHz are international distress frequencies for digital selective calling. The conditions for the use of these frequencies are prescribed in Article **31**.
5.110	The frequencies 2'174.5 kHz, 4'177.5 kHz, 6'268 kHz, 8'376.5 kHz, 12'520 kHz and 16'695 kHz are international distress frequencies for narrow-band direct-printing telegraphy. The conditions for the use of these frequencies are prescribed in Article **31**.
5.111	The carrier frequencies 2'182 kHz, 3'023 kHz, 5'680 kHz, 8'364 kHz and the frequencies 121.5 MHz, 156.525 MHz, 156.8 MHz and 243 MHz may also be used, in accordance with the procedures in force for terrestrial radiocommunication services, for search and rescue operations concerning manned space vehicles. The conditions for the use of the frequencies are prescribed in Article **31**. The same applies to the frequencies 10'003 kHz, 14'993 kHz and 19'993 kHz, but in each of these cases emissions must be confined in a band of ± 3 kHz about the frequency. (WRC-07)
5.115	The carrier (reference) frequencies 3'023 kHz and 5'680 kHz may also be used, in accordance with Article **31** by stations of the maritime mobile service engaged in coordinated search and rescue operations. (WRC-07)
5.116	Administrations are urged to authorize the use of the band 3'155- 3'195 kHz to provide a common worldwide channel for low power wireless hearing aids. Additional channels for these devices may be assigned by administrations in the bands between 3'155 kHz and 3'400 kHz to suit local needs.
5.127	The use of the band 4'000- 4'063 kHz by the maritime mobile service is limited to ship stations using radiotelephony (see No. **52.220** and Appendix **17**).
5.128	Frequencies in the bands 4'063-4'123 kHz and 4'130-4'438 kHz may be used exceptionally by stations in the fixed service, communicating only within the boundary of the country in which they are located, with a mean power not exceeding 50 W, on condition that harmful interference is not caused to the maritime mobile service. In addition, in Afghanistan, Argentina, Armenia, Belarus, Botswana, Burkina Faso, the Central African Rep., China, the Russian Federation, Georgia, India, Kazakhstan, Mali, Niger, Pakistan, Kyrgyzstan, Tajikistan, Chad, Turkmenistan and Ukraine, in the frequency bands 4'063-4'123 kHz, 4'130-4'133 kHz and 4'408-4'438 kHz, stations in the fixed service, with a mean power not exceeding 1 kW, can be operated on condition that they are situated at least 600 km from the coast and that harmful interference is not caused to the maritime mobile service. (WRC-19)
5.130	The conditions for the use of the carrier frequencies 4'125 kHz and 6'215 kHz are prescribed in Articles 31 and 52. (WRC-07)
5.131	The frequency 4'209.5 kHz is used exclusively for the transmission by coast stations of meteorological and navigational warnings and urgent information to ships by means of narrow-band direct-printing techniques. (WRC-97)
5.132	The frequencies 4'210 kHz, 6'314 kHz, 8'416.5 kHz, 12'579 kHz, 16'806.5 kHz, 19'680.5 kHz, 22'376 kHz and 26'100.5 kHz are the international frequencies for the transmission of maritime safety information (MSI) (see Appendix 17).

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5.132A	Stations in the radiolocation service shall not cause harmful interference to, or claim protection from, stations operating in the fixed or mobile services. Applications of the radiolocation service are limited to oceanographic radars operating in accordance with Resolution **612 (Rev. WRC 12)**. (WRC-12)
5.133B	Stations in the amateur service using the frequency band 5'351.5-5'366.5 kHz shall not exceed a maximum radiated power of 15 W (e.i.r.p.). However, in Region 2 in Mexico, stations in the amateur service using the frequency band 5'351.5-5'366.5 kHz shall not exceed a maximum radiated power of 20 W (e.i.r.p.). In the following Region 2 countries: Antigua and Barbuda, Argentina, Bahamas, Barbados, Belize, Bolivia, Brazil, Chile, Colombia, Costa Rica, Cuba, Dominican Republic, Dominica, El Salvador, Ecuador, Grenada, Guatemala, Guyana, Haiti, Honduras, Jamaica, Nicaragua, Panama, Paraguay, Peru, Saint Lucia, Saint Kitts and Nevis, Saint Vincent and the Grenadines, Suriname, Trinidad and Tobago, Uruguay, Venezuela, as well as the overseas countries and territories within the Kingdom of the Netherlands in Region 2, stations in the amateur service using the frequency band 5'351.5-5'366.5 kHz shall not exceed a maximum radiated power of 25 W (e.i.r.p.). (WRC-19)
5.134	The use of the frequency bands 5'900-5'950 kHz, 7'300-7'350 kHz, 9'400-9'500 kHz, 11'600-11'650 kHz, 12'050-12'100 kHz, 13'570-13'600 kHz, 13'800-13'870 kHz, 15'600-15'800 kHz, 17'480-17'550 kHz and 18'900-19'020 kHz by the broadcasting service is subject to the application of the procedure of Article **12**. Administrations are encouraged to use these frequency bands to facilitate the introduction of digitally modulated emissions in accordance with the provisions of Resolution **517 (Rev.WRC-19)**. (WRC-19)
5.136	*Additional allocation*: Frequencies in the band 5'900-5'950 kHz may be used by stations in the following services, communicating only within the boundary of the country in which they are located: fixed service (in all three Regions), land mobile service (in Region 1), mobile except aeronautical mobile (R) service (in Regions 2 and 3), on condition that harmful interference is not caused to the broadcasting service. When using frequencies for these services, administrations are urged to use the minimum power required and to take account of the seasonal use of frequencies by the broadcasting service published in accordance with the Radio Regulations. (WRC-07)
5.137	On condition that harmful interference is not caused to the maritime mobile service, the bands 6'200- 6'213.5 kHz and 6'220.5- 6'525 kHz may be used exceptionally by stations in the fixed service, communicating only within the boundary of the country in which they are located, with a mean power not exceeding 50 W. At the time of notification of these frequencies, the attention of the Bureau will be drawn to the above conditions.
5.138	The following bands:
	6'765 - 6'795 kHz (centre frequency 6'780 kHz),
	433.05 - 434.79 MHz (centre frequency 433.92 MHz) in Region 1 except in the countries mentioned in No**. 5.280**,
	61 - 61.5 GHz (centre frequency 61.25 GHz),
	122 - 123 GHz centre frequency 122.5 GHz), and
	244 - 246 GHz (centre frequency 245 GHz)
	are designated for industrial, scientific and medical (ISM) applications. The use of these frequency bands for ISM applications shall be subject to special authorization by the administration concerned, in agreement with other administrations whose radiocommunication services might be affected. In applying this provision, administrations shall have due regard to the latest relevant ITU-R Recommendations.
5.141A	*Additional allocation:* in Uzbekistan and Kyrgyzstan, the bands 7'000-7'100 kHz and 7'100-7'200 kHz are also allocated to the fixed and land mobile services on a secondary basis. (WRC-03)
5.141B	*Additional allocation*: in Algeria, Saudi Arabia, Australia, Bahrain, Botswana, Brunei Darussalam, China, Comoros, Korea (Rep. of), Diego Garcia, Djibouti, Egypt, United Arab Emirates, Eritrea, Guinea, Indonesia, Iran (Islamic Republic of), Japan, Jordan, Kuwait, Libya, Mali, Morocco, Mauritania, Niger, New Zealand, Oman, Papua New Guinea, Qatar, the Syrian Arab Republic, the Dem. People's Rep. of Korea, Singapore, Sudan, South Sudan, Tunisia, Viet Nam and Yemen, the frequency band 7'100-7'200 kHz is also allocated to the fixed and the mobile, except aeronautical mobile (R), services on a primary basis. (WRC-19)
5.143	*Additional allocation:* Frequencies in the band 7'300-7'350 kHz may be used by stations in the fixed service and in the land mobile service, communicating only within the boundary of the country in which they are

RR footnote No	RR footnote text
	located, on condition that harmful interference is not caused to the broadcasting service. When using frequencies for these services, administrations are urged to use the minimum power required and to take account of the seasonal use of frequencies by the broadcasting service published in accordance with the Radio Regulations. (WRC-07)
5.143B	In Region 1, frequencies in the band 7'350- 7'450 kHz may be used by stations in the fixed and land mobile services communicating only within the boundary of the country in which they are located on condition that harmful interference is not caused to the broadcasting service. The total radiated power of each station shall not exceed 24 dBW. (WRC-12)
5.145	The conditions for the use of the carrier frequencies 8'291 kHz, 12'290 kHz and 16'420 kHz are prescribed in Articles **31** and **52**. (WRC-07)
5.145A	Stations in the radiolocation service shall not cause harmful interference to, or claim protection from, stations operating in the fixed service. Applications of the radiolocation service are limited to oceanographic radars operating in accordance with Resolution **612 (Rev.WRC-12)**. (WRC 12)
5.146	*Additional allocation:* Frequencies in the bands 9'400-9'500 kHz, 11'600-11'650 kHz, 12'050-12'100 kHz, 15'600-15'800 kHz, 17'480-17'550 kHz and 18'900-19'020 kHz may be used by stations in the fixed service, communicating only within the boundary of the country in which they are located, on condition that harmful interference is not caused to the broadcasting service. When using frequencies in the fixed service, administrations are urged to use the minimum power required and to take account of the seasonal use of frequencies by the broadcasting service published in accordance with the Radio Regulations. (WRC-07)
5.147	On condition that harmful interference is not caused to the broadcasting service, frequencies in the bands 9'775-9'900 kHz, 11'650-11'700 kHz and 11'975-12'050 kHz may be used by stations in the fixed service communicating only within the boundary of the country in which they are located, each station using a total radiated power not exceeding 24 dBW.

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5.149	In making assignments to stations of other services to which the bands:	
	13'360- 13'410 kHz, 25'550- 25'670 kHz, 37.5- 38.25 MHz, 73- 74.6 MHz in Regions 1 and 3, 150.05- 153 MHz in Region 1, 322- 328.6 MHz, 406.1- 410 MHz, 608- 614 MHz in Regions 1 and 3, 1'330- 1'400 MHz, 1'610.6- 1'613.8 MHz, 1'660- 1'670 MHz, 1'718.8- 1'722.2 MHz, 2'655- 2'690 MHz, 3'260- 3'267 MHz, 3'332- 3'339 MHz, 3'345.8- 3'352.5 MHz, 4'825- 4'835 MHz, 4'950- 4'990 MHz, 4'990- 5'000 MHz, 6'650- 6'675.2 MHz, 10.6- 10.68 GHz, 14.47- 14.5 GHz, 22.01- 22.21 GHz, 22.21- 22.5 GHz, 22.81- 22.86 GHz, 23.07- 23.12 GHz,	31.2- 31.3 GHz, 31.5- 31.8 GHz in Regions 1 and 3, 36.43- 36.5 GHz, 42.5- 43.5 GHz, 48.94- 49.04 GHz, 76- 86 GHz, 92- 94 GHz, 94.1- 100 GHz, 102- 109.5 GHz, 111.8- 114.25 GHz, 128.33- 128.59 GHz, 129.23- 129.49 GHz, 130- 134 GHz, 136- 148.5 GHz, 151.5- 158.5 GHz, 168.59- 168.93 GHz, 171.11- 171.45 GHz, 172.31- 172.65 GHz, 173.52- 173.85 GHz, 195.75- 196.15 GHz, 209- 226 GHz, 241- 250 GHz, 252- 275 GHz
	are allocated, administrations are urged to take all practicable steps to protect the radio astronomy service from harmful interference. Emissions from spaceborne or airborne stations can be particularly serious sources of interference to the radio astronomy service (see Nos. **4.5** and **4.6** and Article **29**). (WRC 07)	
5.150	The following bands:	
	13'553- 13'567 kHz	(centre frequency 13'560 kHz),
	26'957- 27'283 kHz	(centre frequency 27'120 kHz),
	40.66- 40.70 MHz	(centre frequency 40.68 MHz),
	902- 928 MHz	in Region 2 (centre frequency 915 MHz),
	2'400- 2'500 MHz	(centre frequency 2'450 MHz),
	5'725- 5'875 MHz	(centre frequency 5'800 MHz), and
	24- 24.25 GHz	(centre frequency 24.125 GHz)
	are also designated for industrial, scientific and medical (ISM) applications. Radiocommunication services operating within these bands must accept harmful interference which may be caused by these applications. ISM equipment operating in these bands is subject to the provisions of No. **15.13**.	
5.151	*Additional allocation:* Frequencies in the bands 13'570-13'600 kHz and 13'800-13'870 kHz may be used by stations in the fixed service and in the mobile except aeronautical mobile (R) service , communicating only within the boundary of the country in which they are located, on the condition that harmful interference is not caused to the broadcasting service. When using frequencies in these services, administrations are urged to use the minimum power required and to take account of the seasonal use of frequencies by the broadcasting service published in accordance with the Radio Regulations. (WRC-07)	
5.155B	The band 21'870- 21'924 kHz is used by the fixed service for provision of services related to aircraft flight safety.	
5.156A	The use of the band 23'200- 23'350 kHz by the fixed service is limited to provision of services related to aircraft flight safety.	

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5.157	The use of the band 23'350- 24'000 kHz by the maritime mobile service is limited to inter-ship radiotelegraphy.
5.161B	*Alternative allocation:* in Albania, Germany, Armenia, Austria, Belarus, Belgium, Bosnia and Herzegovina, Cyprus, Vatican, Croatia, Denmark, Spain, Estonia, Finland, France, Greece, Hungary, Ireland, Iceland, Italy, Latvia, Liechtenstein, Lithuania, Luxembourg, North Macedonia, Malta, Moldova, Monaco, Montenegro, Norway, Uzbekistan, Netherlands, Portugal, Kyrgyzstan, Slovakia, Czech Rep., Romania, United Kingdom, San Marino, Slovenia, Sweden, Switzerland, Turkey and Ukraine, the frequency band 42-42.5 MHz is allocated to the fixed and mobile services on a primary basis. (WRC-19)
5.162A	*Additional allocation*: in Germany, Austria, Belgium, Bosnia and Herzegovina, China, Vatican, Denmark, Spain, Estonia, the Russian Federation, Finland, France, Ireland, Iceland, Italy, Latvia, Liechtenstein, Lithuania, Luxembourg, North Macedonia, Monaco, Montenegro, Norway, the Netherlands, Poland, Portugal, the Czech Rep., the United Kingdom, Serbia, Slovenia, Sweden and Switzerland the frequency band 46-68 MHz is also allocated to the radiolocation service on a secondary basis. This use is limited to the operation of wind profiler radars in accordance with Resolution **217** (WRC-97). (WRC-19)
5.164	*Additional allocation:* in Albania, Algeria, Germany, Austria, Belgium, Bosnia and Herzegovina, Botswana, Bulgaria, Côte d'Ivoire, Croatia, Denmark, Spain, Estonia, Eswatini, Finland, France, Gabon, Greece, Hungary, Ireland, Israel, Italy, Jordan, Lebanon, Libya, Liechtenstein, Lithuania, Luxembourg, Madagascar, Mali, Malta, Morocco, Mauritania, Monaco, Montenegro, Nigeria, Norway, the Netherlands, Poland, Syrian Arab Republic, Slovakia, Czech Rep., Romania, the United Kingdom, Serbia, Slovenia, Sweden, Switzerland, Chad, Togo, Tunisia and Turkey, the frequency band 47-68 MHz, in South Africa the frequency band 47-50 MHz, and in Latvia the frequency bands 48.5-56.5 MHz and 58-68 MHz, are also allocated to the land mobile service on a primary basis. However, stations of the land mobile service in the countries mentioned in connection with each frequency band referred to in this footnote shall not cause harmful interference to, or claim protection from, existing or planned broadcasting stations of countries other than those mentioned in connection with the frequency band. . (WRC-19)
5.166A	*Different category of service:* in Austria, Cyprus, the Vatican, Croatia, Denmark, Spain, Finland, Hungary, Latvia, the Netherlands, the Czech Republic, the United Kingdom, Slovakia and Slovenia, the frequency band 50.0-50.5 MHz is allocated to the amateur service on a primary basis. Stations in the amateur service in these countries shall not cause harmful interference to, or claim protection from, stations of the broadcasting, fixed and mobile services operating in accordance with the Radio Regulations in the frequency band 50.0-50.5 MHz in the countries not listed in this provision. For a station of these services, the protection criteria in No. **5.169B** shall also apply. In Region 1, with the exception of those countries listed in No. **5.169**, wind profiler radars operating in the radiolocation service under No. **5.162A** are authorized to operate on the basis of equality with stations in the amateur service in the frequency band 50.0-50.5 MHz. (WRC-19)
5.166C	In Region 1, stations in the amateur service in the frequency band 50-52 MHz, with the exception of those countries listed in No. **5.169**, shall not cause harmful interference to, or claim protection from, wind profiler radars operating in the radiolocation service under No. **5.162A**. (WRC-19)
5.180	The frequency 75 MHz is assigned to marker beacons. Administrations shall refrain from assigning frequencies close to the limits of the guardband to stations of other services which, because of their power or geographical position, might cause harmful interference or otherwise place a constraint on marker beacons. Every effort should be made to improve further the characteristics of airborne receivers and to limit the power of transmitting stations close to the limits 74.8 MHz and 75.2 MHz.
5.197A	*Additional allocation*: the band 108-117.975 MHz is also allocated on a primary basis to the aeronautical mobile (R) service, limited to systems operating in accordance with recognized international aeronautical standards. Such use shall be in accordance with Resolution **413 (Rev.WRC-07)***. The use of the band 108-112 MHz by the aeronautical mobile (R) service shall be limited to systems composed of ground-based transmitters and associated receivers that provide navigational information in support of air navigation functions in accordance with recognized international aeronautical standards. (WRC-07) **Note by the Secretariat:* This Resolution was revised by WRC-12.
5.200	In the band 117.975-137 MHz, the frequency 121.5 MHz is the aeronautical emergency frequency and, where required, the frequency 123.1 MHz is the aeronautical frequency auxiliary to 121.5 MHz. Mobile stations of

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	the maritime mobile service may communicate on these frequencies under the conditions laid down in Article **31** for distress and safety purposes with stations of the aeronautical mobile service. (WRC-07)
5.203C	The use of the space operation service (space-to-Earth) with non-geostationary satellite short-duration mission systems in the frequency band 137-138 MHz is subject to Resolution **660** (WRC-19). Resolution **32 (WRC-19)** applies. These systems shall not cause harmful interference to, or claim protection from, the existing services to which the frequency band is allocated on a primary basis. (WRC-19)
5.206	Different category of service: in Armenia, Azerbaijan, Belarus, Bulgaria, Egypt, the Russian Federation, Finland, France, Georgia, Greece, Kazakstan, Lebanon, Moldova, Mongolia, Uzbekistan, Poland, Kyrgyzstan, the Syrian Arab Republic, Slovakia, the Czech Republic, Romania, , Tajikistan, Turkmenistan and Ukraine, the allocation of the band 137-138 MHz to the aeronautical mobile (OR) service is on a primary basis (see No. **5.33**). (WRC-2000)
5.208	The use of the band 137-138 MHz by the mobile-satellite service is subject to coordination under No. **9.11A**. (WRC-97)
5.208A	In making assignments to space stations in the mobile-satellite service in the frequency bands 137-138 MHz, 387-390 MHz and 400.15-401 MHz and in the maritime mobile-satellite service (space-to-Earth) in the frequency bands 157.1875-157.3375 MHz and 161.7875-161.9375 MHz, administrations shall take all practicable steps to protect the radio astronomy service in the frequency bands 150.05-153 MHz, 322-328.6 MHz, 406.1-410 MHz and 608-614 MHz from harmful interference from unwanted emissions as shown in the most recent version of Recommendation ITU-R RA.769. . (WRC-19)
5.208B	In the frequency bands: 137-138 MHz, 157.1875-157.3375 MHz, 161.7875-161.9375 MHz, 387-390 MHz, 400.15-401 MHz, 1 452-1 492 MHz, 1 525-1 610 MHz, 1 613.8-1 626.5 MHz, 2 655-2 690 MHz, 21.4-22 GHz, Resolution **739 (Rev.WRC-19)** applies. . (WRC-19)
5.209	The use of the bands 137- 138 MHz, 148- 150.05 MHz, 399.9- 400.05 MHz, 400.15- 401 MHz, 454- 456 MHz and 459- 460 MHz by the mobile-satellite service is limited to non-geostationary-satellite systems. (WRC-97)
5.209A	The use of the frequency band 137.175-137.825 MHz by non-geostationary-satellite systems in the space operation service identified as short-duration mission in accordance with Appendix **4** is not subject to No. **9.11A**. (WRC-19)
5.211	*Additional allocation*: in Germany, Saudi Arabia, Austria, Bahrain, Belgium, Denmark, the United Arab Emirates, Spain, Finland, Greece, Guinea, Ireland, Israel, Kenya, Kuwait, Lebanon, Liechtenstein, Luxembourg, North Macedonia, Mali, Malta, Montenegro, Norway, the Netherlands, Qatar, Slovakia, the United Kingdom, Serbia, Slovenia, Somalia, Sweden, Switzerland, Tanzania, Tunisia and Turkey, the frequency band 138-144 MHz is also allocated to the maritime mobile and land mobile services on a primary basis. (WRC-19)
5.218	*Additional allocation*: the band 148- 149.9 MHz is also allocated to the space operation service (Earth-to-space) on a primary basis, subject to agreement obtained under No**. 9.21**. The bandwidth of any individual transmission shall not exceed ± 25 kHz.
5.218A	The frequency band 148-149.9 MHz in the space operation service (Earth-to-space) may be used by non-geostationary-satellite systems with short-duration missions. Non-geostationary-satellite systems in the space operation service used for a short-duration mission in accordance with Resolution **32 (WRC-19)** of the Radio Regulations are not subject to agreement under No. **9.21**. At the stage of coordination, the provisions of Nos. **9.17** and **9.18** also apply. In the frequency band 148-149.9 MHz, non-geostationary-satellite systems with short-duration missions shall not cause unacceptable interference to, or claim protection from, existing primary services within this frequency band, or impose additional constraints on the space operation and mobile-satellite services. In addition, earth stations in non-geostationary-satellite systems in the space operation service with short-duration missions in

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	the frequency band 148-149.9 MHz shall ensure that the power flux-density does not exceed −149 dB(W/(m^2 · 4 kHz)) for more than 1% of time at the border of the territory of the following countries: Armenia, Azerbaijan, Belarus, China, Korea (Rep. of), Cuba, Russian Federation, India, Iran (Islamic Republic of), Japan, Kazakhstan, Malaysia, Uzbekistan, Kyrgyzstan, Thailand and Viet Nam. In case this power flux-density limit is exceeded, agreement under No. **9.21** is required to be obtained from countries mentioned in this footnote. (WRC-19)
5.219	The use of the frequency band 148-149.9 MHz by the mobile-satellite service is subject to coordination under No. **9.11A**. The mobile-satellite service shall not constrain the development and use of the fixed, mobile and space operation services in the frequency band 148-149.9 MHz. The use of the frequency band 148-149.9 MHz by non-geostationary-satellite systems in the space operation service identified as short-duration mission is not subject to No. **9.11A**. (WRC-19)
5.220	The use of the frequency bands 149.9-150.05 MHz and 399.9-400.05 MHz by the mobile-satellite service is subject to coordination under No. **9.11A.** (WRC-15)
5.221	Stations of the mobile-satellite service in the frequency band 148-149.9 MHz shall not cause harmful interference to, or claim protection from, stations of the fixed or mobile services operating in accordance with the Table of Frequency Allocations in the following countries: Albania, Algeria, Germany, Saudi Arabia, Australia, Austria, Bahrain, Bangladesh, Barbados, Belarus, Belgium, Benin, Bosnia and Herzegovina, Botswana, Brunei Darussalam, Bulgaria, Cameroon, China, Cyprus, Congo (Rep. of the), Korea (Rep. of), Côte d'Ivoire, Croatia, Cuba, Denmark, Djibouti, Egypt, the United Arab Emirates, Eritrea, Spain, Estonia, Eswatini, Ethiopia, the Russian Federation, Finland, France, Gabon, Georgia, Ghana, Greece, Guinea, Guinea Bissau, Hungary, India, Iran (Islamic Republic of), Ireland, Iceland, Israel, Italy, Jamaica, Japan, Jordan, Kazakhstan, Kenya, Kuwait, Lesotho, Latvia, Lebanon, Libya, Liechtenstein, Lithuania, Luxembourg, North Macedonia, Malaysia, Mali, Malta, Mauritania, Moldova, Mongolia, Montenegro, Mozambique, Namibia, Norway, New Zealand, Oman, Uganda, Uzbekistan, Pakistan, Panama, Papua New Guinea, Paraguay, the Netherlands, the Philippines, Poland, Portugal, Qatar, the Syrian Arab Republic, Kyrgyzstan, Dem. People's Rep. of Korea, Slovakia, Romania, the United Kingdom, Senegal, Serbia, Sierra Leone, Singapore, Slovenia, Sudan, Sri Lanka, South Africa, Sweden, Switzerland, Tanzania, Chad, Togo, Tonga, Trinidad and Tobago, Tunisia, Turkey, Ukraine, Viet Nam, Yemen, Zambia and Zimbabwe. (WRC-19)
5.225A	*Additional allocation:* in Algeria, Armenia, Azerbaijan, Belarus, China, the Russian Federation, France, Iran (Islamic Republic of), Kazakhstan, Uzbekistan, Kyrgyzstan, Tajikistan, Turkmenistan, Ukraine and Viet Nam, the frequency band 154-156 MHz is also allocated to the radiolocation service on a primary basis. The usage of the frequency band 154-156 MHz by the radiolocation service shall be limited to space-object detection systems operating from terrestrial locations. The operation of stations in the radiolocation service in the frequency band 154-156 MHz shall be subject to agreement obtained under No. **9.21**. For the identification of potentially affected administrations in Region 1, the instantaneous field-strength value of 12 dB(μV/m) for 10% of the time produced at 10 m above ground level in the 25 kHz reference frequency band at the border of the territory of any other administration shall be used. For the identification of potentially affected administrations in Region 3, the interference-to-noise ratio (*I*/*N*) value of −6 dB (N = −161 dBW/4 kHz), or −10 dB for applications with greater protection requirements, such as public protection and disaster relief (PPDR (*N* = −161 BW/4 kHz)), for 1% of the time produced at 60 m above ground level at the border of the territory of any other administration shall be used. In the frequency bands 156.7625-156.8375 MHz, 156.5125-156.5375 MHz, 161.9625-161.9875 MHz, 162.0125-162.0375 MHz, out-of-band e.i.r.p. of space surveillance radars shall not exceed −16 dBW. Frequency assignments to the radiolocation service under this allocation in Ukraine shall not be used without the agreement of Moldova. (WRC 12)
5.226	The frequency 156.525 MHz is the international distress, safety and calling frequency for the maritime mobile VHF radiotelephone service using digital selective calling (DSC). The conditions for the use of this frequency and the band 156.4875-156.5625 MHz are contained in Articles **31** and **52**, and in Appendix **18**. The frequency 156.8 MHz is the international distress, safety and calling frequency for the maritime mobile VHF radiotelephone service. The conditions for the use of this frequency and the band 156.7625- 156.8375 MHz are contained in Article **31** and Appendix **18**. In the bands 156-156.4875 MHz, 156.5625-156.7625 MHz, 156.8375-157.45 MHz, 160.6- 160.975 MHz and 161.475-162.05 MHz, each administration shall give priority to the maritime mobile service on only such

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	frequencies as are assigned to stations of the maritime mobile service by the administration (see Articles **31** and **52**, and Appendix **18**). Any use of frequencies in these bands by stations of other services to which they are allocated should be avoided in areas where such use might cause harmful interference to the maritime mobile VHF radiocommunication service. However, the frequencies 156.8 MHz and 156.525 MHz and the frequency bands in which priority is given to the maritime mobile service may be used for radiocommunications on inland waterways subject to agreement between interested and affected administrations and taking into account current frequency usage and existing agreements. (WRC-07)
5.227	*Additional allocation:* the bands 156.4875-156.5125 MHz and 156.5375-156.5625 MHz are also allocated to the fixed and land mobile services on a primary basis. The use of these bands by the fixed and land mobile services shall not cause harmful interference to nor claim protection from the maritime mobile VHF radiocommunication service. (WRC-07)
5.228	The use of the frequency bands 156.7625-156.7875 MHz and 156.8125-156.8375 MHz by the mobile-satellite service (Earth-to-space) is limited to the reception of automatic identification system (AIS) emissions of long-range AIS broadcast messages (Message 27, see the most recent version of Recommendation ITU R M.1371). With the exception of AIS emissions, emissions in these frequency bands by systems operating in the maritime mobile service for communications shall not exceed 1 W. (WRC 12)
5.228A	The frequency bands 161.9625-161.9875 MHz and 162.0125-162.0375 MHz may be used by aircraft stations for the purpose of search and rescue operations and other safety-related communications. (WRC 12)
5.228AA	The use of the frequency bands 161.9375- 161.9625 MHz and 161.9875- 162.0125 MHz by the maritime mobile-satellite (Earth-to-space) service is limited to the systems which operate in accordance with Appendix **18**. (WRC 15)
5.228AB	The use of the frequency bands 157.1875-157.3375 MHz and 161.7875-161.9375 MHz by the maritime mobile-satellite service (Earth-to-space) is limited to non-geostationary-satellite systems operating in accordance with Appendix **18**. (WRC-19)
5.228B	The use of the frequency bands 161.9625-161.9875 MHz and 162.0125-162.0375 MHz by the fixed and land mobile services shall not cause harmful interference to, or claim protection from, the maritime mobile service. (WRC 12)
5.228F	The use of the frequency bands 161.9625-161.9875 MHz and 162.0125-162.0375 MHz by the mobile-satellite service (Earth-to-space) is limited to the reception of automatic identification system emissions from stations operating in the maritime mobile service. (WRC 12)
5.235	*Additional allocation*: in Germany, Austria, Belgium, Denmark, Spain, Finland, France, Israel, Italy, Liechtenstein, Malta, Monaco, Norway, the Netherlands, the United Kingdom, Sweden and Switzerland, the band 174- 223 MHz is also allocated to the land mobile service on a primary basis. However, the stations of the land mobile service shall not cause harmful interference to, or claim protection from, broadcasting stations, existing or planned, in countries other than those listed in this footnote.
5.254	The bands 235- 322 MHz and 335.4- 399.9 MHz may be used by the mobile-satellite service, subject to agreement obtained under No. **9.21**, on condition that stations in this service do not cause harmful interference to those of other services operating or planned to be operated in accordance with the Table of Frequency Allocations except for the additional allocation made in footnote No. **5.256A.** (WRC-03)
5.255	The bands 312- 315 MHz (Earth-to-space) and 387- 390 MHz (space-to-Earth) in the mobile-satellite service may also be used by non-geostationary-satellite systems. Such use is subject to coordination under No. **9.11A.**
5.256	The frequency 243 MHz is the frequency in this band for use by survival craft stations and equipment used for survival purposes. (WRC-07)
5.257	The band 267- 272 MHz may be used by administrations for space telemetry in their countries on a primary basis, subject to agreement obtained under No. **9.21**.
5.258	The use of the band 328.6- 335.4 MHz by the aeronautical radionavigation service is limited to Instrument Landing Systems (glide path).

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5.260A	- In the frequency band 399.9-400.05 MHz, the maximum e.i.r.p. of any emission of earth stations in the mobile-satellite service shall not exceed 5 dBW in any 4 kHz band and the maximum e.i.r.p. of each earth station in the mobile-satellite service shall not exceed 5 dBW in the whole 399.9-400.05 MHz frequency band. Until 22 November 2022, this limit shall not apply to satellite systems for which complete notification information has been received by the Radiocommunication Bureau by 22 November 2019 and that have been brought into use by that date. After 22 November 2022, these limits shall apply to all systems within the mobile-satellite service operating in this frequency band. - In the frequency band 399.99-400.02 MHz, the e.i.r.p. limits as specified above shall apply after 22 November 2022 to all systems within the mobile-satellite service. Administrations are requested that their mobile-satellite service satellite links in the 399.99-400.02 MHz frequency band comply with the e.i.r.p. limits as specified above, after 22 November 2019. (WRC 19)
5.260B	In the frequency band 400.02-400.05 MHz, the provisions of No. **5.260A** are not applicable for telecommand uplinks within the mobile-satellite service. (WRC 19)
5.261	Emissions shall be confined in a band of ± 25 kHz about the standard frequency 400.1 MHz.
5.263	The band 400.15- 401 MHz is also allocated to the space research service in the space-to-space direction for communications with manned space vehicles. In this application, the space research service will not be regarded as a safety service.
5.264	The use of the band 400.15- 401 MHz by the mobile-satellite service is subject to coordination under No. **9.11A**. The power flux-density limit indicated in Annex **1** of Appendix **5** shall apply until such time as a competent world radiocommunication conference revises it.
5.264A	- In the frequency band 401-403 MHz, the maximum e.i.r.p. of any emission of each earth station in the meteorological-satellite service and the Earth exploration-satellite service shall not exceed 22 dBW in any 4 kHz band for geostationary-satellite systems and non-geostationary-satellite systems with an orbit of apogee equal or greater than 35 786 km. - The maximum e.i.r.p. of any emission of each earth station in the meteorological-satellite service and the Earth exploration-satellite service shall not exceed 7 dBW in any 4 kHz band for non-geostationary-satellite systems with an orbit of apogee lower than 35 786 km. - The maximum e.i.r.p. of each earth station in the meteorological-satellite service and the Earth exploration-satellite service shall not exceed 22 dBW for geostationary-satellite systems and non-geostationary-satellite systems with an orbit of apogee equal or greater than 35 786 km in the whole 401-403 MHz frequency band. The maximum e.i.r.p. of each earth station in the meteorological-satellite service and the Earth exploration-satellite service shall not exceed 7 dBW for non-geostationary-satellite systems with an orbit of apogee lower than 35 786 km in the whole 401-403 MHz frequency band. - Until 22 November 2029, these limits shall not apply to satellite systems for which complete notification information has been received by the Radiocommunication Bureau by 22 November 2019 and that have been brought into use by that date. After 22 November 2029, these limits shall apply to all systems within the meteorological-satellite service and the Earth exploration-satellite service operating in this frequency band. (WRC 19)
5.264B	Non-geostationary-satellite systems in the meteorological-satellite service and the Earth exploration-satellite service for which complete notification information has been received by the Radiocommunication Bureau before 28 April 2007 are exempt from provisions of No. **5.264A** and may continue to operate in the frequency band 401.898-402.522 MHz on a primary basis without exceeding a maximum e.i.r.p. level of 12 dBW. (WRC 19)
5.265	In the frequency band 403-410 MHz, Resolution **205 (Rev.WRC-19)** applies. (WRC-19)
5.266	The use of the band 406- 406.1 MHz by the mobile-satellite service is limited to low power satellite emergency position-indicating radiobeacons (see also Article **31**). (WRC-07)
5.267	Any emission capable of causing harmful interference to the authorised uses of the band 406- 406.1 MHz is prohibited.
5.276	*Additional allocation:* in Afghanistan, Algeria, Saudi Arabia, Bahrain, Bangladesh, Brunei Darussalam, Burkina Faso, Djibouti, Egypt, the United Arab Emirates, Ecuador, Eritrea, Ethiopia, Greece, Guinea, India, Indonesia, Iran (Islamic Republic of), Iraq, Israel, Italy, Jordan, Kenya, Kuwait, Libya, Malaysia, Niger, Nigeria, Oman, Pakistan, the Philippines, Qatar, the Syrian Arab Republic, the Dem. People's Rep. of Korea, Singapore,

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	Somalia, Sudan, Switzerland, Thailand, Togo, Turkey and Yemen, the frequency band 430-440 MHz is also allocated to the fixed service on a primary basis and the frequency bands 430-435 MHz and 438-440 MHz are also allocated, except in Ecuador, to the mobile, except aeronautical mobile, service on a primary basis. (WRC-15)
5.279A	The use of the frequency band 432-438 MHz by sensors in the Earth exploration-satellite service (active) shall be in accordance with Recommendation ITU-R RS.1260-2. Additionally, the Earth exploration-satellite service (active) in the frequency band 432-438 MHz shall not cause harmful interference to the aeronautical radionavigation service in China. The provisions of this footnote in no way diminish the obligation of the Earth exploration-satellite service (active) to operate as a secondary service in accordance with Nos. **5.29** and **5.30**. (WRC-19)
5.280	In Germany, Austria, Bosnia and Herzegovina, Croatia, Liechtenstein, North Macedonia, Montenegro, Portugal, Serbia, Slovenia and Switzerland, the frequency band 433.05-434.79 MHz (centre frequency 433.92 MHz) is designated for industrial, scientific and medical (ISM) applications. Radiocommunication services of these countries operating within this frequency band must accept harmful interference which may be caused by these applications. ISM equipment operating in this frequency band is subject to the provisions of No. **15.13**. (WRC-19)
5.282	In the bands 435- 438 MHz, 1'260- 1'270 MHz, 2'400- 2'450 MHz, 3'400- 3'410 MHz (in Regions 2 and 3 only) and 5'650- 5'670 MHz, the amateur-satellite service may operate subject to not causing harmful interference to other services operating in accordance with the Table (see No. **5.43**). Administrations authorising such use shall ensure that any harmful interference caused by emissions from a station in the amateur-satellite service is immediately eliminated in accordance with the provisions of No**. 25.11**. The use of the bands 1'260- 1'270 MHz and 5'650- 5'670 MHz by the amateur-satellite service is limited to the Earth-to-space direction.
5.287	Use of the frequency bands 457.5125-457.5875 MHz and 467.5125-467.5875 MHz by the maritime mobile service is limited to on-board communication stations. The characteristics of the equipment and the channelling arrangement shall be in accordance with Recommendation ITU-R M.1174-4. The use of these frequency bands in territorial waters is subject to the national regulations of the administration concerned. (WRC-19)
5.289	Earth exploration-satellite service applications, other than the meteorological-satellite service, may also be used in the bands 460- 470 MHz and 1'690- 1'710 MHz for space-to-Earth transmissions subject to not causing harmful interference to stations operating in accordance with the Table.
5.291A	*Additional allocation:* in Germany, Austria, Denmark, Estonia, Liechtenstein, the Czech Rep., Serbia and Switzerland, the frequency band 470- 494 MHz is also allocated to the radiolocation service on a secondary basis. This use is limited to the operation of wind profiler radars in accordance with Resolution **217 (WRC-97)**. (WRC-15)
5.296	*Additional allocation*: in Albania, Germany, Angola, Saudi Arabia, Austria, Bahrain, Belgium, Benin, Bosnia and Herzegovina, Botswana, Bulgaria, Burkina Faso, Burundi, Cameroon, Vatican, Congo (Rep. of the), Côte d'Ivoire, Croatia, Denmark, Djibouti, Egypt, United Arab Emirates, Spain, Estonia, Eswatini. Finland, France, Gabon, Georgia, Ghana, Hungary, Iraq, Ireland, Iceland, Israel, Italy, Jordan, Kenya, Kuwait, Lesotho, Latvia, Lebanon, Libya, Liechtenstein, Lithuania, Luxembourg, North Macedonia, Malawi, Mali, Malta, Morocco, Mauritius, Mauritania, Moldova, Monaco, Mozambique, Namibia, Niger, Nigeria, Norway, Oman, Uganda, the Netherlands, Poland, Portugal, Qatar, the Syrian Arab Republic, Slovakia, the Czech Republic, Romania, the United Kingdom, Rwanda, San Marino, Serbia, Sudan, South Africa, Sweden, Switzerland, Tanzania, Chad, Togo, Tunisia, Turkey, Ukraine, Zambia and Zimbabwe, the frequency band 470-694 MHz is also allocated on a secondary basis to the land mobile service, intended for applications ancillary to broadcasting and programme-making. Stations of the land mobile service in the countries listed in this footnote shall not cause harmful interference to existing or planned stations operating in accordance with the Table in countries other than those listed in this footnote. (WRC-19)
5.306	*Additional allocation*: in Region 1, except in the African Broadcasting Area (see Nos. **5.10** to **5.13**), and in Region 3, the band 608 - 614 MHz is also allocated to the radio astronomy service on a secondary basis.
5.312A	In Region 1, the use of the frequency band 694-790 MHz by the mobile, except aeronautical mobile, service is subject to the provisions of Resolution **760 (Rev.WRC-19)**. See also Resolution **224 (Rev.WRC-19)**. (WRC-19)

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5.316B	In Region 1, the allocation to the mobile, except aeronautical mobile, service in the frequency band 790-862 MHz is subject to agreement obtained under No. **9.21** with respect to the aeronautical radionavigation service in countries mentioned in No. **5.312**. For countries party to the GE06 Agreement, the use of stations of the mobile service is also subject to the successful application of the procedures of that Agreement. Resolutions **224 (Rev.WRC-19)** and **749 (Rev.WRC-19)** shall apply, as appropriate. (WRC-19)
5.317A	The parts of the frequency band 698-960 MHz in Region 2 and the frequency bands 694-790 MHz in Region 1 and 790-960 MHz in Regions 1 and 3 which are allocated to the mobile service on a primary basis are identified for use by administrations wishing to implement International Mobile Telecommunications (IMT) – see Resolutions **224 (Rev.WRC-19)**, **760 (Rev.WRC-19)** and **749 (Rev.WRC-19)**, where applicable. This identification does not preclude the use of these frequency bands by any application of the services to which they are allocated and does not establish priority in the Radio Regulations. (WRC-19)
5.327A	The use of the frequency band 960- 1'164 MHz by the aeronautical mobile (R) service is limited to systems that operate in accordance with recognized international aeronautical standards. Such use shall be in accordance with Resolution **417 (Rev. WRC-15)**. (WRC-15)
5.328	The use of the band 960- 1'215 MHz by the aeronautical radionavigation service is reserved on a worldwide basis for the operation and development of airborne electronic aids to air navigation and any directly associated ground-based facilities. (WRC-2000)
5.328A	Stations in the radionavigation-satellite service in the band 1'164- 1'215 MHz shall operate in accordance with the provisions of Resolution **609 (Rev.WRC-07)** and shall not claim protection from stations in the aeronautical radionavigation service in the band 960- 1’215 MHz. No. **5.43A** does not apply. The provisions of No**. 21.18** shall apply. (WRC-07)
5.328AA	The frequency band 1'087.7-1'092.3 MHz is also allocated to the aeronautical mobile-satellite (R) service (Earth-to-space) on a primary basis, limited to the space station reception of Automatic Dependent Surveillance-Broadcast (ADS-B) emissions from aircraft transmitters that operate in accordance with recognized international aeronautical standards. Stations operating in the aeronautical mobile-satellite (R) service shall not claim protection from stations operating in the aeronautical radionavigation service. Resolution **425 (Rev.WRC-19)** shall apply. (WRC-19)
5.328B	The use of the bands 1'164- 1'300 MHz, 1'559- 1' 610 MHz and 5'010- 5'030 MHz by systems and networks in the radionavigation-satellite service for which complete coordination or notification information, as appropriate, is received by the Radiocommunication Bureau after 1 January 2005 is subject to the application of the provisions of Nos. **9.12, 9.12A** and **9.13.** Resolution **610 (WRC-03)*** shall also apply; however, in the case of radionavigation-satellite service (space-to-space) networks and systems, Resolution **610 (WRC-03)*** shall only apply to transmitting space stations. In accordance with No. **5.329A**, for systems and networks in the radionavigation-satellite service (space-to-space) in the bands 1'215-1'300 MHz and 1'559-1'610 MHz, the provisions of Nos. **9.7, 9.12, 9.12A** and **9.13** shall only apply with respect to other systems and networks in the radionavigation-satellite service (space-to-space). (WRC-07) * Note by the Secretariat: This Resolution was revised by WRC-19.
5.329	Use of the radionavigation-satellite service in the frequency band 1'215-1'300 MHz shall be subject to the condition that no harmful interference is caused to, and no protection is claimed from, the radionavigation service authorized under No. **5.331**. Furthermore, the use of the radionavigation-satellite service in the frequency band 1'215-1'300 MHz shall be subject to the condition that no harmful interference is caused to the radiolocation service. No. **5.43** shall not apply in respect of the radiolocation service. Resolution **608 (Rev.WRC-19)** shall apply. (WRC-19)
5.329A	Use of systems in the radionavigation-satellite service (space-to-space) operating in the bands 1'215- 1'300 MHz and 1'559- 1'610 MHz is not intended to provide safety service applications, and shall not impose any additional constraints on radionavigation-satellite service (space-to-Earth) systems or on other services operating in accordance with the Table of Frequency Allocations. (WRC-07)
5.331	*Additional allocation:* in Algeria, Germany, Saudi Arabia, Australia, Austria, Bahrain, Belarus, Belgium, Benin, Bosnia and Herzegovina, Brazil, Burkina Faso, Burundi, Cameroon, China, Korea (Rep. of), Croatia, Denmark, Egypt, the United Arab Emirates, Estonia, the Russian Federation, Finland, France, Ghana, Greece, Guinea, Equatorial Guinea, Hungary, India, Indonesia, Iran (Islamic Republic of), Iraq, Ireland, Israel, Jordan, Kenya, Kuwait, Lesotho, Latvia, Lebanon, Liechtenstein, Lithuania, Luxembourg, North Macedonia, Madagascar, Mali,

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	Mauritania, Montenegro, Nigeria, Norway, Oman, Pakistan, the Kingdom of the Netherlands, Poland, Portugal, Qatar, the Syrian Arab Republic, Dem. People's Rep. of Korea, Slovakia, the United Kingdom, Serbia, Slovenia, Somalia, Sudan, South Sudan, Sri Lanka, South Africa, Sweden, Switzerland, Thailand, Togo, Turkey, Venezuela and Viet Nam, the frequency band 1'215-1'300 MHz is also allocated to the radionavigation service on a primary basis. In Canada and the United States, the frequency band 1'240-1'300 MHz is also allocated to the radionavigation service, and use of the radionavigation service shall be limited to the aeronautical radionavigation service. (WRC-19)
5.332	In the band 1'215- 1'260 MHz, active spaceborne sensors in the earth exploration-satellite and space research services shall not cause harmful interference to, claim protection from, or otherwise impose constraints on operation or development of the radiolocation service, the radionavigation-satellite service and other services allocated on a primary basis. (WRC-2000)
5.335A	In the band 1'260- 1'300 MHz, active spaceborne sensors in the Earth exploration-satellite and space research services shall not cause harmful interference to, claim protection from, or otherwise impose constraints on operation or development of the radiolocation service and other services allocated by footnotes on a primary basis. (WRC-2000)
5.337	The use of the bands 1'300- 1'350 MHz, 2'700- 2'900 MHz and 9'000- 9'200 MHz by the aeronautical radionavigation service is restricted to ground-based radars and to associated airborne transponders which transmit only on frequencies in these bands and only when actuated by radars operating in the same band.
5.337A	The use of the band 1'300- 1'350 MHz by earth stations in the radionavigation-satellite service and by stations in the radiolocation service shall not cause harmful interference to, nor constrain the operation and development of, the aeronautical-radionavigation service. (WRC-2000)
5.338A	In the frequency bands 1'350-1'400 MHz, 1'427-1'452 MHz, 22.55-23.55 GHz, 24.25-27.5 GHz, 30-31.3 GHz, 49.7-50.2 GHz, 50.4-50.9 GHz, 51.4-52.4 GHz, 52.4-52.6 GHz, 81-86 GHz and 92-94 GHz, Resolution **750 (Rev.WRC-19)** applies. (WRC-19)
5.339	The bands 1'370- 1'400 MHz, 2'640- 2'655 MHz, 4'950- 4'990 MHz and 15.20- 15.35 GHz are also allocated to the space research (passive) and earth exploration-satellite (passive) services on a secondary basis.

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5.340	All emissions are prohibited in the following bands:	
	1'400- 1'427 MHz,	
	2'690- 2'700 MHz,	except those provided for by No. **5.422**,
	10.68- 10.7GHz,	except those provided for by No. **5.483**,
	15.35- 15.4 GHz,	except those provided for by No. **5.511**,
	23.6- 24 GHz,	
	31.3- 31.5 GHz,	
	31.5- 31.8 GHz,	in Region 2,
	48.94- 49.04 GHz,	from airborne stations,
	50.2- 50.4 GHz[2],	
	52.6- 54.25 GHz,	
	86- 92 GHz,	
	100- 102 GHz,	
	109.5- 111.8 GHz,	
	114.25- 116 GHz	
	148.5- 151.5 GHz,	
	164- 167 GHz,	
	182- 185 GHz,	
	190- 191.8 GHz,	
	200- 209 GHz,	
	226- 231.5 GHz,	
	250- 252 GHz. (WRC-03)	
	---------- [2] **5.340.1** The allocation to the earth exploration-satellite service (passive) and the space research service (passive) in the band 50.2- 50.4 GHz should not impose undue constraints on the use of the adjacent bands by the primary allocated services in those bands. (WRC-97)	
5.341	In the bands 1'400- 1'727 MHz, 101- 120 GHz and 197- 220 GHz, passive research is being conducted by some countries in a programme for the search for intentional emissions of extraterrestrial origin.	
5.341A	In Region 1, the frequency bands 1'427- 1'452 MHz and 1'492- 1'518 MHz are identified for use by administrations wishing to implement International Mobile Telecommunications (IMT) in accordance with Resolution **223 (Rev.WRC-15)***. This identification does not preclude the use of these frequency bands by any other application of the services to which it is allocated and does not establish priority in the Radio Regulations. The use of IMT stations is subject to agreement obtained under No**. 9.21** with respect to the aeronautical mobile service used for aeronautical telemetry in accordance with No. **5.342**. (WRC-15) * Note by the Secretariat: This Resolution was revised by WRC-19.	
5.345	Use of the frequency band 1'452-1'492 MHz by the broadcasting-satellite service, and by the broadcasting service, is limited to digital audio broadcasting and is subject to the provisions of Resolution **528 (Rev.WRC-19)**. (WRC-19)	
5.348	The use of the band 1'518- 1'525 MHz by the mobile-satellite service is subject to coordination under No. **9.11A**. In the band 1'518- 1'525 MHz stations in the mobile-satellite service shall not claim protection from the stations in the fixed service. No. **5.43A** does not apply. (WRC-03)	
5.348A	In the band 1'518- 1'525 MHz, the coordination threshold in terms of the power flux-density levels at the surface of the Earth in application of No. **9.11A** for space stations in the mobile-satellite (space-to-Earth) service, with respect to the land mobile service use for specialized mobile radios or used in conjunction with public switched telecommunication networks (PSTN) operating within the territory of Japan, shall be - 150 dB(W/m^2) in any 4 kHz band for all angles of arrival, instead of those given in Table 5-2 of Appendix **5**. In the band 1'518- 1'525 MHz stations in the mobile-satellite service shall not claim protection from stations in the mobile service in the territory of Japan. No. **5.43A** does not apply. (WRC-03)	

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5.348B	In the band 1'518- 1'525 MHz, stations in the mobile-satellite service shall not claim protection from aeronautical mobile telemetry stations in the mobile service in the territory of the United States (see Nos. **5.343** and **5.344**) and in the countries listed in No. **5.342**. No. **5.43A** does not apply. (WRC-03)
5.351	The bands 1'525- 1'544 MHz, 1'545- 1'559 MHz, 1'626.5- 1'645.5 MHz and 1'646.5- 1'660.5 MHz shall not be used for feeder links of any service. In exceptional circumstances, however, an earth station at a specified fixed point in any of the mobile-satellite services may be authorised by an administration to communicate via space stations using these bands.
5.351A	For the use of the bands 1'518-1'544 MHz, 1'545-1'559 MHz, 1'610-1'645.5 MHz, , 1'646.5-1'660.5 MHz, 1'668-1'675 MHz, 1'980-2'010 MHz, 2'170-2'200 MHz, 2'483.5-2'520 MHz, and 2'670-2'690 MHz by the mobile-satellite service, see Resolutions **212 (Rev.WRC-07)*** and **225 (Rev.WRC-07)****. (WRC-07) * Note by the Secretariat: This Resolution was revised by WRC-15 and WRC-19. ** Note by the Secretariat: This Resolution was revised by WRC-12.
5.353A	In applying the procedures of Section II of Article **9** to the mobile-satellite service in the bands 1'530- 1'544 MHz and 1'626.5- 1'645.5 MHz, priority shall be given to accommodating the spectrum requirements for distress, urgency and safety communications of the Global Maritime Distress and Safety System (GMDSS). Maritime mobile-satellite distress, urgency and safety communications shall have priority access and immediate availability over all other mobile satellite communications operating within a network. Mobile-satellite systems shall not cause unacceptable interference to, or claim protection from, distress, urgency and safety communications of the GMDSS. Account shall be taken of the priority of safety-related communications in the other mobile-satellite services. (The provisions of Resolution **222 (WRC-2000)** shall apply.) (WRC-2000)
5.354	The use of the bands 1'525- 1'559 MHz and 1'626.5- 1'660.5 MHz by the mobile-satellite services is subject to coordination under No. **9.11A**.
5.356	The use of the band 1'544- 1'545 MHz by the mobile-satellite service (space-to-Earth) is limited to distress and safety communications (see Article **31**).
5.357	Transmissions in the band 1'545- 1'555 MHz from terrestrial aeronautical stations directly to aircraft stations, or between aircraft stations, in the aeronautical mobile (R) service are also authorised when such transmissions are used to extend or supplement the satellite-to-aircraft links.
5.357A	In applying the procedures of Section II of Article **9** to the mobile-satellite service in the frequency bands 1'545- 1'555 MHz and 1'646.5- 1'656.5 MHz, priority shall be given to accommodating the spectrum requirements of the aeronautical mobile-satellite (R) service providing transmission of messages with priority 1 to 6 in Article **44**. Aeronautical mobile-satellite (R) service communications with priority 1 to 6 in Article **44** shall have priority access and immediate availability, by pre-emption if necessary, over all other mobile-satellite communications operating within a network. Mobile-satellite systems shall not cause unacceptable interference to, or claim protection from, aeronautical mobile-satellite (R) service communications with priority 1 to 6 in Article **44**. Account shall be taken of the priority of safety-related communications in the other mobile-satellite services. (The provisions of Resolution **222 (Rev.WRC-12)*** shall apply.) (WRC-12) * *Note by the Secretariat:* This Resolution was revised by WRC-07 and WRC-12.
5.364	The use of the band 1'610- 1'626.5 MHz by the mobile-satellite service (Earth-to-space) and by the radiodetermination-satellite service (Earth-to-space) is subject to coordination under No. **9.11A**. A mobile earth station operating in either of the services in this band shall not produce a peak e.i.r.p. density in excess of -15 dB(W/4 kHz) in the part of the band used by systems operating in accordance with the provisions of No. **5.366** (to which No. **4.10** applies), unless otherwise agreed by the affected administrations. In the part of the band where such systems are not operating, the mean e.i.r.p. density of a mobile earth station shall not exceed -3 dB(W/4 kHz). Stations of the mobile-satellite service shall not claim protection from stations in the aeronautical radionavigation service, stations operating in accordance with the provisions of No. **5.366** and stations in the fixed service operating in accordance with the provisions of No. **5.359**. Administrations responsible for the coordination of mobile-satellite networks shall make all practicable efforts to ensure protection of stations operating in accordance with the provisions of No. **5.366**.
5.365	The use of the band 1'613.8- 1'626.5 MHz by the mobile-satellite service (space-to-Earth) is subject to coordination under No. **9.11A**.

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5.366	The band 1'610- 1'626.5 MHz is reserved on a worldwide basis for the use and development of airborne electronic aids to air navigation and any directly associated ground-based or satellite-borne facilities. Such satellite use is subject to agreement obtained under No. **9.21**.
5.367	*Additional allocation*: the frequency band 1'610- 1'626.5 MHz is also allocated to the aeronautical mobile-satellite (R) service on a primary basis, subject to agreement obtained under No. **9.21**. (WRC-12)
5.368	The provisions of No. **4.10** do not apply with respect to the radiodetermination-satellite and mobile-satellite services in the frequency band 1'610-1'626.5 MHz. However, No. **4.10** applies in the frequency band 1'610-1'626.5 MHz with respect to the aeronautical radionavigation-satellite service when operating in accordance with No. **5.366**, the aeronautical mobile satellite (R) service when operating in accordance with No. **5.367**, and in the frequency band 1'621.35-1'626.5 MHz with respect to the maritime mobile-satellite service when used for GMDSS. (WRC-19)
5.371	*Additional allocation:* in Region 1, the band 1'610- 1'626.5 MHz (Earth-to-space) is also allocated to the radiodetermination-satellite service on a secondary basis, subject to agreement obtained under No. **9.21**. (WRC-12)
5.372	Harmful interference shall not be caused to stations of the radio astronomy service using the frequency band 1'610.6-1'613.8 MHz by stations of the radiodetermination-satellite and mobile-satellite services (No. **29.13** applies). The equivalent power flux-density (epfd) produced in the frequency band 1'610.6-1'613.8 MHz by all space stations of a non-geostationary-satellite system in the mobile-satellite service (space-to-Earth) operating in frequency band 1'613.8-1'626.5 MHz shall be in compliance with the protection criteria provided in Recommendations ITU-R RA.769-2 and ITU-R RA.1513-2, using the methodology given in Recommendation ITU-R M.1583-1, and the radio astronomy antenna pattern described in Recommendation ITU-R RA.1631-0. (WRC-19)
5.373	Maritime mobile earth stations receiving in the frequency band 1'621.35-1'626.5 MHz shall not impose additional constraints on earth stations operating in the maritime mobile-satellite service or maritime earth stations of the radiodetermination-satellite service operating in accordance with the Radio Regulations in the frequency band 1'610-1'621.35 MHz or on earth stations operating in the maritime mobile-satellite service operating in accordance with the Radio Regulations in the frequency band 1'626.5-1'660.5 MHz, unless otherwise agreed between the notifying administrations. (WRC-19)
5.373A	Maritime mobile earth stations receiving in the frequency band 1'621.35-1'626.5 MHz shall not impose constraints on the assignments of earth stations of the mobile-satellite service (Earth-to-space) and the radiodetermination-satellite service (Earth-to-space) in the frequency band 1'621.35-1'626.5 MHz in networks for which complete coordination information has been received by the Radiocommunication Bureau before 28 October 2019. (WRC-19)
5.374	Mobile earth stations in the mobile-satellite service operating in the bands 1'631.5- 1'634.5 MHz and 1'656.5 - 1'660 MHz shall not cause harmful interference to the stations in the fixed service operating in the countries listed in No. **5.359.** (WRC-97)
5.375	The use of the band 1'645.5- 1'646.5 MHz by the mobile-satellite service (Earth-to-space) and for inter-satellite links is limited to distress and safety communications (see Article **31**).
5.376	Transmissions in the band 1'646.5- 1'656.5 MHz from aircraft stations in the aeronautical mobile (R) service directly to terrestrial aeronautical stations, or between aircraft stations, are also authorised when such transmissions are used to extend or supplement the aircraft-to-satellite links.
5.376A	Mobile earth stations operating in the band 1'660- 1'660.5 MHz shall not cause harmful interference to stations in the radio astronomy service. (WRC-97)
5.379A	Administrations are urged to give all practicable protection in the band 1'660.5- 1'668.4 MHz for future research in radio astronomy, particularly by eliminating air-to-ground transmissions in the meteorological aids service in the band 1'664.4- 1'668.4 MHz as soon as practicable.
5.379B	The use of the band 1'668-1'675 MHz by the mobile-satellite service is subject to coordination under No. **9.11A**. In the band 1'668-1'668.4 MHz, Resolution **904 (WRC-07)** shall apply. (WRC-07)
5.379C	In order to protect the radio astronomy service in the band 1'668- 1'670 MHz, the aggregate power flux-density values produced by mobile earth stations in a network of the mobile-satellite service operating in this band shall not exceed - 181 dB(W/m^2) in 10 MHz and - 194 dB(W/m^2) in any 20 kHz at any radio astronomy

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	station recorded in the Master International Frequency Register, for more than 2% of integration periods of 2'000 s. (WRC-03)
5.379D	For sharing of the band 1'668.4-1'675 MHz between the mobile-satellite service and the fixed and mobile services, Resolution **744 (Rev.WRC-07)** shall apply. (WRC-07)
5.379E	In the band 1'668.4- 1'675 MHz, stations in the mobile-satellite service shall not cause harmful interference to stations in the meteorological aids service in China, Iran (Islamic Republic of), Japan and Uzbekistan. In the band 1'668.4- 1'675 MHz, administrations are urged not to implement new systems in the meteorological aids service and are encouraged to migrate existing meteorological aids service operations to other bands as soon as practicable. (WRC-03)
5.380A	In the band 1'670-1'675 MHz, stations in the mobile-satellite service shall not cause harmful interference to, nor constrain the development of, existing earth stations in the meteorological-satellite service notified before 1 January 2004. Any new assignment to these earth stations in this band shall also be protected from harmful interference from stations in the mobile-satellite service. (WRC-07)
5.384A	The frequency bands 1'710-1'885 MHz, 2'300-2'400 MHz and 2'500-2'690 MHz, or portions thereof, are identified for use by administrations wishing to implement International Mobile Telecommunications (IMT) in accordance with Resolution **223 (Rev.WRC-15)***. This identification does not preclude the use of these frequency bands by any application of the services to which they are allocated and does not establish priority in the Radio Regulations. (WRC-15). * Note by the Secretariat: This Resolution was revised by WRC-19.
5.385	*Additional allocation*: the band 1'718.8- 1'722.2 MHz is also allocated to the radio astronomy service on a secondary basis for spectral line observations. (WRC-2000)
5.388	The frequency bands 1'885- 2'025 MHz and 2'110- 2'200 MHz are intended for use, on a worldwide basis, by administrations wishing to implement International Mobile Telecommunications (IMT). Such use does not preclude the use of these frequency bands by other services to which they are allocated. The frequency bands should be made available for IMTin accordance with Resolution **212 (Rev.WRC-15)*** (see also Resolution **223 (Rev.WRC-15)***). (WRC-15) * Note by the Secretariat: This Resolution was revised by WRC-19.
5.388A	In Regions 1 and 3, the bands 1'885- 1'980 MHz, 2'010- 2'025 MHz and 2'110- 2'170 MHz and, in Region 2, the bands 1'885- 1'980 MHz and 2'110- 2'160 MHz may be used by high altitude platform stations as base stations to provide International Mobile Telecommunications (IMT), in accordance with Resolution **221 (Rev.WRC-07)**. Their use by IMT applications using high altitude platform stations as base stations does not preclude the use of these bands by any station in the services to which they are allocated and does not establish priority in the Radio Regulations. (WRC-12)
5.389A	The use of the bands 1'980-2'010 MHz and 2'170-2'200 MHz by the mobile-satellite service is subject to coordination under No. **9.11A** and to the provisions of Resolution **716 (Rev.WRC-2000)****. (WRC-07) ** Note by the Secretariat: This Resolution was revised by WRC-12.
5.391	In making assignments to the mobile service in the frequency bands 2'025- 2'110 MHz and 2'200- 2'290 MHz, administrations shall not introduce high-density mobile systems, as described in Recommendation ITU-R SA.1154-0, and shall take that Recommendation into account for the introduction of any other type of mobile system. (WRC-15)
5.392	Administrations are urged to take all practicable measures to ensure that space-to-space transmissions between two or more non-geostationary satellites, in the space research, space operations and Earth exploration-satellite services in the bands 2'025- 2'110 MHz and 2'200- 2'290 MHz, shall not impose any constraints on Earth-to-space, space-to-Earth and other space-to-space transmissions of those services and in those bands between geostationary and non-geostationary satellites.
5.398	In respect of the radiodetermination-satellite service in the band 2'483.5- 2'500 MHz, the provisions of No. **4.10** do not apply.
5.402	The use of the band 2'483.5- 2'500 MHz by the mobile-satellite and the radiodetermination-satellite services is subject to the coordination under No. **9.11A**. Administrations are urged to take all practicable steps to prevent harmful interference to the radio astronomy service from emissions in the 2'483.5- 2'500 MHz band, especially those caused by second-harmonic radiation that would fall into the 4'990- 5'000 MHz band allocated to the radio astronomy service worldwide.

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5.418B	Use of the band 2'630- 2'655 MHz by non-geostationary-satellite systems in the broadcasting-satellite service (sound), pursuant to No. **5.418**, for which complete Appendix **4** coordination information, or notification information, has been received after 2 June 2000, is subject to the application of the provisions of No. **9.12**. (WRC- 03)
5.418C	Use of the band 2'630-2'655 MHz by geostationary-satellite networks for which complete Appendix **4** coordination information, or notification information, has been received after 2 June 2000 is subject to the application of the provisions of No. **9.13** with respect to non-geostationary-satellite systems in the broadcasting-satellite service (sound), pursuant to No. **5.418** and No. **22.2** does not apply. (WRC-03)
5.423	In the band 2'700- 2'900 MHz, ground-based radars used for meteorological purposes are authorised to operate on a basis of equality with stations of the aeronautical radionavigation service.
5.424A	In the band 2'900- 3'100 MHz, stations in the radiolocation service shall not cause harmful interference to, nor claim protection from, radar systems in the radionavigation service. (WRC-03)
5.425	In the band 2'900- 3'100 MHz, the use of the shipborne interrogator-transponder system (SIT) shall be confined to the sub-band 2'930- 2'950 MHz.
5.426	The use of the band 2'900- 3'100 MHz by the aeronautical radionavigation service is limited to ground-based radars.
5.427	In the bands 2'900- 3'100 MHz and 9'300- 9'500 MHz, the response from radar transponders shall not be capable of being confused with the response from radar beacons (racons) and shall not cause interference to ship or aeronautical radars in the radionavigation service, having regard, however, to No. **4.9**.
5.430A	The allocation of the frequency band 3'400-3'600 MHz to the mobile, except aeronautical mobile, service is subject to agreement obtained under No. **9.21**. This frequency band is identified for International Mobile Telecommunications (IMT). This identification does not preclude the use of this frequency band by any application of the services to which it is allocated and does not establish priority in the Radio Regulations. The provisions of Nos. **9.17** and **9.18** shall also apply in the coordination phase. Before an administration brings into use a (base or mobile) station of the mobile service in this frequency band, it shall ensure that the power flux-density (pfd) produced at 3 m above ground does not exceed −154.5 dB(W/(m^2 * 4 kHz)) for more than 20% of time at the border of the territory of any other administration. This limit may be exceeded on the territory of any country whose administration has so agreed. In order to ensure that the pfd limit at the border of the territory of any other administration is met, calculations and verification shall be made, taking into account all relevant information, with the mutual agreement of both administrations (the administration responsible for the terrestrial station and the administration responsible for the earth station), and with the assistance of the Bureau if so requested. In case of disagreement, calculation and verification of the pfd shall be made by the Bureau, taking into account the information referred to above. Stations of the mobile service in the frequency band 3'400-3'600 MHz shall not claim more protection from space stations than that provided in Table **21-4** of the Radio Regulations (Edition of 2004). (WRC-15)
5.436	Use of the frequency band 4'200- 4'400 MHz by stations in the aeronautical mobile (R) service is reserved exclusively for wireless avionics intra-communication systems that operate in accordance with recognized international aeronautical standards. Such use shall be in accordance with Resolution **424 (WRC-15)**. (WRC-15)
5.437	Passive sensing in the Earth exploration-satellite and space research services may be authorized in the frequency band 4'200-4'400 MHz on a secondary basis. (WRC-15)
5.438	Use of the frequency band 4'200- 4'400 MHz by the aeronautical radionavigation service is reserved exclusively for radio altimeters installed on board aircraft and for the associated transponders on the ground. (WRC-15)
5.440	The standard frequency and time signal-satellite service may be authorised to use the frequency 4'202 MHz for space-to-Earth transmissions and the frequency 6'427 MHz for Earth-to-space transmissions. Such transmissions shall be confined within the limits of ± 2 MHz of these frequencies, subject to agreement obtained under No. **9.21**.
5.441	The use of the bands 4'500- 4'800 MHz (space-to-Earth), 6'725- 7'025 MHz (Earth-to-space) by the fixed-satellite service shall be in accordance with the provisions of Appendix **30B**. The use of the bands 10.7- 10.95 GHz (space-to-Earth), 11.2- 11.45 GHz (space-to-Earth) and 12.75- 13.25 GHz (Earth-to-space) by geostationary-satellite systems in the fixed-satellite service shall be in accordance with the provisions of Appendix **30B**. The use of the bands 10.7- 10.95 GHz (space-to Earth), 11.2- 11.45 GHz (space-to-Earth) and

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	12.75- 13.25 GHz (Earth-to-space) by a non-geostationary-satellite system in the fixed-satellite service is subject to application of the provisions of No. **9.12** for coordination with other non-geostationary-satellite systems in the fixed-satellite service. Non- geostationary-satellite system in the fixed-satellite service shall not claim protection from geostationary-satellite networks in the fixed-satellite service operating in accordance with the Radio Regulations, irrespective of the dates of receipt by the Bureau of the complete coordination or notification information, as appropriate, for the non-geostationary-satellite systems in the fixed-satellite service and of the complete coordination or notification information, as appropriate, for the geostationary-satellite networks, and No. **5.43A** does not apply. Non-geostationary-satellite systems in the fixed-satellite service in the above bands shall be operated in such a way that any unacceptable interference that may occur during their operation shall be rapidly eliminated. (WRC-2000)
5.443AA	In the frequency bands 5'000-5'030 MHz and 5'091-5'150 MHz, the aeronautical mobile-satellite (R) service is subject to agreement obtained under No. **9.21**. The use of these bands by the aeronautical mobile-satellite (R) service is limited to internationally standardized aeronautical systems. (WRC-12)
5.443B	In order not to cause harmful interference to the microwave landing system operating above 5’030 MHz, the aggregate power flux-density produced at the Earth’s surface in the frequency band 5’030 -5’150 MHz by all the space stations within any radionavigation-satellite service system (space-to-Earth) operating in the frequency band 5’010- 5’030 MHz shall not exceed - 124.5 dB(W/m^2) in a 150 kHz band. In order not to cause harmful interference to the radio astronomy service in the frequency band 4’990 - 5’000 MHz, radionavigation-satellite service systems operating in the frequency band 5’010- 5’030 MHz shall comply with the limits in the frequency band 4’990- 5’000 MHz defined in Resolution **741 (Rev. WRC-15)**. (WRC-15)
5.443C	The use of the frequency band 5'030-5'091 MHz by the aeronautical mobile (R) service is limited to internationally standardized aeronautical systems. Unwanted emissions from the aeronautical mobile (R) service in the frequency band 5'030-5'091 MHz shall be limited to protect RNSS system downlinks in the adjacent 5'010-5'030 MHz band. Until such time that an appropriate value is established in a relevant ITU-R Recommendation, the e.i.r.p. density limit of −75 dBW/MHz in the frequency band 5'010-5'030 MHz for any AM(R)S station unwanted emission should be used. (WRC-12)
5.443D	In the frequency band 5'030-5'091 MHz, the aeronautical mobile-satellite (R) service is subject to coordination under No. **9.11A**. The use of this frequency band by the aeronautical mobile-satellite (R) service is limited to internationally standardized aeronautical systems. (WRC-12)
5.444	The frequency band 5'030-5'150 MHz is to be used for the operation of the international standard system (microwave landing system) for precision approach and landing. In the frequency band 5'030-5'091 MHz, the requirements of this system shall have priority over other uses of this band. For the use of the frequency band 5'091-5'150 MHz, No. **5.444A** and Resolution **114 (Rev.WRC-15)** apply. (WRC-15)
5.444A	The use of the allocation to the fixed-satellite service (Earth-to-space) in the frequency band 5'091- 5'150 MHz is limited to feeder links of non-geostationary satellite systems in the mobile-satellite service and is subject to coordination under No. **9.11A**. The use of the frequency band 5'091- 5'150 MHz by feeder links of non-geostationary satellite systems in the mobile-satellite service shall be subject to application of Resolution **114 (Rev.WRC-15)**. Moreover, to ensure that the aeronautical radionavigation service is protected from harmful interference, coordination is required for feeder-link earth stations of the non-geostationary satellite systems in the mobile-satellite service which are separated by less than 450 km from the territory of an administration operating ground stations in the aeronautical radionavigation service. (WRC-15)
5.444B	The use of the frequency band 5'091-5'150 MHz by the aeronautical mobile service is limited to: – systems operating in the aeronautical mobile (R) service and in accordance with international aeronautical standards, limited to surface applications at airports. Such use shall be in accordance with Resolution **748 (Rev.WRC-19)**; – aeronautical telemetry transmissions from aircraft stations (see No. **1.83**) in accordance with Resolution **418 (Rev.WRC-19)**. (WRC-19)
5.446	*Additional allocation*: in the countries listed in No **5.369**, the frequency band 5'150- 5'216 MHz is also allocated to the radiodetermination-satellite service (space-to-Earth) on a primary basis, subject to agreement obtained under No. **9.21**. In Region 2 (except in Mexico), the frequency band is also allocated to the radiodetermination-satellite service (space-to-Earth) on a primary basis. In Regions 1 and 3, except those countries listed in No. **5.369** and Bangladesh, the frequency band is also allocated to the radiodetermination-

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	satellite service (space-to-Earth) on a secondary basis. The use by the radiodetermination-satellite service is limited to feeder links in conjunction with the radiodetermination-satellite service operating in the frequency bands 1'610- 1'626.5 MHz and/or 2'483.5- 2'500 MHz. The total power flux-density at the Earth's surface shall in no case exceed -159 dB(W/m^2) in any 4 kHz band for all angles of arrival. (WRC-15)
5.446A	The use of the bands 5'150-5'350 MHz and 5 '470-5'725 MHz by the stations in the mobile, except aeronautical mobile, service shall be in accordance with Resolution **229 (Rev.WRC-19)**. (WRC-19)
5.446B	In the band 5'150- 5'250 MHz, stations in the mobile service shall not claim protection from earth stations in the fixed-satellite service. No. **5.43A** does not apply to the mobile service with respect to fixed-satellite service earth stations. (WRC-03)
5.446C	*Additional allocation*: in Region 1 (except in Algeria, Saudi Arabia, Bahrain, Egypt, United Arab Emirates, Iraq, Jordan, Kuwait, Lebanon, Morocco, Oman, Qatar, Syrian Arab Republic, Sudan, South Sudan and Tunisia), the frequency band 5 150-5 250 MHz is also allocated to the aeronautical mobile service on a primary basis, limited to aeronautical telemetry transmissions from aircraft stations (see No. **1.83**), in accordance with Resolution **418 (Rev.WRC-19)**. These stations shall not claim protection from other stations operating in accordance with Article **5**. No. **5.43A** does not apply. (WRC-19)
5.447A	The allocation to the fixed-satellite service (Earth-to-space) in the band 5 150-5 250 MHz is limited to feeder links of non-geostationary-satellite systems in the mobile-satellite service and is subject to coordination under No. **9.11A**.
5.447B	*Additional allocation*: the band 5'150- 5'216 MHz is also allocated to the fixed-satellite service (space-to-Earth) on a primary basis. This allocation is limited to feeder links of non-geostationary-satellite systems in the mobile-satellite service and is subject to provisions of No. **9.11A.** The power flux-density at the Earth's surface produced by space stations of the fixed-satellite service operating in the space-to-Earth direction in the band 5'150- 5'216 MHz shall in no case exceed -164 dB(W/m^2) in any 4 kHz band for all angles of arrival.
5.447C	Administrations responsible for fixed-satellite service networks in the band 5'150- 5'250 MHz operated under Nos. **5.447A** and **5.447B** shall coordinate on an equal basis in accordance with No. **9.11A** with administrations responsible for non-geostationary-satellite networks operated under No**. 5.446** and brought into use prior to 17 November 1995. Satellite networks operated under No**. 5.446** brought into use after 17 November 1995 shall not claim protection from, and shall not cause harmful interference to, stations of the fixed-satellite service operated under Nos. **5.447A** and **5.447B.**
5.447D	The allocation of the band 5'250- 5'255 MHz to the space research service on a primary basis is limited to active spaceborne sensors. Other uses of the band by the space research service are on a secondary basis. (WRC-97)
5.447F	In the frequency band 5'250-5'350 MHz, stations in the mobile service shall not claim protection from the radiolocation service, the Earth exploration-satellite service (active) and the space research service (active). The radiolocation service, the Earth exploration-satellite service (active) and the space research service (active) shall not impose more stringent conditions upon the mobile service than those stipulated in Resolution **229 (Rev.WRC-19)**. (WRC-19)
5.448A	The Earth exploration-satellite (active) and space research (active) services in the frequency band 5'250- 5'350 MHz shall not claim protection from the radiolocation service. No. **5.43A** does not apply. (WRC-03)
5.448B	The Earth exploration-satellite service (active) operating in the band 5'350- 5'570 MHz and space research service (active) operating in the band 5'460- 5'570 MHz shall not cause harmful interference to the aeronautical radionavigation service in the band 5'350- 5'460 MHz, the radionavigation service in the band 5’460- 5’470 MHz and the maritime radionavigation service in the band 5'470- 5'570 MHz. (WRC-03)
5.448C	The space research service (active) operating in the band 5'350- 5'460 MHz shall not cause harmful interference to nor claim protection from other services to which this band is allocated. (WRC-03)
5.448D	In the frequency band 5’350- 5’470 MHz, stations in the radiolocation service shall not cause harmful interference to, nor claim protection from, radar systems in the aeronautical radionavigation service operating in accordance with No. **5.449**. (WRC-03)
5.449	The use of the band 5'350 - 5'470 MHz by the aeronautical radionavigation service is limited to airborne radars and associated airborne beacons.

RR footnote No	RR footnote text
5.450A	In the frequency band 5'470- 5'725 MHz, stations in the mobile service shall not claim protection from radiodetermination services. The radiodetermination services shall not impose more stringent conditions upon the mobile service than those stipulated in Resolution **229 (Rev.WRC-19)**. (WRC-19)
5.450B	In the frequency band 5’470- 5’650 MHz, stations in the radiolocation service, except ground-based radars used for meteorological purposes in the band 5’600- 5’650 MHz, shall not cause harmful interference to, nor claim protection from, radar systems in the maritime radionavigation service. (WRC-03)
5.452	Between 5'600 MHz and 5'650 MHz, ground-based radars used for meteorological purposes are authorized to operate on a basis of equality with stations of the maritime radionavigation service.
5.457A	In the frequency bands 5’925- 6’425 MHz and 14- 14.5 GHz, earth stations located on board vessels may communicate with space stations of the fixed-satellite service. Such use shall be in accordance with Resolution **902 (WRC-03)**. In the frequency band 5'925-6'425 MHz, earth stations located on board vessels and communicating with space stations of the fixed-satellite service may employ transmit antennas with minimum diameter of 1.2 m and operate without prior agreement of any administration if located at least 330 km away from the low-water mark as officially recognized by the coastal State. All other provisions of Resolution **902 (WRC-03)** shall apply. (WRC-15)
5.458	In the band 6'425- 7'075 MHz, passive microwave sensor measurements are carried out over the oceans. In the band 7'075- 7'250 MHz, passive microwave sensor measurements are carried out. Administrations should bear in mind the needs of the Earth exploration-satellite (passive) and space research (passive) services in their future planning of the bands 6'425- 7'025 MHz and 7'075- 7'250 MHz.
5.458A	In making assignments in the band 6'700- 7'075 MHz to space stations of the fixed-satellite service, administrations are urged to take all practicable steps to protect spectral line observations of the radio astronomy service in the band 6'650- 6'675.2 MHz from harmful interference from unwanted emissions.
5.458B	The space-to-Earth allocation to the fixed-satellite service in the band 6'700- 7'075 MHz is limited to feeder links for non-geostationary satellite systems of the mobile-satellite service and is subject to coordination under No. **9.11A**. The use of the band 6'700- 7'075 MHz (space-to-Earth) by feeder links for non-geostationary satellite systems in the mobile-satellite service is not subject to No. **22.2.**
5.460	No emissions from space research service (Earth-to-space) systems intended for~~t~~ deep space shall be effected in the frequency band 7’190- 7’235 MHz. Geostationary satellites in the space research service operating in the frequency band 7’190- 7’235 MHz shall not claim protection from existing and future stations of the fixed and mobile services and No. **5.43A** does not apply. (WRC-15)
5.460A	The use of the frequency band 7'190- 7'250 MHz (Earth-to-space) by the Earth exploration-satellite service shall be limited to tracking, telemetry and command for the operation of spacecraft. Space stations operating in the Earth exploration-satellite service (Earth-to-space) in the frequency band 7'190-7'250 MHz shall not claim protection from existing and future stations in the fixed and mobile services, and No. **5.43A** does not apply. No. **9.17** applies. Additionally, to ensure protection of the existing and future deployment of fixed and mobile services, the location of earth stations supporting spacecraft in the Earth exploration-satellite service in non-geostationary orbits or geostationary orbit shall maintain a separation distance of at least 10 km and 50 km, respectively, from the respective border(s) of neighbouring countries, unless a shorter distance is otherwise agreed between the corresponding administrations. (WRC 15)
5.460B	Space stations on the geostationary orbit operating in the Earth exploration-satellite service (Earth-to-space) in the frequency band 7'190- 7'235 MHz shall not claim protection from existing and future stations of the space research service, and No. **5.43A** does not apply. (WRC 15)
5.461	*Additional allocation:* the bands 7'250- 7'375 MHz (space-to-Earth) and 7'900- 8'025 MHz (Earth-to-space) are also allocated to the mobile-satellite service on a primary basis, subject to agreement obtained under No. **9.21**.
5.461A	The use of the band 7'450- 7'550 MHz by the meteorological-satellite service (space-to-Earth) is limited to geostationary-satellite systems. Non-geostationary meteorological-satellite systems in this band notified before 30 November 1997 may continue to operate on a primary basis until the end of their lifetime. (WRC-97)
5.461AA	The use of the frequency band 7'375-7'750 MHz by the maritime mobile-satellite service is limited to geostationary-satellite networks. (WRC 15)

RR footnote No	RR footnote text
5.461AB	In the frequency band 7'375-7'750 MHz, earth stations in the maritime mobile-satellite service shall not claim protection from, nor constrain the use and development of, stations in the fixed and mobile, except aeronautical mobile, services. No. **5.43A** does not apply. (WRC 15)
5.461B	The use of the band 7'750- 7'900 MHz by the meteorological-satellite service (space-to-Earth) is limited to non-geostationary satellite systems. (WRC-12)

RR footnote No	RR footnote text	
5.462A	In Regions 1 and 3 (except for Japan), in the band 8'025- 8'400 MHz, the Earth exploration-satellite service using geostationary satellites shall not produce a power flux-density in excess of the following values for angles of arrival (Theta), without the consent of the affected administration:	
	- 135 dB (W/m^2) in a 1 MHz band	for 0° ≤ Theta < 5°
	- 135 + 0.5 (Theta – 5) dB (W/m^2) in a 1 MHz band	for 5° ≤ Theta < 25°
	- 125 dB (W/m^2) in a 1 MHz band	for 25° ≤ Theta ≤ 90°
	(WRC-12)	
5.463	Aircraft stations are not permitted to transmit in the band 8'025- 8'400 MHz.	
5.465	In the space research service, the use of the band 8'400- 8'450 MHz is limited to deep space.	
5.469	*Additional allocation*: in Armenia, Azerbaijan, Belarus, the Russian Federation, Georgia, Hungary, Lithuania, Mongolia, Uzbekistan, Poland, Kyrgyzstan, the Czech Rep., Romania, Tajikistan, Turkmenistan and Ukraine, the band 8'500- 8'750 MHz is also allocated to the land mobile and radionavigation services on a primary basis. (WRC-12)	
5.469A	In the band 8'550- 8'650 MHz, stations in the earth exploration-satellite service (active) and space research service (active) shall not cause harmful interference to, or constrain the use and development of, stations of the radiolocation service. (WRC-97)	
5.470	The use of the band 8'750- 8'850 MHz by the aeronautical radionavigation service is limited to airborne Doppler navigation aids on a centre frequency of 8'800 MHz.	
5.471	*Additional allocation:* in Algeria, Germany, Bahrain, Belgium, China, Egypt, the United Arab Emirates, France, Greece, Indonesia, Iran (Islamic Republic of), Libya, the Netherlands, Qatar and Sudan, the frequency bands 8'825- 8'850 MHz and 9'000- 9'200 MHz are also allocated to the maritime radionavigation service, on a primary basis, for use by shore-based radars only. (WRC-15)	
5.472	In the bands 8'850- 9'000 MHz and 9'200- 9'225 MHz, the maritime radionavigation service is limited to shore-based radars.	
5.473	*Additional allocation*: in Armenia, Austria, Azerbaijan, Belarus, Cuba, the Russian Federation, Georgia, Hungary, Uzbekistan, Poland, Kyrgyzstan, Romania, Tajikistan, Turkmenistan and Ukraine, the frequency bands 8 850-9 000 MHz and 9 200-9 300 MHz are also allocated to the radionavigation service on a primary basis. (WRC-19)	
5.473A	In the band 9'000-9'200 MHz, stations operating in the radiolocation service shall not cause harmful interference to, nor claim protection from, systems identified in No. **5.337** operating in the aeronautical radionavigation service, or radar systems in the maritime radionavigation service operating in this band on a primary basis in the countries listed in No. **5.471**. (WRC-07)	
5.474	In the band 9'200- 9'500 MHz, search and rescue transponders (SART) may be used, having due regard to the appropriate ITU-R Recommendation (see also **Article 31**).	
5.474A	The use of the frequency bands 9'200- 9'300 MHz and 9'900- 10'400 MHz by the Earth exploration-satellite service (active) is limited to systems requiring necessary bandwidth greater than 600 MHz that cannot be fully accommodated within the frequency band 9'300- 9'900 MHz. Such use is subject to agreement to be obtained under No. **9.21** from Algeria, Saudi Arabia, Bahrain, Egypt, Indonesia, Iran (Islamic Republic of), Lebanon and Tunisia. An administration that has not replied under No. **9.52** is considered as not having agreed to the coordination request. In this case, the notifying administration of the satellite system operating in the Earth exploration-satellite service (active) may request the assistance of the Bureau under Sub-Section IID of Article **9**. (WRC-15)	
5.474B	Stations operating in the Earth exploration-satellite (active) service shall comply with Recommendation ITU-R RS.2066-0. (WRC-15)	
5.474C	Stations operating in the Earth exploration-satellite (active) service shall comply with Recommendation ITU-R RS.2065-0. (WRC-15)	
5.474D	Stations in the Earth exploration-satellite service (active) shall not cause harmful interference to, or claim protection from, stations of the maritime radionavigation and radiolocation services in the frequency band 9'200- 9'300 MHz, the radionavigation and radiolocation services in the frequency band 9'900- 10'000 MHz and the radiolocation service in the frequency band 10.0-10.4 GHz. (WRC-15)	

RR footnote No	RR footnote text
5.475	The use of the band 9'300-9'500 MHz by the aeronautical radionavigation service is limited to airborne weather radars and ground-based radars. In addition, ground-based radar beacons in the aeronautical radionavigation service are permitted in the band 9'300- 9'320 MHz on condition that harmful interference is not caused to the maritime radionavigation service. (WRC-07)
5.475A	The use of the band 9'300- 9'500 MHz by the Earth exploration-satellite service (active) and the space research service (active) is limited to systems requiring necessary bandwidth greater than 300 MHz that cannot be fully accommodated within the 9'500-9'800 MHz band. (WRC-07)
5.475B	In the band 9'300- 9'500 MHz, stations operating in the radiolocation service shall not cause harmful interference to, nor claim protection from, radars operating in the radionavigation service in conformity with the Radio Regulations. Ground-based radars used for meteorological purposes have priority over other radiolocation uses. (WRC-07)
5.476A	In the band 9'300- 9'800 MHz, stations in the Earth exploration-satellite service (active) and space research service (active) shall not cause harmful interference to, nor claim protection from, stations of the radionavigation and radiolocation services. (WRC-07)
5.478A	The use of the band 9'800- 9'900 MHz by the Earth exploration-satellite service (active) and the space research service (active) is limited to systems requiring necessary bandwidth greater than 500 MHz that cannot be fully accommodated within the 9'300- 9'800 MHz band. (WRC-07)
5.478B	In the band 9'800- 9'900 MHz, stations in the Earth exploration-satellite service (active) and space research service (active) shall not cause harmful interference to, nor claim protection from stations of the fixed service to which this band is allocated on a secondary basis. (WRC-07)
5.479	The band 9'975- 10'025 MHz is also allocated to the meteorological-satellite service on a secondary basis for use by weather radars.
5.482	In the band 10.6-10.68 GHz, the power delivered to the antenna of stations of the fixed and mobile, except aeronautical mobile, services shall not exceed −3 dBW. This limit may be exceeded, subject to agreement obtained under No. **9.21**. However, in Algeria, Saudi Arabia, Armenia, Azerbaijan, Bahrain, Bangladesh, Belarus, Egypt, United Arab Emirates, Georgia, India, Indonesia, Iran (Islamic Republic of), Iraq, Jordan, Kazakhstan, Kuwait, Lebanon, Libya Morocco, Mauritania, Moldova, Nigeria, Oman, Uzbekistan, Pakistan, Philippines, Qatar, Syrian Arab Republic, Kyrgyzstan, Singapore, Tajikistan, Tunisia, Turkmenistan and Viet Nam, this restriction on the fixed and mobile, except aeronautical mobile, service is not applicable. (WRC-07)
5.482A	For sharing of the band 10.6-10.68 GHz between the Earth exploration-satellite (passive) service and the fixed and mobile, except aeronautical mobile, services, Resolution **751 (WRC-07)** applies. (WRC-07)
5.484	In Region 1, the use of the band 10.7- 11.7 GHz by the fixed-satellite service (Earth-to-space) is limited to feeder links for the broadcasting-satellite service.
5.484A	The use of the bands 10.95- 11.2 GHz (space-to-Earth), 11.45- 11.7 GHz (space-to-Earth), 11.7- 12.2 GHz (space-to-Earth) in Region 2, 12.2- 12.75 GHz (space-to-Earth) in Region 3, 12.5-12.75 GHz (space-to-Earth) in Region 1, 13.75- 14.5 GHz (Earth-to-space), 17.8- 18.6 GHz (space-to-Earth), 19.7- 20.2 GHz (space-to-Earth), 27.5- 28.6 GHz (Earth-to-space), 29.5- 30 GHz (Earth-to-space) by a non-geostationary-satellite system in the fixed-satellite service is subject to application of the provisions of No. **9.12** for coordination with other non-geostationary-satellite systems in the fixed-satellite service. Non-geostationary-satellite systems in the fixed-satellite service shall not claim protection from geostationary-satellite networks in the fixed-satellite service operating in accordance with the Radio Regulations, irrespective of the dates of receipt by the Bureau of the complete coordination or notification information, as appropriate, for the non-geostationary-satellite systems in the fixed-satellite service and of the complete coordination or notification information, as appropriate, for the geostationary-satellite networks, and No. **5.43A** does not apply. Non-geostationary-satellite systems in the fixed-satellite service in the above bands shall be operated in such a way that any unacceptable interference that may occur during their operation shall be rapidly eliminated. (WRC-2000)
5.484B	Resolution **155 (WRC-15)** shall apply. (WRC-15)
5.487	In the band 11.7- 12.5 GHz in Regions 1 and 3, the fixed, fixed-satellite, mobile, except aeronautical mobile, and broadcasting services, in accordance with their respective allocations, shall not cause harmful interference to, or claim protection from, broadcasting-satellite stations operating in accordance with the Regions 1 and 3 Plan in Appendix **30**. (WRC-03)

RR footnote No	RR footnote text
5.487A	*Additional allocation:* in Region 1, the band 11.7- 12.5 GHz, in Region 2, the band 12.2- 12.7 GHz and, in Region 3, the band 11.7- 12.2 GHz, are also allocated to the fixed-satellite service (space-to-Earth) on a primary basis, limited to non-geostationary systems and subject to application of the provisions of No. **9.12** for coordination with other non-geostationary-satellite systems in the fixed-satellite service. Non-geostationary-satellite systems in the fixed-satellite service shall not claim protection from geostationary-satellite networks in the broadcasting-satellite service operating in accordance with the Radio Regulations, irrespective of the dates of receipt by the Bureau of the complete coordination or notification information, as appropriate, for the non-geostationary-satellite systems in the fixed-satellite service and of the complete coordination or notification information, as appropriate, for the geostationary-satellite networks, and No. **5.43A** does not apply. Non-geostationary-satellite systems in the fixed-satellite service in the above bands shall be operated in such a way that any unacceptable interference that may occur during their operation shall be rapidly eliminated. (WRC-03)
5.492	Assignments to stations of the broadcasting-satellite service which are in conformity with the appropriate regional Plan or included in the Regions 1 and 3 List in Appendix **30** may also be used for transmissions in the fixed-satellite service (space-to-Earth), provided that such transmissions do not cause more interference, or require more protection from interference, than the broadcasting-satellite service transmissions operating in conformity with the Plan or the List, as appropriate. (WRC 2000)
5.497	The use of the band 13.25- 13.4 GHz by the aeronautical radionavigation service is limited to Doppler navigation aids.
5.498A	The Earth exploration-satellite (active) and space research (active) services operating in the band 13.25- 13.4 GHz shall not cause harmful interference to, or constrain the use and development of, the aeronautical radionavigation service. (WRC-97)
5.499A	The use of the frequency band 13.4-13.65 GHz by the fixed-satellite service (space-to-Earth) is limited to geostationary-satellite systems and is subject to agreement obtained under No. **9.21** with respect to satellite systems operating in the space research service (space-to-space) to relay data from space stations in the geostationary-satellite orbit to associated space stations in non-geostationary satellite orbits for which advance publication information has been received by the Bureau by 27 November 2015. (WRC-15)
5.499B	Administrations shall not preclude the deployment and operation of transmitting earth stations in the standard frequency and time signal-satellite service (Earth-to-space) allocated on a secondary basis in the frequency band 13.4-13.65 GHz due to the primary allocation to FSS (space-to-Earth). (WRC-15)
5.499C	The allocation of the frequency band 13.4-13.65 GHz to the space research service on a primary basis is limited to: – satellite systems operating in the space research service (space-to-space) to relay data from space stations in the geostationary-satellite orbit to associated space stations in non-geostationary satellite orbits for which advance publication information has been received by the Bureau by 27 November 2015, – active spaceborne sensors, – satellite systems operating in the space research service (space-to-Earth) to relay data from space stations in the geostationary-satellite orbit to associated earth stations. Other uses of the frequency band by the space research service are on a secondary basis. (WRC-15)
5.449D	In the frequency band 13.4-13.65 GHz, satellite systems in the space research service (space-to-Earth) and/or the space research service (space-to-space) shall not cause harmful interference to, nor claim protection from, stations in the fixed, mobile, radiolocation and Earth exploration-satellite (active) services. (WRC-15)
5.499E	In the frequency band 13.4-13.65 GHz, geostationary-satellite networks in the fixed-satellite service (space-to- Earth) shall not claim protection from space stations in the Earth exploration-satellite service (active) operating in accordance with these Regulations, and No. **5.43A** does not apply. The provisions of No. **22.2** do not apply to the Earth exploration-satellite service (active) with respect to the fixed-satellite service (space-to-Earth) in this frequency band. (WRC-15)
5.501A	The allocation of the frequency band 13.65- 13.75 GHz to the space research service on a primary basis is limited to active spaceborne sensors. Other uses of the frequency band by the space research service are on a secondary basis. (WRC-15)

RR footnote No	RR footnote text
5.501B	In the band 13.4- 13.75 GHz, the Earth exploration-satellite (active) and space research (active) services shall not cause harmful interference to, or constrain the use and development of, the radiolocation service. (WRC-97)
5.502	In the band 13.75- 14 GHz, an earth station of a geostationary fixed-satellite service network shall have a minimum antenna diameter of 1.2 m and an earth station of a non-geostationary fixed-satellite service system shall have a minimum antenna diameter of 4.5 m. In addition, the e.i.r.p., averaged over one second, radiated by a station in the radiolocation or radionavigation services shall not exceed 59 dBW for elevation angles above 2° and 65 dBW at lower angles. Before an administration brings into use an earth station in a geostationary-satellite network in the fixed-satellite service in this band with an antenna diameter smaller than 4.5 m, it shall ensure that the power flux-density produced by this earth station does not exceed: - - 115 dB(W/(m^2 ***** 10 MHz)) for more than 1% of the time produced at 36 m above sea level at the low water mark, as officially recognized by the coastal state; - - 115 dB(W/(m^2 ***** 10 MHz)) for more than 1% of the time produced 3 m above ground at the border of the territory of an administration deploying or planning to deploy land mobile radars in this band, unless prior agreement has been obtained. For earth stations within the fixed-satellite service having an antenna diameter greater than or equal to 4.5 m, the e.i.r.p. of any emission should be at least 68 dBW and should not exceed 85 dBW. (WRC-03)
5.503	In the band 13.75- 14 GHz, geostationary space stations in the space research service for which information for advance publication has been received by the Bureau prior to 31 January 1992 shall operate on an equal basis with stations in the fixed-satellite service; after that date, new geostationary space stations in the space research service will operate on a secondary basis. Until those geostationary space stations in the space research service for which information for advance publication has been received by the Bureau prior to 31 January 1992 cease to operate in this band: - in the band 13.77-13.78 GHz, the e.i.r.p. density of emissions from any earth station in the fixed-satellite service operating with a space station in geostationary-satellite orbit shall not exceed: i) 4.7D + 28 dB(W/40 kHz), where D is the fixed-satellite service earth station antenna diameter (m) for antenna diameters equal to or greater than 1.2 m and less than 4.5 m; ii) 49.2 + 20 log(D/4.5) dB(W/40 kHz), where D is the fixed-satellite service earth station antenna diameter (m) for antenna diameters equal to or greater than 4.5 m and less than 31.9 m; iii) 66.2 dB(W/40 kHz) for any fixed-satellite service earth station for antenna diameters (m) equal to or greater than 31.9 m; iv) 56.2 dB(W/4 kHz) for narrow-band (less than 40 kHz of necessary bandwidth) fixed-satellite service earth station emissions from any fixed-satellite service earth station having an antenna diameter of 4.5 m or greater; - the e.i.r.p. density of emissions from any earth station in the fixed-satellite service operating with a space station in **non**-geostationary-satellite orbit shall not exceed 51 dBW in the 6 MHz band from 13.772 to 13.778 GHz. Automatic power control may be used to increase the e.i.r.p. density in these frequency ranges to compensate for rain attenuation, to the extent that the power flux-density at the fixed-satellite service space station does not exceed the value resulting from use by an earth station of an e.i.r.p. meeting the above limits in clear-sky conditions. (WRC-03)
5.504	The use of the band 14- 14.3 GHz by the radionavigation service shall be such as to provide sufficient protection to space stations of the fixed-satellite service.
5.504A	In the band 14-14.5 GHz, aircraft earth stations in the secondary aeronautical mobile-satellite service may also communicate with space stations in the fixed-satellite service. The provisions of Nos. **5.29, 5.30** and **5.31** apply. (WRC-03)

RR footnote No	RR footnote text
5.504B	Aircraft earth stations operating in the aeronautical mobile-satellite service in the frequency band 14-14.5 GHz shall comply with the provisions of Annex 1, Part C of Recommendation ITU-R M.1643-0, with respect to any radio astronomy station performing observations in the 14.47- 14.5 GHz frequency band located on the territory of Spain, France, India, Italy, the United Kingdom and South Africa. (WRC-15)
5.506A	In the band 14-14.5 GHz, ship earth stations with an e.i.r.p. greater than 21 dBW shall operate under the same conditions as earth stations located on board vessels, as provided in Resolution **902 (WRC-03)**. This footnote shall not apply to ship earth stations for which the complete Appendix **4** information has been received by the Bureau prior to 5 July 2003. (WRC-03)
5.506B	Earth stations located on board vessels communicating with space stations in the fixed-satellite service may operate in the frequency band 14-14.5 GHz without the need for prior agreement from Cyprus and Malta, within the minimum distance given in Resolution **902 (WRC-03)** from these countries. (WRC-15)
5.508	*Additional allocation*: in Germany, France, Italy, Libya, North Macedonia and the United Kingdom, the frequency band 14.25 - 14.3 GHz is also allocated to the fixed service on a primary basis. (WRC-19)
5.511A	Use of the frequency band 15.43- 15.63 GHz by the fixed-satellite service (Earth-to-space) is limited to feeder links of non-geostationary systems in the mobile-satellite service, subject to coordination under No. **9.11A**. (WRC-15)
5.511C	Stations operating in the aeronautical radionavigation service shall limit the effective e.i.r.p. in accordance with Recommendation ITU-R S.1340-0. The minimum coordination distance required to protect the aeronautical radionavigation stations (No. **4.10** applies) from harmful interference from feeder link earth stations and the maximum e.i.r.p. transmitted towards the local horizontal plane by a feeder-link earth station shall be in accordance with Recommendation ITU-R S.1340-0. (WRC-15)
5.511E	In the frequency band 15.4-15.7 GHz, stations operating in the radiolocation service shall not cause harmful interference to, or claim protection from, stations operating in the aeronautical radionavigation service. (WRC-12)
5.511F	In order to protect the radio astronomy service in the frequency band 15.35-15.4 GHz, radiolocation stations operating in the frequency band 15.4-15.7 GHz shall not exceed the power flux-density level of −156 dB(W/m2) in a 50 MHz bandwidth in the frequency band 15.35-15.4 GHz, at any radio astronomy observatory site for more than 2 per cent of the time. (WRC-12)
5.513A	Spaceborne active sensors operating in the band 17.2-17.3 GHz shall not cause harmful interference to, or constrain the development of, the radiolocation and other services allocated on a primary basis. (WRC-97)
5.516	The use of the band 17.3- 18.1 GHz by geostationary-satellite systems in the fixed-satellite service (Earth-to-space) is limited to feeder links for the broadcasting-satellite service. The use of the band 17.3- 17.8 GHz in Region 2 by systems in the fixed-satellite service (Earth-to-space) is limited to geostationary satellites. For the use of the band 17.3- 17.8 GHz in Region 2 by feeder links for the broadcasting-satellite service in the band 12.2- 12.7 GHz, see Article **11**. The use of the bands 17.3- 18.1 GHz (Earth-to-space) in Regions 1 and 3 and 17.8- 18.1 GHz (Earth-to-space) in Region 2 by non-geostationary-satellite systems in the fixed-satellite service is subject to application of the provisions of No. **9.12** for coordination with other non-geostationary-satellite systems in the fixed-satellite service. Non-geostationary-satellite systems in the fixed-satellite service shall not claim protection from geostationary-satellite networks in the fixed-satellite service operating in accordance with the Radio Regulations, irrespective of the dates of receipt by the Bureau of the complete coordination or notification information, as appropriate, for the non-geostationary-satellite systems in the fixed-satellite service and of the complete coordination or notification information, as appropriate, for the geostationary-satellite networks, and No. **5.43A** does not apply. Non-geostationary-satellite systems in the fixed-satellite service in the above bands shall be operated in such a way that any unacceptable interference that may occur during their operation shall be rapidly eliminated. (WRC-2000)
5.516A	In the band 17.3- 17.7 GHz, earth stations of the fixed-satellite service (space-to-Earth) in Region 1 shall not claim protection from the broadcasting-satellite service feeder-link earth stations operating under Appendix **30A**, nor put any limitations or restrictions on the locations of the broadcasting-satellite service feeder-link earth stations anywhere within the service area of the feeder link. (WRC-03)
5.516B	The following bands are identified for use by high-density applications in the fixed-satellite service: 17.3- 17.7 GHz (space-to-Earth) in Region 1,

RR footnote No	RR footnote text
	18.3- 19.3 GHz (space-to-Earth) in Region 2, 19.7- 20.2 GHz (space-to-Earth) in all Regions, 39.5- 40 GHz (space-to-Earth) in Region 1, 40- 40.5 GHz (space-to-Earth) in all Regions, 40.5- 42 GHz (space-to-Earth) in Region 2, 47.5- 47.9 GHz (space-to-Earth) in Region 1, 48.2- 48.54 GHz (space-to-Earth) in Region 1, 49.44- 50.2 GHz (space-to-Earth) in Region 1, and 27.5- 27.82 GHz (Earth-to-space) in Region 1, 28.35- 28.45 GHz (Earth-to-space) in Region 2, 28.45- 28.94 GHz (Earth-to-space) in all Regions, 28.94- 29.1 GHz (Earth-to-space) in Region 2 and 3, 29.25- 29.46 GHz (Earth-to-space) in Region 2, 29.46- 30 GHz (Earth-to-space) in all Regions, 48.2- 50.2 GHz (Earth-to-space) in Region 2. This identification does not preclude the use of these frequency bands by other fixed-satellite service applications or by other services to which these frequency bands are allocated on a co-primary basis and does not establish priority in these Radio Regulations among users of the frequency bands. Administrations should take this into account when considering regulatory provisions in relation to these frequency bands. See Resolution **143 (Rev.WRC-19)**. (WRC-19)
5.517A	The operation of earth stations in motion communicating with geostationary fixed-satellite service space stations within the frequency bands 17.7-19.7 GHz (space-to-Earth) and 27.5-29.5 GHz (Earth-to-space) shall be subject to the application of Resolution **169 (WRC 19)**. (WRC 19)
5.519	*Additional allocation:* the bands 18.0-18.3 GHz in Region 2 and 18.1-18.4 GHz in Regions 1 and 3 are also allocated to the meteorological-satellite service (space-to-Earth) on a primary basis. Their use is limited to geostationary satellites. (WRC-07)
5.520	The use of the band 18.1- 18.4 GHz by the fixed-satellite service (Earth-to-space) is limited to feeder links of geostationary-satellite systems in the broadcasting-satellite service. (WRC-2000)
5.522A	The emissions of the fixed service and the fixed-satellite service in the band 18.6- 18.8 GHz are limited to the values given in Nos. **21.5A** and **21.16.2**, respectively. (WRC-2000)
5.522B	The use of the band 18.6- 18.8 GHz by the fixed-satellite service is limited to geostationary systems and systems with an orbit of apogee greater than 20'000 km. (WRC-2000)
5.523A	The use of the bands 18.8- 19.3 GHz (space-to-Earth) and 28.6- 29.1 GHz (Earth-to-space) by geostationary and non-geostationary fixed-satellite service networks is subject to the application of the provisions of No. **9.11A** and No. **22.2** does not apply. Administrations having geostationary-satellite networks under coordination prior to 18 November 1995 shall cooperate to the maximum extent possible to coordinate pursuant to No. **9.11A** with non-geostationary-satellite networks for which notification information has been received by the Bureau prior to that date, with a view to reaching results acceptable to all the parties concerned. Non-geostationary-satellite networks shall not cause unacceptable interference to geostationary fixed-satellite service networks for which complete Appendix **4** notification information is considered as having been received by the Bureau prior to 18 November 1995. (WRC-97)
5.523B	The use of the band 19.3- 19.6 GHz (Earth-to-space) by the fixed-satellite service is limited to feeder links for non-geostationary-satellite systems in the mobile-satellite service. Such use is subject to the application of the provisions of No. **9.11A**, and No. **22.2** does not apply.
5.523C	No. **22.2** shall continue to apply in the bands 19.3- 19.6 GHz and 29.1- 29.4 GHz, between feeder links of non-geostationary mobile-satellite service networks and those fixed-satellite service networks for which complete Appendix **4** coordination information, or notification information, is considered as having been received by the Bureau prior to 18 November 1995. (WRC-97)
5.523D	The use of the band 19.3- 19.7 GHz (space-to-Earth) by geostationary fixed-satellite service systems and by feeder links for non-geostationary-satellite systems in the mobile-satellite service is subject to the application of the provisions of No. **9.11A**, but not subject to the provisions of No. **22.2**. The use of this band for other

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	non-geostationary fixed-satellite service systems, or for the cases indicated in Nos. **5.523C** and **5.523E**, is not subject to the provisions of **No. 9.11A** and shall continue to be subject to Articles **9** (except No. **9.11A**) and **11** procedures, and to the provisions of No. **22.2**. (WRC-97)
5.523E	**No. 22.2** shall continue to apply in the bands 19.6- 19.7 GHz and 29.4- 29.5 GHz, between feeder links of non-geostationary mobile-satellite service networks and those fixed-satellite service networks for which complete Appendix **4** coordination information, or notification information, is considered as having been received by the Bureau by 21 November 1997. (WRC-97)
5.525	In order to facilitate interregional coordination between networks in the mobile-satellite and fixed-satellite services, carriers in the mobile-satellite service that are most susceptible to interference shall, to the extent practicable, be located in the higher parts of the bands 19.7- 20.2 GHz and 29.5- 30 GHz.
5.526	In the bands 19.7- 20.2 GHz and 29.5- 30 GHz in Region 2, and in the bands 20.1- 20.2 GHz and 29.9- 30 GHz in Regions 1 and 3, networks which are both in the fixed-satellite service and in the mobile-satellite service may include links between earth stations at specified or unspecified points or while in motion, through one or more satellites for point-to-point and point-to-multipoint communications.
5.527	In the bands 19.7- 20.2 GHz and 29.5- 30 GHz, the provisions of No. **4.10** do not apply with respect to the mobile-satellite service.
5.527A	The operation of earth stations in motion communicating with the FSS is subject to Resolution **156 (WRC-15)**. (WRC-15)
5.528	The allocation to the mobile-satellite service is intended for use by networks which use narrow spot-beam antennas and other advanced technology at the space stations. Administrations operating systems in the mobile-satellite service in the band 19.7- 20.1 GHz in Region 2 and in the band 20.1- 20.2 GHz shall take all practicable steps to ensure the continued availability of these bands for administrations operating fixed and mobile systems in accordance with the provisions of No. **5.524**.
5.530A	Unless otherwise agreed between the administrations concerned, any station in the fixed or mobile services of an administration shall not produce a power flux-density in excess of −120.4 dB(W/(m^2 · MHz)) at 3 m above the ground of any point of the territory of any other administration in Regions 1 and 3 for more than 20% of the time. In conducting the calculations, administrations should use the most recent version of Recommendation ITU-R P.452 (see also the most recent version of Recommendation ITU-R BO.1898). (WRC-15)
5.530B	In the band 21.4-22 GHz, in order to facilitate the development of the broadcasting-satellite service, administrations in Regions 1 and 3 are encouraged not to deploy stations in the mobile service and are encouraged to limit the deployment of stations in the fixed service to point-to-point links. (WRC-12)
5.532	The use of the band 22.21- 22.5 GHz by the Earth exploration-satellite (passive) and space research (passive) services shall not impose constraints upon the fixed and mobile, except aeronautical mobile, services.
5.532A	The location of earth stations in the space research service shall maintain a separation distance of at least 54 km from the respective border(s) of neighbouring countries to protect the existing and future deployment of fixed and mobile services unless a shorter distance is otherwise agreed between the corresponding administrations. Nos. **9.17** and **9.18** do not apply. (WRC-12)
5.532AB	The frequency band 24.25-27.5 GHz is identified for use by administrations wishing to implement the terrestrial component of International Mobile Telecommunications (IMT). This identification does not preclude the use of this frequency band by any application of the services to which it is allocated and does not establish priority in the Radio Regulations. Resolution **242 (WRC-19)** applies. (WRC-19)
5.532B	Use of the band 24.65-25.25 GHz in Region 1 and the band 24.65-24.75 GHz in Region 3 by the fixed- satellite service (Earth-to-space) is limited to earth stations using a minimum antenna diameter of 4.5 m. WRC-12)
5.534A	The allocation to the fixed service in the frequency band 25.25-27.5 GHz is identified in Region 2 for use by high-altitude platform stations (HAPS) in accordance with the provisions of Resolution **166 (WRC-19)**. Such use of the fixed-service allocation by HAPS shall be limited to the ground-to-HAPS direction in the frequency band 25.25-27.0 GHz and to the HAPS-to-ground direction in the frequency band 27.0-27.5 GHz. Furthermore, the use of the frequency band 25.5-27.0 GHz by HAPS shall be limited to gateway links. This identification does not preclude the use of this frequency band by other fixed-service applications or by other

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	services to which this band is allocated on a co-primary basis, and does not establish priority in the Radio Regulations. (WRC-19)
5.535	In the band 24.75- 25.25 GHz, feeder links to stations of the broadcasting-satellite service shall have priority over other uses in the fixed-satellite service (Earth-to-space). Such other uses shall protect and shall not claim protection from existing and future operating feeder-link networks to such broadcasting satellite stations.
5.535A	The use of the band 29.1- 29.5 GHz (Earth-to-space) by the fixed-satellite service is limited to geostationary-satellite systems and feeder links to non-geostationary-satellite systems in the mobile-satellite service. Such use is subject to the application of the provisions of No. **9.11A**, but not subject to the provisions of No. **22.2**, except as indicated in Nos. **5.523C** and **5.523E** where such use is not subject to the provisions of No. **9.11A** and shall continue to be subject to Articles **9** (except No. **9.11A**) and **11** procedures, and to the provisions of No. **22.2**. (WRC-97)
5.536	Use of the 25.25- 27.5 GHz band by the inter-satellite service is limited to space research and Earth exploration-satellite applications, and also transmissions of data originating from industrial and medical activities in space.
5.536A	Administrations operating earth stations in the Earth exploration-satellite service or the space research service shall not claim protection from stations in the fixed and mobile services operated by other administrations. In addition, earth stations in the Earth exploration-satellite service or in the space research service should be operated taking into account the most recent version of Recommendation ITU-R SA.1862. Resolution **242 (WRC-19)** applies. (WRC-19)
5.538	*Additional allocation:* the bands 27.500-27.501 GHz and 29.999-30.000 GHz are also allocated to the fixed-satellite service (space-to-Earth) on a primary basis for the beacon transmissions intended for up-link power control. Such space-to-Earth transmissions shall not exceed an equivalent isotropically radiated power (e.i.r.p.) of +10 dBW in the direction of adjacent satellites on the geostationary-satellite orbit. (WRC-07)
5.539	The band 27.5- 30 GHz may be used by the fixed-satellite service (Earth-to-space) for the provision of feeder links for the broadcasting-satellite service.
5.540	*Additional allocation:* the band 27.501- 29.999 GHz is also allocated to the fixed-satellite service (space-to-Earth) on a secondary basis for beacon transmissions intended for up-link power control.
5.541	In the band 28.5- 30 GHz, the earth exploration-satellite service is limited to the transfer of data between stations and not to the primary collection of information by means of active or passive sensors.
5.541A	Feeder links of non-geostationary networks in the mobile-satellite service and geostationary networks in the fixed-satellite service operating in the band 29.1- 29.5 GHz (Earth-to-space) shall employ uplink adaptive power control or other methods of fade compensation, such that the earth station transmissions shall be conducted at the power level required to meet the desired link performance while reducing the level of mutual interference between both networks. These methods shall apply to networks for which Appendix **4** coordination information is considered as having been received by the Bureau after 17 May 1996 and until they are changed by a future competent world radiocommunication conference. Administrations submitting Appendix **4** information for coordination before this date are encouraged to utilize these techniques to the extent practicable. (WRC-2000)
5.543	The band 29.95- 30 GHz may be used for space-to-space links in the earth exploration-satellite service for telemetry, tracking, and control purposes, on a secondary basis.
5.543B	The allocation to the fixed service in the frequency band 31-31.3 GHz is identified for worldwide use by high-altitude platform stations (HAPS). This identification does not preclude the use of this frequency band by other fixed-service applications or by other services to which this frequency band is allocated on a co-primary basis, and does not establish priority in the Radio Regulations. Such use of the fixed-service allocation by HAPS shall be in accordance with the provisions of Resolution **167 (WRC-19)**. (WRC-19)
5.547	The bands 31.8-33.4 GHz, 37-40 GHz, 40.5-43.5 GHz, 51.4-52.6 GHz, 55.78-59 GHz and 64-66 GHz are available for high-density applications in the fixed service (see Resolution **75 (WRC-2000)***). Administrations should take this into account when considering regulatory provisions in relation to these bands. Because of the potential deployment of high-density applications in the fixed-satellite service in the bands 39.5- 40 GHz and 40.5-42 GHz (see No. **5.516B**), administrations should further take into account potential constraints to high-density

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	applications in the fixed service, as appropriate. (WRC-07) * Note by the Secretariat: This Resolution was revised by WRC-12.
5.547A	Administrations should take practical measures to minimize the potential interference between stations in the fixed service and airborne stations in the radionavigation service in the 31.8- 33.4 GHz band, taking into account the operational needs of the airborne radar systems. (WRC-2000)
5.548	In designing systems for the inter-satellite service in the band 32- 33 GHz, for the radionavigation service in the band 32 – 33 GHz, and for the space research service (deep space) in the band 31.8- 32.3 GHz, administrations shall take all necessary measures to prevent harmful interference between these services, bearing in mind the safety aspects of the radionavigation service (see Recommendation **707**). (WRC-03)
5.549A	In the band 35.5- 36.0 GHz, the mean power flux-density at the Earth's surface, generated by any spaceborne sensor in the Earth exploration-satellite service (active) or space research service (active), for any angle greater than 0.8° from the beam centre shall not exceed - 73.3 dB(W/m^2) in this band. (WRC-03)
5.550A	For sharing of the band 36-37 GHz between the Earth exploration-satellite (passive) service and the fixed and mobile services, Resolution **752 (WRC-07)** shall apply. (WRC-07)
5.550B	The frequency band 37-43.5 GHz, or portions thereof, is identified for use by administrations wishing to implement the terrestrial component of International Mobile Telecommunications (IMT). This identification does not preclude the use of this frequency band by any application of the services to which it is allocated and does not establish priority in the Radio Regulations. Because of the potential deployment of FSS earth stations within the frequency range 37.5-42.5 GHz and high-density applications in the fixed-satellite service in the frequency bands 39.5-40 GHz in Region 1, 40-40.5 GHz in all Regions and 40.5-42 GHz in Region 2 (see No. **5.516B**), administrations should further take into account potential constraints to IMT in these frequency bands, as appropriate. Resolution **243 (WRC-19)** applies. (WRC-19)
5.550C	The use of the frequency bands 37.5-39.5 GHz (space-to-Earth), 39.5-42.5 GHz (space-to-Earth), 47.2-50.2 GHz (Earth-to-space) and 50.4-51.4 GHz (Earth-to-space) by a non-geostationary-satellite system in the fixed-satellite service is subject to the application of the provisions of No. **9.12** for coordination with other non-geostationary-satellite systems in the fixed-satellite service but not with non-geostationary-satellite systems in other services. Resolution **770 (WRC-19)** shall also apply, and No. **22.2** shall continue to apply. (WRC-19)
5.550D	The allocation to the fixed service in the frequency band 38-39.5 GHz is identified for worldwide use by administrations wishing to implement high-altitude platform stations (HAPS). In the HAPS-to-ground direction, the HAPS ground station shall not claim protection from stations in the fixed, mobile and fixed-satellite services; and No. **5.43A** does not apply. This identification does not preclude the use of this frequency band by other fixed-service applications or by other services to which this frequency band is allocated on a co-primary basis and does not establish priority in the Radio Regulations. Furthermore, the development of the fixed-satellite, fixed and mobile services shall not be unduly constrained by HAPS. Such use of the fixed-service allocation by HAPS shall be in accordance with the provisions of Resolution **168 (WRC-19)**. (WRC-19)
5.550E	The use of the frequency bands 39.5-40 GHz and 40-40.5 GHz by non-geostationary-satellite systems in the mobile-satellite service (space-to-Earth) and by non-geostationary-satellite systems in the fixed-satellite service (space-to-Earth) is subject to the application of the provisions of No. **9.12** for coordination with other non-geostationary-satellite systems in the fixed-satellite and mobile-satellite services but not with non-geostationary-satellite systems in other services. No. **22.2** shall continue to apply for non-geostationary-satellite-systems. (WRC-19)

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5.551H	The equivalent power flux-density (epfd) produced in the band 42.5-43.5 GHz by all space stations in any non-geostationary-satellite system in the fixed-satellite service (space-to-Earth), or in the broadcasting-satellite service operating in the frequency band 42-42.5 GHz, shall not exceed the following values at the site of any radio astronomy station for more than 2% of the time: - 230 dB(W/m^2) in 1 GHz and –246 dB(W/m^2) in any 500 kHz of the frequency band 42.5-43.5 GHz at the site of any radio astronomy station registered as a single-dish telescope; and - 209 dB(W/m^2) in any 500 kHz of the frequency band 42.5-43.5 GHz at the site of any radio astronomy station registered as a very long baseline interferometry station. These epfd values shall be evaluated using the methodology given in Recommendation ITU-R S.1586-1 and the reference antenna pattern and the maximum gain of an antenna in the radio astronomy service given in Recommendation ITU-R RA.1631-0 and shall apply over the whole sky and for elevation angles higher than the minimum operating angle $Theta_{min}$ of the radiotelescope (for which a default value of 5° should be adopted in the absence of notified information). These values shall apply at any radio astronomy station that either: - was in operation prior to 5 July 2003 and has been notified to the Bureau before 4 January 2004; or - was notified before the date of receipt of the complete Appendix **4** information for coordination or notification, as appropriate, for the space station to which the limits apply. Other radio astronomy stations notified after these dates may seek an agreement with administrations that have authorized the space stations. In Region 2, Resolution **743 (WRC-03)** shall apply. The limits in this footnote may be exceeded at the site of a radio astronomy station of any country whose administration so agreed. (WRC-15)
5.551I	The power flux-density in the band 42.5-43.5 GHz produced by any geostationary space station in the fixed-satellite service (space-to-Earth), or the broadcasting-satellite service operating in the 42-42.5 GHz band, shall not exceed the following values at the site of any radio astronomy station: - 137 dB(W/m^2) in 1 GHz and –153 dB(W/m^2) in any 500 kHz of the 42.5-43.5 GHz band at the site of any radio astronomy station registered as a single-dish telescope; and - 116 dB(W/m^2) in any 500 kHz of the 42.5-43.5 GHz band at the site of any radio astronomy station registered as a very long baseline interferometry station. These values shall apply at the site of any radio astronomy station that either: – was in operation prior to 5 July 2003 and has been notified to the Bureau before 4 January 2004; or – was notified before the date of receipt of the complete Appendix **4** information for coordination or notification, as appropriate, for the space station to which the limits apply. Other radio astronomy stations notified after these dates may seek an agreement with administrations that have authorized the space stations. In Region 2, Resolution **743 (WRC-03)** shall apply. The limits in this footnote may be exceeded at the site of a radio astronomy station of any country whose administration so agreed. (WRC-03)
5.552	The allocation of the spectrum for the fixed-satellite service in the bands 42.5- 43.5 GHz and 47.2- 50.2 GHz for Earth-to-space transmission is greater than that in the band 37.5- 39.5 GHz for space-to-Earth transmission in order to accommodate feeder links to broadcasting satellites. Administrations are urged to take all practicable steps to reserve the band 47.2- 49.2 GHz for feeder links for the broadcasting-satellite service operating in the band 40.5- 42.5 GHz.
5.552A	The allocation to the fixed service in the frequency bands 47.2-47.5 GHz and 47.9-48.2 GHz is identified for use by high-altitude platform stations (HAPS). This identification does not preclude the use of this frequency band by any application of the services to which it is allocated on a co-primary basis, and does not establish priority in the Radio Regulations. Such use of the fixed-service allocation in the frequency bands 47.2-47.5 GHz and 47.9-48.2 GHz by HAPS shall be in accordance with the provisions of Resolution **122 (Rev.WRC-19)**. (WRC-19)

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5.553	In the bands 43.5- 47 GHz and 66- 71 GHz, stations in the land mobile service may be operated subject to not causing harmful interference to the space radiocommunication services to which these bands are allocated (see No. **5.43**). (WRC-2000)
5.554	In the bands 43.5- 47 GHz, 66- 71 GHz, 95- 100 GHz, 123- 130 GHz, 191.8- 200 GHz and 252- 265 GHz, satellite links connecting land stations at specified fixed points are also authorized when used in conjunction with the mobile-satellite service or the radionavigation-satellite service. (WRC-2000)
5.554A	The use of the bands 47.5- 47.9 GHz, 48.2- 48.54 GHz and 49.44- 50.2 GHz by the fixed-satellite service (space-to-Earth) is limited to geostationary satellites. (WRC-03)
5.555	*Additional allocation:* the band 48.94- 49.04 GHz is also allocated to the radio astronomy service on a primary basis. (WRC-2000)
5.555B	The power flux-density in the band 48.94- 49.04 GHz produced by any geostationary space station in the fixed-satellite service (space-to-Earth) operating in the bands 48.2- 48.54 GHz and 49.44- 50.2 GHz shall not exceed – 151.8 dB(W/m^2) in any 500 kHz band at the site of any radio astronomy station. (WRC-03)
5.555C	The use of the frequency band 51.4-52.4 GHz by the fixed-satellite service (Earth-to-space) is limited to geostationary-satellite networks. The earth stations shall be limited to gateway earth stations with a minimum antenna diameter of 2.4 metres. (WRC-19)
5.556	In the bands 51.4- 54.25 GHz, 58.2- 59 GHz and 64- 65 GHz, radio astronomy observations may be carried out under national arrangements. (WRC-2000)
5.556A	Use of the bands 54.25- 56.9 GHz, 57- 58.2 GHz and 59- 59.3 GHz by the inter-satellite service is limited to satellites in the geostationary-satellite orbit. The single-entry power flux-density at all altitudes from 0 km to 1'000 km above the Earth's surface produced by a station in the inter-satellite service, for all conditions and for all methods of modulation, shall not exceed -147 dB(W/(m^2 * 100 MHz)) for all angles of arrival. (WRC-97)
5.557A	In the band 55.78- 56.26 GHz, in order to protect stations in the Earth exploration-satellite service (passive), the maximum power density delivered by a transmitter to the antenna of a fixed service station is limited to - 26 dB(W/MHz). (WRC 2000)
5.558	In the bands 55.78- 58.2 GHz, 59- 64 GHz, 66- 71 GHz, 122.25- 123 GHz, 130- 134 GHz, 167- 174.8 GHz and 191.8-200 GHz, stations in the aeronautical mobile service may be operated subject to not causing harmful interference to the inter-satellite service (see No. **5.43**). (WRC 2000)
5.558A	Use of the band 56.9- 57 GHz by inter-satellite systems is limited to links between satellites in geostationary-satellite orbit and to transmissions from non-geostationary satellites in high-Earth orbit to those in low-Earth orbit. For links between satellites in the geostationary-satellite orbit, the single entry power flux-density at all altitudes from 0 km to 1'000 km above the Earth's surface, for all conditions and for all methods of modulation, shall not exceed -147 dB(W/(m^2 * 100 MHz)) for all angles of arrival. (WRC-97)
5.559	In the band 59- 64 GHz, airborne radars in the radiolocation service may be operated subject to not causing harmful interference to the inter-satellite service (see No. **5.43**). (WRC-2000)
5.559AA	The frequency band 66-71 GHz is identified for use by administrations wishing to implement the terrestrial component of International Mobile Telecommunications (IMT). This identification does not preclude the use of this frequency band by any application of the services to which this frequency band is allocated and does not establish priority in the Radio Regulations. Resolution **241 (WRC-19)** applies. (WRC-19)
5.559B	The use of the frequency band 77.5- 78 GHz by the radiolocation service shall be limited to short-range radar for ground-based applications, including automotive radars. The technical characteristics of these radars are provided in the most recent version of Recommendation ITU R M.2057. The provisions of No. **4.10** do not apply. (WRC 15)
5.560	In the band 78- 79 GHz radars located on space stations may be operated on a primary basis in the earth exploration-satellite service and in the space research service.
5.561	In the band 74- 76 GHz, stations in the fixed, mobile and broadcasting services shall not cause harmful interference to stations of the fixed-satellite service or stations of the broadcasting-satellite service operating in accordance with the decisions of the appropriate frequency assignment planning conference for the broadcasting-satellite service. (WRC-2000)
5.561A	The 81- 81.5 GHz band is also allocated to the amateur and amateur-satellite services on a secondary basis. (WRC-2000)

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5.562	The use of the band 94 - 94.1 GHz by the earth exploration-satellite (active) and space research (active) services is limited to spaceborne cloud radars. (WRC-97)
5.562A	In the bands 94- 94.1 GHz and 130- 134 GHz, transmissions from space stations of the Earth exploration-satellite service (active) that are directed into the main beam of a radio astronomy antenna have the potential to damage some radio astronomy receivers. Space agencies operating the transmitters and the radio astronomy stations concerned should mutually plan their operations so as to avoid such occurrences to the maximum extent possible. (WRC-2000)
5.562B	In the bands 105-109.5 GHz, 111.8-114.25 GHz and 217-226 GHz, the use of this allocation is limited to space-based radio astronomy only. (WRC-19)
5.562C	Use of the band 116- 122.25 GHz by the inter-satellite service is limited to satellites in the geostationary-satellite orbit. The single-entry power flux-density produced by a station in the inter-satellite service, for all conditions and for all methods of modulation, at all altitudes from 0 km to 1'000 km above the Earth's surface and in the vicinity of all geostationary orbital positions occupied by passive sensors, shall not exceed -148 dB(W/(m^2 * MHz)) for all angles of arrival. (WRC-2000)
5.562E	The allocation to the Earth exploration-satellite service (active) is limited to the band 133.5- 134 GHz. (WRC-2000)
5.562H	Use of the bands 174.8- 182 GHz and 185- 190 GHz by the inter-satellite service is limited to satellites in the geostationary-satellite orbit. The single-entry power flux-density produced by a station in the inter-satellite service, for all conditions and for all methods of modulation, at all altitudes from 0 km to 1'000 km above the Earth's surface and in the vicinity of all geostationary orbital positions occupied by passive sensors, shall not exceed - 144 dB(W/(m^2 * MHz)) for all angles of arrival. (WRC 2000)
5.563A	In the bands 200- 209 GHz, 235- 238 GHz, 250- 252 GHz and 265- 275 GHz, ground-based passive atmospheric sensing is carried out to monitor atmospheric constituents. (WRC-2000)
5.563B	The band 237.9- 238 GHz is also allocated to the Earth exploration-satellite service (active) and the space research service (active) for spaceborne cloud radars only. (WRC-2000)
5.564A	For the operation of fixed and land mobile service applications in frequency bands in the range 275-450 GHz: The frequency bands 275-296 GHz, 306-313 GHz, 318-333 GHz and 356-450 GHz are identified for use by administrations for the implementation of land mobile and fixed service applications, where no specific conditions are necessary to protect Earth exploration-satellite service (passive) applications. The frequency bands 296-306 GHz, 313-318 GHz and 333-356 GHz may only be used by fixed and land mobile service applications when specific conditions to ensure the protection of Earth exploration-satellite service (passive) applications are determined in accordance with Resolution **731 (Rev.WRC-19)**. In those portions of the frequency range 275-450 GHz where radio astronomy applications are used, specific conditions (e.g. minimum separation distances and/or avoidance angles) may be necessary to ensure protection of radio astronomy sites from land mobile and/or fixed service applications, on a case-by-case basis in accordance with Resolution **731 (Rev.WRC-19)**. The use of the above-mentioned frequency bands by land mobile and fixed service applications does not preclude use by, and does not establish priority over, any other applications of radio services in the range of 275-450 GHz. (WRC-19)
5.565	The following frequency bands in the range 275- 1'000 GHz are identified for use by administrations for passive service applications: - radio astronomy service: 275- 323 GHz, 327- 371 GHz, 388- 424 GHz, 426- 442 GHz, 453-510 GHz, 623- 711 GHz, 795- 909 GHz and 926- 945 GHz; - Earth exploration-satellite service (passive) and space research service (passive): 275-286 GHz, 296-306 GHz, 313-356 GHz, 361-365 GHz, 369-392 GHz, 397-399 GHz, 409-411 GHz, 416-434 GHz, 439-467 GHz, 477-502 GHz, 523-527 GHz, 538-581 GHz, 611-630 GHz, 634-654 GHz, 657-692 GHz, 713-718 GHz, 729-733 GHz, 750-754 GHz, 771-776 GHz, 823-846 GHz, 850-854 GHz, 857-862 GHz, 866-882 GHz, 905-928 GHz, 951-956 GHz, 968-973 GHz and 985-990 GHz. The use of the range 275-1'000 GHz by the passive services does not preclude use of this range by active services. Administrations wishing to make frequencies in the 275-1'000 GHz range available for active service applications are urged to take all practicable steps to protect these passive services from harmful interference until

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	the date when the Table of Frequency Allocations is established in the above-mentioned 275-1'000 GHz frequency range. All frequencies in the range 1'000-3'000 GHz may be used by both active and passive services. (WRC 12)
9.6	Before an administration*, **, *** notifies to the Bureau or brings into use a frequency assignment in any of the cases listed below, it shall effect coordination, as required, with other administrations identified under No. **9.27**: (WRC-03) * **9.6.1** In the case of coordination of an assignment in a satellite network, an administration may act on behalf of a group of named administrations. Whenever, under this provision, an administration acts on behalf of a group of named administrations, all members of the group retain the right to respond in respect of their own services which could affect or be affected by the proposed assignment. ** **9.6.2** In all cases, the coordination of an earth station with terrestrial stations or other earth stations operating in the opposite direction of transmission shall remain within the authority of the administration on the territory of which this station is located. *** **9.6.3** Unless otherwise specified, coordination under any of the particular sharing situations defined in Nos. **9.7** to **9.21** is not applicable when limits for that sharing situation are specified elsewhere in these Regulations. (WRC-03)
9.11A	*e)* for a station for which the requirement to coordinate is included in a footnote to the Table of Frequency Allocations referring to this provision, the provisions of Nos. **9.12** to **9.16** are applicable; (WRC-2000)
9.12	*f)* for a station in a satellite network using a non-geostationary-satellite orbit, for which the requirement to coordinate is included in a footnote to the Table of Frequency Allocations referring to this provision or to No. **9.11A**, in respect of any other satellite network using a non-geostationary-satellite orbit, with the exception of coordination between earth stations operating in the opposite direction of transmission; (WRC-2000)
9.12A	*g)* for a station in a satellite network using a non-geostationary-satellite orbit, for which the requirement to coordinate is included in a footnote to the Table of Frequency Allocations referring to this provision or to No. **9.11A**, in respect of any other satellite network using the geostationary-satellite orbit, with the exception of coordination between earth stations operating in the opposite direction of transmission; (WRC-2000)
9.13	*h)* for a station in a satellite network using the geostationary-satellite orbit, for which the requirement to coordinate is included in a footnote to the Table of Frequency Allocations referring to this provision or to No. **9.11A**, in respect of any other satellite network using a non-geostationary-satellite orbit, with the exception of coordination between earth stations operating in the opposite direction of transmission; (WRC-2000)
9.14	*i)* for a transmitting space station of a satellite network for which the requirement to coordinate is included in a footnote to the Table of Frequency Allocations referring to this provision or to No. **9.11A** in respect of receiving stations of terrestrial services where the threshold value is exceeded; (WRC-07)
9.15	*j)* for either a specific earth station or typical earth station of a non-geostationary satellite network for which the requirement to coordinate is included in a footnote to the Table of Frequency Allocations referring to No. **9.11A**, in respect of terrestrial stations in frequency bands allocated with equal rights to space and terrestrial services and where the coordination area of the earth station includes the territory of another country; (WRC-2000)
9.16	*k)* for a transmitting station of a terrestrial service for which the requirement to coordinate is included in a footnote to the Table of Frequency Allocations referring to No. **9.11A** and which is located within the coordination area of an earth station in a non-geostationary-satellite network; (WRC-2000)
9.17	*l)* for any specific earth station or typical mobile earth station in frequency bands above 100 MHz allocated with equal rights to space and terrestrial services, in respect of terrestrial stations, where the coordination area of the earth station includes the territory of another country, with the exception of the coordination under No. **9.15**; (WRC-2000)
9.18	*n)* for any transmitting station of a terrestrial service in the bands referred to in No. **9.17** within the coordination area of an earth station, in respect of this earth station, with the exception of the coordination under Nos. **9.16** and **9.19**; (WRC-2000)
9.19	*o)* for any transmitting station of a terrestrial service or any transmitting earth station in the fixed-satellite service (Earth-to-space) in a frequency band shared on an equal primary basis with the broadcasting-satellite service, with respect to typical earth stations included in the service area of a space station in the broadcasting-satellite service. (WRC-2000)

RR footnote No	RR footnote text
9.21	*p)* for any station of a service for which the requirement to seek the agreement of other administrations is included in a footnote to the Table of Frequency Allocations referring to this provision. (WRC-2000)

b) Relevant European Common Allocation Table (ECA) Footnote

ECA foot-note No	European Common Allocation Table (ECA) footnote text
ECA5	In parts of this band aeronautical stations and aircraft stations utilise 8.33 kHz channel spacing for non secure communications requirements.
ECA6	The mobile-satellite service is limited to low earth orbiting satellites.
ECA7	This band can also be used by low capacity fixed links in rural areas on a national basis. These links need to be coordinated with mobile service and require full protection.
ECA9	CEPT administrations may authorise all or parts of the band 69.9-70.5 MHz to the amateur service on a secondary basis.
ECA17	In the sub-bands 5755 - 5765 MHz, 10.36 - 10.37 GHz, 10.45 - 10.46 GHz the amateur service operates on a secondary basis. In making assignments to other services, CEPT administrations are requested wherever possible to maintain these sub-bands in such a way as to facilitate the reception of amateur emissions with minimal power flux densities.
ECA19	This band is allocated to the radio astronomy service. CEPT administrations are urged to take all practicable steps to protect the radio astronomy service from harmful interference. Emissions from space or airborne stations in this and adjacent bands can cause serious harmful interference.
ECA23	In the sub-bands 5660-5670 MHz (earth to space), 5830-5850 MHz (space to earth) and 10.45-10.50 GHz the amateur-satellite additionally operates on a secondary and non interference basis to other services. In making assignments to other services, CEPT administrations are requested wherever possible to maintain these allocations in such a way as to facilitate the reception of amateur emissions with minimal power flux densities.
ECA39	Administrations shall avoid deployment of high-density mobile systems incl. highdensity fixed wireless access in the 22.0-23.6 GHz frequency band (ECC/DEC/(18)06)