

# COMREG

## Radio Frequency Plan for Ireland



An Coimisiún um  
Rialáil Cumarsáide

Commission for  
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# 1 Introduction

The Commission for Communications Regulation (“ComReg”) is the statutory body responsible for the regulation of the electronic communications (telecommunications, radiocommunication and broadcasting networks), postal and premium rate sectors in Ireland in accordance with European Union (“EU”) and Irish law. ComReg also manages Ireland’s radio spectrum (or “spectrum”) and national numbering resource.

Radio spectrum is a medium by which information may be transmitted wirelessly over distances ranging from a few metres to thousands of kilometres. It is a valuable national resource underpinning important economic, social and communications activities. These include widely used services, such as fixed wireless communications, mobile broadband, radio and TV broadcasting, and the safe operation of air and maritime transport. Radio spectrum is also fundamental in the day-to-day operation of the emergency services, the defence forces and is a vital input to many other services including important scientific applications, such as weather forecasting and monitoring the Earth’s environment. However, it is a finite natural resource with competing uses and users, and so it must be managed effectively and used efficiently.

One part of the spectrum management function is the provision of accurate information on the use of the radio spectrum resource. To this end, section 35 of the Communications Act, 2002, obliges ComReg to produce, publish and maintain the national radio frequency plan, detailing all radio frequency allocations in Ireland. ComReg has met this legislative obligation by regularly publishing an updated document that contains the Radio Frequency Plan for Ireland (“the Plan”) and this document in your hands is the fifth minor revision published since the major revision of July 2020.

Following the recent World Radiocommunication Conference, a major revision taking onboard the changes to the International Radio Regulations and the European Common Allocations, is planned in 2024.

The Plan is comprised of a set of tables which sets out Ireland’s radio spectrum allocations covering 8.3 kilohertz to 3000 Gigahertz, indicating the services to which each frequency band is allocated (“frequency allocations”) in the radio spectrum.

The document is divided into ten sections. The tables of frequency allocations are contained within three of these sections. Section 3 contains the frequency plan for the spectrum range between 8.3 kHz and 27 500 kHz. Section 4 contains the frequency plan for the spectrum between 27.5 MHz and 10 000 MHz and section 5 contains the frequency plan for the spectrum between 10 GHz and 3 000 GHz, followed by five annexes.

## Introduction (continued)

For each frequency band, the types of radio services that are permitted for operation in Ireland and those radio services that are currently in use in that band are detailed. In addition, the International Telecommunications Union (ITU)<sup>1</sup> Allocations applicable to Ireland and the associated European Common Allocation (from ERC Report 025<sup>2</sup>) for each frequency band are outlined, along with applicable national and European legislation, relevant European Decisions and Recommendations and ComReg documentation.

In publishing the Plan for Ireland, ComReg is maintaining its commitment to all stakeholders, ensuring that a comprehensive source of information is made available, providing key data on current radio spectrum allocations in Ireland.

This December 2023 edition of the Plan reflects all updates relating to both National and European Legislation, together with the applicable CEPT Decisions, Recommendations and corrected errors identified in previous editions.

ComReg welcomes any proposed amendments or changes in relation to the Plan and this is best achieved by sending an email to [abby.molloy@comreg.ie](mailto:abby.molloy@comreg.ie).

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<sup>1</sup> As contained in the latest available edition of the ITU-R Radio Regulations, available at: <https://www.itu.int/en/publications/ITU-R/pages/publications.aspx?parent=R-REG-RR-2020&media=electronic>

<sup>2</sup> ERC Report 025 is available to download using the following link: <https://docdb.cept.org/document/593/amendments/400>

## 2 Understanding the Plan

The first step to understanding the plan is to appreciate what is meant by a radiocommunication service and the use of the words “allocation” and “assignment”.

### Radiocommunication service

A service as defined in the ITU Radio Regulations involving the transmission, emission and/or reception of radio waves for specific telecommunication purposes.

There are 41 different types of radiocommunication services, for example:

- The fixed service - a radiocommunication service between specified fixed points.
- The fixed-satellite service - a radiocommunication service between earth stations at given positions, when one or more satellites are used; the given position may be a specified fixed point or any fixed point within specified areas; in some cases this service includes satellite-to-satellite links, which may also be operated in the inter-satellite service; the fixed-satellite service may also include feeder links for other space radiocommunication services.
- The mobile service - a radiocommunication service between mobile and land stations, or between mobile stations.

A common error is to confuse radiocommunication services with technologies such as 4G or LTE.

## Understanding the Plan (continued)

### The allocation of radio spectrum

The allocation of radio spectrum means “the designation of a given frequency band for use by one or more types of radiocommunications services, where appropriate, under specified conditions”<sup>3</sup>.

An allocation identifies the radiocommunication services that could potentially use a radio frequency band and is an important activity in facilitating the international coordination of radio spectrum between regional areas and neighbouring countries (thereby reducing the potential for interference) and enabling economies of scale.

### The assignment of radio spectrum

The assignment of radio spectrum refers to the spectrum management activities that issues, and authorises the use of, rights of use of radio frequencies<sup>4</sup>.

In Ireland, the possession and use of radio equipment requires authorisation from ComReg and this authorisation may take the form of either a licence or a licence-exemption under the 1926 Act.

For the avoidance of doubt, there is no license-free spectrum in Ireland and spectrum above and below the extents covered in this document, if used, need to be subject to either a licence or licence exemption.

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<sup>3</sup> European Communities (Electronic Communications Networks and Services) (Framework) Regulations 2011 (S.I. 333 of 2011).

<sup>4</sup> A spectrum assignment refers to the rights of use for specific radio frequencies within a frequency band issued to an individual or for a station and usually under specified conditions (e.g. in the context of radio frequencies for ECS, one or more of the conditions identified in Part B of the Schedule to the Authorisation Regulations).

## Understanding the Plan (continued)

Consider the example table below:

Frequency Band (MHz)	ITU	European	National Usage	Legislation	CEPT	Notes
862 - 890	FIXED					
	MOBILE EXCEPT AERONAUTICAL MOBILE 5.317A	MOBILE 5.317A	LIBERALISED USE (880-915 and 925-960MHz)	National & European Legislation: S.I. 251 of 2012 S.I. 34 of 2014 European Legislation Decision 2009/766/EC (as amended by Decision 2011/251/EU and Decision 2018/637/EU)	ECC/DEC/(06)13	See ComReg Documents 12/52 and 13/55
			GSM-R (876-880 and 921-925 MHz)	National & European Legislation: S.I. 213 of 2012 S.I. 34 of 2014	ECC/DEC/(02)10 ECC/DEC/(02)09 ECC/DEC/(02)05 ECC/REC/(05)08	See ComReg Document 11/90
			Mobile Communications on board Vessels (MCV) (880-915, 925-960, 1710-1785 and 1805-1880 MHz)	National & European Legislation: S.I.169 of 2013 S.I. 34 of 2014 Decision 2010/166/EU (as amended by Decision (EU) 2017/191)	ECC/DEC/(08)08	
	BROADCASTING					
		ECA13 ECA29 ECA36	IRL1			
<b>Column 1</b>	<b>Column 2</b>	<b>Column 3</b>	<b>Column 4</b>	<b>Column 5</b>	<b>Column 6</b>	<b>Column 7</b>

## Understanding the Plan (continued)

There are seven columns and what is contained in each column and how to read the example table is as follows:

**Column 1:** Values in this column denote the radio frequency band. Units used in the column header are: kHz indicates kilohertz, MHz indicates Megahertz and GHz indicates Gigahertz.

In this example, the table covers the frequency band 862 MHz to 890 MHz.

**Column 2:** This column shows the radiocommunication service(s) allocated to the band in the ITU Radio Regulations. Entries in UPPER CASE denote primary services while entries in lower case denote secondary services as defined in the Radio Regulations. Footnotes (e.g. 5.317A) are the footnotes to the Table of Frequency Allocations as detailed in the Radio Regulations. Only footnotes relevant to Ireland are included in this document.

In the example table, the band is allocated internationally to three different services – all on a co-primary basis as follows:

- The FIXED services;
- The MOBILE except aeronautical mobile services; and
- The BROADCASTING services.

On the same line as MOBILE except aeronautical mobile there is an ITU footnote designated by the code 5.317A. The precursor (the number 5) indicates that this footnote comes from Article 5 of the ITU Radio Regulations. The full text of the footnote is contained in Annex D of this document and states:

*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)*

Note that Ireland is in Region 1. This footnote, which was most recently updated at the World Radiocommunication Conference in 2019 (WRC-19) provides guidance to Member States and industry that this band has been identified for International Mobile Telecommunications (IMT). IMT is the generic term used by the ITU community to designate broadband mobile systems. The term IMT now encompasses IMT-2000, IMT-Advanced and IMT-2020 collectively - which includes 3G, 4G and 5G technologies.

## Understanding the Plan (continued)

Where a footnote appears on the same line as a service this indicates that the footnote is directly applicable to the service that it appears under. Generic footnotes (e.g. ECA36) appear in a separate rows to the listed radio services as they are applicable to the whole band and not directly to one single radiocommunication service in that band.

ITU Footnotes mentioned in the tables in this document may be found in Annex 1 of this document.

**Column 3:** This column indicates the European Common Allocation for the band as detailed in according to ERC Report 025. ERC Report 025 represents the strategic objective of CEPT to achieve a harmonised table of frequency allocations and utilisations in Europe. Therefore this column may contain a subset of the international allocations or in a limited number of instances a service that is harmonised in Europe that does not appear in Column 2.

Again, entries in UPPER CASE denote primary services while entries in lower case denote secondary services as defined in the Radio Regulations.

In the example one might note the difference between the ITU allocations and the European allocations. The only primary allocation is to the MOBILE service but without the exclusion of aeronautical mobile - this takes into account the use of mobile phones and devices in aircraft.

There is no allocation to either the FIXED or BROADCASTING services in European in this spectrum band. This reflects the European strategy in previous decades to dedicate this band for mobile services by removing all fixed links and migrating any broadcasting out of this band. This was the first global mobile band and the band used across Europe for GSM (2G) technologies.

There are three European footnotes in this band as follows:

- *Footnote ECA13 - CEPT administrations are urged to take all practical steps to clear the band 645-960 MHz of the assignments to the aeronautical radionavigation service. This band previously had, on a secondary basis, an ITU and a European allocation to Radiolocation services and was used for aircraft navigation services before GSM was conceived.*
- *Footnote ECA29 - The frequency bands 890-915 / 935-960 MHz, 880-890 / 925-935 MHz, 1710-1785 / 1805-1880 MHz, 1920-1980 MHz and 2110-2170 MHz are reserved for public cellular mobile use only. Other services such as the fixed service should only be allowed in the above bands where coexistence with public mobile systems is possible i.e. in sparsely populated or rural areas where the frequency band is not needed for mobile cellular systems. This band previously had been used for fixed links before GSM was conceived.*

## Understanding the Plan (continued)

- *Footnote ECA36 - A frequency band, which has been harmonised by NATO and NATO member nations for military use as defined in the NATO Joint Civil/Military Frequency Agreement (NJFA) 2014. This footnote provides guidance to the effect that the band is used by military systems.*

A list of European Footnotes may be found in Annex 2 of this document.

**Column 4:** This column indicates the current national usage of the band - each usage in Ireland is grouped next to the appropriate ECA allocations.

In Ireland licences have been issued under the mobile allocation for terrestrial systems capable of providing electronic communications service (liberalised use licences in this case) there is a licence regime in place to issue GSM-R licences<sup>5</sup>, and apparatus used to provide mobile communications services on board vessels have been exempted from the requirement to hold a licence.

The generic Irish footnote IRL1 covers a variety of short range devices that have been exempted from the requirement to hold a licence. The full list of exempted short range devices can be found in ComReg Doc. - 02/71 (as revised). These include:

- Alarms;
- Non-specific Short range devices;
- Radio microphones and Assisted Listening Devices;
- RFID;
- Tracking, tracing and data acquisition; and
- Wideband data transmission systems

**Column 5:** This column details the national and European Legislation applicable to the frequency band. In Ireland, Primary legislation is in the form of Acts and secondary legislation is in the form of Statutory Instruments (S.I.).

**Column 6:** This column details the relevant CEPT Decisions and Recommendations applicable to the frequency band.

**Column 7:** This column notes any additional relevant detail or documents that may be of interest. Where licences have been issued and the license conditions limit operations using one technology, then this is often detailed in this column.

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<sup>5</sup> GSM-R is GSM technology used by the railway industry in support of operations.

## Disclaimer

The information in this document is made available by the Commission for Communications Regulation (ComReg) on the understanding that it is for information purposes only. It is not intended to form the basis of any investment decision and should not be considered as a recommendation by the Commissioners or their advisors to participate in any tender for the allocation of radio spectrum.

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# Radio Frequency Plan

# 03

## Spectrum from 8.3 kHz to 27500 kHz

## GENERAL INFORMATION for 8.3 kHz to 27 500 kHz

All radio and telecommunications terminal equipment must comply with the Radio Equipment Directive.

Please see <https://www.comreg.ie/industry/radio-spectrum/spectrum-compliance/equipment-compliance/> for further details.

All apparatus for Wireless Telegraphy requires a licence unless it has been specifically exempted from licensing under Irish Legislation by means of an Exemption Order. Please see <https://www.comreg.ie/industry/radio-spectrum/licence-exemptions/list-of-licence-exemptions/> for further details.

The following references apply to the spectrum from 9 kHz to 27500 kHz:

1. Commission Decision 676/2002/EC of the European Parliament and of the Council of 7 March 2002 on a regulatory framework for radio spectrum policy in the European Community (Radio Spectrum Decision).  
See: <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32002D0676&from=EN>
2. Commission Decision 2019/785/EU on the harmonisation of radio spectrum for equipment using ultra-wideband technology in the Union and repealing Decision 2007/131/EC.  
See: <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32014L0053&from=EN>
3. Where short-range devices ("SRD's") are utilised within a given band, this is denoted by the generic footnote "IRL1". Where applicable, this footnote will be situated under the "National Usage" column and in the same row as both the ITU and ECA Footnotes. In all instances where the footnote "IRL1" is listed, it is recommended that readers refer to ComReg document 02/71R, as revised, for further information relating to specific SRD usage.  
See: <https://www.comreg.ie/publication/permitted-short-range-devices-in-ireland-3>
4. Commission Decision 2006/771/EC, as amended by Commission Implementing Decision (EU) 2022/180, sets out harmonised technical conditions for a wide variety of the SRD applications falling under the scope of the footnote "IRL1". Readers are referred to ComReg document 02/71R, as revised, for further details on specific bands to which this Commission Decision applies.  
For Decision 2006/771/EC, see: <https://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2006:312:0066:0070:EN:PDF>  
For Decision (EU) 2022/180, see: <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32022D0180&from=EN>

5. EC Decisions other than Commission Decision 2006/771/EC (as amended by Commission Implementing Decision (EU) 2019/1345), which set out harmonised technical conditions for some other SRD applications falling under the scope of the footnote "IRL1", are also listed within the table. Such Decisions, where applicable, are situated in cells directly to the right of the "IRL1" footnote, and under the "Legislation" column. Readers are further referred to ComReg document 02/71R for more detailed information on these Decisions also.
6. S.I. No. 248 of 2017 - European Union (Radio Equipment) Regulations 2017.  
See: <http://www.irishstatutebook.ie/eli/2017/si/248/made/en/print>
7. Directive 2014/53/EU of the European Parliament and of the Council of 16 April 2014 on the harmonisation of the laws of the Member States relating to the making available on the market of radio equipment and repealing Directive 1999/5/EC  
See: <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32014L0053&from=EN>
8. Wireless Telegraphy Act, 1926 (Number 45 of 1926).  
See: <http://www.irishstatutebook.ie/eli/1926/act/45/enacted/en/html>
9. S.I. 193 of 2009, "Wireless Telegraphy (Aircraft Station Licence) Regulations 2009", applies to licences to keep, have possession of, install, maintain, work and use apparatus for wireless telegraphy forming part of an Aircraft Station, and having the characteristics set out therein.  
See: [http://www.comreg.ie/\\_fileupload/publications/SI193of2009.pdf](http://www.comreg.ie/_fileupload/publications/SI193of2009.pdf)

Frequency Band (kHz)	ITU	European	National Usage	Legislation	CEPT	Notes
0 - 8.3000 kHz	Not Allocated 5.53 5.54	Not Allocated				
			IRL1			0 - 148 Hz: NMR
8.3000 - 9 kHz	METEOROLOGICAL AIDS 5.54A	METEOROLOGICAL AIDS	Lightning detector systems			
			IRL1			
9 - 11.3000 kHz	METEOROLOGICAL AIDS 5.54A	METEOROLOGICAL AIDS	Lightning detector systems			
	RADIONAVIGATION	RADIONAVIGATION				
			IRL1			
11.3000 - 14 kHz	RADIONAVIGATION	RADIONAVIGATION				
			IRL1			
14 - 19.9500 kHz	FIXED	FIXED				

Frequency Band (kHz)	ITU	European	National Usage	Legislation	CEPT	Notes
14 - 19.9500 kHz -continued-	MARITIME MOBILE 5.57	MARITIME MOBILE				
	5.56	ECA36	IRL1			
19.9500 - 20.0500 kHz	STANDARD FREQUENCY AND TIME SIGNAL (20 kHz)	STANDARD FREQUENCY AND TIME SIGNAL (20 kHz)	Standard frequency and time (reception)			
			IRL1			
20.0500 - 70 kHz	FIXED	FIXED				
	MARITIME MOBILE 5.57	MARITIME MOBILE				
	5.56	ECA36	IRL1			
70 - 72 kHz	RADIONAVIGATION 5.60	RADIONAVIGATION	Radionavigation	National Legislation: S.I. 369 of 2009		See ComReg document 11/07
		ECA36	IRL1			
72 - 84 kHz	FIXED	FIXED				

Frequency Band (kHz)	ITU	European	National Usage	Legislation	CEPT	Notes
72 - 84 kHz -continued-	MARITIME MOBILE 5.57	MARITIME MOBILE				
	RADIONAVIGATION 5.60	RADIONAVIGATION				
	5.56	ECA36	IRL1			
84 - 86 kHz	RADIONAVIGATION 5.60	RADIONAVIGATION	Radionavigation	National Legislation: S.I. 369 OF 2009		See ComReg document 11/07
		ECA36	IRL1			
86 - 90 kHz	FIXED	FIXED				
	MARITIME MOBILE 5.57	MARITIME MOBILE				
	RADIONAVIGATION	RADIONAVIGATION				
			Paging (Commercial Firms)			
	5.56	ECA36	IRL1			

Frequency Band (kHz)	ITU	European	National Usage	Legislation	CEPT	Notes
90 - 110 kHz	RADIONAVIGATION 5.62	RADIONAVIGATION	Radionavigation	National Legislation: S.I. 369 OF 2009		
	Fixed	Fixed				
	5.64	ECA36	IRL1			
110 - 112 kHz	FIXED	FIXED				
	MARITIME MOBILE	MARITIME MOBILE				
	RADIONAVIGATION	RADIONAVIGATION	Radionavigation	National Legislation: S.I. 369 OF 2009		See ComReg document 11/07
	5.64	ECA36	IRL1			
112 - 115 kHz	RADIONAVIGATION 5.60	RADIONAVIGATION	Radionavigation	National Legislation: S.I. 369 OF 2009		See ComReg document 11/07
		ECA36	IRL1			
115 - 117.6000 kHz	RADIONAVIGATION 5.60	RADIONAVIGATION	Radionavigation	National Legislation: S.I. 369 OF 2009		See ComReg document 11/07

Frequency Band (kHz)	ITU	European	National Usage	Legislation	CEPT	Notes
115 - 117.6000 kHz -continued-	Fixed	Fixed				
	Maritime Mobile	Maritime Mobile				
	5.64	ECA36	IRL1			
117.6000 - 126 kHz	FIXED	FIXED				
	MARITIME MOBILE	MARITIME MOBILE				
	RADIONAVIGATION 5.60	RADIONAVIGATION	Radionavigation	National Legislation: S.I. 369 of 2009		See ComReg document 11/07
	5.64	ECA36	IRL1			
126 - 129 kHz	RADIONAVIGATION 5.60	RADIONAVIGATION	Radionavigation	National Legislation: S.I. 369 of 2009		See ComReg document 11/07
		ECA36	IRL1			
129 - 130 kHz	FIXED	FIXED				
	MARITIME MOBILE	MARITIME MOBILE				

Frequency Band (kHz)	ITU	European	National Usage	Legislation	CEPT	Notes
129 - 130 kHz -continued-	RADIONAVIGATION 5.60	RADIONAVIGATION	Radionavigation	National Legislation: S.I. 369 of 2009		See ComReg document 11/07
	5.64	ECA36	IRL1			
130 - 135.7000 kHz	FIXED	FIXED				
	MARITIME MOBILE	MARITIME MOBILE				
	5.64	ECA36	IRL1			
135.7000 - 137.8000 kHz	FIXED 5.64	FIXED				
	MARITIME MOBILE	MARITIME MOBILE				
	Amateur 5.67A	Amateur	Amateur (Secondary)	National Legislation: S.I. 192 of 2009		See ComReg Document 09/45, as revised
	5.67B	ECA36	IRL1			
137.8000 - 148.5000 kHz	FIXED	FIXED				

Frequency Band (kHz)	ITU	European	National Usage	Legislation	CEPT	Notes
137.8000 - 148.5000 kHz -continued-	MARITIME MOBILE	MARITIME MOBILE				
	5.64	ECA36	IRL1			148 - 5000 kHz: NMR
148.5000 - 255 kHz	BROADCASTING	BROADCASTING	Broadcasting (AM Sound)	National Legislation: Broadcasting Act 2009		GE75 Plan
			IRL1			
255 - 283.5000 kHz	AERONAUTICAL RADIONAVIGATION	AERONAUTICAL RADIONAVIGATION	Aeronautical Radionavigation	National Legislation: S.I. 369 OF 2009		See ComReg document 11/07
	BROADCASTING	BROADCASTING	Broadcasting (AM Sound)	National Legislation: Broadcasting Act 2009		GE75 Plan.
		ECA36	IRL1			
283.5000 - 315 kHz	AERONAUTICAL RADIONAVIGATION	AERONAUTICAL RADIONAVIGATION	Aeronautical Radionavigation	National Legislation: S.I. 369 OF 2009		GE85-EMA See ComReg document 11/07

Frequency Band (kHz)	ITU	European	National Usage	Legislation	CEPT	Notes
283.5000 - 315 kHz -continued-	MARITIME RADIONAVIGATION (Radiobeacons) 5.73	MARITIME RADIONAVIGATION (Radiobeacons)	Maritime Radionavigation	National Legislation: S.I. 414 of 2006 S.I. 369 of 2009		Transmission of DGPS signals GE85-EMA ITU-R M.823 and ITU-R M.588-1 See ComReg document 11/07
	5.74	ECA36	IRL1			
315 - 325 kHz	AERONAUTICAL RADIONAVIGATION	AERONAUTICAL RADIONAVIGATION	Aeronautical Radionavigation	National Legislation: S.I. 855 of 2004 S.I. 369 of 2009		Annex 10 of the Convention on International Civil Aviation. See ComReg document 11/07
	Maritime Radionavigation (Radiobeacons) 5.73	Maritime Radionavigation (Radiobeacons)	Maritime Radionavigation			
		ECA36	IRL1			
325 - 405 kHz	AERONAUTICAL RADIONAVIGATION	AERONAUTICAL RADIONAVIGATION	Aeronautical Radionavigation	National Legislation: S.I. 855 of 2004 S.I. 369 of 2009		Annex 10 of the Convention on International Civil Aviation. See ComReg document 11/07

Frequency Band (kHz)	ITU	European	National Usage	Legislation	CEPT	Notes
325 - 405 kHz -continued-		ECA36	IRL1			
405 - 415 kHz	RADIONAVIGATION 5.76	RADIONAVIGATION	Aeronautical Radionavigation	National Legislation: S.I. 369 of 2009		Annex 10 of the Convention on International Civil Aviation. See ComReg document 11/07
		ECA36	IRL1			
415 - 435 kHz	AERONAUTICAL RADIONAVIGATION	AERONAUTICAL RADIONAVIGATION	Aeronautical Radionavigation	National Legislation: S.I. 369 of 2009		Annex 10 of the Convention on International Civil Aviation. See ComReg document 11/07
	MARITIME MOBILE 5.79	MARITIME MOBILE	Maritime mobile (DSC)	National legislation: S.I. 414 of 2006		GE85-MM-R1 See ComReg document 11/07
		ECA36	IRL1			
435 - 472 kHz	MARITIME MOBILE 5.79	MARITIME MOBILE	Maritime Mobile	National legislation: S.I. 414 of 2006		GE85-MM-R1

Frequency Band (kHz)	ITU	European	National Usage	Legislation	CEPT	Notes
435 - 472 kHz -continued-	Aeronautical Radionavigation	Aeronautical Radionavigation	Aeronautical Radionavigation	National Legislation: S.I. 369 of 2009		See ComReg document 11/07
	5.82	ECA36	IRL1			
472 - 479 kHz	MARITIME MOBILE 5.79	MARITIME MOBILE				
	Amateur 5.80A	Amateur	Amateur (Secondary)	National Legislation: S.I. 192 of 2009		See ComReg Document 09/45, as revised
	Aeronautical Radionavigation	Aeronautical Radionavigation	Aeronautical Radionavigation	National Legislation: S.I. 369 of 2009		See ComReg document 11/07
	5.82	ECA36	IRL1			
479 - 495 kHz	MARITIME MOBILE 5.79A 5.79	MARITIME MOBILE				
	Aeronautical Radionavigation	Aeronautical Radionavigation	Aeronautical Radionavigation	National Legislation: S.I. 369 OF 2009		See ComReg document 11/07
	5.82	ECA36	IRL1			

Frequency Band (kHz)	ITU	European	National Usage	Legislation	CEPT	Notes
495 - 505 kHz	MARITIME MOBILE	MOBILE	Maritime GMDSS			500 kHz is an international Distress and Calling Frequency for Morse telegraphy
	5.82C	ECA36	IRL1			
505 - 526.5000 kHz	AERONAUTICAL RADIONAVIGATION	AERONAUTICAL RADIONAVIGATION	Aeronautical Radionavigation	National Legislation: S.I. 369 OF 2009		GE85-MM-R1 See ComReg document 11/07
	MARITIME MOBILE 5.79 5.79A 5.84	MARITIME MOBILE	Maritime Mobile	National legislation: S.I. 414 of 2006		GE85-MM-R1
		ECA36	IRL1			
526.5000 - 1606.5000 kHz	BROADCASTING	BROADCASTING	Broadcasting (AM Sound)	National Legislation: Broadcasting Act 2009		GE75 Plan
			IRL1			
1606.5000 - 1625 kHz	FIXED	FIXED				GE85-MM-R1
	LAND MOBILE	LAND MOBILE				GE85-MM-R1

Frequency Band (kHz)	ITU	European	National Usage	Legislation	CEPT	Notes
1606.5000 - 1625 kHz -continued-	MARITIME MOBILE 5.90	MARITIME MOBILE	Maritime mobile (DSC)	National legislation: S.I. 414 of 2006		GE85-MM-R1
		Radiolocation	Radiolocation	National Legislation: S.I. 369 of 2009		See ComReg document 11/07
	5.92	ECA36	IRL1			
1625 - 1635 kHz	RADIOLOCATION	RADIOLOCATION	Radiolocation	National Legislation: S.I. 369 of 2009		See ComReg document 11/07
	5.93	ECA36	IRL1			
1635 - 1800 kHz	FIXED	FIXED				
	LAND MOBILE	LAND MOBILE				
	MARITIME MOBILE 5.90	MARITIME MOBILE	Maritime Mobile Radiolocation: Position Fixing	National legislation: S.I. 414 of 2006		GE85-MM-R1
	5.92 5.96	ECA36	IRL1			

Frequency Band (kHz)	ITU	European	National Usage	Legislation	CEPT	Notes
1800 - 1810 kHz	RADIOLOCATION	RADIOLOCATION	Radiolocation	National Legislation: S.I. 369 of 2009		Position Fixing See ComReg document 11/07
		ECA36	IRL1			
1810 - 1850 kHz	AMATEUR	AMATEUR	Amateur (Primary)	National Legislation: S.I. 192 of 2009		See ComReg Document 09/45, as revised
	5.100 5.98	5.100	IRL1			
1850 - 2000 kHz	FIXED	FIXED				
	MOBILE EXCEPT AERONAUTICAL MOBILE	MOBILE EXCEPT AERONAUTICAL MOBILE				
		Amateur	Amateur (primary)	National Legislation: S.I. 192 of 2009		See ComReg Document 09/45, as revised
	5.92 5.96 5.103	ECA36	IRL1			
2000 - 2025 kHz	FIXED	FIXED	Fixed			

Frequency Band (kHz)	ITU	European	National Usage	Legislation	CEPT	Notes
2000 - 2025 kHz -continued-	MOBILE EXCEPT AERONAUTICAL MOBILE (R)	MOBILE EXCEPT AERONAUTICAL MOBILE (R)	Maritime Mobile	National legislation: S.I. 414 of 2006		
	5.92 5.103	ECA36	IRL1			
2025 - 2045 kHz	FIXED	FIXED				
	MOBILE EXCEPT AERONAUTICAL MOBILE (R)	MOBILE EXCEPT AERONAUTICAL MOBILE (R)				
	Meteorological Aids 5.104					
	5.92 5.103 5.104	ECA36	IRL1			
2045 - 2160 kHz	FIXED	FIXED				
	LAND MOBILE	LAND MOBILE				

Frequency Band (kHz)	ITU	European	National Usage	Legislation	CEPT	Notes
2045 - 2160 kHz -continued-	MARITIME MOBILE	MARITIME MOBILE	Maritime Mobile	National Legislation: S.I. 414 of 2006		GE85-MM-R1
	5.92	ECA36	IRL1			
2160 - 2170 kHz	RADIOLOCATION	RADIOLOCATION	Radiolocation	National Legislation: S.I. 369 of 2009		See ComReg document 11/07
	5.93	ECA36	IRL1			
2170 - 2173.5000 kHz	MARITIME MOBILE	MARITIME MOBILE				
		ECA36	IRL1			
2173.5000 - 2190.5000 kHz	MOBILE (distress and calling)	MOBILE (distress and calling)	Maritime GMDSS	National Legislation: S.I. 414 of 2006		
	5.108 5.109 5.110 5.111	ECA36	IRL1			
2190.5000 - 2194 kHz	MARITIME MOBILE	MARITIME MOBILE				

Frequency Band (kHz)	ITU	European	National Usage	Legislation	CEPT	Notes
2190.5000 - 2194 kHz -continued-		ECA36	IRL1			
2194 - 2300 kHz	FIXED	FIXED	Fixed			
	MOBILE EXCEPT AERONAUTICAL MOBILE (R)	MOBILE EXCEPT AERONAUTICAL MOBILE (R)	Maritime Mobile	National legislation: S.I. 414 of 2006		
	5.92 5.103	ECA36	IRL1			
2300 - 2498 kHz	FIXED	FIXED				
	MOBILE EXCEPT AERONAUTICAL MOBILE (R)	MOBILE EXCEPT AERONAUTICAL MOBILE (R)	Maritime Mobile	National legislation: S.I. 414 of 2006		
	BROADCASTING 5.113					
	5.103	ECA36	IRL1			
2498 - 2501 kHz	STANDARD FREQUENCY AND TIME SIGNAL (2500 kHz)	STANDARD FREQUENCY AND TIME SIGNAL (2500 kHz)				

Frequency Band (kHz)	ITU	European	National Usage	Legislation	CEPT	Notes
2498 - 2501 kHz -continued-			IRL1			
2501 - 2502 kHz	STANDARD FREQUENCY AND TIME SIGNAL	STANDARD FREQUENCY AND TIME SIGNAL				
	Space Research	Space Research				
			IRL1			
2502 - 2625 kHz	FIXED	FIXED				
	MOBILE EXCEPT AERONAUTICAL MOBILE (R)	MOBILE EXCEPT AERONAUTICAL MOBILE (R)	Maritime Mobile	National legislation: S.I. 414 of 2006		
	5.92 5.103	ECA36	IRL1			
2625 - 2650 kHz	MARITIME MOBILE	MARITIME MOBILE	Maritime Mobile	National legislation: S.I. 414 of 2006		International Intership Communications
	MARITIME RADIONAVIGATION	MARITIME RADIONAVIGATION				

Frequency Band (kHz)	ITU	European	National Usage	Legislation	CEPT	Notes
2625 - 2650 kHz -continued-	5.92	ECA36	IRL1			
2650 - 2850 kHz	FIXED	FIXED				
	MOBILE EXCEPT AERONAUTICAL MOBILE (R)	MOBILE EXCEPT AERONAUTICAL MOBILE (R)	Maritime Mobile	National legislation: S.I. 414 of 2006		
	5.92 5.103	ECA36	IRL1			
2850 - 3025 kHz	AERONAUTICAL MOBILE (R)	AERONAUTICAL MOBILE (R)	Aeronautical Mobile	National Legislation: S.I. 855 of 2004 S.I. 369 of 2009		ITU Radio Regulations Appendix 27 Allotment Plan See ComReg document 11/07
	5.111 5.115	ECA36	IRL1			
3025 - 3155 kHz	AERONAUTICAL MOBILE (OR)	AERONAUTICAL MOBILE (OR)	Aeronautical Mobile	National Legislation: S.I. 855 of 2004 S.I. 369 of 2009		ITU Radio Regulations Appendix 26 Allotment Plan See ComReg document 11/07

Frequency Band (kHz)	ITU	European	National Usage	Legislation	CEPT	Notes
3025 - 3155 kHz -continued-		ECA36	IRL1			
3155 - 3200 kHz	FIXED	FIXED				
	MOBILE EXCEPT AERONAUTICAL MOBILE (R)	MOBILE EXCEPT AERONAUTICAL MOBILE (R)				
	5.116	ECA36	IRL1			
3200 - 3230 kHz	FIXED	FIXED				
	BROADCASTING 5.113					
	MOBILE EXCEPT AERONAUTICAL MOBILE (R)	MOBILE EXCEPT AERONAUTICAL MOBILE (R)				
	5.116	ECA36	IRL1			
3230 - 3400 kHz	FIXED	FIXED				

Frequency Band (kHz)	ITU	European	National Usage	Legislation	CEPT	Notes
3230 - 3400 kHz -continued-	MOBILE EXCEPT AERONAUTICAL MOBILE	MOBILE EXCEPT AERONAUTICAL MOBILE				
	BROADCASTING 5.113					
	5.116	ECA36	IRL1			
3400 - 3500 kHz	AERONAUTICAL MOBILE (R)	AERONAUTICAL MOBILE (R)	Aeronautical mobile	National Legislation: S.I. 855 of 2004 S.I. 369 of 2009		ITU Radio Regulations Appendix 27 Allotment Plan including HF data links. Annex 10 of the Convention on International Civil Aviation. See ComReg document 11/07.
		ECA36	IRL1			
3500 - 3800 kHz	AMATEUR	AMATEUR	Amateur (Primary)	National legislation: S.I. 192 of 2009		See ComReg Document 09/45, as revised
	FIXED	FIXED				

Frequency Band (kHz)	ITU	European	National Usage	Legislation	CEPT	Notes
3500 - 3800 kHz -continued-	MOBILE EXCEPT AERONAUTICAL MOBILE	MOBILE EXCEPT AERONAUTICAL MOBILE	Maritime Mobile	National Legislation: S.I. 414 of 2006		
	5.92	ECA36	IRL1			
3800 - 3900 kHz	FIXED	FIXED				
	AERONAUTICAL MOBILE (OR)	AERONAUTICAL MOBILE (OR)	Aeronautical Mobile	National Legislation: S.I. 855 of 2004 S.I. 369 of 2009		ITU Radio Regulations Appendix 26 (Allotment Plan)
	LAND MOBILE	LAND MOBILE				
		ECA36	IRL1			
3900 - 3950 kHz	AERONAUTICAL MOBILE (OR)	AERONAUTICAL MOBILE (OR)	Aeronautical Mobile	National Legislation: S.I. 855 of 2004 S.I. 369 of 2009		ITU Radio Regulations Appendix 26 (Allotment Plan)
		ECA36	IRL1			
3950 - 4000 kHz	FIXED	FIXED				
	BROADCASTING	BROADCASTING				

Frequency Band (kHz)	ITU	European	National Usage	Legislation	CEPT	Notes
3950 - 4000 kHz -continued-		ECA36	IRL1			
4000 - 4063 kHz	FIXED	FIXED				
	MARITIME MOBILE 5.127	MARITIME MOBILE	Maritime Mobile	National legislation: S.I. 414 of 2006		ITU Radio Regulations Appendix 17 (Channelling Plan) and Appendix 25 (Allotment Plan)
		ECA36	IRL1			
4063 - 4438 kHz	MARITIME MOBILE 5.79A 5.109 5.110	MARITIME MOBILE	Maritime Mobile	National legislation: S.I. 414 of 2006		ITU Radio Regulations Appendix 17 (Channelling Plan) and Appendix 25 (Allotment Plan)
	5.128 5.130 5.131 5.132	ECA36	IRL1			
4438 - 4488 kHz	FIXED	FIXED				
	MOBILE EXCEPT AERONAUTICAL MOBILE					

Frequency Band (kHz)	ITU	European	National Usage	Legislation	CEPT	Notes
4438 - 4488 kHz -continued-	Radiolocation 5.132A	Radiolocation				
		ECA36	IRL1			
4488 - 4650 kHz	FIXED	FIXED				
	MOBILE EXCEPT AERONAUTICAL MOBILE (R)	MOBILE EXCEPT AERONAUTICAL MOBILE (R)				
		ECA36	IRL1			
4650 - 4700 kHz	AERONAUTICAL MOBILE (R)	AERONAUTICAL MOBILE (R)	Aeronautical Mobile	National Legislation: S.I. 855 of 2004 S.I. 369 of 2009		ITU Radio Regulations Appendix 27 (Allotment Plan) including HF data links. Annex 10 of the Convention on International Civil Aviation.
		ECA36	IRL1			
4700 - 4750 kHz	AERONAUTICAL MOBILE (OR)	AERONAUTICAL MOBILE (OR)	Aeronautical Mobile	National Legislation: S.I. 855 of 2004 S.I. 369 of 2009		ITU Radio Regulations Appendix 26 )Allotment Plan).

Frequency Band (kHz)	ITU	European	National Usage	Legislation	CEPT	Notes
4700 - 4750 kHz -continued-		ECA36	IRL1			
4750 - 4850 kHz	FIXED	FIXED				
	AERONAUTICAL MOBILE (OR)	AERONAUTICAL MOBILE (OR)	Aeronautical Mobile	National Legislation: S.I. 855 of 2004 S.I. 369 of 2009		ITU Radio Regulations Appendix 26 (Allotment Plan).
	LAND MOBILE	LAND MOBILE				
	BROADCASTING 5.113					
		ECA36	IRL1			
4850 - 4995 kHz	FIXED	FIXED				
	LAND MOBILE	LAND MOBILE				
	BROADCASTING 5.113					
		ECA36	IRL1			

Frequency Band (kHz)	ITU	European	National Usage	Legislation	CEPT	Notes
4995 - 5003 kHz	STANDARD FREQUENCY AND TIME SIGNAL (5000 kHz)	STANDARD FREQUENCY AND TIME SIGNAL (5000 kHz)				
			Amateur (5000 - 5500 kHz) (Secondary)	National Legislation: S.I. 192 of 2009		See ComReg Document 09/45, as revised
			IRL1			5000 kHz - 30 MHz: NMR
5003 - 5005 kHz	STANDARD FREQUENCY AND TIME SIGNAL	STANDARD FREQUENCY AND TIME SIGNAL				
	Space Research	Space Research				
			Amateur (5000 - 5500 kHz) (Secondary)	National Legislation: S.I. 192 of 2009		See ComReg Document 09/45, as revised
			IRL1			
5005 - 5060 kHz	FIXED	FIXED				
	BROADCASTING 5.113					

Frequency Band (kHz)	ITU	European	National Usage	Legislation	CEPT	Notes
5005 - 5060 kHz -continued-			Amateur (5000 - 5500 kHz) (Secondary)	National Legislation: S.I. 192 of 2009		See ComReg Document 09/45, as revised
		ECA36	IRL1			
5060 - 5250 kHz	FIXED	FIXED				
	Mobile except Aeronautical Mobile	Mobile except Aeronautical Mobile				
			Amateur (5000 - 5500 kHz) (Secondary)	National Legislation: S.I. 192 of 2009		See ComReg Document 09/45, as revised
		ECA36	IRL1			
5250 - 5275 kHz	FIXED	FIXED				
	MOBILE EXCEPT AERONAUTICAL MOBILE	MOBILE EXCEPT AERONAUTICAL MOBILE				
	Radiolocation 5.132A	Radiolocation				

Frequency Band (kHz)	ITU	European	National Usage	Legislation	CEPT	Notes
5250 - 5275 kHz -continued-			Amateur (5000 - 5500 kHz) (Secondary)	National Legislation: S.I. 192 of 2009		See ComReg Document 09/45, as revised
		ECA36	IRL1			
5275 - 5450 kHz	FIXED	FIXED				
	MOBILE EXCEPT AERONAUTICAL MOBILE	MOBILE EXCEPT AERONAUTICAL MOBILE				
	Amateur (5351.5 - 5366.5 kHz) 5.133B	Amateur (5351.5 - 5366.5 kHz)	Amateur (5000 - 5500 kHz) (Secondary)	National Legislation: S.I. 192 of 2009		See ComReg Document 09/45, as revised
		ECA36	IRL1			
5450 - 5480 kHz	FIXED	FIXED				
	AERONAUTICAL MOBILE (OR)	AERONAUTICAL MOBILE (OR)	Aeronautical Mobile	National Legislation: S.I. 855 of 2004 S.I. 369 of 2009		ITU Radio Regulations Appendix 26 (Allotment Plan).
	LAND MOBILE	LAND MOBILE				

Frequency Band (kHz)	ITU	European	National Usage	Legislation	CEPT	Notes
5450 - 5480 kHz -continued-		ECA36	IRL1			
5480 - 5680 kHz	AERONAUTICAL MOBILE (R)	AERONAUTICAL MOBILE (R)	Aeronautical Mobile, SAR (communications)	National Legislation: S.I. 855 of 2004 S.I. 369 of 2009		ITU Radio Regulations Appendix 27 (Allotment Plan) including HF data links. Annex 10 of the Convention on International Civil Aviation
	5.111 5.115	ECA36	IRL1			
5680 - 5730 kHz	AERONAUTICAL MOBILE (OR)	AERONAUTICAL MOBILE (OR)	Aeronautical Mobile	National Legislation: S.I. 855 of 2004 S.I. 369 of 2009		ITU Radio Regulations Appendix 26 (Allotment Plan)
	5.111 5.115	ECA36	IRL1			
5730 - 5900 kHz	FIXED	FIXED				
	LAND MOBILE	LAND MOBILE				
		ECA36	IRL1			

Frequency Band (kHz)	ITU	European	National Usage	Legislation	CEPT	Notes
5900 - 5950 kHz	BROADCASTING 5.134	BROADCASTING				ITU Radio Regulations Article 12 (Planning Procedure).
	5.136		IRL1			
5950 - 6200 kHz	BROADCASTING	BROADCASTING				ITU Radio Regulations Article 12 (Planning Procedure)
			IRL1			
6200 - 6525 kHz	MARITIME MOBILE 5.109 5.110 5.130	MARITIME MOBILE	Maritime Mobile	National legislation: S.I. 414 of 2006		ITU Radio Regulations Appendix 17 (Channelling Plan) and Appendix 25 (Allotment Plan).
	5.132 5.137	ECA36	IRL1			
6525 - 6685 kHz	AERONAUTICAL MOBILE (R)	AERONAUTICAL MOBILE (R)	Aeronautical Mobile	National Legislation: S.I. 855 of 2004 S.I. 369 of 2009		ITU Radio Regulations Appendix 27 (Allotment Plan) including HF Links. Annex 10 of the Convention on International Civil Aviation

Frequency Band (kHz)	ITU	European	National Usage	Legislation	CEPT	Notes
6525 - 6685 kHz -continued-		ECA36	IRL1			
6685 - 6765 kHz	AERONAUTICAL MOBILE (OR)	AERONAUTICAL MOBILE (OR)	Aeronautical Mobile	National Legislation: S.I. 855 of 2004 S.I. 369 of 2009		ITU Radio Regulations Appendix 26 (Allotment Plan).
		ECA36	IRL1			
6765 - 7000 kHz	FIXED	FIXED	Fixed			
	MOBILE EXCEPT AERONAUTICAL MOBILE (R)	MOBILE EXCEPT AERONAUTICAL MOBILE (R)				
	5.138	ECA36	IRL1			
7000 - 7100 kHz	AMATEUR	AMATEUR	Amateur (Primary)	National Legislation: S.I. 192 of 2009		See ComReg Document 09/45, as revised
	AMATEUR-SATELLITE	AMATEUR-SATELLITE	Amateur-Satellite (Primary)	National Legislation: S.I. 192 of 2009		See ComReg Document 09/45, as revised
			IRL1			

Frequency Band (kHz)	ITU	European	National Usage	Legislation	CEPT	Notes
7100 - 7200 kHz	AMATEUR	AMATEUR	Amateur (Primary)	National Legislation: S.I. 192 of 2009		See ComReg Document 09/45, as revised
			IRL1			
7200 - 7300 kHz	BROADCASTING	BROADCASTING				ITU Radio Regulations Article 12 (Planning Procedure).
			IRL1			
7300 - 7400 kHz	BROADCASTING 5.134	BROADCASTING				ITU Radio Regulations Article 12 (Planning Procedure).
	5.143 5.143B		IRL1			
7400 - 7450 kHz	BROADCASTING	BROADCASTING				ITU Radio Regulations Article 12 (Planning Procedure).
	5.143B		IRL1			
7450 - 8100 kHz	FIXED	FIXED				

Frequency Band (kHz)	ITU	European	National Usage	Legislation	CEPT	Notes
7450 - 8100 kHz -continued-	MOBILE EXCEPT AERONAUTICAL MOBILE (R)	MOBILE EXCEPT AERONAUTICAL MOBILE (R)				
		ECA36	IRL1			
8100 - 8195 kHz	FIXED	FIXED				
	MARITIME MOBILE	MARITIME MOBILE	Maritime Mobile	National Legislation: S.I. 414 of 2006		ITU Radio Regulations Appendix 17 (Channelling Plan).
		ECA36	IRL1			
8195 - 8815 kHz	MARITIME MOBILE 5.109 5.110 5.132 5.145	MARITIME MOBILE	Maritime Mobile	National Legislation: S.I. 414 of 2006		ITU Radio Regulations Appendix 17 (Channelling Plan) and Appendix 25 (Allotment Plan).
	5.111	ECA36	IRL1			

Frequency Band (kHz)	ITU	European	National Usage	Legislation	CEPT	Notes
8815 - 8965 kHz	AERONAUTICAL MOBILE (R)	AERONAUTICAL MOBILE (R)	Aeronautical Mobile	National Legislation: S.I. 855 of 2004 S.I. 369 of 2009		ITU Radio Regulations Appendix 27 (Allotment Plan) including HF data links. Annex 10 of the Convention on International Civil Aviation.
		ECA36	IRL1			
8965 - 9040 kHz	AERONAUTICAL MOBILE (OR)	AERONAUTICAL MOBILE (OR)	Aeronautical Mobile	National Legislation: S.I. 855 of 2004 S.I. 369 of 2009		ITU Radio Regulations Appendix 26 (Allotment Plan). Annex 10 of the Convention on International Civil Aviation
		ECA36	IRL1			
9040 - 9305 kHz	FIXED	FIXED				
		ECA36	IRL1			
9305 - 9355 kHz	FIXED	FIXED				
	Radiolocation 5.145A	Radiolocation				

Frequency Band (kHz)	ITU	European	National Usage	Legislation	CEPT	Notes
9305 - 9355 kHz -continued-		ECA36	IRL1			
9355 - 9400 kHz	FIXED	FIXED				
		ECA36	IRL1			
9400 - 9500 kHz	BROADCASTING 5.134	BROADCASTING				ITU Radio Regulations Article 12 (Planning Procedure).
	5.146		IRL1			
9500 - 9900 kHz	BROADCASTING	BROADCASTING				ITU Radio Regulations Article 12 (Planning Procedure).
	5.147		IRL1			
9900 - 9995 kHz	FIXED	FIXED				
		ECA36	IRL1			

Frequency Band (kHz)	ITU	European	National Usage	Legislation	CEPT	Notes
9995 - 10003 kHz	STANDARD FREQUENCY AND TIME SIGNAL (10 000 kHz)	STANDARD FREQUENCY AND TIME SIGNAL (10 000 kHz)				
	5.111		IRL1			
10003 - 10005 kHz	STANDARD FREQUENCY AND TIME SIGNAL	STANDARD FREQUENCY AND TIME SIGNAL				
	Space Research	Space Research				
	5.111		IRL1			
10005 - 10100 kHz	AERONAUTICAL MOBILE (R)	AERONAUTICAL MOBILE (R)	Aeronautical mobile	National Legislation: S.I. 855 of 2004 S.I. 369 of 2009		ITU Radio Regulations Appendix 27 (Allotment Plan) including HF data links. Annex 10 of the Convention on International Civil Aviation
	5.111	ECA36	IRL1			
10100 - 10150 kHz	FIXED	FIXED				

Frequency Band (kHz)	ITU	European	National Usage	Legislation	CEPT	Notes
10100 - 10150 kHz -continued-	Amateur	Amateur	Amateur (secondary)	National Legislation: S.I. 192 of 2009		See ComReg document 09/45, as revised
		ECA36	IRL1			
10150 - 11175 kHz	FIXED	FIXED				
	Mobile except Aeronautical Mobile (R)	Mobile except Aeronautical Mobile (R)				
		ECA36	IRL1			
11175 - 11275 kHz	AERONAUTICAL MOBILE (OR)	AERONAUTICAL MOBILE (OR)	Aeronautical Mobile	National Legislation: S.I. 855 of 2004 S.I. 369 of 2009		ITU Radio Regulations Appendix 26 (Allotment Plan). Annex 10 of the Convention on International Civil Aviation. See ComReg document 11/07
		ECA36	IRL1			

Frequency Band (kHz)	ITU	European	National Usage	Legislation	CEPT	Notes
11275 - 11400 kHz	AERONAUTICAL MOBILE (R)	AERONAUTICAL MOBILE (R)	Aeronautical Mobile	National Legislation: S.I. 855 of 2004 S.I. 369 of 2009		ITU Radio Regulations Appendix 27 (Allotment Plan) including HF data links. Annex 10 of the Convention on International Civil Aviation See ComReg document 11/07
		ECA36	IRL1			
11400 - 11600 kHz	FIXED	FIXED				
		ECA36	IRL1			
11600 - 11650 kHz	BROADCASTING 5.134	BROADCASTING				ITU Radio Regulations Article 12 (Planning Procedure).
	5.146		IRL1			
11650 - 12050 kHz	BROADCASTING	BROADCASTING				ITU Radio Regulations Article 12 (Planning Procedure).
	5.147		IRL1			

Frequency Band (kHz)	ITU	European	National Usage	Legislation	CEPT	Notes
12050 - 12100 kHz	BROADCASTING 5.134	BROADCASTING	Shortwave Broadcasting (Reception only)	National Legislation: Broadcasting Act 2009		ITU Radio Regulations Article 12 (Planning Procedure).
	5.146		IRL1			
12100 - 12230 kHz	FIXED	FIXED				
		ECA36	IRL1			
12230 - 13200 kHz	MARITIME MOBILE 5.109 5.110 5.132 5.145	MARITIME MOBILE	Maritime Mobile	National legislation: S.I. 414 of 2006		Appendix 17 (Channelling Plan) and Appendix 25 (Allotment Plan).
		ECA36	IRL1			
13200 - 13260 kHz	AERONAUTICAL MOBILE (OR)	AERONAUTICAL MOBILE (OR)	Aeronautical Mobile	National Legislation: S.I. 855 of 2004 S.I. 369 of 2009		ITU Radio Regulations Appendix 26 (Allotment Plan). Annex 10 of the Convention on International Civil Aviation.
		ECA36	IRL1			

Frequency Band (kHz)	ITU	European	National Usage	Legislation	CEPT	Notes
13260 - 13360 kHz	AERONAUTICAL MOBILE (R)	AERONAUTICAL MOBILE (R)	Aeronautical Mobile	National Legislation: S.I. 855 of 2004		ITU Radio Regulations Appendix 27 (Allotment Plan). Annex 10 of the Convention on International Civil Aviation.
		ECA36	IRL1			
13360 - 13410 kHz	FIXED	FIXED				
	RADIO ASTRONOMY	RADIO ASTRONOMY				
	5.149	ECA36	IRL1			
13410 - 13450 kHz	FIXED	FIXED				
	Mobile except Aeronautical Mobile (R)	Mobile except Aeronautical Mobile (R)				
		ECA36	IRL1			
13450 - 13550 kHz	FIXED	FIXED				

Frequency Band (kHz)	ITU	European	National Usage	Legislation	CEPT	Notes
13450 - 13550 kHz -continued-	Mobile except Aeronautical Mobile (R)	Mobile except Aeronautical Mobile (R)				
	Radiolocation 5.132A	Radiolocation				
	5.149A	ECA36	IRL1			
13550 - 13570 kHz	FIXED	FIXED				
	Mobile except Aeronautical Mobile (R)	Mobile except Aeronautical Mobile (R)				
	5.150	ECA36	IRL1			
13570 - 13600 kHz	BROADCASTING 5.134	BROADCASTING				ITU Radio Regulations Article 12 (Planning Procedure)
	5.151		IRL1			
13600 - 13800 kHz	BROADCASTING	BROADCASTING				ITU Radio Regulations Article 12 (Planning Procedure).

Frequency Band (kHz)	ITU	European	National Usage	Legislation	CEPT	Notes
13600 - 13800 kHz -continued-			IRL1			
13800 - 13870 kHz	BROADCASTING 5.134	BROADCASTING				ITU Radio Regulations Article 12 (Planning Procedure).
	5.151		IRL1			
13870 - 14000 kHz	FIXED	FIXED				
	Mobile except Aeronautical Mobile (R)	Mobile except Aeronautical Mobile (R)				
		ECA36	IRL1			
14000 - 14250 kHz	AMATEUR	AMATEUR	Amateur (Primary)	National Legislation: S.I. 192 of 2009		See ComReg Document 09/45, as revised
	AMATEUR-SATELLITE	AMATEUR-SATELLITE	Amateur-Satellite (Primary)	National Legislation: S.I. 192 of 2009		See ComReg document 09/45, as revised
			IRL1			

Frequency Band (kHz)	ITU	European	National Usage	Legislation	CEPT	Notes
14250 - 14350 kHz	AMATEUR	AMATEUR	Amateur (Primary)	National Legislation: S.I. 192 of 2009		See ComReg document 09/45, as revised
			IRL1			
14350 - 14990 kHz	FIXED	FIXED				
	Mobile except Aeronautical Mobile (R)	Mobile except Aeronautical Mobile (R)				
		ECA36	IRL1			
14990 - 15005 kHz	STANDARD FREQUENCY AND TIME SIGNAL (15 000 kHz)	STANDARD FREQUENCY AND TIME SIGNAL (15 000 kHz)				
	5.111		IRL1			
15005 - 15010 kHz	STANDARD FREQUENCY AND TIME SIGNAL	STANDARD FREQUENCY AND TIME SIGNAL				
	Space Research	Space Research				
			IRL1			

Frequency Band (kHz)	ITU	European	National Usage	Legislation	CEPT	Notes
15010 - 15100 kHz	AERONAUTICAL MOBILE (OR)	AERONAUTICAL MOBILE (OR)	Aeronautical Mobile			ITU Radio Regulations Appendix 26 (Allotment Plan)
		ECA36	IRL1			
15100 - 15600 kHz	BROADCASTING	BROADCASTING				ITU Radio Regulations Article 12 (Planning Procedure).
			IRL1			
15600 - 15800 kHz	BROADCASTING 5.134	BROADCASTING				ITU Radio Regulations Article 12 (Planning Procedure).
	5.146		IRL1			
15800 - 16100 kHz	FIXED	FIXED				
		ECA36	IRL1			
16100 - 16200 kHz	FIXED	FIXED				

Frequency Band (kHz)	ITU	European	National Usage	Legislation	CEPT	Notes
16100 - 16200 kHz -continued-	Radiolocation 5.145A	Radiolocation				
		ECA36	IRL1			
16200 - 16360 kHz	FIXED	FIXED				
		ECA36	IRL1			
16360 - 17410 kHz	MARITIME MOBILE 5.109 5.110 5.132 5.145	MARITIME MOBILE	Maritime Mobile	National legislation: S.I. 414 of 2006		ITU Radio Regulations Appendix 17 (Channelling Plan) and Appendix 25 (Allotment Plan).
		ECA36	IRL1			
17410 - 17480 kHz	FIXED	FIXED				
		ECA36	IRL1			
17480 - 17550 kHz	BROADCASTING 5.134	BROADCASTING				ITU Radio Regulations Article 12 (Planning Procedure)

Frequency Band (kHz)	ITU	European	National Usage	Legislation	CEPT	Notes
17480 - 17550 kHz -continued-	5.146		IRL1			
17550 - 17900 kHz	BROADCASTING	BROADCASTING				ITU Radio Regulations Article 12 (Planning Procedure).
			IRL1			
17900 - 17970 kHz	AERONAUTICAL MOBILE (R)	AERONAUTICAL MOBILE (R)	Aeronautical mobile,	National Legislation: S.I. 855 of 2004 S.I. 369 of 2009		ITU Radio Regulations Appendix 27 (Allotment Plan) including HF data links. Annex 10 of the Convention on International Civil Aviation
		ECA36	IRL1			
17970 - 18030 kHz	AERONAUTICAL MOBILE (OR)	AERONAUTICAL MOBILE (OR)	Aeronautical Mobile	National Legislation: S.I. 855 of 2004 S.I. 369 of 2009		ITU Radio Regulations Appendix 26 (Allotment Plan).
		ECA36	IRL1			
18030 - 18052 kHz	FIXED	FIXED				

Frequency Band (kHz)	ITU	European	National Usage	Legislation	CEPT	Notes
18030 - 18052 kHz -continued-		ECA36	IRL1			
18052 - 18068 kHz	FIXED	FIXED				
	Space Research	Space Research				
		ECA36	IRL1			
18068 - 18168 kHz	AMATEUR	AMATEUR	Amateur (Primary)	National Legislation: S.I. 192 of 2009		See ComReg Document 09/45, as revised
	AMATEUR-SATELLITE	AMATEUR-SATELLITE	Amateur-Satellite (Primary)			
			IRL1			
18168 - 18780 kHz	FIXED	FIXED				
	Mobile except Aeronautical Mobile	Mobile except Aeronautical Mobile	Maritime Mobile	National Legislation: S.I. 414 of 2006		
		ECA36	IRL1			

Frequency Band (kHz)	ITU	European	National Usage	Legislation	CEPT	Notes
18780 - 18900 kHz	MARITIME MOBILE	MARITIME MOBILE	Maritime Mobile	National legislation: S.I. 414 of 2006		ITU Radio Regulations Appendix 17 (Channelling Plan).
		ECA36	IRL1			
18900 - 19020 kHz	BROADCASTING 5.134	BROADCASTING				ITU Radio Regulations Article 12 (Planning Procedure).
	5.146		IRL1			
19020 - 19680 kHz	FIXED	FIXED				
		ECA36	IRL1			
19680 - 19800 kHz	MARITIME MOBILE 5.132	MARITIME MOBILE	Maritime Mobile	National legislation: S.I. 414 of 2006		ITU Radio Regulations Appendix 17 (Channelling Plan) and Appendix 25 (Allotment Plan).
		ECA36	IRL1			
19800 - 19990 kHz	FIXED	FIXED				

Frequency Band (kHz)	ITU	European	National Usage	Legislation	CEPT	Notes
19800 - 19990 kHz -continued-		ECA36	IRL1			
19990 - 19995 kHz	STANDARD FREQUENCY AND TIME SIGNAL	STANDARD FREQUENCY AND TIME SIGNAL				
	Space Research	Space Research	Search and Rescue applications (reception)			19993 kHz ( $\hat{A}\pm 3$ kHz) concerning manned space vehicles.
	5.111		IRL1			
19995 - 20010 kHz	STANDARD FREQUENCY AND TIME SIGNAL (20 000 kHz)	STANDARD FREQUENCY AND TIME SIGNAL (20 000 kHz)				
	5.111		IRL1			
20010 - 21000 kHz	FIXED	FIXED				
	Mobile	Mobile				
		ECA36	IRL1			

Frequency Band (kHz)	ITU	European	National Usage	Legislation	CEPT	Notes
21000 - 21450 kHz	AMATEUR	AMATEUR	Amateur (Primary)	National Legislation: S.I. 192 of 2009		See ComReg document 09/45, as revised
	AMATEUR-SATELLITE	AMATEUR-SATELLITE	Amateur-Satellite (Primary)	National Legislation: S.I. 192 of 2009		See ComReg document 09/45, as revised
			IRL1			
21450 - 21850 kHz	BROADCASTING	BROADCASTING				ITU Radio Regulations Article 12 (Planning Procedure)
			IRL1			
21850 - 21870 kHz	FIXED	FIXED				
		ECA36	IRL1			
21870 - 21924 kHz	FIXED 5.155B	FIXED				
		ECA36	IRL1			

Frequency Band (kHz)	ITU	European	National Usage	Legislation	CEPT	Notes
21924 - 22000 kHz	AERONAUTICAL MOBILE (R)	AERONAUTICAL MOBILE (R)	Aeronautical Mobile	National Legislation: S.I. 855 of 2004 S.I. 369 of 2009		ITU Radio Regulations Appendix 27 Allotment Plan, including HF data links. Annex 10 of the Convention on International Civil Aviation
		ECA36	IRL1			
22000 - 22855 kHz	MARITIME MOBILE 5.132	MARITIME MOBILE	Maritime Mobile	National legislation: S.I. 414 of 2006		ITU Radio Regulations Appendix 17 (Channelling Plan) and Appendix 25 (Allotment Plan).
		ECA36	IRL1			
22855 - 23000 kHz	FIXED	FIXED				
		ECA36	IRL1			
23000 - 23200 kHz	FIXED	FIXED				
	Mobile except Aeronautical Mobile (R)	Mobile except Aeronautical Mobile (R)				

Frequency Band (kHz)	ITU	European	National Usage	Legislation	CEPT	Notes
23000 - 23200 kHz -continued-		ECA36	IRL1			
23200 - 23350 kHz	FIXED 5.156A	FIXED				
	AERONAUTICAL MOBILE (OR)	AERONAUTICAL MOBILE (OR)				
		ECA36	IRL1			
23350 - 24000 kHz	FIXED	FIXED				
	MOBILE EXCEPT AERONAUTICAL MOBILE 5.157	MOBILE EXCEPT AERONAUTICAL MOBILE				
		ECA36	IRL1			
24000 - 24450 kHz	FIXED	FIXED				
	LAND MOBILE	LAND MOBILE				
		ECA36	IRL1			

Frequency Band (kHz)	ITU	European	National Usage	Legislation	CEPT	Notes
24450 - 24600 kHz	FIXED	FIXED				
	LAND MOBILE	LAND MOBILE				
	Radiolocation 5.132A	Radiolocation				
		ECA36	IRL1			
24600 - 24890 kHz	FIXED	FIXED				
	LAND MOBILE	LAND MOBILE				
		ECA36	IRL1			
24890 - 24990 kHz	AMATEUR	AMATEUR	Amateur (Primary)	National Legislation: S.I. 192 of 2009		See ComReg document 09/45, as revised
	AMATEUR-SATELLITE	AMATEUR-SATELLITE	Amateur-Satellite (Primary)	National Legislation: S.I. 192 of 2009		See ComReg document 09/45, as revised
			IRL1			

Frequency Band (kHz)	ITU	European	National Usage	Legislation	CEPT	Notes
24990 - 25005 kHz	STANDARD FREQUENCY AND TIME SIGNAL (25 000 kHz)	STANDARD FREQUENCY AND TIME SIGNAL (25 000 kHz)				
			IRL1			
25005 - 25010 kHz	STANDARD FREQUENCY AND TIME SIGNAL	STANDARD FREQUENCY AND TIME SIGNAL				
	Space Research	Space Research				
			IRL1			
25010 - 25070 kHz	FIXED	FIXED				
	MOBILE EXCEPT AERONAUTICAL MOBILE	MOBILE EXCEPT AERONAUTICAL MOBILE				
		ECA36	IRL1			
25070 - 25210 kHz	MARITIME MOBILE	MARITIME MOBILE	Maritime Mobile	National legislation: S.I. 414 of 2006		ITU Radio Regulations Appendix 17 (Channelling Plan).
		ECA36	IRL1			

Frequency Band (kHz)	ITU	European	National Usage	Legislation	CEPT	Notes
25210 - 25550 kHz	FIXED	FIXED				
	MOBILE EXCEPT AERONAUTICAL MOBILE	MOBILE EXCEPT AERONAUTICAL MOBILE				
		ECA36	IRL1			
25550 - 25670 kHz	RADIO ASTRONOMY	RADIO ASTRONOMY				
	5.149					
			IRL1			
25670 - 26100 kHz	BROADCASTING	BROADCASTING				ITU Radio Regulations Article 12 (Planning Procedure)
			IRL1			
26100 - 26175 kHz	MARITIME MOBILE 5.132	MARITIME MOBILE	Maritime Mobile	National legislation: S.I. 414 of 2006		ITU Radio Regulations Appendix 17 (Channelling Plan) and Appendix 25 (Allotment Plan).
		ECA36	IRL1			

Frequency Band (kHz)	ITU	European	National Usage	Legislation	CEPT	Notes
26175 - 26200 kHz	FIXED	FIXED				
	MOBILE EXCEPT AERONAUTICAL MOBILE	MOBILE EXCEPT AERONAUTICAL MOBILE	Paging (private, on-site)			See ComReg document 02/12R
		ECA36	IRL1			
26200 - 26350 kHz	FIXED	FIXED				
	MOBILE EXCEPT AERONAUTICAL MOBILE	MOBILE EXCEPT AERONAUTICAL MOBILE				
	Radiolocation 5.132A	Radiolocation				
		ECA36	IRL1			
26350 - 27500 kHz	FIXED	FIXED				
	MOBILE EXCEPT AERONAUTICAL MOBILE	MOBILE EXCEPT AERONAUTICAL MOBILE				See ComReg document 02/12R
			Citizen Band radio (26.960 -27.410 MHz.)	National Legislation: S.I. 436 of 1998	ECC/DEC/(11)03	

# 04

## Spectrum from 27.5 MHz to 10000 Hz

## GENERAL INFORMATION for 27.5 MHz to 10 000 MHz

All radio and telecommunications terminal equipment must comply with the Radio Equipment Directive.

Please see <https://www.comreg.ie/industry/radio-spectrum/spectrum-compliance/equipment-compliance/> for further details.

All apparatus for Wireless Telegraphy requires a licence unless it has been specifically exempted from licensing under Irish Legislation by means of an Exemption Order. Please see <https://www.comreg.ie/industry/radio-spectrum/licence-exemptions/list-of-licence-exemptions/> for further details.

The following references apply to the spectrum from 27.5 MHz to 10 000 MHz:

1. Commission Decision 676/2002/EC of the European Parliament and of the Council of 7 March 2002 on a regulatory framework for radio spectrum policy in the European Community (Radio Spectrum Decision).  
See: <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32002D0676&from=EN>
2. Commission Decision 2019/785/EU on the harmonisation of radio spectrum for equipment using ultra-wideband technology in the Union and repealing Decision 2007/131/EC.  
See: <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32014L0053&from=EN>
3. Where short-range devices ("SRD's") are utilised within a given band, this is denoted by the generic footnote "IRL1". Where applicable, this footnote will be situated under the "National Usage" column and in the same row as both the ITU and ECA Footnotes. In all instances where the footnote "IRL1" is listed, it is recommended that readers refer to ComReg document 02/71R, as revised, for further information relating to specific SRD usage.  
See: <https://www.comreg.ie/publication/permitted-short-range-devices-in-ireland-3>
4. Commission Decision 2006/771/EC, as amended by Commission Implementing Decision (EU) 2022/180, sets out harmonised technical conditions for a wide variety of the SRD applications falling under the scope of the footnote "IRL1". Readers are referred to ComReg document 02/71R for further details on specific bands to which this Commission Decision applies.  
For Decision 2006/771/EC, see: <https://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2006:312:0066:0070:EN:PDF>  
For Decision (EU) 2022/180, see: <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32022D0180&from=EN>

5. EC Decisions other than Commission Decision 2006/771/EC (as amended by Commission Implementing Decision (EU) 2019/1345), which set out harmonised technical conditions for some other SRD applications falling under the scope of the footnote "IRL1", are also listed within the table. Such Decisions, where applicable, are situated in cells directly to the right of the "IRL1" footnote, and under the "Legislation" column. Readers are further referred to ComReg document 02/71R for more detailed information on these Decisions also.
6. S.I. No. 248 of 2017 - European Union (Radio Equipment) Regulations 2017.  
See: <http://www.irishstatutebook.ie/eli/2017/si/248/made/en/print>
7. Directive 2014/53/EU of the European Parliament and of the Council of 16 April 2014 on the harmonisation of the laws of the Member States relating to the making available on the market of radio equipment and repealing Directive 1999/5/EC  
See: <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32014L0053&from=EN>
8. Wireless Telegraphy Act, 1926 (Number 45 of 1926).  
See: <http://www.irishstatutebook.ie/eli/1926/act/45/enacted/en/html>
9. S.I. 193 of 2009, "Wireless Telegraphy (Aircraft Station Licence) Regulations 2009", applies to licences to keep, have possession of, install, maintain, work and use apparatus for wireless telegraphy forming part of an Aircraft Station, and having the characteristics set out therein.  
See: [http://www.comreg.ie/\\_fileupload/publications/SI193of2009.pdf](http://www.comreg.ie/_fileupload/publications/SI193of2009.pdf)

Frequency Band (MHz)	ITU	European	National Usage	Legislation	CEPT	Notes
27.5000 - 28 MHz	METEOROLOGICAL AIDS	METEOROLOGICAL AIDS				
	FIXED	FIXED				
	MOBILE	MOBILE	Paging (private, on-site)			See ComReg document 02/12R
			Wireless Public Address Systems (27.6-27.99 MHz)	National Legislation: S.I. 304 of 2006		See ComReg documents 06/26 and 06/26a
		ECA36	IRL1			
28 - 29.7000 MHz	AMATEUR	AMATEUR	Amateur (Primary)	National Legislation: S.I. 192 of 2009		See ComReg Document 09/45, as revised
	AMATEUR-SATELLITE	AMATEUR-SATELLITE	Amateur-Satellite (Primary)	National Legislation: S.I. 192 of 2009		See ComReg Document 09/45, as revised
			IRL1			
29.7000 - 30.0050 MHz	MOBILE	MOBILE				
	FIXED					

Frequency Band (MHz)	ITU	European	National Usage	Legislation	CEPT	Notes	
29.7000 - 30.0050 MHz -continued-			Amateur (Secondary - from 30 MHz)	National Legislation: S.I. 192 of 2009		See ComReg Document 09/45, as revised	
		ECA36	IRL1			30 - 130 MHz: NMR	
30.0050 - 30.0100 MHz	MOBILE	MOBILE	Mobile				
	FIXED						
	SPACE OPERATION (satellite identification)						
	SPACE RESEARCH						
				Amateur (Secondary)	National Legislation: S.I. 192 of 2009		See ComReg Document 09/45, as revised
		ECA36	IRL1				
30.0100 - 37.5000 MHz	FIXED						
	MOBILE	MOBILE			Recommendation T/R 25-08		

Frequency Band (MHz)	ITU	European	National Usage	Legislation	CEPT	Notes
30.0100 - 37.5000 MHz -continued-			Amateur (Secondary)	National Legislation: S.I. 192 of 2009		See ComReg Document 09/45, as revised
			Paging (Hospitals)			See ComReg document 02/12R
		ECA36	IRL1			
37.5000 - 38.2500 MHz	FIXED					
	MOBILE	MOBILE			Recommendation T/R 25-08	
	Radio Astronomy	Radio Astronomy				
			Amateur (Secondary)	National Legislation: S.I. 192 of 2009		See ComReg Document 09/45, as revised
	5.149	ECA36	IRL1			
38.2500 - 39 MHz	FIXED					
	MOBILE	MOBILE			Recommendation T/R 25-08	

Frequency Band (MHz)	ITU	European	National Usage	Legislation	CEPT	Notes
38.2500 - 39 MHz -continued-			Amateur (Secondary)	National Legislation: S.I. 192 of 2009		See ComReg Document 09/45, as revised
		ECA36	IRL1			
39 - 39.5000 MHz	FIXED					
	MOBILE	MOBILE				
	Radiolocation 5.132A	Radiolocation				
			Amateur (Secondary)	National Legislation: S.I. 192 of 2009		See ComReg Document 09/45, as revised
		ECA36	IRL1			
39.5000 - 39.9860 MHz	FIXED					
	MOBILE	MOBILE				
			Amateur (Secondary)	National Legislation: S.I. 192 of 2009		See ComReg Document 09/45, as revised

Frequency Band (MHz)	ITU	European	National Usage	Legislation	CEPT	Notes
39.5000 - 39.9860 MHz -continued-		ECA36	IRL1			
39.9860 - 40.0200 MHz	FIXED					
	MOBILE	MOBILE				
	Space Research	Space Research				
			Amateur (Secondary)	National Legislation: S.I. 192 of 2009		See ComReg Document 09/45, as revised
40.0200 - 40.6600 MHz		ECA36	IRL1			
	FIXED					
	MOBILE	MOBILE			Recommendation T/R 25-08	
			Amateur (Secondary)	National Legislation: S.I. 192 of 2009		See ComReg Document 09/45, as revised
		ECA36	IRL1			

Frequency Band (MHz)	ITU	European	National Usage	Legislation	CEPT	Notes
40.6600 - 40.7000 MHz	FIXED					
	MOBILE	MOBILE				
			Amateur (Secondary)	National Legislation: S.I. 192 of 2009		See ComReg Document 09/45, as revised
	5.150	ECA36	IRL1			
40.7000 - 40.9800 MHz	FIXED					
	MOBILE	MOBILE				
			Amateur (Secondary)	National Legislation: S.I. 192 of 2009		See ComReg Document 09/45, as revised
		ECA36	IRL1			
40.9800 - 41.0150 MHz	FIXED					
	MOBILE	MOBILE			Recommendation T/R 25-08	
	Space Research	Space Research				

Frequency Band (MHz)	ITU	European	National Usage	Legislation	CEPT	Notes
40.9800 - 41.0150 MHz -continued-			Amateur (Secondary)	National Legislation: S.I. 192 of 2009		See ComReg Document 09/45, as revised
		ECA36	IRL1			
41.0150 - 42 MHz	FIXED					
	MOBILE	MOBILE			Recommendation T/R 25-08	
			Amateur (Secondary)	National Legislation: S.I. 192 of 2009		See ComReg Document 09/45, as revised
		ECA36	IRL1			
42 - 42.5000 MHz	FIXED	FIXED				
	MOBILE	MOBILE				
	Radiolocation 5.132A	Radiolocation				
			Amateur (Secondary)	National Legislation: S.I. 192 of 2009		See ComReg document 09/45, as revised

Frequency Band (MHz)	ITU	European	National Usage	Legislation	CEPT	Notes
42 - 42.5000 MHz -continued-	5.161B	ECA36	IRL1			
42.5000 - 44 MHz	FIXED					
	MOBILE	MOBILE				
			Amateur (Secondary)	National Legislation: S.I. 192 of 2009		See ComReg document 09/45, as revised
		ECA36	IRL1			
44 - 47 MHz	FIXED					
	MOBILE	MOBILE			Recommendation T/R 25- 08	
			Radiolocation (secondary) (46-68 MHz)			Wind profiler radar - ITU Resolution 217
			Amateur (Secondary)	National Legislation: S.I. 192 of 2009		See ComReg document 09/45, as revised
	5.162A	ECA36	IRL1			

Frequency Band (MHz)	ITU	European	National Usage	Legislation	CEPT	Notes
47 - 50 MHz	BROADCASTING					ST61 Plan: Television broadcasting ceased.
		LAND MOBILE			Recommendation T/R 25-08	
			Radiolocation (secondary) (46-68 MHz)	National Legislation S.I. 369 of 2009		Wind profiler radar - ITU Resolution 217. See ComReg document 11/07
			Amateur (secondary - up to 49 MHz)	National Legislation: S.I. 192 of 2009		See ComReg document 09/45, as revised
	5.162A 5.164	ECA36	IRL1 (49.82 - 49.98 MHz, National SRD solution only)			
50 - 52 MHz	BROADCASTING					ST61 Plan: Television broadcasting ceased.
		LAND MOBILE			Recommendation T/R 25-08	

Frequency Band (MHz)	ITU	European	National Usage	Legislation	CEPT	Notes
50 - 52 MHz -continued-	Amateur 5.166A 5.166B 5.166C 5.169A	Amateur	Amateur (secondary)	National Legislation: S.I. 192 of 2009		See ComReg document 09/45, as revised
			Radiolocation (secondary) (46-68 MHz)	National Legislation: S.I. 369 of 2009		See ComReg document 11/07
	5.162A 5.164	ECA36				
52 - 68 MHz	BROADCASTING					ST61 Plan: Television broadcasting ceased.
		LAND MOBILE			Recommendation T/R 25- 08	
			Radiolocation (secondary) (46-68 MHz)	National Legislation: S.I. 369 of 2009		See ComReg document 11/07
			Amateur (Secondary: 54 - 68 MHz)	National Legislation: S.I. 192 of 2009		See ComReg document 09/45, as revised

Frequency Band (MHz)	ITU	European	National Usage	Legislation	CEPT	Notes
52 - 68 MHz -continued-	5.162A 5.164 5.169B					
68 - 70.4500 MHz	FIXED					
	MOBILE EXCEPT AERONAUTICAL MOBILE	MOBILE	VHF Low Band: Land Mobile PMR, Community Repeaters and Third Party Business Radio	National Legislation: S.I. 435 of 2002 S.I. 83 of 1988 S.I. 646 of 2005 Wireless Telegraphy (Business Radio Licence) Regulations 1949 as amended.	Recommendation T/R 25- 08	ComReg Documents: 08/08R (as revised) 00/07R (as revised)
		Amateur ( (70.125 - 70.45 MHz))	Amateur (entire sub- band) (Secondary)	National Legislation: S.I. 192 of 2009		See ComReg document 09/45, as revised
	5.149	ECA9 ECA36				
70.4500 - 74.8000 MHz	FIXED					
	MOBILE EXCEPT AERONAUTICAL MOBILE	MOBILE EXCEPT AERONAUTICAL MOBILE				

Frequency Band (MHz)	ITU	European	National Usage	Legislation	CEPT	Notes
70.4500 - 74.8000 MHz -continued-		Amateur	Amateur (Secondary: 70.45 - 70.5 MHz)	National Legislation: S.I. 192 of 2009		See ComReg document 09/45, as revised
		Radio Astronomy				
	5.149	ECA9 ECA36				
74.8000 - 75.2000 MHz	AERONAUTICAL RADIONAVIGATION	AERONAUTICAL RADIONAVIGATION	Aeronautical Radionavigation	S.I. 369 of 2009		ILS/Marker Beacons Annex 10 to the Convention on International Civil Aviation.
	5.180	ECA36				
75.2000 - 87.5000 MHz	FIXED					
	Mobile except Aeronautical Mobile	MOBILE	VHF Low Band: Land Mobile PMR, Community Repeaters and Third Party Business Radio	National Legislation: S.I. 435 of 2002 S.I. 83 of 1988 Wireless Telegraphy (Business Radio Licence) Regulations 1949 as amended.	RECOMMENDATION T/R 25-08	ComReg Documents: 02/02R and 08/08R (as revised) 00/07Ra and 00/07R (as revised) 02/03R and 08/08.
		ECA36				

Frequency Band (MHz)	ITU	European	National Usage	Legislation	CEPT	Notes
87.5000 - 100 MHz	BROADCASTING	BROADCASTING	Broadcasting (FM Sound)	National Legislation: Broadcasting Act 2009	ERC/REC 54-01	GE84 Agreement
			IRL1			
100 - 108 MHz	BROADCASTING	BROADCASTING	Broadcasting (FM Sound)	National Legislation: Broadcasting Act 2009	ERC/REC 54-01	GE84 Agreement
			IRL1			
108 - 117.9750 MHz	AERONAUTICAL RADIONAVIGATION 5.197A	AERONAUTICAL RADIONAVIGATION 5.197A	Aeronautical Radionavigation	National Legislation: S.I. 369 of 2009		Annex 10 to the Convention on International Civil Aviation See ComReg document 11/07.
		AERONAUTICAL MOBILE (R)				
		5.197A				
117.9750 - 121.4500 MHz	AERONAUTICAL MOBILE (R)	AERONAUTICAL MOBILE-SATELLITE (R)	Aeronautical Mobile (Air- ground-air communications (ATC) (118-137 MHz))	National Legislation: S.I. 369 of 2009		Annex 10 to the Convention on International Civil Aviation. See ComReg document 11/07

Frequency Band (MHz)	ITU	European	National Usage	Legislation	CEPT	Notes
117.9750 - 121.4500 MHz -continued-			Aeronautical Radionavigation (VHF Omnidirectional Radio Range (VOR) navigation (112-118 MHz))	National Legislation: S.I. 369 of 2009		Annex 10 to the Convention on International Civil Aviation See ComReg document 11/07
	5.111 5.200	ECA5				
121.4500 - 121.5500 MHz	AERONAUTICAL MOBILE	AERONAUTICAL MOBILE	Aeronautical Mobile (Air- ground-air communications (ATC) (118-137 MHz))	National Legislation: S.I. 369 of 2009		Aeronautical emergency frequency (121.5 MHz) Auxiliary frequency (121.5-123.1 MHz) Annex 10 to the Convention on International Civil Aviation See ComReg document 11/07
			Maritime mobile: EPIRBs (121.5 and 243 MHz)	National Legislation: S.I. 414 of 2006		ITU Radio Regulations Article 32, Appendices 13 and 15 and ITU-R M.690- 1
	5.111 5.200					

Frequency Band (MHz)	ITU	European	National Usage	Legislation	CEPT	Notes
121.5500 - 136 MHz	AERONAUTICAL MOBILE	AERONAUTICAL MOBILE	Aeronautical Mobile (Air-ground-air communications (ATC) (118-137 MHz))	National Legislation: S.I. 369 of 2009		Annex 10 to the Convention on International Civil Aviation. See ComReg document 11/07 Aeronautical emergency frequency (121.5 MHz) Auxiliary frequency (121.5-123.1 MHz)
	5.200	ECA5				
136 - 137 MHz	AERONAUTICAL MOBILE	AERONAUTICAL MOBILE	Aeronautical Mobile (Aeronautical radionavigation: Air-ground-air communications (ATC) (118-137 MHz))	National Legislation: S.I. 369 of 2009		Annex 10 to the Convention on International Civil Aviation. See ComReg document 11/07
		ECA5				
137 - 137.0250 MHz	METEOROLOGICAL-SATELLITE (space to Earth)	METEOROLOGICAL-SATELLITE (space to Earth)				
	MOBILE-SATELLITE (space to Earth) 5.208A 5.208B 5.209	MOBILE-SATELLITE (space to Earth)				

Frequency Band (MHz)	ITU	European	National Usage	Legislation	CEPT	Notes
137 - 137.0250 MHz -continued-	SPACE RESEARCH (space to Earth)	SPACE RESEARCH (space to Earth)				
	SPACE OPERATION (space to Earth) 5.203C	SPACE OPERATION (space to Earth)				
	Fixed					
	Mobile except Aeronautical Mobile (R)	MOBILE				
	5.206 5.208	ECA6 ECA36				
137.0250 - 137.1750 MHz	METEOROLOGICAL- SATELLITE (space to Earth)	METEOROLOGICAL- SATELLITE (space to Earth)				
	SPACE OPERATION (space to Earth) 5.203C	SPACE OPERATION (space to Earth)				
	SPACE RESEARCH (space to Earth)	SPACE RESEARCH (space to Earth)				

Frequency Band (MHz)	ITU	European	National Usage	Legislation	CEPT	Notes
137.0250 - 137.1750 MHz -continued-	Mobile-Satellite (space to earth) 5.208A 5.208B 5.209	Mobile-Satellite (space to Earth)				
	Fixed					
	Mobile except Aeronautical Mobile (R)	MOBILE				
	5.208 5.206	ECA6 ECA36				
137.1750 - 137.8250 MHz	METEOROLOGICAL-SATELLITE (space to Earth)	METEOROLOGICAL-SATELLITE (space to Earth)				
	MOBILE-SATELLITE (space to Earth) 5.208A 5.208B 5.209	MOBILE-SATELLITE (space to Earth)				

Frequency Band (MHz)	ITU	European	National Usage	Legislation	CEPT	Notes
137.1750 - 137.8250 MHz -continued-	SPACE OPERATION (space to Earth) 5.203C 5.209A	SPACE OPERATION (space to Earth)				
	SPACE RESEARCH (space to Earth)	SPACE RESEARCH (space to Earth)				
	Fixed					
	Mobile except Aeronautical Mobile (R)	MOBILE				
	5.208 5.206	ECA6 ECA36				
137.8250 - 138 MHz	SPACE OPERATION (space to Earth) 5.203C	SPACE OPERATION (space to Earth)				
	METEOROLOGICAL- SATELLITE (space to Earth)	METEOROLOGICAL- SATELLITE (space to Earth)				

Frequency Band (MHz)	ITU	European	National Usage	Legislation	CEPT	Notes
137.8250 - 138 MHz -continued-	SPACE RESEARCH (space to Earth)	SPACE RESEARCH (space to Earth)				
	Mobile-Satellite (space to Earth) 5.208A 5.208B 5.209	Mobile-Satellite (space to Earth)				
	Fixed					
	Mobile except Aeronautical Mobile (R)	MOBILE				
	5.208 5.206	ECA6 ECA36				
138 - 143.6000 MHz	AERONAUTICAL MOBILE (OR)	AERONAUTICAL MOBILE (OR)				
		LAND MOBILE	VHF Mid band: Land Mobile PMR, Paging	National Legislation: Wireless Telegraphy (Business Radio Licence) Regulations 1949 as amended.		ComReg documents: 00/07aR (as revised) 02/12R (as revised)

Frequency Band (MHz)	ITU	European	National Usage	Legislation	CEPT	Notes
138 - 143.6000 MHz -continued-		Space Research (space to Earth)				
	5.211 5.210	ECA36 ECA5	IRL1			
143.6000 - 143.6500 MHz	AERONAUTICAL MOBILE (OR)	AERONAUTICAL MOBILE (OR)				
	SPACE RESEARCH (space to Earth)	SPACE RESEARCH (space to Earth)				
		LAND MOBILE	VHF Mid band: Land Mobile PMR, Paging	National Legislation: Wireless Telegraphy (Business Radio Licence) Regulations 1949 as amended.		ComReg documents: 00/07aR (as revised) 02/12R (as revised)
	5.211	ECA36 ECA5				
143.6500 - 144 MHz	AERONAUTICAL MOBILE (OR)	AERONAUTICAL MOBILE (OR)				

Frequency Band (MHz)	ITU	European	National Usage	Legislation	CEPT	Notes
143.6500 - 144 MHz -continued-		LAND MOBILE	VHF Mid band: Land Mobile PMR, Paging	National Legislation: Wireless Telegraphy (Business Radio Licence) Regulations 1949 as amended.		ComReg documents: 00/07aR (as revised) 02/12R (as revised)
	5.211 5.210	ECA36 ECA5				
144 - 146 MHz	AMATEUR	AMATEUR	Amateur (Primary)	National Legislation: S.I. 192 of 2009		See ComReg document 09/45, as revised
	AMATEUR-SATELLITE	AMATEUR-SATELLITE	Amateur-Satellite (Primary)	National Legislation: S.I. 192 of 2009		See ComReg document 09/45, as revised
146 - 148 MHz	FIXED					
	Mobile except Aeronautical Mobile (R)	MOBILE	VHF Mid band: Land Mobile PMR, Paging	National Legislation: Wireless Telegraphy (Business Radio Licence) Regulations 1949 as amended.	Recommendation T/R 25-08 ECC/DEC/(19)02	ComReg documents: 00/07aR (as revised) 02/12R (as revised)
		ECA7				
148 - 149.9000 MHz	FIXED					

Frequency Band (MHz)	ITU	European	National Usage	Legislation	CEPT	Notes
148 - 149.9000 MHz -continued-	MOBILE EXCEPT AERONAUTICAL MOBILE (R)	MOBILE	VHF Mid band: Land Mobile PMR, Paging	National Legislation: Wireless Telegraphy (Business Radio Licence) Regulations 1949 as amended.	Recommendation T/R 25-08 ECC/DEC/(19)02	ComReg documents: 00/07aR (as revised) 02/12R (as revised)
	MOBILE-SATELLITE (Earth to space) 5.209	MOBILE-SATELLITE (Earth to space)	Satellite personal communication service	National Legislation: S.I. 214 of 1998	ERC/DEC/(99)06	
	5.218 5.218A 5.219 5.221	ECA6 ECA7				
149.9000 - 150.0500 MHz	MOBILE-SATELLITE (Earth to space) 5.209 5.220	MOBILE-SATELLITE (Earth to space)	Satellite personal communication service	National Legislation: S.I. 214 of 1998	ERC/DEC/(99)06	
		MOBILE	VHF Mid band: Land Mobile PMR, Paging	National Legislation: Wireless Telegraphy (Business Radio Licence) Regulations 1949 as amended.	Recommendation T/R 25-08	
150.0500 - 153 MHz	FIXED					

Frequency Band (MHz)	ITU	European	National Usage	Legislation	CEPT	Notes
150.0500 - 153 MHz -continued-	MOBILE EXCEPT AERONAUTICAL MOBILE	MOBILE EXCEPT AERONAUTICAL MOBILE	VHF Mid band: Land Mobile PMR, Paging	National Legislation: Wireless Telegraphy (Business Radio Licence) Regulations 1949 as amended.	Recommendation T/R 25-08 ECC/DEC/(19)02	ComReg documents: 00/07aR (as revised) 02/12R (as revised)
	RADIO ASTRONOMY	RADIO ASTRONOMY				
	5.149	ECA7				
153 - 154 MHz	FIXED					
	MOBILE EXCEPT AERONAUTICAL MOBILE (R)	MOBILE EXCEPT AERONAUTICAL MOBILE	VHF mid band: Land mobile PMR, paging and alarm systems (national, wide area, local and on-site)	National Legislation: Wireless Telegraphy (Business Radio Licence) Regulations 1949 as amended.	Recommendation T/R 25-08	ComReg documents: 00/07aR (as revised) 02/12R (as revised)
	Meteorological Aids					
		ECA7				
154 - 156.4875 MHz	FIXED					

Frequency Band (MHz)	ITU	European	National Usage	Legislation	CEPT	Notes
154 - 156.4875 MHz -continued-	MOBILE EXCEPT AERONAUTICAL MOBILE (R)	MOBILE EXCEPT AERONAUTICAL MOBILE (R)	VHF Mid band: Land Mobile PMR, Paging	National Legislation: Wireless Telegraphy (Business Radio Licence) Regulations 1949 as amended.	Recommendation T/R 25-08 ECC/DEC/(19)02	ComReg documents: 00/07aR (as revised) 02/12R (as revised)
	5.226	ECA7 ECA8				
156.4875 - 156.5125 MHz	MARITIME MOBILE (distress and calling via DSC)	MARITIME MOBILE (distress and calling via DSC)				
			VHF Mid band: Land Mobile PMR, Paging	National Legislation: Wireless Telegraphy (Business Radio Licence) Regulations 1949 as amended.	Recommendation T/R 25-08 ECC/DEC/(19)02	ComReg documents: 00/07aR (as revised) 02/12R (as revised)
	5.226 5.227	ECA7 ECA8				
156.5125 - 156.5375 MHz	MARITIME MOBILE (distress and calling via DSC)	MARITIME MOBILE (distress and calling via DSC)				

Frequency Band (MHz)	ITU	European	National Usage	Legislation	CEPT	Notes
156.5125 - 156.5375 MHz -continued-			VHF Mid band: Land Mobile PMR, Paging	National Legislation: Wireless Telegraphy (Business Radio Licence) Regulations 1949 as amended.	Recommendation T/R 25- 08 ECC/DEC/(19)02	ComReg documents: 00/07aR (as revised) 02/12R (as revised)
	5.111 5.226					
156.5375 - 156.5625 MHz	MARITIME MOBILE (distress and calling via DSC)	MARITIME MOBILE (distress and calling via DSC)				
		MOBILE EXCEPT AERONAUTICAL MOBILE (R)	VHF Mid band: Land Mobile PMR, Paging	National Legislation: Wireless Telegraphy (Business Radio Licence) Regulations 1949 as amended.	Recommendation T/R 25- 08 ECC/DEC/(19)02	ComReg documents: 00/07aR (as revised) 02/12R (as revised)
	5.226 5.527	ECA7 ECA8				
156.5625 - 156.7625 MHz	FIXED					

Frequency Band (MHz)	ITU	European	National Usage	Legislation	CEPT	Notes
156.5625 - 156.7625 MHz -continued-	MOBILE EXCEPT AERONAUTICAL MOBILE (R)	MOBILE EXCEPT AERONAUTICAL MOBILE (R)	VHF Mid band: Land Mobile PMR, Paging	National Legislation: Wireless Telegraphy (Business Radio Licence) Regulations 1949 as amended.	Recommendation T/R 25- 08 ECC/DEC/(19)02	ComReg documents: 00/07aR (as revised) 02/12R (as revised)
	5.226	ECA7 ECA8				ITU Radio Regulations Appendix 18
156.7625 - 156.7875 MHz	MARITIME MOBILE	MARITIME MOBILE (distress and calling)	Maritime Mobile (156 - 163 MHz)	National Legislation: S.I. 369 of 2009		Coast Stations Distress and Calling (156.8 MHz) ITU Radio Regulations Appendix 18. See ComReg document 11/07.
	Mobile-Satellite (Earth to space)					
			Land Mobile (VHF High Band)	National Legislation: Wireless Telegraphy (Business Radio Licence) Regulations 1949 as amended.	RECOMMENDATION T/R 25-08 ECC/DEC/(19)02	ComReg documents: 00/07aR (as revised) 02/12R (as revised)
	5.111 5.226 5.228					

Frequency Band (MHz)	ITU	European	National Usage	Legislation	CEPT	Notes
156.7875 - 156.8125 MHz	MARITIME MOBILE (distress and calling)	MARITIME MOBILE (distress and calling)	Maritime Mobile	National Legislation: S.I. 369 of 2009		Coast Stations (156-163 MHz) Distress and Calling (156.8 MHz) ITU Radio Regulations Appendix 18 See ComReg document 11/07.
	5.111 5.226					
156.8125 - 156.8375 MHz	MARITIME MOBILE	MARITIME MOBILE	Maritime Mobile	National Legislation: S.I. 369 of 2009		Coast Stations (156-163 MHz) ITU Radio Regulations Appendix 18. See ComReg document 11/07.
	Mobile-Satellite (Earth to space)					
	5.111 5.226 5.228					
156.8375 - 157.1875 MHz	FIXED					

Frequency Band (MHz)	ITU	European	National Usage	Legislation	CEPT	Notes
156.8375 - 157.1875 MHz -continued-	MOBILE EXCEPT AERONAUTICAL MOBILE	MOBILE EXCEPT AERONAUTICAL MOBILE	Maritime Mobile	National Legislation: S.I. 369 of 2009		Coast Stations (156-163 MHz) ITU Radio Regulations Appendix 18. See ComReg document 11/07.
	5.226	ECA7 ECA8				
157.1875 - 157.3375 MHz	FIXED					
	MOBILE EXCEPT AERONAUTICAL MOBILE	MOBILE EXCEPT AERONAUTICAL MOBILE	Maritime Mobile	S.I. 369 of 2009		Coast Stations (156 - 163 MHz) ITU Radio Regulations Appendix 18. See ComReg document 11/07.
	Maritime Mobile-Satellite 5.228AB 5.208A 5.208B 5.228AC	Maritime Mobile-Satellite				
	5.226	ECA7 ECA8				

Frequency Band (MHz)	ITU	European	National Usage	Legislation	CEPT	Notes
157.3375 - 161.7875 MHz	FIXED					
	MOBILE EXCEPT AERONAUTICAL MOBILE	MOBILE EXCEPT AERONAUTICAL MOBILE	Maritime Mobile	S.I. 369 of 2009		Coast Stations (156 - 163 MHz) ITU Radio Regulations Appendix 18. See ComReg document 11/07.
	5.226	ECA7 ECA8				
161.7875 - 161.9375 MHz	FIXED					
	MOBILE EXCEPT AERONAUTICAL MOBILE	MOBILE EXCEPT AERONAUTICAL MOBILE	Maritime Mobile	National Legislation: S.I. 369 of 2009		Coast Stations (156 - 163 MHz) ITU Radio Regulations Appendix 18. See ComReg document 11/07.
	Maritime Mobile-Satellite 5.228AB 5.208A 5.208B 5.228AC	Maritime Mobile-Satellite				
	5.226	ECA7 ECA8				

Frequency Band (MHz)	ITU	European	National Usage	Legislation	CEPT	Notes
161.9375 - 161.9625 MHz	FIXED					
	MOBILE EXCEPT AERONAUTICAL MOBILE	MOBILE EXCEPT AERONAUTICAL MOBILE	Maritime Mobile	National Legislation: S.I. 369 of 2009		Coast Stations (156-163 MHz) ITU Radio Regulations Appendix 18 See ComReg document 11/07
	MARITIME MOBILE- SATELLITE (Earth to space) 5.228AA	Maritime Mobile-Satellite				
	5.226	ECA7 ECA8				
161.9625 - 161.9875 MHz	FIXED					
	MOBILE EXCEPT AERONAUTICAL MOBILE	MOBILE EXCEPT AERONAUTICAL MOBILE	Maritime Mobile	National Legislation: S.I. 369 of 2009		Coast Stations (156-163 MHz) AIS (161.975 & 162.025 MHz reserved) ITU Radio Regulations Appendix 18 See ComReg document 11/07

Frequency Band (MHz)	ITU	European	National Usage	Legislation	CEPT	Notes
161.9625 - 161.9875 MHz -continued-	Mobile-Satellite (Earth to space) 5.228F	Mobile-Satellite				
	5.226 5.228A 5.228B	ECA7 ECA8				
161.9875 - 162.0125 MHz	FIXED					
	MARITIME MOBILE- SATELLITE (Earth to space) 5.228A	MARITIME MOBILE- SATELLITE (Earth to space)				Maritime mobile satellite (Earth to space) (161.9875-162.0125 MHz)
	MOBILE EXCEPT AERONAUTICAL MOBILE	MOBILE EXCEPT AERONAUTICAL MOBILE				
			Maritime Mobile	National Legislation: S.I. 369 of 2009		Coast Stations (156 - 163 MHz) ITU Radio Regulations Appendix 18. See ComReg document 11/07
	5.226	ECA7 ECA8				

Frequency Band (MHz)	ITU	European	National Usage	Legislation	CEPT	Notes
162.0125 - 162.0375 MHz	FIXED					
	MOBILE EXCEPT AERONAUTICAL MOBILE	MOBILE EXCEPT AERONAUTICAL MOBILE				
	MOBILE-SATELLITE (Earth to space) 5.228F					
			Maritime Mobile	National Legislation: S.I. 369 of 2009		Coast Stations (156 - 163 MHz) AIS (161.975 & 162.025 MHz reserved) ITU Radio Regulations Appendix 18. See ComReg document 11/07
	5.226 5.228A 5.228B	ECA7 ECA8				
162.0375 - 169.4000 MHz	FIXED					

Frequency Band (MHz)	ITU	European	National Usage	Legislation	CEPT	Notes
162.0375 - 169.4000 MHz -continued-	Mobile except Aeronautical Mobile	Mobile except Aeronautical Mobile	Land mobile (VHF high band between 163-174 MHz)	National Legislation: Wireless Telegraphy (Business Radio Licence) Regulations 1949 as amended.	Recommendation T/R 25- 08	ComReg documents: 00/07aR (as revised) 02/12R (as revised)
			Maritime Mobile	National Legislation: S.I. 369 of 2009		Coast Stations (156 - 163 MHz) ITU Radio Regulations Appendix 18. See ComReg document 11/07
			Maritime Radionavigation	National Legislation: S.I. 369 of 2009		162.4375-162.4625 and 163.0125-163.03125 MHz ITU Radio Regulations Appendix 18. See ComReg document 11/07
	5.226	ECA7				
169.4000 - 169.8125 MHz	FIXED					
	Mobile except Aeronautical Mobile	Mobile except Aeronautical Mobile				

Frequency Band (MHz)	ITU	European	National Usage	Legislation	CEPT	Notes
169.4000 - 169.8125 MHz -continued-	5.226		IRL1	Decision 2005/928/EC (as amended by 2008/673/EC)		
169.8125 - 174 MHz	FIXED					
	Mobile except Aeronautical Mobile	Mobile except Aeronautical Mobile	Land Mobile			
	5.226	ECA7	IRL1	Decision 2005/928/EC (as amended by 2008/673/EC)		
174 - 223 MHz	BROADCASTING	BROADCASTING	Broadcasting: Television (DVB-T), sound (T-DAB)	National Legislation: Broadcasting Act 2009		GE06 Agreements. The Wiesbaden, 1995, Special Arrangement as revised in Constanta 2007 (WI95revCO07)
		LAND MOBILE				See ComReg Document 08/08R (as revised)
	5.235		IRL1			
223 - 225 MHz	BROADCASTING	BROADCASTING	Broadcasting: Television (DVB-T), sound (T-DAB)	National Legislation: Broadcasting Act 2009		GE06 Agreements.

Frequency Band (MHz)	ITU	European	National Usage	Legislation	CEPT	Notes
223 - 225 MHz -continued-	Fixed					
	Mobile					See ComReg Document 08/08R (as revised)
			Aeronautical Mobile	National Legislation: S.I. 369 of 2009		Annex 10 to the Convention on International Civil Aviation.
225 - 230 MHz	BROADCASTING	BROADCASTING	Broadcasting: Television (DVB-T), sound (T-DAB)	National Legislation: Broadcasting Act 2009		GE06 Agreements.
	Fixed					
	Mobile	Land Mobile				
		ECA10 ECA36				
230 - 235 MHz	FIXED					
	MOBILE	MOBILE				

Frequency Band (MHz)	ITU	European	National Usage	Legislation	CEPT	Notes
230 - 235 MHz -continued-			Aeronautical Mobile	National Legislation: S.I. 369 of 2009		Aeronautical UHF communications (225- 400 MHz) Annex 10 to the Convention on International Civil Aviation.
		ECA10 ECA36				
235 - 240 MHz	FIXED		Fixed (Government Services)			
	MOBILE	MOBILE				
	5.254	ECA10 ECA36				
240 - 242.9500 MHz	FIXED					
	MOBILE	MOBILE				
	5.254	ECA10 ECA36				

Frequency Band (MHz)	ITU	European	National Usage	Legislation	CEPT	Notes
242.9500 - 243.0500 MHz	FIXED					
	MOBILE					
		AERONAUTICAL MOBILE	Aeronautical Mobile	National Legislation: S.I. 369 of 2009		Aeronautical UHF communications (225- 400 MHz) Annex 10 to the Convention on International Civil Aviation. ITU Radio Regulations Article 32, Appendix 13 and 15 and ITU-R M.690- 1
			Maritime Mobile	National Legislation: S.I. 414 of 2006		EPIRBs (243 MHz) and Naval inter-ship communications ITU Radio Regulations Article 32, Appendix 13 and 15 and ITU-R M.690- 1
	5.111 5.254 5.256					
243.0500 - 267 MHz	FIXED					
	MOBILE EXCEPT AERONAUTICAL	MOBILE				

Frequency Band (MHz)	ITU	European	National Usage	Legislation	CEPT	Notes
243.0500 - 267 MHz -continued-			Aeronautical Mobile	National Legislation: S.I. 369 of 2009		Aeronautical UHF communications (225-400 MHz). Annex 10 to the Convention on International Civil Aviation. ITU Radio Regulations Article 32, Appendix 13 and 15 and ITU-R M.690-1.
	5.111 5.254 5.256	ECA10 ECA36				
267 - 272 MHz	FIXED		Fixed			
	MOBILE	MOBILE				
	Space Operation (space to Earth)					
			Aeronautical Mobile	National Legislation: S.I. 369 of 2009		Aeronautical UHF communications (225-400 MHz). Annex 10 to the Convention on International Civil Aviation.

Frequency Band (MHz)	ITU	European	National Usage	Legislation	CEPT	Notes
267 - 272 MHz -continued-	5.254 5.257	ECA10 ECA36				
272 - 273 MHz	SPACE OPERATION (space to Earth)					
	FIXED					
	MOBILE	MOBILE				
			Aeronautical Mobile	National Legislation: S.I. 369 of 2009		Aeronautical UHF communications (225- 400 MHz) Annex 10 to the Convention on International Civil Aviation.
	5.254	ECA10 ECA36				
273 - 312 MHz	FIXED					
	MOBILE	MOBILE	Mobile: Emergency Search & Rescue (position fixing)			

Frequency Band (MHz)	ITU	European	National Usage	Legislation	CEPT	Notes
273 - 312 MHz -continued-			Aeronautical Mobile	National Legislation: S.I. 369 of 2009		Aeronautical UHF communications (225-400 MHz). Annex 10 to the Convention on International Civil Aviation.
	5.254	ECA10 ECA36				
312 - 315 MHz	FIXED					
	MOBILE	MOBILE				
	Mobile-Satellite (Earth to space)		Satellite personal communication system	National Legislation: S.I. 214 of 1998	ERC/DEC/(99)06	
			Aeronautical Mobile	National Legislation: S.I. 369 of 2009		Aeronautical UHF communications (225-400 MHz). Annex 10 to the Convention on International Civil Aviation.
	5.254 5.255	ECA10 ECA36				

Frequency Band (MHz)	ITU	European	National Usage	Legislation	CEPT	Notes
315 - 322 MHz	FIXED					
	MOBILE	MOBILE				
			Aeronautical Mobile	National Legislation: S.I. 369 of 2009		Aeronautical UHF communications (225-400 MHz). Annex 10 to the Convention on International Civil Aviation.
	5.254	ECA10 ECA36				
322 - 328.6000 MHz	FIXED					
	MOBILE	MOBILE				
	RADIO ASTRONOMY	RADIO ASTRONOMY				
			Aeronautical Mobile	National Legislation: S.I. 369 of 2009		Aeronautical UHF communications (225-400 MHz). Annex 10 to the Convention on International Civil Aviation.

Frequency Band (MHz)	ITU	European	National Usage	Legislation	CEPT	Notes
322 - 328.6000 MHz -continued-	5.149	ECA10 ECA36				
328.6000 - 335.4000 MHz	AERONAUTICAL RADIONAVIGATION 5.258	AERONAUTICAL RADIONAVIGATION 5.258	Aeronautical Radionavigation	National Legislation: S.I. 369 of 2009		Annex 10 to the Convention on International Civil Aviation. See ComReg document 11/07
			Aeronautical Mobile	National Legislation: S.I. 369 of 2009		Aeronautical UHF communications (225- 400 MHz). Annex 10 to the Convention on International Civil Aviation.
335.4000 - 380 MHz	FIXED					
	MOBILE	MOBILE				
			Aeronautical Mobile	National Legislation: S.I. 369 of 2009		Aeronautical UHF communications (225- 400 MHz). Annex 10 to the Convention on International Civil Aviation.

Frequency Band (MHz)	ITU	European	National Usage	Legislation	CEPT	Notes
335.4000 - 380 MHz -continued-	5.254	ECA7 ECA10 ECA36				
380 - 385 MHz	FIXED					
	MOBILE	MOBILE	Mobile	National Legislation: S.I. 324 of 2008 S.I. 435 OF 2002	ECC/DEC/(08)05 (Applies to the range 380 - 385 MHz & 390 - 395 MHz) ECC/DEC/(06)05 ERC/DEC/(01)19 Recommendation T/R 25-08	Trunked Radio TETRA (Emergency) (380-385 and 390-395 MHz) TETRA (Civil) (385-389.9 and 395-399.9 MHz). See ComReg document 08/67.
			Aeronautical Mobile	National Legislation: S.I. 369 of 2009		Aeronautical UHF communications (225-400 MHz). Annex 10 to the Convention on International Civil Aviation.
	5.254	ECA10 ECA36				
385 - 387 MHz	FIXED					

Frequency Band (MHz)	ITU	European	National Usage	Legislation	CEPT	Notes
385 - 387 MHz -continued-	MOBILE	MOBILE				
			Aeronautical Mobile	National Legislation: S.I. 369 of 2009		Aeronautical UHF communications (225-400 MHz). Annex 10 to the Convention on International Civil Aviation.
	5.254	ECA10 ECA36				
387 - 390 MHz	FIXED					
	MOBILE	MOBILE	Mobile	National Legislation: S.I. 435 of 2002	ERC/DEC/(01)19 Recommendation T/R 25-08	Mobile: Trunked Radio TETRA (Civil) (385-389.9 and 395-399.9 MHz) Secondary Basis Only. See ComReg document 08/67.
	Mobile-Satellite (space to Earth) 5.208A 5.208B 5.254 5.255		Satellite personal communication system	National Legislation: S.I. 214 of 1998	ERC/DEC/(99)06	

Frequency Band (MHz)	ITU	European	National Usage	Legislation	CEPT	Notes
387 - 390 MHz -continued-			Aeronautical Mobile	National Legislation: S.I. 369 of 2009		Aeronautical UHF communications (225-400 MHz). Annex 10 to the Convention on International Civil Aviation.
		ECA36 ECA10				
390 - 395 MHz	FIXED					
	MOBILE	MOBILE	Mobile	National Legislation: S.I. 324 of 2008 S.I. 435 of 2002	ECC/DEC/(08)05 (Applies to the range 380 - 385 MHz & 390 - 395 MHz) ECC/DEC/(06)05 ERC/DEC/(01)19 Recommendation T/R 25-08	Trunked Radio TETRA(Emergency) (380-385 and 390-395 MHz) TETRA(Civil) (385-390 and 395-399.9 MHz) See ComReg document 08/67.
			Aeronautical Mobile	National Legislation: S.I. 369 of 2009		Aeronautical UHF communications (225-400 MHz). Annex 10 to the Convention on International Civil Aviation.

Frequency Band (MHz)	ITU	European	National Usage	Legislation	CEPT	Notes
390 - 395 MHz -continued-	5.254	ECA36 ECA10				
395 - 399.9900 MHz	FIXED					
	MOBILE	MOBILE	Aeronautical Mobile	National Legislation: S.I. 369 of 2009		Aeronautical UHF communications (225- 400 MHz). Annex 10 to the Convention on International Civil Aviation.
	5.254	ECA10 ECA36				
399.9000 - 400.0500 MHz	MOBILE-SATELLITE (Earth to space) 5.209 5.220 5.260A 5.260B	MOBILE-SATELLITE (Earth to space)	Satellite personal communication system	National Legislation: S.I. 214 of 1998	ERC/DEC/(99)06	
			Aeronautical Mobile	National Legislation: S.I. 369 of 2009		Aeronautical UHF communications (225 - 400 MHz). Annex 10 to the Convention on International Civil Aviation.

Frequency Band (MHz)	ITU	European	National Usage	Legislation	CEPT	Notes
400.0500 - 400.1500 MHz	STANDARD FREQUENCY AND TIME SIGNAL-SATELLITE (400.1 MHz)	STANDARD FREQUENCY AND TIME SIGNAL-SATELLITE (400.1 MHz)				
	5.261					
400.1500 - 401 MHz	METEOROLOGICAL AIDS	METEOROLOGICAL AIDS	Meteorological aids (radiosondes)			
	METEOROLOGICAL-SATELLITE (space to Earth)	METEOROLOGICAL-SATELLITE (space to Earth)				
	SPACE RESEARCH (space to Earth) 5.263	SPACE RESEARCH (space to Earth)				
	MOBILE-SATELLITE (space to Earth) 5.208A 5.208B 5.209	MOBILE-SATELLITE (space to Earth)	Satellite personal communication system	National Legislation: S.I. 214 of 1998	ERC/DEC/(99)06	
	Space Operation (space to Earth)	SPACE OPERATION (space to Earth)				

Frequency Band (MHz)	ITU	European	National Usage	Legislation	CEPT	Notes
400.1500 - 401 MHz -continued-	5.264					
401 - 402 MHz	METEOROLOGICAL AIDS	METEOROLOGICAL AIDS	Meteorological aids (radiosondes)			
	SPACE OPERATION (space to Earth)					
	EARTH EXPLORATION-SATELLITE (Earth to space)	EARTH EXPLORATION-SATELLITE (Earth to space)				
	METEOROLOGICAL-SATELLITE (Earth to space)	METEOROLOGICAL-SATELLITE (Earth to space)				
	Fixed					
	Mobile except Aeronautical Mobile					
	5.264A 5.264B					

Frequency Band (MHz)	ITU	European	National Usage	Legislation	CEPT	Notes
401 - 402 MHz -continued-			IRL1			
402 - 403 MHz	METEOROLOGICAL AIDS	METEOROLOGICAL AIDS	Meteorological aids (radiosondes)			
	EARTH EXPLORATION-SATELLITE (Earth to space)	EARTH EXPLORATION-SATELLITE (Earth to space)				
	METEOROLOGICAL-SATELLITE (Earth to space)	METEOROLOGICAL-SATELLITE (Earth to space)				
	Fixed					
	Mobile except Aeronautical Mobile					
	5.264A 5.264B					
				IRL1		
403 - 406 MHz	METEOROLOGICAL AIDS	METEOROLOGICAL AIDS	Meteorological aids (radiosondes)			

Frequency Band (MHz)	ITU	European	National Usage	Legislation	CEPT	Notes
403 - 406 MHz -continued-	Fixed					
	Mobile except Aeronautical Mobile					
	5.265		IRL1			
406 - 406.1000 MHz	MOBILE-SATELLITE (Earth to space)	MOBILE-SATELLITE (Earth to space)	EPIRBs (emergency beacons) ELT:406.025MHz (5W)	European Legislation: Decision 2005/631/EC		COSPAS/SARSAT - This band is only available for distress and safety purposes.
			Personal Locator Beacons (PLB)	S.I. 290 of 2010		
	5.266 5.267 5.265					
406.1000 - 410 MHz	FIXED					
	MOBILE EXCEPT AERONAUTICAL MOBILE	LAND MOBILE				
	RADIO ASTRONOMY	RADIO ASTRONOMY				

Frequency Band (MHz)	ITU	European	National Usage	Legislation	CEPT	Notes
406.1000 - 410 MHz -continued-	5.149 5.265	ECA36				
410 - 420 MHz	FIXED					
	MOBILE EXCEPT AERONAUTICAL MOBILE	MOBILE EXCEPT AERONAUTICAL MOBILE	Land Mobile: Digital and Analogue Trunked Radio	National Legislation: S.I. 435 of 2002	Recommendation T/R 25- 08 ECC/DEC/(19)02	
			400 MHz Band Licences	National Legislation: S.I. 489 of 2019	ECC/DEC/(19)02 Recommendation T/R 25- 08	See ComReg document 19/99.
	SPACE RESEARCH (space to Earth) 5.268					
		ECA36				
420 - 430 MHz	FIXED		Fixed			
	MOBILE EXCEPT AERONAUTICAL MOBILE	MOBILE EXCEPT AERONAUTICAL MOBILE	Land Mobile: Digital and Analogue Trunked Radio	National Legislation: S.I. 435 of 2002	Recommendation T/R 25- 08 ECC/DEC/(19)02	

Frequency Band (MHz)	ITU	European	National Usage	Legislation	CEPT	Notes
420 - 430 MHz -continued-			400 MHz Band Licences	National Legislation: S.I. 489 of 2019	ECC/DEC/(19)02 Recommendation T/R 25- 08	See ComReg document 19/99.
	Radiolocation	Radiolocation				
		ECA7 ECA36				
430 - 432 MHz	AMATEUR	AMATEUR	Amateur (Primary)	National Legislation: S.I. 192 of 2009		See ComReg document 09/45, as revised.
	RADIOLOCATION	RADIOLOCATION	Radiolocation	National Legislation: S.I. 369 of 2009		See ComReg document 11/07
		ECA36 ECA12	IRL1			
432 - 433.0500 MHz	AMATEUR	AMATEUR	Amateur (Primary)	National Legislation: S.I. 192 of 2009		See ComReg document 09/45, as revised.
	RADIOLOCATION	RADIOLOCATION	Radiolocation	National Legislation: S.I. 369 of 2009		See ComReg document 11/07

Frequency Band (MHz)	ITU	European	National Usage	Legislation	CEPT	Notes
432 - 433.0500 MHz -continued-	Earth Exploration-Satellite (Active) 5.279A	Earth Exploration-Satellite (Active)				
	5.138	ECA12 ECA36	IRL1			
433.0500 - 434.7900 MHz	AMATEUR	AMATEUR	Amateur (Primary)	National Legislation: S.I. 192 of 2009		See ComReg document 09/45, as revised.
	RADIOLOCATION	RADIOLOCATION	Radiolocation	National Legislation: S.I. 369 of 2009		See ComReg document 11/07
	Earth Exploration-Satellite (Active) 5.279A	Earth Exploration-Satellite (Active)				
		Land Mobile				
	5.138	ECA12 ECA36	IRL1			
434.7900 - 438 MHz	AMATEUR	AMATEUR	Amateur (Primary)	National Legislation: S.I. 192 of 2009		See ComReg document 09/45, as revised.

Frequency Band (MHz)	ITU	European	National Usage	Legislation	CEPT	Notes
434.7900 - 438 MHz -continued-		AMATEUR-SATELLITE	Amateur-Satellite	National Legislation: S.I. 192 of 2009		See ComReg document 09/45, as revised.
	RADIOLOCATION	RADIOLOCATION	Radiolocation	National Legislation: S.I. 369 of 2009		See ComReg document 11/07
	Earth Exploration-Satellite (Active) 5.279A	Earth Exploration-Satellite (Active)				
	5.138 5.282	ECA12 ECA36				
438 - 440 MHz	AMATEUR	AMATEUR	Amateur (Primary)	National Legislation: S.I. 192 of 2009		See ComReg document 09/45, as revised.
	RADIOLOCATION	RADIOLOCATION	Radiolocation	National Legislation: S.I. 369 of 2009		See ComReg document 11/07.
		ECA36 ECA12	IRL1			
440 - 450 MHz	FIXED					

Frequency Band (MHz)	ITU	European	National Usage	Legislation	CEPT	Notes
440 - 450 MHz -continued-	MOBILE EXCEPT AERONAUTICAL MOBILE	MOBILE EXCEPT AERONAUTICAL MOBILE	Land Mobile	National Legislation: Wireless Telegraphy (Business Radio Licence) Regulations 1949 as amended.	Recommendation T/R 25- 08	ComReg Documents: 00/07aR (as revised) 08/08R (as revised)
				National Legislation: S.I. 93 of 1998	ECC/DEC/(15)05	PMR 446 (446-446.1 MHz)
				National Legislation: S.I. 160 of 2006	ECC/DEC/(15)05	Digital PMR 446 (446.1- 446.2 MHz)
	Radiolocation	Radiolocation				
	5.286	ECA7 ECA36	IRL1			
450 - 455 MHz	FIXED					
	MOBILE 5.286AA	MOBILE	Land Mobile	National Legislation: S.I. 435 of 2002 S.I. 83 of 1988 Wireless Telegraphy (Business Radio Licence) Regulations 1949 as amended.	Recommendation T/R 25- 08 ECC/DEC/(19)02	PMR UHF band and Community Repeaters. See ComReg documents: 00/07aR (as revised) 08/08R (as revised) 02/03R (as revised)

Frequency Band (MHz)	ITU	European	National Usage	Legislation	CEPT	Notes
450 - 455 MHz -continued-	5.209 5.286 5.286A	ECA7 ECA34				
455 - 456 MHz	FIXED					
	MOBILE 5.286AA	MOBILE	Land Mobile	National Legislation: S.I. 435 of 2002 S.I. 83 of 1988 Wireless Telegraphy (Business Radio Licence) Regulations 1949 as amended.	Recommendation T/R 25- 08 ECC/DEC/(19)02	PMR UHF Band, Digital Land Mobile (Civil). See ComReg documents: 00/07aR (as revised) 08/08R (as revised) 02/12R (as revised).
	5.209 5.286A	ECA7 ECA34				
456 - 459 MHz	FIXED					
	MOBILE	MOBILE	Land mobile (Government Services, Commercial, Local Authorities)	National Legislation: S.I. 435 of 2002 S.I. 83 of 1988 Wireless Telegraphy (Business Radio Licence) Regulations 1949 as amended.	Recommendation T/R 25- 08 ECC/DEC/(19)02	See ComReg documents: 00/07aR (as revised) 08/08R (as revised)

Frequency Band (MHz)	ITU	European	National Usage	Legislation	CEPT	Notes
456 - 459 MHz -continued-			Maritime Mobile	National Legislation: S.I. 414 of 2006	Recommendation T/R 32-02	On-board Ship Communications (457.525 - 457.575 MHz)
	5.287	ECA7 ECA34	IRL1			
459 - 460 MHz	FIXED					
	MOBILE 5.286AA	MOBILE	Land Mobile	National Legislation: S.I. 435 of 2002 S.I. 83 of 1988 Wireless Telegraphy (Business Radio Licence) Regulations 1949 as amended.	Recommendation T/R 25-08 ECC/DEC/(19)02	PMR UHF band, on-site paging and telemetry. See ComReg documents: 00/07aR (as revised) 08/08R (as revised) Note: ECG monitoring only in adjacent band 458.6375 - 458.8375 MHz.
	5.209 5.286A	ECA7				
460 - 470 MHz	FIXED					

Frequency Band (MHz)	ITU	European	National Usage	Legislation	CEPT	Notes
460 - 470 MHz -continued-	MOBILE 5.286AA	MOBILE	Land mobile PMR (government services, commercial, local authorities) and community repeaters	National Legislation: S.I. 435 of 2002 S.I. 83 of 1988 Wireless Telegraphy (Business Radio Licence) Regulations 1949 as amended.	Recommendation T/R 25- 08 ECC/DEC/(19)02	See ComReg documents: 00/07aR (as revised) 08/08R (as revised) 02/03R (as revised) 02/12R (as revised)
			Land Mobile			Wide-area paging (469.85-470 MHz)
			Maritime Mobile	National Legislation: S.I. 414 of 2006		On-board Ship Communications
	Meteorological-Satellite (space to Earth)					
	5.287 5.289	ECA7 ECA34				

Frequency Band (MHz)	ITU	European	National Usage	Legislation	CEPT	Notes
470 - 694 MHz	BROADCASTING	BROADCASTING	Broadcasting (Television)	National Legislation: Broadcasting Act 2009 S.I. 445 of 2009		GE06 Agreements. Mobile (services ancillary to broadcasting only as per RR 5.296) A number of bilateral coordination agreements exist between Ireland and other European countries. For further details, see: <a href="https://www.comreg.ie/industry/licensing/international-spectrum-coordination">https://www.comreg.ie/industry/licensing/international-spectrum-coordination</a>
		Radio Astronomy				
	5.149 5.296 5.306 5.311A	ECA13	IRL1			
694 - 790 MHz	BROADCASTING	BROADCASTING				
	MOBILE EXCEPT AERONAUTICAL MOBILE 5.312A 5.317A	MOBILE EXCEPT AERONAUTICAL MOBILE	Short-Term ECS Licences (703 - 733 MHz, 758 - 788 MHz)	National Legislation: S.I. 484 of 2022	ECC/DEC/(15)01	Short-Term ECS Licensing Framework: See ComReg document 22/78. This band forms part of ComReg's MBSA Award: <a href="https://www.comreg.ie/industry/radio-spectrum/spectrum-awards/proposed-multi-band-spectrum-award/">https://www.comreg.ie/industry/radio-spectrum/spectrum-awards/proposed-multi-band-spectrum-award/</a>

Frequency Band (MHz)	ITU	European	National Usage	Legislation	CEPT	Notes
694 - 790 MHz -continued-	5.311A		IRL1			
790 - 862 MHz	FIXED					
	BROADCASTING					GE06 Agreements. 08/08R (as revised)
	MOBILE EXCEPT AERONAUTICAL MOBILE 5.316B 5.317A	MOBILE EXCEPT AERONAUTICAL MOBILE	LIBERALISED USE (791- 821 and 832-862MHz)	National & European Legislation: S.I. 251 of 2012 S.I. 34 OF 2014 Decision 2010/267/EU	ECC/DEC/(09)03 ECC/REC/(11)04	See ComReg Documents 12/52 and 13/55
		ECA13	IRL1	Decision 2014/641/EU (on PMSE spectrum use: 823 - 832 MHz)		
862 - 890 MHz	FIXED					

Frequency Band (MHz)	ITU	European	National Usage	Legislation	CEPT	Notes
862 - 890 MHz -continued-	MOBILE EXCEPT AERONAUTICAL MOBILE 5.317A	MOBILE	LIBERALISED USE (880-915 and 925-960MHz)	National & European Legislation: S.I. 251 of 2012 S.I. 34 of 2014 (EU) 2022/173	ECC/DEC/(06)13	See ComReg Documents 12/52 and 13/55
			GSM-R (876-880 and 921-925 MHz)	National & European Legislation: S.I. 213 of 2013 S.I. 34 of 2014	ECC/DEC/(05)08 ECC/DEC/(20)02	See ComReg Document 11/90
			Mobile Communications on board Vessels (MCV)(880-915, 925-960, 1710-1785 and 1805-1880 MHz)	National & European Legislation: S.I. 169 of 2013 Decision 2010/166/EU (as amended by Decision (EU) 2017/191)	ECC/DEC/(08)08	
			Railway Mobile Radio (RMR) (874.4 - 880.0 MHz and 919.4 - 925.0 MHz)	European Legislation: (EU) 2021/730		
	BROADCASTING					

Frequency Band (MHz)	ITU	European	National Usage	Legislation	CEPT	Notes
862 - 890 MHz -continued-		ECA13 ECA29 ECA36 ECA32	IRL1 (872 - 876 MHz)	Decision (EU) 2018/1538 (Decision on SRD in the sub-band 874 - 876 MHz) (EU) 2022/172 (Amending Decision (EU) 2018/1538)		
890 - 942 MHz	FIXED					
	MOBILE EXCEPT AERONAUTICAL MOBILE 5.317A	MOBILE	LIBERALISED USE (880- 915 and 925-960MHz)	National Legislation: S.I. 251 of 2012 S.I. 34 of 2014 (EU) 2022/173	ECC/DEC/(06)13	See ComReg Documents 12/52 and 13/55

Frequency Band (MHz)	ITU	European	National Usage	Legislation	CEPT	Notes
890 - 942 MHz -continued-			GSM-R (876-880 and 921-925 MHz)	National & European legislation: S.I. 213 of 2013 (EU) 2021/730	ECC/REC/(05)08 ECC/DEC/(20)02	See ComReg Document 11/90
			Mobile Communication on board Aircraft (MCA) (920-960MHz)	National & European Legislation: S.I. 178 of 2008 S.I. 218 of 2017 Decision 2008/294/EC (as amended by Decision 2013/654/EU and Decision (EU) 2016/2317 )	ECC/DEC/(06)07	
			Mobile Communications on board Vessels (MCV)(880-915, 925-960, 1710-1785 and 1805-1880 MHz)	National & European Legislation: S.I. 169 of 2013 Decision 2010/166/EU (as amended by Decision (EU) 2017/191)	ECC/DEC/(08)08	
			Railway Mobile Radio (RMR) (874.4 - 880.0 MHz and 919.4. - 925.0 MHz)	(EU) 2021/730		
	BROADCASTING					
	Radiolocation	Radiolocation				

Frequency Band (MHz)	ITU	European	National Usage	Legislation	CEPT	Notes
890 - 942 MHz -continued-		ECA13 ECA14 ECA29 ECA32 ECA36 ECA30	IRL1 (915 - 921 MHz)	Decision (EU) 2018/1538 (Decision on SRD in the sub-band 915 - 921 MHz) (EU) 2022/172 (Amending Decision (EU) 2018/1538)		
942 - 960 MHz	FIXED					
	MOBILE EXCEPT AERONAUTICAL MOBILE 5.317A	MOBILE	LIBERALISED USE (880-915MHz - 925-960MHz)	National & European Legislation S.I. 251 of 2012 S.I. 34 of 2014 (EU) 2022/173	ECC/DEC/(06)13	See ComReg Documents 12/52 and 13/55
			Mobile Communication on board Aircraft (MCA) (921-960MHz)	National & European Legislation: S.I. 178 of 2008 S.I. 218 of 2017 Decision 2008/294/EC (as amended by Decision 2013/654/EU and Decision (EU) 2016/2317 )	ECC/DEC/(06)07	
Mobile Communications on board Vessels (MCV) (880-915 MHz/925-960 MHz and 1710- 1785MHz/1805-1880 MHz)	National & European Legislation: S.I. 169 of 2013 Decision 2010/166/EU (as amended by Decision (EU) 2017/191)	ECC/DEC/(08)08				

Frequency Band (MHz)	ITU	European	National Usage	Legislation	CEPT	Notes
942 - 960 MHz -continued-	BROADCASTING					
		ECA13 ECA29 ECA32				
960 - 1164 MHz	AERONAUTICAL RADIONAVIGATION 5.328 5.328AA	AERONAUTICAL RADIONAVIGATION	Aeronautical radionavigation: Distance Measuring equipment and secondary surveillance radar (960- 1215 MHz)	S.I. 369 of 2009		Annex 10 to the Convention on International Civil Aviation. See ComReg document 11/07
	AERONAUTICAL MOBILE (R) 5.327A	AERONAUTICAL MOBILE (R) 5.327A				
		AERONAUTICAL MOBILE-SATELLITE				
		ECA36				
1164 - 1215 MHz	AERONAUTICAL RADIONAVIGATION 5.328	AERONAUTICAL RADIONAVIGATION	Aeronautical radionavigation: Distance measuring equipment and secondary surveillance radar (960- 1215 MHz)	S.I. 369 of 2009		Annex 10 to the Convention on International Civil Aviation. See ComReg document 11/07

Frequency Band (MHz)	ITU	European	National Usage	Legislation	CEPT	Notes
1164 - 1215 MHz -continued-	RADIONAVIGATION- SATELLITE (space to Earth) (space to space) 5.328A 5.328B	RADIONAVIGATION- SATELLITE (space to Earth) (space to space)				GNSS Systems
		ECA36				
1215 - 1240 MHz	EARTH EXPLORATION- SATELLITE (Active)	EARTH EXPLORATION- SATELLITE (Active)				
	RADIOLOCATION	RADIOLOCATION				
	RADIONAVIGATION- SATELLITE (space to Earth) (space to space) 5.328B 5.329 5.329A	RADIONAVIGATION- SATELLITE (space to Earth) (space to space)				GNSS Systems
	SPACE RESEARCH (Active)	SPACE RESEARCH (Active)				

Frequency Band (MHz)	ITU	European	National Usage	Legislation	CEPT	Notes
1215 - 1240 MHz -continued-	5.331 5.332	ECA36				
1240 - 1300 MHz	EARTH EXPLORATION-SATELLITE (Active)	EARTH EXPLORATION-SATELLITE (Active)				
	RADIOLOCATION	RADIOLOCATION				
	RADIONAVIGATION-SATELLITE (space to Earth) (space to space) 5.328B 5.329 5.329A	RADIONAVIGATION-SATELLITE (space to Earth) (space to space)				GNSS Systems
	SPACE RESEARCH (Active)	SPACE RESEARCH (Active)				
	Amateur	Amateur	Amateur (secondary)	National Legislation: S.I. 192 of 2009		See ComReg document 09/45, as revised
		Amateur-Satellite (1260-1270 MHz)				

Frequency Band (MHz)	ITU	European	National Usage	Legislation	CEPT	Notes
1240 - 1300 MHz -continued-	5.282 5.331 5.332 5.335A	ECA36				
1300 - 1350 MHz	AERONAUTICAL RADIONAVIGATION 5.337	AERONAUTICAL RADIONAVIGATION				
	RADIOLOCATION	RADIOLOCATION				
	RADIONAVIGATION- SATELLITE (Earth to space)	RADIONAVIGATION- SATELLITE (Earth to space)				
			Amateur (1300 -1304 MHz) (Secondary)	National Legislation: S.I. 192 of 2009		See ComReg document 09/45, as revised
	5.149 5.337A	ECA36				
1350 - 1400 MHz	FIXED	FIXED	Fixed: Point-Point radio links (infrastructure)	National Legislation: S.I. 370 of 2009	Recommendation T/R 13-01 (Annex A and Annex B)	See ComReg document 09/89
	MOBILE	MOBILE				

Frequency Band (MHz)	ITU	European	National Usage	Legislation	CEPT	Notes
1350 - 1400 MHz -continued-	RADIOLOCATION	RADIOLOCATION				
	5.149 5.339 5.338A	ECA36	IRL1			
1400 - 1427 MHz	EARTH EXPLORATION-SATELLITE (passive)	EARTH EXPLORATION-SATELLITE (passive)			ECC/DEC/(11)01	
	RADIO ASTRONOMY	RADIO ASTRONOMY	Radio Astronomy			
	SPACE RESEARCH (passive)	SPACE RESEARCH (passive)				
	5.340 5.341					
1427 - 1429 MHz	FIXED	FIXED	Fixed: Point-Point radio links (infrastructure)	National & European Legislation: S.I. 370 of 2009	Recommendation T/R 13-01	See ComReg document 09/89
	SPACE OPERATION (Earth to space)	SPACE OPERATION (Earth to space)				

Frequency Band (MHz)	ITU	European	National Usage	Legislation	CEPT	Notes
1427 - 1429 MHz -continued-	MOBILE EXCEPT AERONAUTICAL MOBILE	MOBILE EXCEPT AERONAUTICAL MOBILE		European Legislation: Decision (EU) 2015/750 (as amended by Decision (EU) 2018/661)		
	5.341 5.338A	ECA36				
1429 - 1452 MHz	FIXED	FIXED	Fixed: Point-Point radio links (infrastructure)	National & European Legislation: S.I. 370 of 2009	Recommendation T/R 13-01 (Annex B)	See ComReg document 09/89
	MOBILE EXCEPT AERONAUTICAL MOBILE 5.341A	MOBILE EXCEPT AERONAUTICAL MOBILE		Decision (EU) 2015/750 (as amended by Decision (EU) 2018/661)		
	5.341 5.338A	ECA36				
1452 - 1492 MHz	FIXED	Fixed				Band closed to Fixed services.
	MOBILE EXCEPT AERONAUTICAL MOBILE	MOBILE EXCEPT AERONAUTICAL MOBILE		Decision (EU) 2015/750 (as amended by Decision (EU) 2018/661)		

Frequency Band (MHz)	ITU	European	National Usage	Legislation	CEPT	Notes
1452 - 1492 MHz -continued-	BROADCASTING-SATELLITE 5.208B					Resolution 528 (WARC-92)
	BROADCASTING	BROADCASTING				Digital Audio Broadcasting The Maastricht, 2002, Special Arrangement as revised in Constanta 2007 (MA02revCO07)
	5.341 5.345					
1492 - 1518 MHz	FIXED	FIXED	Fixed Point-Point radio links (infrastructure)	National & European Legislation: S.I. 370 of 2009	Recommendation T/R 13-01 (Annex A)	See ComReg document 09/89R
	MOBILE EXCEPT AERONAUTICAL MOBILE 5.341A	MOBILE EXCEPT AERONAUTICAL MOBILE		Decision (EU) 2015/750 (as amended by Decision (EU) 2018/661 - applies up to 1517 MHz)		
	5.341	ECA36	IRL1			
1518 - 1525 MHz	FIXED	FIXED				

Frequency Band (MHz)	ITU	European	National Usage	Legislation	CEPT	Notes
1518 - 1525 MHz -continued-	MOBILE EXCEPT AERONAUTICAL MOBILE	MOBILE EXCEPT AERONAUTICAL MOBILE				
	MOBILE-SATELLITE (space to Earth) 5.348 5.348A 5.348B 5.351A	MOBILE-SATELLITE (space to Earth)	Terminals for Satellite Services (space to Earth)	National Legislation: S.I. 226 of 2020	ECC/DEC/(12)01	See ComReg document 20/47, as revised.
	5.341	ECA36	IRL1			
1525 - 1530 MHz	SPACE OPERATION (space to Earth)	SPACE OPERATION (space to Earth)				Inmarsat-D and Mini-M, EMS-MSSAT and EMS PRODAT terminals
	FIXED	FIXED				
	MOBILE-SATELLITE (space to Earth) 5.208B 5.351A	MOBILE-SATELLITE (space to Earth)	Terminals for Satellite Services (space to Earth)	National Legislation: S.I. 226 of 2020	ECC/DEC/(12)01	See ComReg document 20/47, as revised.
			Maritime mobile satellite (S/E), Search and Rescue (SAR) satellite systems including GMDSS			

Frequency Band (MHz)	ITU	European	National Usage	Legislation	CEPT	Notes
1525 - 1530 MHz -continued-	Earth Exploration-Satellite					
	Mobile except Aeronautical Mobile					
	5.341 5.351 5.354					
1530 - 1535 MHz	SPACE OPERATION (space to Earth)	SPACE OPERATION (space to Earth)				
	MOBILE-SATELLITE (space to Earth) 5.351A 5.353A 5.208B	MOBILE-SATELLITE (space to Earth)	Maritime mobile-satellite (S/E), Search and Rescue (SAR), satellite systems including GMDSS			
			Terminals for Satellite Services (space to Earth)	National Legislation: S.I. 226 of 2020	ECC/DEC/(12)01	See ComReg document 20/47, as revised.
	Earth Exploration-Satellite	Earth Exploration-Satellite				
	Fixed	Fixed				

Frequency Band (MHz)	ITU	European	National Usage	Legislation	CEPT	Notes
1530 - 1535 MHz -continued-	Mobile except Aeronautical Mobile	Mobile except Aeronautical Mobile				
	5.341 5.351 5.354					
1535 - 1559 MHz	MOBILE-SATELLITE (space to Earth) 5.208B 5.351A	MOBILE-SATELLITE (space to Earth)	Maritime mobile-satellite (S/E) Search and Rescue (SAR) Satellite systems including GMDSS			1544-1545 MHz SARSAT Downlink
			Terminals for Satellite Services (space to Earth) (1535 - 1544 MHz & 1545 - 1559 MHz)	National Legislation: S.I. 226 of 2020	ECC/DEC/(12)01	See ComReg document 20/47, as revised.
	5.341 5.351 5.353A 5.354 5.356 5.357 5.357A 5.359					
1559 - 1610 MHz	AERONAUTICAL RADIONAVIGATION	AERONAUTICAL RADIONAVIGATION				

Frequency Band (MHz)	ITU	European	National Usage	Legislation	CEPT	Notes
1559 - 1610 MHz -continued-	RADIONAVIGATION-SATELLITE (space to Earth) (space to space) 5.208B 5.328B 5.329A	RADIONAVIGATION-SATELLITE (space to Earth) (space to space)				GNSS Systems
	5.341					
1610 - 1610.6000 MHz	AERONAUTICAL RADIONAVIGATION	AERONAUTICAL RADIONAVIGATION				
	MOBILE-SATELLITE (Earth to space) 5.351A	MOBILE-SATELLITE (Earth to space)	Satellite Personal Communications Service	National Legislation: S.I. 214 of 1998	ECC/DEC/(09)02 ECC/DEC/(12)01	
			Terminals for Satellite Services (Earth to space)	National Legislation: S.I. 226 of 2020	ECC/DEC/(12)01	See ComReg document 20/47, as revised.
	5.341 5.364 5.366 5.367 5.368 5.371 5.372					

Frequency Band (MHz)	ITU	European	National Usage	Legislation	CEPT	Notes
1610.6000 - 1613.8000 MHz	AERONAUTICAL RADIONAVIGATION	AERONAUTICAL RADIONAVIGATION				
	MOBILE-SATELLITE (Earth to space) 5.351A	MOBILE-SATELLITE (Earth to space)	Satellite Personal Communications Service	National Legislation: S.I. 214 of 1998	ECC/DEC/(09)02 ECC/DEC/(12)01	
			Terminals for Satellite Services (Earth to space)	National Legislation: S.I. 226 of 2020	ECC/DEC/(12)01	See ComReg document 20/47, as revised.
	RADIO ASTRONOMY	RADIO ASTRONOMY				
	5.149 5.341 5.364 5.366 5.367 5.368 5.371 5.372					
1613.8000 - 1621.3500 MHz	AERONAUTICAL RADIONAVIGATION	AERONAUTICAL RADIONAVIGATION				

Frequency Band (MHz)	ITU	European	National Usage	Legislation	CEPT	Notes
1613.8000 - 1621.3500 MHz -continued-	MOBILE-SATELLITE (Earth to space) 5.351A	MOBILE-SATELLITE (Earth to space)	Satellite Personal Communications Service	National Legislation: S.I. 214 of 1998	ECC/DEC/(09)02 ECC/DEC/(09)04 ECC/DEC/(12)01	
			Terminals for Satellite Services (Earth to space)	National Legislation: S.I. 226 of 2020	ECC/DEC/(09)04 ECC/DEC/(12)01	See ComReg document 20/47, as revised.
	Mobile-Satellite (space to Earth) 5.208B	Mobile-Satellite (space to Earth)	Terminals for Satellite Services (space to Earth)	National Legislation: S.I. 226 of 2020	ECC/DEC/(09)04 ECC/DEC/(12)01	See ComReg document 20/47, as revised.
	5.341 5.364 5.365 5.366 5.367 5.368 5.371 5.372					
1621.3500 - 1626.5000 MHz	MARITIME MOBILE- SATELLITE (space to Earth) 5.373 5.373A	MARITIME MOBILE- SATELLITE (space to Earth)				
	MOBILE-SATELLITE (Earth to space) 5.351A	MOBILE-SATELLITE (Earth to space)	Terminals for Satellite Services (Earth to space)	National Legislation: S.I. 226 of 2020	ECC/DEC/(09)04 ECC/DEC/(12)01	See ComReg document 20/47, as revised.

Frequency Band (MHz)	ITU	European	National Usage	Legislation	CEPT	Notes
1621.3500 - 1626.5000 MHz -continued-	AERONAUTICAL RADIONAVIGATION	AERONAUTICAL RADIONAVIGATION				
	Mobile-Satellite (space to Earth) except maritime mobile satellite (Space to Earth)	Mobile-Satellite (space to Earth) except maritime mobile satellite (Space to Earth)	Satellite Personal Communications Service	National Legislation: S.I. 214 of 1998	ECC/DEC/(09)02 ECC/DEC/(09)04 ECC/DEC/(12)01	
			Terminals for Satellite Services (space to Earth)	National Legislation: S.I. 226 of 2020	ECC/DEC/(09)04 ECC/DEC/(12)01	See ComReg document 20/47, as revised.
	5.208B 5.341 5.364 5.365 5.366 5.367 5.371 5.372					
1626.5000 - 1660 MHz	MOBILE-SATELLITE (Earth to space) 5.351A	MOBILE-SATELLITE (Earth to space)	Maritime mobile satellite (Earth to space) , Search and Rescue (SAR), satellite systems including GMDSS	National Legislation: S.I. 398 of 2001 S.I. 128 of 2005 S.I. 343 of 2008		ERC/REP 25
			Terminals for Satellite Services (Earth to space)	National Legislation: S.I. 226 of 2020	ECC/DEC/(12)01	See ComReg document 20/47, as revised.

Frequency Band (MHz)	ITU	European	National Usage	Legislation	CEPT	Notes
1626.5000 - 1660 MHz -continued-	5.341 5.351 5.353A 5.354 5.357A 5.352A 5.374 5.375 5.376		IRL1			
1660 - 1660.5000 MHz	RADIO ASTRONOMY	RADIO ASTRONOMY				Important band for Radio astronomy
	MOBILE-SATELLITE (Earth to space) 5.351A	MOBILE-SATELLITE (Earth to space)	Maritime mobile-satellite (Earth to space)	National Legislation: S.I. 398 of 2001 S.I. 128 of 2005 S.I. 343 of 2008		
			Terminals for Satellite Services (Earth to space)	National Legislation: S.I. 226 of 2020	ECC/DEC/(12)01	See ComReg document 20/47, as revised.
5.149 5.341 5.351 5.354 5.376A		IRL1				
1660.5000 - 1668 MHz	RADIO ASTRONOMY	RADIO ASTRONOMY				Important band for Radio astronomy

Frequency Band (MHz)	ITU	European	National Usage	Legislation	CEPT	Notes
1660.5000 - 1668 MHz -continued-	SPACE RESEARCH (passive)	SPACE RESEARCH (passive)				
	Fixed	Fixed				
	Mobile except Aeronautical Mobile	Mobile except Aeronautical Mobile				
	5.149 5.341 5.379A					
1668 - 1668.4000 MHz	MOBILE-SATELLITE (Earth to space) 5.351A 5.379A 5.379B	MOBILE-SATELLITE (Earth to space)				
	RADIO ASTRONOMY	RADIO ASTRONOMY	Radio Astronomy			Important band for Radio astronomy
	SPACE RESEARCH (passive)	SPACE RESEARCH (passive)				
	Fixed	Fixed				

Frequency Band (MHz)	ITU	European	National Usage	Legislation	CEPT	Notes
1668 - 1668.4000 MHz -continued-	Mobile except Aeronautical Mobile	Mobile except Aeronautical Mobile				
	5.149 5.341 5.379A					
1668.4000 - 1670 MHz	METEOROLOGICAL AIDS	METEOROLOGICAL AIDS				
	FIXED	FIXED				
	MOBILE EXCEPT AERONAUTICAL MOBILE	MOBILE EXCEPT AERONAUTICAL MOBILE				
	MOBILE-SATELLITE (Earth to space) 5.351A 5.379B 5.379C	MOBILE-SATELLITE (Earth to space)				
	RADIO ASTRONOMY	RADIO ASTRONOMY	Radio Astronomy			Important band for Radio astronomy
	5.149 5.341 5.379D					

Frequency Band (MHz)	ITU	European	National Usage	Legislation	CEPT	Notes
1670 - 1675 MHz	METEOROLOGICAL AIDS	METEOROLOGICAL AIDS				
	METEOROLOGICAL-SATELLITE (space to Earth)	METEOROLOGICAL-SATELLITE (space to Earth)				
	MOBILE-SATELLITE (Earth to space) 5.351A 5.379B	MOBILE-SATELLITE (Earth to space)	Terminals for Satellite Services (Earth to space)	National Legislation: S.I. 226 of 2020	ECC/DEC/(12)01	See ComReg document 20/47, as revised.
			Mobile-Satellite (space to Earth)	National Legislation: S.I. 226 of 2020		See ComReg document 20/47, as revised.
	MOBILE	MOBILE				
	FIXED	Fixed				
	5.341 5.379D 5.380A 5.379E					
1675 - 1690 MHz	METEOROLOGICAL AIDS	METEOROLOGICAL AIDS				
	FIXED	FIXED				

Frequency Band (MHz)	ITU	European	National Usage	Legislation	CEPT	Notes
1675 - 1690 MHz -continued-	METEOROLOGICAL- SATELLITE (space to Earth)	METEOROLOGICAL- SATELLITE (space to Earth)				
	MOBILE EXCEPT AERONAUTICAL MOBILE	MOBILE EXCEPT AERONAUTICAL MOBILE				
	5.341	ECA36				
1690 - 1700 MHz	METEOROLOGICAL AIDS	METEOROLOGICAL AIDS				
	METEOROLOGICAL- SATELLITE (space to Earth)	METEOROLOGICAL- SATELLITE (space to Earth)				
	Fixed	Fixed				
	Mobile except Aeronautical Mobile	Mobile except Aeronautical Mobile				
	5.289 5.341	ECA36				
1700 - 1710 MHz	FIXED	FIXED				

Frequency Band (MHz)	ITU	European	National Usage	Legislation	CEPT	Notes
1700 - 1710 MHz -continued-	METEOROLOGICAL- SATELLITE (space to Earth)	METEOROLOGICAL- SATELLITE (space to Earth)				
	MOBILE EXCEPT AERONAUTICAL MOBILE	Mobile except Aeronautical Mobile				
	5.289 5.341	ECA36				
1710 - 1930 MHz	FIXED	FIXED (1710 - 1800 MHz, 1805 - 1880 MHz)				
		Fixed (1800 - 1805 MHz, 1880 - 1930 MHz)				
	MOBILE 5.384A 5.388A 5.388B	MOBILE	LIBERALISED USE (1710-1785- 1805-1880 MHz)	National & European Legislation: S.I. 251 OF 2012 S.I. 34 OF 2014 (EU) 2022/173	ECC/DEC/(06)13	See ComReg Documents 12/52 and 13/55

Frequency Band (MHz)	ITU	European	National Usage	Legislation	CEPT	Notes
1710 - 1930 MHz -continued-	Mobile Communication on board Aircraft (MCA) (1710-1785, 1805-1880 MHz)	National & European Legislation: S.I. 178 of 2008 S.I. 218 of 2017 Decision 2008/294/EC	ECC/DEC/(06)07			
	UMTS terrestrial (3G mobile) (1900-1980, 2010-2025, 2110-2170 MHz)	National & European Legislation: S.I. 158 of 2003 S.I. 340 of 2003 S.I. 34 of 2014 Decision 2012/688/EU (as amended by Decision (EU) 2020/667) Decision 128/1999/EC	ECC/DEC/(06)01 (Applies to 1920 - 1980 MHz) ERC/REC/(01)01 ECC/REC/(08)02			
	Wireless access platform for electronic communications (1785-1805 Mhz)	National Legislation: S.I. 172 of 2007		See ComReg documents 05/93! and 05/93A		
	Short-Term ECS Licences (1920 - 1980 MHz, 2110 - 2170 MHz)	National Legislation: S.I. 484 of 2022		Short-Term ECS Licensing! Framework: See ComReg! document 22/78. This band forms!part of ComReg's MBSA Award!:!https://www.comreg.ie/industry/radio-spectrum/spectrum-awards/proposed-multi-band-spectrum-award/		

Frequency Band (MHz)	ITU	European	National Usage	Legislation	CEPT	Notes
1710 - 1930 MHz -continued-	Mobile Communications on board Vessels (MCV) (1710-1785, 1805-1880, and 1920 - 1980 MHz)	National & European Legislation: S.I. 169 of 2013 (as amended by Decision (EU) 2017/191)	ECC/DEC/(08)08			
	DECT (1880 - 1900 MHz)	National Legislation: S.I. 168 of 1994		Exclusive designation for DECT.		
	Railway Mobile Radio (RMR) (1900 - 1910 MHz)	European Legislation: (EU) 2021/730				
	5.149 5.341 5.385 5.388	ECA29 ECA36	IRL1 (1785 - 1805 MHz)	Decision 2014/641/EU (on PMSE spectrum use:1785 - 1805 MHz)		

Frequency Band (MHz)	ITU	European	National Usage	Legislation	CEPT	Notes
1930 - 1970 MHz			IMT-2000 / UMTS terrestrial (1900-1980, 2010-2025 and 2110-2170 MHz)	National & European Legislation: S.I. 158 of 2003 S.I. 340 of 2003 S.I. 34 of 2014 Decision 2012/688/EU (as amended by Decision (EU) 2020/667) Decision 128/1999/EC	ECC/DEC/(06)01 (Applies to 1920 - 1980 MHz) ERC/REC/(01)01 ECC/REC/(08)02	
	MOBILE 5.388A	MOBILE	Short-Term ECS Licences (1920 - 1980 MHz, 2110 - 2170 MHz)	National Legislation: S.I. 484 of 2022		Short-Term ECS Licensing Framework: See ComReg document 22/78. This band forms part of ComReg's MBSA Award: <a href="https://www.comreg.ie/industry/radio-spectrum/spectrum-awards/proposed-multi-band-spectrum-award/">https://www.comreg.ie/industry/radio-spectrum/spectrum-awards/proposed-multi-band-spectrum-award/</a>
			Mobile Communications on board Vessels (MCV) (1710-1785, 1805-1880, and 1920 - 1980 MHz)	National & European Legislation: S.I. 169 of 2013 2010/166/EU (as amended by Decision (EU) 2017/191)	ECC/DEC/(08)08	
	FIXED	Fixed				
	5.388	ECA29				

Frequency Band (MHz)	ITU	European	National Usage	Legislation	CEPT	Notes
1970 - 1980 MHz			IMT-2000 / UMTS terrestrial (1900-1980, 2010-2025 and 2110-2170 MHz)	National & European Legislation: S.I. 158 of 2003 S.I. 340 of 2003 S.I. 34 of 2014 Decision 2012/688/EU (as amended by Decision (EU) 2020/667) Decision 128/1999/EC	ECC/DEC/(06)01 (Applies to 1920 - 1980 MHz) ERC/REC/(01)01 ECC/REC/(08)02	
	MOBILE 5.388A	MOBILE 5.388A	Short-Term ECS Licences (1920 - 1980 MHz, 2110 - 2170 MHz)	National Legislation: S.I. 484 of 2022		Short-Term ECS Licensing Framework: See ComReg document 22/78. This band forms part of ComReg's MBSA Award: <a href="https://www.comreg.ie/industry/radio-spectrum/spectrum-awards/proposed-multi-band-spectrum-award/">https://www.comreg.ie/industry/radio-spectrum/spectrum-awards/proposed-multi-band-spectrum-award/</a>
			Mobile Communications on board Vessels (MCV) (1710-1785, 1805-1880, and 1920 - 1980 MHz)	National & European Legislation: S.I. 169 of 2013 2010/166/EU (as amended by Decision (EU) 2017/191)	ECC/DEC/(08)08	
	FIXED	Fixed				
	5.388	ECA29				

Frequency Band (MHz)	ITU	European	National Usage	Legislation	CEPT	Notes
1980 - 2010 MHz	FIXED					
	MOBILE	MOBILE	IMT-2000 / UMTS satellite component	National & European Legislation: S.I. 214 of 1998 S.I. 158 of 2003 Decision 128/1999/EC		
	MOBILE-SATELLITE (Earth to space) 5.351A	MOBILE-SATELLITE (Earth to space)	Terminals for Satellite Services (Earth to space)	National & European Legislation: S.I. 226 of 2020 2007/98/EC 2009/449/EC Decision 626/2008/EC	ECC/DEC/(06)09 ECC/DEC/(12)01	See ComReg document 20/47, as revised.
	5.388 5.389A					
2010 - 2025 MHz	FIXED	Fixed				
	MOBILE 5.388A	MOBILE	IMT-2000 / UMTS terrestrial (1900-1980, 2010-2025 and 2110-2170 MHz)	National & European Legislation: S.I. 158 of 2003 S.I. 340 of 2003 S.I. 34 of 2014 Decision 128/1999/EC	ERC/REC/(01)01	
			PMSE	European Legislation: Decision (EU) 2016/339	ERC/REC 25-10	See ComReg document 08/08R (as revised)

Frequency Band (MHz)	ITU	European	National Usage	Legislation	CEPT	Notes
2010 - 2025 MHz -continued-	5.388					
2025 - 2110 MHz	FIXED	FIXED	Fixed: Point-Point radio links (infrastructure) (2025-2110 and 2200-2290 MHz)	National Legislation: S.I. 370 of 2009	Recommendation T/R 13-01 (ANNEX C)	See ComReg document 09/89R (as revised)
	SPACE RESEARCH (Earth to space)(space to space)	SPACE RESEARCH (Earth to space)(space to space)				
	MOBILE 5.391	MOBILE				
	SPACE OPERATION (Earth to space)(space to space)	SPACE OPERATION (Earth to space)(space to space)				
	EARTH EXPLORATION-SATELLITE (Earth to space) (Space to space)	EARTH EXPLORATION-SATELLITE (Earth to space) (Space to space)				
			SAP/SAB (PMSE)		ERC/REC 25-10 Recommendation	See ComReg document 08/08R, as revised.
	5.392	ECA16A ECA36				
2110 - 2120 MHz	FIXED	Fixed				

Frequency Band (MHz)	ITU	European	National Usage	Legislation	CEPT	Notes
2110 - 2120 MHz -continued-	MOBILE 5.388A	MOBILE	IMT-2000 / UMTS Terrestrial (1900-1980, 2010-2025 and 2110- 2170 MHz)	National & European Legislation: S.I. 158 of 2003 S.I. 340 of 2003 S.I. 34 of 2014 Decision 128/1999/EC Decision 2012/688/EU (as amended by Decision (EU) 2020/667)	ECC/DEC/(06)01 (Applies to 2110 - 2170 MHz) ERC/REC/(01)01	
			Mobile Communication on board Aircraft (MCA)(2110-2170 MHz)	National & European Legislation: S.I. 178 of 2008 S.I. 218 of 2017	ECC/DEC/(06)07	
			Mobile Communications on board Vessels (MCV) (2110 - 2170 MHz)	National & European Legislation: S.I. 169 of 2013 2010/166/EU (as amended by Decision (EU) 2017/191)		

Frequency Band (MHz)	ITU	European	National Usage	Legislation	CEPT	Notes
2110 - 2120 MHz -continued-	Short-Term ECS Licences (1920 - 1980 MHz, 2110 - 2170 MHz)	National & European Legislation: S.I. 484 of 2022		Short-Term ECS Licensing Framework: See ComReg document 22/78. This band forms part of ComReg's MBSA Award: <a href="https://www.comreg.ie/industry/radio-spectrum/spectrum-awards/proposed-multi-band-spectrum-award/">https://www.comreg.ie/ industry/radio-spectrum/ spectrum- awards/proposed-multi- band-spectrum-award/</a>		
	SPACE RESEARCH (deep space) (Earth to space)	SPACE RESEARCH (deep space) (Earth to space)				
	5.388	ECA29				
2120 - 2160 MHz	FIXED	Fixed				

Frequency Band (MHz)	ITU	European	National Usage	Legislation	CEPT	Notes
2120 - 2160 MHz -continued-	MOBILE 5.388A	MOBILE	IMT-2000 / UMTS Terrestrial (1900-1980, 2010-2025 and 2110- 2170 MHz)	National & European Legislation: S.I. 158 of 2003 S.I. 340 of 2003 S.I. 34 of 2014 Decision 2012/688/EU (as amended by Decision (EU) 2020/667) Decision 128/1999/EC	ECC/DEC/(06)01 (Applies to 2110 - 2170 MHz) ERC/REC/(01)01	
			Mobile Communication on board Aircraft (MCA)(2110-2170 MHz)	National & European Legislation: S.I. 178 of 2008 S.I. 218 of 2017 2008/294/EC (as amended by Decision 2013/654/EU and Decision (EU) 2016/2317)	ECC/DEC/(06)07	
			Mobile Communications on board Vessels (MCV) (2110 - 2170 MHz)	National & European Legislation: S.I. 169 of 2013 2010/166/EU 2010/166/EU (as amended by Decision (EU) 2017/191)		

Frequency Band (MHz)	ITU	European	National Usage	Legislation	CEPT	Notes
2120 - 2160 MHz -continued-	Short-Term ECS Licences (1920 - 1980 MHz, 2110 - 2170 MHz)	National & European Legislation: S.I. 484 of 2022		Short-Term ECS Licensing Framework: See ComReg document 22/78. This band forms part of ComReg's MBSA Award: <a href="https://www.comreg.ie/industry/radio-spectrum/spectrum-awards/proposed-multi-band-spectrum-award/">https://www.comreg.ie/ industry/radio-spectrum/ spectrum- awards/proposed-multi- band-spectrum-award/</a>		
	5.388	ECA29				
2160 - 2170 MHz	FIXED	Fixed				

Frequency Band (MHz)	ITU	European	National Usage	Legislation	CEPT	Notes
2160 - 2170 MHz -continued-	MOBILE 5.388A	MOBILE	IMT-2000 / UMTS Terrestrial (1900-1980, 2010-2025 and 2110- 2170 MHz)	National & European Legislation: S.I. 158 of 2003 S.I. 340 of 2003 S.I. 34 of 2014 2012/688/EU (as amended by Decision (EU) 2020/667) Decision 128/1999/EC	ECC/DEC/(06)01 (Applies to 2110 - 2170 MHz) ERC/REC/(01)01	See ComReg document 20/47, as revised.
			Mobile Communication on board Aircraft (MCA)(2110-2170 MHz)	National & European Legislation: S.I. 178 of 2008 S.I. 218 of 2017 2008/294/EC as amended by Decision 2013/654/EU and Decision (EU) 2016/2317	ECC/DEC/(06)07	
			Mobile Communications on board Vessels (MCV) (2110 - 2170 MHz)	National & European Legislation: S.I. 169 of 2013 2010/166/EU (as amended by Decision (EU) 2017/191)	ECC/DEC/(08)08	

Frequency Band (MHz)	ITU	European	National Usage	Legislation	CEPT	Notes
2160 - 2170 MHz -continued-	Short-Term ECS Licences (1920 - 1980 MHz, 2110 - 2170 MHz)	National & European Legislation: S.I. 484 of 2022		Short-Term ECS Licensing Framework: See ComReg document 22/78. This band forms part of ComReg's MBSA Award: <a href="https://www.comreg.ie/industry/radio-spectrum/spectrum-awards/proposed-multi-band-spectrum-award/">https://www.comreg.ie/ industry/radio-spectrum/ spectrum- awards/proposed-multi- band-spectrum-award/</a>		
	5.388	ECA29				
2170 - 2200 MHz	FIXED					
	MOBILE	MOBILE				
	MOBILE-SATELLITE (space to Earth) 5.351A	MOBILE-SATELLITE (space to Earth)	IMT-2000 / UMTS satellite Component	National & European Legislation: S.I. 214 of 1998 S.I. 158 of 2003 Decision 2007/98/EC Decision 2009/449/EC Decision 128/1999/EC Decision 626/2008/EC	ECC/DEC/(06)09 ECC/REC/(10)01	See ComReg document 20/47, as revised.
		Terminals for Satellite Services (space to Earth)	National Legislation: S.I. 226 of 2020	ECC/DEC/(06)09 ECC/DEC/(12)01	See ComReg document 20/47, as revised.	

Frequency Band (MHz)	ITU	European	National Usage	Legislation	CEPT	Notes
2170 - 2200 MHz -continued-	5.388 5.389A					
2200 - 2290 MHz	FIXED	FIXED	Fixed links (infrastructure) (2025- 2110 and 2200-2290 MHz)	National Legislation: S.I. 370 of 2009	Recommendation T/R 13- 01: Annex C	See ComReg document 09/89R (as revised)
	SPACE RESEARCH (space to Earth)( space to space)	SPACE RESEARCH (space to Earth)( space to space)				
	SPACE OPERATION (space to Earth)( space to space)	SPACE OPERATION (space to Earth)( space to space)				
	EARTH EXPLORATION- SATELLITE (Space to Earth) (Space to Space)	EARTH EXPLORATION- SATELLITE (Space to Earth) (Space to Space)				
	MOBILE 5.391	MOBILE				
				PMSE		ERC/REC 25-10

Frequency Band (MHz)	ITU	European	National Usage	Legislation	CEPT	Notes
2200 - 2290 MHz -continued-	5.392	ECA16A ECA36				
2290 - 2300 MHz	FIXED	FIXED	Fixed Links (Infrastructure)	National Legislation: S.I. 370 of 2009	Recommendation T/R 13- 01: Annex C	See ComReg document 09/89R (as revised)
	MOBILE EXCEPT AERONAUTICAL MOBILE	MOBILE EXCEPT AERONAUTICAL MOBILE				
	SPACE RESEARCH (deep space) (space to Earth)	SPACE RESEARCH (deep space) (space to Earth)				
2300 - 2450 MHz	FIXED	FIXED				ITU-R F. 746 Annex 2 (2.3-2.5 GHz)
	MOBILE 5.384A	MOBILE				
	Amateur	Amateur (2300 - 2400 MHz)	Amateur (secondary)	National Legislation: S.I. 192 of 2009		See ComReg document 09/45, as revised.
		Amateur-Satellite (2400 - 2450 MHz)	Amateur-Satellite (Secondary)	National Legislation: S.I. 192 of 2009		See ComReg document 09/45, as revised.

Frequency Band (MHz)	ITU	European	National Usage	Legislation	CEPT	Notes
2300 - 2450 MHz -continued-	Radiolocation	Radiolocation				
			PMSE (2300-2400 MHz)		ERC/REC 25-10	See ComReg document 08/08R(as revised)
	5.150 5.282	ECA36	IRL1			
2450 - 2483.5000 MHz	FIXED	FIXED				
	MOBILE	MOBILE				
	Radiolocation					
	5.150	5.150	IRL1			
2483.5000 - 2500 MHz	FIXED	FIXED				
	MOBILE	MOBILE				
	MOBILE-SATELLITE (space to Earth) 5.351A	MOBILE-SATELLITE (space to Earth)	Satellite Personal Communications Service	National Legislation: S.I. 214 of 1998	ECC/DEC/(09)02	

Frequency Band (MHz)	ITU	European	National Usage	Legislation	CEPT	Notes
2483.5000 - 2500 MHz -continued-			Terminals for Satellite Services (space to Earth)	National Legislation: S.I. 226 of 2020	ECC/DEC/(09)02	See ComReg document 20/47, as revised.
	Radiolocation					
	RADIODETERMINATION -SATELLITE (space to Earth) 5.398				ERC/REC 25-10	
	5.150 5.402		IRL1			
2500 - 2520 MHz	FIXED 5.410	Fixed		European Legislation: Decision 2008/477/EC	ECC/REC/(11)05	
	MOBILE EXCEPT AERONAUTICAL MOBILE 5.384A	MOBILE EXCEPT AERONAUTICAL MOBILE	Mobile Communications on board Vessels (MCV) (2500 - 2570, 2620 - 2690 MHz)	National & European Legislation: S.I. 169 of 2013 2010/166/EU (as amended by Decision (EU) 2017/191)	ECC/DEC/(08)08	
2520 - 2655 MHz	FIXED 5.410	FIXED				

Frequency Band (MHz)	ITU	European	National Usage	Legislation	CEPT	Notes
2520 - 2655 MHz -continued-	MOBILE EXCEPT AERONAUTICAL MOBILE 5.384A	MOBILE EXCEPT AERONAUTICAL MOBILE	Mobile Communications on board Vessels (MCV) (2500 - 2570, 2620 - 2690 MHz)	National & European Legislation: S.I. 169 of 2013 2010/166/EU (as amended by Decision (EU) 2017/191)	ECC/DEC/(08)08	
	BROADCASTING- SATELLITE 5.416 5.413					
			PMSE		ERC/REC 25-10	See ComReg document 08/08R (as revised)
	5.339 5.418B 5.418C	ECA16				
2655 - 2670 MHz	FIXED 5.410	FIXED				
	MOBILE EXCEPT AERONAUTICAL MOBILE 5.384A	MOBILE EXCEPT AERONAUTICAL MOBILE	Mobile Communications on board Vessels (MCV) (2500 - 2570, 2620 - 2690 MHz)	National & European Legislation: S.I. 169 of 2013 2010/166/EU (as amended by Decision (EU) 2017/191)	ECC/DEC/(08)08	

Frequency Band (MHz)	ITU	European	National Usage	Legislation	CEPT	Notes	
2655 - 2670 MHz -continued-	BROADCASTING- SATELLITE 5.208B 5.413 5.416						
	Earth Exploration- Satellite (passive)	Earth Exploration- Satellite (passive)					
	Radio Astronomy	Radio Astronomy					
	Space Research (passive)	Space Research (passive)					
				PMSE		ERC/REC 25-10	See ComReg document 08/08R (as revised)
	5.149 5.420 5.208B	ECA16					
2670 - 2690 MHz	FIXED 5.410	Fixed				.	

Frequency Band (MHz)	ITU	European	National Usage	Legislation	CEPT	Notes	
2670 - 2690 MHz -continued-	MOBILE EXCEPT AERONAUTICAL MOBILE 5.384A	MOBILE EXCEPT AERONAUTICAL MOBILE					
	Earth Exploration- Satellite (passive)						
	Radio Astronomy	Radio Astronomy					
	Space Research (passive)						
				PMSE		ERC/REC 25-10	See ComReg document 08/08R (as revised)
	5.149						
2690 - 2700 MHz	EARTH EXPLORATION- SATELLITE (passive)	EARTH EXPLORATION- SATELLITE (passive)					
	RADIO ASTRONOMY	RADIO ASTRONOMY	Radio Astronomy				
	SPACE RESEARCH (passive)	SPACE RESEARCH (passive)					

Frequency Band (MHz)	ITU	European	National Usage	Legislation	CEPT	Notes
2690 - 2700 MHz -continued-	5.340					
2700 - 2900 MHz	AERONAUTICAL RADIONAVIGATION 5.337	AERONAUTICAL RADIONAVIGATION	Radar and navigation systems	S.I. 369 of 2009	ECC/REC/(02)09	Annex 10 to the Convention on International Civil Aviation. See ComReg document 11/07
	Radiolocation	Radiolocation	Radiolocation	National Legislation: S.I. 369 of 2009		Meteorological Radar See ComReg document 11/07, as revised.
			Maritime Radionavigation Service			
	5.423	ECA36				
2900 - 3100 MHz	RADIONAVIGATION 5.426	RADIONAVIGATION	Radionavigation	National Legislation: S.I. 369 of 2009		Radar and Navigation Systems. Annex 10 to the Convention on International Civil Aviation.
	RADIOLOCATION 5.424A	RADIOLOCATION	Radar Beacons (RACONs)	National Legislation: S.I. 369 of 2009		IALA Recommendation R101 and ITU-R M.824 See ComReg document 11/07

Frequency Band (MHz)	ITU	European	National Usage	Legislation	CEPT	Notes
2900 - 3100 MHz -continued-	5.425 5.427	ECA36				
3100 - 3300 MHz	RADIOLOCATION	RADIOLOCATION	Radars, active sensors and RACONs	National Legislation: S.I. 369 of 2009		See ComReg document 11/07
	Earth Exploration- Satellite (active)	Earth Exploration- Satellite (active)				
	Space Research (active)	Space Research (active)				
			Maritime Radionavigation Service	National Legislation: S.I. 369 of 2009		See ComReg document 11/07
	5.149	ECA36				
3300 - 3400 MHz	RADIOLOCATION	RADIOLOCATION	Radiolocation	National Legislation: S.I. 369 of 2009		Upper limit for Airborne Radars is 3410 MHz See ComReg document 11/07
	5.149	ECA36				

Frequency Band (MHz)	ITU	European	National Usage	Legislation	CEPT	Notes
3400 - 3600 MHz	FIXED	FIXED	Terrestrial systems for the provision of electronic communications services	National & European Legislation: S.I. 532 of 2016 Decision 2008/411/EC (as amended by Decision 2014/276/EU and Decision (EU) 2019/235)	ECC/DEC/(11)06 ECC/REC/(04)05	
	FIXED-SATELLITE (space to Earth)	FIXED-SATELLITE (space to Earth)				
	MOBILE EXCEPT AERONAUTICAL MOBILE 5.430A	MOBILE EXCEPT AERONAUTICAL MOBILE	Terrestrial systems for the provision of electronic communications services	National & European Legislation: S.I. 532 of 2016 Decision 2008/411/EC (as amended by Decision 2014/276/EU and Decision (EU) 2019/235)	ECC/DEC/(11)06	
	Radiolocation	Radiolocation				
			State Services			
		ECA36				

Frequency Band (MHz)	ITU	European	National Usage	Legislation	CEPT	Notes
3600 - 4200 MHz	FIXED	FIXED	Terrestrial systems for the provision of electronic communications services (3600 - 3800 MHz)	National & European Legislation: S.I. 532 OF 2016 Decision 2008/411/EC (as amended by Decision 2014/276/EU and Decision (EU) 2019/235)	ECC/DEC/(11)06 ECC/REC/(04)05	See ComReg documents 06/17R (as revised), 06/17a and 06/18
	FIXED-SATELLITE (space to Earth)	FIXED-SATELLITE (space to Earth)	Fixed-satellite (space to Earth): Licence exempt VSAT receivers	National Legislation: S.I. 197 of 2005	ECC/DEC/(05)09 (Applicable to 3.7 - 4.2 GHz)	See ComReg document 00/64R
	Mobile	MOBILE	Terrestrial systems for the provision of electronic communications services (3600 - 3800 MHz)	National & European Legislation: S.I. 532 OF 2016 Decision 2008/411/EC (as amended by Decision 2014/276/EU and Decision (EU) 2019/235)	ECC/DEC/(11)06	
		ECA37				
4200 - 4400 MHz	AERONAUTICAL RADIONAVIGATION (R) 5.438	AERONAUTICAL RADIONAVIGATION	Radionavigation	National Legislation: S.I. 369 of 2009		Radar Altimeters FM CW (1W EIRP) See ComReg document 11/07
	AERONAUTICAL MOBILE 5.436	AERONAUTICAL MOBILE				

Frequency Band (MHz)	ITU	European	National Usage	Legislation	CEPT	Notes
4200 - 4400 MHz -continued-	5.440 5.437	ECA36				
4400 - 4500 MHz	FIXED	FIXED				
	MOBILE	MOBILE				
		ECA36 ECA20				
4500 - 4800 MHz	FIXED	FIXED				
	FIXED-SATELLITE (space to Earth) 5.441	FIXED-SATELLITE (space to Earth)	Fixed satellite (space to Earth)	National Legislation: S.I. 197 of 2005		National Allotment for Fixed-satellite (space- Earth) (4500 - 4800 MHz), Appendix 30B, Radio Regulations See ComReg document 00/64R
	MOBILE	MOBILE				
		ECA20 ECA36	IRL1			

Frequency Band (MHz)	ITU	European	National Usage	Legislation	CEPT	Notes
4800 - 4990 MHz	FIXED	FIXED				
	MOBILE 5.442	MOBILE				
	Radio Astronomy	Radio Astronomy				
	5.149 5.339	ECA20 ECA36	IRL1			
4990 - 5000 MHz	FIXED	FIXED				
	MOBILE EXCEPT AERONAUTICAL MOBILE	MOBILE EXCEPT AERONAUTICAL MOBILE				
	RADIO ASTRONOMY	RADIO ASTRONOMY				
	Space Research (passive)					
	5.149	ECA20 ECA36	IRL1			

Frequency Band (MHz)	ITU	European	National Usage	Legislation	CEPT	Notes
5000 - 5010 MHz	AERONAUTICAL RADIONAVIGATION	AERONAUTICAL RADIONAVIGATION	Radionavigation	National Legislation: S.I. 369 OF 2009		Microwave Landing Systems (MLS) See ComReg document 11/07
	RADIONAVIGATION- SATELLITE (Earth to space)	RADIONAVIGATION- SATELLITE (Earth to space)				
	AERONAUTICAL MOBILE-SATELLITE (R) 5.443AA	AERONAUTICAL MOBILE-SATELLITE (R)				
		Space Research (passive)				
		Radio Astronomy	IRL1			
5010 - 5030 MHz	AERONAUTICAL RADIONAVIGATION	AERONAUTICAL RADIONAVIGATION	Radionavigation	National Legislation: S.I. 369 OF 2009		Microwave Landing Systems (MLS) See ComReg document 11/07

Frequency Band (MHz)	ITU	European	National Usage	Legislation	CEPT	Notes
5010 - 5030 MHz -continued-	RADIONAVIGATION-SATELLITE (space to Earth)(space to space) 5.328B 5.443B	RADIONAVIGATION-SATELLITE (space to Earth)(space to space)				
	AERONAUTICAL MOBILE-SATELLITE (R) 5.443AA	AERONAUTICAL MOBILE-SATELLITE				
		Radio Astronomy				
		Space Research (passive)				
			IRL1			
5030 - 5091 MHz	AERONAUTICAL MOBILE (R) 5.443C	AERONAUTICAL MOBILE (R)	Radionavigation	National Legislation: S.I. 369 OF 2009		Microwave Landing Systems (MLS) See ComReg document 11/07
	AERONAUTICAL MOBILE-SATELLITE (R) 5.443D	AERONAUTICAL MOBILE-SATELLITE (R)				

Frequency Band (MHz)	ITU	European	National Usage	Legislation	CEPT	Notes
5030 - 5091 MHz -continued-	AERONAUTICAL RADIONAVIGATION	AERONAUTICAL RADIONAVIGATION				
	5.444		IRL1			
5091 - 5150 MHz	AERONAUTICAL RADIONAVIGATION (R)	AERONAUTICAL RADIONAVIGATION	Radionavigation	National Legislation: S.I. 369 OF 2009		Microwave Landing Systems (MLS) See ComReg document 11/07
	AERONAUTICAL MOBILE-SATELLITE (R) 5.443AA	AERONAUTICAL MOBILE-SATELLITE (R)				
	AERONAUTICAL MOBILE 5.444B	AERONAUTICAL MOBILE				
	FIXED-SATELLITE (Earth to space) 5.444A	FIXED-SATELLITE (Earth to space)				
	5.444		IRL1			
5150 - 5250 MHz	AERONAUTICAL RADIONAVIGATION	AERONAUTICAL RADIONAVIGATION				

Frequency Band (MHz)	ITU	European	National Usage	Legislation	CEPT	Notes
5150 - 5250 MHz -continued-	FIXED-SATELLITE (Earth to space) 5.447A	FIXED-SATELLITE (Earth to space)	Fixed-satellite (Earth to space)	National Legislation: S.I. 295 of 2007		See ComReg document 00/64R
	MOBILE EXCEPT AERONAUTICAL MOBILE 5.446A 5.446B	MOBILE EXCEPT AERONAUTICAL MOBILE				
	5.446 5.447B 5.447C 5.446C		IRL1	(EU) 2022/179		
5250 - 5255 MHz	EARTH EXPLORATION- SATELLITE (active)	EARTH EXPLORATION- SATELLITE (active)				
	RADIOLOCATION	RADIOLOCATION				
	SPACE RESEARCH 5.447D	SPACE RESEARCH				
	MOBILE EXCEPT AERONAUTICAL MOBILE 5.447F 5.446A	MOBILE EXCEPT AERONAUTICAL MOBILE				

Frequency Band (MHz)	ITU	European	National Usage	Legislation	CEPT	Notes
5250 - 5255 MHz -continued-	5.448A	ECA36 ECA22	IRL1	(EU) 2022/179		
5255 - 5350 MHz	EARTH EXPLORATION-SATELLITE (active)	EARTH EXPLORATION-SATELLITE (active)				
	RADIOLOCATION	RADIOLOCATION				
	SPACE RESEARCH (active)	SPACE RESEARCH (active)				
	MOBILE EXCEPT AERONAUTICAL MOBILE 5.447F 5.446A	MOBILE EXCEPT AERONAUTICAL MOBILE				
	5.448A	ECA36 ECA22	IRL1	(EU) 2022/179		
5350 - 5460 MHz	EARTH EXPLORATION-SATELLITE (active) 5.448B	EARTH EXPLORATION-SATELLITE (active)				

Frequency Band (MHz)	ITU	European	National Usage	Legislation	CEPT	Notes
5350 - 5460 MHz -continued-	SPACE RESEARCH (active) 5.448C	SPACE RESEARCH (active)				
	AERONAUTICAL RADIONAVIGATION 5.449	AERONAUTICAL RADIONAVIGATION				
	RADIOLOCATION 5.448D	RADIOLOCATION				
		ECA36 ECA22	IRL1			
5460 - 5470 MHz	RADIONAVIGATION 5.449	RADIONAVIGATION				
	EARTH EXPLORATION- SATELLITE (active)	EARTH EXPLORATION- SATELLITE (active)				
	SPACE RESEARCH (active)	SPACE RESEARCH (active)				
	RADIOLOCATION 5.448D	RADIOLOCATION				

Frequency Band (MHz)	ITU	European	National Usage	Legislation	CEPT	Notes
5460 - 5470 MHz -continued-	5.448B	ECA36 ECA22	IRL1			
5470 - 5570 MHz	MARITIME RADIONAVIGATION	MARITIME RADIONAVIGATION	Radionavigation	National Legislation: S.I. 369 of 2009		Meteorological service radar, radiolocation: Position Fixing Equipment. See ComReg document 11/07
	MOBILE EXCEPT AERONAUTICAL MOBILE 5.450A 5.446A	MOBILE EXCEPT AERONAUTICAL MOBILE				
	EARTH EXPLORATION- SATELLITE (active)	EARTH EXPLORATION- SATELLITE (active)				
	SPACE RESEARCH (active)	SPACE RESEARCH (active)				
	RADIOLOCATION 5.450B	RADIOLOCATION	Radiolocation	National Legislation: S.I. 369 of 2009		Weather Radar See ComReg document 11/07
	5.448B 5.451	ECA36 ECA22	IRL1	(EU) 2022/179		

Frequency Band (MHz)	ITU	European	National Usage	Legislation	CEPT	Notes
5570 - 5650 MHz	MARITIME RADIONAVIGATION	MARITIME RADIONAVIGATION	Radionavigation	National Legislation: S.I. 369 of 2009		Meteorological service radar, radiolocation: Position Fixing Equipment. See ComReg document 11/07
	MOBILE EXCEPT AERONAUTICAL MOBILE 5.450A 5.446A	MOBILE EXCEPT AERONAUTICAL MOBILE				
	RADIOLOCATION 5.450B	RADIOLOCATION	Radiolocation	National Legislation: S.I. 369 of 2009		Weather Radar See ComReg document 11/07
			Amateur (secondary)	National Legislation: S.I. 192 of 2009		See ComReg document 09/45, as revised.
	5.451 5.452	ECA36 ECA22	IRL1	(EU) 2022/179		
5650 - 5725 MHz	RADIOLOCATION	RADIOLOCATION				
	MOBILE EXCEPT AERONAUTICAL MOBILE 5.450A 5.446A	MOBILE EXCEPT AERONAUTICAL MOBILE				

Frequency Band (MHz)	ITU	European	National Usage	Legislation	CEPT	Notes
5650 - 5725 MHz -continued-	Amateur	Amateur	Amateur (secondary)	National Legislation: S.I. 192 of 2009		See ComReg document 09/45, as revised.
	Space Research (deep space)					
		Amateur-Satellite (Earth to space)		National Legislation: S.I. 273 of 2000 S.I. 295 of 2007		
	5.282 5.451	ECA36 ECA22 ECA23	IRL1	(EU) 2022/179		
5725 - 5830 MHz	FIXED-SATELLITE (Earth to space)	FIXED-SATELLITE (Earth to space)	Fixed-satellite (Earth to space)	National Legislation: S.I. 295 of 2007		See ComReg document 00/64R
	RADIOLOCATION	RADIOLOCATION				
	Amateur	Amateur	Amateur (secondary)	National Legislation: S.I. 192 of 2009		See ComReg document 09/45, as revised.
		Mobile				

Frequency Band (MHz)	ITU	European	National Usage	Legislation	CEPT	Notes
5725 - 5830 MHz -continued-		Fixed	FWA/MAN (5725-5875 MHz)		ECC/REC/(06)04	
	5.150 5.451	ECA36 ECA22 ECA17	IRL1			
5830 - 5850 MHz	FIXED-SATELLITE (Earth to space)	FIXED-SATELLITE (Earth to space)	Fixed-satellite (Earth to space)	National Legislation: S.I. 295 of 2007		See ComReg document 00/64R
	RADIOLOCATION	RADIOLOCATION				
	Amateur	Amateur				
	Amateur-Satellite (space to Earth)	Amateur-Satellite (space to Earth)	Amateur (secondary)	National Legislation: S.I. 192 of 2009		See ComReg document 09/45, as revised.
		Fixed	FWA/MAN (5725-5875 MHz)		ECC/REC/(06)04	
		Mobile				
	5.150 5.451	ECA22 ECA23 ECA36	IRL1			

Frequency Band (MHz)	ITU	European	National Usage	Legislation	CEPT	Notes
5850 - 5925 MHz	FIXED	FIXED				
	FIXED-SATELLITE (Earth to space)	FIXED-SATELLITE (Earth to space)	Fixed-satellite (Earth to space): VSATs	National Legislation: S.I. 295 of 2007		See ComReg document 00/64R
	MOBILE	MOBILE		European Legislation: Decision (EU) 2020/1426 (on safety-related applications of Intelligent Transport Systems (ITS) - 5875 - 5935 MHz)	ECC/REC/(08)01	
			FWA/MAN (5725-5875 MHz)		ECC/REC/(06)04	
	5.150		IRL1	Decision 2008/671/EC (on Intelligent Transport Systems (ITS))		
5925 - 6700 MHz	FIXED	FIXED	Fixed Point-Point radio links (infrastructure) (5925-7125 MHz)	National Legislation: S.I. 370 of 2009	ERC/REC 14-01 Annex 1	See ComReg document 09/89R (as revised)
	FIXED-SATELLITE (Earth to space) 5.457A 5.457B	FIXED-SATELLITE (Earth to space)	Fixed-satellite (Earth to space): VSATs	National Legislation: S.I. 295 of 2007	ECC/DEC/(05)09 (Applicable to 5.925 - 6.425 GHz).	See ComReg document 00/64R

Frequency Band (MHz)	ITU	European	National Usage	Legislation	CEPT	Notes
5925 - 6700 MHz -continued-	MOBILE	MOBILE		European Legislation: Decision (EU) 2020/1426 (on safety-related applications of Intelligent Transport Systems (ITS) - 5875 - 5935 MHz)	ECC/REC/(08)01	
		Earth Exploration- Satellite (passive)				
	5.149 5.440 5.458		IRL1	(EU) 2021/1067 (5945 - 6425 MHz)		
6700 - 7075 MHz	FIXED	FIXED	Fixed Links (Infrastructure)	National Legislation: S.I. 370 of 2009	ERC/REC 14-02 E: Annex 1	See ComReg document 09/89R (as revised)
	FIXED-SATELLITE (Earth to space)(space to Earth) 5.441	FIXED-SATELLITE (Earth to space)(space to Earth)	Fixed-satellite (Earth to space)(space to Earth)	National Legislation: S.I. 295 of 2007		National Allotment for Fixed-satellite Uplink (6725-7025 MHz) Appendix 30B, Radio Regulations
	MOBILE					
		Earth Exploration- Satellite (passive)				

Frequency Band (MHz)	ITU	European	National Usage	Legislation	CEPT	Notes
6700 - 7075 MHz -continued-	5.458 5.458A 5.458B		IRL1			
7075 - 7145 MHz	FIXED	FIXED	Fixed Links (Infrastructure)	National Legislation: S.I. 370 of 2009	ERC/REC 14-02 ECC/REC/(02)06	See ComReg document 09/89R (as revised) Part of the L7 band (7125 -7425 MHz ) may be allocated towards unidirectional links such as ENG/OB
	MOBILE					
		Earth Exploration- Satellite (passive)				
	5.458		IRL1			
7145 - 7235 MHz	FIXED	FIXED	Fixed Links (Infrastructure)	National Legislation: S.I. 370 of 2009	ECC/REC/(02)06	See ComReg document 09/89R (as revised) Note: Part of the L7 band (7125 -7425 MHz ) may be allocated towards unidirectional links such as ENG/OB

Frequency Band (MHz)	ITU	European	National Usage	Legislation	CEPT	Notes
7145 - 7235 MHz -continued-	MOBILE	MOBILE				
	SPACE RESEARCH (deep space: 7145 - 7190 MHz)(Earth to space) 5.460 (7190 - 7235 MHz)	SPACE RESEARCH (deep space: 7145 - 7190 MHz)(Earth to space)				
	EARTH EXPLORATION-SATELLITE (7190-7235 MHz) (Earth to space) 5.460A 5.460B	EARTH EXPLORATION-SATELLITE (Earth to space)				
		Space Operation (Earth to space) (7145 - 7190 MHz)				
	5.458 5.460		IRL1			
7235 - 7250 MHz	FIXED	FIXED	Fixed Links (Infrastructure)	National Legislation: S.I. 370 of 2009	ECC/REC/(02)06	See ComReg document 09/89R (as revised) Note: Part of the L7 band (7125 -7425 MHz ) may be allocated towards unidirectional links such as ENG/OB

Frequency Band (MHz)	ITU	European	National Usage	Legislation	CEPT	Notes
7235 - 7250 MHz -continued-	MOBILE					
	EARTH EXPLORATION-SATELLITE (Earth to space) 5.460A	EARTH EXPLORATION-SATELLITE (Earth to space)				
		Space Research (Earth to space)				
	5.548		IRL1			
7250 - 7300 MHz	FIXED	FIXED	Fixed Links (Infrastructure)	National Legislation: S.I. 370 of 2009	ECC/REC/(02)06	See ComReg document 09/89R (as revised) Note: Part of the L7 band (7125-7425 MHz ) may be allocated towards unidirectional links such as ENG/OB
	FIXED-SATELLITE (space to Earth)	FIXED-SATELLITE (space to Earth)	Fixed satellite (space to Earth)	National Legislation: S.I. 295 of 2007		
	MOBILE	MOBILE				
	5.461 (7300 - 7375 MHz)	ECA36				

Frequency Band (MHz)	ITU	European	National Usage	Legislation	CEPT	Notes
7300 - 7450 MHz	FIXED	FIXED	Fixed Links (Infrastructure)	S.I. 370 of 2009	ECC/REC/(02)06	See ComReg document 09/89R (as revised)
	FIXED-SATELLITE (space to Earth)	FIXED-SATELLITE (space to Earth)	Fixed-satellite (space to Earth)	National Legislation: S.I. 295 of 2007		See ComReg document 00/64R
	MOBILE EXCEPT AERONAUTICAL MOBILE	MOBILE EXCEPT AERONAUTICAL MOBILE				
	MARITIME MOBILE- SATELLITE (7375 MHz - 7450 MHz) 5.461AA 5.461AB	MARITIME MOBILE- SATELLITE (7375 MHz - 7450 MHz) 5.461AA 5.461AB				
	5.461	ECA36	IRL1			
7450 - 7550 MHz	FIXED	FIXED	Fixed Links (Infrastructure)	National Legislation: S.I. 370 of 2009	ECC/REC/(02)06	See ComReg document 09/89R (as revised)
	FIXED-SATELLITE (space to Earth)	FIXED-SATELLITE (space to Earth)	Fixed-satellite (space to Earth)	National Legislation: S.I. 295 of 2007		See ComReg document 00/64R
	METEOROLOGICAL- SATELLITE (space to Earth)	METEOROLOGICAL- SATELLITE (space to Earth)				

Frequency Band (MHz)	ITU	European	National Usage	Legislation	CEPT	Notes
7450 - 7550 MHz -continued-	MOBILE EXCEPT AERONAUTICAL MOBILE	MOBILE EXCEPT AERONAUTICAL MOBILE				
	5.461A	ECA36				
	MARITIME MOBILE- SATELLITE (space to Earth) 5.461AA 5.461AB	MARITIME MOBILE- SATELLITE (space to Earth) 5.461AA 5.461AB				
	5.461A	ECA36	IRL1			
7550 - 7750 MHz	FIXED	FIXED	Fixed Links (Infrastructure)	National Legislation: S.I. 370 of 2009	ECC/REC/(02)06	See ComReg document 09/89R (as revised) ITU-R F.386-6 Annex 1
	FIXED-SATELLITE (space to Earth)	FIXED-SATELLITE (space to Earth)	Fixed-satellite (space to Earth)	National Legislation: S.I. 295 of 2007		See ComReg 00/64R
	MOBILE EXCEPT AERONAUTICAL MOBILE	MOBILE EXCEPT AERONAUTICAL MOBILE				

Frequency Band (MHz)	ITU	European	National Usage	Legislation	CEPT	Notes
7550 - 7750 MHz -continued-	MARITIME MOBILE- SATELLITE 5.461AA 5.461AB	MARITIME MOBILE- SATELLITE				
		ECA36	IRL1			
7750 - 7900 MHz	FIXED	FIXED	Fixed Links (Infrastructure)	National Legislation: S.I. 370 of 2009	ECC/REC/(02)06	See ComReg document 09/89R (as revised) ITU-R F.386-6 Annex 1
	METEOROLOGICAL- SATELLITE (space to Earth) 5.461B	METEOROLOGICAL- SATELLITE (space to Earth)				
	MOBILE EXCEPT AERONAUTICAL MOBILE	MOBILE EXCEPT AERONAUTICAL MOBILE				
			IRL1			
7900 - 8025 MHz	FIXED	FIXED	Fixed Links (Infrastructure)	National Legislation: S.I. 370 of 2009	ECC/REC/(02)06	See ComReg document 09/89R (as revised) ITU-R F.386-6 Annex 1

Frequency Band (MHz)	ITU	European	National Usage	Legislation	CEPT	Notes
7900 - 8025 MHz -continued-	FIXED-SATELLITE (Earth to space)	FIXED-SATELLITE (Earth to space)	Fixed satellite (Earth to space)	National Legislation: S.I. 295 of 2007		See ComReg document 00/64R
	MOBILE	MOBILE				
	5.461	ECA36	IRL1			
8025 - 8175 MHz	FIXED	FIXED	Fixed Links (Infrastructure)	National Legislation: S.I. 370 of 2009	ECC/REC/(02)06	See ComReg document 09/89R (as revised) ITU-R F.386-6 Annex 1
	EARTH EXPLORATION- SATELLITE (space to Earth)	EARTH EXPLORATION- SATELLITE (space to Earth)				
	FIXED-SATELLITE (Earth to space)	FIXED-SATELLITE (Earth to space)	Fixed satellite (Earth to space)	National Legislation: S.I. 295 of 2007		
	MOBILE 5.463	MOBILE				
	5.462A	ECA36	IRL1			

Frequency Band (MHz)	ITU	European	National Usage	Legislation	CEPT	Notes
8175 - 8215 MHz	FIXED	FIXED	Fixed Links (Infrastructure)	National Legislation: S.I. 370 of 2009	ECC/REC/(02)06	See ComReg document 09/89R (as revised) ITU-R F.386-6 Annex 1
	EARTH EXPLORATION- SATELLITE (space to Earth)	EARTH EXPLORATION- SATELLITE (space to Earth)				
	FIXED-SATELLITE (Earth to space)	FIXED-SATELLITE (Earth to space)	Fixed-satellite (Earth to space)	National Legislation: S.I. 295 of 2007		
	MOBILE 5.463	MOBILE				
	METEOROLOGICAL- SATELLITE (Earth to space)	METEOROLOGICAL- SATELLITE (Earth to space)				
	5.462A	ECA36	IRL1			
8215 - 8400 MHz	FIXED	FIXED	Fixed Links (Infrastructure)	National Legislation: S.I. 370 of 2009	ECC/REC/(02)06	See ComReg document 09/89R (as revised) ITU-R F.386-6, Annex 1 & Annex 3

Frequency Band (MHz)	ITU	European	National Usage	Legislation	CEPT	Notes
8215 - 8400 MHz -continued-	EARTH EXPLORATION-SATELLITE (space to Earth)	EARTH EXPLORATION-SATELLITE (space to Earth)				
	FIXED-SATELLITE (Earth to space)	FIXED-SATELLITE (Earth to space)	Fixed-satellite (Earth to space)	National Legislation: S.I. 295 of 2007		See ComReg document 00/64R
	MOBILE 5.463					
	5.462A		IRL1			
8400 - 8500 MHz	FIXED	FIXED	Fixed Links (Infrastructure)	National Legislation: S.I. 370 of 2009	ECC/REC/(02)06	See ComReg document 09/89R (as revised) ITU-R F.386-6 Annex 3
	MOBILE EXCEPT AERONAUTICAL MOBILE					
	SPACE RESEARCH (space to Earth) 5.465	SPACE RESEARCH (space to Earth)				
		Radiolocation				

Frequency Band (MHz)	ITU	European	National Usage	Legislation	CEPT	Notes
8400 - 8500 MHz -continued-			IRL1			
8500 - 8550 MHz	RADIOLOCATION	RADIOLOCATION				
	5.469A	ECA24 ECA36	IRL1			
8550 - 8650 MHz	EARTH EXPLORATION- SATELLITE (active)	EARTH EXPLORATION- SATELLITE (active)				
	RADIOLOCATION	RADIOLOCATION				
	SPACE RESEARCH (active)	SPACE RESEARCH (active)				
	5.469A	ECA24 ECA36	IRL1			
8650 - 8750 MHz	RADIOLOCATION	RADIOLOCATION				
		ECA24 ECA36	IRL1			

Frequency Band (MHz)	ITU	European	National Usage	Legislation	CEPT	Notes
8750 - 8850 MHz	RADIOLOCATION	RADIOLOCATION				
	AERONAUTICAL RADIONAVIGATION 5.470	AERONAUTICAL RADIONAVIGATION	Aeronautical Radionavigation	National Legislation: S.I. 369 of 2009		Airborne Doppler Radar. See ComReg document 11/07.
		Space Research				
		ECA24 ECA36	IRL1			
8850 - 9000 MHz	RADIOLOCATION	RADIOLOCATION				
	MARITIME RADIONAVIGATION 5.472	MARITIME RADIONAVIGATION				
		Space Research				
		ECA24 ECA36	IRL1			
9000 - 9200 MHz	AERONAUTICAL RADIONAVIGATION 5.337	AERONAUTICAL RADIONAVIGATION	Radionavigation	National Legislation: S.I. 369 of 2009		Radar. See ComReg document 11/07.

Frequency Band (MHz)	ITU	European	National Usage	Legislation	CEPT	Notes
9000 - 9200 MHz -continued-	Radiolocation	RADIOLOCATION				
		Space Research				
	5.473A	ECA24 ECA36	IRL1			
9200 - 9300 MHz	EARTH EXPLORATION- SATELLITE (active) 5.474A 5.474B	EARTH EXPLORATION- SATELLITE (active)				
	RADIOLOCATION	RADIOLOCATION				
	MARITIME RADIONAVIGATION 5.472	MARITIME RADIONAVIGATION				
		Space Research				
	5.474 5.474D	ECA24 ECA36	IRL1			

Frequency Band (MHz)	ITU	European	National Usage	Legislation	CEPT	Notes
9300 - 9500 MHz	RADIONAVIGATION 5.475	RADIONAVIGATION	Radionavigation	National Legislation: S.I. 369 of 2009		Maritime Radionavigation Service. See ComReg document 11/07.
	EARTH EXPLORATION-SATELLITE (active)	EARTH EXPLORATION-SATELLITE (active)				
	SPACE RESEARCH (active)	SPACE RESEARCH (active)				
	RADIOLOCATION	RADIOLOCATION	Radiolocation	National Legislation: S.I. 369 of 2009		Maritime RACONs. See ComReg document 11/07.
	5.427 5.474 5.475 5.475A 5.475B 5.476A	ECA24 ECA36	IRL1			Weather radar (9330-9360MHz), radiolocation: Position fixing (private operators). See ComReg document 11/07.

Frequency Band (MHz)	ITU	European	National Usage	Legislation	CEPT	Notes
9500 - 9800 MHz	EARTH EXPLORATION-SATELLITE (active)	EARTH EXPLORATION-SATELLITE (active)				
	RADIOLOCATION	RADIOLOCATION	Radiolocation	National Legislation: S.I. 369 of 2009		Bird tracking radar See ComReg document 11/07
	RADIONAVIGATION					
	SPACE RESEARCH (active)	SPACE RESEARCH (active)				
	5.476A	ECA24 ECA36	IRL1			
9800 - 9900 MHz	RADIOLOCATION	RADIOLOCATION				
	Earth Exploration-Satellite (Active)	Earth Exploration-Satellite (Active)				
	Space Research (active)	Space Research (active)				
	Fixed					
	5.478A 5.478B	ECA24 ECA36	IRL1			

Frequency Band (MHz)	ITU	European	National Usage	Legislation	CEPT	Notes
9900 - 10000 MHz	EARTH EXPLORATION-SATELLITE (Active) 5.474A 5.474B 5.474C	EARTH EXPLORATION-SATELLITE (Active)				

# 05

## Spectrum from 10 GHz to 3000 GHz

## GENERAL INFORMATION for 10 GHz to 3000 GHz

All radio and telecommunications terminal equipment must comply with the Radio Equipment Directive.

Please see <https://www.comreg.ie/industry/radio-spectrum/spectrum-compliance/equipment-compliance/> for further details.

All apparatus for Wireless Telegraphy requires a licence unless it has been specifically exempted from licensing under Irish Legislation by means of an Exemption Order. Please see <https://www.comreg.ie/industry/radio-spectrum/licence-exemptions/list-of-licence-exemptions/> for further details.

The following references apply to the spectrum from 10 GHz to 3000 GHz:

1. Commission Decision 676/2002/EC of the European Parliament and of the Council of 7 March 2002 on a regulatory framework for radio spectrum policy in the European Community (Radio Spectrum Decision).  
See: <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32002D0676&from=EN>
2. Commission Decision 2019/785/EU on the harmonisation of radio spectrum for equipment using ultra-wideband technology in the Union and repealing Decision 2007/131/EC.  
See: <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32014L0053&from=EN>
3. Where short-range devices ("SRD's") are utilised within a given band, this is denoted by the generic footnote "IRL1". Where applicable, this footnote will be situated under the "National Usage" column and in the same row as both the ITU and ECA Footnotes. In all instances where the footnote "IRL1" is listed, it is recommended that readers refer to ComReg document 02/71R, as revised, for further information relating to specific SRD usage.  
See: <https://www.comreg.ie/publication/permitted-short-range-devices-in-ireland-3>
4. Commission Decision 2006/771/EC, as amended by Commission Implementing Decision (EU) 2022/180, sets out harmonised technical conditions for a wide variety of the SRD applications falling under the scope of the footnote "IRL1". Readers are referred to ComReg document 02/71R for further details on specific bands to which this Commission Decision applies.  
For Decision 2006/771/EC, see: <https://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2006:312:0066:0070:EN:PDF>  
For Decision (EU) 2022/180, see: <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32022D0180&from=EN>

5. EC Decisions other than Commission Decision 2006/771/EC (as amended by Commission Implementing Decision (EU) 2019/1345), which set out harmonised technical conditions for some other SRD applications falling under the scope of the footnote "IRL1", are also listed within the table. Such Decisions, where applicable, are situated in cells directly to the right of the "IRL1" footnote, and under the "Legislation" column. Readers are further referred to ComReg document 02/71R for more detailed information on these Decisions also.
6. S.I. No. 248 of 2017 - European Union (Radio Equipment) Regulations 2017.  
See: <http://www.irishstatutebook.ie/eli/2017/si/248/made/en/print>
7. Directive 2014/53/EU of the European Parliament and of the Council of 16 April 2014 on the harmonisation of the laws of the Member States relating to the making available on the market of radio equipment and repealing Directive 1999/5/EC  
See: <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32014L0053&from=EN>
8. Wireless Telegraphy Act, 1926 (Number 45 of 1926).  
See: <http://www.irishstatutebook.ie/eli/1926/act/45/enacted/en/html>
9. S.I. 193 of 2009, "Wireless Telegraphy (Aircraft Station Licence) Regulations 2009", applies to licences to keep, have possession of, install, maintain, work and use apparatus for wireless telegraphy forming part of an Aircraft Station, and having the characteristics set out therein.  
See: [http://www.comreg.ie/\\_fileupload/publications/SI193of2009.pdf](http://www.comreg.ie/_fileupload/publications/SI193of2009.pdf)

Frequency Band (GHz)	ITU	European	National Usage	Legislation	CEPT	Notes	
10 - 10.4000 GHz	EARTH EXPLORATION-SATELLITE 5.474A 5.474B 5.474C	EARTH EXPLORATION-SATELLITE (active)					
	FIXED	FIXED	FWALA (10.15-10.3 GHz /and 10.5-10.65 GHz)	National Legislation: S.I. 79 of 2003 S.I. 530 of 2003	ERC/REC 12-05	FWALA services (10.15–10.3 GHz). See ComReg document 06/17R3 for details of band plan and pairing arrangements	
	MOBILE	MOBILE				See ComReg document 02/02R and 08/08R as revised.	
	RADIOLOCATION	RADIOLOCATION					
	Amateur	Amateur	Amateur (secondary)	National Legislation: S.I. 192 of 2009		See ComReg document 09/45, as revised.	
				PMSE		ERC/REC 25-10	See ComReg document 08/08R, as revised.
	5.474D 5.479	ECA17A ECA36	IRL1				

Frequency Band (GHz)	ITU	European	National Usage	Legislation	CEPT	Notes
10.4000 - 10.4500 GHz	FIXED	FIXED				
	MOBILE	Mobile				
	RADIOLOCATION	RADIOLOCATION				
	Amateur	Amateur	Amateur (secondary)	National Legislation: S.I. 192 of 2009		See ComReg document 09/45, as revised.
			PMSE		ERC/REC 25-10	See ComReg document 08/08R, as revised.
		ECA17 ECA17A ECA36	IRL1			
10.4500 - 10.5000 GHz	RADIOLOCATION	RADIOLOCATION			ERC/REC 12-05 (Fixed links)	
		FIXED				
		MOBILE				
	Amateur	Amateur	Amateur (secondary)	National Legislation: S.I. 192 of 2009		See ComReg document 09/45, as revised.

Frequency Band (GHz)	ITU	European	National Usage	Legislation	CEPT	Notes
10.4500 - 10.5000 GHz -continued-	Amateur-Satellite	Amateur-Satellite	Amateur-satellite (secondary)	National Legislation: S.I. 192 of 2009		See ComReg document 09/45, as revised.
			PMSE		ERC/REC 25-10	See ComReg document 08/08R, as revised.
		ECA17 ECA17A ECA23 ECA36	IRL1			
10.5000 - 10.5500 GHz	FIXED	FIXED	FWALA (10.15-10.3 and 10.5-10.65 GHz)	National Legislation: S.I. 79 of 2003 S.I. 530 of 2003		See ComReg documents 06/17R3, 06/17a and 06/18
	MOBILE	MOBILE				
	Radiolocation	Radiolocation				
			PMSE		ERC/REC 25-10	See ComReg document 08/08R, as revised.
		ECA17A	IRL1			

Frequency Band (GHz)	ITU	European	National Usage	Legislation	CEPT	Notes
10.5500 - 10.6000 GHz	FIXED	FIXED	FWALA (10.15-10.3 and 10.5-10.65 GHz)	National Legislation: S.I. 79 of 2003 S.I. 530 of 2003	ERC/REC 12-05	FWA services (10.5 – 10.65 GHz). See ComReg document 06/17R7 for details of band plan and pairing arrangements.
	MOBILE EXCEPT AERONAUTICAL MOBILE	MOBILE EXCEPT AERONAUTICAL MOBILE				
	Radiolocation	Radiolocation				
			PMSE		ERC/REC 25-10	See ComReg document 08/08R, as revised.
		ECA17A	IRL1			
10.6000 - 10.6800 GHz	EARTH EXPLORATION-SATELLITE (passive)	EARTH EXPLORATION-SATELLITE (passive)				
	FIXED	FIXED	FWALA (10.15-10.3 and 10.5-10.65 GHz)	National Legislation: S.I. 79 of 2003 S.I. 530 of 2003	ECC/DEC/(10)01	FWA services (10.5 – 10.65 GHz). See ComReg document 06/17R7 for details of band plan and pairing arrangements.

Frequency Band (GHz)	ITU	European	National Usage	Legislation	CEPT	Notes	
10.6000 - 10.6800 GHz -continued-	Mobile except Aeronautical Mobile	Mobile except Aeronautical Mobile					
	RADIO ASTRONOMY	RADIO ASTRONOMY					
	SPACE RESEARCH (passive)	SPACE RESEARCH (passive)					
	Radiolocation	Radiolocation	Radiolocation (security devices, to 10.65 GHz))	National Legislation: S.I. 369 of 2009		See ComReg document 11/07.	
				PMSE		ERC/REC 25-10	See ComReg document 08/08R, as revised.
	5.149 5.482 5.482A	ECA17					
10.6800 - 10.7000 GHz	EARTH EXPLORATION- SATELLITE (passive)	EARTH EXPLORATION- SATELLITE (passive)					
	RADIO ASTRONOMY	RADIO ASTRONOMY	Radio Astronomy				

Frequency Band (GHz)	ITU	European	National Usage	Legislation	CEPT	Notes
10.6800 - 10.7000 GHz -continued-	SPACE RESEARCH (passive)	SPACE RESEARCH (passive)				
	5.340					
10.7000 - 10.9500 GHz	FIXED	FIXED	Fixed Links (Infrastructure)	National Legislation: S.I. 370 of 2009	ERC/REC 12-06 Annex E	See ComReg documents 09/89 and 09/89A ITU-R F.387-6 Annex 2
	FIXED-SATELLITE (space to Earth) 5.441 (Earth to space) 5.484	FIXED-SATELLITE (space to Earth) (Earth to space)	Earth stations (satellite down links) (broadcasters) and transportable Earth stations	National Legislation: S.I. 295 OF 2007	ERC/DEC/(00)08	Fixed-Satellite See ComReg document 00/64R. National Allotment for Fixed-satellite Down Link (10.7 - 10.95 GHz, 11.2-11.45 GHz) ITU Radio Regulations Appendix 30B
			Terminals for Satellite Services (space to Earth)	National Legislation: S.I. 226 of 2020	ECC/DEC/(05)10 ECC/DEC/(05)11 ECC/DEC/(06)02 ECC/DEC/(06)03 ECC/DEC/(18)04 ECC/DEC/(18)05 ECC/DEC/(12)01	See ComReg document 20/47, as amended.
	MOBILE EXCEPT AERONAUTICAL MOBILE	MOBILE EXCEPT AERONAUTICAL MOBILE				

Frequency Band (GHz)	ITU	European	National Usage	Legislation	CEPT	Notes
10.7000 - 10.9500 GHz -continued-		Mobile-Satellite (space to Earth)				
10.9500 - 11.2000 GHz	FIXED	FIXED	Fixed Links (Infrastructure)	National Legislation: S.I. 370 of 2009	ERC/REC 12-06 Annex E	See ComReg documents 09/89 and 09/89A ITU-R F.387-6 Annex 2
	FIXED-SATELLITE (Earth to space) 5.484 (space to Earth) 5.484A 5.484B	FIXED-SATELLITE (Earth to space) (Space to Earth)	Terminals for Satellite Services (space to Earth)	National Legislation: S.I. 226 of 2020	ECC/DEC/(05)10 ECC/DEC/(05)11 ECC/DEC/(06)02 ECC/DEC/(06)03 ECC/DEC/(18)04 ECC/DEC/(18)05 ECC/DEC/(12)01	See ComReg document 20/47, as amended.
	MOBILE EXCEPT AERONAUTICAL MOBILE	MOBILE EXCEPT AERONAUTICAL MOBILE				
11.2000 - 11.4500 GHz	FIXED	FIXED	Fixed Links (Infrastructure)	National Legislation: S.I. 370 of 2009	ERC/REC 12-06 Annex E	See ComReg documents 09/89 and 09/89A ITU-R F.387-6 Annex 2

Frequency Band (GHz)	ITU	European	National Usage	Legislation	CEPT	Notes
11.2000 - 11.4500 GHz -continued-	FIXED-SATELLITE (Earth to space) 5.484 (space to Earth) 5.441	FIXED-SATELLITE	Earth stations (satellite down links) (broadcasters) VSAT and transportable Earth stations	National Legislation: S.I. 295 of 2007 S.I. 197 of 2005	ERC/DEC/(00)08 ECC/DEC/(03)04 ECC/DEC/(05)10 ECC/DEC/(05)11 ECC/DEC/(06)02 ECC/DEC/(06)03	Fixed-Satellite See ComReg document 00/64R. National Allotment for Fixed-satellite Down Link (10.7 - 10.95 GHz, 11.2- 11.45 GHz) ITU Radio Regulations Appendix 30B
			Terminals for Satellite Services (space to Earth)	National Legislation: S.I. 226 of 2020	ECC/DEC/(05)10 ECC/DEC/(05)11 ECC/DEC/(06)02 ECC/DEC/(06)03 ECC/DEC/(18)04 ECC/DEC/(18)05 ECC/DEC/(12)01	See ComReg document 20/47, as amended.
	MOBILE EXCEPT AERONAUTICAL MOBILE	MOBILE EXCEPT AERONAUTICAL MOBILE				
11.4500 - 11.7000 GHz	FIXED	FIXED	Fixed Links (Infrastructure)	National Legislation: S.I. 370 of 2009	ERC/REC 12-06	See ComReg documents 09/89 and 09/89A ITU-R F.387-6 Annex 2

Frequency Band (GHz)	ITU	European	National Usage	Legislation	CEPT	Notes
11.4500 - 11.7000 GHz -continued-	FIXED-SATELLITE (Earth to space) 5.484 (space to Earth) 5.484A 5.484B	FIXED-SATELLITE (Earth to space) (space to Earth)	Terminals for Satellite Services (space to Earth)	National Legislation: S.I. 226 of 2020	ECC/DEC/(05)10 ECC/DEC/(05)11 ECC/DEC/(06)02 ECC/DEC/(06)03 ECC/DEC/(18)04 ECC/DEC/(18)05 ECC/DEC/(12)01	See ComReg document 20/47, as amended.
	MOBILE EXCEPT AERONAUTICAL MOBILE	MOBILE EXCEPT AERONAUTICAL MOBILE				
11.7000 - 12.5000 GHz	FIXED					
	BROADCASTING					
	BROADCASTING- SATELLITE 5.492	BROADCASTING- SATELLITE	PMSE	National Legislation: S.I. 505 of 2003	ERC/DEC/(00)08	SNG and ENG downlink (public broadcasters).  Broadcast-Satellite plans as per ITU Radio Regulations Appendix 8. See ComReg Document 08/08R, as revised.
		Terminals for Satellite Services (space to Earth)	National Legislation: S.I. 226 of 2020	ECC/DEC/(06)02 ECC/DEC/(06)03 ECC/DEC/(12)01 ECC/DEC/(18)04 ECC/DEC/(18)05	See ComReg document 20/47, as amended.	

Frequency Band (GHz)	ITU	European	National Usage	Legislation	CEPT	Notes
11.7000 - 12.5000 GHz -continued-	Mobile except Aeronautical Mobile	MOBILE EXCEPT AERONAUTICAL MOBILE				
	5.487 5.487A	ECA28				
12.5000 - 12.7500 GHz	FIXED-SATELLITE (space to Earth) 5.484A (Earth to space) 5.484B	FIXED-SATELLITE (space to Earth) (Earth to space)	VSAT and transportable Earth stations	National Legislation: S.I. 295 of 2007	ECC/DEC/(05)10 ECC/DEC/(05)11 ECC/DEC/(06)03	See ComReg document 00/64R.
			Terminals for Satellite Services (space to Earth)	National Legislation: S.I. 226 of 2020	ECC/DEC/(06)02 ECC/DEC/(06)03 ECC/DEC/(12)01 ECC/DEC/(18)04 ECC/DEC/(18)05	See ComReg document 20/47, as amended.
12.7500 - 13.2500 GHz	FIXED	FIXED	Fixed links (12.75-13.25 GHz)	National Legislation: S.I. 370 of 2009	ERC/REC 12-02	See ComReg documents 09/89 and 09/89A
	FIXED-SATELLITE (Earth to space) 5.441	FIXED-SATELLITE (Earth to space)	Transportable Earth Stations	National Legislation: S.I. 295 of 2007		National Allotment for Fixed-satellite Uplink (12.75 - 13.25 GHz) in ITU Radio Regulations Appendix 30B See ComReg document 00/64R.

Frequency Band (GHz)	ITU	European	National Usage	Legislation	CEPT	Notes
12.7500 - 13.2500 GHz -continued-	MOBILE					
	Space Research (deep space) (space to Earth)					
13.2500 - 13.4000 GHz	EARTH EXPLORATION- SATELLITE (active)	EARTH EXPLORATION- SATELLITE (active)				
	AERONAUTICAL RADIONAVIGATION 5.497	AERONAUTICAL RADIONAVIGATION				
	SPACE RESEARCH (active)	SPACE RESEARCH (active)				
	5.498A	ECA26				
13.4000 - 13.6500 GHz	EARTH EXPLORATION- SATELLITE (active)	EARTH EXPLORATION- SATELLITE (active)				

Frequency Band (GHz)	ITU	European	National Usage	Legislation	CEPT	Notes
13.4000 - 13.6500 GHz -continued-	FIXED-SATELLITE (space to Earth) 5.499A 5.499B	FIXED-SATELLITE (space to Earth)				
	RADIOLOCATION	RADIOLOCATION				
	SPACE RESEARCH 5.499C 5.499D	SPACE RESEARCH				
	Standard Frequency and Time Signal–Satellite (Earth to space)					
	5.499E 5.501B	ECA26 ECA36	IRL1			
13.6500 - 13.7500 GHz	EARTH EXPLORATION- SATELLITE	EARTH EXPLORATION- SATELLITE				
	RADIOLOCATION	RADIOLOCATION				
	SPACE RESEARCH 5.501A	SPACE RESEARCH				

Frequency Band (GHz)	ITU	European	National Usage	Legislation	CEPT	Notes
13.6500 - 13.7500 GHz -continued-	Standard Frequency and Time Signal-Satellite (Earth to space)					
	5.501B	ECA26 ECA36	IRL1			
13.7500 - 14 GHz	RADIOLOCATION	RADIOLOCATION	Radiolocation	National Legislation: S.I. 369 of 2009		Maritime Navigation Radars See ComReg document 11/07.
	FIXED-SATELLITE (Earth to space) 5.484A	FIXED-SATELLITE (Earth to space)	VSAT and transportable Earth stations	National Legislation: S.I. 295 of 2007		See ComReg document 00/64R.
	Standard Frequency and Time Signal-satellite (Earth to space)					
	Space Research	Space Research				
	Earth Exploration-Satellite					
	5.502 5.503	ECA26 ECA36	IRL1			

Frequency Band (GHz)	ITU	European	National Usage	Legislation	CEPT	Notes
14 - 14.2500 GHz	FIXED-SATELLITE (Earth to space) 5.457A 5.457B 5.484A 5.484B 5.506 5.506B	FIXED-SATELLITE (Earth to space)	Earth Stations (satellite uplinks), public broadcasters uplinks, VSAT (14-14.5 GHz) uplinks, transportable Earth stations (SNG) uplinks, ENG uplinks	National Legislation: S.I. 295 of 2007	ECC/DEC/(05)10 ECC/DEC/(06)02 ECC/DEC/(06)03 ERC/REC 13-03	See ComReg document 00/64R.
			Terminals for Satellite Services (Earth to space)	National Legislation: S.I. 226 of 2020	ECC/DEC/(05)10 ECC/DEC/(06)02 ECC/DEC/(06)03 ECC/DEC/(18)04 ECC/DEC/(18)05	See ComReg document 20/47, as revised.
	RADIONAVIGATION 5.504					
	Mobile-Satellite (Earth to space) 5.504A 5.504B 5.504C	Mobile-Satellite (Earth to space)	Terminals for Satellite Services (Earth to space)	National Legislation: S.I. 226 of 2020	ECC/DEC/(05)11	See ComReg document 20/47, as revised.
	Space Research	Space Research				
	5.504A					

Frequency Band (GHz)	ITU	European	National Usage	Legislation	CEPT	Notes
14.2500 - 14.3000 GHz	FIXED-SATELLITE (Earth to space) 5.484A 5.506 5.457A 5.457B 5.506B 5.484B	FIXED-SATELLITE (Earth to space)	Earth Stations (satellite uplinks), (public broadcasters), uplinks, VSAT (14-14.5 GHz) uplinks, transportable Earth stations (SNG) uplinks	National Legislation: S.I. 295 of 2007	ECC/DEC/(03)04 ECC/DEC/(05)10 ERC/REC 13-03 (VSAT/SNG)	See ComReg document 00/64R.
			Terminals for Satellite Services (Earth to space)	National Legislation: S.I. 226 of 2020	ECC/DEC/(05)10 ECC/DEC/(06)02 ECC/DEC/(06)03 ECC/DEC/(18)04 ECC/DEC/(18)05	See ComReg document 20/47, as revised.
	RADIONAVIGATION 5.504					
	Mobile-Satellite 5.506A 5.508A 5.504B	Mobile-Satellite	Terminals for Satellite Services (Earth to space)	National Legislation: S.I. 226 of 2020	ECC/DEC/(05)11	See ComReg document 20/47, as revised.
	Space Research	Space Research				
	5.504A 5.508					
14.3000 - 14.4000 GHz	FIXED					

Frequency Band (GHz)	ITU	European	National Usage	Legislation	CEPT	Notes
14.3000 - 14.4000 GHz -continued-	FIXED-SATELLITE (Earth to space) 5.457A 5.457B 5.484A 5.484B 5.506 5.506B	FIXED-SATELLITE (Earth to space)	VSAT (14-14.5 GHz) uplinks	National Legislation: S.I. 295 of 2007	ECC/DEC/(03)04 ECC/DEC/(05)10 ERC/REC 13-03	See ComReg document 00/64R.
			PMSE	National Legislation: S.I. 295 OF 2007		ENG uplinks, SNG uplinks.
			Terminals for Satellite Services (Earth to space)	National Legislation: S.I. 226 OF 2020	ECC/DEC/(05)10 ECC/DEC/(06)02 ECC/DEC/(06)03 ECC/DEC/(18)04 ECC/DEC/(18)05	See ComReg document 20/47, as revised.
	MOBILE EXCEPT AERONAUTICAL MOBILE					
	Mobile-Satellite (Earth to space) 5.504B 5.506A 5.509A	Mobile-Satellite (Earth to space)	Terminals for Satellite Services (Earth to space)	National Legislation: S.I. 226 of 2020	ECC/DEC/(05)11	See ComReg document 20/47, as revised.
	Radionavigation-Satellite					
5.504A						

Frequency Band (GHz)	ITU	European	National Usage	Legislation	CEPT	Notes
14.4000 - 14.4700 GHz	FIXED					
	FIXED-SATELLITE (Earth to space) 5.457A 5.457B 5.484A 5.484B 5.506 5.506B	FIXED-SATELLITE (Earth to space)	VSAT (14-14.5 GHz) uplinks	National Legislation: S.I. 295 of 2007	ECC/DEC/(03)04 ECC/DEC/(05)10 ERC/REC 13-03	See ComReg document 00/64R.
			PMSE	National Legislation: S.I. 295 of 2007		ENG uplinks, SNG uplinks.
			Terminals for Satellite Services (Earth to space)	National Legislation: S.I. 226 of 2020	ECC/DEC/(05)10 ECC/DEC/(06)02 ECC/DEC/(06)03 ECC/DEC/(18)04 ECC/DEC/(18)05	See ComReg document 20/47, as revised.
	MOBILE EXCEPT AERONAUTICAL MOBILE					
	Mobile-Satellite (Earth to space) 5.504B 5.506A 5.509A	Mobile-Satellite (Earth to space)	Terminals for Satellite Services (Earth to space)	National Legislation: S.I. 226 of 2020	ECC/DEC/(05)11	See ComReg document 20/47, as revised.
	Space Research (space to Earth)					

Frequency Band (GHz)	ITU	European	National Usage	Legislation	CEPT	Notes
14.4000 - 14.4700 GHz -continued-	5.504A					
14.4700 - 14.5000 GHz	FIXED					
	FIXED-SATELLITE (Earth to space) 5.457A 5.484A 5.506 5.506B	FIXED-SATELLITE (Earth to space)	VSAT uplinks	National Legislation: S.I. 295 of 2007	ECC/DEC/(05)10 ERC/REC 13-03	See ComReg document 00/64R.
			PMSE	National Legislation: S.I. 295 of 2007		ENG uplinks, SNG uplinks.
			Terminals for Satellite Services (Earth to space)	National Legislation: S.I. 226 of 2020	ECC/DEC/(05)10 ECC/DEC/(06)02 ECC/DEC/(06)03 ECC/DEC/(18)04 ECC/DEC/(18)05	See ComReg document 20/47, as revised.
	MOBILE EXCEPT AERONAUTICAL MOBILE					
	Mobile-Satellite (Earth to space) 5.504B 5.506A 5.509A	Mobile-Satellite (Earth to space)	Terminals for Satellite Services (Earth to space)	National Legislation: S.I. 226 of 2020	ECC/DEC/(05)11	See ComReg document 20/47, as revised.
	Radio Astronomy	Radio Astronomy				

Frequency Band (GHz)	ITU	European	National Usage	Legislation	CEPT	Notes
14.4700 - 14.5000 GHz -continued-	5.149 5.504A					
14.5000 - 14.7500 GHz	FIXED	FIXED	Fixed Links (Infrastructure)	National Legislation: S.I. 370 of 2009	ERC/REC 12-07	See ComReg documents 09/89 and 09/89A ITU-R F.636-3
	FIXED-SATELLITE (Earth to space) 5.509B 5.509C 5.509D 5.509E 5.509F 5.510					
	MOBILE	MOBILE				
	Space Research 5.509G					
		Radio Astronomy				
		ECA20 ECA36				

Frequency Band (GHz)	ITU	European	National Usage	Legislation	CEPT	Notes
14.7500 - 14.8000 GHz	FIXED	FIXED				
	FIXED-SATELLITE (Earth to space) 5.510					
	MOBILE	MOBILE				
	Space Research 5.509G					
		Radio Astronomy				
		ECA20 ECA36				
14.8000 - 15.3500 GHz	FIXED	FIXED	Fixed Links (Infrastructure)	National Legislation: S.I. 370 of 2009	ERC/REC 12-07	See ComReg documents 09/89 and 09/89A ITU-R F.636-3
	MOBILE	MOBILE				
	Space Research					
		Radio Astronomy				

Frequency Band (GHz)	ITU	European	National Usage	Legislation	CEPT	Notes
14.8000 - 15.3500 GHz -continued-	5.339	ECA20 ECA36				
15.3500 - 15.4000 GHz	EARTH EXPLORATION- SATELLITE (passive)	EARTH EXPLORATION- SATELLITE (passive)				
	RADIO ASTRONOMY	RADIO ASTRONOMY	Radio Astronomy			
	SPACE RESEARCH (passive)	SPACE RESEARCH (passive)				
	5.340					
15.4000 - 15.4300 GHz	AERONAUTICAL RADIONAVIGATION	AERONAUTICAL RADIONAVIGATION				
	RADIOLOCATION 5.511E 5.511F	RADIOLOCATION				
15.4300 - 15.6300 GHz	FIXED-SATELLITE (Earth to space) 5.511A	FIXED-SATELLITE (Earth to space)				

Frequency Band (GHz)	ITU	European	National Usage	Legislation	CEPT	Notes
15.4300 - 15.6300 GHz -continued-	RADIOLOCATION 5.511E 5.511F	RADIOLOCATION				
	AERONAUTICAL RADIONAVIGATION	AERONAUTICAL RADIONAVIGATION				
	5.511C					
15.6300 - 15.7000 GHz	AERONAUTICAL RADIONAVIGATION	AERONAUTICAL RADIONAVIGATION				
	RADIOLOCATION 5.511E 5.511F	RADIOLOCATION				
15.7000 - 16.6000 GHz	RADIOLOCATION	RADIOLOCATION	Radiolocation	National Legislation: S.I. 369 of 2009		Surface Movement Radar. Annex 10 to the Convention on International Civil Aviation. See ComReg document 11/07.
	5.512 5.513	ECA36				

Frequency Band (GHz)	ITU	European	National Usage	Legislation	CEPT	Notes
16.6000 - 17.1000 GHz	RADIOLOCATION	RADIOLOCATION				
	Space Research (deep space) (Earth to space)	Space Research (deep space) (Earth to space)				
		ECA36				
17.1000 - 17.2000 GHz	RADIOLOCATION	RADIOLOCATION				
		Mobile				
		ECA36	IRL1			
17.2000 - 17.3000 GHz	EARTH EXPLORATION-SATELLITE (active)	EARTH EXPLORATION-SATELLITE (active)				
	RADIOLOCATION	RADIOLOCATION				
	SPACE RESEARCH (active)	SPACE RESEARCH (active)				
		MOBILE				

Frequency Band (GHz)	ITU	European	National Usage	Legislation	CEPT	Notes
17.2000 - 17.3000 GHz -continued-	5.513A	ECA36	IRL1			
17.3000 - 17.7000 GHz	INTER-SATELLITE (Earth to space) 5.516 (space to Earth) 5.516A 5.516B	INTER-SATELLITE	Terminals for Satellite Services (space to Earth)	National Legislation S.I. 226 of 2020	ECC/DEC/(13)01 ECC/DEC/(15)04	See ComReg document 20/47, as revised.
	Radiolocation	Radiolocation				Feeder Link plans for Broadcast Satellites as per ITU Radio Regulations Appendix 30A
		ECA36				
17.7000 - 18.1000 GHz	FIXED	FIXED	Fixed Links (Infrastructure)	National Legislation: S.I. 370 of 2009	ERC/DEC/(00)07 ERC/REC 12-03 Annex A	See ComReg documents 09/89 and 09/89A
	FIXED-SATELLITE (space to Earth) 5.484A 5.517A (Earth to space) 5.516	FIXED-SATELLITE (space to Earth) (Earth to space)	Terminals for Satellite Services (space to Earth)	National Legislation: S.I. 226 of 2020	ECC/DEC/(13)01 ECC/DEC/(15)04	See ComReg document 20/47, as revised.
	MOBILE					

Frequency Band (GHz)	ITU	European	National Usage	Legislation	CEPT	Notes
18.1000 - 18.4000 GHz	FIXED	FIXED	Fixed Links (Infrastructure)	National Legislation: S.I. 370 of 2009	ERC/DEC/(00)07 ERC/REC 12-03 Annex A	See ComReg documents 09/89 and 09/89A
	FIXED-SATELLITE (Earth to space) 5.520 (space to Earth) 5.484A, 5.516B, 5.517A	FIXED-SATELLITE (Earth to space) (space to Earth)	Terminals for Satellite Services (space to Earth)	National Legislation: S.I. 226 of 2020	ECC/DEC/(13)01 ECC/DEC/(15)04	See ComReg document 20/47, as revised.
	MOBILE					
		METEOROLOGICAL- SATELLITE (space to Earth)				
	5.519					
18.4000 - 18.6000 GHz	FIXED	FIXED	Fixed Links (Infrastructure)	National Legislation: S.I. 370 of 2009	ERC/DEC/(00)07 ERC/REC 12-03 Annex A	See ComReg documents 09/89 and 09/89A
	FIXED-SATELLITE (space to Earth) 5.484A 5.516B 5.517A	FIXED-SATELLITE (space to Earth)	Terminals for Satellite Services (space to Earth)	National Legislation: S.I. 226 of 2020	ECC/DEC/(13)01 ECC/DEC/(15)04	See ComReg document 20/47, as revised.
	MOBILE					

Frequency Band (GHz)	ITU	European	National Usage	Legislation	CEPT	Notes
18.6000 - 18.8000 GHz	FIXED	FIXED	Fixed Links (Infrastructure)	National Legislation: S.I. 370 of 2009	ERC/DEC/(00)07 ERC/REC 12-03 Annex A	See ComReg documents 09/89 and 09/89A
	FIXED-SATELLITE (space to Earth) 5.517A 5.522B	FIXED-SATELLITE (space to Earth)	Terminals for Satellite Services (space to Earth)	National Legislation: S.I. 226 of 2020	ECC/DEC/(13)01 ECC/DEC/(15)04	See ComReg document 20/47, as revised.
	MOBILE EXCEPT AERONAUTICAL MOBILE					
	EARTH EXPLORATION- SATELLITE (passive)	EARTH EXPLORATION- SATELLITE (passive)				
	Space Research (passive)					
	5.522A					
18.8000 - 19.3000 GHz	FIXED	FIXED	Fixed Links (Infrastructure)	National Legislation: S.I. 370 of 2009	ERC/DEC/(00)07 ERC/REC 12-03 Annex A	See ComReg documents 09/89 and 09/89A

Frequency Band (GHz)	ITU	European	National Usage	Legislation	CEPT	Notes
18.8000 - 19.3000 GHz -continued-	FIXED-SATELLITE (space to Earth) 5.516B 5.517A 5.523A	FIXED-SATELLITE (space to Earth)	Earth station down links (educational institutions)	National Legislation: S.I. 197 of 2005	ECC/DEC/(13)01	
			Terminals for Satellite Services (space to Earth)	National Legislation: S.I. 226 of 2020	ECC/DEC/(13)01 ECC/DEC/(15)04	See ComReg document 20/47, as revised.
	MOBILE					
19.3000 - 19.7000 GHz	FIXED	FIXED	Fixed Links (Infrastructure)	National Legislation: S.I. 370 of 2009	ERC/DEC/(00)07 ERC/REC 12-03 Annex A	See ComReg documents 09/89 and 09/89A
	FIXED-SATELLITE (space to Earth) (Earth to space) 5.517A 5.523B 5.523C 5.523D 5.523E	FIXED-SATELLITE (space to Earth)(Earth to space)	Earth station down links (educational institutions)	National Legislation: S.I. 197 of 2005	ECC/DEC/(13)01	
			Terminals for Satellite Services (space to Earth)	National Legislation: S.I. 226 of 2020	ECC/DEC/(13)01 ECC/DEC/(15)04	See ComReg document 20/47, as revised.
	MOBILE					
19.7000 - 20.1000 GHz	FIXED-SATELLITE (space to Earth) 5.484A 5.516B 5.484B 5.527A	FIXED-SATELLITE (space to Earth)	Terminals for Satellite Services (space to Earth)	National Legislation: S.I. 226 of 2020	ECC/DEC/(06)02 ECC/DEC/(06)03 ECC/DEC/(13)01 ECC/DEC/(15)04	See ComReg document 20/47, as revised.

Frequency Band (GHz)	ITU	European	National Usage	Legislation	CEPT	Notes
19.7000 - 20.1000 GHz -continued-	Mobile-Satellite (space to Earth)	Mobile-Satellite (space to Earth)				
20.1000 - 20.2000 GHz	FIXED-SATELLITE (space to Earth) 5.484A 5.484B 5.516B 5.527A	FIXED-SATELLITE (space to Earth)	Terminals for Satellite Services (space to Earth)	National Legislation: S.I. 226 of 2020	ECC/DEC/(06)02 ECC/DEC/(06)03 ECC/DEC/(13)01 ECC/DEC/(15)04	See ComReg document 20/47, as revised.
	MOBILE-SATELLITE (space to Earth)	MOBILE-SATELLITE (space to Earth)				
	5.525 5.526 5.527 5.528					
20.2000 - 21.2000 GHz	FIXED-SATELLITE (space to Earth)	FIXED-SATELLITE (space to Earth)				
	MOBILE-SATELLITE (space to Earth)	MOBILE-SATELLITE (space to Earth)				
	Standard Frequency and Time Signal–Satellite (space to Earth)					

Frequency Band (GHz)	ITU	European	National Usage	Legislation	CEPT	Notes
20.2000 - 21.2000 GHz -continued-		ECA36				
21.2000 - 21.4000 GHz	EARTH EXPLORATION- SATELLITE (passive)	EARTH EXPLORATION- SATELLITE (passive)				
	FIXED	FIXED				
	MOBILE	MOBILE				
	SPACE RESEARCH (passive)	SPACE RESEARCH (passive)				
21.4000 - 22 GHz	FIXED					
	MOBILE					
	BROADCASTING- SATELLITE 5.208B	BROADCASTING- SATELLITE				
	5.530A 5.530B		IRL1	Decision 2005/50/EC (as amended by Decision 2011/485/EU and Decision (EU) 2017/2077)		

Frequency Band (GHz)	ITU	European	National Usage	Legislation	CEPT	Notes
22 - 22.2100 GHz	FIXED	FIXED	Fixed Links (Infrastructure)	National Legislation: S.I. 370 of 2009	ERC/REC 13-02 E Annex A	See ComReg documents 09/89 and 09/89A
	MOBILE EXCEPT AERONAUTICAL MOBILE	MOBILE EXCEPT AERONAUTICAL MOBILE				
		RADIO ASTRONOMY				
		SPACE RESEARCH (passive)				
	5.149	ECA17A	IRL1	Decision 2005/50/EC (as amended by Decision 2011/485/EU and Decision (EU) 2017/2077)		
22.2100 - 22.5000 GHz	EARTH EXPLORATION- SATELLITE (passive)	Earth Exploration- Satellite (passive)				
	FIXED	FIXED	Fixed Links (Infrastructure)	National Legislation: S.I. 370 of 2009	ERC/REC 13-02 E Annex A	See ComReg documents 09/89 and 09/89A
	MOBILE EXCEPT AERONAUTICAL MOBILE	MOBILE EXCEPT AERONAUTICAL MOBILE				
	RADIO ASTRONOMY	RADIO ASTRONOMY				

Frequency Band (GHz)	ITU	European	National Usage	Legislation	CEPT	Notes
22.2100 - 22.5000 GHz -continued-	SPACE RESEARCH (passive)	SPACE RESEARCH (passive)				
		Mobile				
	5.149 5.532	ECA17A	IRL1	Decision 2005/50/EC (as amended by Decision 2011/485/EU and Decision (EU) 2017/2077)		
22.5000 - 22.5500 GHz	FIXED	FIXED	Fixed Links (Infrastructure)	National Legislation: S.I. 370 of 2009	ERC/REC 13-02 E Annex A	See ComReg documents 09/89 and 09/89A
	MOBILE	MOBILE				
		RADIO ASTRONOMY				
		SPACE RESEARCH (passive)				
		ECA17A	IRL1	Decision 2005/50/EC (as amended by Decision 2011/485/EU and Decision (EU) 2017/2077)		

Frequency Band (GHz)	ITU	European	National Usage	Legislation	CEPT	Notes
22.5500 - 23.1500 GHz	FIXED	FIXED	Fixed Links (Infrastructure)	National Legislation: S.I. 370 of 2009	ERC/REC 13-02 E Annex A	See ComReg documents 09/89 and 09/89A
	INTER-SATELLITE 5.338A	INTER-SATELLITE				
	MOBILE	MOBILE				
	SPACE RESEARCH (Earth to space) 5.532A	SPACE RESEARCH (passive)				
		ECA17A	IRL1	Decision 2005/50/EC (as amended by Decision 2011/485/EU and Decision (EU) 2017/2077)		
23.1500 - 23.5500 GHz	INTER-SATELLITE 5.338A					
	MOBILE					
	FIXED	FIXED				

Frequency Band (GHz)	ITU	European	National Usage	Legislation	CEPT	Notes
23.1500 - 23.5500 GHz -continued-			IRL1	Decision 2005/50/EC (as amended by Decision 2011/485/EU and Decision (EU) 2017/2077)		
23.5500 - 23.6000 GHz	FIXED	FIXED	Fixed Links (Infrastructure)	National Legislation: S.I. 370 of 2009	ERC/REC 13-02 E Annex A	See ComReg documents 09/89 and 09/89A
	MOBILE	MOBILE				
		INTER-SATELLITE	IRL1	Decision 2005/50/EC (as amended by Decision 2011/485/EU and Decision (EU) 2017/2077)		
23.6000 - 24 GHz	EARTH EXPLORATION-SATELLITE (passive)	EARTH EXPLORATION-SATELLITE (passive)				
	RADIO ASTRONOMY	RADIO ASTRONOMY	Radio Astronomy			
	SPACE RESEARCH (passive)	SPACE RESEARCH (passive)				

Frequency Band (GHz)	ITU	European	National Usage	Legislation	CEPT	Notes
23.6000 - 24 GHz -continued-	5.340		IRL1	Decision 2005/50/EC (as amended by Decision 2011/485/EU and Decision (EU) 2017/2077)		
24 - 24.0500 GHz	AMATEUR	AMATEUR	Amateur (Primary)	National Legislation: S.I. 192 OF 2009		See ComReg document 09/45, as revised.
	AMATEUR-SATELLITE	AMATEUR-SATELLITE	Amateur-Satellite (Primary)	National Legislation: S.I. 192 OF 2009		See ComReg document 09/45, as revised.
	5.150		IRL1	Decision 2005/50/EC (as amended by Decision 2011/485/EU and Decision (EU) 2017/2077)		
24.0500 - 24.2500 GHz	RADIOLOCATION	RADIOLOCATION				
	Amateur	Amateur				
	Earth Exploration-Satellite (Active)	Earth Exploration-Satellite (active)				
		Fixed				

Frequency Band (GHz)	ITU	European	National Usage	Legislation	CEPT	Notes
24.0500 - 24.2500 GHz -continued-		Mobile				
	5.150	ECA36	IRL1	Decision 2005/50/EC (as amended by Decision 2011/485/EU and Decision (EU) 2017/2077)		
24.2500 - 24.4500 GHz	FIXED	FIXED				
	MOBILE EXCEPT AERONAUTICAL MOBILE 5.338A 5.532AB	MOBILE EXCEPT AERONAUTICAL MOBILE		European Legislation: Decision (EU) 2019/784 (as amended by Decision (EU) 2020/590)		
		ECA17A	IRL1	Decision 2005/50/EC (as amended by Decision 2011/485/EU and Decision (EU) 2017/2077)		
24.4500 - 24.6500 GHz	FIXED	FIXED	FWALA (24.605-24.745 and 25.613-25.753 GHz)	National Legislation: S.I. 79 OF 2003 S.I. 530 OF 2003	ECC/REC/(11)01	See ComReg documents 06/17R (as revised), 06/17a and 06/18
	INTER-SATELLITE					

Frequency Band (GHz)	ITU	European	National Usage	Legislation	CEPT	Notes
24.4500 - 24.6500 GHz -continued-	MOBILE EXCEPT AERONAUTICAL MOBILE 5.532AB 5.338A	MOBILE EXCEPT AERONAUTICAL MOBILE		European Legislation: Decision (EU) 2019/784 (as amended by Decision (EU) 2020/590)		
		ECA17A (24.45 - 24.5 GHz)	IRL1	Decision 2005/50/EC (as amended by Decision 2011/485/EU and Decision (EU) 2017/2077)		
24.6500 - 24.7500 GHz	FIXED	FIXED	FWALA (24.605-24.745 and 25.613-25.753 GHz)	National Legislation: S.I. 79 of 2003 S.I. 530 of 2003	ECC/REC/(11)01	See ComReg documents 06/17R (as revised), 06/17a, 06/18
	INTER-SATELLITE					
	FIXED-SATELLITE (Earth to space) 5.532B	FIXED-SATELLITE (Earth to space)				
	MOBILE EXCEPT AERONAUTICAL MOBILE 5.338A 5.532AB	MOBILE EXCEPT AERONAUTICAL MOBILE		European Legislation: Decision (EU) 2019/784 (as amended by Decision (EU) 2020/590)		

Frequency Band (GHz)	ITU	European	National Usage	Legislation	CEPT	Notes
24.6500 - 24.7500 GHz -continued-			IRL1	Decision 2005/50/EC (as amended by Decision 2011/485/EU and Decision (EU) 2017/2077)		
24.7500 - 25.2500 GHz	FIXED	FIXED	Fixed national Point-to-Point links (24.745-25.277 and 25.753-26.285 GHz)	National Legislation: S.I. 762 of 2007 S.I. 158 of 2018		See ComReg document 18/32, 18/53
			Fixed national Point-to-Multipoint links (24.801-24.885 and 25.809-25.893 GHz)	National Legislation: S.I. 762 OF 2007 S.I. 158 OF 2003	ECC/REC/(11)01	See ComReg document 07/93R, 06/37CR
	FIXED-SATELLITE (Earth to space) 5.532B	FIXED-SATELLITE (Earth to space)				
	MOBILE EXCEPT AERONAUTICAL MOBILE 5.338A 5.532AB	MOBILE EXCEPT AERONAUTICAL MOBILE		European Legislation: Decision (EU) 2019/784 (as amended by Decision (EU) 2020/590)		
			IRL1	Decision 2005/50/EC (as amended by Decision 2011/485/EU and Decision (EU) 2017/2077)		

Frequency Band (GHz)	ITU	European	National Usage	Legislation	CEPT	Notes
25.2500 - 25.5000 GHz	FIXED	FIXED	Fixed Links	National Legislation: S.I. 370 of 2009	ERC/REC 13-02	See ComReg documents 09/89R (as revised) and 09/89A
	MOBILE 5.338A 5.532AB	MOBILE		European Legislation: Decision (EU) 2019/784 (as amended by Decision (EU) 2020/590)		
	INTER-SATELLITE 5.536	INTER-SATELLITE				
	Standard Frequency and Time Signal-satellite (Earth to space)					
		ECA36	IRL1	Decision 2005/50/EC (as amended by Decision 2011/485/EU and Decision (EU) 2017/2077)		
25.5000 - 26.5000 GHz	FIXED	FIXED	Fixed links (25.277- 25.445 and 26.285- 26.453 GHz)	National Legislation: S.I. 370 of 2009	ERC/REC 13-02	See ComReg documents 09/89R (as revised) and 09/89A
			FWALA (24.605-24.745 and 25.613-25.753 GHz)	National Legislation: S.I. 79 of 2003 S.I. 530 of 2003	ECC/REC/(11)01	See ComReg documents 06/17R(as revised), 06/17a, 06/18

Frequency Band (GHz)	ITU	European	National Usage	Legislation	CEPT	Notes
25.5000 - 26.5000 GHz -continued-			Fixed national Point-to-Point links (24.745-25.277 and 25.753-26.285 GHz)	National Legislation: S.I. 762 of 2007 S.I. 158 of 2018		See ComReg document 18/32, 18/53
	EARTH EXPLORATION-SATELLITE (space to Earth) 5.536B	EARTH EXPLORATION-SATELLITE (space to Earth)				
	INTER-SATELLITE 5.536	INTER-SATELLITE				
	MOBILE 5.338A 5.532AB	MOBILE		European Legislation: Decision (EU) 2019/784 (as amended by Decision (EU) 2020/590)		
	SPACE RESEARCH (space to Earth)	SPACE RESEARCH (space to Earth)				
	Standard Frequency and Time Signal-satellite (Earth to space)					

Frequency Band (GHz)	ITU	European	National Usage	Legislation	CEPT	Notes
25.5000 - 26.5000 GHz -continued-	5.536A	ECA36	IRL1	Decision 2005/50/EC (as amended by Decision 2011/485/EU and Decision (EU) 2017/2077)		
26.5000 - 27 GHz	EARTH EXPLORATION-SATELLITE (space to Earth) 5.536B	EARTH EXPLORATION-SATELLITE (space to Earth)				
	FIXED	FIXED				
	MOBILE 5.338A 5.532AB	MOBILE		European Legislation: Decision (EU) 2019/784 (as amended by Decision (EU) 2020/590)		
	SPACE RESEARCH (space to Earth)	SPACE RESEARCH (space to Earth)				
	Standard Frequency and Time Signal-Satellite (Earth to space)					
	INTER-SATELLITE 5.536	INTER-SATELLITE				

Frequency Band (GHz)	ITU	European	National Usage	Legislation	CEPT	Notes
26.5000 - 27 GHz -continued-	5.536A	ECA36	IRL1	Decision 2005/50/EC (as amended by Decision 2011/485/EU and Decision (EU) 2017/2077 - applies up to 26.65 GHz)		
27 - 27.5000 GHz	FIXED	FIXED				
	MOBILE 5.338A 5.532AB	MOBILE		European Legislation: Decision (EU) 2019/784 (as amended by Decision (EU) 2020/590)		
	INTER-SATELLITE 5.536	INTER-SATELLITE				
		Earth Exploration-Satellite (space to Earth)				
		ECA36				
27.5000 - 28.5000 GHz	FIXED	FIXED	Fixed Links (Infrastructure)	National Legislation: S.I. 370 of 2009	ERC/REC 12-07	See ComReg document s 09/89R (as revised) and 09/89A

Frequency Band (GHz)	ITU	European	National Usage	Legislation	CEPT	Notes
27.5000 - 28.5000 GHz -continued-	FIXED-SATELLITE (Earth to space) 5.484A 5.516B 5.539 5.517A	FIXED-SATELLITE (Earth to space)	Terminals for Satellite Services (Earth to space)	National Legislation: S.I. 226 of 2020	ECC/DEC/(13)01 ECC/DEC/(15)04	See ComReg document 20/47, as revised.
	MOBILE					
	5.538 5.540					
28.5000 - 29.1000 GHz	FIXED	FIXED	Fixed Links (Infrastructure)	National Legislation: S.I. 370 OF 2009	ERC/REC 12-07	See ComReg documents 09/89R (as revised) and 09/89A
	FIXED-SATELLITE (Earth to space) 5.484A 5.516B 5.523A 5.539 5.517A	FIXED-SATELLITE (Earth to space)	Terminals for Satellite Services (Earth to space)	National Legislation: S.I. 226 of 2020	ECC/DEC/(13)01 ECC/DEC/(15)04	See ComReg document 20/47, as revised.
	MOBILE					

Frequency Band (GHz)	ITU	European	National Usage	Legislation	CEPT	Notes
28.5000 - 29.1000 GHz -continued-	Earth Exploration-Satellite (Earth to space) 5.541	Earth Exploration-Satellite (Earth to space)				
	5.540					
29.1000 - 29.5000 GHz	FIXED	FIXED				See ComReg documents 09/89R (as revised) and 09/89A
	FIXED-SATELLITE (Earth to space) 5.523C 5.523E 5.535A 5.539 5.541A 5.516B	FIXED-SATELLITE (Earth to space)	Terminals for Satellite Services (Earth to space)	National Legislation S.I. 226 of 2020	ECC/DEC/(13)01 ECC/DEC/(15)04	See ComReg document 20/47, as revised.
	MOBILE					
	Earth Exploration-Satellite (Earth to space) 5.541	Earth Exploration-Satellite (Earth to space)				
	5.540					

Frequency Band (GHz)	ITU	European	National Usage	Legislation	CEPT	Notes
29.5000 - 29.9000 GHz	FIXED-SATELLITE (Earth to space) 5.484A 5.484B 5.539 5.516B 5.527A	FIXED-SATELLITE (Earth to space)	Terminals for Satellite Services (Earth to space)	National Legislation: S.I. 226 of 2020	ECC/DEC/(06)02 ECC/DEC/(06)03 ECC/DEC/(13)01 ECC/DEC/(15)04	See ComReg document 20/47, as revised.
	Mobile-Satellite (Earth to space)	Mobile-Satellite (Earth to space)				
	Earth Exploration- Satellite (Earth to space) 5.541	Earth Exploration- Satellite (Earth to space)				
	5.540					
29.9000 - 30 GHz	FIXED-SATELLITE (Earth to space) 5.484A 5.484B 5.539 5.516B 5.527A	FIXED-SATELLITE (Earth to space)			ECC/DEC/(06)02 ECC/DEC/(06)03 ECC/DEC/(05)08 ECC/DEC/(13)01	
		MOBILE-SATELLITE (Earth to space)				

Frequency Band (GHz)	ITU	European	National Usage	Legislation	CEPT	Notes
29.9000 - 30 GHz -continued-	Earth Exploration-Satellite (Earth to space) 5.541 5.543	EARTH EXPLORATION-SATELLITE (Earth to space)				
	5.525 5.526 5.527 5.538 5.540					
30 - 31 GHz	FIXED-SATELLITE (Earth to space) 5.338A	FIXED-SATELLITE (Earth to space)			ECC/DEC/(10)02	
	MOBILE-SATELLITE (Earth to space)	MOBILE-SATELLITE (Earth to space)				
	Standard Frequency and Time Signal-satellite (space to Earth)					
		ECA36				
31 - 31.3000 GHz	FIXED 5.338A 5.543B	FIXED	Fixed Links (Infrastructure)	National Legislation: S.I. 370 OF 2009	ERC/REC 12-07 ECC/REC/(02)02	See ComRegDocuments 09/89R (as revised) and 09/89A

Frequency Band (GHz)	ITU	European	National Usage	Legislation	CEPT	Notes
31 - 31.3000 GHz -continued-	MOBILE	MOBILE				
	Standard Frequency and Time Signal-satellite (space to Earth)					
	Space Research 5.544					
	5.149					
31.3000 - 31.5000 GHz	EARTH EXPLORATION-SATELLITE (passive)	EARTH EXPLORATION-SATELLITE (passive)			ECC/DEC/(10)02	
	RADIO ASTRONOMY	RADIO ASTRONOMY	Radio Astronomy			
	SPACE RESEARCH (passive)	SPACE RESEARCH (passive)				
	5.340					
31.5000 - 31.8000 GHz	EARTH EXPLORATION-SATELLITE (passive)	EARTH EXPLORATION-SATELLITE (passive)				

Frequency Band (GHz)	ITU	European	National Usage	Legislation	CEPT	Notes
31.5000 - 31.8000 GHz -continued-	RADIO ASTRONOMY	RADIO ASTRONOMY				
	SPACE RESEARCH (passive)	SPACE RESEARCH (passive)				
	Fixed	Fixed	Fixed Links	National Legislation: S.I. 370 OF 2009	ERC/REC 12-07 ECC/REC/(02)02	See ComReg documents 09/89R (as revised) and 09/89A
	Mobile except Aeronautical Mobile	Mobile except Aeronautical Mobile				
	5.149 5.546					
31.8000 - 32 GHz	FIXED 5.547A	FIXED				
	RADIONAVIGATION	RADIONAVIGATION				
	SPACE RESEARCH (deep space) (space to Earth)	SPACE RESEARCH (deep space) (space to Earth)				

Frequency Band (GHz)	ITU	European	National Usage	Legislation	CEPT	Notes
31.8000 - 32 GHz -continued-	5.547 5.548					
32 - 32.3000 GHz	FIXED 5.547A	FIXED				
	RADIONAVIGATION	RADIONAVIGATION				
	SPACE RESEARCH (Deep space)(space to Earth)	SPACE RESEARCH (Deep space)(space to Earth)				
	5.548 5.547					
32.3000 - 33 GHz	FIXED 5.547A	FIXED				
	INTER-SATELLITE	INTER-SATELLITE				
	RADIONAVIGATION	RADIONAVIGATION				
	5.547 5.548					

Frequency Band (GHz)	ITU	European	National Usage	Legislation	CEPT	Notes
33 - 33.4000 GHz	FIXED 5.547A	FIXED				
	RADIONAVIGATION	RADIONAVIGATION				
		INTER-SATELLITE				
	5.547					
33.4000 - 34.2000 GHz	RADIOLOCATION	RADIOLOCATION				
		ECA36				
34.2000 - 34.7000 GHz	RADIOLOCATION	RADIOLOCATION				
	SPACE RESEARCH (deep space) (Earth to space)	SPACE RESEARCH (deep space) (Earth to space)				
		ECA36				
34.7000 - 35.2000 GHz	RADIOLOCATION	RADIOLOCATION				
	Space Research	Space Research				

Frequency Band (GHz)	ITU	European	National Usage	Legislation	CEPT	Notes
34.7000 - 35.2000 GHz -continued-		ECA36				
35.2000 - 35.5000 GHz	METEOROLOGICAL AIDS	METEOROLOGICAL AIDS				
	RADIOLOCATION	RADIOLOCATION				
		ECA36				
35.5000 - 36 GHz	EARTH EXPLORATION-SATELLITE (active)	EARTH EXPLORATION-SATELLITE (active)				
	METEOROLOGICAL AIDS	METEOROLOGICAL AIDS				
	RADIOLOCATION	RADIOLOCATION				
	SPACE RESEARCH (active)	SPACE RESEARCH (active)				
	5.549A	ECA36				
36 - 37 GHz	EARTH EXPLORATION-SATELLITE (passive)	EARTH EXPLORATION-SATELLITE (passive)				

Frequency Band (GHz)	ITU	European	National Usage	Legislation	CEPT	Notes
36 - 37 GHz -continued-	FIXED	FIXED				
	MOBILE	MOBILE				
	SPACE RESEARCH (passive)	SPACE RESEARCH (passive)				
		Radio Astronomy				
	5.149 5.550A					
37 - 37.5000 GHz	FIXED	FIXED	Fixed Links (Infrastructure)	National Legislation: S.I. 370 of 2009	ERC/DEC/(00)02 Recommendation T/R 12- 01 Annex A	See ComReg documents 09/89R (as revised) and 09/89A.
	MOBILE EXCEPT AERONAUTICAL MOBILE 5.550B					
		SPACE RESEARCH (space to Earth)				
	SPACE OPERATION (space to Earth)					

Frequency Band (GHz)	ITU	European	National Usage	Legislation	CEPT	Notes
37 - 37.5000 GHz -continued-	5.547					
37.5000 - 38 GHz	FIXED	FIXED	Fixed Links (Infrastructure)	National Legislation: S.I. 370 of 2009	ERC/DEC/(00)02 Recommendation T/R 12- 01 Annex A	See ComReg documents 09/89R (as revised) and 09/89A
	FIXED-SATELLITE (space to Earth) 5.550C	FIXED-SATELLITE (space to Earth)				
	MOBILE EXCEPT AERONAUTICAL MOBILE 5.550B					
	SPACE RESEARCH (space to Earth)	SPACE RESEARCH (space to Earth)				
	Earth Exploration- Satellite (space to Earth)	Earth Exploration- Satellite (space to Earth)				
	5.547					
38 - 39.5000 GHz	FIXED 5.550D	FIXED	Fixed Links (Infrastructure)	National Legislation: S.I. 370 of 2009	ERC/DEC/(00)02 T/R 12-01 Annex A Recommendation	See ComReg documents 09/89R (as revised) and 09/89A

Frequency Band (GHz)	ITU	European	National Usage	Legislation	CEPT	Notes
38 - 39.5000 GHz -continued-	FIXED-SATELLITE (space to Earth) 5.550C	FIXED-SATELLITE (space to Earth)			ERC/DEC/(00)02	
	MOBILE 5.550B					
	Earth Exploration- Satellite (space to Earth)	Earth Exploration- Satellite (space to Earth)				
	5.547					
39.5000 - 40 GHz	FIXED	FIXED			ERC/DEC/(00)02	
	FIXED-SATELLITE (space to Earth) 5.516B 5.550C	FIXED-SATELLITE (space to Earth)			ERC/DEC/(00)02	
	MOBILE 5.550B	MOBILE				
	MOBILE-SATELLITE (space to Earth)	MOBILE-SATELLITE (space to Earth)				

Frequency Band (GHz)	ITU	European	National Usage	Legislation	CEPT	Notes
39.5000 - 40 GHz -continued-	Earth Exploration-Satellite (space to Earth)	Earth Exploration-Satellite (space to Earth)				
	5.547	ECA36				
40 - 40.5000 GHz	FIXED	FIXED			ERC/DEC/(00)02	See ComReg Documents 09/89A
	FIXED-SATELLITE (space to Earth) 5.516B 5.550C	FIXED-SATELLITE (space to Earth)			ERC/DEC/(00)02	
	MOBILE 5.550B	MOBILE				
	MOBILE-SATELLITE (space to Earth)	MOBILE-SATELLITE (space to Earth)				
	EARTH EXPLORATION-SATELLITE (Earth to space)					
	Earth Exploration-Satellite (space to Earth) 5.550E	Earth Exploration-Satellite (space to Earth)				

Frequency Band (GHz)	ITU	European	National Usage	Legislation	CEPT	Notes
40 - 40.5000 GHz -continued-	SPACE RESEARCH (Earth to space)	SPACE RESEARCH (Earth to space)				
	5.550E					
40.5000 - 41 GHz	FIXED	FIXED	Fixed Links	National Legislation: S.I. 370 OF 2009	ERC/DEC/(99)15 ECC/DEC/(02)04 ECC/REC/(01)04	See ComReg Documents 09/89R ( as revised) and 09/89A
	FIXED-SATELLITE (space to Earth) 5.550C					
	BROADCASTING	BROADCASTING				
	BROADCASTING- SATELLITE	BROADCASTING- SATELLITE				
	LAND MOBILE 5.550B					
	Aeronautical Mobile					
	Maritime Mobile					

Frequency Band (GHz)	ITU	European	National Usage	Legislation	CEPT	Notes
40.5000 - 41 GHz -continued-	5.547					
41 - 42.5000 GHz	FIXED	FIXED	Fixed Links (Infrastructure)	National Legislation: S.I. 370 OF 2009	ERC/DEC/(99)15 ECC/DEC/(02)04 ERC/REC 12-07	See ComReg documents 09/89R (as revised) and 09/89A
	FIXED-SATELLITE (space to Earth) 5.516B 5.550C					
	BROADCASTING	BROADCASTING				
	BROADCASTING- SATELLITE	BROADCASTING- SATELLITE				
	LAND MOBILE 5.550B					
	Aeronautical Mobile					
	Maritime Mobile					

Frequency Band (GHz)	ITU	European	National Usage	Legislation	CEPT	Notes
41 - 42.5000 GHz -continued-	5.547 5.551H 5.551I					
42.5000 - 43.5000 GHz	FIXED	FIXED	Fixed Links	National Legislation: S.I. 370 OF 2009	ERC/DEC/(99)15	See ComReg documents 09/89R (as revised) and 09/89A
	FIXED-SATELLITE (Earth to space) 5.552	FIXED-SATELLITE (Earth to space)				
	MOBILE EXCEPT AERONAUTICAL MOBILE 5.550B	MOBILE EXCEPT AERONAUTICAL MOBILE				
	RADIO ASTRONOMY	RADIO ASTRONOMY				
	5.149 5.547					
43.5000 - 45.5000 GHz	MOBILE 5.553	MOBILE				
	MOBILE-SATELLITE	MOBILE-SATELLITE				

Frequency Band (GHz)	ITU	European	National Usage	Legislation	CEPT	Notes
43.5000 - 45.5000 GHz -continued-	RADIONAVIGATION					
	RADIONAVIGATION-SATELLITE					
		Fixed-Satellite				
	5.554	ECA36				
45.5000 - 47 GHz	MOBILE 5.553	MOBILE				
	MOBILE-SATELLITE	MOBILE-SATELLITE				
	RADIONAVIGATION	RADIONAVIGATION				
	RADIONAVIGATION-SATELLITE	RADIONAVIGATION-SATELLITE				
	5.554					
47 - 47.2000 GHz	AMATEUR	AMATEUR	Amateur (Primary)	National Legislation: S.I. 192 of 2009		See ComReg document 09/45, as revised.

Frequency Band (GHz)	ITU	European	National Usage	Legislation	CEPT	Notes
47 - 47.2000 GHz -continued-	AMATEUR-SATELLITE	AMATEUR-SATELLITE	Amateur-Satellite (Primary)	National Legislation: S.I. 192 of 2009		See ComReg document 09/45, as revised.
47.2000 - 47.5000 GHz	FIXED	FIXED				
	FIXED-SATELLITE (Earth to space) 5.552 5.550C	FIXED-SATELLITE (Earth to space)				
	MOBILE	MOBILE				
	5.552A					
47.5000 - 47.9000 GHz	FIXED	FIXED				
	FIXED-SATELLITE (Earth to space) 5.550C 5.552 (space to Earth) 5.516B 5.554A	FIXED-SATELLITE (Earth to space) (space to Earth)				
	MOBILE	MOBILE				
47.9000 - 48.2000 GHz	FIXED	FIXED				

Frequency Band (GHz)	ITU	European	National Usage	Legislation	CEPT	Notes
47.9000 - 48.2000 GHz -continued-	FIXED-SATELLITE (Earth to space) 5.552 5.550C	FIXED-SATELLITE (Earth to space)				
	MOBILE	MOBILE				
	5.552A					
48.2000 - 48.5400 GHz	FIXED	FIXED				
	FIXED-SATELLITE (Earth to space ) 5.552 5.550C (space to Earth) 5.516B 5.554A 5.555B	FIXED-SATELLITE (Earth to space ) (space to Earth)				
	MOBILE	MOBILE				
48.5400 - 49.4400 GHz	FIXED	FIXED				
	FIXED-SATELLITE (Earth to space) 5.552 5.550C	FIXED-SATELLITE (Earth to space)				

Frequency Band (GHz)	ITU	European	National Usage	Legislation	CEPT	Notes
48.5400 - 49.4400 GHz -continued-	MOBILE	MOBILE				
		RADIO ASTRONOMY				
	5.149 5.340 5.555	ECA17A				
49.4400 - 50.2000 GHz	FIXED	FIXED				
	FIXED-SATELLITE (Earth to space ) 5.338A 5.552 5.550C (space to Earth) 5.516B 5.554A 5.555B	FIXED-SATELLITE (Earth to space ) (space to Earth)				
	MOBILE	MOBILE				
		ECA17A				
50.2000 - 50.4000 GHz	EARTH EXPLORATION- SATELLITE (passive)	EARTH EXPLORATION- SATELLITE (passive)				
	SPACE RESEARCH (passive)	SPACE RESEARCH (passive)				

Frequency Band (GHz)	ITU	European	National Usage	Legislation	CEPT	Notes
50.2000 - 50.4000 GHz -continued-	5.340					
50.4000 - 51.4000 GHz	FIXED	FIXED				
	FIXED-SATELLITE (Earth to space) 5.338A 5.550C	FIXED-SATELLITE (Earth to space)				
	MOBILE					
	Mobile-Satellite (Earth to space)	Mobile-Satellite (Earth to space)				
51.4000 - 52.4000 GHz	FIXED	FIXED				
	FIXED-SATELLITE (Earth to space) 5.555C	FIXED-SATELLITE (Earth to space)				
	MOBILE	MOBILE				
		RADIO ASTRONOMY				

Frequency Band (GHz)	ITU	European	National Usage	Legislation	CEPT	Notes
51.4000 - 52.4000 GHz -continued-	5.547 5.556 5.338A					
52.4000 - 52.6000 GHz	FIXED 5.338A	FIXED				
	MOBILE	MOBILE				
	5.547 5.556					
52.6000 - 54.2500 GHz	EARTH EXPLORATION- SATELLITE (passive)	EARTH EXPLORATION- SATELLITE (passive)				
	SPACE RESEARCH (passive)	SPACE RESEARCH (passive)				
	5.340 5.556					
54.2500 - 55.7800 GHz	EARTH EXPLORATION- SATELLITE (passive)	EARTH EXPLORATION- SATELLITE (passive)				

Frequency Band (GHz)	ITU	European	National Usage	Legislation	CEPT	Notes
54.2500 - 55.7800 GHz -continued-	INTER-SATELLITE 5.556A					
	SPACE RESEARCH (passive)	SPACE RESEARCH (passive)				
55.7800 - 56.9000 GHz	EARTH EXPLORATION- SATELLITE (passive)	EARTH EXPLORATION- SATELLITE (passive)				
	FIXED 5.557A	FIXED				
	INTER-SATELLITE 5.556A	INTER-SATELLITE				
	SPACE RESEARCH (passive)	SPACE RESEARCH (passive)				
	MOBILE 5.558					
	5.547					

Frequency Band (GHz)	ITU	European	National Usage	Legislation	CEPT	Notes
56.9000 - 57 GHz	EARTH EXPLORATION-SATELLITE (passive)	EARTH EXPLORATION-SATELLITE (passive)				
	FIXED	FIXED				
	INTER-SATELLITE 5.558A	INTER-SATELLITE				
	MOBILE 5.558	MOBILE				
	SPACE RESEARCH (passive)	SPACE RESEARCH (passive)				
	5.547					
57 - 58.2000 GHz	EARTH EXPLORATION-SATELLITE (passive)	EARTH EXPLORATION-SATELLITE (passive)				
	FIXED	FIXED				
	INTER-SATELLITE 5.556A	INTER-SATELLITE				

Frequency Band (GHz)	ITU	European	National Usage	Legislation	CEPT	Notes
57 - 58.2000 GHz -continued-	MOBILE 5.558	MOBILE				
	SPACE RESEARCH (passive)	SPACE RESEARCH (passive)				
	5.547		IRL1			
58.2000 - 59 GHz	EARTH EXPLORATION- SATELLITE (passive)	EARTH EXPLORATION- SATELLITE (passive)				
	FIXED	FIXED				
	SPACE RESEARCH (passive)	SPACE RESEARCH (passive)				
	MOBILE					
		RADIO ASTRONOMY				
	5.547 5.556	ECA6 ECA19	IRL1			

Frequency Band (GHz)	ITU	European	National Usage	Legislation	CEPT	Notes
59 - 59.3000 GHz	EARTH EXPLORATION-SATELLITE (passive)	EARTH EXPLORATION-SATELLITE (passive)				
	FIXED	FIXED				
	INTER-SATELLITE 5.556A	INTER-SATELLITE				
	MOBILE 5.558	MOBILE				
	RADIOLOCATION 5.559	RADIOLOCATION				
	SPACE RESEARCH (passive)	SPACE RESEARCH (passive)				
				IRL1		
59.3000 - 64 GHz	FIXED	FIXED				
	INTER-SATELLITE	INTER-SATELLITE				

Frequency Band (GHz)	ITU	European	National Usage	Legislation	CEPT	Notes
59.3000 - 64 GHz -continued-	MOBILE 5.558	MOBILE				
	RADIOLOCATION 5.559	RADIOLOCATION				
	5.138		IRL1			
64 - 65 GHz	FIXED	FIXED				
	INTER-SATELLITE	INTER-SATELLITE				
	MOBILE EXCEPT AERONAUTICAL MOBILE	MOBILE EXCEPT AERONAUTICAL MOBILE				
	5.547 5.556		IRL1			
65 - 66 GHz	EARTH EXPLORATION- SATELLITE	EARTH EXPLORATION- SATELLITE				
	FIXED	FIXED				
	INTER-SATELLITE	INTER-SATELLITE				

Frequency Band (GHz)	ITU	European	National Usage	Legislation	CEPT	Notes
65 - 66 GHz -continued-	MOBILE EXCEPT AERONAUTICAL MOBILE	MOBILE EXCEPT AERONAUTICAL MOBILE				
	SPACE RESEARCH	SPACE RESEARCH				
	5.547		IRL1			
66 - 71 GHz	INTER-SATELLITE	INTER-SATELLITE				
	MOBILE 5.558 5.553 5.559AA	MOBILE				
	MOBILE-SATELLITE	MOBILE-SATELLITE				
	RADIONAVIGATION	RADIONAVIGATION				
	RADIONAVIGATION- SATELLITE	RADIONAVIGATION- SATELLITE				
	5.554					

Frequency Band (GHz)	ITU	European	National Usage	Legislation	CEPT	Notes
71 - 74 GHz	FIXED	FIXED	Fixed Links (Infrastructure)	National Legislation: S.I. 370 of 2009	ECC/REC/(05)07	Fixed Point-to-Point Links (71–76 GHz and 81–86 GHz) for TDD and FDD use See ComReg documents 09/89R (as revised) and 09/89A
	FIXED-SATELLITE (space to Earth)	FIXED-SATELLITE (space to Earth)				
	MOBILE	MOBILE				
	MOBILE-SATELLITE (space to Earth)	MOBILE-SATELLITE (space to Earth)				
74 - 75.5000 GHz	FIXED	FIXED	Fixed Links (Infrastructure)	National Legislation: S.I. 370 of 2009	ECC/REC/(05)07	Fixed Point-to-Point Links (71-76 GHz 81-86GHz) for TDD and FDD use See ComReg documents 09/89R (as revised) and 09/89A
	FIXED-SATELLITE (space to Earth)	FIXED-SATELLITE (space to Earth)				
	MOBILE	MOBILE				

Frequency Band (GHz)	ITU	European	National Usage	Legislation	CEPT	Notes
74 - 75.5000 GHz -continued-	BROADCASTING	BROADCASTING				
	BROADCASTING-SATELLITE	BROADCASTING-SATELLITE				
	Space Research (space to Earth)	Space Research (space to Earth)				
	5.561		IRL1			
75.5000 - 76 GHz	BROADCASTING	BROADCASTING				
	BROADCASTING-SATELLITE	BROADCASTING-SATELLITE				
	FIXED	FIXED	Fixed Links (Infrastructure)	National Legislation: S.I. 370 of 2009	ECC/REC/(05)07	Fixed Point-to-Point Links (71-76 GHz 81-86GHz) for TDD and FDD use See ComReg documents 09/89R (as revised) and 09/89A
	FIXED-SATELLITE (space to Earth)	FIXED-SATELLITE (space to Earth)				

Frequency Band (GHz)	ITU	European	National Usage	Legislation	CEPT	Notes
75.5000 - 76 GHz -continued-	MOBILE					
	Space Research (space to Earth)					
		Amateur	Amateur (Secondary)	S.I. 192 of 2009		
		Amateur-Satellite	Amateur-Satellite (Secondary)	S.I. 192 of 2009		
	5.561	ECA35	IRL1			
76 - 77.5000 GHz	RADIO ASTRONOMY	RADIO ASTRONOMY				
	RADIOLOCATION	RADIOLOCATION				
	Amateur	Amateur	Amateur (Secondary)	S.I. 192 of 2009		
	Amateur-Satellite	Amateur-Satellite	Amateur-Satellite (Secondary)	S.I. 192 of 2009		
	Space Research (space to Earth)	Space Research (space to Earth)				

Frequency Band (GHz)	ITU	European	National Usage	Legislation	CEPT	Notes
76 - 77.5000 GHz -continued-	5.149		IRL1	Decision 2004/545/EC (on Automotive SRR)		
77.5000 - 78 GHz	AMATEUR	AMATEUR	AMATEUR (PRIMARY)	S.I. 192 of 2009		
	AMATEUR-SATELLITE	AMATEUR-SATELLITE	AMATEUR-SATELLITE (PRIMARY)	S.I. 192 of 2009		
	Radio Astronomy					
	Space Research (space to Earth)	Space Research (space to Earth)				
	RADIOLOCATION 5.559B	RADIOLOCATION				
	5.149		IRL1	Decision 2004/545/EC (on Automotive SRR)		
78 - 79 GHz	RADIOLOCATION	RADIOLOCATION				
	Amateur	Amateur	Amateur (Secondary)	S.I. 192 of 2009		

Frequency Band (GHz)	ITU	European	National Usage	Legislation	CEPT	Notes
78 - 79 GHz -continued-	Amateur-Satellite	Amateur-Satellite	Amateur-Satellite (Secondary)	S.I. 192 of 2009		
	Radio Astronomy	Radio Astronomy				
	Space Research (space to Earth)	Space Research (space to Earth)				
	5.149 5.560		IRL1	Decision 2004/545/EC (on Automotive SRR)		
79 - 81 GHz	RADIO ASTRONOMY	RADIO ASTRONOMY				
	RADIOLOCATION	RADIOLOCATION				
	Amateur	Amateur	Amateur (Secondary)	S.I. 192 of 2009		
	Amateur-Satellite (space to Earth)	Amateur-Satellite (space to Earth)	Amateur-Satellite (Secondary) (space to Earth)	S.I. 192 of 2009		
	Space Research (space to Earth)					

Frequency Band (GHz)	ITU	European	National Usage	Legislation	CEPT	Notes
79 - 81 GHz -continued-	5.149		IRL1	Decision 2004/545/EC (on Automotive SRR)		
81 - 84 GHz	FIXED 5.338A	FIXED	Fixed Links (Infrastructure)	National Legislation: S.I. 370 of 2009	ECC/REC/(05)07	Fixed Point-to-Point Links (71-76 GHz and 81- 86GHz) for TDD and FDD use See ComReg documents 09/89 and 09/89A
	FIXED-SATELLITE (Earth to space)	FIXED-SATELLITE (Earth to space)				
	MOBILE	MOBILE				
	MOBILE-SATELLITE (Earth to space)	MOBILE-SATELLITE (Earth to space)				
	RADIO ASTRONOMY	RADIO ASTRONOMY				
	Space Research (space to Earth)	Space Research (space to Earth)				
				Amateur (Secondary) (81-81.5 GHz)	S.I. 192 of 2009	

Frequency Band (GHz)	ITU	European	National Usage	Legislation	CEPT	Notes
81 - 84 GHz -continued-			Amateur-Satellite (Secondary) (81-81.5 GHz)	S.I. 192 of 2009		In accordance with ITU footnote 5.561A.
	5.149 5.561A		IRL1			
84 - 86 GHz	FIXED 5.338A	FIXED	Fixed Links (Infrastructure)	National Legislation: S.I. 370 of 2009	ECC/REC/(05)07	Fixed Point-to-Point Links (71-76 GHz 81-86GHz) for TDD and FDD use See ComReg documents 09/89R (as revised) and 09/89A
	FIXED-SATELLITE (Earth to space)	FIXED-SATELLITE (Earth to space)				
	MOBILE	MOBILE				
	RADIO ASTRONOMY	RADIO ASTRONOMY				
	5.149		IRL1			
86 - 92 GHz	EARTH EXPLORATION- SATELLITE (passive)	EARTH EXPLORATION- SATELLITE (passive)				

Frequency Band (GHz)	ITU	European	National Usage	Legislation	CEPT	Notes
86 - 92 GHz -continued-	RADIO ASTRONOMY	RADIO ASTRONOMY				
	SPACE RESEARCH (passive)	SPACE RESEARCH (passive)				
	5.340					
92 - 94 GHz	FIXED 5.338A	FIXED				
	RADIO ASTRONOMY	RADIO ASTRONOMY				
	MOBILE	MOBILE				
	RADIOLOCATION	RADIOLOCATION				
	5.149					
94 - 94.1000 GHz	EARTH EXPLORATION- SATELLITE (active)	EARTH EXPLORATION- SATELLITE (active)				
	RADIOLOCATION	RADIOLOCATION				

Frequency Band (GHz)	ITU	European	National Usage	Legislation	CEPT	Notes
94 - 94.1000 GHz -continued-	SPACE RESEARCH (active)	SPACE RESEARCH (active)				
	Radio Astronomy	Radio Astronomy				
	5.562 5.562A					
94.1000 - 95 GHz	FIXED	FIXED				
	RADIO ASTRONOMY	RADIO ASTRONOMY				
	MOBILE	MOBILE				
	RADIOLOCATION	RADIOLOCATION				
	5.149					
95 - 100 GHz	FIXED	FIXED				
	MOBILE	MOBILE				
	RADIO ASTRONOMY	RADIO ASTRONOMY				

Frequency Band (GHz)	ITU	European	National Usage	Legislation	CEPT	Notes
95 - 100 GHz -continued-	RADIOLOCATION	RADIOLOCATION				
	RADIONAVIGATION	RADIONAVIGATION				
	RADIONAVIGATION-SATELLITE	RADIONAVIGATION-SATELLITE				
	5.149 5.554					
100 - 102 GHz	EARTH EXPLORATION-SATELLITE (passive)	EARTH EXPLORATION-SATELLITE (passive)				
	RADIO ASTRONOMY	RADIO ASTRONOMY				
	SPACE RESEARCH (passive)	SPACE RESEARCH (passive)				
	5.340 5.341					
102 - 105 GHz	FIXED	FIXED				

Frequency Band (GHz)	ITU	European	National Usage	Legislation	CEPT	Notes
102 - 105 GHz -continued-	RADIO ASTRONOMY	RADIO ASTRONOMY				
	MOBILE	MOBILE				
	5.149 5.341					
105 - 109.5000 GHz	FIXED	FIXED				
	MOBILE	MOBILE				
	RADIO ASTRONOMY	RADIO ASTRONOMY				
	SPACE RESEARCH (passive) 5.562B	SPACE RESEARCH (passive)				
	5.149 5.341					
109.5000 - 111.8000 GHz	EARTH EXPLORATION- SATELLITE (passive)	EARTH EXPLORATION- SATELLITE (passive)				

Frequency Band (GHz)	ITU	European	National Usage	Legislation	CEPT	Notes
109.5000 - 111.8000 GHz -continued-	RADIO ASTRONOMY	RADIO ASTRONOMY				
	SPACE RESEARCH (passive)	SPACE RESEARCH (passive)				
	5.340 5.341					
111.8000 - 114.2500 GHz	FIXED	FIXED				
	MOBILE	MOBILE				
	RADIO ASTRONOMY	RADIO ASTRONOMY				
	SPACE RESEARCH (passive) 5.562B	SPACE RESEARCH (passive)				
	5.149 5.341					
114.2500 - 116 GHz	EARTH EXPLORATION- SATELLITE (passive)	EARTH EXPLORATION- SATELLITE (passive)				

Frequency Band (GHz)	ITU	European	National Usage	Legislation	CEPT	Notes
114.2500 - 116 GHz -continued-	RADIO ASTRONOMY	RADIO ASTRONOMY				
	SPACE RESEARCH (passive)	SPACE RESEARCH (passive)				
	5.340 5.341					
116 - 119.9800 GHz	EARTH EXPLORATION-SATELLITE (passive)	EARTH EXPLORATION-SATELLITE (passive)				
	INTER-SATELLITE 5.562C	INTER-SATELLITE				
	SPACE RESEARCH (passive)					
	5.341					
119.9800 - 120.0200 GHz	EARTH EXPLORATION-SATELLITE (passive)	EARTH EXPLORATION-SATELLITE (passive)				

Frequency Band (GHz)	ITU	European	National Usage	Legislation	CEPT	Notes
119.9800 - 120.0200 GHz -continued-	INTER-SATELLITE 5.562C	INTER-SATELLITE				
	SPACE RESEARCH (passive)					
	5.341					
120.0200 - 122.2500 GHz	EARTH EXPLORATION- SATELLITE (passive)	EARTH EXPLORATION- SATELLITE (passive)				
	INTER-SATELLITE 5.562C	INTER-SATELLITE				
	SPACE RESEARCH	SPACE RESEARCH				
	5.138		IRL1			
122.2500 - 123 GHz	FIXED	FIXED				
	INTER-SATELLITE	INTER-SATELLITE				
	MOBILE 5.558	MOBILE				

Frequency Band (GHz)	ITU	European	National Usage	Legislation	CEPT	Notes
122.2500 - 123 GHz -continued-	Amateur	Amateur	Amateur (Secondary)	S.I. 192 of 2009		
		Amateur-Satellite	Amateur-Satellite (Secondary)	S.I. 192 of 2009		
	5.138		IRL1			ISM (122-123 GHz)
123 - 130 GHz	FIXED-SATELLITE (space to Earth)	FIXED-SATELLITE (space to Earth)				
	MOBILE-SATELLITE (space to Earth)	MOBILE-SATELLITE (space to Earth)				
	RADIONAVIGATION	RADIONAVIGATION				
	RADIONAVIGATION-SATELLITE	RADIONAVIGATION-SATELLITE				
	Radio Astronomy	Radio Astronomy				
	5.149 5.554					

Frequency Band (GHz)	ITU	European	National Usage	Legislation	CEPT	Notes
130 - 134 GHz	EARTH EXPLORATION-SATELLITE (active) 5.562E	EARTH EXPLORATION-SATELLITE (active)				
	FIXED	FIXED				
	INTER-SATELLITE	INTER-SATELLITE				
	MOBILE 5.558	MOBILE				
	RADIO ASTRONOMY	RADIO ASTRONOMY				
	5.149 5.562A					
134 - 136 GHz	AMATEUR	AMATEUR	AMATEUR (PRIMARY)	S.I. 192 of 2009		
	AMATEUR-SATELLITE	AMATEUR-SATELLITE	AMATEUR-SATELLITE (PRIMARY)	S.I. 192 of 2009		
	Radio Astronomy	Radio Astronomy				
136 - 141 GHz	RADIO ASTRONOMY	RADIO ASTRONOMY				

Frequency Band (GHz)	ITU	European	National Usage	Legislation	CEPT	Notes
136 - 141 GHz -continued-	RADIOLOCATION	RADIOLOCATION				
	Amateur	Amateur	Amateur (Secondary)	S.I. 192 of 2009		
	Amateur-Satellite	Amateur-Satellite	Amateur-Satellite (Secondary)	S.I. 192 of 2009		
	5.149					
141 - 148.5000 GHz	FIXED	FIXED				
	MOBILE	MOBILE				
	RADIO ASTRONOMY	RADIO ASTRONOMY				
	RADIOLOCATION	RADIOLOCATION				
	5.149					
148.5000 - 151.5000 GHz	EARTH EXPLORATION- SATELLITE (passive)	EARTH EXPLORATION- SATELLITE (passive)				

Frequency Band (GHz)	ITU	European	National Usage	Legislation	CEPT	Notes
148.5000 - 151.5000 GHz -continued-	RADIO ASTRONOMY	RADIO ASTRONOMY				
	SPACE RESEARCH (passive)	SPACE RESEARCH (passive)				
	5.340					
151.5000 - 155.5000 GHz	FIXED	FIXED				
	MOBILE	MOBILE				
	RADIO ASTRONOMY	RADIO ASTRONOMY				
	RADIOLOCATION	RADIOLOCATION				
	5.149					
155.5000 - 158.5000 GHz		EARTH EXPLORATION- SATELLITE (passive)				
	FIXED	FIXED				

Frequency Band (GHz)	ITU	European	National Usage	Legislation	CEPT	Notes
155.5000 - 158.5000 GHz -continued-	MOBILE	MOBILE				
	RADIO ASTRONOMY	RADIO ASTRONOMY				
		SPACE RESEARCH (passive)				
	5.149					
158.5000 - 164 GHz	FIXED	FIXED				
	FIXED-SATELLITE (space to Earth)	FIXED-SATELLITE (space to Earth)				
	MOBILE	MOBILE				
	MOBILE-SATELLITE (space to Earth)	MOBILE-SATELLITE (space to Earth)				
164 - 167 GHz	EARTH EXPLORATION-SATELLITE (passive)	EARTH EXPLORATION-SATELLITE (passive)				
	RADIO ASTRONOMY	RADIO ASTRONOMY				

Frequency Band (GHz)	ITU	European	National Usage	Legislation	CEPT	Notes
164 - 167 GHz -continued-	SPACE RESEARCH (passive)	SPACE RESEARCH (passive)				
	5.340					
167 - 174.5000 GHz	FIXED	FIXED				
	FIXED-SATELLITE (space to Earth)	FIXED-SATELLITE (space to Earth)				
	INTER-SATELLITE	INTER-SATELLITE				
	MOBILE 5.558	MOBILE				
	5.149					
174.5000 - 174.8000 GHz	FIXED	FIXED				
	INTER-SATELLITE	INTER-SATELLITE				
	MOBILE 5.558	MOBILE				

Frequency Band (GHz)	ITU	European	National Usage	Legislation	CEPT	Notes
174.8000 - 182 GHz	EARTH EXPLORATION-SATELLITE (passive)	EARTH EXPLORATION-SATELLITE (passive)				
	INTER-SATELLITE 5.562H	INTER-SATELLITE				
	SPACE RESEARCH (passive)	SPACE RESEARCH (passive)				
182 - 185 GHz	EARTH EXPLORATION-SATELLITE (passive)	EARTH EXPLORATION-SATELLITE (passive)				
	RADIO ASTRONOMY	RADIO ASTRONOMY				
	SPACE RESEARCH (passive)	SPACE RESEARCH (passive)				
	5.340					
185 - 190 GHz	EARTH EXPLORATION-SATELLITE (passive)	EARTH EXPLORATION-SATELLITE (passive)				

Frequency Band (GHz)	ITU	European	National Usage	Legislation	CEPT	Notes
185 - 190 GHz -continued-	INTER-SATELLITE 5.562H	INTER-SATELLITE				
	SPACE RESEARCH (passive)	SPACE RESEARCH (passive)				
190 - 191.8000 GHz	EARTH EXPLORATION- SATELLITE (passive)	EARTH EXPLORATION- SATELLITE (passive)				
	SPACE RESEARCH (passive)	SPACE RESEARCH (passive)				
	5.340					
191.8000 - 200 GHz	FIXED	FIXED				
	INTER-SATELLITE	INTER-SATELLITE				
	MOBILE 5.558	MOBILE				
	MOBILE-SATELLITE	MOBILE-SATELLITE				

Frequency Band (GHz)	ITU	European	National Usage	Legislation	CEPT	Notes
191.8000 - 200 GHz -continued-	RADIONAVIGATION	RADIONAVIGATION				
	RADIONAVIGATION-SATELLITE	RADIONAVIGATION-SATELLITE				
	5.149 5.341 5.554					
200 - 202 GHz	EARTH EXPLORATION-SATELLITE (passive)	EARTH EXPLORATION-SATELLITE (passive)				
	RADIO ASTRONOMY	RADIO ASTRONOMY				
	SPACE RESEARCH (passive)	SPACE RESEARCH (passive)				
	5.340 5.341 5.563A					
202 - 209 GHz	EARTH EXPLORATION-SATELLITE	EARTH EXPLORATION-SATELLITE				

Frequency Band (GHz)	ITU	European	National Usage	Legislation	CEPT	Notes
202 - 209 GHz -continued-	RADIO ASTRONOMY	RADIO ASTRONOMY				
	SPACE RESEARCH (passive)	SPACE RESEARCH (passive)				
	5.340 5.341 5.563A					
209 - 217 GHz	FIXED	FIXED				
	FIXED-SATELLITE (Earth to space)	FIXED-SATELLITE (Earth to space)				
	MOBILE	MOBILE				
	RADIO ASTRONOMY	RADIO ASTRONOMY				
	5.149 5.341					
217 - 226 GHz	FIXED	FIXED				

Frequency Band (GHz)	ITU	European	National Usage	Legislation	CEPT	Notes
217 - 226 GHz -continued-	FIXED-SATELLITE (Earth to space)	FIXED-SATELLITE (Earth to space)				
	MOBILE	MOBILE				
	RADIO ASTRONOMY	RADIO ASTRONOMY				
	SPACE RESEARCH (passive) 5.562B	SPACE RESEARCH (passive)				
	5.149 5.341					
226 - 231.5000 GHz	EARTH EXPLORATION- SATELLITE (passive)	EARTH EXPLORATION- SATELLITE (passive)				
	RADIO ASTRONOMY	RADIO ASTRONOMY				
	SPACE RESEARCH (passive)	SPACE RESEARCH (passive)				
	5.340					

Frequency Band (GHz)	ITU	European	National Usage	Legislation	CEPT	Notes
231.5000 - 232 GHz	FIXED	FIXED				
	MOBILE	MOBILE				
	Radiolocation	Radiolocation				
232 - 235 GHz	FIXED	FIXED				
	FIXED-SATELLITE (space to Earth)	FIXED-SATELLITE (space to Earth)				
	MOBILE	MOBILE				
	Radiolocation	Radiolocation				
235 - 238 GHz	EARTH EXPLORATION-SATELLITE (passive)	EARTH EXPLORATION-SATELLITE (passive)				
	FIXED-SATELLITE (space to Earth)	FIXED-SATELLITE (space to Earth)				
	SPACE RESEARCH (passive)	SPACE RESEARCH (passive)				

Frequency Band (GHz)	ITU	European	National Usage	Legislation	CEPT	Notes
235 - 238 GHz -continued-	5.563A 5.563B					
238 - 240 GHz	FIXED	FIXED				
	FIXED-SATELLITE (space to Earth)	FIXED-SATELLITE (space to Earth)				
	MOBILE	MOBILE				
	RADIOLOCATION	RADIOLOCATION				
	RADIONAVIGATION	RADIONAVIGATION				
	RADIONAVIGATION- SATELLITE	RADIONAVIGATION- SATELLITE				
240 - 241 GHz	FIXED	FIXED				
	MOBILE	MOBILE				
	RADIOLOCATION	RADIOLOCATION				

Frequency Band (GHz)	ITU	European	National Usage	Legislation	CEPT	Notes
241 - 248 GHz	RADIO ASTRONOMY	RADIO ASTRONOMY				
	RADIOLOCATION	RADIOLOCATION				
	Amateur	Amateur	Amateur (Secondary)	S.I. 192 of 2009		
	Amateur-Satellite	Amateur-Satellite	Amateur-Satellite (Secondary)	S.I. 192 of 2009		
	5.138 5.149		IRL1			ISM (244-246 GHz)
248 - 250 GHz	AMATEUR	AMATEUR	AMATEUR (PRIMARY)	S.I. 192 of 2009		
	AMATEUR-SATELLITE	AMATEUR-SATELLITE	AMATEUR-SATELLITE (PRIMARY)	S.I. 192 of 2009		
	Radio Astronomy	Radio Astronomy				
	5.149					
250 - 252 GHz	EARTH EXPLORATION-SATELLITE (passive)	EARTH EXPLORATION-SATELLITE (passive)				

Frequency Band (GHz)	ITU	European	National Usage	Legislation	CEPT	Notes
250 - 252 GHz -continued-	SPACE RESEARCH (passive)	SPACE RESEARCH (passive)				
	RADIO ASTRONOMY	RADIO ASTRONOMY				
	5.340 5.563A					
252 - 265 GHz	FIXED	FIXED				
	MOBILE	MOBILE				
	MOBILE-SATELLITE (Earth to space)	MOBILE-SATELLITE (Earth to space)				
	RADIONAVIGATION	RADIONAVIGATION				
	RADIONAVIGATION- SATELLITE	RADIONAVIGATION- SATELLITE				
	RADIO ASTRONOMY	RADIO ASTRONOMY				
	5.149 5.554					

Frequency Band (GHz)	ITU	European	National Usage	Legislation	CEPT	Notes
265 - 275 GHz	FIXED	FIXED				
	FIXED–SATELLITE (Earth to space)	FIXED–SATELLITE (Earth to space)				
	MOBILE	MOBILE				
	RADIO ASTRONOMY	RADIO ASTRONOMY				
	5.149 5.563A					
275 - 3000 GHz	(Not Allocated)	(Not Allocated)				
	5.565 5.564A					

## ANNEX 1 - ITU Footnotes

### RELEVANT FOOTNOTES FROM RADIO REGULATIONS.

Reference is made in the Table of allocations to the following footnotes. These footnotes are taken from Article 5 of the Radio Regulations, as amended at WRC-19. Additional information can be obtained from the ITU (see Annex 5).

5.53	Administrations authorizing the use of frequencies below 9 kHz shall ensure that no harmful interference is caused thereby to the services to which the bands above 9 kHz are allocated.
5.54	Administrations conducting scientific research using frequencies below 9 kHz are urged to advise other administrations that may be concerned in order that such research may be afforded all practicable protection from harmful interference.
5.54A	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 ITUR RS.1881 should be applied. (WRC12)
5.54B	Additional allocation: in Algeria, Saudi Arabia, Egypt, the United Arab Emirates, the Russian Federation, Iraq, Lebanon, Morocco, Qatar, the Syrian Arab Republic, Sudan and Tunisia, the frequency band 8.3-9 kHz is also allocated to the radionavigation, fixed and mobile services on a primary basis. (WRC12)
5.54C	Additional allocation: in China, the frequency band 8.3-9 kHz is also allocated to the maritime radionavigation and maritime mobile services on a primary basis. (WRC12)
5.55	Additional allocation: in Armenia, Azerbaijan, the Russian Federation, Georgia, Kyrgyzstan, Tajikistan and Turkmenistan, the band 14-17 kHz is also allocated to the radionavigation service on a primary basis. (WRC07)
5.56	The stations of services to which the bands 14-19.95 kHz and 20.05-70 kHz and in Region 1 also the bands 72-84 kHz and 86-90 kHz are allocated may transmit standard frequency and time signals. Such stations shall be afforded protection from harmful interference. In Armenia, Azerbaijan, Belarus, Bulgaria, the Russian Federation, Georgia, Kazakhstan, Mongolia, Kyrgyzstan, Slovakia, Tajikistan and Turkmenistan, the frequencies 25 kHz and 50 kHz will be used for this purpose under the same conditions. (WRC-07)
5.57	<p>The use of the bands 14-19.95 kHz, 20.05-70 kHz and 70-90 kHz (72-84 kHz and 86-90 kHz in Region 1) by the maritime mobile service is limited to coast radiotelegraph stations (A1A and F1B only).</p> <p>Exceptionally, the use of class J2B or J7B emissions is authorized subject to the necessary bandwidth not exceeding that normally used for class A1A or F1B emissions in the band concerned.</p>
5.58	Additional allocation: in Armenia, Azerbaijan, the Russian Federation, Georgia, Kazakhstan, Kyrgyzstan, Tajikistan and Turkmenistan, the band 67-70 kHz is also allocated to the radionavigation service on a primary basis. (WRC2000)
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.
5.66	Different category of service: in Germany, the allocation of the band 115-117.6 kHz to the fixed and maritime mobile services is on a primary basis (see No. 5.33) and to the radionavigation service on a secondary basis (see No. 5.32).
5.67	Additional allocation: in Kyrgyzstan and Turkmenistan, the frequency band 130-148.5 kHz is also allocated to the radionavigation service on a secondary basis. Within and between these countries this service shall have an equal right to operate. (WRC-19)
5.67A	Stations in the amateur service using frequencies in the band 135.7-137.8 kHz shall not exceed a maximum radiated power of 1 W (e.i.r.p.) and shall not cause harmful interference to stations of the radionavigation service operating in countries listed in No. 5.67. (WRC-07)
5.67B	The use of the frequency band 135.7-137.8 kHz in Algeria, Egypt, Iraq, Lebanon, Syrian Arab Republic, Sudan, South Sudan and Tunisia is limited to the fixed and maritime mobile services. The amateur service shall not be used in the above-mentioned countries in the frequency band 135.7-137.8 kHz, and this should be taken into account by the countries authorizing such use. (WRC-19)
5.68	Alternative allocation: in Angola, Congo (Rep. of the), the Dem. Rep. of the Congo and South Africa, the band 160-200 kHz is allocated to the fixed service on a primary basis. (WRC12)
5.69	Additional allocation: in Somalia, the band 200-255 kHz is also allocated to the aeronautical radionavigation service on a primary basis.
5.70	Alternative allocation: in Angola, Botswana, Burundi, the Central African Rep., Congo (Rep. of the), Eswatini, Ethiopia, Kenya, Lesotho, Madagascar, Malawi, Mozambique, Namibia, Nigeria, Oman, the Dem. Rep. of the Congo, South Africa, Tanzania, Chad, Zambia and Zimbabwe, the frequency band 200-283.5 kHz is allocated to the aeronautical radionavigation service on a primary basis. (WRC-19)
5.71	Suppressed (WRC-19)
5.72	Norwegian stations of the fixed service situated in northern areas (north of 60° N) subject to auroral disturbances are allowed to continue operation on four frequencies in the bands 283.5-490 kHz and 510-526.5 kHz.
5.73	The band 285-325 kHz (283.5-325 kHz in Region 1) in the maritime radionavigation service may be used to transmit supplementary navigational information using narrow-band techniques, on condition that no harmful interference is caused to radiobeacon stations operating in the radionavigation service. (WRC-97)
5.74	Additional Allocation: in Region 1, the frequency band 285.3-285.7 kHz is also allocated to the maritime radionavigation service (other than radiobeacons) on a primary basis.
5.75	Different category of service: in Armenia, Azerbaijan, Belarus, the Russian Federation, Georgia, Moldova, Kyrgyzstan, Tajikistan, Turkmenistan, Ukraine and the Black Sea areas of Romania, the allocation of the band 315-325 kHz to the maritime radionavigation service is on a primary basis under the condition that in the Baltic Sea area, the assignment of frequencies in this band to new stations in the maritime or aeronautical radionavigation services shall be subject to prior consultation between the administrations concerned. (WRC-07)

5.76	The frequency 410 kHz is designated for radio direction-finding in the maritime radionavigation service. The other radionavigation services to which the band 405-415 kHz is allocated shall not cause harmful interference to radio direction-finding in the band 406.5-413.5 kHz.
5.77	Different category of service: in Australia, China, the French overseas communities of Region 3, Korea (Rep. of), India, Iran (Islamic Republic of), Japan, Pakistan, Papua New Guinea, the Dem. People's Rep. of Korea and Sri Lanka, the allocation of the frequency band 415-495 kHz to the aeronautical radionavigation service is on a primary basis. In Armenia, Azerbaijan, Belarus, the Russian Federation, Kazakhstan, Latvia, Uzbekistan and Kyrgyzstan, the allocation of the frequency band 435-495 kHz to the aeronautical radionavigation service is on a primary basis. Administrations in all the aforementioned countries shall take all practical steps necessary to ensure that aeronautical radionavigation stations in the frequency band 435-495 kHz do not cause interference to reception by coast stations of transmissions from ship stations on frequencies designated for ship stations on a worldwide basis. (WRC-19)
5.79	In the maritime mobile service, the frequency bands 415-495 kHz and 505-526.5 kHz are limited to radiotelegraphy and may also be used for the NAVDAT system in accordance with the most recent version of Recommendation ITU-R M.2010, subject to agreement between interested and affected administrations. NAVDAT transmitting stations are limited to coast stations. (WRC-19)
5.79A	When establishing coast stations in the NAVTEX service on the frequencies 490 kHz, 518 kHz and 4 209.5 kHz, administrations are strongly recommended to coordinate the operating characteristics in accordance with the procedures of the International Maritime Organization (IMO) (see Resolution 339 (Rev.WRC07)). (WRC07)
5.80	In Region 2, the use of the band 435-495 kHz by the aeronautical radionavigation service is limited to non-directional beacons not employing voice transmission.
5.80A	The maximum equivalent isotropically radiated power (e.i.r.p.) of stations in the amateur service using frequencies in the band 472-479 kHz shall not exceed 1 W. Administrations may increase this limit of e.i.r.p. to 5 W in portions of their territory which are at a distance of over 800 km from the borders of Algeria, Saudi Arabia, Azerbaijan, Bahrain, Belarus, China, Comoros, Djibouti, Egypt, United Arab Emirates, the Russian Federation, Iran (Islamic Republic of), Iraq, Jordan, Kazakhstan, Kuwait, Lebanon, Libya, Morocco, Mauritania, Oman, Uzbekistan, Qatar, Syrian Arab Republic, Kyrgyzstan, Somalia, Sudan, Tunisia, Ukraine and Yemen. In this frequency band, stations in the amateur service shall not cause harmful interference to, or claim protection from, stations of the aeronautical radionavigation service. (WRC12)
5.80B	The use of the frequency band 472-479 kHz in Algeria, Saudi Arabia, Azerbaijan, Bahrain, Belarus, China, Comoros, Djibouti, Egypt, United Arab Emirates, the Russian Federation, Iraq, Jordan, Kazakhstan, Kuwait, Lebanon, Libya, Mauritania, Oman, Uzbekistan, Qatar, Syrian Arab Republic, Kyrgyzstan, Somalia, Sudan, Tunisia and Yemen is limited to the maritime mobile and aeronautical radionavigation services. The amateur service shall not be used in the above-mentioned countries in this frequency band, and this should be taken into account by the countries authorizing such use. (WRC12)
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 narrowband direct-printing telegraphy. The conditions for use of the frequency 490 kHz are prescribed in Articles 31 and 52. In using the band 415-495 kHz for the aeronautical radionavigation service, administrations are requested to ensure that no harmful interference is caused to the frequency 490 kHz. (WRC-07)
5.84	The conditions for the use of the frequency 518 kHz by the maritime mobile service are prescribed in Articles 31 and 52. (WRC-07)

5.87	Additional allocation: in Angola, Botswana, Eswatini, Lesotho, Malawi, Mozambique, Namibia and Niger, the frequency band 526.5-535 kHz is also allocated to the mobile service on a secondary basis. (WRC-19)
5.87A	Additional allocation: in Uzbekistan, the band 526.5-1 606.5 kHz is also allocated to the radionavigation service on a primary basis. Such use is subject to agreement obtained under No. 9.21 with administrations concerned and limited to ground-based radiobeacons in operation on 27 October 1997 until the end of their lifetime. (WRC-97)
5.90	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.
5.93	Additional allocation: in Angola, Armenia, Azerbaijan, Belarus, the Russian Federation, Georgia, Hungary, Kazakhstan, Latvia, Lithuania, Mongolia, Nigeria, Uzbekistan, Poland, Kyrgyzstan, Slovakia, Tajikistan, Chad, Turkmenistan and Ukraine, the bands 1 625-1 635 kHz, 1 800-1 810 kHz and 2 160-2 170 kHz are also allocated to the fixed and land mobile services on a primary basis, subject to agreement obtained under No. 9.21. (WRC12)
5.96	In Germany, Armenia, Austria, Azerbaijan, Belarus, Denmark, Estonia, the Russian Federation, Finland, Georgia, Hungary, Ireland, Iceland, Israel, Kazakhstan, Latvia, Liechtenstein, Lithuania, Malta, Moldova, Norway, Uzbekistan, Poland, Kyrgyzstan, Slovakia, the Czech Rep., the United Kingdom, Sweden, Switzerland, Tajikistan, Turkmenistan and Ukraine, administrations may allocate up to 200 kHz to their amateur service in the bands 1 715-1 800 kHz and 1 850-2 000 kHz. However, when allocating the bands within this range to their amateur service, administrations shall, after prior consultation with administrations of neighbouring countries, take such steps as may be necessary to prevent harmful interference from their amateur service to the fixed and mobile services of other countries. The mean power of any amateur station shall not exceed 10 W. (WRC-03)
5.98	Alternative allocation: in Angola, Armenia, Azerbaijan, Belarus, Belgium, Cameroon, Congo (Rep. of the), Denmark, Egypt, Eritrea, Spain, Ethiopia, the Russian Federation, Georgia, Greece, Italy, Kazakhstan, Lebanon, Lithuania, the Syrian Arab Republic, Kyrgyzstan, Somalia, Tajikistan, Tunisia, Turkmenistan, Turkey and Ukraine, the band 1 810-1 830 kHz is allocated to the fixed and mobile, except aeronautical mobile, services on a primary basis. (WRC12)
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. (WRC12)
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)

5.100	In Region 1, the authorization to use the band 1 810-1 830 kHz by the amateur service in countries situated totally or partially north of 40° N shall be given only after consultation with the countries mentioned in Nos. 5.98 and 5.99 to define the necessary steps to be taken to prevent harmful interference between amateur stations and stations of other services operating in accordance with Nos. 5.98 and 5.99.
5.101	(SUP - WRC-12)
5.103	In Region 1, in making assignments to stations in the fixed and mobile services in the bands 1 850- 2 045 kHz, 2 194-2 498 kHz, 2 502-2 625 kHz and 2 650-2 850 kHz, administrations should bear in mind the special requirements of the maritime mobile service
5.104	In Region 1, the use of the band 2 025-2 045 kHz by the meteorological aids service is limited to oceanographic buoy stations.
5.107	Additional allocation: in Saudi Arabia, Eritrea, Eswatini, Ethiopia, Iraq, Libya and Somalia, the frequency band 2160 - 2170 kHz is also allocated to the fixed and mobile, except aeronautical mobile (R), services on a primary basis. The mean power of stations in these services shall not exceed 50 W. (WRC-19)
5.108	The carrier frequency 2 182 kHz is an international distress and calling frequency for radiotelephony. The conditions for the use of the band 2 173.5-2 190.5 kHz are prescribed in Articles 31 and 52. (WRC-07)
5.109	The frequencies 2 187.5 kHz, 4 207.5 kHz, 6 312 kHz, 8 414.5 kHz, 12 577 kHz and 16 804.5 kHz are international distress frequencies for digital selective calling. The conditions for the use of these frequencies are prescribed in Article 31.
5.110	The frequencies 2 174.5 kHz, 4 177.5 kHz, 6 268 kHz, 8 376.5 kHz, 12 520 kHz and 16 695 kHz are international distress frequencies for narrow-band direct-printing telegraphy. The conditions for the use of these frequencies are prescribed in Article 31.

5.111	The carrier frequencies 2 182 kHz, 3 023 kHz, 5 680 kHz, 8364 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. Th 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 19993 kHz, but in each of these cases emissions must be confined in a band of $\pm 3$ kHz about the frequency. (WRC-07)
5.112	Alternative allocation: in Sri Lanka, the frequency band 2194 - 2300 kHz is allocated to the fixed and mobile, except aeronautical mobile, services on a primary basis. (WRC-19)
5.113	For the conditions for the use of the bands 2 300-2 495 kHz (2 498 kHz in Region 1), 3 200-3 400 kHz, 4 750-4 995 kHz and 5 005-5 060 kHz by the broadcasting service, see Nos. 5.16 to 5.20, 5.21 and 23.3 to 23.10.
5.114	Alternative allocation: in Iraq, the frequency band 2 502-2 625 kHz is allocated to the fixed and mobile, except aeronautical mobile, services on a primary basis. (WRC-19)
5.115	The carrier (reference) frequencies 3 023 kHz and 5 680 kHz may also be used, in accordance with Article 31, by stations of the maritime mobile service engaged in coordinated search and rescue operations. (WRC-07)
5.116	Administrations are urged to authorize the use of the band 3 155-3 195 kHz to provide a common worldwide channel for low power wireless hearing aids. Additional channels for these devices may be assigned by administrations in the bands between 3 155 kHz and 3400 kHz to suit local needs It should be noted that frequencies in the range 3 000 kHz to 4 000 kHz are suitable for hearing aid devices which are designed to operate over short distances within the induction field.
5.117	Alternative allocation: in Côte d'Ivoire, Egypt, Liberia, Sri Lanka and Togo, the frequency band 3 155-3 200 kHz is allocated to the fixed and mobile, except aeronautical mobile, services on a primary basis. (WRC-19)
5.118	Additional allocation: in the United States, Mexico and Peru, the frequency band 3 230-3 400 kHz is also allocated to the radiolocation service on a secondary basis. (WRC-19)
5.123	Additional allocation: in Botswana, Eswatini, Lesotho, Malawi, Mozambique, Namibia, South Africa, Zambia and Zimbabwe, the frequency band 3 900-3 950 kHz is also allocated to the broadcasting service on a primary basis, subject to agreement obtained under No. 9.21. (WRC-19)
5.126	In Region 3, the stations of those services to which the band 3 995-4 005 kHz is allocated may transmit standard frequency and time signals.

5.127	The use of the band 4 000-4 063 kHz by the maritime mobile service is limited to ship stations using radiotelephony (see No. 52.220 and Appendix 17).
5.128	Frequencies thin frequency 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).
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.WRC12). (WRC12)
5.132B	Alternative allocation: in Armenia, Belarus, Moldova and Kyrgyzstan, the frequency band 4 438-4 488 kHz is allocated to the fixed and mobile, except aeronautical mobile (R), services on a primary basis. (WRC-19)
5.133	Different category of service: in Armenia, Azerbaijan, Belarus, the Russian Federation, Georgia, Kazakhstan, Latvia, Lithuania, Niger, Uzbekistan, Kyrgyzstan, Tajikistan, Turkmenistan and Ukraine, the allocation of the band 5 130-5 250 kHz to the mobile, except aeronautical mobile, service is on a primary basis (see No. 5.33). (WRC12)
5.133A	Alternative allocation: in Armenia, Belarus, Moldova and Kyrgyzstan, the frequency bands 5 250-5 275 kHz and 26 200-26 350 kHz are allocated to the fixed and mobile, except aeronautical mobile, services on a primary basis. (WRC-19)
5.133B	Stations in the amateur service using the frequency band 5 351.5-5 366.5 kHz shall not exceed a maximum radiated power of 15 W (e.i.r.p.). However, in Region 2 in Mexico, stations in the amateur service using the frequency band 5 351.5-5 366.5 kHz shall not exceed a maximum radiated power of 20 W (e.i.r.p.). In the following Region 2 countries: Antigua and Barbuda, Argentina, Bahamas, Barbados, Belize, Bolivia, Brazil, Chile, Colombia, Costa Rica, Cuba, Dominican Republic, Dominica, El

Salvador, Ecuador, Grenada, Guatemala, Guyana, Haiti, Honduras, Jamaica, Nicaragua, Panama, Paraguay, Peru, Saint Lucia, Saint Kitts and Nevis, 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.

The following bands:

5.138 6765-6 795 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.

5.140 Additional allocation: in Angola, Iraq, Kenya, Somalia and Togo, the band 7 000-7 050 kHz is also allocated to the fixed service on a primary basis. (WRC12)

5.141 Alternative allocation: in Egypt, Eritrea, Ethiopia, Guinea, Libya, Madagascar and Niger, the band 7 000-7 050 kHz is allocated to the fixed service on a primary basis. (WRC12)

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 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, the band 7 350-7 450 kHz is allocated, until 29 March 2009, to the fixed service on a primary basis and to the land mobile service on a secondary basis. After 29 March 2009, on condition that harmful interference is not caused to the broadcasting service, frequencies in the band 7 350-7 450 kHz may be used by stations in the fixed and land mobile services communicating only within the boundary of the country in which they are located, each station using a total radiated power that shall not exceed 24 dBW. (WRC-03)
5.144	In Region 3, the stations of those services to which the band 7 995-8 005 kHz is allocated may transmit standard frequency and time signals.
5.145	The conditions for the use of the carrier frequencies 8 291 kHz, 12 290 kHz and 16 420 kHz are prescribed in Articles 31 and 52. (WRC-07)
5.145A	Stations in the radiolocation service shall not cause harmful interference to, or claim protection from, stations operating in the fixed service. Applications of the radiolocation service are limited to oceanographic radars operating in accordance with Resolution 612 (Rev.WRC12). (WRC12)
5.145B	Alternative allocation: in Armenia, Belarus, Moldova and Kyrgyzstan, the frequency bands 9 305-9 355 kHz and 16 100-16 200 kHz are allocated to the fixed service on a primary basis. (WRC-19)
5.146	Additional allocation: frequencies in the bands 9 400-9 500 kHz, 11 600-11 650 kHz, 12 050- 12 100 kHz, 15 600-15 800 kHz, 17 480-17 550 kHz and 18 900-19 020 kHz may be used by stations in the fixed service, communicating only within the boundary of the country in which they are located, on condition that harmful interference is not caused to the broadcasting service. When using frequencies in the fixed service, administrations are urged to use the minimum power required and to take account of the seasonal use of frequencies by the broadcasting service published in accordance with the Radio Regulations. (WRC-07)
5.147	On condition that harmful interference is not caused to the broadcasting service, frequencies in the bands 9 775-9 900 kHz, 11 650-11 700 kHz and 11 975-12 050 kHz may be used by stations in the fixed service communicating only within the boundary of the country in which they are located, each station using a total radiated power not exceeding 24 dBW.

5.149

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

13 360-13 410 kHz,  
25 550-25 670 kHz,  
37.5-38.25 MHz,  
73-74.6 MHz in Regions 1 and 3,  
150.05-153 MHz in Region 1,  
322-328.6 MHz,  
406.1-410 MHz,  
608-614 MHz in Regions 1 and 3,  
1 330-1 400 MHz,  
1 610.6-1 613.8 MHz,  
1 660-1 670 MHz,  
1 718.8-1 722.2 MHz,  
2 655-2 690 MHz,  
3 260-3 267 MHz,  
3 332-3 339 MHz,  
3 345.8-3 352.5 MHz,  
4 825-4 835 MHz,  
4 950-4 990 MHz,  
4 990-5 000 MHz,  
6 650-6 675.2 MHz,  
10.6-10.68 GHz,  
14.47-14.5 GHz,  
22.01-22.21 GHz,  
22.21-22.5 GHz,  
22.81-22.86 GHz,  
23.07-23.12 GHz,  
31.2-31.3 GHz,

31.5-31.8 GHz in Regions 1 and 3,  
36.43-36.5 GHz,  
42.5-43.5 GHz,  
48.94-49.04 GHz,  
76-86 GHz,  
92-94 GHz,  
94.1-100 GHz,  
102-109.5 GHz,  
111.8-114.25 GHz,  
128.33-128.59 GHz,  
129.23-129.49 GHz,  
130-134 GHz,  
136-148.5 GHz,  
151.5-158.5 GHz,  
168.59-168.93 GHz,  
171.11-171.45 GHz,  
172.31-172.65 GHz,  
173.52-173.85 GHz,  
195.75-196.15 GHz,  
209-226 GHz,  
241-250 GHz,  
252-275 GHz

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

5.149A

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

The following bands:

5.150

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),  
2400-2 500 MHz (centre frequency 2 450 MHz),  
5725-5 875 MHz (centre frequency 5 800 MHz), &  
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 13 570-13600 kHz and 13 800-13 870 kHz may be used by stations in the fixed service and in the mobile except aeronautical mobile (R) service, communicating only within the boundary of the country in which they are located, on the condition that harmful interference is not caused to the broadcasting service. When using frequencies in these services, administrations are urged to use the minimum power required and to take account of the seasonal use of frequencies by the broadcasting service published in accordance with the Radio Regulations. (WRC-07)
5.152	Additional allocation: in Armenia, Azerbaijan, China, Côte d'Ivoire, the Russian Federation, Georgia, Iran (Islamic Republic of), Kazakhstan, Uzbekistan, Kyrgyzstan, Tajikistan, Turkmenistan and Ukraine, the band 14 250-14 350 kHz is also allocated to the fixed service on a primary basis. Stations of the fixed service shall not use a radiated power exceeding 24 dBW. (WRC-03)
5.153	In Region 3, the stations of those services to which the band 15 995-16 005 kHz is allocated may transmit standard frequency and time signals.
5.154	Additional allocation: in Armenia, Azerbaijan, the Russian Federation, Georgia, Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Ukraine, the band 18 068-18 168 kHz is also allocated to the fixed service on a primary basis for use within their boundaries, with a peak envelope power not exceeding 1 kW. (WRC-03)
5.155	Additional allocation: in Armenia, Azerbaijan, Belarus, the Russian Federation, Georgia, Kazakhstan, Moldova, Mongolia, Uzbekistan, Kyrgyzstan, Slovakia, Tajikistan, Turkmenistan and Ukraine, the band 21 850-21 870 kHz is also allocated to the aeronautical mobile (R) service on a primary basis. (WRC07)
5.155A	In Armenia, Azerbaijan, Belarus, the Russian Federation, Georgia, Kazakhstan, Moldova, Mongolia, Uzbekistan, Kyrgyzstan, Slovakia, Tajikistan, Turkmenistan and Ukraine, the use of the band 21 850-21 870 kHz by the fixed service is limited to provision of services related to aircraft flight safety. WRC07)
5.155B	The band 21 870-21 924 kHz is used by the fixed service for provision of services related to aircraft flight safety.
5.156	Additional allocation: in Nigeria, the band 22 720-23 200 kHz is also allocated to the meteorological aids service (radiosondes) on a primary basis.
5.156A	The use of the band 23 200-23 350 kHz by the fixed service is limited to provision of services related to aircraft flight safety.
5.157	The use of the band 23 350-24 000 kHz by the maritime mobile service is limited to inter-ship radiotelegraphy
5.158	Alternative allocation: in Armenia, Belarus, Moldova and Kyrgyzstan, the frequency band 24 450-24 600 kHz is allocated to the fixed and land mobile services on a primary basis. (WRC-19)
5.159	Alternative allocation: in Armenia, Belarus, Moldova and Kyrgyzstan, the frequency band 39-39.5 MHz is allocated to the fixed and mobile services on a primary basis. (WRC-19)
5.161B	Alternative allocation: in Albania, Germany, Armenia, Austria, Belarus, Belgium, Bosnia and Herzegovina, Cyprus, Vatican, Croatia, Denmark, Spain, Estonia, Finland, France, Greece, Hungary, Ireland, Iceland, Italy, Latvia, Liechtenstein, Lithuania, Luxembourg, North Macedonia, Malta, Moldova, Monaco, Montenegro, Norway, Uzbekistan, Netherlands, Portugal, Kyrgyzstan, Slovakia, Czech Rep., Romania, United Kingdom, San Marino, Slovenia, Sweden, Switzerland, Turkey and Ukraine, the frequency band 42-42.5 MHz is allocated to the fixed and mobile services on a primary basis. (WRC-19)

5.162	Additional allocation: in Australia, the band 44-47 MHz is also allocated to the broadcasting service on a primary basis. (WRC12)
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)
5.166B	In Region 1, stations in the amateur service operating on a secondary basis shall not cause harmful interference to, or claim protection from, stations of the broadcasting service. The field strength generated by an amateur station in Region 1 in the frequency band 50-52 MHz shall not exceed a calculated value of +6 dB(V/m) at a height of 10 m above ground for more than 10% of time along the border of a country with operational analogue broadcasting stations in Region 1 and of neighbouring countries with broadcasting stations in Region 3 listed in Nos. 5.167 and 5.168. (WRC-19)
5.166C	In Region 1, stations in the amateur service in the frequency band 50-52 MHz, with the exception of those countries listed in No. 5.169, shall not cause harmful interference to, or claim protection from, wind profiler radars operating in the radiolocation service under No. 5.162A. (WRC-19)
5.169A	Alternative allocation: in the following countries in Region 1: Angola, Saudi Arabia, Bahrain, Burkina Faso, Burundi, the United Arab Emirates, Gambia, Jordan, Kenya, Kuwait, Mauritius, Mozambique, Oman, Uganda, Qatar, South Sudan and Tanzania, the frequency band 50-54 MHz is allocated to the amateur service on a primary basis. In Guinea-Bissau, the frequency band 50.0-50.5 MHz is allocated to the amateur service on a primary basis. In Djibouti, the frequency band 50-52 MHz is allocated to the amateur service on a primary basis. With the exception of those countries listed in No. 5.169, stations in the amateur service operating in Region 1 under this footnote, in all or part of the frequency band 50-54 MHz, shall not cause harmful interference to, or claim protection from, stations of other services operating in accordance with the Radio Regulations in Algeria, Egypt, Iran (Islamic Republic of), Iraq, Israel, Libya, Palestine*, the Syrian Arab Republic, the Dem. People's Republic of Korea, Sudan and Tunisia. The field strength generated by an amateur station in the frequency band 50-54 MHz shall not exceed a value of +6 dB(V/m) at a height of 10 m above ground for more than 10% of time along the borders of listed countries requiring protection. (WRC-19)
5.169B	Except countries listed under No. 5.169, stations in the amateur service used in Region 1, in all or part of the 50-54 MHz frequency band, shall not cause harmful interference to, or claim protection from, stations of other services used in accordance with the Radio Regulations in Algeria, Armenia, Azerbaijan, Belarus, Egypt, Russian Federation, Iran (Islamic Republic of), Iraq, Kazakhstan, Kyrgyzstan, Libya, Uzbekistan, Palestine*, the Syrian Arab Republic, Sudan, Tunisia and Ukraine. The field strength generated by an amateur station in the frequency band 50-54 MHz shall not exceed a value of +6 dB(V/m) at a height of 10 m above ground for more than 10% of time along the borders of the countries listed in this provision. (WRC-19)

5.180	The frequency 75 MHz is assigned to marker beacons. Administrations shall refrain from assigning frequencies close to the limits of the guard band 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)
5.200	In the band 117.975-137 MHz, the frequency 121.5 MHz is the aeronautical emergency frequency and, where required, the frequency 123.1 MHz is the aeronautical frequency auxiliary to 121.5 MHz. Mobile stations of the maritime mobile service may communicate on these frequencies under the conditions laid down in Article 31 for distress and safety purposes with stations of the aeronautical mobile service. (WRC-07)
5.203C	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)
5.208	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)
5.210	Additional allocation: in Italy, the Czech Rep. and the United Kingdom, the bands 138-143.6 MHz and 143.65-144 MHz are also allocated to the space research service (space-to-Earth) on a secondary basis. (WRC07)
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 $\pm 25$ 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 the frequency band 148-149.9 MHz shall ensure that the power flux-density does not exceed 149 dBW/(m <sup>2</sup> . 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 bands 149.9-150.05 MHz and 399.9-400.05 MHz by the mobile-satellite service is subject to coordination under No. 9.11A. The mobile-satellite service shall not constrain the development and use of the radionavigation-satellite service in the bands 149.9-150.05 MHz and 399.9-400.05 MHz. (WRC-97)
5.221	Stations of the mobile-satellite service in the frequency band 148-149.9 MHz shall not cause harmful interference to, or claim protection from, stations of the fixed or mobile services operating in accordance with the Table of Frequency Allocations in the following countries: Albania, Algeria, Germany, Saudi Arabia, Australia, Austria, Bahrain, Bangladesh, Barbados, Belarus, Belgium, Benin, Bosnia and Herzegovina, Botswana, Brunei Darussalam, Bulgaria, Cameroon, China, Cyprus, Congo (Rep. of the), Korea (Rep. of), Côte d'Ivoire, Croatia, Cuba, Denmark, Djibouti, Egypt, the United Arab Emirates, Eritrea, Spain, Estonia, Eswatini, Ethiopia, the Russian Federation, Finland, France, Gabon, Georgia, Ghana, Greece, Guinea, Guinea Bissau, Hungary, India, Iran (Islamic Republic of), Ireland, Iceland, Israel, Italy, Jamaica, Japan, Jordan, Kazakhstan, Kenya, Kuwait, Lesotho, Latvia, Lebanon, Libya, Liechtenstein, Lithuania, Luxembourg, North Macedonia, Malaysia, Mali, Malta, Mauritania, Moldova, Mongolia, Montenegro, Mozambique, Namibia, Norway, New Zealand, Oman, Uganda, Uzbekistan, Pakistan, Panama, Papua New Guinea, Paraguay, the Netherlands, the Philippines, Poland, Portugal, Qatar, the Syrian Arab Republic, Kyrgyzstan, Dem. People's Rep. of Korea, Slovakia, Romania, the United Kingdom, Senegal, Serbia, Sierra Leone, Singapore, Slovenia, Sudan, Sri Lanka, South Africa, Sweden, Switzerland, Tanzania, Chad, Togo, Tonga, Trinidad and Tobago, Tunisia, Turkey, Ukraine, Viet Nam, Yemen, Zambia and Zimbabwe. (WRC-19)
5.222	Emissions of the radionavigation-satellite service in the bands 149.9-150.05 MHz and 399.9- 400.05 MHz may also be used by receiving earth stations of the space research service.
	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.
5.226	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 156-156.4875MHz, 156.5625-156.7625 MHz, 156.8375-157.45 MHz, 160.6-160.975 MHz and 161.475-162.05 MHz, each administration shall give priority to the maritime mobile service on only such frequencies as are assigned to stations of the maritime mobile service by the administration (see Articles 31 and 52, and Appendix 18).  Any use of frequencies in these bands by stations of other services to which they are allocated should be avoided in areas where such use might cause harmful interference to the maritime mobile VHF radiocommunication service.  However, the frequencies 156.8 MHz and 156.525 MHz and the frequency bands in which priority is given to the maritime mobile service may be used for radiocommunications on inland waterways subject to agreement between interested and affected administrations and taking into account current frequency usage and existing agreements. (WRC-07)

5.227	Additional allocation: the bands 156.4875-156.5125 MHz and 156.5375-156.5625 MHz are also allocated to the fixed and land mobile services on a primary basis. The use of these bands by the fixed and land mobile services shall not cause harmful interference to nor claim protection from the maritime mobile VHF radiocommunication service. (WRC-07)
5.227A	Additional allocation: the bands 161.9625-161.9875 MHz and 162.0125-162.0375 MHz are also allocated to the mobile-satellite service (Earth-to-space) on a secondary basis for the reception of automatic identification system (AIS) emissions from stations operating in the maritime-mobile service (see Appendix 18).(WRC-07)
5.228	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 ITUR 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. (WRC12)
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. (WRC12)
5.228AB	The use of the frequency bands 157.1875-157.3375 MHz and 161.7875-161.9375 MHz by the maritime mobile-satellite service (Earth-to-space) is limited to non-geostationary-satellite systems operating in accordance with Appendix 18. (WRC-19)
5.228AC	The use of the frequency bands 157.1875-157.3375 MHz and 161.7875-161.9375 MHz by the maritime mobile-satellite service (space-to-Earth) is limited to non-geostationary-satellite systems operating in accordance with Appendix 18. Such use is subject to agreement obtained under No. 9.21 with respect to the terrestrial services in Azerbaijan, Belarus, China, Korea (Rep. of), Cuba, the Russian Federation, the Syrian Arab Republic, the Dem. People's Rep. of Korea, South Africa and Viet Nam. (WRC-19)
5.228AA	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)
5.228B	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. (WRC12)
5.228F	The use of the frequency bands 161.9625-161.9875 MHz and 162.0125-162.0375 MHz by the mobilesatellite 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).
5.260	Recognizing that the use of the band 399.9-400.05 MHz by the fixed and mobile services may cause harmful interference to the radionavigation satellite service, administrations are urged not to authorize such use in application of No. 4.4.
5.260A	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 $\pm 25$ 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)

5.265	In the frequency band 403-410 MHz, Resolution 205 (Rev.WRC-19) applies. (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)
5.266	The use of the band 406-406.1 MHz by the mobile-satellite service is limited to low power satellite emergency position-indicating radiobeacons (see also Article 31). (WRC-07)
5.267	Any emission capable of causing harmful interference to the authorized uses of the band 406- 406.1 MHz is prohibited.
5.268	Use of the band 410-420 MHz by the space research service is limited to communications within 5 km of an orbiting, manned space vehicle. The power flux-density at the surface of the Earth produced by emissions from extra-vehicular activities shall not exceed $-153 \text{ dB(W/m}^2\text{)}$ for $0^\circ = d = 5^\circ$ , $-153 + 0.077 (d - 5) \text{ dB(W/m}^2\text{)}$ for $5^\circ = d = 70^\circ$ and $-148 \text{ dB(W/m}^2\text{)}$ for $70^\circ = d = 90^\circ$ , where $d$ is the angle of arrival of the radio-frequency wave and the reference bandwidth is 4 kHz. No. 4.10 does not apply to extra-vehicular activities. In this frequency band the space research (space-to-space) service shall not claim protection from, nor constrain the use and development of, stations of the fixed and mobile services. (WRC-97)
5.279A	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)
5.282	In the bands 435-438 MHz, 1 260-1 270 MHz, 2 400-2 450 MHz, 3 400-3 410 MHz (in Regions 2 and 3 only) and 5 650-5 670 MHz, the amateur-satellite service may operate subject to not causing harmful interference to other services operating in accordance with the Table (see No. 5.43). Administrations authorizing such use shall ensure that any harmful interference caused by emissions from a station in the amateur-satellite service is immediately eliminated in accordance with the provisions of No. 25.11. The use of the bands 1 260-1 270 MHz and 5 650-5 670 MHz by the amateur-satellite service is limited to the Earth-to-space direction.
5.286	The band 449.75-450.25 MHz may be used for the space operation service (Earth-to-space) and the space research service (Earth-to-space), subject to agreement obtained under No. 9.21.
5.286A	The use of the bands 454-456 MHz and 459-460 MHz by the mobile-satellite service is subject to coordination under No. 9.11A. (WRC-97)
5.286AA	The frequency band 450-470 MHz is identified for use by administrations wishing to implement International Mobile Telecommunications (IMT) - see Resolution 224 (Rev.WRC-19). This identification does not preclude the use of this frequency band by any application of the services to which it is allocated and does not establish priority in the Radio Regulations. (WRC-19)

5.286B	The use of the band 454-455 MHz in the countries listed in No. 5.286D, 455-456 MHz and 459-460 MHz in Region 2, and 454-456 MHz and 459-460 MHz in the countries listed in No. 5.286E, by stations in the mobile-satellite service, shall not cause harmful interference to, or claim protection from, stations of the fixed or mobile services operating in accordance with the Table of Frequency allocations. (WRC-97)
5.286C	The use of the band 454-455 MHz in the countries listed in No. 5.286D, 455-456 MHz and 459-460 MHz in Region 2, and 454-456 MHz and 459-460 MHz in the countries listed in No. 5.286E, by stations in the mobile-satellite service, shall not constrain the development and use of the fixed and mobile services operating in accordance with the Table of Frequency Allocations. (WRC-97)
5.287	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, Finland, Liechtenstein, Norway, Netherlands, the Czech Rep. and Switzerland, the band 470-494 MHz is also allocated to the radiolocation service on a secondary basis. This use is limited to the operation of wind profiler radars in accordance with Resolution 217 (WRC-97). (WRC-97)
5.294	Additional allocation: in Saudi Arabia, Cameroon, Côte d'Ivoire, Egypt, Ethiopia, Israel, Kenya, Libya, the Syrian Arab Republic, South Sudan, Chad and Yemen, the band 470-582 MHz is also allocated to the fixed service on a secondary basis. (WRC-12)
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)
5.302	Additional allocation: in the United Kingdom, the band 590-598 MHz is also allocated to the aeronautical radionavigation service on a primary basis. All new assignments to stations in the aeronautical radionavigation service, including those transferred from the adjacent bands, shall be subject to coordination with the Administrations of the following countries: Germany, Belgium, Denmark, Spain, France, Ireland, Luxembourg, Morocco, Norway and the Netherlands.
5.306	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.
5.309	Different category of service: in Costa Rica, EI

5.311A	For the frequency band 620-790 MHz, see also Resolution 549 (WRC-07). (WRC-07)
5.312	Additional allocation: in Armenia, Azerbaijan, Belarus, Bulgaria, the Russian Federation, Georgia, Hungary, Kazakhstan, Moldova, Mongolia, Uzbekistan, Poland, Kyrgyzstan, Slovakia, the Czech Rep., Romania, Tajikistan, Turkmenistan and Ukraine, the band 645-862 MHz is also allocated to the aeronautical radionavigation service on a primary basis. (WRC-03)
5.312A	In Region 1, the use of the frequency band 694-790 MHz by the mobile, except aeronautical mobile, service is subject to the provisions of Resolution 760 (Rev.WRC-19). See also Resolution 224 (Rev.WRC-19). (WRC-19)
5.314	Additional allocation: in Austria, Italy, Moldova, Uzbekistan, Kyrgyzstan and the United Kingdom, the band 790-862 MHz is also allocated to the land mobile service on a secondary basis. (WRC12)
5.316	Additional allocation: in Germany, Saudi Arabia, Bosnia and Herzegovina, Burkina Faso, Cameroon, Côte d'Ivoire, Croatia, Denmark, Egypt, Finland, Greece, Israel, Jordan, Kenya, Libya, The Former Yugoslav Republic of Macedonia, Liechtenstein, Mali, Monaco, Montenegro, Norway, the Netherlands, Portugal, the United Kingdom, the Syrian Arab Republic, Serbia, Sweden and Switzerland, the band 790-830 MHz, and in these same countries and in Spain, France, Gabon and Malta, the band 830-862 MHz, are also allocated to the mobile, except aeronautical mobile, service on a primary basis. However, stations of the mobile service in the countries mentioned in connection with each band referred to in this footnote shall not cause harmful interference to, or claim protection from, stations of services operating in accordance with the Table in countries other than those mentioned in connection with the band. This allocation is effective until 16 June 2015. (WRC07)
5.316A	Additional allocation: in Spain, France, Gabon and Malta, the band 790-830 MHz, in Albania, Angola, Bahrain, Benin, Botswana, Burundi, Congo (Rep. of the), Egypt, United Arab Emirates, Estonia, Gambia, Ghana, Guinea, Guinea-Bissau, Hungary, Iraq, Kuwait, Lesotho, Latvia, Lebanon, Lithuania, Luxembourg, Malawi, Morocco, Mauritania, Mozambique, Namibia, Niger, Nigeria, Oman, Uganda, Poland, Qatar, Slovakia, Czech Rep., Romania, Rwanda, Senegal, Sudan, South Sudan, South Africa, Swaziland, Tanzania, Chad, Togo, Yemen, Zambia, Zimbabwe and French overseas departments and communities of Region 1, the band 790-862 MHz and in Georgia, the band 806-862 MHz, are also allocated to the mobile, except aeronautical mobile, service on a primary basis subject to the agreement by the administrations concerned obtained under No. 9.21 and under the GE06 Agreement, as appropriate, including those administrations mentioned in No. 5.312, where appropriate. See Resolutions 224 (Rev.WRC12) and 749 (Rev.WRC12). This allocation is effective until 16 June 2015. (WRC12)
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)

5.322	In Region 1, in the band 862-960 MHz, stations of the broadcasting service shall be operated only in the African Broadcasting Area (see Nos. 5.10 to 5.13) excluding Algeria, Egypt, Spain, the Libyan Arab Jamahiriya, Morocco, Namibia, Nigeria, South Africa, Tanzania, Zimbabwe and Zambia, subject to agreement obtained under No. 9.21. (WRC-2000)
5.327A	The use of the band 960-1 164 MHz by the aeronautical mobile (R) service is limited to systems that operate in accordance with recognized international aeronautical standards. Such use shall be in accordance with Resolution 417 (WRC-07). (WRC-07)
5.328	The use of the band 960-1 215 MHz by the aeronautical radionavigation service is reserved on a worldwide basis for the operation and development of airborne electronic aids to air navigation and any directly associated ground-based facilities. (WRC-2000)
5.328A	Stations in the radionavigation-satellite service in the band 1 164-1 215 MHz shall operate in accordance with the provisions of Resolution 609 (Rev.WRC-07) and shall not claim protection from stations in the aeronautical radionavigation service in the band 960-1 215 MHz. No. 5.43A does not apply. The provisions of No. 21.18 shall apply. (WRC-07)
5.328AA	The frequency band 1 087.7-1 092.3 MHz is also allocated to the aeronautical mobile-satellite (R) service (Earth-to-space) on a primary basis, limited to the space station reception of Automatic Dependent Surveillance-Broadcast (ADS-B) emissions from aircraft transmitters that operate in accordance with recognized international aeronautical standards. Stations operating in the aeronautical mobile-satellite (R) service shall not claim protection from stations operating in the aeronautical radionavigation service. Resolution 425 (Rev.WRC-19) shall apply. (WRC-19)
5.328B	The use of the bands 1 164-1 300 MHz, 1 559-1 610 MHz and 5 010-5 030 MHz by systems and networks in the radionavigation-satellite service for which complete coordination or notification information, as appropriate, is received by the Radiocommunication Bureau after 1 January 2005 is subject to the application of the provisions of Nos. 9.12, 9.12A and 9.13. Resolution 610 (WRC-03) shall also apply; however, in the case of radionavigation-satellite service (space-to-space) networks and systems, Resolution 610 (WRC-03) shall only apply to transmitting space stations. In accordance with No. 5.329A, for systems and networks in the radionavigation satellite service (space-to-space) in the bands 1 215-1 300 MHz and 1 559-1 610 MHz, the provisions of Nos. 9.7, 9.12, 9.12A and 9.13 shall only apply with respect to other systems and networks in the radionavigation-satellite service (space-to-space). (WRC-07)
5.329	Use of the radionavigation-satellite service in the frequency band 1 215-1 300 MHz shall be subject to the condition that no harmful interference is caused to, and no protection is claimed from, the radionavigation service authorized under No. 5.331. Furthermore, the use of the radionavigation-satellite service in the frequency band 1 215-1 300 MHz shall be subject to the condition that no harmful interference is caused to the radiolocation service. No. 5.43 shall not apply in respect of the radiolocation service. Resolution 608 (Rev.WRC-19) shall apply. (WRC-19)
5.329A	Use of systems in the radionavigation-satellite service (space-to-space) operating in the bands 1 215-1 300 MHz and 1 559-1 610 MHz is not intended to provide safety service applications, and shall not impose any additional constraints on radionavigation-satellite service (space-to-Earth) systems or on other services operating in accordance with the Table of Frequency Allocations. (WRC-07)

5.331	Additional allocation: in Algeria, Germany, Saudi Arabia, Australia, Austria, Bahrain, Belarus, Belgium, Benin, Bosnia and Herzegovina, Brazil, Burkina Faso, Burundi, Cameroon, China, Korea (Rep. of), Croatia, Denmark, Egypt, the United Arab Emirates, Estonia, the Russian Federation, Finland, France, Ghana, Greece, Guinea, Equatorial Guinea, Hungary, India, Indonesia, Iran (Islamic Republic of), Iraq, Ireland, Israel, Jordan, Kenya, Kuwait, Lesotho, Latvia, Lebanon, Liechtenstein, Lithuania, Luxembourg, North Macedonia, Madagascar, Mali, Mauritania, Montenegro, Nigeria, Norway, Oman, Pakistan, the Kingdom of the Netherlands, Poland, Portugal, Qatar, the Syrian Arab Republic, Dem. People's Rep. of Korea, Slovakia, the United Kingdom, Serbia, Slovenia, Somalia, Sudan, South Sudan, Sri Lanka, South Africa, Sweden, Switzerland, Thailand, Togo, Turkey, Venezuela and Viet Nam, the frequency band 1 215-1 300 MHz is also allocated to the radionavigation service on a primary basis. In Canada and the United States, the frequency band 1 240-1 300 MHz is also allocated to the radionavigation service, and use of the radionavigation service shall be limited to the aeronautical radionavigation service. (WRC-19)	
5.332	In the band 1 215-1 260 MHz, active spaceborne sensors in the Earth exploration-satellite and space research services shall not cause harmful interference to, claim protection from, or otherwise impose constraints on operation or development of the radiolocation service, the radionavigation-satellite service and other services allocated on a primary basis. (WRC-2000)	
5.335A	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.	
5.340	All emissions are prohibited in the following bands:  1 400-1 427 MHz, 2 690-2 700 MHz, 10.68-10.7 GHz, 15.35-15.4 GHz,	except those provided for by No. 5.422, except those provided for by No. 5.483, except those provided for by No. 5.511,

23.6-24 GHz,  
 31.3-31.5 GHz,  
 31.5-31.8 GHz,  
 48.94-49.04 GHz,  
 50.2-50.4 GHz<sup>1</sup>,  
 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)

in Region 2,  
 from airborne stations

5.341	In the bands 1 400-1 727 MHz, 101-120 GHz and 197-220 GHz, passive research is being conducted by some countries in a programme for the search for intentional emissions of extraterrestrial origin.
5.341A	In Region 1, the frequency bands 1 427-1 452 MHz and 1 492-1 518 MHz are identified for use by administrations wishing to implement International Mobile Telecommunications (IMT) in accordance with Resolution 223 (Rev.WRC-15). This identification does not preclude the use of these frequency bands by any other application of the services to which it is allocated and does not establish priority in the Radio Regulations. The use of IMT stations is subject to agreement obtained under No. 9.21 with respect to the aeronautical mobile service used for aeronautical telemetry in accordance with No. 5.342. (WRC-15)
5.345	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 <sup>2</sup> ) in any 4 kHz band for all angles of arrival, instead of those given in Table 5-2 of Appendix 5. In the band 1 518-1 525 MHz stations in the mobile-satellite service shall not claim protection from stations in the mobile service in the territory of Japan. No. 5.43A does not apply. (WRC-03)
5.348B	In the band 1 518 - 1 525 MHz, stations in the mobile-satellite service shall not claim protection from aeronautical mobile telemetry stations in the mobile service in the territory of the United States (see Nos. 5.343 and 5.344) and in the countries listed in No. 5.342. No. 5.43A does not apply. (WRC-03)

5.351	The bands 1 525-1 544 MHz, 1 545-1 559 MHz, 1 626.5-1 645.5 MHz and 1 646.5-1 660.5 MHz shall not be used for feeder links of any service. In exceptional circumstances, however, an earth station at a specified fixed point in any of the mobile-satellite services may be authorized by an administration to communicate via space stations using these bands.
5.351A	For the use of the bands 1 518-1 544 MHz, 1 545-1 559 MHz, 1 610-1 645.5 MHz, 1646.5- 1 660.5 MHz, 1 668-1 675 MHz, 1 980-2 010 MHz, 2 170-2 200 MHz, 2 483.5-2 520 MHz and 2 670-2 690 MHz by the mobile-satellite service, see Resolutions 212 (Rev.WRC-07) and 225 (Rev.WRC-07). (WRC-07)
5.352A	In the frequency band 1 525-1 530 MHz, stations in the mobile-satellite service, except stations in the maritime mobile-satellite service, shall not cause harmful interference to, or claim protection from, stations of the fixed service in Algeria, Saudi Arabia, Egypt, Guinea, India, Israel, Italy, Jordan, Kuwait, Mali, Morocco, Mauritania, Nigeria, Oman, Pakistan, the Philippines, Qatar, Syrian Arab Republic, Viet Nam and Yemen notified prior to 1 April 1998. (WRC-19)
5.353A	In applying the procedures of Section II of Article 9 to the mobile-satellite service in the bands 1 530-1 544 MHz and 1 626.5-1 645.5 MHz, priority shall be given to accommodating the spectrum requirements for distress, urgency and safety communications of the Global Maritime Distress and Safety System (GMDSS). Maritime mobile-satellite distress, urgency and safety communications shall have priority access and immediate availability over all other mobile satellite communications operating within a network. Mobile-satellite systems shall not cause unacceptable interference to, or claim protection from, distress, urgency and safety communications of the GMDSS. Account shall be taken of the priority of safety-related communications in the other mobile-satellite services. (The provisions of Resolution 222 (WRC-2000)* shall apply.) (WRC-2000)
5.354	The use of the bands 1 525-1 559 MHz and 1 626.5-1 660.5 MHz by the mobile-satellite services is subject to coordination under No. 9.11A.
5.355	Additional allocation: in Bahrain, Bangladesh, Congo (Rep. of the), Djibouti, Egypt, Eritrea, Iraq, Israel, Kuwait, Qatar, Syrian Arab Republic, Somalia, Sudan, South Sudan, Chad, Togo and Yemen, the bands 1 540-1 559 MHz, 1 610-1 645.5 MHz and 1 646.5-1 660 MHz are also allocated to the fixed service on a secondary basis. (WRC12)
5.356	The use of the band 1 544-1 545 MHz by the mobile-satellite service (space-to-Earth) is limited to distress and safety communications (see Article 31).
5.357	Transmissions in the band 1 545-1 555 MHz from terrestrial aeronautical stations directly to aircraft stations, or between aircraft stations, in the aeronautical mobile (R) service are also authorized when such transmissions are used to extend or supplement the satellite-to-aircraft links.
5.357A	A In applying the procedures of Section II of Article 9 to the mobile-satellite service in the bands 1 545-1 555 MHz and 1 646.5-1 656.5 MHz, priority shall be given to

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

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- 5.359 Additional allocation: in Germany, Saudi Arabia, Armenia, Azerbaijan, Belarus, Cameroon, the Russian Federation, Georgia, Guinea, Guinea-Bissau, Jordan, Kazakhstan, Kuwait, Lithuania, Mauritania, Uganda, Uzbekistan, Pakistan, Poland, the Syrian Arab Republic, Kyrgyzstan, the Dem. People's Rep. of Korea, Romania, Tajikistan, Tunisia, Turkmenistan and Ukraine, the frequency bands 1 550-1 559 MHz, 1 610-1 645.5 MHz and 1 646.5-1 660 MHz are also allocated to the fixed service on a primary basis. Administrations are urged to make all practicable efforts to avoid the implementation of new fixed-service stations in these frequency bands. (WRC-19)
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- 5.362A In the United States, in the bands 1 555-1 559 MHz and 1 656.5-1 660.5 MHz, the aeronautical mobile-satellite (R) service shall have priority access and immediate availability, by preemption if necessary, over all other mobile-satellite communications operating within a network. Mobile-satellite systems shall not cause unacceptable interference to, or claim protection from, aeronautical mobile-satellite (R) service communications with priority 1 to 6 in Article 44. Account shall be taken of the priority of safety-related communications in the other mobile-satellite services. (WRC-97)
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- 5.362B Additional allocation: The band 1 559-1 610 MHz is also allocated to the fixed service on a secondary basis in Algeria, Saudi Arabia, Armenia, Azerbaijan, Belarus, Benin, Cameroon, Russian Federation, Gabon, Georgia, Guinea, Guinea-Bissau, Jordan, Kazakhstan, Libya, Lithuania, Mali, Mauritania, Nigeria, Uzbekistan, Pakistan, Poland, the Syrian Arab Republic, Kyrgyzstan, Dem. People's Rep. of Korea, Romania, Senegal, Tajikistan, Tanzania, Tunisia, Turkmenistan and Ukraine until 1 January 2015, at which time this allocation shall no longer be valid. Administrations are urged to take all practicable steps to protect the radionavigation-satellite service and the aeronautical radionavigation service and not authorize new frequency assignments to fixed-service systems in this band. (WRC12)
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- 5.362C Additional allocation: in Congo (Rep. of the), Eritrea, Iraq, Israel, Jordan, Qatar, the Syrian Arab Republic, Somalia, Sudan, South Sudan, Chad, Togo and Yemen, the band 1 559-1 610 MHz is also allocated to the fixed service on a secondary basis until 1 January 2015, at which time this allocation shall no longer be valid. Administrations are urged to take all practicable steps to protect the radionavigation-satellite service and not authorize new frequency assignments to fixed-service systems in this band. (WRC12)
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- 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.
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- 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 bands 1 610-1 626.5 MHz and 5 000-5 150 MHz are also allocated to the aeronautical mobile-satellite (R) service on a primary basis, subject to agreement obtained under No. 9.21.
5.368	The provisions of No. 4.10 do not apply with respect to the radiodetermination-satellite and mobile-satellite services in the frequency band 1 610-1 626.5 MHz. However, No. 4.10 applies in the frequency band 1 610-1 626.5 MHz with respect to the aeronautical radionavigation-satellite service when operating in accordance with No. 5.366, the aeronautical mobile satellite (R) service when operating in accordance with No. 5.367, and in the frequency band 1 621.35-1 626.5 MHz with respect to the maritime mobile-satellite service when used for GMDSS. (WRC-19)
5.369	Different category of service: in Angola, Australia, China, Eritrea, Ethiopia, India, Iran (Islamic Republic of), Israel, Lebanon, Liberia, Madagascar, Mali, Pakistan, Papua New Guinea, Syrian Arab Republic, the Dem. Rep. of the Congo, Sudan, South Sudan, Togo and Zambia, the allocation of the band 1 610-1 626.5 MHz to the radiodetermination-satellite service (Earth-to-space) is on a primary basis (see No. 5.33), subject to agreement obtained under No. 9.21 from countries not listed in this provision. (WRC12)
5.371	Additional allocation: in Region 1, the bands 1 610-1 626.5 MHz (Earth-to-space) and 2 483.5-2 500 MHz (space-to-Earth) are also allocated to the radiodetermination-satellite service on a secondary basis, subject to agreement obtained under No. 9.21.
5.372	Harmful interference shall not be caused to stations of the radio astronomy service using the 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 stations in the fixed service operating in the countries listed in No. 5.359. (WRC-97)
5.375	The use of the band 1 645.5-1 646.5 MHz by the mobile-satellite service (Earth-to-space) and for inter-satellite links is limited to distress and safety communications (see Article 31).

5.376	Transmissions in the band 1 646.5-1 656.5 MHz from aircraft stations in the aeronautical mobile (R) service directly to terrestrial aeronautical stations, or between aircraft stations, are also authorized when such transmissions are used to extend or supplement the aircraft-to-satellite links.
5.376A	Mobile earth stations operating in the band 1 660-1 660.5 MHz shall not cause harmful interference to stations in the radio astronomy service. (WRC-97)
5.379A	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 <sup>2</sup> ) in 10 MHz and $-194$ dB(W/m <sup>2</sup> ) in any 20 kHz at any radio astronomy station recorded in the Master International Frequency Register, for more than 2% of integration periods of 2 000 s. (WRC-03)
5.379D	For sharing of the band 1 668.4-1 675 MHz between the mobile-satellite service and the fixed and mobile services, Resolution 744 (Rev.WRC-07) shall apply. (WRC-07)
5.379E	In the band 1 668.4-1 675 MHz, stations in the mobile-satellite service shall not cause harmful interference to stations in the meteorological aids service in China, Iran (Islamic Republic of), Japan and Uzbekistan. In the band 1 668.4-1 675 MHz, administrations are urged not to implement new systems in the meteorological aids service and are encouraged to migrate existing meteorological aids service operations to other bands as soon as practicable. (WRC-03)
5.380A	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 bands, or portions of the bands, 1 710-1 885 MHz, 2 300-2 400 MHz and 2 500-2 690 MHz, are identified for use by administrations wishing to implement International Mobile Telecommunications (IMT) in accordance with Resolution 223 (Rev.WRC-07). This identification does not preclude the use of these bands by any application of the services to which they are allocated and does not establish priority in the Radio Regulations. (WRC-07)
5.385	Additional allocation: the band 1 718.8-1 722.2 MHz is also allocated to the radio astronomy service on a secondary basis for spectral line observations. (WRC-2000)

5.388	The bands 1 885-2 025 MHz and 2 110-2 200 MHz are intended for use, on a worldwide basis, by administrations wishing to implement International Mobile Telecommunications-2000 (IMT-2000). Such use does not preclude the use of these bands by other services to which they are allocated. The bands should be made available for IMT-2000 in accordance with Resolution 212 (Rev.WRC-97). (See also Resolution 223 (WRC-2000).) (WRC-2000)
5.388A	In Regions 1 and 3, the bands 1 885-1 980 MHz, 2 010-2 025 MHz and 2 110-2 170 MHz and, in Region 2, the bands 1 885-1 980 MHz and 2 110-2 160 MHz may be used by high altitude platform stations as base stations to provide International Mobile Telecommunications-2000 (IMT-2000), in accordance with Resolution 221 (Rev.WRC-03). Their use by IMT-2000 applications using high altitude platform stations as base stations does not preclude the use of these bands by any station in the services to which they are allocated and does not establish priority in the Radio Regulations. (WRC-03)
5.388B	In Algeria, Saudi Arabia, Bahrain, Benin, Burkina Faso, Cameroon, Comoros, Côte d'Ivoire, China, Cuba, Djibouti, Egypt, United Arab Emirates, Eritrea, Ethiopia, Gabon, Ghana, India, Iran (Islamic Republic of), Israel, Jordan, Kenya, Kuwait, Lebanon, Libya, Mali, Morocco, Mauritania, Nigeria, Oman, Uganda, Pakistan, Qatar, the Syrian Arab Republic, Senegal, Singapore, Sudan, South Sudan, Tanzania, Chad, Togo, Tunisia, Yemen, Zambia and Zimbabwe, for the purpose of protecting fixed and mobile services, including IMT mobile stations, in their territories from co-channel interference, a high altitude platform station (HAPS) operating as an IMT base station in neighbouring countries, in the frequency bands referred to in No. 5.388A, shall not exceed a co-channel power flux-density of 127 dB(W)/(m <sup>2</sup> · MHz)) at the Earth's surface outside a country's borders unless explicit agreement of the affected administration is provided at the time of the notification of HAPS. (WRC-19)
5.389A	The use of the bands 1 980-2 010 MHz and 2 170-2 200 MHz by the mobile-satellite service is subject to coordination under No. 9.11A and to the provisions of Resolution 716 (Rev.WRC-2000). (WRC-07)
5.389B	The use of the frequency band 1 980-1 990 MHz by the mobile-satellite service shall not cause harmful interference to or constrain the development of the fixed and mobile services in Argentina, Brazil, Canada, Chile, Ecuador, the United States, Honduras, Jamaica, Mexico, Paraguay, Peru, Suriname, Trinidad and Tobago, Uruguay and Venezuela. (WRC-19)
5.389C	The use of the bands 2 010-2 025 MHz and 2 160-2 170 MHz in Region 2 by the mobile-satellite service is subject to coordination under No. 9.11A and to the provisions of Resolution 716 (Rev.WRC-2000). (WRC-07)
5.389E	The use of the bands 2 010-2 025 MHz and 2 160-2 170 MHz by the mobile-satellite service in Region 2 shall not cause harmful interference to or constrain the development of the fixed and mobile services in Regions 1 and 3.
5.389F	In Algeria, Cape Verde, Egypt, Iran (Islamic Republic of), Mali, Syrian Arab Republic and Tunisia, the use of the frequency bands 1 980-2 010 MHz and 2 170-2 200 MHz by the mobile-satellite service shall neither cause harmful interference to the fixed and mobile services, nor hamper the development of those services prior to 1 January 2005, nor shall the former service request protection from the latter services. (WRC-19)
5.391	In making assignments to the mobile service in the bands 2 025-2 110 MHz and 2 200-2 290 MHz, administrations shall not introduce high-density mobile systems, as described in Recommendation ITU-R SA.1154, and shall take that Recommendation into account for the introduction of any other type of mobile system. (WRC-97)
5.392	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.

5.396	Space stations of the broadcasting-satellite service in the band 2 310-2 360 MHz operating in accordance with No. 5.393 that may affect the services to which this band is allocated in other countries shall be coordinated and notified in accordance with Resolution 33 (Rev.WRC-97)*. Complementary terrestrial broadcasting stations shall be subject to bilateral coordination with neighbouring countries prior to their bringing into use.
5.398	In respect of the radiodetermination-satellite service in the band 2 483.5-2 500 MHz, the provisions of No. 4.10 do not apply.
5.399	In Region 1, in countries other than those listed in No. 5.400, harmful interference shall not be caused to, or protection shall not be claimed from, stations of the radiolocation service by stations of the radiodetermination satellite service.
5.402	The use of the band 2 483.5-2 500 MHz by the mobile-satellite and the radiodetermination-satellite services is subject to the coordination under No. 9.11A. Administrations are urged to take all practicable steps to prevent harmful interference to the radio astronomy service from emissions in the 2 483.5-2 500 MHz band, especially those caused by second-harmonic radiation that would fall into the 4 990-5 000 MHz band allocated to the radio astronomy service worldwide.
5.403	Subject to agreement obtained under No. 9.21, the band 2 520-2 535 MHz may also be used for the mobile-satellite (space-to-Earth), except aeronautical mobile-satellite, service for operation limited to within national boundaries. The provisions of No. 9.11A apply. (WRC-07)
5.405	(SUP - WRC-12)
5.410	The band 2 500-2 690 MHz may be used for tropospheric scatter systems in Region 1, subject to agreement obtained under No. 9.21. Administrations shall make all practicable efforts to avoid developing new tropospheric scatter systems in this band. When planning new tropospheric scatter radio-relay links in this band, all possible measures shall be taken to avoid directing the antennas of these links towards the geostationary-satellite orbit. (WRC-07)
5.413	In the design of systems in the broadcasting-satellite service in the bands between 2 500 MHz and 2 690 MHz, administrations are urged to take all necessary steps to protect the radio astronomy service in the band 2 690-2 700 MHz.
5.415	The use of the bands 2 500-2 690 MHz in Region 2 and 2 500-2 535 MHz and 2 655-2 690 MHz in Region 3 by the fixed-satellite service is limited to national and regional systems, subject to agreement obtained under No. 9.21, giving particular attention to the broadcasting-satellite service in Region 1. (WRC-07)
5.416	The use of the band 2 520-2 670 MHz by the broadcasting-satellite service is limited to national and regional systems for community reception, subject to agreement obtained under No. 9.21. The provisions of No. 9.19 shall be applied by administrations in this band in their bilateral and multilateral negotiations. (WRC-07)
5.417C	Use of the band 2 605-2 630 MHz by non-geostationary-satellite systems in the broadcasting-satellite service (sound), pursuant to No. 5.417A, for which complete Appendix 4 coordination information, or notification information, has been received after 4 July 2003, is subject to the application of the provisions of No. 9.12. (WRC-03)

5.417D	Use of the band 2 605-2 630 MHz by geostationary-satellite networks for which complete Appendix 4 coordination information, or notification information, has been received after 4 July 2003 is subject to the application of the provisions of No. 9.13 with respect to non-geostationary-satellite systems in the broadcasting satellite service (sound), pursuant to No. 5.417A, and No. 22.2 does not apply. (WRC-03)
5.418B	Use of the band 2 630-2 655 MHz by non-geostationary-satellite systems in the broadcasting-satellite service (sound), pursuant to No. 5.418, for which complete Appendix 4 coordination information, or notification information, has been received after 2 June 2000, is subject to the application of the provisions of No. 9.12. (WRC-03)
5.418C	Use of the band 2 630-2 655 MHz by geostationary-satellite networks for which complete Appendix 4 coordination information, or notification information, has been received after 2 June 2000 is subject to the application of the provisions of No. 9.13 with respect to non-geostationary-satellite systems in the broadcasting satellite service (sound), pursuant to No. 5.418 and No. 22.2 does not apply. (WRC-03)
5.419	When introducing systems of the mobile-satellite service in the band 2 670-2 690 MHz, administrations shall take all necessary steps to protect the satellite systems operating in this band prior to 3 March 1992. The coordination of mobile-satellite systems in the band shall be in accordance with No. 9.11A. (WRC-07)
5.420	The band 2 655-2 670 MHz may also be used for the mobile-satellite (Earth-to-space), except aeronautical mobile-satellite, service for operation limited to within national boundaries, subject to agreement obtained under No. 9.21. The coordination under No. 9.11A applies. (WRC-07)
5.423	In the band 2 700-2 900 MHz, ground-based radars used for meteorological purposes are authorized to operate on a basis of equality with stations of the aeronautical radionavigation service.
5.424A	In the band 2 900-3 100 MHz, stations in the radiolocation service shall not cause harmful interference to, nor claim protection from, radar systems in the radionavigation service. (WRC-03)
5.425	In the band 2 900-3 100 MHz, the use of the shipborne interrogator-transponder (SIT) system shall be confined to the sub-band 2 930 -2 950 MHz.
5.426	The use of the band 2 900-3 100 MHz by the aeronautical radionavigation service is limited to ground based radars.
5.427	In the bands 2 900-3 100 MHz and 9 300-9 500 MHz, the response from radar transponders shall not be capable of being confused with the response from radar beacons (racons) and shall not cause interference to ship or aeronautical radars in the radionavigation service, having regard, however, to No. 4.9.

5.430A	<p>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 fluxdensity (pfd) produced at 3 m above ground does not exceed <math>-154.5 \text{ dBW}/(\text{m}^2 \cdot 4 \text{ kHz})</math> for more than 20% of time at the border of the territory of any other administration. This limit may be exceeded on the territory of any country whose administration has so agreed. In order to ensure that the pfd limit at the border of the territory of any other administration is met, the calculations and verification shall be made, taking into account all relevant information, with the mutual agreement of both administrations (the administration responsible for the terrestrial station and the administration responsible for the earth station) and with the assistance of the Bureau if so requested. In case of disagreement, the calculation and verification of the pfd shall be made by the Bureau, taking into account the information referred to above. Stations of the mobile service in the frequency band 3 400-3 600 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)</p>
5.431	<p>Additional allocation: in Germany, the frequency band 3 400-3 475 MHz is also allocated to the amateur service on a secondary basis. (WRC-19)</p>
5.436	<p>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)</p>
5.437	<p>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)</p>
5.438	<p>Use of the band 4 200-4 400 MHz by the aeronautical radionavigation service is reserved exclusively for radio altimeters installed on board aircraft and for the associated transponders on the ground. However, passive sensing in the Earth exploration-satellite and space research services may be authorized in this band on a secondary basis (no protection is provided by the radio altimeters).</p>
5.440	<p>The standard frequency and time signal-satellite service may be authorized to use the frequency 4 202 MHz for space-to-Earth transmissions and the frequency 6 427 MHz for Earth-to-space transmissions. Such transmissions shall be confined within the limits of <math>\pm 2</math> MHz of these frequencies, subject to agreement obtained under No. 9.21.</p>
5.441	<p>The use of the bands 4 500-4 800 MHz (space-to-Earth), 6 725-7 025 MHz (Earth-to-space) by the fixed-satellite service shall be in accordance with the provisions of Appendix 30B. The use of the bands 10.7-10.95 GHz (space-to-Earth), 11.2-11.45 GHz (space-to-Earth) and 12.75-13.25 GHz (Earth-to-space) by geostationary-satellite systems in the fixed-satellite service shall be in accordance with the provisions of Appendix 30B. The use of the bands 10.7-10.95 GHz (space-to-Earth), 11.2-11.45 GHz (space-to-Earth) and 12.75-13.25 GHz (Earth-to-space) by a non-geostationary-satellite system in the fixed-satellite service is subject to application of the provisions of No. 9.12 for coordination with other non-geostationary-satellite systems in the fixed satellite service. Non-geostationary-satellite systems in the fixed-satellite service shall not claim protection from geostationary-satellite networks in the fixed-satellite service operating in accordance with the Radio Regulations, irrespective of the dates of receipt by the Bureau of the complete coordination or notification information, as appropriate, for the non-geostationary-satellite systems in the fixed-satellite service and of the complete coordination or notification information, as appropriate, for the geostationary-satellite networks, and No. 5.43A does not apply. Non-geostationary-satellite systems in the fixed-satellite service in the above bands shall be operated in such a way that any unacceptable interference that may occur during their operation shall be rapidly eliminated. (WRC-2000)</p>

5.442	In the bands 4 825-4 835 MHz and 4 950-4 990 MHz, the allocation to the mobile service is restricted to the mobile, except aeronautical mobile, service. In Region 2 (except Brazil, Cuba, Guatemala, Mexico, Paraguay, Uruguay and Venezuela), and in Australia, the band 4 825-4 835 MHz is also allocated to the aeronautical mobile service, limited to aeronautical mobile telemetry for flight testing by aircraft stations. Such use shall be in accordance with Resolution 416 (WRC-07) and shall not cause harmful interference to the fixed service. (WRC-07)
5.443AA	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. (WRC12)
5.443B	In order not to cause harmful interference to the microwave landing system operating above 5 030 MHz, the aggregate power flux-density produced at the Earth's surface in the band 5 030-5 150 MHz by all the space stations within any radionavigation-satellite service system (space-to-Earth) operating in the band 5 010-5 030 MHz shall not exceed $-124.5$ dB(W/m <sup>2</sup> ) in a 150 kHz band. In order not to cause harmful interference to the radio astronomy service in the band 4 990-5 000 MHz, radionavigation-satellite service systems operating in the band 5 010-5 030 MHz shall comply with the limits in the band 4 990-5 000 MHz defined in Resolution 741(WRC-03). (WRC-03)
5.443C	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 ITUR 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. (WRC12)
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. (WRC12)
5.444	The band 5 030-5 150 MHz is to be used for the operation of the international standard system (microwave landing system) for precision approach and landing. In the band 5 030-5 091 MHz, the requirements of this system shall take precedence over other uses of this band. For the use of the band 5091-5 150 MHz, No. 5.444A and Resolution 114 (Rev.WRC-03) apply. (WRC-07)
5.444A	<p>Additional allocation: the band 5 091-5 150 MHz is also allocated to the fixed-satellite service (Earth-to-space) on a primary basis. This allocation is limited to feeder links of non-geostationary satellite systems in the mobile-satellite service and is subject to coordination under No. 9.11A.</p> <p>In the band 5 091-5 150 MHz, the following conditions also apply:</p> <ul style="list-style-type: none"> <li>– prior to 1 January 2018, the use of the band 5 091-5 150 MHz by feeder links of non-geostationary satellite systems in the mobile-satellite service shall be made in accordance with Resolution 114 (Rev.WRC-03);</li> <li>– after 1 January 2016, no new assignments shall be made to earth stations providing feeder links of non-geostationary mobile-satellite systems;</li> <li>– after 1 January 2018, the fixed-satellite service will become secondary to the aeronautical radionavigation service. (WRC-07)</li> </ul>

5.444B	<p>The use of the frequency band 5 091-5 150 MHz by the aeronautical mobile service is limited to:</p> <ul style="list-style-type: none"> <li>– 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);</li> <li>– aeronautical telemetry transmissions from aircraft stations (see No. 1.83) in accordance with Resolution 418 (Rev.WRC-19). (WRC-19)</li> </ul>
5.446	<p>Additional allocation: in the countries listed in Nos. 5.369 and 5.400, the band 5 150-5 216 MHz is also allocated to the radiodetermination-satellite service (space-to-Earth) on a primary basis, subject to agreement obtained under No. 9.21. In Region 2, the band is also allocated to the radiodetermination-satellite service (space-to-Earth) on a primary basis. In Regions 1 and 3, except those countries listed in Nos. 5.369 and 5.400, the band is also allocated to the radiodetermination-satellite service (space-to-Earth) on a secondary basis. The use by the radiodetermination-satellite service is limited to feeder links in conjunction with the radiodetermination-satellite service operating in the bands 1 610-1 626.5 MHz and/or 2 483.5-2 500 MHz. The total power flux-density at the Earth's surface shall in no case exceed <math>-159</math> dB(W/m<sup>2</sup>) in any 4 kHz band for all angles of arrival.</p>
5.446A	<p>The use of the frequency bands 5 150-5 350 MHz and 5 470-5 725 MHz by the stations in the mobile, except aeronautical mobile, service shall be in accordance with Resolution 229 (Rev.WRC-19). (WRC-19)</p>
5.446B	<p>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)</p>
5.446C	<p>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)</p>
5.447A	<p>The allocation to the fixed-satellite service (Earth-to-space) is limited to feeder links of non-geostationary-satellite systems in the mobile-satellite service and is subject to coordination under No. 9.11A.</p>
5.447B	<p>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 <math>-164</math> dB(W/m<sup>2</sup>) in any 4 kHz band for all angles of arrival.</p>
5.447C	<p>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.</p>

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 space borne sensors. Other uses of the band by the space research service are on a secondary basis. (WRC-97)
5.447F	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.
5.450A	In the frequency band 5 470-5 725 MHz, stations in the mobile service shall not claim protection from radiodetermination services. The radiodetermination services shall not impose more stringent conditions upon the mobile service than those stipulated in Resolution 229 (Rev.WRC-19). (WRC-19)
5.450B	In the frequency band 5 470-5 650 MHz, stations in the radiolocation service, except ground-based radars used for meteorological purposes in the band 5 600-5 650 MHz, shall not cause harmful interference to, nor claim protection from, radar systems in the maritime radionavigation service. (WRC-03)
5.451	Additional allocation: in the United Kingdom, the band 5470-5 850 MHz is also allocated to the land mobile service on a secondary basis. The power limits specified in Nos. 21.2, 21.3, 21.4 and 21.5 shall apply in the band 5 725-5 850 MHz.

5.452	Between 5 600 MHz and 5 650 MHz, ground-based radars used for meteorological purposes are authorized to operate on a basis of equality with stations of the maritime radionavigation service.
5.457A	In the bands 5 925-6 425 MHz and 14-14.5 GHz, earth stations located on board vessels may communicate with space stations of the fixed-satellite service. Such use shall be in accordance with Resolution 902 (WRC-03). (WRC-03)
5.457B	In the bands 5 925-6 425 MHz and 14-14.5 GHz, earth stations located on board vessels may operate with the characteristics and under the conditions contained in Resolution 902 (WRC-03) in Algeria, Saudi Arabia, Bahrain, Comoros, Djibouti, Egypt, United Arab Emirates, Jordan, Kuwait, Libya, Morocco, Mauritania, Oman, Qatar, the Syrian Arab Republic, Sudan, South Sudan, Tunisia and Yemen, in the maritime mobile-satellite service on a secondary basis. Such use shall be in accordance with Resolution 902 (WRC-03). (WRC-12)
5.458	In the band 6 425-7 075 MHz, passive microwave sensor measurements are carried out over the oceans. In the band 7 075-7 250 MHz, passive microwave sensor measurements are carried out. Administrations should bear in mind the needs of the Earth exploration-satellite (passive) and space research (passive) services in their future planning of the bands 6 425- 7 025 MHz and 7 075-7 250 MHz.
5.458A	In making assignments in the band 6 700-7 075 MHz to space stations of the fixed-satellite service, administrations are urged to take all practicable steps to protect spectral line observations of the radio astronomy service in the band 6 650-6 675.2 MHz from harmful interference from unwanted emissions.
5.458B	The space-to-Earth allocation to the fixed-satellite service in the band 6 700-7 075 MHz is limited to feeder links for non-geostationary satellite systems of the mobile-satellite service and is subject to coordination under No. 9.11A. The use of the band 6 700-7 075 MHz (space-to-Earth) by feeder links for non-geostationary satellite systems in the mobile-satellite service is not subject to No. 22.2.
5.458C	Administrations making submissions in the band 7 025-7 075 MHz (Earth-to-space) for geostationary satellite systems in the fixed-satellite service after 17 November 1995 shall consult on the basis of relevant ITU-R Recommendations with the administrations that have notified and brought into use non-geostationary-satellite systems in this frequency band before 18 November 1995 upon request of the latter administrations. This consultation shall be with a view to facilitating shared operation of both geostationary-satellite systems in the fixed satellite service and non-geostationary-satellite systems in this band.
5.460	No emissions from space research service (Earth-to-space) systems intended for deep space shall be effected in the frequency band 7 190-7 235 MHz. Geostationary satellites in the space research service operating in the frequency band 7 190-7 235 MHz shall not claim protection from existing and future stations of the fixed and mobile services and No. 5.43A does not apply. (WRC-15)
5.459	Additional allocation: in the Russian Federation, the frequency bands 7 100-7 155 MHz and 7 190- 7 235 MHz are also allocated to the space operation service (Earth-to-space) on a primary basis, subject to agreement obtained under No. 9.21. (WRC-97)

5.460A	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)
5.461B	The use of the band 7 750-7 850 MHz by the meteorological-satellite service (space-to-Earth) is limited to non-geostationary satellite systems. (WRC-97)
5.461AA	The use of the frequency band 7 375-7 750 MHz by the maritime mobile-satellite service is limited to geostationary-satellite networks. (WRC-15)
5.461AB	In the frequency band 7 375-7 750 MHz, earth stations in the maritime mobile-satellite service shall not claim protection from, nor constrain the use and development of, stations in the fixed and mobile, except aeronautical mobile, services. No. 5.43A does not apply. (WRC-15)
5.462A	In Regions 1 and 3 (except for Japan), in the band 8 025-8 400 MHz, the Earth exploration-satellite service using geostationary satellites shall not produce a power flux-density in excess of the following provisional values for angles of arrival (?), without the consent of the affected administration: -174 dB(W/m <sup>2</sup> ) in a 4 kHz band for 0° = ? -174 + 0.5 (? - 5) dB(W/m <sup>2</sup> ) in a 4 kHz band for 5° = ? -164 dB(W/m <sup>2</sup> ) in a 4 kHz band for 25° = ? = 90° These values are subject to study under Resolution 124 (WRC-97)*. (WRC-97) * This resolution was revised by WRC 2000
5.463	Aircraft stations are not permitted to transmit in the band 8 025-8 400 MHz. (WRC-97)
5.465	In the space research service, the use of the band 8 400-8 450 MHz is limited to deep space.
5.466	Different category of service: in Singapore and Sri Lanka, the allocation of the band 8 400-8 500 MHz to the space research service is on a secondary basis (see No. 5.32). (WRC12)

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)
5.469A	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.
5.472	In the bands 8 850-9 000 MHz and 9 200-9 225 MHz, the maritime radionavigation service is limited to shore-based radars.
5.473A	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).
5.474B	Stations operating in the Earth exploration-satellite (active) service shall comply with Recommendation ITU-R RS.2066- 0. (WRC-15)
5.474C	Stations operating in the Earth exploration-satellite (active) service shall comply with Recommendation ITU-R RS.2065- 0. (WRC-15)
5.474D	Stations in the Earth exploration-satellite service (active) shall not cause harmful interference to, or claim protection from, stations of the maritime radionavigation and radiolocation services in the frequency band 9 200-9 300 MHz, the radionavigation and radiolocation services in the frequency band 9 900-10 000 MHz and the radiolocation service in the frequency band 10.0-10.4 GHz. (WRC-15)
5.475	The use of the band 9 300-9 500 MHz by the aeronautical radionavigation service is limited to airborne weather radars and ground-based radars. In addition, ground-based radar beacons in the aeronautical radionavigation service are permitted in the band 9 300-9 320 MHz on condition that harmful interference is not caused to the maritime radionavigation service. (WRC-07)
5.475A	The use of the band 9 300-9 500 MHz by the Earth exploration-satellite service (active) and the space research service (active) is limited to systems requiring necessary bandwidth greater than 300 MHz that cannot be fully accommodated within the 9 500-9 800 MHz band. (WRC-07)
5.475B	In the band 9 300-9 500 MHz, stations operating in the radiolocation service shall not cause harmful interference to, nor claim protection from, radars operating in the radionavigation service in conformity with the Radio Regulations. Ground-based radars used for meteorological purposes have priority over other radiolocation uses. (WRC-07)

5.476A	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)
5.478	Additional allocation: in Azerbaijan, Mongolia, Kyrgyzstan, Romania, Turkmenistan and Ukraine, the band 9 800-10 000 MHz is also allocated to the radionavigation service on a primary basis. (WRC-07)
5.478A	The use of the band 9 800-9 900 MHz by the Earth exploration-satellite service (active) and the space research service (active) is limited to systems requiring necessary bandwidth greater than 500 MHz that cannot be fully accommodated within the 9 300-9 800 MHz band. (WRC-07)
5.478B	In the band 9 800-9 900 MHz, stations in the Earth exploration-satellite service (active) and space research service (active) shall not cause harmful interference to, nor claim protection from stations of the fixed service to which this band is allocated on a secondary basis. (WRC-07)
5.479	The band 9 975-10 025 MHz is also allocated to the meteorological-satellite service on a secondary basis for use by weather radars.
5.482	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.
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)
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)
5.495	Additional allocation: in Greece, Monaco, Montenegro, Uganda and Tunisia, the frequency band 12.5-12.75 GHz is also allocated to the fixed and mobile, except aeronautical mobile, services on a secondary basis. (WRC-19)
5.496	Additional allocation: in Austria, Azerbaijan, Kyrgyzstan and Turkmenistan, the band 12.5-12.75 GHz is also allocated to the fixed service and the mobile, except aeronautical mobile, service on a primary basis. However, stations in these services shall not cause harmful interference to fixed-satellite service earth stations of countries in Region 1 other than those listed in this footnote. Coordination of these earth stations is not required with stations of the fixed and mobile services of the countries listed in this footnote. The power flux-density limit at the Earth's surface given in Table 21-4 of Article 21, for the fixed-satellite service shall apply on the territory of the countries listed in this footnote. (WRC2000)
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)
5.499E	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 band. (WRC-15)
5.499C	<p>The allocation of the frequency band 13.4-13.65 GHz to the space research service on a primary basis is limited to:</p> <ul style="list-style-type: none"> <li>– 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,</li> <li>– active spaceborne sensors,</li> <li>– 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.</li> </ul>
5.499D	In the frequency band 13.4-13.65 GHz, satellite systems in the space research service (space-to-Earth) and/or the space research service (space-to-space) shall not cause harmful interference to, nor claim protection from, stations in the fixed, mobile, radiolocation and Earth exploration-satellite (active) services. (WRC-15)
5.501A	The allocation of the band 13.4-13.75 GHz to the space research service on a primary basis is limited to active spaceborne sensors. Other uses of the band by the space research service are on a secondary basis. (WRC-97)
5.501B	In the band 13.4-13.75 GHz, the Earth exploration-satellite (active) and space research (active) services shall not cause harmful interference to, or constrain the use and development of, the radiolocation service. (WRC-97)
5.502	<p>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:</p> <ul style="list-style-type: none"> <li>–115 dB(W/(m<sup>2</sup> · 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;</li> <li>–115 dB(W/(m<sup>2</sup> · 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)</li> </ul>
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 nongeostationary-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)
5.504B	Aircraft earth stations operating in the aeronautical mobile-satellite service in the band 14-14.5 GHz shall comply with the provisions of Annex 1, Part C of Recommendation ITU-R M.1643, with respect to any radio astronomy station performing observations in the 14.47-14.5 GHz band located on the territory of Spain, France, India, Italy, the United Kingdom and South Africa. (WRC-03)
5.504C	In the frequency band 14-14.25 GHz, the power flux-density produced on the territory of the countries of Saudi Arabia, Bahrain, Botswana, Côte d'Ivoire, Egypt, Guinea, India, Iran (Islamic Republic of), Kuwait, Nigeria, Oman, the Syrian Arab Republic and Tunisia by any aircraft earth station in the aeronautical mobile-satellite service shall not exceed the limits given in Annex 1, Part B of Recommendation ITU-R M.1643-0, unless otherwise specifically agreed by the affected administration(s). The provisions of this footnote in no way derogate the obligations of the aeronautical mobile-satellite service to operate as a secondary service in accordance with No. 5.29. (WRC-15)
5.505	Additional allocation: in Algeria, Saudi Arabia, Bahrain, Botswana, Brunei Darussalam, Cameroon, China, Congo (Rep. of the), Djibouti, Korea (Rep. of), Egypt, the United Arab Emirates, Gabon, Guinea, India, Indonesia, Iran (Islamic Republic of), Iraq, Israel, Japan, Jordan, Kuwait, Lebanon, Malaysia, Mali, Morocco, Mauritania, Oman, the Philippines, Qatar, the Syrian Arab Republic, the Dem. People's Rep. of Korea, Singapore, Somalia, Sudan, South Sudan, Swaziland, Chad, Viet Nam and Yemen, the frequency band 14-14.3 GHz is also allocated to the fixed service on a primary basis. (WRC-15)
5.506	The band 14-14.5 GHz may be used, within the fixed-satellite service (Earth-to-space), for feeder links for the broadcasting-satellite service, subject to coordination with other networks in the fixed-satellite service. Such use of feeder links is reserved for countries outside Europe.
5.506A	In the band 14-14.5 GHz, ship earth stations with an e.i.r.p. greater than 21 dBW shall operate under the same conditions as earth stations located on board vessels, as provided in Resolution 902 (WRC-03). This footnote shall not apply to ship earth stations for which the complete Appendix 4 information has been received by the Bureau prior to 5 July 2003. (WRC-03)
5.506B	Earth stations located on board vessels communicating with space stations in the fixed-satellite service may operate in the frequency band 14-14.5 GHz without the need for prior agreement from Cyprus, Greece and Malta, within the minimum distance given in Resolution 902 (WRC-03) from these countries. (WRC-03)

5.508	Additional allocation: in Germany, France, Italy, Libya, North Macedonia and the United Kingdom, the frequency band 14.25-14.3 GHz is also allocated to the fixed service on a primary basis. (WRC-19)
5.508A	In the band 14.25-14.3 GHz, the power flux-density produced on the territory of the countries of Saudi Arabia, Botswana, China, Côte d'Ivoire, Egypt, France, Guinea, India, Iran (Islamic Republic of), Italy, Kuwait, Lesotho, Nigeria, Oman, the Syrian Arab Republic, the United Kingdom and Tunisia by any aircraft earth station in the aeronautical mobile-satellite service shall not exceed the limits given in Annex 1, Part B of Recommendation ITU-R M.1643, unless otherwise specifically agreed by the affected administration(s). The provisions of this footnote in no way derogate the obligations of the aeronautical mobile-satellite service to operate as a secondary service in accordance with No. 5.29. (WRC-03)
5.509A	In the band 14.3-14.5 GHz, the power flux-density produced on the territory of the countries of Saudi Arabia, Botswana, Cameroon, China, Côte d'Ivoire, Egypt, France, Gabon, Guinea, India, Iran (Islamic Republic of), Italy, Kuwait, Lesotho, Morocco, Nigeria, Oman, the Syrian Arab Republic, the United Kingdom, Sri Lanka, Tunisia and Viet Nam by any aircraft earth station in the aeronautical mobile-satellite service shall not exceed the limits given in Annex 1, Part B of Recommendation ITU-R M.1643, unless otherwise specifically agreed by the affected administration(s). The provisions of this footnote in no way derogate the obligations of the aeronautical mobile-satellite service to operate as a secondary service in accordance with No. 5.29. (WRC-03)
5.509B	The use of the frequency bands 14.5-14.75 GHz in countries listed in Resolution 163 (WRC-15) and 14.5-14.8 GHz in countries listed in Resolution 164 (WRC-15) by the fixed-satellite service (Earth-to-space) not for feeder links for the broadcasting-satellite service is limited to geostationary-satellites. (WRC-15)
5.509C	For the use of the frequency bands 14.5-14.75 GHz in countries listed in Resolution 163 (WRC-15) and 14.5-14.8 GHz in countries listed in Resolution 164 (WRC-15) by the fixed-satellite service (Earth-to-space) not for feeder links for the broadcasting-satellite service, the fixed-satellite service earth stations shall have a minimum antenna diameter of 6 m and a maximum power spectral density of -44.5 dBW/Hz at the input of the antenna. The earth stations shall be notified at known locations on land. (WRC-15)
5.509D	Before an administration brings into use an earth station in the fixed-satellite service (Earth-to-space) not for feeder links for the broadcasting-satellite service in the frequency bands 14.5-14.75 GHz (in countries listed in Resolution 163 (WRC-15)) and 14.5-14.8 GHz (in countries listed in Resolution 164 (WRC-15)), it shall ensure that the power flux-density produced by this earth station does not exceed -151.5 dB(W/(m <sup>2</sup> · 4 kHz)) produced at all altitudes from 0 m to 19 000 m above sea level at 22 km seaward from all coasts, defined as the low-water mark, as officially recognized by each coastal State. (WRC-15)
5.509E	In the frequency bands 14.50-14.75 GHz in countries listed in Resolution 163 (WRC-15) and 14.50-14.8 GHz in countries listed in Resolution 164 (WRC-15), the location of earth stations in the fixed-satellite service (Earth-to-space) not for feeder links for the broadcasting-satellite service shall maintain a separation distance of at least 500 km from the border(s) of other countries unless shorter distances are explicitly agreed by those administrations. No. 9.17 does not apply. When applying this provision, administrations should consider the relevant parts of these Regulations and the latest relevant ITU-R Recommendations. (WRC-15)

5.509F	In the frequency bands 14.50-14.75 GHz in countries listed in Resolution 163 (WRC-15) and 14.50-14.8 GHz in countries listed in Resolution 164 (WRC-15), earth stations in the fixed-satellite service (Earth-to-space) not for feeder links for the broadcasting-satellite service shall not constrain the future deployment of the fixed and mobile services. (WRC-15)
5.509G	The frequency band 14.5-14.8 GHz is also allocated to the space research service on a primary basis. However, such use is limited to the satellite systems operating in the space research service (Earth-to-space) to relay data to space stations in the geostationary-satellite orbit from associated earth stations. Stations in the space research service shall not cause harmful interference to, or claim protection from, stations in the fixed and mobile services and in the fixed-satellite service limited to feeder links for the broadcasting-satellite service and associated space operations functions using the guardbands under Appendix 30A and feeder links for the broadcasting-satellite service in Region 2. Other uses of this frequency band by the space research service are on a secondary basis. (WRC-15)
5.510	Except for use in accordance with Resolution 163 (WRC-15) and Resolution 164 (WRC-15), the use of the frequency band 14.5-14.8 GHz by the fixed-satellite service (Earth-to-space) is limited to feeder links for the broadcasting-satellite service. This use is reserved for countries outside Europe. Uses other than feeder links for the broadcasting-satellite service are not authorized in Regions 1 and 2 in the frequency band 14.75-14.8 GHz. (WRC-15)
5.511	Additional allocation: in Saudi Arabia, Bahrain, Cameroon, Egypt, the United Arab Emirates, Guinea, Iran (Islamic Republic of), Iraq, Israel, Kuwait, Lebanon, Pakistan, Oman, Qatar, the Syrian Arab Republic and Somalia, the band 15.35-15.4 GHz is also allocated to the fixed and mobile services on a secondary basis. (WRC-12)
5.511A	The band 15.43-15.63 GHz is also allocated to the fixed-satellite service (space-to-Earth) on a primary basis. Use of the band 15.43-15.63 GHz by the fixed-satellite service (space-to-Earth and Earth-to-space) is limited to feeder links of non-geostationary systems in the mobile-satellite service, subject to coordination under No. 9.11A. The use of the frequency band 15.43-15.63 GHz by the fixed-satellite service (space-to-Earth) is limited to feeder links of non-geostationary systems in the mobile-satellite service for which advance publication information has been received by the Bureau prior to 2 June 2000. In the space-to-Earth direction, the minimum earth station elevation angle above and gain towards the local horizontal plane and the minimum coordination distances to protect an earth station from harmful interference shall be in accordance with Recommendation ITU-R S.1341. In order to protect the radio astronomy service in the band 15.35-15.4 GHz, the aggregate power flux-density radiated in the 15.35-15.4 GHz band by all the space stations within any feeder-link of a non-geostationary system in the mobile-satellite service (space-to-Earth) operating in the 15.43-15.63 GHz band shall not exceed the level of - 156 dB(W/m <sup>2</sup> ) in a 50 MHz bandwidth, into any radio astronomy observatory site for more than 2% of the time. (WRC-2000)
5.511C	Stations operating in the aeronautical radionavigation service shall limit the effective e.i.r.p. in accordance with Recommendation ITU-R S.1340. The minimum coordination distance required to protect the aeronautical radionavigation stations (No. 4.10 applies) from harmful interference from feeder-link earth stations and the maximum e.i.r.p. transmitted towards the local horizontal plane by a feeder-link earth station shall be in accordance with Recommendation ITU-R S.1340. (WRC-97)
5.511D	Fixed-satellite service systems for which complete information for advance publication has been received by the Bureau by 21 November 1997 may operate in the bands 15.4-15.43 GHz and 15.63-15.7 GHz in the space-to-Earth direction and 15.63-15.65 GHz in the Earth-to-space direction. In the bands 15.4-15.43 GHz and 15.65-15.7 GHz, emissions from a non-geostationary space station shall not exceed the power flux-density limits at the Earth's surface of -146 dB(W/(m <sup>2</sup> .MHz)) for any angle of arrival. In the band 15.63-15.65 GHz, where an administration plans emissions from a non-geostationary space station that exceed -146 dB(W/(m <sup>2</sup> . MHz)) for any angle of arrival, it shall coordinate under No. 9.11A with the affected administrations. Stations in the fixed-satellite service operating in the band 15.63-15.65 GHz in the Earth-to-space direction shall not cause harmful interference to stations in the aeronautical radionavigation service (No. 4.10 applies). (WRC-97)

5.511E	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. (WRC12)
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 15.415-15.7 GHz shall not exceed the power flux-density level of $-156$ dB(W/m <sup>2</sup> ) 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. (WRC12)
5.512	Additional allocation: in Algeria, Saudi Arabia, Austria, Bahrain, Bangladesh, Brunei Darussalam, Cameroon, Congo (Rep. of the), Egypt, El Salvador, the United Arab Emirates, Eritrea, Finland, Guatemala, India, Indonesia, Iran (Islamic Republic of), Jordan, Kenya, Kuwait, Lebanon, Libya, Malaysia, Mali, Morocco, Mauritania, Montenegro, Nepal, Nicaragua, Niger, Oman, Pakistan, Qatar, Syrian Arab Republic, the Dem. Rep. of the Congo, Singapore, Somalia, Sudan, South Sudan, Chad, Togo and Yemen, the frequency band 15.7-17.3 GHz is also allocated to the fixed and mobile services on a primary basis. (WRC-15)
5.513	Additional allocation: in Israel, the band 15.7-17.3 GHz is also allocated to the fixed and mobile services on a primary basis. These services shall not claim protection from or cause harmful interference to services operating in accordance with the Table in countries other than those included in No. 5.512.
5.513A	Spaceborne active sensors operating in the band 17.2-17.3 GHz shall not cause harmful interference to, or constrain the development of, the radiolocation and other services allocated on a primary basis. (WRC-97)
5.515	In the band 17.3-17.8 GHz, sharing between the fixed-satellite service (Earth-to-space) and the broadcasting-satellite service shall also be in accordance with the provisions of § 1 of Annex 4 of Appendix 30A.
5.516	The use of the band 17.3-18.1 GHz by geostationary-satellite systems in the fixed-satellite service (Earth-to-space) is limited to feeder links for the broadcasting-satellite service. The use of the band 17.3-17.8 GHz in Region 2 by systems in the fixed-satellite service (Earth-to-space) is limited to geostationary satellites. For the use of the band 17.3-17.8 GHz in Region 2 by feeder links for the broadcasting-satellite service in the band 12.2- 12.7 GHz, see Article 11. The use of the bands 17.3-18.1 GHz (Earth-to-space) in Regions 1 and 3 and 17.8- 18.1 GHz (Earth-to-space) in Region 2 by non-geostationary-satellite systems in the fixed-satellite service is subject to application of the provisions of No. 9.12 for coordination with other non-geostationary-satellite systems in the fixed-satellite service. Non-geostationary-satellite systems in the fixed-satellite service shall not claim protection from geostationary-satellite networks in the fixed-satellite service operating in accordance with the Radio Regulations, irrespective of the dates of receipt by the Bureau of the complete coordination or notification information, as appropriate, for the non-geostationary-satellite systems in the fixed-satellite service and of the complete coordination or notification information, as appropriate, for the geostationary-satellite networks, and No. 5.43A does not apply. Non-geostationary-satellite systems in the fixed-satellite service in the above bands shall be operated in such a way that any unacceptable interference that may occur during their operation shall be rapidly eliminated. (WRC-2000)

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

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

	17.3-17.7 GHz	(space-to-Earth) in Region 1
	18.3-19.3 GHz	(space-to-Earth) in Region 2
	19.7-20.2 GHz	(space-to-Earth) in all Regions
	39.5-40 GHz	(space-to-Earth) in Region 1
	40-40.5 GHz	(space-to-Earth) in all Regions
	40.5-42 GHz	(space-to-Earth) in Region 2
	47.5-47.9 GHz	(space-to-Earth) in Region 1
	48.2-48.54 GHz	(space-to-Earth) in Region 1
	49.44-50.2 GHz	(space-to-Earth) in Region 1
	and	
5.516B	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)

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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 18-18.3 GHz in Region 2 and 18.1-18.4 GHz in Regions 1 and 3 are also allocated to the meteorological-satellite service (space-to-Earth) on a primary basis. Their use is limited to geostationary satellites. (WRC-07)
5.520	The use of the band 18.1-18.4 GHz by the fixed-satellite service (Earth-to-space) is limited to feeder links of geostationary-satellite systems in the broadcasting-satellite service. (WRC-2000)
5.521	Alternative allocation: in Germany, Denmark, the United Arab Emirates and Greece, the band 18.1-18.4 GHz is allocated to the fixed, fixed-satellite (space-to-Earth) and mobile services on a primary basis (see No. 5.33). The provisions of No. 5.519 also apply. (WRC-03)
5.522A	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 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 $-120.4 \text{ dB}(W/(m^2 \cdot \text{MHz}))$ 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 ITUR P.452 (see Recommendation ITUR BO.1898). (WRC12)
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. (WRC12)

5.530C	The use of the band 21.4-22 GHz is subject to the provisions of Resolution 755 (WRC12). (WRC12)
5.530D	See Resolution 555 (WRC12). (WRC12)
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.
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. (WRC12)
5.533	The inter-satellite service shall not claim protection from harmful interference from airport surface detection equipment stations of the radionavigation service.
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)
5.535A	The use of the band 29.1-29.5 GHz (Earth-to-space) by the fixed-satellite service is limited to geostationarysatellite systems and feeder links to non-geostationary-satellite systems in the mobile-satellite service. Such use is subject to the application of the provisions of No. 9.11A, but not subject to the provisions of No. 22.2, except as indicated in Nos. 5.523C and 5.523E where such use is not subject to the provisions of No. 9.11A and shall continue to be subject to Articles 9 (except No. 9.11A) and 11 procedures, and to the provisions of No. 22.2. (WRC-97)
5.536	Use of the 25.25-27.5 GHz band by the inter-satellite service is limited to space research and Earth exploration-satellite applications, and also transmissions of data originating from industrial and medical activities in space.

5.536A	Administrations operating earth stations in the Earth exploration-satellite service or the space research service shall not claim protection from stations in the fixed and mobile services operated by other administrations. In addition, earth stations in the Earth exploration-satellite service or in the space research service should be operated taking into account the most recent version of Recommendation ITU-R SA.1862. Resolution 242 (WRC-19) applies. (WRC-19)
5.536B	In Algeria, Saudi Arabia, Austria, Bahrain, Belgium, Brazil, China, Korea (Rep. of), Denmark, Egypt, United Arab Emirates, Estonia, Finland, Hungary, India, Iran (Islamic Republic of), Iraq, Ireland, Israel, Italy, Jordan, Kenya, Kuwait, Lebanon, Libya, Lithuania, Moldova, Norway, Oman, Uganda, Pakistan, the Philippines, Poland, Portugal, Qatar, the Syrian Arab Republic, Dem. People's Rep. of Korea, Slovakia, the Czech Rep., Romania, the United Kingdom, Singapore, Slovenia, Sudan, Sweden, Tanzania, Turkey, Viet Nam and Zimbabwe, earth stations operating in the Earth exploration-satellite service in the frequency band 25.5-27 GHz shall not claim protection from, or constrain the use and deployment of, stations of the fixed and mobile services. Resolution 242 (WRC-19) applies. (WRC-19)
5.537	Space services using non-geostationary satellites operating in the inter-satellite service in the band 27- 27.5 GHz are exempt from the provisions of No. 22.2.
5.538	Additional allocation: the bands 27.500-27.501 GHz and 29.999-30.000 GHz are also allocated to the fixed-satellite service (space-to-Earth) on a primary basis for the beacon transmissions intended for up-link power control. Such space-to-Earth transmissions shall not exceed an equivalent isotropically radiated power (e.i.r.p.) of +10 dBW in the direction of adjacent satellites on the geostationary-satellite orbit. (WRC-07)
5.539	The band 27.5-30 GHz may be used by the fixed-satellite service (Earth-to-space) for the provision of feeder links for the broadcasting-satellite service.
5.540	Additional allocation: the band 27.501-29.999 GHz is also allocated to the fixed-satellite service (space-to-Earth) on a secondary basis for beacon transmissions intended for up-link power control.
5.541	In the band 28.5-30 GHz, the earth exploration-satellite service is limited to the transfer of data between stations and not to the primary collection of information by means of active or passive sensors.
5.541A	Feeder links of non-geostationary networks in the mobile-satellite service and geostationary networks in the fixed-satellite service operating in the band 29.1-29.5 GHz (Earth-to-space) shall employ uplink adaptive power control or other methods of fade compensation, such that the earth station transmissions shall be conducted at the power level required to meet the desired link performance while reducing the level of mutual interference between both networks. These methods shall apply to networks for which Appendix 4 coordination information is considered as having been received by the Bureau after 17 May 1996 and until they are changed by a future competent world radiocommunication conference. Administrations submitting Appendix 4 information for coordination before this date are encouraged to utilize these techniques to the extent practicable. (WRC-2000)
5.542	Additional allocation: in Algeria, Saudi Arabia, Bahrain, Brunei Darussalam, Cameroon, China, the Dem. Rep. of the Congo, Egypt, the United Arab Emirates, Eritrea, Ethiopia, Guinea, India, Iran (Islamic Republic of), Iraq, Japan, Jordan, Kuwait, Lebanon, Malaysia, Mali, Morocco, Mauritania, Nepal, Oman, Pakistan, Philippines, Qatar, the Syrian Arab Republic, the Dem. People's Rep. of Korea, Somalia, Sudan, South Sudan, Sri Lanka and Chad, the band 29.5-31 GHz is also allocated to the fixed and mobile services on a secondary basis. The power limits specified in Nos. 21.3 and 21.5 shall apply. (WRC-12)

5.543	The band 29.95-30 GHz may be used for space-to-space links in the Earth exploration-satellite service for telemetry, tracking, and control purposes, on a secondary basis.
5.543B	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)
5.543A	In Bhutan, Cameroon, Korea (Rep. of), the Russian Federation, India, Indonesia, Iran (Islamic Republic of), Iraq, Japan, Kazakhstan, Malaysia, Maldives, Mongolia, Myanmar, Uzbekistan, Pakistan, the Philippines, Kyrgyzstan, the Dem. People's Rep. of Korea, Sudan, Sri Lanka, Thailand and Viet Nam, the allocation to the fixed service in the frequency band 31-31.3 GHz may also be used by systems using high altitude platform stations (HAPS) in the ground-to-HAPS direction. The use of the frequency band 31-31.3 GHz by systems using HAPS is limited to the territory of the countries listed above and shall not cause harmful interference to, nor claim protection from, other types of fixed-service systems, systems in the mobile service and systems operated under No. 5.545. Furthermore, the development of these services shall not be constrained by HAPS. Systems using HAPS in the frequency band 31- 31.3 GHz shall not cause harmful interference to the radio astronomy service having a primary allocation in the frequency band 31.3-31.8 GHz, taking into account the protection criterion as given in the most recent version of Recommendation ITU-R RA.769. In order to ensure the protection of satellite passive services, the level of unwanted power density into a HAPS ground station antenna in the frequency band 31.3-31.8 GHz shall be limited to -106 dB(W/MHz) under clear-sky conditions, and may be increased up to -100 dB(W/MHz) under rainy conditions to mitigate fading due to rain, provided the effective impact on the passive satellite does not exceed the impact under clear-sky conditions. See Resolution 145 (Rev.WRC-12). (WRC-15)
5.544	In the band 31-31.3 GHz the power flux-density limits specified in Article 21, Table 21-4 shall apply to the space research service.
5.545	Different category of service: in Armenia, Georgia, Kyrgyzstan, Tajikistan and Turkmenistan, the allocation of the band 31-31.3 GHz to the space research service is on a primary basis (see No. 5.33). (WRC12)
5.546	Different category of service: in Saudi Arabia, Armenia, Azerbaijan, Bahrain, Belarus, Egypt, the United Arab Emirates, Spain, Estonia, the Russian Federation, Georgia, Hungary, Iran (Islamic Republic of), Israel, Jordan, Lebanon, Moldova, Mongolia, Oman, Uzbekistan, Poland, the Syrian Arab Republic, Kyrgyzstan, Romania, the United Kingdom, South Africa, Tajikistan, Turkmenistan and Turkey, the allocation of the frequency band 31.5-31.8 GHz to the fixed and mobile, except aeronautical mobile, services is on a primary basis (see No. 5.33). (WRC-19)
5.547	The bands 31.8-33.4 GHz, 37-40 GHz, 40.5-43.5 GHz, 51.4-52.6 GHz, 55.78-59 GHz and 64-66 GHz are available for high-density applications in the fixed service (see Resolution 75 (WRC-2000)). Administrations should take this into account when considering regulatory provisions in relation to these bands. Because of the potential deployment of high-density applications in the fixed-satellite service in the bands 39.5-40 GHz and 40.5- 42 GHz (see No. 5.516B), administrations should further take into account potential constraints to high-density applications in the fixed service, as appropriate. (WRC-07)
5.547A	Administrations should take practical measures to minimize the potential interference between stations in the fixed service and airborne stations in the radionavigation service in the 31.8-33.4 GHz band, taking into account the operational needs of the airborne radar systems. (WRC-2000)

5.547B	Alternative allocation: in the United States, the band 31.8-32 GHz is allocated to the radionavigation and space research (deep space) (space-to-Earth) services on a primary basis. (WRC-97)
5.547C	Alternative allocation: in the United States, the band 32-32.3 GHz is allocated to the radionavigation and space research (deep space) (space-to-Earth) services on a primary basis. (WRC-03)
5.547D	Alternative allocation: in the United States, the band 32.3-33 GHz is allocated to the inter-satellite and radionavigation services on a primary basis. (WRC-97)
5.547E	Alternative allocation: in the United States, the band 33-33.4 GHz is allocated to the radionavigation service on a primary basis. (WRC-97)
5.548	In designing systems for the inter-satellite service in the band 32.3-33 GHz, for the radionavigation service in the band 32-33 GHz, and for the space research service (deep space) in the band 31.8-32.3 GHz, administrations shall take all necessary measures to prevent harmful interference between these services, bearing in mind the safety aspects of the radionavigation service (see Recommendation 707). (WRC-03)
5.549A	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 <sup>2</sup> ) 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)
5.551F	Different category of service: in Japan, the allocation of the band 41.5-42.5 GHz to the mobile service is on a primary basis (see No. 5.33). (WRC-97)
5.551H	<p>The equivalent power flux-density (epfd) produced in the band 42.5-43.5 GHz by all space stations in any non-geostationary-satellite system in the fixed-satellite service (space-to-Earth), or in the broadcasting-satellite service operating in the 42-42.5 GHz band, shall not exceed the following values at the site of any radio astronomy station for more than 2% of the time:</p> <ul style="list-style-type: none"> <li>–230 dB(W/m<sup>2</sup>) in 1 GHz and –246 dB(W/m<sup>2</sup>) 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</li> <li>–209 dB(W/m<sup>2</sup>) 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 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 and shall apply over the whole sky and for elevation angles higher than the minimum operating angle <math>\theta_{min}</math> of the radiotelescope (for which a default value of 5° should be adopted in the absence of notified information).</li> </ul> <p>These values shall apply at any radio astronomy station that either:</p> <ul style="list-style-type: none"> <li>– was in operation prior to 5 July 2003 and has been notified to the Bureau before 4 January 2004; or</li> <li>– 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.</li> </ul> <p>Other radio astronomy stations notified after these dates may seek an agreement with administrations that have authorized the space stations. In Region 2, Resolution 743 (WRC-03) shall apply. The limits in this footnote may be exceeded at the site of a radio astronomy station of any country whose administration so agreed. (WRC-07)</p>
5.551I	<p>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:</p> <ul style="list-style-type: none"> <li>–137 dB(W/m<sup>2</sup>) in 1 GHz and –153 dB(W/m<sup>2</sup>) 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</li> <li>–116 dB(W/m<sup>2</sup>) 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.</li> </ul> <p>These values shall apply at the site of any radio astronomy station that either:</p> <ul style="list-style-type: none"> <li>– was in operation prior to 5 July 2003 and has been notified to the Bureau before 4 January 2004;</li> <li>or</li> <li>– 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.</li> </ul> <p>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)</p>
5.552	The allocation of the spectrum for the fixed-satellite service in the bands 42.5-43.5 GHz and 47.2-50.2 GHz for Earth-to-space transmission is greater than that in the band 37.5-39.5 GHz for space-to-Earth transmission in order to accommodate feeder links to broadcasting satellites. Administrations are urged to take all practicable steps to reserve the band 47.2-49.2 GHz for feeder links for the broadcasting-satellite service operating in the band 40.5-42.5 GHz.

5.552A	The allocation to the fixed service in the frequency bands 47.2-47.5 GHz and 47.9-48.2 GHz is identified for use by high-altitude platform stations (HAPS). This identification does not preclude the use of this frequency band by any application of the services to which it is allocated on a co-primary basis, and does not establish priority in the Radio Regulations. Such use of the fixed-service allocation in the frequency bands 47.2-47.5 GHz and 47.9-48.2 GHz by HAPS shall be in accordance with the provisions of Resolution 122 (Rev.WRC-19). (WRC-19)
5.553	In the bands 43.5-47 GHz and 66-71 GHz, stations in the land mobile service may be operated subject to not causing harmful interference to the space radiocommunication services to which these bands are allocated (see No. 5.43). (WRC-2000)
5.554	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 <sup>2</sup> ) 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 <sup>2</sup> .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 $-147 \text{ dB(W/(m}^2 \cdot 100 \text{ MHz))}$ for all angles of arrival. (WRC-97)
5.559	In the band 59-64 GHz, airborne radars in the radiolocation service may be operated subject to not causing harmful interference to the inter-satellite service (see No. 5.43). (WRC-2000)
5.559AA	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)
5.561B	In Japan, use of the band 84-86 GHz, by the fixed-satellite service (Earth-to-space) is limited to feeder links in the broadcasting-satellite service using the geostationary-satellite orbit. (WRC-2000)
5.562	The use of the band 94-94.1 GHz by the Earth exploration-satellite (active) and space research (active) services is limited to spaceborne cloud radars. (WRC-97)
5.562A	In the bands 94-94.1 GHz and 130-134 GHz, transmissions from space stations of the Earth exploration-satellite service (active) that are directed into the main beam of a radio astronomy antenna have the potential to damage some radio astronomy receivers. Space agencies operating the transmitters and the radio astronomy stations concerned should mutually plan their operations so as to avoid such occurrences to the maximum extent possible. (WRC-2000)
5.562B	In the frequency bands 105-109.5 GHz, 111.8-114.25 GHz and 217-226 GHz, the use of this allocation is limited to space-based radio astronomy only. (WRC-19)

5.562C	Use of the band 116-122.25 GHz by the inter-satellite service is limited to satellites in the geostationary-satellite orbit. The single-entry power flux-density produced by a station in the inter-satellite service, for all conditions and for all methods of modulation, at all altitudes from 0 km to 1 000 km above the Earth's surface and in the vicinity of all geostationary orbital positions occupied by passive sensors, shall not exceed $-148 \text{ dB(W/(m}^2\text{.MHz))}$ for all angles of arrival. (WRC-2000)
5.562D	Additional allocation: In Korea (Rep. of), the frequency bands 128-130 GHz, 171-171.6 GHz, 172.2-172.8 GHz and 173.3-174 GHz are also allocated to the radio astronomy service on a primary basis. Radio astronomy stations in Korea (Rep. of) operating in the frequency bands referred to in this footnote shall not claim protection from, or constrain the use and development of, services in other countries operating in accordance with the Radio Regulations. (WRC-15)
5.562E	The allocation to the Earth exploration-satellite service (active) is limited to the band 133.5-134 GHz. (WRC-2000)
5.562F	In the band 155.5-158.5 GHz, the allocation to the Earth exploration-satellite (passive) and space research (passive) services shall terminate on 1 January 2018. (WRC-2000)
5.562G	The date of entry into force of the allocation to the fixed and mobile services in the band 155.5-158.5 GHz shall be 1 January 2018. (WRC-2000)
5.562H	Use of the bands 174.8-182 GHz and 185-190 GHz by the inter-satellite service is limited to satellites in the geostationary-satellite orbit. The single-entry power flux-density produced by a station in the inter-satellite service, for all conditions and for all methods of modulation, at all altitudes from 0 to 1 000 km above the Earth's surface and in the vicinity of all geostationary orbital positions occupied by passive sensors, shall not exceed $-144 \text{ dB(W/(m}^2\text{.MHz))}$ 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	<p>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.</p> <p>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).</p> <p>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)</p>
5.565	<p>The frequency band 275-1 000 GHz may be used by administrations for experimentation with, and development of, various active and passive services. In this band a need has been identified for the following spectral line measurements for passive services:</p> <p>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;</p> <p>Earth exploration-satellite service (passive) and space research service (passive): 275-277 GHz, 294-306 GHz, 316-334 GHz, 342-349 GHz, 363-365 GHz, 371-389 GHz, 416-434 GHz, 442-444 GHz, 496-506 GHz, 546-568 GHz, 624-629 GHz, 634-654 GHz, 659-661 GHz, 684-692 GHz, 730-732 GHz, 851-853 GHz and 951-956 GHz.</p> <p>Future research in this largely unexplored spectral region may yield additional spectral lines and continuum bands of interest to the passive services. Administrations are urged to take all practicable steps to protect these passive services from harmful interference until the date when the allocation Table is established in the above mentioned frequency band. (WRC-2000)</p>

## ANNEX 2 - EUROPEAN FOOTNOTES

These footnotes are listed in the Table of Frequency Allocations and are included in the European Common Allocation table which is available to download from <http://www.erodocdb.dk/docs/doc98/official/pdf/ERCRep025.pdf>

ECA5	In parts of this band aeronautical stations and aircraft stations may 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
ECA8	Any use of low capacity fixed links shall be avoided in areas where such use might cause harmful interference to the maritime mobile VHF radiocommunication service.
ECA9	CEPT administrations may authorise all or parts of the band 69.9-70.5 MHz to the amateur service on a secondary basis.
ECA10	The range 225-399.9 MHz is essential to NATO and is in military use for land mobile, mobile-satellite, Air/Ground/Air and specific maritime and terrestrial communications, including ITU Region 2. This NATO UHF band 225-400 MHz is the only harmonised and commonly available resource managed by NATO on a daily basis in and for NATO nations. It is recognised that 380-385 MHz and 390-395 MHz are currently shared with narrowband Public Protection and Disaster Relief (PPDR) applications.
ECA12	The applicable RR 5 footnotes in column 1 remain in force. Administrations are however urged to aim for the fullest possible harmonisation with the ITU Table of Allocations and ECA.
ECA13	CEPT administrations are urged to take all practical steps to clear the band 645-960 MHz of the assignments to the aeronautical radionavigation service.

ECA14	Radiolocation limited to military requirements for naval ship borne radars.
ECA16	On the introduction of MFCN, the fixed service will become secondary in appropriate parts of the band.
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
ECA17A	Use of the band by the mobile service is limited to SAP/SAB applications.
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
ECA20	This fixed service band is designated for common use by civil and non civil users. Any user priorities in respect of preferred channels or sub-bands are to be determined after discussions between interested parties.
ECA22	The band 5250-5850 MHz is utilised for a variety of radiodetermination applications falling within the radionavigation and radiolocation services. This band will be subject to further detailed consideration.
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.

ECA24	The band 8500-10000 MHz is utilised for a variety of radiodetermination applications falling within the radionavigation and radiolocation services. This band will be subject to further detailed consideration in conjunction with the band 5250-5850 MHz (see ECA22).
ECA26	The band 13.25-14.0 GHz is utilised for a variety of radiodetermination applications falling within the radionavigation and radiolocation services. This band will be subject to further detailed consideration.
ECA28	CEPT administrations shall not deploy new fixed service systems in the band 11.7-12.5 GHz (ERC/DEC(00)08).
ECA29	The frequency bands 890-915 / 935-960 MHz, 880-890 / 925-935 MHz, 1710-1785 / 1805-1880 MHz, 1920-1980 MHz and 2110-2170 MHz are reserved for public cellular mobile use only. Other services such as the fixed service should only be allowed in the above bands where coexistence with public mobile systems is possible i.e. in sparsely populated or rural areas where the frequency band is not needed for mobile cellular systems.
ECA30	National administrations should consider co-ordination zones around the EISCAT sites when using the band 925-935 MHz for mobile services including international planning for military services. Short Range Devices should not use this band.
ECA32	The bands 880-915 MHz and 925-960 MHz are currently used for GSM (2nd generation terrestrial mobile system) in most CEPT member countries and by IMT, depending on the market demands and national licensing schemes.
ECA34	Parts of the bands 450-457.5/460-467.5 MHz may also be used for existing and evolving public cellular networks on a national basis.
ECA35	In Europe the band 75.5-76 GHz is also allocated to the Amateur and Amateur Satellite services.

ECA36 A frequency band, which has been harmonised by NATO and NATO member nations for military use as defined in the NATO Joint Civil/Military Frequency Agreement (NJFA) 2014. Note: NATO Joint Civil/Military Frequency Agreement (NJFA) - Extract for Public Disclosure, February 2017

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ECA37 In Europe the allocation to the mobile service is limited to the band 3400-3800 MHz.

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## ANNEX 3 - ABBREVIATIONS AND DEFINITIONS

### ABBREVIATIONS

AIS	Automatic Identification System
AM	Amplitude Modulation
AMSS	Amplitude Modulation Signalling System
ATC	Air Traffic Control
BWALA	Broadband Wireless Access Local Area
CEPT	European Conference of Postal and Telecommunications Administrations
DAB	Digital Audio Broadcasting
DECT	Digital Enhanced Cordless Telecommunications
DGPS	Differential Global Positioning System
DSC	Digital Selective Calling
E.I.R.P.	Equivalent isotropically radiated power
e.r.p.	Equivalent radiated power

E/S	Earth to space direction of transmission
ECC	Electronic Communications Committee - A committee of the CEPT responsible for radio and telecommunication matters
ECC/DEC	ECC Decision
ECG	Electrocardiogram
EESS	Earth Exploration-Satellite Service
ENG	Electronic News Gathering
ENG/OB	Electronic News Gathering/Outside Broadcast
EPIRB	Emergency Position-Indicating Radio Beacon
ERC	European Radiocommunications Committee - A committee of the CEPT responsible for radio matters. Merged into the ECC and no longer in existence.
ERC/DEC	ERC Decision
ERC/REC	ERC Recommendation
ERO	European Radiocommunications Office - A permanent office within CEPT dealing with radio and telecommunication matters
ETSI	European Telecommunication Standards Institute
FM	Frequency Modulation

FSS	Fixed Satellite Service
FSTV	Fast Scan Television
FWA	Fixed Wireless Access
FWALA	Fixed Wireless Access Local Area
FWPMA	Fixed Wireless Point to Multipoint Access
GE06	ITU Geneva 2006 Agreements: Final Acts of the Regional Radiocommunications Conference for the revision of the Geneva 1989 Agreement and Final Acts of the Regional Radiocommunications Conference for the revision of the Stockholm 1961 Agreement
GE75	ITU Geneva 1975 Plan: assignment of frequencies to broadcasting stations in medium frequency bands in Regions 1 and 3 and in low frequency bands in Region 1.
GE84	ITU Geneva 1984 Plan for FM sound broadcasting stations in Region 1 and part of Region 3 in the band 87.5-108 MHz
GE85-EMA	ITU Geneva 1985 Regional Agreement concerning the planning of the Maritime Radionavigation Service (Radiobeacons) in the European Maritime Area
GE85-MM-R1	ITU Geneva 1985 Regional Agreement concerning the MF Maritime Mobile and Aeronautical Radionavigation Services (Region 1)
GHz	Gigahertz - 1,000,000,000 Hertz
GLONASS	Global Satellite Navigation System (Russian Federation)
GMDSS	Global Maritime Distress and Safety System
GNSS	Global Navigation Satellite Services

GPS	Global Positioning System
GSM	Global System for Mobile Communications
HF	High Frequency
HRPT	High Resolution Picture Transmission
Hz	Hertz, The unit of frequency measurement, (1 kHz = 1000 Hz, 1 MHz = 1000,000 Hz, 1GHz = 1000,000,000 Hertz)
IALA	International Association of Lighthouse Authorities
IF	Intermediate Frequency
ILS	Instrument Landing System
IMT-2000	International Mobile Telecommunications – 3rd generation Mobile Systems
INMARSAT	Satellite and telecommunications operating company
INTELSAT	Satellite and telecommunications operating company
ISM	Industrial, Scientific and Medical applications
ITU	International Telecommunication Union
ITU-R	Radiocommunication Sector of the ITU

LAN	Local Area Network
LEO	Low Earth Orbit
LORAN C	Radionavigation System
MEO	Medium Earth Orbit
MHz	Megahertz - 1,000,000 Hertz
MLS	Microwave Landing System
MMDS	Multichannel multipoint distribution service
MSS	Mobile Satellite Service
MWS	Multimedia Wireless System
NAVTEX	Navigation Text Messaging System
NMR	Nuclear Magnetic Resonance
PAMR	Public Access Mobile Radio
PMR	Private Mobile Radio
Primary	Where a band is indicated as allocated to one or more services and the name of the service is printed in “Capitals” (e.g. MOBILE) these are called “primary” services. Within a band, Primary services shall have prior choice of frequencies (also see secondary services). Where a band is indicated in a footnote of the Table as allocated to a service “on a primary basis” in an area smaller than a region or in a particular country, this is a primary service in that country.

RACON	Radar Beacon
RLAN	Radio Local Area Network
S.I.	Statutory Instrument
S/E	Space to Earth direction of transmission
SAP/SAB	Services Ancillary to Programme-making/Services Ancillary to Broadcasting
SAR	Search and Rescue
SARSAT	Search and Rescue Satellite Aided Tracking
S-DAB	Satellite Digital Audio Broadcasting
SNG	Satellite News Gathering
S-PCS	Satellite Personal Communications System
SRD	Short Range Devices
SRR	Short Range Radar
ST61	ITU Stockholm 1961 Plan: Plans annexed to the Regional agreement for the European Broadcasting Area concerning the use of frequencies by the broadcasting services in the VHF and UHF bands
T-DAB	Terrestrial Digital Audio Broadcasting

TETRA	Terrestrial Trunked Radio (Digital)
UHF	Ultra High Frequency
UMTS	Universal Mobile Telecommunications Systems
VHF	Very High Frequency
VOR	VHF Omnidirectional Omnidirectional Navigation
VSAT	Very Small Aperture Terminal
WAN	Wide Area Network
WARC	World Administrative Radio Conference
WRC	World Radiocommunication Conference

## DEFINITIONS

Aeronautical Fixed Service:	A radiocommunication service between specified fixed points provided primarily for the safety of air navigation and for the regular efficient and economical operation of air transport.
Aeronautical Mobile Service:	A mobile service between aeronautical stations and aircraft stations, or between aircraft stations, in which survival craft stations may participate; emergency position-indicating radiobeacon stations may also participate in this service on designated distress and emergency frequencies.
Aeronautical Mobile-Satellite Service:	A mobile satellite service in which mobile earth stations are located on board aircraft; survival craft stations and emergency position indicating radiobeacon stations may also participate in this service.
Aeronautical Radionavigation Service:	A radionavigation service intended for the benefit and for the safe operation of aircraft.

Allocation:	Entry in the Table of Frequency Allocations of a given frequency band for the purpose of its use by one or more terrestrial or space radiocommunication services or the radio astronomy service under specified conditions. This term shall also be applied to the frequency band concerned.
Amateur Service:	A radiocommunication service for the purpose of self-training, intercommunication and technical investigations carried out by amateurs, that is, by duly authorised persons interested in radio technique solely with a personal aim and without pecuniary interest.
Amateur-Satellite Service:	A radiocommunication service using space stations on earth satellites for the same purposes as those of the amateur service.
Appendix 17	Appendix 17 of the ITU Radio Regulations: Frequencies and channelling arrangements in the high frequency bands for the maritime mobile service
Appendix 18	Appendix 18 of the Radio Regulations: Table of Transmitting frequencies in the band 156-174 MHz for stations in the maritime mobile service
Appendix 25	Appendix 25 of the ITU Radio Regulations: Provisions and associated frequency allotment plan for coast radiotelephone stations operating in the exclusive maritime mobile bands between 4 000 kHz and 27 500 kHz
Appendix 26	Appendix 26 of the ITU Radio Regulations: Provisions and associated frequency allotment plan for Aeronautical Mobile (OR) service in the band allocated exclusively to that service between 3 025 kHz and 18 030 kHz
Appendix 27	Appendix 27 of the ITU Radio Regulations: Frequency allotment plan for the aeronautical mobile (R) service and related information
Appendix 30	Appendix 30 of the Radio Regulations: Provisions for all services and associated plans for the broadcast-satellite service in frequency bands 11.7-12.2 GHz (in Region 3), 11.7-12.5 GHz (in Region 1), and 12.2-12.7 GHz (in Region 2)
Appendix 30A	Appendix 30A of the Radio Regulations: Provisions and associated plans for feeder links for the broadcasting-satellite services
Article 12	Article 12 of the ITU Radio Regulations: Seasonal planning of the HF bands allocated to the broadcast service between 5 900 kHz and 26 100 kHz
Broadcasting Service:	A radiocommunication service in which the transmissions are intended for direct reception by the general public. This service may include sound transmissions, television transmissions or other types of transmission.

Broadcasting-Satellite Service:	A radiocommunication service in which signals transmitted or retransmitted by space stations are intended for direct reception by the general public. In the broadcasting satellite service the term “direct reception” shall encompass both individual reception and community reception.
Citizen Band:	Short range radio service for both hobby and business use. It is designed to be used without the need to have any technical qualifications and not to cause interference to other radio users.
Deep Space:	Space at a distance from the Earth approximately equal to, or greater than, the distance between the earth and the moon.
Earth Exploration-Satellite Service:	A radiocommunication service between earth stations and one or more space stations which may include links between space stations, in which: information relating to the characteristics of the earth and its natural phenomena is obtained from active sensors or passive sensors on earth satellites; similar information is collected from airborne or earth based platforms; such information may be distributed to earth stations within the system concerned; platform interrogation may be included. This service may also include feeder links necessary for its operation.
Emergency Position Indicating Radiobeacon Station	A station in the mobile service the emissions of which are intended to facilitate search and rescue operations.
Fixed Service:	A radiocommunication service between specified fixed points.
Fixed-Satellite Service:	A radiocommunication service between earth stations at specified fixed points when one or more satellites are used; in some cases this service includes satellite-to-satellite links, which may also be effected in the inter-satellite service; the fixed-satellite service may also include feeder links for other space radiocommunication services.
Galileo:	The European global satellite navigation system.
Inductive Loop Systems:	Systems which operate by producing a controlled magnetic field within which a predetermined recognisable signal is formed.
Industrial, Scientific and Medical (ISM):	Operation of equipment or appliances designed to generate and use locally, radio frequency energy for industrial, scientific, medical, domestic or similar purposes, excluding applications in the field of telecommunications.
Instrument Landing System (ILS):	A radionavigation system which provides aircraft with horizontal and vertical guidance just before and during landing and, at certain fixed points, indicates the distance to the reference point of landing.

Inter-Satellite Service:	A radiocommunication service providing links between artificial earth satellites.
Land Mobile Service:	A mobile radiocommunications service between base stations and land mobile stations or between land mobile stations.
Maritime Mobile Service:	A mobile service between coast stations and ship stations, or between ship stations, or between associated on board communication stations; survival craft stations and emergency position-indicating radiobeacon stations may also participate in this service.
Maritime Mobile-Satellite Service:	A mobile satellite service in which mobile earth stations are located on board ships; survival craft stations and emergency position-indicating radiobeacon stations may also participate in this service.
Maritime Radionavigation:	A radionavigation service intended for the benefit and for the safe operation of ships.
Meteorological Aids Service:	A radiocommunication service used for meteorological, including hydrological, observations and exploration.
Meteorological-Satellite Service:	An earth exploration satellite service for meteorological purposes.
Mobile Service:	A radiocommunication service between mobile and land stations, or between mobile stations.
Mobile-Satellite Service:	A radiocommunication service between mobile earth stations and one or more space stations, or between space stations used by this service or between mobile earth stations by means of one or more space stations. This service may also include feeder links necessary for its operation.
Radar Beacon (RACON):	A transmitter-receiver associated with a fixed navigational mark which, when triggered by a radar, automatically returns a distinctive signal which can appear on the display of the triggering radar, providing range, bearing and identification information.
Radar:	A radiodetermination system based on the comparison of reference signals with radio signals reflected, or retransmitted, from the position to be determined.
Radio Astronomy Service:	A service involving the use of radio astronomy

Radio Astronomy:	Astronomy based on the reception of radio waves of cosmic origin.
Radiocommunications Service:	A service involving the transmission, emission and/or reception of radio waves for specific telecommunications purposes.
Radiodetermination:	The determination of the position, velocity and/or other characteristics of an object, or the obtaining of information relating to these parameters, by means of the propagation properties of radio waves.
Radiolocation:	Radiodetermination used for purposes other than radionavigation.
Radionavigation:	Radiodetermination used for the purposes of radionavigation, including obstruction warning.
Radiosonde:	An automatic radio transmitter in the meteorological aids service usually carried on an aircraft, free balloon, kite or parachute, and which transmits meteorological data.
Safety Service	Any radiocommunication service used permanently or temporarily for the safeguarding of human life and property.
Secondary	Where a band is indicated as allocated to one or more service and the name of the service is printed in normal characters (e.g. Mobile) these are called secondary services. Stations of a secondary service: 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 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; 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.
Space Operations	A radiocommunication service concerned exclusively with the operation of spacecraft, in particular space tracking, space telemetry and space telecommand.
Space Research Service:	A radiocommunication service in which spacecraft or other objects in space are used for scientific or technological research purposes.
Standard Frequency and Time Signal - Satellite Service:	A radiocommunication service using space stations on earth satellites for the same purpose as those of the standard frequency and time signal service.

Standard frequency and Time  
Signal Service:

A radiocommunication service for scientific, technical and other purposes, providing the transmission of specified frequencies, time signals or both, of stated high precision, intended for general reception.

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## ANNEX 4 – OTHER RELEVANT DOCUMENTATION.

### EUROPEAN LEGISLATION

Decision (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
Decision (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
Decision (EU) 2022/172	Commission Implementing Decision (EU) 2022/172 of 7 February 2022 amending Implementing Decision (EU) 2018/1538 on the harmonisation of radio spectrum for use by short-range devices within the 874-876 and 915-921 MHz frequency bands
Decision (EU) 2020/667	Commission Implementing Decision 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
Decision (EU) 2020/667	Commission Implementing Decision 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
Decision (EU) 2020/636	Commission Implementing Decision 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
Decision (EU) 2020/590	Commission Implementing Decision 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
Decision (EU) 2019/784	Commission Implementing Decision 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.
Decision (EU) 2019/235	Commission Implementing Decision 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.
Decision (EU) 2018/661	Commission Implementing Decision 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.
Decision (EU) 2018/637	Commission Implementing Decision of 20 April 2018 amending Decision 2009/766/EC on the harmonisation of the 900 MHz and 1800 MHz frequency bands for terrestrial systems capable of providing pan-European electronic communications services in the Community as regards relevant technical conditions for the Internet of Things.
Decision (EU) 2018/1538	Commission Implementing Decision of 11 October 2018 on the harmonisation of radio spectrum for use by short-range devices within the 874-876 and 915-921 MHz frequency bands.
Decision (EU) 2017/2077	Commission Implementing Decision 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.
Decision (EU) 2017/191	Commission Implementing Decision 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.

Decision (EU) 2016/687	Commission Implementing Decision 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
Decision (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.
Decision (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.
Decision (EU) 2015/750	Commission Implementing Decision on the harmonisation of the 1 452-1 492 MHz frequency band for terrestrial systems capable of providing electronic communications services in the Union
Decision 2014/720/EU	Commission Implementing Decision 2014/702/EU of 7 October 2014 amending Decision 2007/131/EC on allowing the use of the radio spectrum for equipment using ultra-wideband technology in a harmonised manner in the Community.
Decision 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
Decision 2014/276/EU	Commission Decision of 2 May 2014 amending Decision 2008/411/EU on the harmonisation of the 3400-3800MHz frequency band for terrestrial systems capable of providing electronic communications services in the Community
Decision 2013/752/EU	Commission Decision of 11 December 2013 amending Decision 2006/771/EU on harmonization of the radio spectrum for use by short-range devices and repealing Decision 2005/928/EC
Decision 2013/654/EU	Commission 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)
Decision 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
Decision 2011/829/EU	Commission Decision of 8 December 2011 amending Decision 2006/771/EC on harmonisation of the radio spectrum for use by short-range devices.
Decision 2011/485/EU	Commission Decision of 29 July 2011 amending Decision 2005/50/EC 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
Decision 2011/251/EU	Commission Implementing Decision of 18 April 2011 amending Decision 2009/766/EC on the harmonization of the 900 MHz and 1800 MHz frequency bands for terrestrial systems capable of providing pan-European electronic communications services in the Community
Decision 2010/267/EU	Harmonised technical conditions of use in the 790-862 MHz for terrestrial systems capable of providing ECS
Decision 2010/166/EU	Commission Decision of 19 March 2010 on harmonised conditions of use of radio spectrum for mobile communication services on board vessels (MCV services) in the European Union

Decision 2009/766/EC	On the harmonization of the 900 MHz and 1800 MHz frequency bands for terrestrial systems capable of providing pan-European electronic communications services in the Community
Decision 2009/449/EC	Commission Decision of 13 May 2009 on the selection of operators of pan-European systems providing mobile satellite services (MSS).
Decision 2009/343/EC	Commission Decision of 21 April 2009 amending Decision 2007/131/EC on allowing the use of the radio spectrum for equipment using ultra-wideband technology in a harmonised manner in the Community.
Directive 2009/114/EC	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
Decision 626/2008/EC	Decision No 626/2008/EC of the European Parliament and of the Council of 30 June 2008 on the selection and authorisation of systems providing mobile satellite services (MSS)
Decision 2008/673/EC	Commission Decision of 13 August 2008 amending Decision 2005/928/EC on the harmonisation of the 169,4-169,8125 MHz frequency band in the Community.
Decision 2008/671/EC	Commission Decision of 5 August 2008 on the harmonised use of radio spectrum in the 5875 - 5905 MHz frequency band for safety related applications of Intelligent Transport Systems (ITS)
Decision 2008/477/EC	Commission Decision of 13 June 2008 on the harmonisation of the 2 500-2 690 MHz frequency band for terrestrial systems capable of providing electronic communications services in the Community
Decision 2008/411/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.
Decision 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
Decision 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
Decision 2007/90/EC	Commission Decision of 12 February 2007 amending Decision 2005/513/EC 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 (WAS/RLANs)
Decision 2007/344/EC	Commission Decision of 16 May 2007 on harmonised availability of information regarding spectrum use within the Community.
Decision 2007/131/EC	Commission Decision of 21 April 2009 amending Decision 2007/131/EC on allowing the use of the radio spectrum for equipment using ultra-wideband technology in a harmonised manner in the Community.

Decision 2006/804/EC	Commission Decision of 23 November 2006 on harmonisation of the radio spectrum for radio frequency identification (RFID) devices operating in the ultra-high frequency (UHF) band
Decision 2006/771/EC	Commission Decision of 9 November 2006 on harmonisation of the radio spectrum for use by short-range devices
Decision 2005/82/EC	Directive 2005/82/EC of the European Parliament and of the Council of 14 December 2005 repealing Council Directive 90/544/EEC on the frequency bands designated for the coordinated introduction of pan-European land-based public radio paging in the Community
Decision 2005/631/EC	Commission Decision of 29 August 2005 concerning essential requirements as referred to in Directive 1999/5/EC of the European Parliament and of the Council ensuring access of Cospas-Sarsat locator beacons to emergency services
Decision 2005/513/EC	Commission Decision of 11 July 2005 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 (WAS/RLANs)
Decision 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
Decision 2004/545/EC	Commission Decision 2004/545/EC on the harmonisation of radio spectrum in the 79 GHz range for the use of automotive short-range radar equipment in the Community.
Recommendation 2003/203/EC	Commission Recommendation of 20 March 2003 on the harmonisation of the provision of public R-LAN access to public electronic communications networks and services in the Community
Decision 2002/676/EC	Decision No. 676/2002/EC of the European Parliament and of the Council of 7 March 2002 on a regulatory framework for radio spectrum policy in the European Community (Radio Spectrum Decision)
Directive 2002/22/EC	Directive 2002/22/EC of the European Parliament and of the Council of 7 March 2002 on universal service and users' rights relating to electronic communications networks and services (Universal Service Directive)
Directive 2002/21/EC	Directive 2002/21/EC of the European Parliament and of the Council of 7 March 2002 on a common regulatory framework for electronic communications networks and services (Framework Directive)
Directive 2002/20/EC	Directive 2002/20/EC of the European Parliament and of the Council of 7 March 2002 on the authorisation of electronic communications networks and services (Authorisation Directive)
Directive 2002/19/EC	Directive 2002/19/EC of the European Parliament and of the Council of 7 March 2002 on access to, and interconnection of electronic communications networks and associated facilities (Access Directive)
Decision 2001/148/EC	Commission Decision of 21 February 2001 on the application of Article 3(3)(e) of Directive 1999/5/EC to avalanche beacons

Decision 128/1999/EC	Decision No 128/1999/EC of the European Parliament and of the Council of 14 December 1998 on the coordinated introduction of a third-generation mobile and wireless communications system
Directive 1999/5/EC	Directive 1999/5/EC of the European Parliament and of the Council of 9 March 1999 on radio equipment and telecommunications terminal equipment and the mutual recognition of their conformity
Directive 91/287/EEC	Council Directive 91/287/EEC on the frequency band to be designated for the coordinated introduction of digital European cordless telecommunications (DECT) into the Community
Directive 1987/372/EEC	Council Directive 87/372/EEC 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

## PRIMARY LEGISLATION

Number 18 of 2009

Broadcasting Act 2009

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Number 20 of 2002

Communications Regulation Act,

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Number 45 of 1926

Wireless Telegraphy Act, 1926

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## SECONDARY LEGISLATION

S.I. 007 of 2004	Wireless Telegraphy Act, 1926 (Section 3) (Exemption of Low Power Aircraft Earth Stations) Order, 2004
S.I. 19 of 2013	Wireless Telegraphy (Interim GSM Mobile Telephony Licence) (Amendment) Regulations 2013
S.I. 34 of 2014	Wireless Telegraphy (Transfer of Spectrum Rights of Use) Regulations 2014
S.I. 79 of 2003	Wireless Telegraphy (Fixed Wireless Access Local Area Licence) Regulations, 2003 (S.I. No. 79)
S.I. 83 of 1988	Wireless Telegraphy (Community Repeater Licence) Regulations, 1988.
S.I. 93 of 1998	Wireless Telegraphy Act, 1926 (Section 3) (Exemption of Short-Range Business Radios) Order, 1993
S.I. 111 of 2013	Wireless Telegraphy Act 1926 (section 3) (Exemption of Ground Probing and Wall Probing Radars) Order 2013
S.I. 112 of 2013	Wireless Telegraphy Act 1926 (section 3) (Exemption of Level Probing Radars) Order 2013
S.I. 123 of 1996	European Communities (Mobile and Personal Communications) Regulations, 1996.
S.I. 128 of 2005	Wireless Telegraphy Act 1926 (Section) (Exemption of certain classes of Land Mobile Earth Stations) Order 2005
S.I. 158 of 2003	Wireless Telegraphy Act, 1926 (Section 3) (Exemption of Mobile Telephones) (Amendment) Order, 2003: S.I. No. 158 of 2003
S.I. 158 of 2018	Wireless Telegraphy (National Point to Point Block Licences) Regulations 2018.
S.I. 160 of 2006	Wireless Telegraphy Act, 1926 (Section 3) (Exemption of Short-Range Devices) (Amendment) Order, 2006
S.I. 168 of 1994	European Communities (Digital European Cordless Telecommunications — DECT) Regulations, 1994.
S.I. 169 of 2013	Wireless Telegraphy Act 1926 (Section 3) (Exemption of Apparatus for Mobile Communications Services on Board Vessels) Order 2013
S.I. 172 of 2007	Wireless Telegraphy (1785 - 1805 MHz Wireless Access Platform for Electronic Communications Services) Regulations, 2007
S.I. 178 of 2008	Wireless Telegraphy Act 1926 (Section 3) (Exemption of Apparatus for Mobile Communication Services on Aircraft) order 2008
S.I. 189 of 2011	Wireless telegraphy (interim GSM mobile telephony licence) regulations 2011.
S.I. 192 of 2009	Wireless Telegraphy (Amateur Station Licence) Regulations, 2009

S.I. 195 of 2010	European Communities (public pan-European cellular digital land-based mobile communications) regulations 2010.
S.I. 197 of 2005	Wireless Telegraphy Act, 1926 (Section 3) (Exemption of Receive Only Apparatus For Wireless Telegraphy) Order 2005 (for Receive only apparatus)
S.I. 197 of 2019	Wireless Telegraphy (Public Service Television And Sound Broadcasting Licences) Regulations 2019.
S.I. 213 of 2013	Wireless Telegraphy (GSM for Railway Licence) Regulations 2013
S.I. 214 of 1998	Wireless Telegraphy Act, 1926 (Section 3) (Exemption of Satellite Earth Stations for Satellite Personal Communications Services (S-PCS)) Order, 1998
S.I. 214 of 2013	Wireless Telegraphy (Broadband Wireless Access Local Area Licence) Regulations 2013
S.I. 218 of 2017	Wireless Telegraphy Act 1926 (section 3) (Exemption of Apparatus for Mobile Communication Services on Aircraft) Order 2017.
S.I. 226 of 2020	Wireless Telegraphy Act 1926 (section 3) (Exemption of Terminals for Satellite Services) Order 2020.
S.I. 240 of 2014	Wireless Telegraphy (Licensing of Telemetry Systems) Regulations 2014
S.I. 251 of 2012	Wireless Telegraphy (Liberalised Use and Preparatory Licences in the 800 MHz, 900 MHz and 1800 MHz Bands) Regulations 2012
S.I. 273 of 2000	Wireless Telegraphy Act, 1926 (Section 3) (Exemption of Certain Fixed Satellite Receiving Earth Stations) Order, 2000
S.I. 287 of 1999	Wireless Telegraphy (Fixed Wireless Point to Multi-Point Access Licence) Regulations, 1999
S.I. 290 of 2010	Wireless Telegraphy Act 1926 (Section 3) (Exemption of 406 MHz Personal Locator Beacons)
S.I. 295 of 2007	Wireless Telegraphy (Fixed Satellite Earth Stations and Teleport Facility) Regulations 2007
S.I. 296 of 2006	Wireless Telegraphy (National Point-to-Point and Point-to-Multipoint Block Licences) Regulations, 2006.
S.I. 304 of 2006	Wireless Telegraphy (Wireless Public Address System) Regulations, 2006
S.I. 320 of 1949	Wireless Telegraphy (Business Radio Licence) Regulations, 1949, as amended.
S.I. 324 of 2008	Wireless Telegraphy (Use of the Band 380 -400 MHz by Emergency Services) Regulations, 2008
S.I. 338 of 2003	Wireless Telegraphy (Fixed Wireless Point to Multi-point Access Licence) (Amendment) (no.2) Regulations, 2003: S.I. No. 338 of 2003

S.I. 339 of 2003	Wireless Telegraphy (GSM Mobile Telephony Licence) (Amendment) Regulations, 2003: S.I. No. 339 of 2003
S.I. 340 of 2003	Wireless Telegraphy (Third Generation and GSM Mobile Telephony Licence) (Amendment) Regulations, 2003
S.I. 343 of 2008	Wireless Telegraphy Act 1926 (Section 3) (Exemption of Low Power Earth Stations On Board Vessels)
S.I. 369 of 2009	Wireless Telegraphy (Radiodetermination, Air Traffic and Maritime Services) Regulations, 2009
S.I. 370 of 2009	Wireless Telegraphy (Radio Link Licence) Regulations, 2009
S.I. 398 of 2001	Wireless Telegraphy Act, 1926 (Section 3) (Exemption of certain classes of Land Mobile Earth Stations) Order, 2001
S.I. 405 of 2002	Wireless Telegraphy Act, 1926 (Section 3) (Exemption of Short-Range Devices) Order, 2002
S.I. 407 of 2020	Wireless Telegraphy (Further Temporary Electronic Communications Services Licences) Regulations 2020
S.I. 409 of 1997	Wireless Telegraphy (Mobile Telephones) Exemption Order, 1997
S.I. 410 of 1997	Wireless Telegraphy (Cordless Telephones) Exemption Order, 1997
S.I. 414 of 2006	Wireless Telegraphy (Ship Station Radio Licence) Regulations, 2006
S.I. 416 of 1994	European Communities (co-ordinated introduction of public pan-european cellular digital land-based mobile communications-GSM) Regulations, 1994.
S.I. 435 of 2002	Wireless Telegraphy (Mobile Radio Systems) Regulations, 2002 (S.I. No. 435 of 2002)
S.I. 436 of 1998	Wireless Telegraphy Act, 1926 (Section 3) Exemption of Citizens' Band (CB) Radios) Order, 1998
S.I. 445 of 2009	Wireless Telegraphy (UHF Television Programme Retransmission) Regulations, 2009
S.I. 467 of 2002	Wireless Telegraphy (Fixed Wireless Point to Multi-Point Access Licence) (Amendment) Regulations, 2002 (S.I. 467 of 2002)
S.I. 484 of 2022	Wireless Telegraphy (Short-Term Electronic Communications Services Licences) Regulations 2022
S.I. 505 of 2003	Wireless Telegraphy Act, 1926 (section 3) (Exemption of Certain Classes of Fixed Satellite Earth Stations) Order, 2003, S.I. No. 505 of 2003
S.I. 529 of 2003	Wireless Telegraphy (Multipoint Microwave Distribution System) REGULATIONS 2003.
S.I. 530 of 2003	Wireless Telegraphy (Fixed Wireless Access Local Area Licence) (Amendment) Regulations, 2003
S.I. 532 of 2016	Wireless Telegraphy (3.6 GHz Band Licences) Regulations 2016.

S.I. 554 of 2014	Wireless Telegraphy (Interim GSM Mobile Telephony Licence) Regulations 2014
S.I. 563 of 2013	Wireless Telegraphy (1800MHz and Preparatory Licences in the 1800MHz Band) Regulations 2013
S.I. 642 of 2005	Statutory Instrument 642 of 2005 Wireless Telegraphy (Wideband Digital Mobile Data Services) Regulations 2005
S.I. 646 of 2005	Wireless Telegraphy (Third Party Business Radio Licence) Regulations, 2005
S.I. 762 of 2007	Wireless Telegraphy (National Point-to-Point and Point-to-Multipoint Block Licences)
S.I. 855 of 2004	Irish Aviation Authority (Air Traffic Service Systems) Order, 2004

## COMREG DOCUMENTATION

The ComReg documentation listed below and all other ComReg documentation is available to download from the ComReg website [www.comreg.ie](http://www.comreg.ie).

00/07aR	Guidelines for Business Radio Licences (as revised)
00/64R	Guidelines for applicants for satellite earth station licences in the fixed satellite service in spectrum above 3 GHz
02/03R	Community Repeater Licence - Application Form & Guidance Notes
02/04R3	Radio Experimenter Licence - Application Form
02/05R4	Radio Experimenter Licence - Handbook
02/11R2	Point to Multipoint Radio Link Licence, Guidance Notes and Application Form
02/12R	Paging Permit (On-site)- Application Form
02/71R	Permitted Short Range Devices in Ireland (Refer to the most recent Revision of this document (at <a href="http://www.comreg.ie">www.comreg.ie</a> ) (as revised))
04/107	Wideband Digital Mobile Data Services in the 420MHz and 900 MHz bands
04/26	Application Form for Digital Television Delivery Systems at 12GHz
04/27	Digital Television Delivery Systems at 12GHz, Guidance Notes for Applicants
04/28	Technical Conditions for the operation of Digital Television Delivery Systems between 11.7GHz and 12.5GHz
04/41	Technical Conditions For The Operation Of Analogue Programme Services Distribution Systems In Frequency Band 2500-2686 MHz

04/42	Technical Conditions For The Operation Of Digital Programme Services Distribution Systems
05/31	Wideband Digital Mobile Data in the 420 MHz and 900 MHz bands
05/93	Award of available spectrum: 1785 - 1805 MHz (ComReg and Ofcom)
06/17a	Revised Application Form for Fixed Wireless Access Local Area (FWALA) Licence
06/17R3	Revised Guidelines to Applicants for Fixed Wireless Access Local Area (FWALA) Licences
06/18	Information Notice Comparative Evaluation Stage - Revised FWALA Licensing Process
06/26	Guidelines for Applicants - Wireless Public Address System (WPAS)
06/26a	Application Form - Wireless Public Address System (WPAS)
07/37	Short Range Devices in the 10.5 - 10.6 GHz band.
08/08R	Radio Licensing for Special Events and Temporary Use in Ireland (as revised)
08/67	Emergency Services Digital Radio ('ESDR') Licence, Guidance Notes and Application Form
09/45	Amateur Station Licence Guidelines
09/89R	Guidelines to Applicants for Radio Links Licences
11/07	Radiodetermination, Air Traffic and Maritime Services Licence Guidelines
11/90	Response to Information Notice 10/84 - Licensing Regime for GSM for Railway Operations
12/52	Multi-band Spectrum Release: Information Memorandum

13/55	Update on the Multi-Band Spectrum Award process
19/99	Results of the 400 MHz Band Spectrum Award
20/47	Permitted Licence Exemptions for Terminals for Satellite Services
21/96	COVID-19: Temporary Spectrum Management Measures - Response to consultation and decision, including draft regulations on a further temporary spectrum rights (No.3) framework in the 700 MHz Duplex, 2.1 GHz and 2.6 GHz Bands

## ECC DECISIONS

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)
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)
ECC/DEC/(19)03	ECC Decision of 8 March 2019 on the harmonised usage of the channels of the radio regulations appendix 18 (transmitting frequencies in the vhf maritime mobile band)
ECC/DEC/(19)02	ECC Decision of 8 March 2019 on 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
ECC/DEC/(18)06	ECC Decision of 6 July 2018 on the harmonised technical conditions for Mobile/Fixed Communications Networks (MFCN) in the band 24.25-27.5 GHz, corrected 26 October 2018
ECC/DEC/(18)05	ECC Decision of 6 July 2018 on 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
ECC/DEC/(18)04	ECC Decision of 6 July 2018 on 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
ECC/DEC/(17)06	ECC Decision of 17 November 2017 on the harmonised use of the frequency bands 1427-1452 MHz and 1492-1518 MHz for Mobile/Fixed Communications Networks Supplemental Downlink (MFCN SDL)
ECC/DEC/(17)05	ECC Decision of 2 March 2018 on the harmonised prefixes and short codes in national numbering plans

ECC/DEC/(17)04	ECC Decision of 30 June 2017 on the harmonised use and exemption from individual licensing of fixed earth stations operating with NGSO FSS satellite systems in the frequency bands 10.70-12.75 GHz and 14.00-14.50 GHz, amended 8 March 2019
ECC/DEC/(16)02	ECC Decision of 17 June 2016 on harmonised technical conditions and frequency bands for the implementation of Broadband Public Protection and Disaster Relief (BB-PPDR) systems, amended 8 March 2019
ECC/DEC/(16)01	ECC Decision of 4 March 2016 on 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, corrected on 18 November 2016
ECC/DEC/(15)05	ECC Decision of 3 July 2015 on 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, amended on 02 March 2018
ECC/DEC/(15)04	ECC Decision of 3 July 2015 on 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 29.5-30.0 GHz, amended 8 March 2019
ECC/DEC/(15)03	ECC Decision of 3 July 2015 on the harmonised use of broadband Direct Air-to-Ground Communications (DA2GC) systems in the frequency band 5855-5875 MHz
ECC/DEC/(15)01	ECC Decision of 6 March 2015 on 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)
ECC/DEC/(14)02	ECC Decision of 27 June 2014 on Harmonised technical and regulatory conditions for the use of the band 2300-2400 MHz for Mobile/Fixed Communications Networks (MFCN)

ECC/DEC/(13)03	ECC Decision of 8 November 2013 on the harmonised use of the frequency band 1452-1492 MHz for Mobile/Fixed Communications Networks Supplemental Downlink (MFCN SDL), latest amended on 02 March 2018
ECC/DEC/(13)01	EC Decision of 8 March 2013 on the 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, amended 26 October 2018
ECC/DEC/12)03	ECC Decision of 2 November 2012 on the harmonised conditions for UWB applications onboard aircraft, corrected on 6 March 2015
ECC/DEC/(12)01	ECC Decision of 1 June 2012 on Exemption from individual licensing and free circulation and use of terrestrial and satellite mobile terminals operating under the control of networks, corrected on 3 July 2015 and amended on 18 November 2016
ECC/DEC/(11)06	ECC Decision of 9 December 2011 on harmonised frequency arrangements and least restrictive technical conditions (LRTC) for mobile/fixed communications networks (MFCN) operating in the band 3400-3800 MHz, amended on 14 March 2014 and amended 26 October 2018
ECC/DEC/(11)03	ECC Decision of 24 June 2011 on the harmonised use of frequencies for Citizens' Band (CB) radio equipment, amended on 17 June 2016
ECC/DEC/(11)02	ECC Decision of 11 March 2011 on 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, updated on 17 November 2017 and amended on 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 on 3 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)06	ECC Decision of 30 October 2009 on Reserving the National Short Message Service (SMS) Numbering Range Beginning with '116' for Harmonised SMS Numbers for Harmonised Services of Social Value
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 harmonised conditions for Mobile/Fixed Communications Networks (MFCN) operating in the band 790-862 MHz
ECC/DEC/(09)02	ECC Decision of 26 June 2009 on the harmonisation of the bands 1610-1626.5 MHz and 2483.5-2500 MHz for use by systems in the Mobile-Satellite Service, amended 02 November 2012
ECC/DEC/(09)01	ECC Decision of 13 March 2009 on the harmonised use of the 63.72-65.88 GHz frequency band for Intelligent Transport Systems (ITS), amended on 4 March 2016 and amended on 5 July 2019
ECC/DEC/(08)08	ECC Decision of 31 October 2008 on the harmonised use of GSM systems in the 900 MHz and 1800 MHz bands, UMTS systems in the 2 GHz band and LTE systems in the 1800 MHz and 2.6 GHz bands on board vessels, amended on 4 March 2016 and updated on 30 June 2017
ECC/DEC/(08)05	ECC Decision of 27 June 2008 on 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, amended on 17 June 2016 and amended on 8 March 2019
ECC/DEC/(08)01	ECC Decision of 14 March 2008 on the harmonised use of Safety-Related Intelligent Transport Systems (ITS) in the 5875-5935 MHz frequency band, amended on 3 July 2015 and amended on 6 March 2020
ECC/DEC/(07)03	ECC Decision of 6 July 2007 on Reserving the National Numbering Range beginning with '116' for Harmonised Numbers for Harmonised Services of Social Value

ECC/DEC/(07)01	ECC Decision of 30 March 2007 on the harmonised use, exemption from individual licensing and free circulation of Material Sensing Devices using Ultra-Wideband (UWB) technology, amended on 26 June 2009, corrected on 18 November 2016 and amended on 8 March 2019
ECC/DEC/(06)13	ECC Decision of 1 December 2006 on the designation of the bands 880-915 MHz, 925-960 MHz, 1710-1785 MHz and 1805-1880 MHz for terrestrial UMTS, LTE and WiMAX systems, amended on 2 March 2018 and amended on 8 March 2019
ECC/DEC/(06)10	ECC Decision of 1 December 2006 on transitional arrangements for the Fixed Service and Tactical Radio Relay Systems 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, amended on 3 March 2017
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)
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, updated on 26 October 2018
ECC/DEC/(06)07	ECC Decision of 18 November 2016 on the harmonised use of airborne GSM and LTE 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, amended on 18 November 2016 and updated 30 June 2017
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	ECC Decision of 24 March 2006 on the harmonised conditions for devices using UWB technology in bands below 10.6 GHz, amended 9 December 2011 and 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) with e.i.r.p. above 34 dBW 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	ECC Decision of 24 March 2006 on 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
ECC/DEC/(06)01	ECC Decision of 24 March 2006 on the harmonised utilisation of the bands 1920-1980 MHz and 2110-2170 MHz for mobile/fixed communications networks (MFCN) including terrestrial IMT, amended on 2 November 2012 and amended on 8 March 2019
ECC/DEC/(05)11	ECC Decision of 24 June 2005 on the free circulation and use of Aircraft Earth Stations (AES) in the frequency bands 14-14.5 GHz (Earth-to-space), 10.7-11.7GHz (space-to-Earth) and 12.5-12.75 GHz (space-to-Earth), amended on 6 March 2015 and amended on 8 March 2019
ECC/DEC/(05)10	ECC Decision of 24 June 2005 on the 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), amended 8 March 2019
ECC/DEC/(05)09	ECC Decision of 24 June 2005 on the 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), amended on 4 March 2016, updated on 30 June 2017 and amended on 8 March 2019
ECC/DEC/(05)08	ECC Decision of 24 June 2005 on the availability of frequency bands for high density applications in the Fixed-Satellite Service (space-to-Earth and Earth-to-space), amended 08 March 2013
ECC/DEC/(05)05	ECC Decision of 18 March 2005 on harmonised utilisation of spectrum for Mobile/Fixed Communications Networks (MFCN) operating within the band 2500-2690 MHz, amended on 3 July 2015 and amended on 5 July 2019
ECC/DEC/(05)02	ECC Decision of 18 March 2005 on the use of the frequency band 169.4-169.8125 MHz, amended on 8 November 2013, updated on 17 November 2017 and latest amended on 5 July 2019
ECC/DEC/(05)01	ECC Decision of 18 March 2005 on 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), amended on 8 March 2013 and amended 8 March 2019
ECC/DEC/(04)10	ECC Decision of 12 November 2004 on the frequency bands to be designated for the temporary introduction of Automotive Short Range Radars (SRR), amended 01 June 2012 and updated 02 March 2018
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 on 26 June 2009

ECC/DEC/(04)08	ECC Decision of 9 July 2004 on the harmonised use of the 5 GHz frequency bands for the implementation of Wireless Access Systems including Radio Local Area Networks (WAS/RLANs), latest amended on 30 October 2009
ECC/DEC/(04)03	ECC Decision of 19 March 2004 on the frequency band 77-81 GHz to be designated for the use of Automotive Short Range Radars.
ECC/DEC/(03)05	ECC Decision of 17 October 2003 on The publication of national tables of frequency allocations and utilisations (NTFAs), amended on 3 July 2015
ECC/DEC/(03)04	ECC Decision of 17 October 2003 on 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, amended 8 March 2019
ECC/DEC/(02)10	ECC Decision of 15 November 2002 on exemption from individual licensing of GSM-R mobile terminals operating within the frequency bands 876-880 MHz and 921-925 MHz for railway purposes, amended on 11 March 2011
ECC/DEC/(02)09	ECC Decision of 15 November 2002 on free circulation and use of GSM-R mobile terminals operating within the frequency bands 876-880 MHz and 921-925 MHz for railway purposes in CEPT countries, enlarging the field of application of ERC/DEC/(95)01, amended on 11 March 2011
ECC/DEC/(02)05	ECC Decision of 5 July 2002 on the designation and availability of frequency bands for railway purposes in the 876-880 MHz and 921-925 MHz bands, amended on 8 March 2013
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)
ECC/DEC/(01)03	ECC Decision of 15 November 2001 on ECO Frequency Information System (EFIS), Annex 2 is amended on 5 July 2019

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	ERC Decision of 12 March 2001 on harmonised frequencies, technical characteristics and exemption from individual licensing of Ultra Low Power Active Medical Implant (ULP-AMI) communication systems operating in the frequency band 401 - 406 MHz on a secondary basis, amended on 9 December 2011 and updated on 17 November 2017
ERC/DEC/(01)12	ERC Decision of 12 March 2001 on 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, updated on 17 November 2017
ERC/DEC/(01)11	ERC Decision of 12 March 2001 on 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, updated on 17 November 2017
ERC/DEC/(00)08	ERC Decision of 19 October 2000 on 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)
ERC/DEC/(00)07	ERC Decision of 19 October 2000 on 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), amended on 4 March 2016
ERC/DEC/(00)02	ERC Decision of 27 March 2000 on the use of the band 37.5 - 40.5 GHz by the fixed service and Earth stations of the fixed - satellite service (space-to-Earth)
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
ERC/DEC/(99)06	ERC Decision of 10 March 1999 on the harmonised introduction of satellite personal communication systems operating in the bands below 1 GHz (S-PCS<1GHz)
ERC/DEC/(99)05	ERC Decision of 10 March 1999 on Free Circulation, Use and Exemption from Individual Licensing of Mobile Earth Stations.(S-PCS < 1GHz)

ERC/DEC/(99)01	ERC Decision of 10 March 1999 on the harmonised examination syllabi for the General Operator's Certificate (GOC) and the Restricted Operator's Certificate (ROC), amended on 3 July 2015
ERC/DEC/(98)22	ERC Decision of 23 November 1998 on Exemption from Individual Licensing of DECT equipment, amended on 8 November 2013
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 24 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 24 October 1994 on the frequency bands to be designated for the coordinated introduction of the GSM digital pan-European communications system
ECTRA/DEC/(99)02	ECTRA Decision of 3 March 1999 on harmonisation of authorisation conditions in the field of Satellite Personal Communications Services (S-PCS) in Europe, operating in the bands below 1 GHz (S-PCS<1 GHz)
ECTRA/DEC/(99)01	ECTRA Decision of 3 March 1999 on harmonisation of authorisation conditions in the field of Satellite personal Communications Services (S-PCS) in Europe, operating within the bands 1525-1544/1545-1559 MHz, 1626.5-1645.5/1646.5-1660.5 MHz

## ECC RECOMMENDATIONS

ECC/REC/(20)01	ECC Recommendation of 6 March 2020 on 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
ECC/REC/(19)03	ECC Recommendation of 29 May 2019 on measures for increasing Trust in Calling Line Identification and Originating Identification
ECC/REC/(19)02	ECC Recommendation of 29 May 2019 on guidance and methodologies when considering typical unwanted emissions in sharing/compatibility studies
ECC/REC/(19)01	ECC Recommendation of 8 March 2019 on 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
ECC/REC/(18)02	ECC Recommendation of 14 September 2018 on 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
ECC/REC/(18)01	ECC Recommendation of 27 April 2018 on 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
ECC/REC/(17)04	ECC Recommendation of 22 November 2017 on numbering for eCall
ECC/REC/(17)03	ECC Recommendation of 19 May 2017 on guidance for the harmonised use and coordination of Maritime Broadband Radio (MBR) systems on board ships and off-shore platforms operating within the frequency bands 5852-5872 MHz and 5880-5900 MHz
ECC/REC/(17)02	ECC Recommendation of 31 May 2017 on harmonised European Management and Assignment Principles for Geographic E.212 Mobile Network Codes (MNCs)
ECC/REC/(17)01	ECC Recommendation of 3 February 2017 on measurement uncertainty assessment for field measurements
ECC/REC/(16)03	ECC Recommendation of 17 October 2016 on cross-border coordination for Broadband Public Protection and Disaster Relief (BB-PPDR) systems in the frequency band 698 to 791 MHz
ECC/REC/(16)02	ECC Recommendation of 28 April 2016 on extra-Territorial Use of E.164 Numbers - High level principles of assignment and use
ECC/REC/(16)01	ECC Recommendation of 28 April 2016 on 3rd party access to Number Portability Data (NP Data)

ECC/REC/(15)04	ECC Recommendation of 3 July 2015 on Guidance for the implementation of a sharing framework between MFCN and PMSE within 2300-2400 MHz
ECC/REC/(15)03	ECC Recommendation of 23 April 2015 on provision of Comparable Information on Fixed Retail Internet Access Service Quality, amended on 28 November 2018
ECC/REC/(15)02	ECC Recommendation of 23 April 2015 on Guidelines for Major changes to National Numbering and Dialling Plans concerning E.164 Numbers
ECC/REC/(15)01	ECC Recommendation of 13 February 2015 on 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, amended on 5 February 2016 and 14 February 2020
ECC/REC/(14)06	ECC Recommendation of 19 September 2014 on 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
ECC/REC/(14)05	ECC Recommendation of 14 October 2014 on amateur Radio Licence Examinations for Persons with Disabilities
ECC/REC/(14)04	ECC Recommendation of 25 June 2014 on cross-border coordination for mobile/fixed communications networks (MFCN) and between MFCN and other systems in the frequency band 2300-2400 MHz
ECC/REC/(14)03	ECC Recommendation of 10 April 2014 on charging Principles for National and International Freephone Numbers
ECC/REC/(14)02	ECC Recommendation of 11 February 2014 on protection of fixed monitoring stations against interference from nearby or strong transmitters
ECC/REC/(14)01	ECC Recommendation of 31 January 2014 on radio frequency channel arrangements for fixed service systems operating in the band 92-95 GHz, latest amended on 14 September 2018
ECC/REC/(12)04	ECC Recommendation of 5 December 2012 on numbering for Nomadic Voice Services
ECC/REC/(12)03	ECC Recommendation of 18 February 2013 on determination of the radiated power through field strength measurements in the frequency range from 400 MHz to 6000 MHz, amended 8 February 2019
ECC/REC/(12)02	ECC Recommendation of 22 May 2012 on number Portability - Best Practices
ECC/REC/(11)10	ECC Recommendation of 1 November 2010 on location tracking application for emergency and disaster situations
ECC/REC/(11)09	ECC Recommendation of 21 October 2011 on UWB Location Tracking Systems TYPE 2 (LT2), amended 22 May 2015

ECC/REC/(11)08	ECC Recommendation of 1 November 2011 on framework for authorisation regime of indoor global navigation satellite system (GNSS) pseudolites in the band 1559-1610 MHz
ECC/REC/(11)06	ECC Recommendation of 21 October 2011 Block Edge Mask Compliance Measurements for Base Stations, latest amended on 17 October 2016
ECC/REC/(11)05	ECC Recommendation of 26 May 2011 on cross-border Coordination for Mobile/Fixed Communications Networks (MFCN) in the frequency band 2500-2690 MHz, amended on 3 February 2017
ECC/REC/(11)04	ECC Recommendation of 26 May 2011 on cross-border Coordination for Mobile/Fixed Communications Networks (MFCN) in the frequency band 790-862 MHz
ECC/REC/(11)03	ECC Recommendation of 12 May 2011 on numbering and Addressing for Machine-to-Machine (M2M) communications
ECC/REC/(11)01	ECC Recommendation of 2 February 2011 on guidelines for assignment of frequency blocks for Fixed Wireless Systems in the bands 24.5-26.5 GHz, 27.5-29.5 GHz and 31.8-33.4 GHz
ECC/REC/(10)03	ECC Recommendation of 7 October 2010 on harmonised CEPT examination procedures for the Long Range Certificate (LRC) for non-solas vessels
ECC/REC/(10)02	ECC Recommendation of 7 October 2010 on a framework for authorisation regime of Global Navigation Satellite System (GNSS) repeaters
ECC/REC/(10)01	ECC Recommendation of 28 January 2010 on 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/(09)02	ECC Recommendation of 19 October 2009 on Specification for the measurement of disturbance fields from telecommunications systems and networks in the frequency range 9 kHz to 3 GHz
ECC/REC/(09)01	ECC Recommendation of 2 February 2009 on use of the 57-64 GHz frequency band for point-to-point Fixed Wireless Systems
ECC/REC/(08)04	ECC Recommendation of 6 October 2008 on 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)03	Services using Harmonised European Short Codes in the National Numbering Range Beginning with '116'
ECC/REC/(08)02	ECC Recommendation of 21 February 2008 on cross-border coordination for Mobile/Fixed Communications Networks (MFCN) in the frequency bands 900 MHz and 1800 MHz excluding GSM vs. GSM systems, amended on 27 April 2012 and amended on 8 February 2019

ECC/REC/(08)01	ECC Recommendation of 21 February 2008 on use of the Band 5855-5875 MHz for Intelligent Transport Systems (ITS), amended on 3 July 2015 and amended on 6 March 2020
ECC/REC/(07)02	ECC Recommendation of 10 October 2007 on Consumer protection against abuse of High Tariff Services
ECC/REC/(07)01	ECC Recommendation of 31 May 2007 on frequency measurements using Fast Fourier Transform (FFT) techniques
ECC/REC/(06)04	ECC Recommendation of 14 December 2006 on use of the band 5725-5875 MHz for Broadband Fixed Wireless Access (BFWA)
ECC/REC/(06)03	ECC Recommendation of 29 September 2006 on principles related to Numbering plans for SMS Short Codes
ECC/REC/(06)01	Bandwidth measurements using FFT techniques
ECC/REC/(05)08	ECC Recommendation of 1 February 2006 on frequency planning and cross-border coordination between GSM Land Mobile Systems (GSM 900, GSM 1800, and GSM-R), amended on 3 February 2017
ECC/REC/(05)07	ECC Recommendation of 15 October 2005 on radio frequency channel arrangements for Fixed Service Systems operating in the bands 71-76 GHz and 81-86 GHz, amended on 15 February 2009
ECC/REC/(05)06	ECC Recommendation of 5 October 2005 on CEPT Novice Radio Amateur Licence, latest amended on 29 January 2019
ECC/REC/(05)04	Criteria for the assessment of radio interferences caused by radiated disturbances from wire-line telecommunication networks
ECC/REC/(05)02	ECC Recommendation of 24 June 2005 on use of the 64-66 GHz frequency band for Fixed Service, amended on 24 February 2009
ECC/REC/(05)01	ECC Recommendation of 2 February 2005 on harmonisation of automatic measuring methods and data transfer for frequency band registrations, amended on 18 May 2018
ECC/REC/(04)05	Guidelines for accommodation and assignment of Multipoint Fixed Wireless systems in frequency bands 3.4-3.6 GHz and 3.6-3.8 GHz
ECC/REC/(04)04	ECC Recommendation of 27 January 2004 on data-only terminals that do not use E.164 numbers for their services
ECC/REC/(04)01	ECC Recommendation of 13 February 2004 with regard to forbidding the placing on the market and use of Jammers in the CEPT member countries, latest amended on 8 February 2013

ECC/REC/(03)02	ECC Recommendation of 12 June 2003 on satellite Radio Monitoring in CEPT
ECC/REC/(02)09	ECC Recommendation of 12 June 2003 on protection of Aeronautical Radio Navigation Service in the band 2700-2900 MHz from interference caused by the operation of Digital Cordless Cameras
ECC/REC/(02)06	Preferred channel arrangements for digital Fixed Service Systems operating in the frequency range 7125-8500 MHz.
ECC/REC/(02)05	ECC Recommendation of 11 February 2002 on unwanted emissions, latest amended 30 March 2012
ECC/REC/(02)04	ECC Recommendation of 30 September 2002 on measuring non-ionising electromagnetic radiation (9 kHz-300 GHz), amended 6 February 2007
ECC/REC/(02)03	Exchange of radio monitoring information using electronic means in common monitoring campaigns
ECC/REC/(02)02	ECC Recommendation of 5 February 2010 on preferred channel arrangements for fixed service systems (point-to-point and point-to-multipoint) operating in the frequency band 31.0-31.3 GHz
ECC/REC/(02)01	ECC Recommendation of 12 February 2002 on specification of reference receiver performance parameters
ECC/REC/(01)05	ECC Recommendation of 10 October 2001 on list of parameters of digital point-to-point fixed radio links used for national planning, revised 5 February 2010
ECC/REC/(01)04	ECC Recommendation of 10 October 2001 on 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, latest amended on 13 May 2014
ECTRA/REC/(98)05	ECTRA Recommendation of 1998 on guidelines for licensing conditions pursuant to Essential Requirements in the field of telecommunications networks and services in Europe
ECTRA/REC/(98)03	ECTRA Recommendation of 1998 on harmonised National Numbering Conventions regarding ITU-T Recommendation E.164 numbers
ECTRA/REC/(97)02	ECTRA Recommendation of 1997 on registration, Recognition and Supervision of Maritime Accounting Authorities
ECTRA/REC/(01)04	ECTRA Recommendation of 2001 on TETRA ITSI numbering resource and its relationship to E.212 IMSI numbering resource
ERC/REC/(01)02	ERC Recommendation of 2001 on preferred channel arrangement for fixed service systems operating in the frequency band 31.8-33.4 GHz, revised 5 February 2010 and amended on 29 May 2019

ERC/REC/(01)01	ERC Recommendation of 2001 on cross-border coordination for mobile/fixed communications networks (MFCN) in the frequency bands: 1920-1980 MHz and 2110-2170 MHz, latest amended on 5 February 2016
ERC/REC/(00)08	ERC Recommendation of 2001 on field strength measurements along a route with geographical coordinate registrations, revised 15 October 2003
ERC/REC/(00)04	ERC Recommendation of 2000 on harmonised frequencies and free circulation and use for meteor scatter applications
ERC/REC 74-02	ERC Recommendation of 1999 on method of measuring the field strength at fixed points in the frequency range 29.7-960 MHz
ERC/REC 74-01	ERC Recommendation of 1998 on unwanted Emissions in the Spurious Domain, latest amendment on 29 May 2019
ERC/REC 70-03	ERC Recommendation of 1997 on relating to the use of Short Range Devices (SRD), latest amended on 7 June 2019
ERC/REC 62-02	ERC Recommendation of 1998 on harmonised frequency band for Civil and Military Airborne Telemetry applications
ERC/REC 54-01	ERC Recommendation of 1998 on method of measuring the maximum frequency deviation of FM broadcast emissions in the band 87.5 to 108 MHz at monitoring stations, latest amended on 14 February 2020
ERC/REC 31-06	ERC Recommendation of 1999 on the harmonised content of certificates issued by administrations for the GOC and ROC to facilitate the mutual recognition of these certificates
ERC/REC 31-04	ERC Recommendation of 1994 on harmonised CEPT examination procedures for the Short Range Certificate (SRC) for NON-SOLAS vessels, revised 15 October 2009
ERC/REC 25-10	ERC Recommendation of 1995 on frequency Ranges for the Use of Terrestrial Audio and Video Programme Making and Special Events (PMSE) applications, latest amended on 18 October 2016
ERC/REC 14-03	ERC Recommendation of 1997 on harmonised radio frequency channel arrangements for low and medium capacity systems in the band 3400 MHz to 3600 MHz
ERC/REC 14-02	ERC Recommendation of 1995 on radio frequency channel arrangements for high, medium and low capacity digital fixed service systems operating in the band 6425 to 7125 MHz, latest amended on 19 September 2014
ERC/REC 14-01	ERC Recommendation of 1995 on radio frequency channel arrangements for high capacity analogue and digital radio-relay systems operating in the band 5925 to 6425 MHz, amended 8 May 2015

ERC/REC 13-03	ERC Recommendation of 1996 on 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	ERC Recommendation of 29 October 1999 2016 on Radio frequency channel arrangement for fixed service systems operating in the band 55.78-57.0 GHz, amended on 30 January 2015
ERC/REC 12-11	ERC Recommendation of 29 October 1999 on radio frequency channel arrangement for fixed service systems operating in the bands 48.5 to 50.2 GHz / 51.5 to 52.6 GHz, amended on 8 May 2015
ERC/REC 12-08	ERC Recommendation of 1997 on harmonised radio frequency channel arrangements and block allocations for low, medium and high capacity systems in the band 3600 MHz to 4200 MHz, revised 1998
ERC/REC 12-07	ERC Recommendation of 1996 on harmonised radio frequency channel arrangements for digital terrestrial fixed systems operating in the band 14.5-14.62 GHz paired with 15.23 - 15.35 GHz
ERC/REC 12-06	ERC Recommendation of 1996 on preferred channel arrangements for fixed service systems operating in the frequency band 10.7-11.7 GHz, amended 5 February 2010 and amended 29 May 2019
ERC/REC 12-05	ERC Recommendation of 1996 on harmonised radio frequency channel arrangements for digital terrestrial fixed systems operating in the band 10.0-10.68 GHz, revised 15 June 2007
ERC/REC 12-03	ERC Recommendation of 1994 on 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	ERC Recommendation of 1997 on harmonised radio frequency channel arrangements for analogue and digital terrestrial fixed systems operating in the band 12.75 GHz to 13.25 GHz, revised 15 June 2007
ERC/REC 01-10	ERC Recommendation of 2000 on frequency channel occupancy measurements
ERC/REC 01-09	ERC Recommendation of 1999 relating to "Model cross border agreement on radio monitoring" to assist a better co-operation on spectrum monitoring
ERC/REC 01-07	ERC Recommendation of 1997 on harmonised regime for exemption from individual licensing for the use of radio spectrum, revised 9 June 2004
T/R 70-02	Recommendation T/R of 1988 on measures required to prevent unlawful use of radio equipment
T/R 61-02	Recommendation T/R of 1990 on harmonised amateur radio examination certificates, latest amendment is 5 February 2016 and latest update on 9 February 2018

T/R 61-01	Recommendation T/R of 1985 on CEPT Radio Amateur Licence, latest amended on 2 January 2018
T/R 51-01	Recommendation T/R of 2002 on measures to be taken to prevent operation of broadcasting stations on board of ships or aircraft outside national territorial limits
T/R 25-08	Recommendation T/R of 30 May 2008 on Planning criteria and cross-border coordination of frequencies for land mobile systems in the range 29.7-470 MHz , latest amended on 28 September 2018
T/R 13-02	Recommendation T/R of 1993 on preferred channel arrangements for fixed service systems in the frequency range 22.0-29.5 GHz, revised 15 May 2010 and amended 29 May 2019
T/R 13-01	Recommendation T/R of 1993 on preferred channel arrangements for fixed service systems operating in the frequency range 1-2.3 GHz, revised 5 February 2010
T/R 12-01	Recommendation T/R of 1991 on preferred channel arrangements for fixed service systems operating in the frequency band 37.0-39.5 GHz, revised 5 February 2010 and amended on 29 May 2019
T/R 01-05	Recommendation T/R of 1993 on transposition of national standards to enable introduction of European standards

## SOURCES OF FURTHER INFORMATION

### ANNEX 5 - SOURCES OF FURTHER INFORMATION

#### The International Telecommunications Union

This organisation is responsible for the publication of the Radio Regulations which includes the International Table of Frequency Allocations. The Radio Regulations also detail the footnotes, appendices and describe the different categories of service referred to in the Table of Frequency Allocations, Ireland.

#### Publications of the International Telecommunications Union (ITU) can be obtained from:

Sales Service,  
International Telecommunications Union,  
Place Des Nations,  
Ch-1211 Geneva 20,  
Switzerland.

**Tel:** +41 22 730 61 41

**Fax:** +41 22 730 51 94

**Email:** [sales@itu.ch](mailto:sales@itu.ch)

**Web Site:** <http://www.itu.int/publications>

#### Relevant Web Pages

- 1 International Telecommunication Union: <http://www.itu.int/>
- 2 European Conference of Postal and Telecommunications Administrations: <http://www.cept.org/>
- 3 Radio Frequency Plan for Ireland (ComReg Webpage): <https://www.comreg.ie/industry/radio-spectrum/radio-frequency-plan-for-ireland/>
- 4 European Table of Frequency Allocations and Applications in the Frequency Range 8.3 kHz - 3000 GHz (ECA Table): <https://docdb.cept.org/download/2051>

#### CEPT Documentation, including ERC and ECC Decisions, Recommendations, Reports and Publications of the European Radiocommunications Office (ERO) can be obtained from:

The European Communications Office,  
Nyropsgade 37, 4th Floor,  
1602, Copenhagen  
Denmark.

**Tel:** +45 33 89 63 00

**Fax:** +45 33 89 63 30

**E-mail:** [eco@eco.cept.org](mailto:eco@eco.cept.org)

**Documentation database:** <https://www.cept.org/ecc/deliverables/>

**EC Directives can be obtained from:** Europe House  
12-14 Lower Mount Street  
Dublin 2

**Tel:** (01) 634 1111

**Email:** [eu-ie-info-request@ec.europa.eu](mailto:eu-ie-info-request@ec.europa.eu)

**Website:**

[https://ec.europa.eu/ireland/about-us/contact\\_en](https://ec.europa.eu/ireland/about-us/contact_en)

#### Irish Government Publications, including Statutory Instruments, can be obtained from:

Government Publications Office,  
52 St Stephen's Green,  
Dublin 2

**Tel:** (01) 647 0834

**Email:** [Publications@opw.ie](mailto:Publications@opw.ie)

#### Queries relating to this document can be directed to:

The Commission for Communications Regulation, One Docklands Place,  
Guild Street,  
Dublin 1,  
D01 E4X0.

**Tel:** 01 804 9600

**Fax:** 01 804 9680

**Email:**

[abby.molloy@comreg.ie](mailto:abby.molloy@comreg.ie)

**Web Site:** <http://www.comreg.ie>