



Commission for
Communications Regulation

Interface Requirements for Aeronautical and Maritime Radio Services in Ireland. Notification Number 2012/609/IRL

General Document

Reference: ComReg 12/119R1

Date: 13/02/2013

**An Coimisiún um Rialáil Cumarsáide
Commission for Communications Regulation**

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1 General Information

1. The Radio and Telecommunications Terminal Equipment Directive¹ (R&TTE Directive) was transposed into Irish law by Statutory Instrument (S.I.) 240 of 2001 entitled “European Communities (Radio Equipment and Telecommunications Terminal Equipment) Regulations, 2001”. Regulation 5(6)(a) of S.I. 240 of 2001 transposes Article 4.1 of the R&TTE Directive and requires the Commission for Communications Regulation (ComReg) to notify the European Commission of the regulated interfaces in Ireland.
2. This document sets out the interface requirements for the aeronautical and maritime radio services in Ireland which have been stipulated for the purpose of the efficient and effective use of the radio spectrum.
3. The manner in which the radio spectrum is allocated in Ireland is laid down in the Radio Frequency Plan for Ireland (ComReg document 08/90R, as revised)².
4. This document augments the notification made to the European Commission in 2006/476/IRL. This document is in addition to ComReg 06/47R which details the Interface requirements for Radio Services in Ireland
5. All radio and telecommunications terminal equipment must comply with the essential requirements and other relevant provisions of the R&TTE Directive³ before being placed on the market or put into service in Ireland.
6. Under Irish legislation (The Wireless Telegraphy Act, 1926 as amended), all apparatus for Wireless Telegraphy requires a licence unless that apparatus has been specifically exempted from licensing under Irish legislation by means of an Exemption Order.
7. Detailed information on the licensing policies and procedures for specific radio services in Ireland are available on the ComReg website, <http://www.comreg.ie>, generally in the form of Guidelines to applicants.
8. All radio equipment should operate so as to optimise the effective use of the radio spectrum and so that it does not cause harmful interference to other authorised radio services.

¹ 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 available at http://www.comreg.ie/radio_spectrum/randtte.543.420.html

² http://www.comreg.ie/publications/radio_frequency_plan_for_ireland.495.103996.p.html

³ Where applicable, EC Decisions under the R&TTE Directive must also be complied with. These Decisions are listed at <http://europa.eu.int/comm/enterprise/rte/decision/present.htm> and also in this document under “General References and Relevant Documentation”.

9. Licence conditions attached to Wireless Telegraphy licences require that licensees comply with the International Commission on Non-Ionising Radiation Protection (ICNIRP)⁴ Guidelines on non-ionising radiation emissions.
10. Throughout this document, the reference standards refer to the harmonised standards under the R&TTE Directive, where available. Although the use of harmonised standards is not compulsory, compliance with a given harmonised standard gives a presumption of conformity to the relevant essential requirements of the R&TTE Directive under the scope of that standard. A list of harmonised standards under the R&TTE Directive is published in the Official Journal of the European Communities, and is published electronically on the European Commission website⁵.
11. Commission Decision 2000/299/EC⁶ established classifications for radio and telecommunications terminal equipment. Radio and telecommunications terminal equipment which can be placed on the market and put into service without restrictions has been designated as Class 1. A list of Class 1 radio and telecommunications terminal equipment is maintained at <http://www.cept.org/ecc/topics/srd-regulations-and-indicative-list-of-equipment-sub-classes> and http://ec.europa.eu/enterprise/sectors/rtte/index_en.htm respectively. Class 1 equipment does not need notification under the R&TTE Article 6.4 process. On the other hand, radio equipment which has restrictions placed on it in terms of either placing on the market or putting into service is designated as Class 2 equipment, and should accordingly be marked with the alert symbol. Class 2 equipment requires notification to ComReg under the Article 6.4 process.
12. Wherever possible, CEPT ERC/ECC Decisions and Recommendations apply. A list of these documents and the current status of Ireland's implementation of the CEPT Decisions is available on the ECO website: <http://www.cept.org/eco/>.

⁴ www.icnirp.de

⁵ http://ec.europa.eu/enterprise/policies/european-standards/harmonised-standards/rtte/index_en.htm

⁶ http://ec.europa.eu/enterprise/sectors/rtte/documents/index_en.htm

13. ComReg may from time to time introduce additional requirements where necessary for the purposes of ensuring the effective and efficient use of the radio spectrum. Such additional requirements may be necessitated by, inter alia, changes to spectrum allocations and/or technological developments. ComReg reserves the right to amend interface requirements where necessary and this document is therefore subject to revision.
14. Contact details for queries are provided at the end of this document.
15. Web addresses are referenced throughout this document for convenience only. Please note that ComReg is not responsible for the content of external websites.

2 Interface Requirements

2.1 Aeronautical and Maritime Services

16. This section outlines the interface requirements for the Aeronautical and Maritime services in Ireland.

17. The legislation and documentation relevant to these services is listed at the end of this document.

Table 1: Interface Requirements for Aeronautical Services – Communications⁷

IRELAND	Radio Interference Specification	Interface Requirements for Aeronautical Services in Ireland.	12/119R1	12th Feb 2013
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	Nr	Parameter	Description
Normative Part	1	Radiocommunication Service	Aeronautical Mobile Service
	2	Application	Fixed HF Station
	3	Frequency Band (kHz)	2850 – 3025
			3400 – 3500
			4650 – 4700
5480 – 5680			
6525 – 6685			
8815 – 8965			
8965 – 9040			
		10005 – 10100	
		11175 – 11400	
		13200 – 13360	
		17900 – 17970	
		21924 – 22000	
4	Channelling		

⁷ Equipment used or intended to be used in connection with the provision of air traffic services is subject to approval by the IAA in accordance with the IAA (Air Traffic Service Systems) Order, S.I. 855 of 2004

	5	Modulation / Occupied Bandwidth		
	6	Direction / Separation		
	7	Transmit Power / Power Density		
	8	Channel Access and Occupation Rules		
	9	Authorisation Regime	General authorisation not required	
	10	Additional Essential Requirements	Wireless Telegraphy Licence is required and operators must be qualified Aircraft Radio Licence - Application Form & Guidelines 09/44R2 Radiodetermination, Air Traffic and Maritime Services Licence Guidelines ComReg 11/07 Air Traffic Services Licence Application 11/07(b)	
	11	Frequency Planning Assumptions		
	Information	12	Planned Changes	
		13	Reference	Operating standards, and limitations are per ICAO Annex 10
		14	Notification Number	2012/609/IRL
		15	Remarks	

IRELAND	Radio Interference Specification	Interface Requirements for Aeronautical Services in Ireland.	12/119R1	12th Feb 2013
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	Nr	Parameter	Description
Normative Part	1	Radiocommunication Service	Aeronautical Mobile Service
	2	Application	Air-ground communications and Ground-air communications
	3	Frequency Band (MHz)	118 – 137
	4	Channelling	
	5	Modulation / Occupied Bandwidth	
	6	Direction / Separation	
	7	Transmit Power / Power Density	
	8	Channel Access and Occupation Rules	
	9	Authorisation Regime	General authorisation not required
	10	Additional Essential Requirements	Wireless Telegraphy Licence is required and operators must be qualified Aircraft Radio Licence - Application Form & Guidelines 09/44R2 Radiodetermination, Air Traffic and Maritime Services Licence Guidelines ComReg 11/07 Air Traffic Services Licence Application 11/07(b)
	11	Frequency Planning Assumptions	
Information	12	Planned Changes	
	13	Reference	Operating standards, and limitations are per ICAO Annex 10
	14	Notification Number	2012/609/IRL
	15	Remarks	

IRELAND	Radio Interference Specification	Interface Requirements for Aeronautical Services in Ireland.	12/119R1	12th Feb 2013
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	Nr	Parameter	Description
Normative Part	1	Radiocommunication Service	Aeronautical Mobile Service
	2	Application	UHF Communication
	3	Frequency Band (MHz)	225-400
	4	Channelling	
	5	Modulation / Occupied Bandwidth	
	6	Direction / Separation	
	7	Transmit Power / Power Density	
	8	Channel Access and Occupation Rules	
	9	Authorisation Regime	General authorisation not required
	10	Additional Essential Requirements	Wireless Telegraphy Licence is required and operators must be qualified Aircraft Radio Licence - Application Form & Guidelines 09/44R2 Radiodetermination, Air Traffic and Maritime Services Licence Guidelines ComReg 11/07 Air Traffic Services Licence Application 11/07(b)
	11	Frequency Planning Assumptions	
Information	12	Planned Changes	
	13	Reference	Operating standards, and limitations are per ICAO Annex 10
	14	Notification Number	2012/609/IRL
	15	Remarks	

Table 2: Interface Requirements for Aeronautical Services – Navigation

IRELAND	Radio Interference Specification	Interface Requirements for Aeronautical Services in Ireland.	12/119R1	12th Feb 2013
Normative Part	Nr	Parameter	Description	
	1	Radiocommunication Service	Aeronautical Mobile Service	
	2	Application	Non –Directional Beacons	
	3	Frequency Band (kHz)	315-415	
	4	Channelling		
	5	Modulation / Occupied Bandwidth		
	6	Direction / Separation		
	7	Transmit Power / Power Density		
	8	Channel Access and Occupation Rules		
	9	Authorisation Regime	General authorisation not required	
	10	Additional Essential Requirements	Wireless Telegraphy Licence is required and operators must be qualified Aircraft Radio Licence - Application Form & Guidelines 09/44R2 Radiodetermination, Air Traffic and Maritime Services Licence Guidelines ComReg 11/07 Air Traffic Services Licence Application 11/07(b)	
11	Frequency Planning Assumptions			
Information	12	Planned Changes		
	13	Reference	Operating standards, and limitations are per ICAO Annex 10	
	14	Notification Number	2012/609/IRL	

IRELAND	Radio Interference Specification	Interface Requirements for Aeronautical Services in Ireland.	12/119R1	12th Feb 2013
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	Nr	Parameter	Description
Normative Part	1	Radiocommunication Service	Aeronautical Mobile Service
	2	Application	Navigation (Fan Markers)
	3	Frequency Band (kHz)	74800-75200
	4	Channelling	
	5	Modulation / Occupied Bandwidth	
	6	Direction / Separation	
	7	Transmit Power / Power Density	
	8	Channel Access and Occupation Rules	
	9	Authorisation Regime	General authorisation not required
	10	Additional Essential Requirements	Wireless Telegraphy Licence is required and operators must be qualified Aircraft Radio Licence - Application Form & Guidelines 09/44R2 Radiodetermination, Air Traffic and Maritime Services Licence Guidelines ComReg 11/07 Air Traffic Services Licence Application 11/07(b)
	11	Frequency Planning Assumptions	
Information	12	Planned Changes	
	13	Reference	Operating standards, and limitations are per ICAO Annex 10
	14	Notification Number	2012/609/IRL
	15	Remarks	

IRELAND	Radio Interference Specification	Interface Requirements for Aeronautical Services in Ireland.	12/119R1	12th Feb 2013
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	Nr	Parameter	Description
Normative Part	1	Radiocommunication Service	Aeronautical Mobile Service
	2	Application	VHF Omni Directional Range Finder
	3	Frequency Band (MHz)	112-118
	4	Channelling	
	5	Modulation / Occupied Bandwidth	
	6	Direction / Separation	
	7	Transmit Power / Power Density	
	8	Channel Access and Occupation Rules	
	9	Authorisation Regime	General authorisation not required
	10	Additional Essential Requirements	Wireless Telegraphy Licence is required and operators must be qualified Aircraft Radio Licence - Application Form & Guidelines 09/44R2 Radiodetermination, Air Traffic and Maritime Services Licence Guidelines ComReg 11/07 Radiodetermination (Radionavigation) Licence 11/07(d)
	11	Frequency Planning Assumptions	
Information	12	Planned Changes	
	13	Reference	Operating standards, and limitations are per ICAO Annex 10
	14	Notification Number	2012/609/IRL
	15	Remarks	

IRELAND	Radio Interference Specification	Interface Requirements for Aeronautical Services in Ireland.	12/119R1	12th Feb 2013
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	Nr	Parameter	Description
Normative Part	1	Radiocommunication Service	Aeronautical Mobile Service
	2	Application	Instrument Landing Systems
	3	Frequency Band (MHz)	108-112
	4	Channelling	
	5	Modulation / Occupied Bandwidth	
	6	Direction / Separation	
	7	Transmit Power / Power Density	
	8	Channel Access and Occupation Rules	
	9	Authorisation Regime	General authorisation not required
	10	Additional Essential Requirements	
	11	Frequency Planning Assumptions	
Information	12	Planned Changes	
	13	Reference	Operating standards, and limitations are per ICAO Annex 10
	14	Notification Number	2012/609/IRL
	15	Remarks	

IRELAND	Radio Interference Specification	Interface Requirements for Aeronautical Services in Ireland.	12/119R1	12th Feb 2013
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	Nr	Parameter	Description
Normative Part	1	Radiocommunication Service	Aeronautical Mobile Service
	2	Application	ILS Glide Path
	3	Frequency Band (MHz)	328.6 – 335.4
	4	Channelling	
	5	Modulation / Occupied Bandwidth	
	6	Direction / Separation	
	7	Transmit Power / Power Density	
	8	Channel Access and Occupation Rules	
	9	Authorisation Regime	General authorisation not required
	10	Additional Essential Requirements	Wireless Telegraphy Licence is required and operators must be qualified Aircraft Radio Licence - Application Form & Guidelines 09/44R2 Radiodetermination, Air Traffic and Maritime Services Licence Guidelines ComReg 11/07 Air Traffic Services Licence Application 11/07(b)
	11	Frequency Planning Assumptions	
Information	12	Planned Changes	
	13	Reference	Operating standards, and limitations are per ICAO Annex 10
	14	Notification Number	2012/609/IRL
	15	Remarks	

IRELAND	Radio Interference Specification	Interface Requirements for Aeronautical Services in Ireland.	12/119R1	12th Feb 2013
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	Nr	Parameter	Description
Normative Part	1	Radiocommunication Service	Aeronautical Mobile Service
	2	Application	Distance Measuring Equipment
	3	Frequency Band (MHz)	960 - 1215
	4	Channelling	
	5	Modulation / Occupied Bandwidth	
	6	Direction / Separation	
	7	Transmit Power / Power Density	
	8	Channel Access and Occupation Rules	
	9	Authorisation Regime	General authorisation not required
	10	Additional Essential Requirements	Wireless Telegraphy Licence is required and operators must be qualified Aircraft Radio Licence - Application Form & Guidelines 09/44R2 Radiodetermination, Air Traffic and Maritime Services Licence Guidelines ComReg 11/07 Air Traffic Services Licence Application 11/07(b)
	11	Frequency Planning Assumptions	
Information	12	Planned Changes	
	13	Reference	Operating standards, and limitations are per ICAO Annex 10
	14	Notification Number	2012/609/IRL
	15	Remarks	

Table 3: Interface Requirements for Aeronautical Services – Radiolocation⁸

IRELAND	Radio Interference Specification	Interface Requirements for Aeronautical Services in Ireland.	12/119R1	12th Feb 2013
Normative Part	Nr	Parameter	Description	
	1	Radiocommunication Service	Aeronautical Mobile Service	
	2	Application	Secondary Surveillance Radar	
	3	Frequency Band (MHz)	960-1215	
	4	Channelling		
	5	Modulation / Occupied Bandwidth		
	6	Direction / Separation		
	7	Transmit Power / Power Density		
	8	Channel Access and Occupation Rules		
	9	Authorisation Regime	General authorisation not required	
	10	Additional Essential Requirements	Wireless Telegraphy Licence is required and operators must be qualified Aircraft Radio Licence - Application Form & Guidelines 09/44R2 Radiodetermination, Air Traffic and Maritime Services Licence Guidelines ComReg11/07 Radiodetermination Services (Radiolocation) 11/07(c)	
11	Frequency Planning Assumptions			
Information	12	Planned Changes		
	13	Reference	Operating standards, and limitations are per ICAO Annex 10	
	14	Notification Number	2012/609/IRL	

⁸ Equipment used or intended to be used in connection with the provision of air traffic services is subject to approval by the IAA in accordance with the IAA (Air Traffic Service Systems) Order, S.I. 855 of 2004

IRELAND	Radio Interference Specification	Interface Requirements for Aeronautical Services in Ireland.	12/119R1	12th Feb 2013
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	Nr	Parameter	Description
Normative Part	1	Radiocommunication Service	Aeronautical Mobile Service
	2	Application	Primary Radar
	3	Frequency Band (MHz)	2700-2900
	4	Channelling	
	5	Modulation / Occupied Bandwidth	
	6	Direction / Separation	
	7	Transmit Power / Power Density	
	8	Channel Access and Occupation Rules	
	9	Authorisation Regime	General authorisation not required
	10	Additional Essential Requirements	Wireless Telegraphy Licence is required and operators must be qualified Aircraft Radio Licence - Application Form & Guidelines 09/44R2 Radiodetermination, Air Traffic and Maritime Services Licence Guidelines ComReg11/07 Radiodetermination Services (Radiolocation) 11/07(c)
	11	Frequency Planning Assumptions	
Information	12	Planned Changes	
	13	Reference	Operating standards, and limitations are per ICAO Annex 10
	14	Notification Number	2012/609/IRL
	15	Remarks	

IRELAND	Radio Interference Specification	Interface Requirements for Aeronautical Services in Ireland.	12/119R1	12th Feb 2013
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	Nr	Parameter	Description
Normative Part	1	Radiocommunication Service	Aeronautical Mobile Service
	2	Application	Surface Movement Radar
	3	Frequency Band (MHz)	15700-16600
	4	Channelling	
	5	Modulation / Occupied Bandwidth	
	6	Direction / Separation	
	7	Transmit Power / Power Density	
	8	Channel Access and Occupation Rules	
	9	Authorisation Regime	General authorisation not required
	10	Additional Essential Requirements	Wireless Telegraphy Licence is required and operators must be qualified Aircraft Radio Licence - Application Form & Guidelines 09/44R2 Radiodetermination, Air Traffic and Maritime Services Licence Guidelines ComReg11/07 Radiodetermination Services (Radiolocation) 11/07(c)
	11	Frequency Planning Assumptions	
Information	12	Planned Changes	
	13	Reference	Operating standards, and limitations are per ICAO Annex 10
	14	Notification Number	2012/609/IRL
	15	Remarks	

Table 4: Interface requirements for VHF portable radiotelephone equipment in the maritime mobile service (non-GMDSS applications).

IRELAND	Radio Interference Specification	Interface Requirements for Maritime Services in Ireland.	12/119R1	12th Feb 2013
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	Nr	Parameter	Description
Normative Part	1	Radiocommunication Service	Maritime Mobile Service
	2	Application	Portable Ships Radio
	3	Frequency Band (MHz)	156 - 163MHz
	4	Channelling	25 kHz
	5	Modulation / Occupied Bandwidth	G3E
	6	Direction / Separation	
	7	Transmit Power / Power Density	Maximum EIRP 6W
	8	Channel Access and Occupation Rules	Channel plan and parameters must be in accordance with the relevant sections of the ITU Radio Regulations (Articles 5, 19, 30-33, 50-54, 57-58, Appendices 14, 15.16 and Appendix 18)
	9	Authorisation Regime	General authorisation not required
	10	Additional Essential Requirements	<p>Wireless Telegraphy Licence is required</p> <p>If on board vessels:</p> <p>Ships Radio Licence, see Department of Transport Document SRLAPP20072008</p> <p>If shore based:</p> <p>Maritime Services Licence Application ComReg11/07(e)</p> <p>Radiodetermination, Air Traffic and Maritime Services Licence Guidelines ComReg11/07</p> <p>Operator must hold a ships radio operators certificate (see http://www.transport.ie/)</p>
	11	Frequency Planning Assumptions	

Information	12	Planned Changes	
	13	Reference	EN 301 178-2
	14	Notification Number	2012/609/IRL
	15	Remarks	

Table 5: Interface requirements for VHF radiotelephone equipment for general communications and associated equipment for class “D” Digital Selective Calling.

IRELAND	Radio Interference Specification	Interface Requirements for Maritime Services in Ireland.	12/119R1	12th Feb 2013
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	Nr	Parameter	Description
Normative Part	1	Radiocommunication Service	Maritime Mobile Service
	2	Application	VHF radiotelephone equipment for general communications and associated equipment for class “D” Digital Selective Calling
	3	Frequency Band (MHz)	156 – 163 MHz
	4	Channelling	25kHz
	5	Modulation / Occupied Bandwidth	G3E, G2B (DSC)
	6	Direction / Separation	
	7	Transmit Power / Power Density	Maximum EIRP 25W
	8	Channel Access and Occupation Rules	Channel plan, parameters, classes of emission and operation must be in accordance with the relevant sections of the ITU Radio Regulations (Articles 5, 19, 30-33, 50-54, 57-58, Appendices 13-16 and Appendix 18).
	9	Authorisation Regime	General authorisation not required

	10	Additional Essential Requirements	<p>Wireless Telegraphy Licence is required</p> <p>If on board vessels:</p> <p>Ships Radio Licence, see Department of Transport Document SRLAPP20072008</p> <p>If shore based:</p> <p>Maritime Services Licence Application ComReg 11/07(e)</p> <p>Radiodetermination, Air Traffic and Maritime Services Licence Guidelines ComReg 11/07</p> <p>Operator must hold a ships radio operators certificate (see http://www.transport.ie/)</p>
	11	Frequency Planning Assumptions	
Information	12	Planned Changes	
	13	Reference	EN 300 162, EN 301 025-2 and EN 301 025-3
	14	Notification Number	2012/609/IRL
	15	Remarks	

Table 6: Interface requirements for Maritime Emergency Position indicating Radio Beacons (EPIRBs) intended for use on the frequency 121.5 MHz or the frequencies 121.5 MHz and 243 MHz for homing purposes only.

IRELAND	Radio Interference Specification	Interface Requirements for Maritime Services in Ireland.	12/119R1	12th Feb 2013
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	Nr	Parameter	Description
Normative Part	1	Radiocommunication Service	Maritime Mobile Service
	2	Application	EPIRBs
	3	Frequency Band (MHz)	Either 121.5 MHz only or 121.5MHz and 243 MHz combined
	4	Channelling	
	5	Modulation / Occupied Bandwidth	A3X
	6	Direction / Separation	

	7	Transmit Power / Power Density	Maximum EIRP: 200mW or 70mW for man overboard devices only
	8	Channel Access and Occupation Rules	
	9	Authorisation Regime	General authorisation not required
	10	Additional Essential Requirements	Wireless Telegraphy Licence is required for EPIRB's on board vessel Ships Radio Licence, Department of Transport Document SRLAPP20072008 The EPIRB will only be licensed for use as part of a vessel licence Equipment shall be operated in accordance with the relevant sections of the ITU Radio Regulations Article 32, Appendices 13 and 15. Other parameters shall be operated in accordance with ITU-R M.690-1.
	11	Frequency Planning Assumptions	
Information	12	Planned Changes	
	13	Reference	EN 300 152-1, EN 300 152-2, EN 300 152-3
	14	Notification Number	2012/609/IRL
	15	Remarks	Minimum Duty Cycle : 33% with a minimum depth of modulation of 0.85 at an Effective Radiated Peak Envelope Power (ERPEP) of not less than 75mW for an uninterrupted period of at least 24 hours or an ERPEP of not less than 25mW for an uninterrupted period of at least 6 hours for man overboard devices only.

Table 7: Interface requirements for Emergency Position indicating Radio Beacons (EPIRBs) Emergency Locator Transmitter (ELT) or Personal Locator Beacons (PLBs) intended for use with the COSPAS-SARSAT Distress Alert System in the 406 – 406.1 MHz frequency band, with an auxiliary 121.5 MHz transmitter for homing purposes only and optional navigational interface (either internal or external).

IRELAND	Radio Interference Specification	Interface Requirements for Maritime Services in Ireland.	12/119R1	12th Feb 2013
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	Nr	Parameter	Description
Normative Part	1	Radiocommunication Service	Maritime Mobile/Maritime Mobile Satellite
	2	Application	Personal Locator Beacons (PLBs) Emergency Position indicating Radio Beacons (EPIRBs) – Emergency Locator Transmitter (ELT)
	3	Frequency Band (MHz)	406.0 - 406.1 MHz and 121.5 MHz
	4	Channelling	Requirements laid down in COSPAS-SARSAT documents C/S T.001 for 406.0 – 406.1MHz and ITU-R M.690-1 for 121.5 MHz.
	5	Modulation / Occupied Bandwidth	
	6	Direction / Separation	
	7	Transmit Power / Power Density	Between 406.0 – 406.1 MHz, maximum EIRP is $5W \pm 2dB$ (35-39 dBm). At 121.5MHz maximum EIRP is 100mW
	8	Channel Access and Occupation Rules	
	9	Authorisation Regime	General authorisation not required

Information	10	Additional Essential Requirements	<p>EPIRB</p> <p>Wireless Telegraphy Licence is required for EPIRB's on board vessel</p> <p>Ships Radio Licence, Department of Transport Document SRLAPP20072008</p> <p>The EPIRB will only be licensed for use as part of a vessel licence</p> <p>ELT</p> <p>Wireless Telegraphy Licence is required for ELT's on board aircraft</p> <p>Aircraft Radio Licence - Application Form & Guidelines 09/44R2</p> <p>The ELT will only be licensed for use as part of an Aircraft licence</p> <p>PLB</p> <p>Licence exempt subject to compliance with technical conditions (ITU M. 633 and operating on 406 MHz) and registered (see link below)</p> <p>http://www.comreg.ie/licensing_and_services/personal_locator_beacons.715.html</p> <p>The equipment shall meet the relevant sections of C/S G.005 and C/S T.001 and equipment and operation shall be in accordance with the relevant sections of the ITU Radio Regulations (Articles 5, 30, 32, Appendices 13 and 15) and C/S T.007 and ITU M. 633 in relation to PLB's</p> <p>Commission Decision 2005/631/EC</p>
	11	Frequency Planning Assumptions	
	12	Planned Changes	
	13	Reference	EN 302 152-1; C/S T.001; C/S G.005; C/S T.007
	14	Notification Number	2012/609/IRL
15	Remarks		

Table 8: Interface Requirements for non-SOLAS radar systems in the maritime radionavigation service

IRELAND	Radio Interference Specification	Interface Requirements for Maritime Services in Ireland.	12/119R1	12th Feb 2013
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	Nr	Parameter	Description
Normative Part	1	Radiocommunication Service	Maritime radionavigation service
	2	Application	Non-SOLAS radar
	3	Frequency Band (MHz)	2700 - 3400 MHz 9300 – 9500 MHz
	4	Channelling	Frequency tolerance: 1250 in 1E6
	5	Modulation / Occupied Bandwidth	PON, The bandwidth occupied by the emissions must be completely maintained in the band allocated to the service.
	6	Direction / Separation	
	7	Transmit Power / Power Density	100MW (80dBW)
	8	Channel Access and Occupation Rules	
	9	Authorisation Regime	
	10	Additional Essential Requirements	Wireless Telegraphy Licence is required If on board a vessel; Ships Radio Licence see Department of Transport Document SRLAPP20072008 If on land Radiodetermination, Air Traffic and Maritime Services Licence Guidelines ComReg11/07 Radiodetermination (Radiolocation) Licence 11/07(c) or Radiodetermination (Radionavigation) Licence 11/07(d)

	11	Frequency Planning Assumptions	
Information	12	Planned Changes	
	13	Reference	IEC 62252: 2004
	14	Notification Number	
	15	Remarks	

Table 9: Interface requirements for Radar Beacons (RACONs) in the maritime mobile service in the 3 GHz and 9 GHz bands.

IRELAND	Radio Interference Specification	Interface Requirements for Maritime Services in Ireland.	12/119R1	12th Feb 2013
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	Nr	Parameter	Description
Normative Part	1	Radiocommunication Service	Maritime radionavigation service
	2	Application	Radar Beacons (RACONs)
	3	Frequency Band (MHz)	2900 – 3100 MHz or 9300 – 9500 MHz
	4	Channelling	The bandwidth occupied by the emissions must be maintained entirely in the band allocated to the service.
	5	Modulation / Occupied Bandwidth	Q0N
	6	Direction / Separation	
	7	Transmit Power / Power Density	Maximum EIRP: 50W (17dBW)
	8	Channel Access and Occupation Rules	
	9	Authorisation Regime	

	10	Additional Essential Requirements	<p>Wireless Telegraphy Licence is required</p> <p>If on board a vessel;</p> <p>Ships Radio Licence see Department of Transport Document SRLAPP20072008</p> <p>If shore based;</p> <p>Radiodetermination, Air Traffic and Maritime Services Licence Guidelines ComReg11/07</p> <p>Radiodetermination (Radiolocation) Licence 11/07c or Radiodetermination (Radionavigation) Licence 11/07(d)</p>
	11	Frequency Planning Assumptions	
Information	12	Planned Changes	
	13	Reference	ITU-R M.824, IALA Recommendation R-101 on Marine Radar Beacons (RACONs)
	14	Notification Number	2012/609/IRL
	15	Remarks	

Table 10: Interface requirements for the Transmission of differential correction signals of global navigation satellite systems (DGNSS) for maritime use in the frequency bands 162.4375-162.4625 MHz and 163.0125-163.03125 MHz

IRELAND	Radio Interference Specification	Interface Requirements for Maritime Services in Ireland.	12/119R1	12th Feb 2013
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	Nr	Parameter	Description
Normative Part	1	Radiocommunication Service	Maritime Radionavigation
	2	Application	Maritime Navigational Aids
	3	Frequency Band (MHz)	162.4375-162.4625 MHz and 163.0125-163.03125 MHz
	4	Channelling	12.5 kHz,
	5	Modulation / Occupied Bandwidth	F1D, G1D
	6	Direction / Separation	

	7	Transmit Power / Power Density	Maximum EIRP: 25W
	8	Channel Access and Occupation Rules	
	9	Authorisation Regime	
	10	Additional Essential Requirements	<p>Wireless Telegraphy Licence is required</p> <p>If on board a vessel;</p> <p>Ships Radio Licence see Department of Transport Document SRLAPP20072008</p> <p>If shore based;</p> <p>Radiodetermination, Air Traffic and Maritime Services Licence Guidelines ComReg11/07</p> <p>Radiodetermination (Radiolocation) Licence 11/07(c) or Radiodetermination (Radionavigation) Licence 11/07(d)</p>
	11	Frequency Planning Assumptions	
Information	12	Planned Changes	
	13	Reference	
	14	Notification Number	2012/609/IRL
	15	Remarks	

Table 11: Interface requirements for Automatic Identification System (AIS) using time division multiple access in the VHF band for use at a coast station, unmanned maritime buoys, Navigational Aids and Radars for maritime use in the VHF band.

IRELAND	Radio Interference Specification	Interface Requirements for Maritime Services in Ireland.	12/119R1	12th Feb 2013
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	Nr	Parameter	Description
Normative Part	1	Radiocommunication Service	Maritime mobile
	2	Application	Maritime navigational aids
	3	Frequency Band (MHz)	161.975 MHz, 162.025 MHz
	4	Channelling	25 kHz, Channels, parameters, class of emission and operation must be in accordance with the relevant sections of the ITU Radio Regulations (Articles 5, 19, 30-33, 50-54, 57-58, Appendices 13-16 and 18).
	5	Modulation / Occupied Bandwidth	GMSK/FM, G2B (DSC) on 156.525 MHz
	6	Direction / Separation	
	7	Transmit Power / Power Density	Maximum EIRP 12.5W
	8	Channel Access and Occupation Rules	
	9	Authorisation Regime	

	10	Additional Essential Requirements	<p>Wireless Telegraphy Licence is required</p> <p>If On board a vessel</p> <p>Ships Radio Licence see Department of Transport Document SRLAPP20072008</p> <p>If not on board a vessel</p> <p>Radiodetermination, Air Traffic and Maritime Services Licence Guidelines ComReg11/07</p> <p>Radiodetermination (AIS) Licence Application Form 11/07(a)</p> <p>Commissioners of Irish Lights Statutory Sanction is a pre requisite for licensing AIS not on board vessels</p> <p>For radio equipment intending to participate in AIS, Commission Decision 2005/53/EC applies</p>
	11	Frequency Planning Assumptions	Equipment parameters are assumed to meet ITU-R M.1371
Information	12	Planned Changes	
	13	Reference	IEC 62287-1 (2006-03), ITU-R M.1371
	14	Notification Number	2012/609/IRL
	15	Remarks	

Table 12: Interface requirements for radio beacons of the maritime radionavigation service in the frequency band 283.5 – 315 kHz

IRELAND	Radio Interference Specification	Interface Requirements for Maritime Services in Ireland.	12/119R1	12th Feb 2013
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	Nr	Parameter	Description
Normative Part	1	Radiocommunication Service	Maritime Radiodetermination Service
	2	Application	Maritime navigational aids, and radars
	3	Frequency Band (MHz)	283.5 – 315.0 kHz
	4	Channelling	Integer multiple of 500 Hz if transmitting GNSS differential correction signals
	5	Modulation / Occupied Bandwidth	A1A, A2A, G1D.

	6	Direction / Separation	
	7	Transmit Power / Power Density	Maximum EIRP: Minimum necessary to achieve the desired field strength at the service range. It shall not exceed 50µV/m.
	8	Channel Access and Occupation Rules	
	9	Authorisation Regime	
	10	Additional Essential Requirements	<p>Wireless Telegraphy Licence is required</p> <p>If on board a vessel</p> <p>Ships Radio Licence see Department of Transport Document SRLAPP20072008</p> <p>If shore based;</p> <p>Radiodetermination, Air Traffic and Maritime Services Licence Guidelines ComReg11/07</p> <p>Radiodetermination (Radiolocation) Licence 11/07(c) or Radiodetermination (Radionavigation) Licence 11/07(d)</p>
	11	Frequency Planning Assumptions	Assignments shall take account of the Master List of DGNSS Reference and Transmitting Stations in the Maritime Radionavigation (Radiobeacon) Band (283.5 – 315 kHz Region 1, 285 – 325 kHz Regions 2 and 3) published by the International Association of Marine Aids to navigation and Lighthouse Authorities
Information	12	Planned Changes	
	13	Reference	ITU-R M.823 and ITU-R M.588-1
	14	Notification Number	2012/609/IRL
	15	Remarks	

Table 13: Interface requirements for UHF on-board communications

IRELAND	Radio Interference Specification	Interface Requirements for Maritime Services in Ireland.	12/119R1	12th Feb 2013
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	Nr	Parameter	Description
Normative Part	1	Radiocommunication Service	Ships Radio Licence see Department of Transport Document SRLAPP20072008
	2	Application	UHF on-board communications
	3	Frequency Band (MHz)	Single frequency simplex channels: 467.525 MHz, 467.550 MHz, 467.575 MHz, 457.525 MHz, 457.550 MHz, 457.575 MHz Two-frequency simplex channels for use with repeater only: 467.525 MHz (transmit) paired with 457.525 MHz (receive), 467.550 MHz (transmit) paired with 457.550 MHz (receive), 467.575 MHz (transmit) paired with 457.575 MHz (receive)
	4	Channelling	25 kHz channel spacing
	5	Modulation / Occupied Bandwidth	Phase modulation, G3E
	6	Direction / Separation	
	7	Transmit Power / Power Density	Carrier power shall not exceed 4 W
	8	Channel Access and Occupation Rules	
	9	Authorisation Regime	
	10	Additional Essential Requirements	Wireless Telegraphy Licence is required Ships Radio Licence see Department of Transport Document SRLAPP20072008
	11	Frequency Planning Assumptions	
Information	12	Planned Changes	
	13	Reference	EN 300 720-2
	14	Notification Number	2012/609/IRL
	15	Remarks	

3 General References and Relevant Documentation

Under The Wireless Telegraphy Act, 1926 as amended, all apparatus for wireless telegraphy requires a licence unless that apparatus has been exempted from licensing under legislation.

All radio equipment is required to comply with the requirements of the European Communities (Radio Equipment and Telecommunications Terminal Equipment) Regulations, 2001 (S.I. 240 of 2001) and in the case of equipment installed on vessels, the European Communities (Marine Equipment) Regulations 2003 (S.I. 38 of 2003), may be applicable, depending on the vessel.

3.1 National Legislation

Primary Legislation

Wireless Telegraphy Act 1926, as amended.

Secondary Legislation

S.I. 240 of 2001: European Communities (Radio Equipment and Telecommunications Terminal Equipment) Regulations, 2001

S.I. 38 of 2003: European Communities (Marine Equipment) Regulations, 2003

S.I. 855 of 2004: Irish Aviation Authority (Air Traffic Service Systems) Order, 2004

S.I. 414 of 2006: Wireless Telegraphy (Ship Station Radio Licence) Regulations, 2006

S.I. 193 of 2009 Wireless Telegraphy (Aircraft Station Radio Licence) Regulations, 2009

S.I. 369 of 2009: Wireless Telegraphy (Radiodetermination, Air Traffic and Maritime Services) Regulations, 2009

S.I. 290 of 2010: Wireless Telegraphy Act 1926 (section 3) (Exemption of 406 MHz Personal Locator Beacons) Order 2010

3.2 EC Directives and Decisions

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

Commission Decision of 25 January 2005 on the application of Article 3(3)(e) of Directive 1999/5/EC of the European Parliament and of the Council to radio equipment intended to participate in the Automatic Identification System (AIS).

3.3 International Telecommunication Union (ITU) Radio Regulations in General

Radio Regulations Appendix S14: Phonetic alphabet and figure code

Radio Regulations Appendix S15 Frequencies for distress and safety communications for the Global Maritime Distress and Safety System (GMDSS)

Radio Regulations Appendix S16: Documents with which stations on board ships and aircraft shall be provided.

Radio Regulations Appendix S18: Table of transmitting frequencies in the VHF maritime mobile band.

3.4 ComReg Documentation

Aircraft Radio Licence - Application Form & Guidelines 09/44R2:

Radiodetermination, Air Traffic and Maritime Services Licence Guidelines ComReg11/07

Radiodetermination (AIS) Licence Application Form - ComReg 11/07(a)

Air Traffic Services Licence Application Form - ComReg 11/07(b)

Radiodetermination (Radiolocation) Licence - ComReg 11/07(c)

Radiodetermination (Radionavigation) Licence - ComReg 11/07(d)

Maritime Services Licence Application Form - ComReg 11/07(e)

3.5 Department of Transport Documentation

Ships Radio Licence Application Form SRLAPP20072008

http://www.dttas.ie/upload/general/12538-07_SHIP_RADIO_LICENCE_APPLICATION_FORM-0.PDF

3.6 Other Documentation

IEC 62287: Maritime navigation and radiocommunication equipment and systems - Class B shipborne installation of the universal automatic identification system (AIS) using VHF TDMA techniques.

IEC 62282: 2004 Maritime navigation and radiocommunication equipment and systems – Radar for craft not in compliance with IMO SOLAS Chapter V – Performance requirements, methods of test and required test results

EN 300 152: Electromagnetic compatibility and Radio spectrum Matters (ERM); Maritime Emergency Position Indicating Radio Beacons (EPIRBs) intended for use on the frequency 121,5 MHz or the frequencies 121,5 MHz and 243 MHz for homing purposes only.

EN 300-162-1: Electromagnetic compatibility and Radio spectrum Matters (ERM); Radiotelephone transmitters and receivers for the maritime mobile service operating in VHF bands; Part 1: Technical characteristics and methods of measurement

EN 300-162-2: Electromagnetic compatibility and Radio spectrum Matters (ERM); Radiotelephone transmitters and receivers for the maritime mobile service operating in VHF bands; Part 2: Harmonized EN covering essential requirements of article 3.2 of the R&TTE Directive

EN 300-162-3: Electromagnetic compatibility and Radio spectrum Matters (ERM); Radiotelephone transmitters and receivers for the maritime mobile service operating in VHF bands; Part 3: Harmonized EN covering essential requirements of article 3.3 (e) of the R&TTE Directive

EN 300-720-1: ElectroMagnetic Compatibility and Radio Spectrum Matters (ERM); Ultra-High Frequency (UHF) on-board communications systems and equipment; Part 1: Technical characteristics and methods of measurement.

EN 300-720-2: Electromagnetic compatibility and Radio Spectrum Matters (ERM) Ultra-High Frequency (UHF) on-board communications systems and equipment; Part 2: Harmonised EN under article 3.2 of the R&TTE Directive.

EN 301-025: Electromagnetic compatibility and Radio spectrum Matters (ERM); VHF radiotelephone equipment for general communications and associated equipment for Class "D" Digital Selective Calling (DSC).

EN 301-025-2: Electromagnetic compatibility and Radio spectrum Matters (ERM); VHF radiotelephone equipment for general communications and associated equipment for Class "D" Digital Selective Calling (DSC); Part 2: Harmonized EN covering the essential requirements of article 3.2 of the R&TTE Directive

EN 301-025-3: Electromagnetic compatibility and Radio spectrum Matters (ERM); VHF radiotelephone equipment for general communications and associated equipment for Class "D" Digital Selective Calling (DSC); Part 3: Harmonized EN covering the essential requirements of article 3.3(e) of the R&TTE Directive

EN 301-178: Electromagnetic compatibility and Radio spectrum Matters (ERM); Portable Very High Frequency (VHF) radiotelephone equipment for the maritime mobile service operating in the VHF bands (for non-GMDSS applications only).

EN 301-178-2: Electromagnetic compatibility and Radio spectrum Matters (ERM); Portable Very High Frequency (VHF) radiotelephone equipment for the maritime mobile service operating in the VHF bands (for non-GMDSS applications only); Part 2: Harmonized EN covering essential requirements of article 3.2 of the R&TTE Directive

EN 302-152-1: Electromagnetic compatibility and Radio spectrum Matters (ERM); Satellite Personal Locator Beacons (PLBs) operating in the 406,0 MHz to 406,1 MHz frequency band; Part 1: Technical characteristics and methods of measurement

Recommendation ITU-R M.588 Characteristics of maritime radio beacons (Region 1)

Recommendation ITU-R M.588-1: Black and white facsimile transmissions over combined metallic and radio circuits in the maritime mobile service and in the maritime mobile-satellite service.

Recommendation ITU-R M.690-1: Technical characteristics of emergency position-indicating radio beacons (EPIRBs) operating on the carrier frequencies of 121.5 MHz and 243 MHz.

Recommendation ITU-R M.823: Technical characteristics of differential transmissions for Global Navigation Satellite Systems (GNSS) from maritime radio beacons in the frequency band 285-315 kHz (Region 1) and 283.5-325 kHz (Region 2 and 3).

Recommendation ITU-R M.824: Technical parameters of radar beacons (RACONS).

Recommendation ITU-R M.1371 Technical characteristics for an automatic identification system using time-division multiple access in the VHF maritime mobile band

C/S G.005: Cospas-Sarsat Guidelines on 406 MHz Beacon Coding, Registration and Type Approval.

C/S T.001: Specification for Cospas-Sarsat 406 MHz Distress Beacons.

C/S T.007: Cospas-Sarsat 406 MHz Distress Beacon Type Approval Standard.

International Association of Marine Aids to Navigation and Lighthouse Authorities (IALA) Guidelines on the Universal Automatic Identification System.

IALA Recommendation R101 on Maritime Radar Beacons (RACONS).

International Standards and Recommended Practices - Annex 10 to the Convention on International Civil Aviation as published by the International Civil Aviation Organisation (ICAO)

Please note that all documentation is subject to update and revision by the originating authority.

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