



Commission for
Communications Regulation

Guidelines

Radiodetermination, Air Traffic and Maritime Services Licence Guidelines

Document No:	ComReg 11/07R1
Date:	May 2017

This document does not constitute legal, commercial, financial, technical or other advice and the Commission for Communications Regulation shall not, at any time, be bound by the contents of this document which do not necessarily set out the Commission's final or definitive position in any particular matter. The Commission reserves its right to act at all times in accordance with its statutory functions and objectives and this may include reaching a decision or taking an action which is at variance with all or any part of these guidelines.

An Coimisiún um Rialáil Cumarsáide

Commission for Communications Regulation

One Dockland Central, Guild Street, Dublin 1, D01 E4X0, Ireland

Telephone +353 1 804 9600 Fax +353 1 804 9680 Email info@comreg.ie Web www.comreg.ie

Contents

1	Introduction	3
2	Radiodetermination, Air Traffic and Maritime Services – An Overview	4
3	Air Traffic Services Licence	7
3.1	AIR TRAFFIC SERVICES APPLICATION REQUIREMENTS	8
4	Maritime Services Licence	9
4.1	LAND BASED MARITIME MOBILE	10
4.2	LAND BASED PRIVATE MARITIME	10
4.3	MARITIME SERVICES APPLICATION REQUIREMENTS	10
5	Radiodetermination	11
5.1	RADIONAVIGATION	12
5.2	RADIOLOCATION	12
5.3	AUTOMATIC IDENTIFICATION SYSTEM (AIS)	13
5.3.1	AIS; Aids to Navigation (AtoNs)	13
5.3.2	AIS; Non-Aids to Navigation (Non AtoNs)	13
5.3.3	AIS; Frequencies, Approvals and Licensing	13
5.4	RADIODETERMINATION APPLICATION REQUIREMENTS	14
6	Licence Information	15
6.1	THE LICENSEE	15
6.2	THE LICENCE	15
6.3	LICENCE DURATION	15
6.4	LICENCE FEES PAYABLE	16
6.5	AMENDMENTS TO A LICENCE	16
6.6	CANCELLATION OF A LICENCE	16
6.7	SUSPENSION, WITHDRAWAL OR REVOCATION OF A LICENCE	16
7	Submitting Applications	17
	Annex 1: Regulations – SI 369 of 2009	18
	Annex 2: Contact Details	30
	Annex 3: Land Based Private Maritime Channels	31
	Annex 4: Definitions	32

1 Introduction

Section 3 of the Wireless Telegraphy Act 1926, as amended, prohibits the possession, installation, maintenance, working or use of “apparatus for wireless telegraphy” without a licence granted by ComReg under the same Act.

The licensing of apparatus for wireless telegraphy for Radiodetermination, Air Traffic and Maritime Services is governed by the Wireless Telegraphy (Radiodetermination, Air Traffic & Maritime Services) Regulations (S.I. 369 of 2009) (“The Regulations”). The Regulations detail the terms and conditions under which a licence is granted, see Annex 1.

In this document, the Commission for Communications Regulation (ComReg) sets out its guidelines for all applicants wishing to apply for Radiodetermination, Air Traffic and Maritime Services licences. ComReg encourages all applicants to read these guidelines carefully before submitting an application.

Please note that a wireless telegraphy licence granted by ComReg permits the licensee to possess and operate the apparatus for wireless telegraphy specified in the licence. It does not absolve the licensee from complying with any other statutory obligations (e.g. planning authority, aids to navigation consents etc.).

Please further note that this document does not constitute legal, commercial, financial, technical or other advice and the Commission for Communications Regulation shall not, at any time, be bound by the contents of this document which do not necessarily set out the Commission’s final or definitive position in any particular matter. The Commission reserves its right to act at all times in accordance with its statutory functions and objectives and this may include reaching a decision or taking an action which is at variance with all or any part of these guidelines.

Queries regarding these guidelines or the licensing process can be directed to ComReg’s Spectrum Licensing Operations Team:

Telephone: + 353 (0)1 8049600,
e-mail: licensing@comreg.ie

ComReg reserves the right to revise these guidelines in the future.

2 Radiodetermination, Air Traffic and Maritime Services – An Overview

In accordance with its statutory function and objective to ensure the efficient management of the radio spectrum, ComReg established a licensing regime for Radiodetermination, Air Traffic and Maritime Services in 2009. Prior to implementation of the Wireless Telegraphy (Radiodetermination, Air Traffic and Maritime Services Licence) Regulations (SI 369 of 2009) (“the Regulations”) there was no mechanism by which ComReg could licence such services. By introducing the licensing scheme, ComReg can now protect such services from interference and, along with the relevant national body, ensure that international obligations are met.

The licensing process will be co-ordinated with the Irish Aviation Authority (IAA) and the Commissioners of Irish Lights (CIL), as appropriate please see Annex 2 for the contact details for IAA and CIL.

All systems will be licensed for the lifetime of the system. Systems deployed prior to 1 December 2009 will be licensed by ComReg retrospectively and will not incur a licence fee as they do not require co-ordination and/or notification. Systems deployed since 1 December 2009 will incur a once off licence fee of €500 to cover co-ordination and notification costs and will be licensed for the lifetime of the system. Amendments to a licence will incur a €30 fee.

Three distinct categories of service require licensing: Radiodetermination Services, Air Traffic Services, and Maritime Services.

- “Radiodetermination” is defined by the International Telecommunication Union (ITU)¹ as 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.
- Air Traffic Services describes ground based equipment and systems utilising apparatus for wireless telegraphy, operating in the aeronautical frequency bands that are used or intended to be used in connection with the safety, security or operation of aircraft in flight or on the ground, and excludes public electronic communications networks and Radiodetermination Services.
- Maritime Services describes equipment and systems utilising apparatus for wireless telegraphy, operating in the maritime frequency bands not installed on vessels, that are used or intended to be used, in connection with:
 - (a) the safety, security or operation of vessels; or

¹ International Telecommunication Union: <http://www.itu.int/>

(b) the training of personnel in the Maritime Mobile Service, and excludes public electronic communications networks and Radiodetermination Services.

There are internationally agreed frequencies set aside for the use of Radiodetermination, Air Traffic Services and Maritime Services. It is within these unique parts of the radio spectrum that ComReg will issue licenses. All frequencies are allocated on either a Primary Service or a Secondary Service² basis depending on whether they are sharing the spectrum or not.

The management of the Aeronautical spectrum in Ireland is carried out by the Irish Aviation Authority (IAA) while the management of the land based Maritime spectrum is carried out by ComReg.

Under the ITU Radio Regulations³ all persons using apparatus for wireless telegraphy for the Air Traffic and Maritime Services must be properly qualified to agreed standards. It is the responsibility of the licensee to ensure that access to, and control of, licensed apparatus is restricted to those persons who are duly authorised and qualified. In particular, all licensed apparatus must not interfere with any emergency or distress system.

In common with other licensed radio services, all radio equipment used to provide Radiodetermination, Air Traffic or Maritime Services must comply with the Radio and Telecommunication terminal Equipment Directive⁴ 1999/5/EC (the “R&TTE Directive”) which was transposed into Irish law on 5 June 2001 by S.I. 240 of 2001.

ComReg has set out its R&TTE interface requirement in ComReg document 06/47R. This document sets out both the mandatory and information interface requirements for these services. Licensees are advised to familiarise themselves with this document as it is the responsibility of the licensee to ensure that all equipment is R&TTE compliant.

² Secondary services shall not cause interference to Primary Services, nor shall they claim protection from harmful interference from Primary Services but they can claim protection from other stations of the same of other secondary services to which frequencies are assigned at a later date.

³ Article 37 for the Aeronautical Service and Article 47 for the Maritime Service.

⁴ 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

Table 1 below details the different systems within each of the three categories that will be licensed under these Regulations.

AIR TRAFFIC	MARITIME	RADIODETERMINATION	
		Radio Navigation	Radio Location
Aeronautical Mobile	Coast Stations	ILS	Radar
ATIS	MRCC	DME	Racons
Aeronautical Broadcast (e.g. VOLMET)	VHF Communications	AIS	Loran C
ACARS		Beacons	Loran / eLoran
VHF and Comms		VOR/DVOR	
		Localiser	
		Glide Path	
		MLS	

Table 1: Summary of the different systems within each licence category⁵

ComReg reserves the right to amend the above table to take into account new systems which may be brought into services in the future.

⁵ See Annex 4 for a complete list of definitions for all these services.

3 Air Traffic Services Licence

An Air Traffic Services Licence issued by ComReg is required for the possession and use of apparatus for wireless telegraphy, not installed on aircraft that uses the frequencies assigned to the aeronautical services⁶, excluding Aeronautical Radionavigation and Radiolocation.

- ComReg will issue An Air Traffic Services Licence once the applicant has received provisional approval, including frequency assignment from the IAA in respect of the system, or combination of systems; and
- The apparatus for wireless telegraphy is owned and operated by a single entity.

Persons operating apparatus for wireless telegraphy must be in possession of all necessary qualifications. Each licence issued shall remain in effect for so long as the licensed apparatus is in use.

Table 2 below shows some of the systems that require licensing and may be accommodated under an Air Traffic Services Licence⁷. Please contact ComReg if you are using any system other than those mentioned in the table below. ComReg reserves the right to amend this table to take into account new systems which may be brought into service in the future.

System Type	Type of Service
Approach Control	Ground to Air to Ground
Aeronautical Mobile	Ground to Air to Ground
Area Control Centres (ACC)	Ground to Air to Ground
Automatic Terminal Information Services (ATIS)	Ground to Air, Ground to Ground
Aeronautical Broadcast including VOLMET	Ground to Air, Ground to Ground
Control Tower	Ground to Air, Ground to Ground
Ground Control	Ground to Ground
Emergency Vehicles / Support Vehicles ⁸	Ground to Ground

Table 2: Systems requiring an Air Traffic Service licence.

⁶ See ComReg Document 08/90R2, The National Frequency Plan for Ireland details the spectrum allocated for Aeronautical use in Ireland

⁷ See Annex 4 for a complete list of definitions for all these services.

⁸ Where standard PMR (Private Mobile Radio) frequencies are used then a Business Radio Licence is required (See document ComReg 00/07R)

The Irish Aviation Authority (IAA) is responsible for the management of frequency assignments in the aeronautical frequency bands specified in Table 3.

LF/MF	255 – 495 kHz and 505 – 526.5 kHz	NDB and Locator
HF	2.8 MHz - 22 MHz	High frequency bands allocated to the aeronautical mobile (R) service
VHF	108 – 117.975 MHz 117.975 – 137 MHz	ILS localizer (below 112 MHz), VOR and GBAS Air-Ground communications
UHF	225 - 400 MHz 328.6 – 335.4 MHz 960 – 1215 MHz 2700 – 3100 MHz	UHF Communications ILS Glide Path DME Radio Location (Primary Surveillance Radar)
SHF	5030 – 5150 MHz	MLS

Table 3: Aeronautical frequency bands managed by the IAA

3.1 Air Traffic Services Application Requirements

Before applying to ComReg for an Air Traffic Services Licence, all applicants must first contact the IAA to obtain a Frequency Assignment Document.

Please Note: IAA frequency assignments are conditional on the applicant applying to ComReg for an Air Traffic Services Licence within 30 days of the receipt of the assignment. Frequency assignments are considered invalid after 30 days if an Air Traffic Services Licence application is not received by ComReg.

The Frequency Assignment Document, as obtained from the IAA, must accompany all Air Traffic Services Licence applications to ComReg. This document will be inserted as Part 2 of the eventual Air Traffic Services Licence granted by ComReg.

To obtain a Frequency Assignment Document, please contact the IAA at;

AeronauticalFrequencyAssignments@iaa.ie

The appropriate ComReg Licence Application Form, ComReg document 11/07b, Insert reference to application form must then be completed in respect of the system or systems in place. These forms can all be found on the ComReg website (www.comreg.ie). If in doubt please contact ComReg's spectrum licensing unit at 804 9600 or email licensing@comreg.ie.

The onus is on the applicants to provide accurate information in their applications. To confirm this, the "Declaration Form" section of the relevant application form must be

completed in all instances. Applications should be submitted in sufficient time to allow processing prior to any required date or event.

4 Maritime Services Licence

A Maritime Services Licence is required for the possession and use of apparatus for wireless telegraphy on the frequencies assigned to the maritime services⁹, where such apparatus is not located on board vessels¹⁰ but is used for shore based operations excluding apparatus covered under Maritime Radionavigation and Radiolocation. (See Sections 5.1 and 5.2)

A single Maritime Services Licence will cover a specific geographical location irrespective of the number of systems at that location, provided that all such systems are in the possession of a single person or body. For example, if several systems are located at a particular location and all are owned and operated by one person, then that person will require one Maritime Service Licence which shall cover all of those systems. On the other hand, if a person operates several systems which are located at different locations, then the person will require a Maritime Service Licence for each location.

Persons operating apparatus for wireless telegraphy must be in possession of all necessary qualifications. Each licence issued shall remain in effect for so long as the licensed apparatus is in use.

Table 4 below shows some of the systems that require a Maritime Services Licence¹¹. Please contact ComReg if you are using any system other than those mentioned in the table. ComReg reserves the right to amend this table to take into account new systems which may be brought into service in the future.

Type of Systems
Commercial vessel movement and coordination
National Search and Rescue Centres
National Search and Rescue Monitoring and Support
Multiple Systems for Training
Private Marina / Race Control

Table 4: Shore based maritime services requiring a Maritime Services Licence.

The spectrum assigned to services under a Maritime Services Licence falls into two categories:

- Land based Maritime Mobile, or

⁹ See ComReg Document 08/90R2, Radio frequency Plan for Ireland For details of the spectrum allocated for Maritime use.

¹⁰ The licensing of Wireless Telegraphy equipment on board vessels is carried out by the Department of Transport.

¹¹ See Annex 4 for a complete list of definitions of these services

- Land Based Private Maritime

4.1 Land Based Maritime Mobile

Land Based Maritime Mobile has an international ITU allocation and is shown in our National Table of Frequency Allocations (NTFA). Usage of such spectrum must be licensed under a Maritime Services Licence¹² (See ComReg document 08/90R2¹³ for full details).

4.2 Land Based Private Maritime

In addition to section 4.1, 39 channels in the range 157.450 – 163.0 MHz (part of the Land Mobile spectrum) have been designated as private maritime channels. These channels do not have an ITU allocation for maritime use but they have been co-ordinated by ComReg for use by marinas, yacht clubs and other like groups, to assist in the co-ordination and operation of sailing regattas, competitions and other such localised events. Use of private maritime spectrum must also be licensed by ComReg under a Maritime Services Licence. (See Annex 3 for Channel Listing)

4.3 Maritime Services Application Requirements

The appropriate Licence Application Form, ComReg document 11/07e must be completed in respect of the system or systems in place. These forms can all be found on the ComReg website (www.comreg.ie). If in doubt please contact ComReg's spectrum licensing unit at 804 9600 or email licensing@comreg.ie.

The onus is on applicants to provide accurate information in their applications. To confirm this, the "Declaration Form" section of the relevant application form must be completed in all instances. Applications should be submitted in sufficient time to allow processing prior to any required date or event.

¹²The management and coordination of the Maritime Mobile Spectrum for Ireland is under the aegis of the Dept. of Transport.

¹³ComReg document 08/90R2 National Table of Frequency Allocations.

5 Radiodetermination

A Radiodetermination Services Licence is required for the use and possession of apparatus for wireless telegraphy on the frequencies assigned for Radionavigation and Radiolocation.

As defined by the ITU, “Radiodetermination” is 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.

A Radiodetermination Services Licence will only be granted by ComReg if the appropriate approval, including co-ordination, has been given by the relevant body (the Irish Aviation Authority (IAA) or the Commissioners of Irish Lights (CIL)).

A single Radiodetermination Services Licence will be granted in respect of any of the Radiodetermination Services system, or combination of systems, set out in Table 4 below, where the system or combination of systems is at one specific location and is owned and operated by a single person or body. The exception to this is AIS or Radar, which will be licensed as a single national network.

Appropriate approvals from the IAA or CIL may be required in respect of the Radiodetermination Services systems to be licensed. Where such approval is required, a copy of this approval must accompany your application. Please contact IAA and or CIL in relation to the appropriate approvals required.

Aeronautical Radionavigation

The operation and maintenance of wireless telegraphy systems for air navigation in Ireland is subject to approval by the IAA and is subject to international regulations, standards and recommended practices as detailed in Annex 10 to the Convention on International Civil Aviation.

Maritime Radionavigation

The CIL is responsible for the provision, superintendence and management of maritime aids to navigation (i.e. lighthouses, buoys, radio and radar beacons, leading lights etc.) throughout the island of Ireland and its adjacent seas and islands. All maritime radio aids to navigation in Ireland must be operated with the permission of the CIL, granted by issuance of a Statutory Sanction.

Two categories of Radiodetermination Services are being licensed by ComReg:

- Radionavigation Systems, and
- Radiolocation Systems

5.1 Radionavigation

Radionavigation is defined by the ITU as Radiodetermination used for the purposes of navigation, including obstruction warning.

For licensing purposes, Radionavigation systems fall into two categories: systems employing aeronautical spectrum (aeronautical radionavigation), and systems employing maritime spectrum (maritime radionavigation).

Table 5 lists some of the systems that will require a Radionavigation licence from ComReg. At present, these include Automatic Identification Systems (AIS), ILS, DME, Loran, and VOR/DVOR. Parties with any queries in relation to systems other than those listed below should contact ComReg directly. ComReg reserves the right to amend this table to take into account new systems which may be brought into service in the future.

System Type	Service
Instrument Landing System (ILS)	Aeronautical
Microwave Landing System (MLS)	Aeronautical
Distance Measuring Equipment	Aeronautical
AIS	Maritime
VOR / DVOR	Aeronautical
Localiser	Aeronautical
Glide Path	Aeronautical
Loran	Aeronautical / Maritime
Differential GPS	Aeronautical / Maritime
Non Directional Beacons	Aeronautical / Maritime

Table 5: Radionavigation Systems requiring a licence.

Whilst Maritime radionavigation incorporates, many different types of systems, AIS systems, because of their complex nature, are dealt with in Section 5.3.

5.2 Radiolocation

The ITU defines Radiolocation as Radiodetermination for purposes other than those of radionavigation. Several Radiolocation systems fall under the Radiolocation category for licensing by ComReg, including Radar, Racon, Loran C and Loran / eLoran. Radiolocation systems may operate within the aeronautical or maritime bands. Accordingly, the appropriate co-ordination and approvals must be confirmed by the relevant body prior to licensing.

5.3 Automatic Identification System (AIS)

An Automatic Identification System (AIS) is a broadcast transponder system operating in the VHF maritime mobile band. AIS transponder equipment is used on ships and aids to navigation by Vessel Traffic Services (VTS) and by Maritime Authorities. These aids may be located on shore, such as in a lighthouse, or on the water, on platforms or buoys.

5.3.1 AIS; Aids to Navigation (AtoNs):

This transponder equipment may be located on shore, such as in a lighthouse, or on the water, such as on platforms or buoys. They allow the transmission of positional information to ships and to shore, as well as certain additional information such as the nature and status of the AtoN, meteorological and hydrological information.

Statutory Sanction under section 653(2) of the Merchant Shipping Act of 1894 is required for all AtoNs including AIS AtoNs. Statutory Sanction is also required to alter or discontinue an AtoN.

5.3.2 AIS; Non-Aids to Navigation (Non AtoNs):

This transponder equipment is used in shore-side infrastructure by Vessel Traffic Services and Maritime Competent Authorities, and allows them to monitor AIS-fitted vessel movements, to communicate with all AIS transponder equipment types, and if suitably authorised, to perform management functions upon the AIS VHF Data Link (VDL).

5.3.3 AIS; Frequencies, Approvals and Licensing:

The use of frequencies allocated to AIS is agreed on a worldwide basis by the ITU. The channels allocated for AIS are: AIS 1 (161.975MHz) and AIS 2 (162.025 MHz).

Any person or body applying to ComReg for a Radiodetermination Services Licence, permitting them to possess or use an AIS system, must have an MMSI (Maritime Mobile Service Identity), a Time Slot¹⁴, and for AtoNs, a Statutory Sanction. A Statutory Sanction is granted by the CIL and Time Slots are co-ordinated between the CIL and the Irish Coast Guard (IRCG). Applicants must have obtained Statutory Sanction from CIL before applying to ComReg for a Radiodetermination Licence. MMSI numbers are assigned by ComReg as part of the licensing process. Licence applications which do not include proof that such authorisations are properly in place will not be processed by ComReg.

¹⁴ Time slots are only issued if the licensee requests the use of Fixed Access Time Division Multiple Access (FATDMA) scheme, and suitable arrangements have been put in place to reserve these slots for exclusive use.

An AIS AtoN system licence issued by ComReg will only remain valid for so long as its associated Statutory Sanction is in force i.e. if the associated Statutory Sanction is suspended, revoked or withdrawn then the corresponding licence shall automatically cease to be valid. Similarly, if the licence is suspended, revoked or withdrawn then the corresponding Statutory Sanction shall automatically cease to be valid.

As stated above, the required approvals must be in place prior to submitting an application to ComReg for a Radiodetermination Licence, therefore;

- AtoN applicants must contact the CIL to obtain conditional approval (which incorporates Statutory Sanction and slot allocation). This approval is conditional on the applicant applying to ComReg for a wireless telegraphy licence within 30 days of receipt of the approval. The approval is invalid after 30 days if an application is not received by ComReg.
- Non-AtoN applicants must also contact the CIL in advance of making application to ComReg, in order to ensure that there are no difficulties with the proposed system. ComReg will be advised by CIL prior to licensing such systems.

The CIL may be contacted on; www.cil.ie

5.4 Radiodetermination Application Requirements

The appropriate Licence Application Form, ComReg document 11/07a for AIS, ComReg document 11/07c for Radiolocation and ComReg document 11/07d for Radionavigation and must be completed in respect of the system or systems in place. These forms can all be found on the ComReg website (www.comreg.ie). If in doubt please contact ComReg's spectrum licensing unit at 804 9600 or email licensing@comreg.ie.

The onus is on applicants to provide accurate information in their applications. To confirm this, the "Declaration Form" section of the relevant application form must be completed in all instances. Applications should be submitted in sufficient time to allow processing prior to any required date or event.

6 Licence Information

ComReg is subject to Irish and EU rules on treatment and handling of confidential information. ComReg is also a „public body“ for the purpose of the Freedom of Information Act, 1997, as amended, and is bound by this Act in relation to the release of information.

Any personal information which licence applicants provide to ComReg will be treated in accordance with the Data Protection Acts, 1988 & 2003.

6.1 The Licensee

The licensee must be a legal entity; an individual or a registered company.

Additionally, it is the responsibility of the licensee to ensure at all times that the details included in its licence application (e.g. names, registered business address, contact details, services to be provided under the licence) are valid and updated. Any changes to the licence details must be notified to ComReg in writing.

6.2 The Licence

A Radiodetermination, Air Traffic Services or Maritime Services Licence does not confer any right of ownership of the frequency spectrum assigned there under. A licence permits the possession and use of the apparatus for wireless telegraphy described therein, in accordance with the conditions set out in the licence and in the Regulations, and this includes a right to use the assigned frequency spectrum. The conditions attached to a Radiodetermination, Air Traffic and Maritime Service licence are detailed in the Regulations in Annex 1.

Licensees are responsible for ensuring that they comply with all of the conditions set out in their licences and in the Regulations.

6.3 Licence Duration

With the exception of temporary licences, Radiodetermination, Air Traffic Services and Maritime Services Licences are granted for the lifetime of the apparatus for wireless telegraphy specified in the Licences, and Licences shall remain in effect for so long as the licence details are correct or until such time as the licence is either withdrawn, suspended or revoked by ComReg or surrendered by the licensee.

In accordance with the Regulations, all licensees are required to inform ComReg immediately of any substantive change to the details of their licence, and licensees must also confirm to ComReg, in writing and every five years from the original date of granting of the licence, that their licence details are still correct.

6.4 Licence Fees Payable

The granting of a Radiodetermination, Air Traffic Services or Maritime Services Licence is subject to payment of the following prescribed fees to ComReg:

- Systems deployed prior to 1 December 2009 - no fee;
- Systems deployed after 1 December 2009 - €500 fee; and
- Amendment or transfer of a licence - €30 fee.

Note:

Licence fees must be submitted to ComReg together with the ComReg Application Form.

6.5 Amendments to a Licence

Under the Regulations, it is the responsibility of the licensee to inform ComReg of any licence amendments as soon as they occur but no later than 28 days after such changes. A licence amendment occurs when the details on the licence document are no longer valid and therefore need to be updated. Any changes to licence details should be submitted to ComReg on the appropriate application form.

6.6 Cancellation of a Licence

A Radiodetermination, Air Traffic Services and Maritime Services Licence may be cancelled at the written request of the licensee and there shall be no entitlement to any refund of licence fees in the event of any such cancellation.

6.7 Suspension, Withdrawal or Revocation of a Licence

ComReg may suspend, withdraw or revoke a Radiodetermination, Air Traffic Services or Maritime Services Licence in the event of non-compliance by the licensee with any condition of the licence. There shall be no entitlement to any refund of the licence fee in the event of any such action.

7 Submitting Applications

Licence applications must be submitted on the appropriate Form which can be found on the ComReg website www.comreg.ie.

Applicants for licences under this scheme must obtain the relevant approval, including frequency assignment, from the appropriate body (IAA or CIL) before applying to ComReg for a licence.

Applicants must provide accurate information in their applications. To confirm this, the “Declaration Form” section of the Application Form must be completed in all instances. Applications should be submitted in sufficient time to allow processing prior to any required date or event.

The relevant Application Form must be completed in full, in accordance with these guidelines and the information stipulated in the Application Form. Application Forms not properly completed will not be considered as valid and will be returned to the applicant.

The Declaration Form included in the Application Form must be signed.

The appropriate fee must be enclosed with the Application Form:

New Application	€500
Licence Amendment or Transfer	€30

Systems in existence prior to 1 December 2009 will be licensed retrospectively and will not incur a licence fee.

Radiodetermination, Air Traffic and Maritime Service Licence Applications or amendment requests may be submitted to:

Spectrum Licensing Operations
(Radiodetermination, Air Traffic & Maritime Services Section) The Commission
for Communications Regulation
One Dockland Central
Guild Street
Dublin 1
D01 E4X0

Annex 1: Regulations – SI 369 of 2009

STATUTORY INSTRUMENT

SI No 369 of 2009

**Wireless Telegraphy (Radiodetermination, Air Traffic and Maritime Services)
Regulations, 2009**

Published by the Stationery Office
Dublin

To be purchased through any Bookseller or directly from the Government Publications Sales Office, Sun Alliance House, Molesworth Street, Dublin 2.
Or by mail order from
Government Publications, Postal Trade Section,
51 St. Stephen's Green, Dublin 2
(Tel: 01 6476834/35/36/37; Fax 01 6476843)
Or through any bookseller

(Prn. A9 / 1285)

Price €3.05

The Commission for Communications Regulation, in exercise of the powers conferred on it by section 6 of the Wireless Telegraphy Act, 1926 (No. 45 of 1926), transferred to the Commission for Communications Regulation by section 4 of the Communications Regulation (Amendment) Act, 2007 (No. 22 of 2007), and with the consent of the Minister for Communications, Energy and Natural Resources, pursuant to section 37 of the Communications Regulation Act 2002 hereby makes the following regulations:

Citation

1. (1) These Regulations may be cited as the Wireless Telegraphy (Radiodetermination, Air Traffic and Maritime Services) Regulations 2009.

- (2) These Regulations shall come into force on 1 December 2009.

Interpretation and Definitions

2. (1) In these Regulations, except where the context otherwise requires:
 - “*Act of 1926*” means the Wireless Telegraphy Act 1926 (No. 45 of 1926);
 - “*Act of 1972*” means the Wireless Telegraphy Act 1972 (No. 5 of 1972);
 - “*Act of 2002*” means the Communications Regulation Act 2002 (No. 20 of 2002);
 - “*Air Traffic Service System*” means services provided by ground based equipment and systems utilising apparatus for wireless telegraphy, used or intended to be used, in connection with the safety, security or operation of aircraft in flight or on the ground, and excludes public electronic communications networks and Radiodetermination Services;
 - “*Apparatus*” means apparatus for wireless telegraphy for the provision of Radiodetermination Services, Air Traffic Service Systems or Maritime Service Systems and, in relation to a Licence, means apparatus for wireless telegraphy to which the Licence relates;
 - “*apparatus for wireless telegraphy*” and “*wireless telegraphy*” have the same meanings as are set out in section 2 of the Act of 1926;
 - “*Commission*” means the Commission for Communications Regulation;
 - “*ETSI*” means the European Telecommunications Standards Institute;
 - “*Harmful Interference*” means interference which endangers the functioning of a radionavigation service or of other safety services or which otherwise

seriously degrades, obstructs or repeatedly interrupts a radiocommunications service operating in accordance with applicable international, European Community or national regulations;

“*ICNIRP*” means the International Commission for Non-Ionizing Radiation Protection;

“*Licence*” means a licence granted to the licensee in accordance with section 5 of the Act of 1926 to keep, have possession of, install, maintain, work and use Apparatus in a specified place in the State;

“*Licensee*” means the holder of a Licence;

“*Maritime Service System*” means services provided by equipment and systems not installed on vessels, utilising apparatus for wireless telegraphy, used or intended to be used, in connection with:

- (a) the safety, security or operation of vessels; or
- (b) the training of personnel in the Maritime Mobile Service, and excludes public electronic communications networks and Radiodetermination Services

“*Maritime Mobile Service*” means a mobile service between coast stations and ship stations, between ship stations, or between associated on-board communication stations;

“*Radiodetermination*” means 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;

“*Radiodetermination Services*” means services provided by apparatus for wireless telegraphy for the purpose of Radiodetermination; and

“*Regulations*” means the Wireless Telegraphy (Radiodetermination, Air Traffic and Maritime Services) Regulations, 2009.

(2) In these Regulations –

- (a) a reference to an enactment or regulation shall be construed as a reference to the enactment or regulation as amended or extended by or under any subsequent enactment or regulation;
- (b) a reference to a Regulation or a Schedule is to a Regulation of, or a Schedule to, these Regulations, unless it is indicated that reference to some other enactment is intended;

- (c) a reference to a paragraph or subparagraph is to the paragraph or subparagraph of the provision in which the reference occurs unless it is indicated that reference to some other provision is intended; and
- (d) a reference to a Directive of the European Parliament and Council shall be construed as a reference to the Directive as amended or extended by any subsequent Directive.

Licences to which these Regulations apply

3. These Regulations apply to Licences to keep, have possession of, install, maintain, work and use apparatus for wireless telegraphy for the purpose of the provision of Radiodetermination Services, Air Traffic Service Systems or Maritime Service Systems having the characteristics set out in Part 2 of the Licence and operating in accordance with the technical conditions set out in Part 2 of the Licence and at the geographical location or locations set out in Part 2 of the Licence.

Limitation of Licence

4. (1) A Licence granted under these Regulations does not grant to the Licensee named therein any right, interest or entitlement other than the right to keep, install, maintain, work and use, in a specified place in the State, apparatus for wireless telegraphy for the purpose of the provision of Radiodetermination Services, Air Traffic Service Systems or Maritime Service Systems.
- (2) Nothing in these Regulations shall absolve the Licensee from any requirement in law to obtain (such additional) approvals, consents, licences, permissions and authorisations that may be necessary for the discharge of the obligations or the exercise of entitlements under the Licence. The Licensee is responsible for all costs, expenses and other commitments (financial and non-financial) in respect of the Licence and the provision of the Radiodetermination Services, Air Traffic Service Systems or Maritime Service Systems and the Commission shall bear no responsibility for such costs, expenses or commitments.

Application for Licences and Form of Licences

5. (1) An application for a Licence shall be made to the Commission and shall be in writing in such form as may be determined by the Commission.

- (2) A person who makes an application under paragraph (1) of this Regulation shall furnish to the Commission such information as the Commission may reasonably require for the purpose of assessing the application and carrying out its functions under the Act of 1926 and the Act of 2002, and if the person, without reasonable cause, fails to comply with this paragraph, the Commission may refuse to grant a Licence to the person.
- (3) Subject to Regulation 7, a Licence shall be in the form specified in Schedule 1 with any amendment, whether by addition, deletion or alteration, as may be determined by the Commission.

Duration of Licences

6. (1) A Licence shall, unless it has been revoked, withdrawn or surrendered, remain in force for the lifetime of the Apparatus specified in the Licence.

Conditions of Licences

7. (1) It shall be a condition of a Licence that:
 - (a) the Licensee shall comply with these Regulations and the conditions attached to the Licence;
 - (b) the Licensee shall ensure that the Apparatus is used only on such radio frequency spectrum as may be specified in the Licence and such radio frequencies shall be used in an efficient manner having utmost regard to any guidelines that may be issued and amended by the Commission from time to time in relation to the keeping, installing, maintaining, working and use of apparatus for wireless telegraphy for the provision of the provision of Radiodetermination Services, Air Traffic Services Systems or Maritime Traffic Service Systems;
 - (c) the Licensee shall ensure that it makes payments of the fees as set out in Schedule 2 to these Regulations;
 - (d) the Licensee may not, without the prior written consent of the Commission, which shall not be unreasonably withheld, assign the Licence or any of the powers, duties or functions conferred by it or otherwise transfer any of the rights or obligations conferred by it;
 - (e) the Licensee shall ensure that non-ionising radiation emissions from the Apparatus are within the limits specified by the guidelines published by

- ICNIRP, any radiation emission standards adopted and published by ICNIRP, or its successors, from time to time, any radiation emission standards of the European Committee for Electrotechnical Standards and any radiation emission standards specified by national and European Community law;
- (f) the Licensee shall ensure that the Apparatus is not installed or operated at a location in a manner which causes the aggregate non-ionising radiation emissions at that location to exceed the limits specified by any guidelines published by ICNIRP and that it complies with any radiation emission standards adopted and published by ICNIRP, or its successors, any radiation emission standards of the European Committee for Electrotechnical Standards and any radiation emission standards specified by national and European Community law;
 - (g) the Licensee shall as soon as possible, but within 28 days, notify the Commission in writing of any changes to the information contained in the Licence;
 - (h) the Licensee shall furnish such information and reports relating to the operation of the Apparatus as may be requested by the Commission from time to time;
 - (i) the Licensee shall, no later than each fifth anniversary of the issue of a licence under these Regulations, identify to the Commission in writing whether the information contained in the Licence and the Licensee's contact details are correct;
 - (j) the Licensee shall ensure that the Apparatus, or any part thereof, shall be installed, maintained, operated and used so as not to cause Harmful Interference;
 - (k) the Licensee shall ensure that the installation of the Apparatus, or any part thereof, is effected, and its maintenance and operation is carried on, in such a manner as to ensure that the safety of persons or property is not endangered;
 - (l) the Licensee shall observe good site engineering practice in accordance with such guidelines as may be set out by the Commission from time to time;
 - (m) the Licensee shall ensure compliance with any special conditions imposed under section 8 of the Act of 1972 and subject to which this Licence is deemed by subsection (3) of that section to be issued;

- (n) the Licensee shall ensure that, save as may be required by law, access to, and use of, the Apparatus is restricted to the Licensee, employees or agents of the Licensee, and persons authorised by or on behalf of the Licensee and such persons should be suitably qualified;
- (o) where the Commission is satisfied that a Licensee has failed to comply with any provision of these Regulations or a condition of the Licence, and the Commission has served on the Licensee a written notice prohibiting the use of Apparatus by such date and time as may be specified in the notice, then the Licensee shall cease to use that Apparatus on or before the applicable date and time until such notice has been withdrawn by the Commission, and the Licensee shall take such measures as may be specified by the Commission in the notice;
- (p) the Licensee shall upon becoming aware of any event likely to materially affect his or her ability to comply with these Regulations, or any conditions set out or referred to in the Licence, notify the Commission of that fact in writing within 5 business days;
- (q) the Licensee shall on request from an authorised officer of the Commission permit the inspection of the Apparatus, enable access to the site or sites and produce the associated Licence for inspection; and
- (r) the Licensee shall comply with all obligations under relevant international agreements relating to the use of Apparatus or the frequencies to which they are assigned.

Enforcement, Amendment, Revocation and Suspension

8. (1) Where the Commission finds that the Licensee has not complied with any of the conditions attached to his or her Licence, it may take enforcement measures, which shall be objectively justifiable and in a proportionate manner, which may include the suspension or revocation of the Licence.
- (2) The Commission may amend the Licence from time to time where objectively justifiable and in a proportionate manner.
- (3) Without prejudice to paragraph (2) of this Regulation, the Commission may, after serving notice in writing on the Licensee specifying reasons and after affording the Licensee reasonable opportunity to make representations and after having considered any such representations, amend, suspend, or

revoke the Licence where objectively justifiable and in a proportionate manner.

Licence Fees

9. (1) Fees as set out and provided for in Schedule 2 are hereby prescribed in relation to Licences for the purpose of section 6 of the Act of 1926.
- (2) The grant of a Licence is subject to payment of the prescribed fee as set out in Schedule 2 to these Regulations.
- (3) Fees shall be paid to the Commission for Communications Regulation by way of banker's draft or such other means and on such terms (including terms as to the place of payment) as the Commission may decide. Where the date of payment falls on a Saturday, a Sunday or a public holiday payment shall be made on or before the last working day before the date of payment;
- (4) If a Licence is surrendered, withdrawn, suspended or revoked, the Licensee shall not be entitled to be repaid any part of the fee paid by the Licensee under these Regulations but shall still be liable to pay any sums (including interest) that are outstanding.
- (5) An amount payable by a Licensee may be recovered by the Commission as a simple contract debt in any court of competent jurisdiction.

Transitional Arrangements

10. All licences, permits and authorisations previously granted in respect of Radiodetermination Services, Air Traffic Service Systems or Maritime Service Systems prior to the coming into force of these regulations are hereby revoked.

SCHEDULE 1

WIRELESS TELEGRAPHY ACT, 1926

WIRELESS TELEGRAPHY (Radiodetermination, Air Traffic and Maritime Services) REGULATIONS, 2009

LICENCE CERTIFICATE

PART 1

Licence Number: _____

The Commission for Communications Regulation, in exercise of the powers conferred on it by section 6 of the Wireless Telegraphy Act, 1926 (No. 45 of 1926), transferred to the Commission for Communications Regulation by section 4 of the Communications Regulation (Amendment) Act, 2007 (No. 22 of 2007), grants to the Licensee specified, authorisation to keep, have possession of, install, maintain, work and use apparatus for wireless telegraphy as specified in Part 2 of this Licence subject to the Licensee observing the conditions contained in Regulation 7 of the Wireless Telegraphy (Radiodetermination, Air Traffic and Maritime Services) Regulations, 2009 (S.I. 369 of 2009)

Licensee: _____

Address: _____

Licence Type: _____

Commencement and Termination Dates (if applicable):

The Licence comes into effect on ***DD/MM/YY*** and, subject to revocation, withdrawal or surrender, shall remain in force for the lifetime of the apparatus for wireless telegraphy specified in Part 2 of the Licence.

Signed: _____
on behalf of the Commission for Communications Regulation

Date:

Official Stamp

PART 2

Description and Characteristics of Apparatus

Locations(s) of Apparatus

Technical Conditions of Apparatus

and where applicable

Loading Criteria

Roll-Out Plan

SCHEDULE 2

FEES PAYABLE IN CONNECTION WITH LICENCES

No Licence fees are payable in relation to Apparatus which are in operation prior to the commencement of these Regulations.

The Licence fee for Apparatus put into operation after the commencement of these Regulations shall be €500.

Licence amendments and each transfer of a Licence shall incur a fee of €30.

GIVEN under the official seal of the Commission for Communications Regulation
10 September 2009

JOHN DOHERTY
Chairperson
On behalf of the Commission of Communications Regulation

The Minister for Communications, Energy and Natural Resources consents to the making of the foregoing Regulations.

GIVEN under the Official Seal of the Minister for Communications,
Energy and Natural Resources,
25 August 2009

EAMON RYAN T.D.
Minister for Communications Energy and Natural Resources

EXPLANATORY NOTE

(This note is not part of the Instrument and does not purport to be a legal interpretation.)

These Regulations provide for the licensing of apparatus for wireless telegraphy for the provision of Radiodetermination Services (including radar, radio navigation and radiolocation systems), Air Traffic Service Systems (including air traffic control communications) and Maritime Service Systems (including coast radio stations and training establishments) within the State.

Annex 2: Contact Details

Irish Aviation Authority

Technology Directorate

The Times Building
11-12 D'Olier Street
Dublin 2

Telephone: 00 353 1 6718655

Fax: 00 353 1 6792934

Email: AeronauticalFrequencyAssignments@iaa.ie

Commissioners of Irish Lights

Harbour Road

Dun Laoghaire

County Dublin

Telephone: 01 2715400

Email: info@cil.ie

Annex 3: Land Based Private Maritime Channels

Base (MHz)		Mobile (MHz)
162.050		157.450
162.075		157.475
162.100		157.500
162.125		157.525
162.150		157.550
162.175		157.575
162.200		157.600
162.225		157.625
162.250		157.650
162.275		157.675
162.300		157.700
162.325		157.725
162.350		157.750
162.375		157.775
162.400		157.800
162.425		157.825
162.450		157.850
162.475		157.875
162.500		157.900
162.525		157.925
162.550		157.950
162.575		157.975
162.600		158.000
162.625		158.025
162.650		158.050
162.675		158.075
162.700		158.100
162.725		158.125
162.750		158.150
162.775		158.175
162.800		158.200
162.825		158.225
162.850		158.250
162.875		158.275
162.900		158.300
162.925		158.325
162.950		158.350
162.975		158.375
163.000		158.400
		158.425
	Amphibians 4 Channels	158.450
		158.475
		158.500

Annex 4: Definitions

Aeronautical mobile (OR) [off-route] service

An aeronautical mobile service intended for communications, including those relating to flight coordination, primarily outside national or international civil air routes.

Aeronautical mobile (R) [route] service

An aeronautical mobile service reserved for communications relating to safety and regularity of flight, primarily along national or international civil air routes.

Aircraft Communications and Reporting Systems (ACARS)

While in the air, aircraft send digital data as to their operation to the ground. Information is exchanged in relation to the business of the airline, crew requirements etc. This is carried out using a Data Link over VHF or HF.

Approach Control

Approach Control Service. Air traffic control service for arriving or departing controlled flights

Area Control Centres

A unit established to provide air traffic control service to controlled flights in control areas under its jurisdiction.

Automatic Identification Systems (AIS)

A short range coastal tracking system used on ships and by Vessel Traffic Services (VTS) for identifying and locating vessels by electronically exchanging data with other nearby ships and VTS stations.

Automatic Terminal Information Service (ATIS)

A continuous broadcast of recorded non control information in busier terminal (i.e. airport) areas and contains essential information, such as weather information, which runways are active, available approaches, and any other information required by the pilots

Data Link (VHF or HF) (VDL or HFDDL)

The transmission of digital information between two stations for the purpose of information exchange or control. Links can be between ground stations or in the case of VDL Mode 4 between aircraft in flight. Aeronautical VDL use the band 117.975 - 137 MHz, Aeronautical HFDDL operates between 3016 kHz and 17946 kHz.

Differential Global Positioning System (DGPS)

To enhance and augment GPS a network of fixed known land based stations transmit data to receivers in the 284 – 293 kHz band

Distance Measuring Equipment (DME)

This is a transponder-based radio navigation technology that measures distance by timing the propagation delay of radio signals.

Emergency Vehicles, Support Vehicles and systems

Within an airport various organisations provide support services to the operation of aircraft from loading baggage to cleaning the aircraft. Emergency Services also operate within the airport boundaries. The movement of all these systems is coordinated for the safety of aircraft in flight and on the ground and all will be using VHF Communications.

Ground Based Augmentation System

The Ground-Based Augmentation System is a safety-critical system that augments the GPS Standard Positioning Service and provides enhanced levels of service. It supports all phases of approach, landing, departure, and surface operations within its area of coverage

Ground Control

Ground Control sometimes known as Ground Movement Control or Surface Movement Control is responsible for the airport "movement" areas. This generally includes all taxiways, inactive runways, holding areas, and some transitional aprons or intersections where aircraft arrive, having left the runway or departure gate.

Instrument Landing System (ILS)

The Instrument Landing System is a ground-based instrument approach system that provides precision guidance to an aircraft approaching a runway, using a combination of radio signals and consists of an ILS Glide Path, Localiser and Marker Beacons

ILS Glide Path

A glide path operates at the end of certain runways to enable aircraft to approach the runway avoiding any mountainous terrain. This is two differently modulated (90 and 150Hz) signals to provide a narrow path down to the runway.

Localizer

The localizer provides for ILS facility identification by periodically transmitting a 1020 Hz Morse code identification signal.

Marker beacons

On most installations 3 marker beacons operating at a carrier frequency of 75 MHz are provided. These are vertical fan markers and can only be received when the aircraft is above them. The Outer Marker modulation is repeated Morse-style dashes of a 400 Hz tone. The Middle Marker is modulated with a 1300 Hz tone as alternating dots and dashes. The Inner Marker modulation is Morse-style dots at 3000 Hz.

Loran LoranC / e-Loran

Loran-C is a hyperbolic radionavigation system which covers most of the Northern Hemisphere. The system uses groups of at least three ground transmitter stations called chains. Each chain comprises one Master and two or three Secondary stations, several hundred kilometres from the Master station. The repeatable accuracy of Loran-C is impressive, allowing a return to a marked position with greater accuracy time and time again. E-Loran is an enhanced version that integrates the data from GPS into the system to increase accuracy and consistency.

Microwave Landing Systems (MLS)

This is a general upgrade to the ILS system allowing for a greater number of channels and multi path navigation. The benefit to navigation is that it allows approaches to be made around terrain and for multiple installations at the one airport.

Non Directional Beacon (NDB)

A Non-Directional Beacon is a radio transmitter at a known location, used as a navigational aid. As the name implies, the signal transmitted does not include inherent directional information, in contrast to newer navigational aids.

RACON (Radar Beacon)

In their basic form they receive signals from radars which trigger the Racon to emit a characteristic signal which is in turn received by the radar. This characteristic signal is in the form of a series of response pulses which will show up on a ship's radar as a Morse coded trace and allow easy identification of the particular Racon being interrogated. Racons can be placed on any navigational mark (eg: lighthouses, beacons, buoys, etc). The return on the ship's radar will clearly identify the mark from surrounding targets and allow the mariner to accurately measure his range and bearing.

Radar

Radar is an object detection system that uses electromagnetic waves to identify the range, altitude, direction, or speed of both moving and fixed objects such as aircraft, ships, motor vehicles, weather formations, and terrain.

To safely monitor and co ordinate the movement of aircraft or ships a number of different Radar systems are used. These can be short range, (Surface Movement Radar) medium or long range (Primary Radar). Some radar are operated by the airport or port and some are operated by a national authority

Primary Radar is a passive receiver of echoes with no target information. Any information gained is based on differences between the location of the target at initial contact and subsequent contacts.

Approach Control Radar is used to detect and track aircraft at altitudes below 25,000 feet (7,620 meters) and within 40 to 60 nautical miles

Secondary Surveillance Radar operates in interrogator mode transmitting a pulse and receiving a reply from the aircraft encoded with identity and height. This requires the aircraft to have the appropriate type of equipment on board.

Surface Movement Radar is a millimetric, single or multi head radar located around an airport. This provides for runway incursion, foreign object detection and movement control of ground vehicles.

Vessel Traffic Service (VTS)

A marine traffic monitoring system established by harbour or port authorities, similar to air traffic control for aircraft. Typical VTS systems use radar, closed-circuit television (CCTV), VHF radiotelephony and Automatic Identification System to keep track of vessel movements and provide navigational safety in a defined geographical area.

VOLMET,

The broadcast of meteorological information for aircraft in flight.

VOR or DVOR (Doppler VOR)

VOR, short for VHF Omni-directional Radio Range, is a type of radio navigation system for aircraft. VORs broadcast a VHF radio composite signal including the station's Morse code identifier (and sometimes a voice identifier), and data that allows the airborne receiving equipment to derive a magnetic bearing from the station to the aircraft (direction from the VOR station in relation to the Earth's magnetic North at the time of installation).