Public Service Broadcasting Licence issued by

THE COMMISSION FOR COMMUNICATIONS REGULATION

To

Raidió Teilifís Éireann

For Analogue Sound Broadcasting Services

Document Number: 12/13b

Public service broadcasting licence issued by the The Commission For Communications Regulation

to

Raidió Teilifís Éireann

The Commission for Communications Regulation, in exercise of the powers conferred on it by section 121 (1) of the Broadcasting Act 2009 (No. 18 of 2009), hereby issues to Raidió Teilifís Éireann a licence for the purpose of providing Analogue Sound Broadcasting Services as follows, subject to the conditions set out hereunder:

Licensed

1. (1) For the purpose of carrying out the functions authorised by the Broadcasting Act 2009, the Licensee is licensed to:

(a) maintain and operate the broadcasting stations recorded in the Schedule in Part II of this Licence and in accordance with the provisions set out therein and not otherwise, except with the written consent of the Commission,

(b) establish, maintain and operate additional broadcasting stations at such places, and in accordance with such provisions, as the Commission may from time to time approve in writing, and any such approved additional broadcasting stations shall thereupon be deemed to be added to the Schedule in Part II of this Licence,

(c) acquire, install and operate such apparatus for wireless telegraphy as is incidental to the operation of the broadcasting stations mentioned at (a) and (b) as the Commission may approve in writing.

(2) Nothing in this Licence shall serve to preclude the Licensee from entering into any contracts, agreements and arrangements incidental or conducive to carrying out the activities listed in (1) above.

2. The Licensee shall not operate any broadcasting station without the Commission's specific approval in writing in respect of: -

   (i) characteristic frequency,

   (ii) name and geographical co-ordinates of broadcasting stations,

   (iii) effective radiated power,

   (iv) antenna characteristics, and

   (v) antenna height.

3. The Licensee shall comply with the directions given by the Commission in writing in relation to tolerance on characteristic frequency and radiation of spurious emissions or in relation, in any other respect, to the technical operation of the broadcasting stations and apparatus for wireless telegraphy mentioned in the preceding paragraphs.

4. The establishment and operation of radio broadcasting stations shall be in accordance with the conditions relating to the establishment and operation of analogue radio broadcasting stations set out in Part I of this Licence.

5. If any harmful interference (whether avoidable or not) is caused to any radionavigation service or other safety services or a radiocommunications service operating in accordance with the applicable European Community or national regulations which was in existence prior to the broadcasting station or apparatus for wireless telegraphy causing the harmful interference, the Licensee shall, if the Commission considers it reasonable so to request, pay to the relevant party the amount of the expenses incurred in providing protection for such a service against the harmful interference, or in substituting for such a service a service of the same or a different description in another place and providing for the substituted service such protection against the harmful interference as the Commission considers necessary or expedient.

6. The Licensee shall comply with any radiation emission standards adopted and published by the International Commission for Non-Ionising Radiation Protection (ICNIRP) or its successors from time to time; any radiation emission standards of the European Committee for Electrotechnical Standards and any other radiation emission standards specified by national and EC law. The Licensee shall ensure that non-ionising radiation emissions from apparatus operated by the Licensee are within the

limits specified by the guidelines published by ICNIRP. The Licensee shall ensure that apparatus operated by the Licensee is not installed or operated at a location in such a manner as to cause the aggregate of non-ionising radiation emissions to exceed the limits specified by the guidelines published by ICNIRP.

7. The broadcasting stations which are the subject of this Licence shall, at all times, be operated by persons properly authorised by the Licensee and all reasonable steps shall be taken to ensure that access to the broadcasting stations cannot be obtained by unauthorised persons at any time.

8. The Commission shall not be liable for any costs incurred by the Licensee in averting any harmful interference whatsoever.

Sanctions for Breach of Licence

9. (1) Where the Commission finds that the Licensee does not comply with one or more of the conditions of the Licence conferred on it, the Commission shall notify the Licensee of those findings and give the Licensee a reasonable opportunity to state its views or remedy any breaches within:

(a) one month after notification,

(b) a shorter period agreed by the Licensee or stipulated by the Commission in the case of repeated breaches, or

(c) a longer period decided by the Commission.

(2) The Commission may publish, in such manner as it thinks fit, any notification given by it under this Condition subject to the protection of the confidentiality of any information which the Commission considers confidential.

10. Where, at the end of the period referred to in Condition 9 (1), the Commission is of the opinion that the Licensee has not complied with the condition, it shall take appropriate and proportionate measures aimed at ensuring compliance.

Licence revocation

11. (1) The Commission may, in cases of serious and repeated breaches of the conditions of the licence revoke, suspend or withdraw the licence, where measures aimed at ensuring compliance as referred to in Condition 10 have failed.

(2) Prior to any such revocation, suspension or withdrawal, the Commission shall serve notice on the Licensee specifying the reason therefor and shall give the Licensee a reasonable opportunity to make representations about the proposed revocation, suspension or withdrawal.

Prevention of Interference

12. (1) If the Commission –

(a) is satisfied that the use of the system or any part thereof is causing or represents an immediate and serious threat to public safety, public security or public health, or will create serious economic or operational problems for other providers or users of electronic communications networks or services, and

(b) serves on the Licensee an interim notice requiring that the use of such system or part as may be specified in such notice cease forthwith, or on or before such date and time as may be so specified;

The Licensee shall cease to use the system or part, unless and until such notice has been withdrawn by the Commission.

(2) Following the issuing of an interim notice, the Commission shall give the Licensee a reasonable opportunity to make representations about the interim notice and to propose any remedies.

(3) The Commission, having taken into account any representations or proposed remedies made under paragraph (2) may confirm, amend or withdraw the measure.

Restrictions on the Licensee

13. The Licensee shall not, without the prior consent in writing of the Commission (such consent not to be unreasonably withheld), assign the Licence (or lease, or let the Licence). Any consent to transfer granted by the Commission under this paragraph, may be subject to such further conditions as the Commission considers appropriate in the circumstances.

14 The provisions of the International Telecommunication Convention, and of any international convention or international agreement relating to the use of frequencies to which the State may be, or may become, a party during the continuance of this Licence, shall be complied with.

Licence Duration

15. This Licence shall operate from 29 February 2012 and, without prejudice to the right of the Commission to terminate or suspend the Licence in the case of non-compliance with the provisions of the Licence by the Licensee, shall be valid and continue in force until 13 May 2019, and shall then expire.

Definitions

16. In this Licence:

(a) a reference to a Schedule is to a Schedule to this Licence, unless it is indicated that reference to some enactment is intended;

(b) 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;

(c) a reference to an enactment shall be construed as a reference to the enactment as amended or extended by or under any subsequent enactment.

17. (1) In this Licence, except where the subject or context requires otherwise, the following expressions have the meanings hereby assigned to them, that is to say: -

"broadcasting station" has the same meaning as in the Wireless Telegraphy Acts, 1926 to 2009;

"Commission" means the Commission for Communications Regulation established by Part 2 of the Communications Regulation Act, 2002;

"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 the applicable European Community or national regulations;

"International Telecommunication Convention" means the International Telecommunication Convention signed at Nairobi on the 6th day of November 1982 and the Radio Regulations and additional Radio Regulations in force thereunder, and includes any Convention and Regulations which may from time to time be in force in substitution therefor, or in amendment thereof;

"Licensee" means the holder of the Licence, in this case Raidió Teilifís Éireann;

"wireless telegraphy" and "apparatus for wireless telegraphy" have the same meaning as in the Wireless Telegraphy Acts, 1926 to 2009.

(2) A word or expression which is used in this Licence and which is also used in the European Communities (Electronic Communications Networks and Services) (Framework) Regulations 2011 has, unless the context otherwise requires, the same meaning in this Licence that it has in the European Communities (Electronic Communications Networks and Services) (Framework) Regulations 2011.

(3) A word or expression which is used in this Licence and which is also used in the European Communities (Electronic Communications Networks and Services) (Authorisation) Regulations 2011 has, unless the context otherwise requires, the same

meaning in this Licence that it has in the European Communities (Electronic Communications Networks and Services) (Authorisation) Regulations 2011.

GIVEN under the official seal of the Commission for Communications Regulation this 27 day of February 2012

Alex Chisholm
Chairperson

PART I - Technical Conditions for Analogue Radio

The licensee shall comply with the Technical Conditions for Analogue Radio as per ComReg Document 12/04a.

Commission for
Communications Regulation

Appendix 1 - Technical Conditions

Technical Conditions for Analogue Radio

General conditions attached to a licenced analogue VHF - FM, LF and MF - AM Broadcasting Station

Document No:	**12/04a**
Date:	**07, February 2012**

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Contents

1. TECHNICAL CONDITIONS FOR ANALOGUE RADIO

1.1. PURPOSE

1.2. This document specifies the general conditions attached to a licence issued by ComReg to: -

(a) The Broadcasting Authority of Ireland ("BAI") under Part 6 of the Broadcasting Act 2009, for the establishment, maintenance and operation of an LF-MF independent radio station in the frequency band 150 – 285 kHz or 525 – 1605 kHz and/or a VHF-FM station for an independent radio service in the frequency bands 87.5 to 108MHz. These conditions are set out in accordance with section 59(3) of the Broadcasting Act 2009. The BAI, in accordance with section 50 of the Broadcasting Act 2009, shall ensure that these technical conditions are complied with by the sound broadcasting contractor concerned.

(b) RTÉ for the establishment maintenance and operation of analogue radio broadcasting stations. These conditions are set out in accordance with section 121(1) of the Broadcasting Act 2009.

1.3. This document consolidates the technical conditions for VHF-FM and LF/MF – AM stations into one document. These conditions shall apply to all such stations in the frequency bands 150 – 285 kHz, 525 – 1605 kHz and 87.5 – 108.0 MHz. This document replaces the document published by the Department of Transport, Energy and Communications in September 1995 (T&RT 95/10) and the analogue radio technical conditions contained in the RTÉ licence of 2005, (ComReg document 05/13a).

1.4. GENERAL

1.5. These conditions detail the characteristics of the equipment required for the purposes of frequency spectrum management and safety and do not include detailed equipment specifications.

1.6. Evidence of type approval of equipment is not required by the Commission[1]. Instead a procedure of station certification by a suitably qualified person, will apply.

1.7. Procedures for the modification of or addition of a station assignment are also specified in this document.

1.8. The technical parameters specified in this document are in accordance with values specified in the Radio Regulations (2008), in the Final Acts of the Regional Administrative LF/MF Broadcasting Conference (Regions 1 and 3), Geneva 1975, and in the Final Acts of the Regional Administrative Conference for the planning of VHF Sound Broadcasting, Geneva 1984.

[1] It is recommended that broadcasting transmitters comply with any appropriate European Telecommunications Standard.

1.9. The conditions specified in this document may be varied or added to from time to time by the Commission as required.

1.10. In cases of doubt regarding the interpretation of these conditions, the decision of the Commission will be final.

1.11. **DEFINITIONS AND GLOSSARY OF TERMS**

1.12. Radio Regulations
Radio Regulations, Edition of 2008, as published by the International Telecommunication Union (ITU) as replaced or amended from time to time.

1.13. Assignments
A radio frequency or radio frequency channel for which authorisation by the Commission for Communications Regulation has been granted for its use at a specified station with specified characteristics.

1.14. Station
One or more transmitters or receivers, or a combination of transmitters and receivers, including the associated equipment necessary, at one location for the purpose of carrying on a broadcasting service.

1.15. Geneva 1975 Agreement
The Final Acts of the Regional Administrative LF/MF Broadcasting Conference (Regions 1 and 3), Geneva 1975. An updated plan of assignments constitutes part of this Agreement.

1.16. Geneva 1984 Agreement
The Final Acts of the Regional Administrative Conference for the planning of VHF Sound Broadcasting, Geneva 1984. An updated plan of assignments constitutes part of this Agreement.

1.17. Effective Radiated Power (ERP) in a given direction.
The product of the power supplied to the antenna and its gain relative to a halfwave dipole in a given direction. This is usually expressed in decibels relative to one watt (dBW).

1.18. Effective Monopole Radiated Power (EMRP) in a given direction.
The product of the power supplied to the antenna and its gain in the horizontal plane relative to a short vertical antenna.

1.19. Maximum Effective Radiated Power.
The maximum value of the effective radiated power in any direction.

1.20. Effective Antenna Height (Eff. Ht.)
The height in metres, above the average level of the ground between distances of 3 and 15km from the transmitter. This is calculated for each of 36 evenly spaced radials (10 degree separation) starting from true North[2].

[2] This can be calculated by the Commission using the latitude and longitude in degrees minutes and seconds, for the transmitting station, provided the antenna height above ground level is supplied

1.21. Maximum Effective Antenna Height
The maximum value in metres for the effective antenna height in any one of the 36 directions referred to in 1.21 above.

1.22. Omnidirectional Antenna
An antenna having a horizontal radiation pattern with variations of 2 dB or less over 360 degrees.

1.23. Service Area
Locations where the field strength available (in the case of VHF at the reference receiver height of 10 metres above ground) exceeds both the minimum wanted field strength and the protected field strength (PFS) values as derived from the assignments in the appropriate plans.

1.24. Vertical Aperture
In relation to a VHF antenna system, the distance in wavelengths between the centres of the outermost radiating elements, plus one half wavelength, in the vertical plane.

1.25. Commission
Commission for Communications Regulation.

1.26. Contractor
The holder of a sound broadcasting contract entered into under Section 63 of the Broadcasting Act 2009.

1.27. **TRANSMITTER CONSTRUCTION**

1.28. General
The mechanical and electrical construction shall meet such requirements as can be reasonably set, taking the state of the art into account (see also 1.35 ‘Safety and Weather Protection’).

1.29. All controls, meters, indicators and terminals shall be clearly labelled. Details of the power supply from which the equipment is intended to operate shall be clearly indicated. The equipment should normally consist of one complete unit.

1.30. Controls
Controls which, when wrongly adjusted, increase the risk of causing interference or of improper functioning of the transmitter shall be immediately accessible to qualified personnel only.

1.31. Manufacturer’s Identification
The transmitter shall be provided with an indication showing the manufacturer’s trademark, type designation and serial number. The indication shall be fitted on the outside of the transmitter, shall be clearly readable, non-removable and indelible.

1.32. **FACILITIES FOR TESTING TRANSMISSION INSTALLATION**

1.33. Adequate and accurately calibrated test equipment shall be made available for non-radiative measurement of transmitter power, modulation characteristics and spurious emissions while the station is undergoing initial alignment and regular maintenance.

1.34. SAFETY AND WEATHER PROTECTION

1.35. General Safety

The station and its premises must comply with all relevant statutory safety regulations.

1.36. Safety Controls

There shall be a single control to isolate power for the entire installation. If a form of auxiliary power (such as diesel generators or an uninterruptable power supply) is provided, then the same control should isolate these. The "on" position of such a device must be clearly indicated.

1.37. Safety Standards

The system must comply with

- the Safety Requirements for Radio Transmitting Equipment as per I.S./EN 60215 : 1989 [3]
- any radiation emission standards adopted and published by the International Commission for Non-Ionising Radiation Protection (ICNIRP) or its successors from time to time; any radiation emission standards of the European Committee for Electrotechnical Standards and any other radiation emission standards specified by national and EC law. The Licensee shall ensure that non- ionising radiation emissions from apparatus operated by the Licensee or by its contractors are within the limits specified by the guidelines published by ICNIRP. The Licensee shall ensure that apparatus operated by the Licensee or by its contractors is not installed or operated at a location in such a manner as to cause the aggregate of non-ionising radiation emissions to exceed the limits specified by the guidelines published by ICNIRP.

1.38. Weather Protection

All apparatus and cables exposed to weather, corrosive atmosphere or other adverse conditions shall be so constructed or protected as may be necessary to prevent danger or interference to other services arising from such exposure.

1.39. SITE ENGINEERING

1.40. General

The practice of good site engineering is a necessary requirement to ensure good coverage, safety of personnel and minimum interference to other services. This is particularly relevant when considering other services, especially aeronautical systems and private mobile radio networks used by the emergency services, operating in frequency bands adjacent to the VHF-FM radio broadcasting bands. In addition, careful consideration is required for other services when operating from the same site or in close proximity to them.

1.41. Spurious Emissions

Careful consideration should be given to the levels of spurious emissions set out in 1.54.

[3] This standard is available from the National Standards Authority of Ireland

1.42. Standard
The European Telecommunications Report ETR132 outlines site engineering practises for VHF-FM systems and is freely available from the European Telecommunications Standards Institute (ETSI) website. The Licensee shall ensure that all necessary precautions are undertaken to ensure good site engineering practise.

1.43. **TRANSMISSION CHARACTERISTICS FOR LF AND MF AM BROADCASTING STATIONS**

1.44. Frequency Aspects
The equipment shall be designed to operate on the assigned frequency in the frequency Band 150 – 285 kHz or 525 – 1605 kHz only.

1.45. The frequency tolerance of the main carrier shall be ±10 Hz.

1.46. The transmit-frequency shall be derived from a crystal-oscillator. If use is made of a synthesiser and/or a phase locked loop system, the transmitter shall be inhibited when synchronisation is absent. The transmitter frequency adjustment control shall be accessible to qualified personnel only.

1.47. Maximum Permitted Levels of Spurious Emissions
The maximum permitted level of spurious emission shall be at least 40dB below the mean power level of the transmitter and at no time may exceed an absolute power level of 50mW.

1.48. Class of Emission, Bandwidth and Modulation Standards
In accordance with the Geneva 1975 Agreement, the transmission system used shall be double sideband amplitude modulation with full carrier. This is normally specified as 9K00A3EGN.

1.49. AF input and RF output Impedance
The nominal A.F. input impedance shall be 600 Ohm balanced to earth within the modulation frequency range 40Hz – 4.5 kHz. The R.F. output impedance of the equipment shall be in the range of 50 - 160 Ohm.

1.50. Transmit Power and Radiated Power
The transmitter power, stated in the licence, is the carrier power in the absence of modulation.

1.51. The radiated power is the sum of the nominal power of the transmitter (in dBW) and the gain of the antenna in dB (relative to a short vertical antenna) without taking any losses into account. It is expressed as the effective monopole radiated power (emrp in kW or in dB relative to 1 kW).

1.52. As the radiated power is the sum of the transmitter output power (in dBW) and the gain of the antenna (in dB) the output carrier power of transmitter shall be adjustable so that the value of the radiated power permitted for each station is not exceeded. If the equipment is designed to operate with different levels of carrier power, the rated output for each power level must be declared by the manufacturer.

1.53. SITE TRANSMISSION CHARACTERISTICS FOR VHF – FM BROADCASTING STATIONS[4]

1.54. Frequency Aspects
The equipment shall be adjusted to operate on the assigned frequency in the frequency band 87.5 to 108 MHz only.

1.55. The frequency tolerance of the main carrier shall be:

- ±2 kHz, for transmitters of mean power greater than 17 dBW.

- ±3 kHz, for transmitters of mean power less than or equal to 17 dBW.

1.56. The transmit-frequency shall be derived from a crystal-oscillator. If use is made of a synthesiser and/or a phase locked loop system, the transmitter shall be inhibited when synchronisation is absent. The transmitter frequency adjustment control shall be accessible to qualified personnel only.

1.57. Maximum Permitted Levels of Spurious Emissions
The maximum permitted level of spurious emission for a transmitting station shall be:

- 40 dB below the licensed E.R.P. for a transmitting station E.R.P. equal to or less than 4 dBW;
- 250 µW E.R.P. for a transmitting station E.R.P. greater than 4 dBW and less than 49 dBW;
- 85 dB below the licensed E.R.P. for a transmitting station E.R.P. equal to or greater than 49 dBW.

1.58. These limits must be adhered to for the frequency range 87.5 to 137 MHz.

1.59. A band pass filter, which provides a minimum attenuation of 60 dB at frequencies outside the VHF-FM broadcasting band, shall be fitted. At frequencies close to the band edges where 60dB attenuation is more difficult, the Licensee may request that an alternative attenuation be permitted, subject to agreement with the Commission.

[4] ETS 300 384 (1995) is the applicable VHF-FM transmitter standard from the European Telecommunications Standard Institute.

1.60. Designation of Emission and Maximum Permitted Bandwidth

1.61. The bandwidth of the radiated signal shall not exceed 270 kHz. The emission shall comply with the following designation :-

- 270KF9EHW for Stereophonic;
- 270KF9EGW for Monophonic, where:

270K	=	Necessary bandwidth	=	270 kHz
F	=	Type of modulation	=	Frequency modulation
9	=	Modulating signal	=	Composite analogue/digital signal
E	=	Information type	=	Sound broadcasting
H	=	Broadcast quality sound (stereophonic)		
G	=	Broadcast quality sound (monophonic)		
W	=	Combination of frequency and time division multiplex		

1.62. Modulation Standards

In accordance with the Geneva 1984 Agreement, the transmission system used shall be either Monophonic or Stereophonic pilot tone system.

(a) Monophonic Transmission

The radio-frequency signal consists of a carrier, frequency modulated by the sound signal, after pre-emphasis, with a maximum frequency deviation of ±75 kHz.

(b) Stereophonic Transmission

The radio-frequency signal consists of a carrier, frequency modulated by a baseband signal according to the specifications of the pilot-tone system. The maximum frequency deviation is ±75kHz.

(c) Pre emphasis and low pass filter

The transmitter must be provided with a pre-emphasis filter with a time-constant of 50 microseconds, combined with a low-pass filter with an attenuation of at least 30 dB at an input modulation frequency of 20 kHz, relative to the level at 1 kHz.

1.63. It is possible, even while operating within the specified maximum deviation limit of ±75kHz, to infringe on the internationally agreed protection ratios used in planning. This is caused by a degree of audio processing resulting in an increase, beyond a reference level[5], of the average power contained within the multiplexed signal envelope integrated over 60 seconds. Where this occurs, the audio signal level must be adjusted, at the responsible station, so as to eliminate any such infringement. Alternatively, an e.r.p. restriction may be imposed by the Commission.

1.64. Permitted subcarriers for the transmission of supplementary information

The addition of a sub-carrier on 57 kHz for the transmission of supplementary information using the Radio Data System (RDS), as specified in I.S. EN 62106 : 2009, is considered as being included in the above Designation of Emission and Permitted Bandwidth. The standard is available from the National Standards Authority of Ireland. Only certain features of this system are licensed[6]. The Licensee

[5]As per ITU-R BS.412-9 or as subsequently amended

[6]An updated list of approved features shall be provided to the Licensee by the Commission on request.

shall provide a completed Certificate of Compliance[7] to the Commission within one month of the commencement of transmission of RDS features.

1.65. RF Output Impedance

The RF output ports of the transmitter and associated equipment shall be capable of interfacing with equipment whose input impedance is 50 ohms.

1.66. Vertically Radiated Power

Due to the proximity of the VHF-FM radio broadcasting band to frequency bands used by aeronautical services, it is important, in the interests of safety, that the power radiated in the vertical direction is restricted. This applies to the entire country due to the nature of the aeronautical services involved. Therefore, the minimum limits, contained in table 1.0, for the vertical aperture of the transmitting antenna shall be complied with. For an effective radiated power of less than 30 dBW, a correction factor may apply, which allows the use of a single dipole. This will be applied by the Commission, and specified on the licence, when appropriate.

Maximum Total E.R.P.	Vertical aperture in Wavelengths
44 dBW <= E.R.P.	8
37 dBW <= E.R.P. < 44 dBW	4
30 dBW <= E.R.P. < 37 dBW	2
E.R.P. < 30 dBW	1

Table 1.0: Minimum limits for Vertically Radiated Power

1.67. **MINIMUM FIELD STRENGTH**

1.68. The minimum field strengths used in planning are:

1) +73dB(µV/m) for LF (150 kHz to 285 kHz)

2) +60dB(µV/m) for MF (525 kHz to 1605 kHz)

3) +54dB(µV/m) for band II Stereo (87.5 MHz to 108 MHz)

4) +48dB(µV/m) for band II Mono (87.5 MHz to 108 MHz)

1.69. The VHF values are for 10 metres above ground level.

1.70. Protection cannot be sought for locations with a field strength below the above mentioned values.

[7]The Certificate of Compliance form is contained at Annex 3. In some cases only the sections of a certificate relevant to RDS operation may be necessary.

1.71. STATION CERTIFICATION AND MAINTENANCE

1.72. Access and Personnel

Only authorised personnel shall have access to the Transmission Equipment for the purpose of adjustment or maintenance of that equipment. The Licensee shall ensure that all authorised personnel are adequately trained for the functions they are to undertake.

1.73. Examination and Testing

When the installation of equipment is complete the Licensee shall inform the Commission and seek permission for on-air testing. Permission for on air testing prior to the examination and commencement of regular service can be obtained. On-air testing shall not be carried out with real programme material but with loop-around of sample programming not lasting more than fifteen minutes. The Licensee shall then examine the station and complete a Certificate of Compliance, contained in Annex 3. This will be maintained by the Licensee. The Licensee, when ready to commence operations, shall inform the Commission of the date of commencement of operations, indicating that the station is operating in accordance with the specified conditions and characteristics of the licence.

1.74. Maintenance

The transmission installation shall be so maintained as to always comply with these conditions. The Licensee and/or the sound broadcasting contractor where appropriate shall ensure that a suitably qualified person has the necessary technical training, knowledge and practical experience so as to be able to certify that the installation and maintenance of the station complies with these conditions. The Licensee and/or the sound broadcasting contractor where appropriate shall examine each station annually to ensure compliance and shall keep a log indicating dates and results of these examinations. In the case of sound broadcasting contracts, the BAI will audit such stations on a regular basis and will agree its approach for such audits with the Commission.

1.75. Time Limit

A maximum period of one year will be allowed from the date of amendment of a licence for an amended station to come on air and the procedures outlined in this section to be completed. If a certificate of compliance has not been forwarded to the Commission within this period the approval for the station in question may be revoked by the Commission.

1.76. ADDITIONAL AND MODIFIED ASSIGNMENTS

1.77. Requisite Information

The Licensee shall provide the Commission with all the necessary details in support of an application for an additional assignment or a modification of an existing assignment. The standard information required is contained in Annex 1.

1.78. Examination

The Licensee shall have regard, in preparation of an application for an additional or modified assignment, to other Licensees having assignments in the same frequency segment and make an examination of the compatibility of the assignments. A report of this examination shall be provided to the Commission at the time of making an application.

1.79. Field Strength Measurements

It may be necessary to supply field strength measurements in support of an application or an interference complaint. In relation to VHF, these measurements shall be supplied in accordance with the procedures outlined in Annex 2.

1.80. International Agreements

The Commission is bound by the provisions of the Radio Regulations and various Regional Radiocommunications Agreements, including but not limited to the the Geneva 1975 Agreement, the Geneva 1984 Agreement and the LEGBAC Memorandum of Understanding[8]. These agreements require the Commission to undertake certain co-ordination and registration procedures when considering additions or modifications of the assignment plan.

1.81. A minimum of three months is allowed for co-ordination. However, co-ordination of additional or modified assignments cannot be guaranteed. The Licensee shall allow adequate time in planning and provide the Commission with the relevant information to ensure compliance with these agreements.

[8] Limited Exploratory Group on Broadcasting to Aeronautical Compatibility. Memorandum of Understanding signed at the World Administrative Radio Conference, 1992.

ANNEXES

Annex1

Information for the Addition / Modification of a sound broadcasting assignment

1 Frequency (MHz/kHz):

2 Name of Transmitting Station:

3 Geographic Co-ordinates:

4 National Grid Reference:

5 Altitude of Site above Sea Level (m):

6 Height of Antenna above Ground Level (m):

7 Polarization:

8 Total Effective Radiated Power (dBW):

9 Maximum Horizontal ERP (dBW):

10 Maximum Vertical ERP (dBW):

11 Directivity of Antenna (D or ND):

12 Map, Ordnance Survey Maps such as the “Discovery Series" or equivalent are acceptable, outlining the intended service area. The map shall outline the complete area to be served by the programme service requiring the additional or modified assignment, where appropriate.

Annex2

Standardised Procedure for Making Field Measurements of Signals Radiated from VHF and UHF Broadcasting Transmitters

Location of Tests

1. The precise location of the selected test point should be noted on a map. The scale of the map should be large enough to allow a national grid reference, accurate to 100m, to be easily read.

2. A general description of the test point vicinity should be noted (i.e. urban, suburban, rural, mountains, flat etc).

3. Particular note should be made of obstructions, if any, in the vicinity that may obscure the line of sight from the selected test point to a particular transmitter.

4. The test point should be selected as far as possible, so as to minimize electrical interference from ESB power lines, heavy traffic or high-power industrial electrical apparatus.

Taking Measurements

1. **Height of Antenna above ground level (agl)**
   The internationally accepted reference height, used in VHF and UHF broadcast planning, for field strength values is 10 metres agl.

2. **Horizontal separation distance of the antenna from the mast**
   The antenna should be separated a suitable distance from the mast. This minimises any distortive effects on the specified antenna gain pattern which may be caused by the proximity of the mast. A separation distance of at least one quarter wavelength between the antenna and the mast is recommended.

3. **Cable Loss**
   Cable loss should be taken into account

4. **Voltage Standing Wave Ratio (VSWR)**
   The VSWR of the antenna should be measured, for the frequency range in question, using a VSWR meter. This is done to verify the antenna impedance is matched to that of the cable. The VSWR should be between 1.0 and 1.5.

   A form to plan and record measurements has been drawn up and is contained below.

5. **Conversion Formulae**

Equations for the conversion of voltage values to electric field strength values are contained in below.

Equations for conversion of voltage values to electric field strength values :

$$E = 4 * (\Pi / \lambda) * \sqrt{((30 * V^2) / (R * G))}$$

where

E = Electric Field Strength (volts/metre)
Π = 3.14159
λ = Wavelength of transmitted signal (metres)
V = Measured Voltage Reading (volts)
R = Input Impedance (50 ohms)
G = Receiving Antenna Gain (Linear Ratio)

$$E_{dB\mu V/m} = 20 * Log_{10} E_{\mu V/m}$$

Alternatively,

$$E_{dB\mu V/m} = V_{dB\mu V} + 20 * Log_{10}(F_{MHz}) - G_{rx} + L_{dB} - 29.78$$

where

F = Frequency
L = Feeder losses

Date: **Sheet No.**

MEASUREMENTS

Downlead (Uncorrected) Values

Antenna Details:		
Type:	Height (m):	Gain (dB):
	Polarization:	VSWR:
Cable Loss at 100 MHz (dB):	Cable Loss at 200 MHz (dB):	
Cable Loss at 600 MHz (dB):	Cable Loss at 800 MHz (dB):	
Measuring Instrument Used:		

Test Point

NGR: Description:	NGR: Description:	NGR: Description:

Transmitter Site	Description of Terrain in Transmitter Direction			
Station	Freq (MHz)	Signal Level (dBµV)		

Transmitter Site	Description of Terrain in Transmitter Direction			
Station	Freq (MHz)	Signal Level (dBµV)		

Date: **Sheet No.**

Test Point

NGR: Description:	NGR: Description:	NGR: Description:

Transmitter Site	Description of Terrain in Transmitter Direction			
Station	Freq (MHz)	Signal Level (dBµV)		

Transmitter Site	Description of Terrain in Transmitter Direction			
Station	Freq (MHz)	Signal Level (dBµV)		

Transmitter Site	Description of Terrain in Transmitter Direction			
Station	Freq (MHz)	Signal Level (dBµV)		

Annex 3

Certificate of Compliance

Programme Service Name _____

Name of Transmitter site _____

Transmitter Site National Grid Reference _____

Frequency (MHz/kHz) _____

On-Air date _____

Transmitter:

Operating Output RF Power of transmitter
FM sound carrier unmodulated carrier _____
AM sound carrier unmodulated carrier _____
Vision Carrier peak envelope power _____

Measured Frequency of transmitter
AM or FM Sound Carrier _____
Vision Carrier _____

Measured Frequency Deviation at 100 % Modulation _____
(FM sound carrier only)

Measured Maximum Bandwidth of Transmission _____

Measured Maximum Spurious Emission Level _____

Height of Antenna (above ground level) _____

Polarization _____

Aperture of Antenna in Wavelengths _____

Maximum Gain of Antenna _____

Azimuth of preferred Orientation (if N.D.) _____

Azimuth of Maximum Gain (if D) _____

Feeder, Transformer / Harness Loss (dB) _____

Describe any filtering or isolation equipment fitted between the Transmitter output and the Antenna system

_____
_____
_____
_____

I hereby certify that this station complies with the licence characteristics and conditions as issued by the Commission for Communications Regulation.

Signed _____ Date _____
on behalf of _____

RDS Features

Programme Identification (PI) Code (Hexadecimal)

Programme Service Name

Basic Features ☐ Group Types OA/OB, 15B, 14A/14B, 1A/1B and 4A including

Traffic Programme	Traffic Announcement,	Clock Time
Program Type	Music/Speech,	Decoder Information
Alternative Frequencies	Programme Item Number	Enhanced Other Networks

Alternative Frequencies	
Transmitter Site	Frequency

Enhanced Other Networks
by Pl Hexadecimal Code

Additional Features

Radio Text	*	Group Type 2A/2B
Transparent Data Channel	*	Group Type 5A//5B
In-House	*	Group Type 6A/6B
Radio Paging	*	Group Type 7A
Traffic Message Channel	*	Group Type 8A

* = authorised / not authorised

I hereby certify that this station complies with the licence characteristics and conditions as issued by the Commission for Communications Regulation.

Signed _____ Date _____

on behalf of _____

PART II – Technical Schedules

Part II

Section 1 - Band II VHF Radio - RTE Radio 1

Station Name	Freq. (MHz)	Longitude	Latitude	Site Ht (m)	Ant. Ht (m)	Pol.	Max. E.R.P. (Watts) per Pol	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	100°	110°	120°	130°	140°	150°	160°	170°	180°	190°	200°	210°	220°	230°	240°	250°	260°	270°	280°	290°	300°	310°	320°	330°	340°	350°
ACHILL	89.9	10W0135	53N5726	366	30	M	3,020	0	0	0	0	0	6	6	6	6	6	6	6	6	6	0	0	0	0	0	0	0	0	0	6	6	6	6	6	6	6	6	0	0	0	0
ARANMORE	89.6	8W3027	54N5859	125	50	M	3,020	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ATHLONE	89.3	7W5500	53N2530	40	45	M	20	0	0	0	0.1	0.2	0.4	0.5	0.6	0.8	1	1.2	1.5	1.7	2	2.5	3	3	3	3	3	3	3	2.5	2	1.7	1.5	1.2	1	0.8	0.6	0.5	0.4	0.2	0.1	0	0
BALLYBOFEY	89.7	7W4458	54N4730	83	27	M	501	2.4	2.6	2.6	2.5	2	1.4	1	0.4	0.1	0	0.2	1	2	3.3	5	7	8.5	9.7	10	10	10	10	9.7	8.5	7	5	3.2	1.8	1	0.4	0	0.1	0.4	1	1.4	2
BALLYDAVID	89.1	10W2215	52N1143	10	50	M	30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BANTRY	88.7	9W2638	51N3956	185	20	M	1,000	2	1	1	0	0	0	0	1	1	3	4	6	8	9	10	10	10	10	10	9	8	6	4	3	1	1	0	0	0	0	1	1	2	2	2	2
CAIRN HILL	89.8	7W4256	53N4825	277	70	M	19,953	3	4	5	7	9	10	10	10	10	10	10	10	10	10	9	7	5	4	3	2	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2
CASLA	88.4	9W3334	53N1721	10	50	M	1,995	0	0	0	1	1	3	4	6	8	9	10	10	10	10	10	9	8	6	4	2	1	1	0	0	0	1	1	2	2	3	3	3	2	2	1	1
CASTLEBAR	89.3	9W2223	53N5530	420	30	M	3,020	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	6	6	6	6	6	6
CASTLETOWNBERE	88.3	10W0003	51N3822	460	15	M	3,020	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CLERMONT CARN	95.2	6W1919	54N0443	510	30	M	39,811	10	10	10	10	10	10	10	10	7	7	7	5	5	3	3	3	3	0	0	0	0	0	0	0	0	0	0	0	3	3	3	3	5	5	7	7
CLIFDEN	89.5	9W5618	53N3024	270	40	M	3,020	0	0	0	0	6	6	6	6	6	6	6	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CLONMEL	88.3	7W4135	52N2025	215	30	M	1,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
COLLINS BARRACKS	89.7	8W2759	51N5508	67	30	M	50	12	12	12	12	12	10	10	8	6	4	4	2	0	0	0	0	0	0	0	0	0	0	0	2	4	4	6	8	10	10	12	12	12	12	12	12
CROSSHAVEN	88.2	8W1739	51N4728	91	30	M	3,020	1.5	1	0.5	0.1	0	0.1	0.5	1	1.5	4	5.9	7.6	9	9.6	9.8	9.8	9.8	9.6	9	7.6	5.9	4	1.5	1	0.5	0.1	0	0.1	0.5	1	1.5	1.9	1.1	2.2	2.1	1.9
DUNGARVAN	88.5	7W4404	52N0414	255	35	M	3,020	0	0	0	0	0	0	0	1	1	2	3	4	6	7	7	6	6	6	5	5	5	6	6	6	7	7	6	4	3	2	1	1	0	0	0	0
FANAD	89.8	7W3949	55N1338	220	10	M	3,981	10	10	10	10	10	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	10	10
FERMOY	89.4	8W1649	52N0836	50	20	M	50	0.6	1.4	2.6	4.1	6	7.8	9.4	10	10	10	10	10	9.4	7.7	6	4	2.4	1.4	0.6	0.1	0	0.3	0.7	1.2	1.7	2.2	2.5	2.7	2.5	2.2	1.8	1.2	0.7	0.2	0	0.1
GREYSTONES - BELLEVUE	89.5	6W0600	53N0856	220	40	V	1,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HOLYWELL HILL	89.2	7W2405	54N5956	260	30	M	6,026	3	3	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	3	3	3	3	3	0	0	0	0	0	0	0	0	0	3
KILDUFF	90.2	7W5437	52N5007	443	30	V	2,951	19.1	18	14.2	11	8.9	7	5	3	2	1	1	1	0.4	0	0.1	1	1.1	1	1.1	1.5	2.4	4	6	9	12	15	19	22	21	20	16.2	16	15.4	16	17.5	18
KILKEAVERAGH	89.5	10W2000	51N5202	360	15	M	3,020	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	0	0	0
KINSALE	89	8W2951	51N4152	30	7	M	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
KIPPURE	89.1	6W1955	53N1038	750	60	M	50,119	6	6	6	6	10	10	6	6	6	6	2	2	2	2	2	2	2	2	2	6	6	6	6	6	6	0	0	0	0	0	0	0	0	0	0	6
KNOCKANORE	89.2	9W3626	52N3131	267	30	M	1,000	0	0	0.5	1	1.5	2	2	2	2	2	1.5	1	0.5	0	0	0	0.5	1	2.5	4	5.5	7	8	9	9	9	9	9	8	7	5.5	4	2.5	1	0.5	0
KNOCKMOYLE	88.4	9W4242	52N1238	375	40	M	1,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
LEHINCH	89.7	9W2223	52N5932	207	30	M	100	5	4	3	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	3	4	5	6	8	8	9	9	9	9	8	8	6
MAAMCLASSACH	88.7	10W2535	52N0832	200	30	M	50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MAGHERA	88.8	8W4308	52N5803	400	102	M	158,489	0	0	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	4	4	4	4	4	4	4	4	4	0	0	0	0	0	0	0
MAGHERDARTY	88.8	8W1032	55N0806	110	30	M	151	9	9	9	8	8	6	5	4	3	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	3	4	5	6	8	8	9	9	9
MALIN	88.9	7W1733	55N1931	183	35	M	1,995	7	7	7	7	7	7	7	7	7	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	7	7
MITCHELSTOWN	88.6	8W1823	52N1842	335	25	M	100	12	12	12	12	12	10	10	8	6	4	4	2	0	0	0	0	0	0	0	0	0	0	0	2	4	4	6	8	10	10	12	12	12	12	12	12
MONAGHAN / LUGAD	88.9	7W0143	54N1106	200	31	M	2,512	1.3	2.5	4	5.9	7.6	9	9.6	9.8	9.8	9.8	9.6	9	7.6	5.9	4	2.5	1.3	0.5	0.1	0	0.1	0.5	1	1.5	1.9	1.1	2.2	2.1	1.9	1.5	1	0.5	0.1	0	0.1	0.5
MOUNT LEINSTER	89.6	6W4643	52N3706	796	60	M	199,526	4	4	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	0	0	0	0	0	0	0	0	0	0	4	4	4	4	4	4	4
MOVILLE	88.3	7W0104	55N1315	320	20	M	1,000	13	13	13	13	13	13	11	8	6	4	3	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	3	4	6	8	11	13
MULLAGHANISH	90	9W0844	51N5854	650	105	M	158,489	3	3	3	3	3	3	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	0	0	0	0	0	0	0	3	3	3	3
SPUR HILL	89.2	8W3100	51N5121	137	35	M	5,012	1.3	2.5	4	5.9	7.6	9	9.6	9.8	9.8	9.8	9.6	9	7.6	5.9	4	2.5	1.3	0.5	0.1	0	0.1	0.5	1	1.5	1.9	1.1	2.2	2.1	1.9	1.5	1	0.5	0.1	0	0.1	0.5
SUIR VALLEY	89	7W1546	52N2224	280	30	M	3,020	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	6	6	6	6
THREE ROCK	88.5	6W1411	53N1449	448	40	M	5,012	1	2	3	3	4	5	7	6	6	8	7	7	7	8	8	6	5	5	6	8	8	7	7	8	8	6	6	7	5	4	3	3	2	1	0	0
TRUSKMORE	88.2	8W2259	54N2225	640	39	M	125,893	0	0	0	0	0	3	3	5	6	6	3	3	3	3	3	3	3	3	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WATERFORD	88.3	7W0752	52N1543	74	20	M	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WOODCOCK HILL	89.4	8W4122	52N4311	244	30	M	2,512	0	0	6	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Part II

Section 2 - Band II VHF Radio - RTE 2FM

Station Name	Freq. (MHz)	Longitude	Latitude	Site Ht (m)	Ant. Ht (m)	Pol	Max. E.R.P. (Watts) per Pol	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	100°	110°	120°	130°	140°	150°	160°	170°	180°	190°	200°	210°	220°	230°	240°	250°	260°	270°	280°	290°	300°	310°	320°	330°	340°	350°
ACHILL	92.1	10W0135	53N5726	366	30	M	3,020	0	0	0	0	0	6	6	6	6	6	6	6	6	6	0	0	0	0	0	0	0	0	0	6	6	6	6	6	6	6	6	6	0	0	0	0
ARANMORE	91.8	8W3027	54N5859	125	50	M	3,020	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ATHLONE	91.5	7W5600	53N253	40	45	M	20	0	0	0	0.1	0.2	0.4	0.5	0.6	0.8	1	1.2	1.5	1.7	2	2.5	3	3	3	3	3	3	3	2.5	2	1.7	1.5	1.2	1	0.8	0.6	0.5	0.4	0.2	0.1	0	0
BALLYBOFEY	91.9	7W4458	54N473	83	27	M	501	2.4	2.6	2.6	2.5	2	1.4	1	0.4	0.1	0	0.2	1	2	3.3	5	7	8.5	9.7	10	10	10	10	9.7	8.5	7	5	3.2	1.8	1	0.4	0	0.1	0.4	1	1.4	2
BALLYDAVID	91.3	10W2215	52N1143	10	50	M	30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BANTRY	90.9	9W2637	51N3955	185	20	M	1,000	2	1	1	0	0	0	0	1	1	3	4	6	8	9	10	10	10	10	10	9	8	6	4	3	1	1	0	0	0	0	1	1	2	2	2	2
CASLA	90.6	9W3334	53N1721	10	50	M	1,995	0	0	0	1	1	3	4	6	8	9	10	10	10	10	10	9	8	6	4	2	1	1	0	0	0	1	1	2	2	3	3	3	2	2	1	1
CASTLEBAR	91.5	9W2223	53N5530	420	30	M	3,020	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	6	6	6	6	6	6
CASTLETOWNBERE	90.5	10W0003	51N3822	460	15	M	3,020	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CLERMONT CARN	97	6W1919	54N0443	510	30	M	39,811	10	10	10	10	10	10	10	10	7	7	7	5	5	3	3	3	3	0	0	0	0	0	0	0	0	0	0	0	3	3	3	3	5	5	7	7
CLIFDEN	91.7	9W5618	53N3024	270	40	M	3,020	0	0	0	0	6	6	6	6	6	6	6	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CLONMEL	90.5	7W4135	52N2025	215	30	M	1,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
COLLINS BARRACKS	92	8W2759	51N5508	67	30	M	50	12	12	12	12	12	10	10	8	6	4	4	2	0	0	0	0	0	0	0	0	0	0	0	2	4	4	6	8	10	10	12	12	12	12	12	12
CROSSHAVEN	90.4	8W1739	51N4728	91	30	M	3,020	1.5	1	0.5	0.1	0	0.1	0.5	1	1.5	4	5.9	7.6	9	9.6	9.8	9.8	9.8	9.6	9	7.6	5.9	4	1.5	1	0.5	0.1	0	0.1	0.5	1	1.5	1.9	2.1	2.2	2.1	1.9
DUNGARVAN	90.7	7W4404	52N0414	255	35	M	3,020	0	0	0	0	0	0	0	1	1	2	3	4	6	7	7	6	6	6	5	5	5	6	6	6	7	7	6	4	3	2	1	1	0	0	0	0
FANAD	92	7W3949	55N1336	220	10	M	3,981	10	10	10	10	10	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	10	10	10
FERMOY	91.6	8W1649	52N0836	50	20	M	50	0.6	1.4	2.6	4.1	6	7.8	9.4	10	10	10	10	10	9.4	7.7	6	4	2.4	1.4	0.6	0.1	0	0.3	0.7	1.2	1.7	2.2	2.5	2.7	2.5	2.2	1.8	1.2	0.7	0.2	0	0.1
GREYSTONES - BELLEVUE	91.7	6W0600	53N0856	220	40	V	1,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HOLYWELL HILL	91.4	7W2405	54N5956	260	30	M	6,026	3	3	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	3	3	3	3	3	0	0	0	0	0	0	0	0	0	3
KILDUFF	92.4	7W5437	52N5007	443	30	V	2,951	19.1	18	14.2	11	8.9	7	5	3	2	1	1	1	0.4	0	0.1	1	1.1	1	1.1	1.5	2.4	4	6	9	12	15	19	22	21	20	18.2	16	15.4	16	17.5	18
KILKEAVERAGH	91.7	10W2000	51N5202	360	15	M	3,020	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	0	0	0
KINSALE	91.2	8W2951	51N4152	30	7	M	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
KIPPURE	91.3	6W1955	53N1038	750	60	M	50,119	6	6	6	6	10	10	6	6	6	6	2	2	2	2	2	2	2	2	2	2	6	6	6	6	6	0	0	0	0	0	0	0	0	0	0	6
KNOCKANORE	91.4	9W3626	52N3131	267	30	M	1,000	0	0	0.5	1	1.5	2	2	2	2	2	1.5	1	0.5	0	0	0	0.5	1	2.5	4	5.5	7	8	9	9	9	9	9	8	7	5.5	4	2.5	1	0.5	0
KNOCKMOYLE	90.6	9W4242	52N1238	375	40	M	1,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
LEHINCH	91.9	9W2223	52N5932	207	30	M	100	5	4	3	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	3	4	5	6	8	8	9	9	9	9	9	8	8	6
MAAMCLASSACH	90.9	10W2535	52N0832	200	30	M	50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MAGHERA	91	8W4308	52N5803	400	102	M	158,489	0	0	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	4	4	4	4	4	4	4	4	4	0	0	0	0	0	0	0	0
MAGHERDARTY	91	8W1032	55N0806	110	30	M	151	9	9	9	8	8	6	5	4	3	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	3	4	5	6	8	8	9	9
MALIN	91.1	7W1733	55N1931	183	35	M	1,995	7	7	7	7	7	7	7	7	7	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	7
MITCHELSTOWN	90.8	8W1823	52N1842	335	25	M	100	12	12	12	12	12	10	10	8	6	4	4	2	0	0	0	0	0	0	0	0	0	0	0	2	4	4	6	8	10	10	12	12	12	12	12	12
MONAGHAN / LUGAD	91.1	7W0143	54N1106	200	31	M	2,512	1.3	2.5	4	5.9	7.6	9	9.6	9.8	9.8	9.8	9.6	9	7.6	5.9	4	2.5	1.3	0.5	0.1	0	0.1	0.5	1	1.5	1.9	2.1	2.2	2.1	1.9	1.5	1	0.5	0.1	0	0.1	0.5
MOUNT LEINSTER	91.6	6W4643	52N3706	796	60	M	199,526	4	4	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
MOVILLE	90.5	7W0104	55N1315	320	20	M	1,000	13	13	13	13	13	13	11	8	6	4	3	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MULLAGHANISH	92.2	9W0844	51N5854	650	105	M	158,489	3	3	3	3	3	3	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	0	0	0	0	0	0	0	0	0	3	3
SPUR HILL	91.4	8W3100	51N5121	137	35	M	5,012	1.5	1	0.5	0.1	0	0.1	0.5	1.3	2.5	4	5.9	7.6	9	9.6	9.8	9.8	9.8	9.6	9	7.6	5.9	4	2.5	1.3	0.5	0.1	0	0.1	0.5	1	1.5	1.9	2.1	2.2	2.3	1.9
SUIR VALLEY	91.2	7W1546	52N2224	280	30	M	3,020	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	6	6	6	6
THREE ROCK	90.7	6W1411	53N1449	448	40	M	5,012	1	2	3	3	4	5	7	6	6	8	7	7	7	8	8	6	5	5	6	8	8	7	7	6	8	6	6	7	5	4	3	3	2	1	0	0
TRUSKMORE	90.4	8W2259	54N2225	640	39	M	125,893	0	0	0	0	0	3	3	5	6	6	3	3	3	3	3	3	3	3	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WATERFORD	90.5	7W0752	52N1543	74	20	M	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WOODCOCK HILL	91.6	8W4122	52N4311	244	30	M	2,512	0	0	6	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Station Name	Freq. (MHz)	Longitude	Latitude	Site Ht (m)	Ant. Ht (m)	Pol	Max. E.R.P. (Watts) per Pol	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	100°	110°	120°	130°	140°	150°	160°	170°	180°	190°	200°	210°	220°	230°	240°	250°	260°	270°	280°	290°	300°	310°	320°	330°	340°	350°
ACHILL	94.3	-10.0135	53.5726	366	30	M	3,020	0	0	0	0	0	6	6	6	6	6	6	6	6	6	0	0	0	0	0	0	0	0	0	6	6	6	6	6	6	6	6	6	0	0	0	0
ARANMORE	99.2	-8.3027	54.5859	125	50	M	3,020	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ATHLONE	98.9	-7.55	53.253	40	45	M	20	0	0	0	0.1	0.2	0.4	0.5	0.6	0.8	1	1.2	1.5	1.7	2	2.5	3	3	3	3	3	3	3	2.5	2	1.7	1.5	1.2	1	0.8	0.6	0.5	0.4	0.2	0.1	0	0
BALLYBOFEY	99.3	-7.4458	54.473	83	27	M	501	2.4	2.6	2.6	2.5	2	1.4	1	0.4	0.1	0	0.2	1	2	3.3	5	7	8.5	9.7	10	10	10	10	9.7	8.5	7	5	3.2	1.8	1	0.4	0	0.1	0.4	1	1.4	2
BALLYDAVID	98.8	-10.2215	52.1142	16	35	V	60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BANTRY	98.3	-9.2638	51.3956	185	20	M	1,000	2	1	1	0	0	0	0	1	1	3	4	6	8	9	10	10	10	10	10	9	8	6	4	3	1	1	0	0	0	0	1	1	2	2	2	2
CASLA	98	-9.3334	53.1721	10	50	M	1,995	0	0	0	1	1	3	4	6	8	9	10	10	10	10	10	9	8	6	4	2	1	1	0	0	0	1	1	2	2	3	3	3	2	2	1	1
CASTLEBAR	93.7	-9.2223	53.553	420	30	M	3,020	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	6	6	6	6	6	6	6
CASTLETOWNBERE	97.9	-10.0003	51.3822	460	15	M	3,020	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CLERMONT CARN	87.8	-6.1919	54.0443	510	30	M	39,811	10	10	10	10	10	10	10	10	7	7	7	5	5	3	3	3	3	0	0	0	0	0	0	0	0	0	0	3	3	3	3	5	5	7	7	7
CLIFDEN	99.1	-9.5618	53.3024	270	40	M	3,020	0	0	0	0	6	6	6	6	6	6	6	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CLONMEL	97.9	-7.4135	52.2025	215	30	M	1,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
COLLINS BARRACKS	99.3	-8.2759	51.5508	67	30	M	50	12	12	12	12	12	10	10	8	6	4	4	2	0	0	0	0	0	0	0	0	0	0	0	2	4	4	6	8	10	10	12	12	12	12	12	12
CROSSHAVEN	97.8	-8.1739	51.4728	91	30	M	3,020	1.5	1	0.5	0.1	0	0.1	0.5	1	1.5	4	5.9	7.6	9	9.6	9.8	9.8	9.8	9.6	9	7.6	5.9	4	1.5	1	0.5	0.1	0	0.1	0.5	1	1.5	1.9	1.1	2.2	2.1	1.9
DUNGARVAN	96.1	-7.4404	52.0414	255	35	M	3,020	0	0	0	0	0	0	0	1	1	2	3	4	6	7	7	6	6	6	5	5	5	6	6	6	7	7	6	4	3	2	1	1	0	0	0	0
FANAD	99.4	-7.3949	55.1336	220	10	M	3,981	10	10	10	10	10	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	10	10
FERMOY	99	-8.1649	52.0836	50	20	M	50	0.6	1.4	2.6	4.1	6	7.8	9.4	10	10	10	10	10	9.4	7.7	6	4	2.4	1.4	0.6	0.1	0	0.3	0.7	1.2	1.7	2.2	2.5	2.7	2.5	2.2	1.8	1.2	0.7	0.2	0	0.1
GREYSTONES - BELLEVUE	99.1	-6.06	53.0856	220	40	V	1,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HOLYWELL HILL	98.8	-7.2405	54.5956	260	30	M	6,026	3	3	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	3	3	3	3	3	0	0	0	0	0	0	0	0	0	3
KILKEAVERAGH	99.1	-10.2	51.5202	360	15	M	3,020	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	0	0	0	0
KINSALE	98.6	-8.2951	51.4152	30	7	M	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
KIPPURE	98.7	-6.1955	53.1038	750	60	M	50,119	6	6	6	6	10	10	6	6	6	6	2	2	2	2	2	2	2	2	2	6	6	6	6	6	6	0	0	0	0	0	0	0	0	0	0	6
KNOCKANDRE	98.7	-9.3624	52.3129	259	16	V	2,000	0	0	0.5	1	1.5	2	2	2	2	2	1.5	1	0.5	0	0	0	0.5	1	2.5	4	5.5	7	8	9	9	9	9	9	8	7	5.5	4	2.5	1	0.5	0
KNOCKMOYLE	98	-9.4242	52.1238	375	40	M	1,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
LEHINCH	99.3	-9.2223	52.5932	207	30	M	100	5	4	3	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	3	4	5	6	8	8	9	9	9	9	9	8	8	6
MAAMCLASSACH	98.3	-10.2535	52.0832	200	30	M	50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MAGHERA	98.4	-8.4308	52.5803	400	102	M	158,489	0	0	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	4	4	4	4	4	4	4	4	4	4	0	0	0	0	0	0	0
MAGHERAORTY	93.2	-8.1032	55.0806	110	30	M	151	9	9	9	8	8	6	5	4	3	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	3	4	5	6	8	8	9	9
MALIN	98.5	-7.1733	55.1931	183	35	M	1,995	7	7	7	7	7	7	7	7	7	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	7	7	7
MITCHELSTOWN	98.2	-8.1823	52.1842	335	25	M	100	12	12	12	12	12	10	10	8	6	4	4	2	0	0	0	0	0	0	0	0	0	0	0	2	4	4	6	8	10	10	12	12	12	12	12	12
MONAGHAN / LUGAD	96.5	-7.0143	54.1106	200	31	M	2,512	1.3	2.5	4	5.9	7.6	9	9.6	9.8	9.8	9.8	9.6	9	7.6	5.9	4	2.5	1.3	0.5	0.1	0	0.1	0.5	1	1.5	1.9	1.1	2.2	2.1	1.9	1.5	1	0.5	0.1	0	0.1	0.5
MOUNT LEINSTER	99.2	-6.4643	52.3706	796	60	M	199,526	4	4	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	0	0	0	0	0	0	0	0	0	0	4	4	4	4	4	4	4
MOVILLE	97.9	-7.0104	55.1315	320	20	M	1,000	13	13	13	13	13	13	11	8	6	4	3	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	3	4	6	8	11	13
MULLAGHANISH	99.6	-9.0844	51.5854	650	105	M	158,489	3	3	3	3	3	3	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	0	0	0	0	0	0	0	0	0	3	3	3
SPUR HILL	98.8	-8.31	51.5121	137	35	M	5,012	1.3	2.5	4	5.9	7.6	9	9.6	9.8	9.8	9.8	9.6	9	7.6	5.9	4	2.5	1.3	0.5	0.1	0	0.1	0.5	1	1.5	1.9	1.1	2.2	2.1	1.9	1.5	1	0.5	0.1	0	0.1	0.5
SUIR VALLEY	98.6	-7.1546	52.2224	280	30	M	3,020	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	6	6	6
THREE ROCK	96.7	-6.1411	53.1449	448	40	M	5,012	1	2	3	3	4	5	7	6	6	8	7	7	7	8	8	6	5	5	6	8	8	7	7	8	8	6	6	7	5	4	3	3	2	1	0	0
TRUSKMORE	97.8	-8.2259	54.2225	640	39	M	125,893	0	0	0	0	0	3	3	5	6	6	3	3	3	3	3	3	3	3	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WATERFORD	97.9	-7.0752	52.1543	74	20	M	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WOODCOCK HILL	99	-8.4122	52.4311	244	30	M	2,512	0	0	6	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Station Name	Freq. (MHz)	Longitude	Latitude	Site Ht (m)	Ant. Ht (m)	Pol	Max. E.R.P. (Watts) per Pol	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	100°	110°	120°	130°	140°	150°	160°	170°	180°	190°	200°	210°	220°	230°	240°	250°	260°	270°	280°	290°	300°	310°	320°	330°	340°	350°
ACHILL	99.5	10W0135	53N5726	366	30	M	3,020	0	0	0	0	0	6	6	6	6	6	6	6	5	6	0	0	0	0	0	0	0	0	0	6	6	6	6	6	6	6	6	6	0	0	0	0
ARANMORE	94	6W3027	54N5859	125	50	M	3,020	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ATHLONE	93.7	7W55	53N253	40	45	M	20	0	0	0	0.1	0.2	0.4	0.5	0.6	0.8	1	1.2	1.5	1.7	2	2.5	3	3	3	3	3	3	3	2.5	2	1.7	1.5	1.2	1	0.8	0.6	0.5	0.4	0.2	0.1	0	0
BALLYBOFEY	94.1	7W4458	54N473	83	27	M	501	2.4	2.6	2.6	2.5	2	1.4	1	0.4	0.1	0	0.2	1	2	3.3	5	7	8.5	9.7	10	10	10	10	9.7	8.5	7	5	3.2	1.8	1	0.4	0	0.1	0.4	1	1.4	2
BALLYDAVID	93.5	10W2215	52N1143	10	50	M	30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BANTRY	93.1	9W2638	51N3956	185	20	M	1,000	2	1	1	0	0	0	0	1	1	3	4	6	8	9	10	10	10	10	10	9	8	6	4	3	1	1	0	0	0	1	1	2	2	2	2
CASLA	92.8	9W3334	53N1721	10	50	M	1,995	0	0	0	1	1	3	4	6	8	9	10	10	10	10	10	9	8	6	4	2	1	1	0	0	0	1	1	2	2	3	3	3	2	2	1	1
CASTLEBAR	98.9	9W2223	53N553	420	30	M	3,020	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	6	6	6	6	6	6	6
CASTLETOWNBERE	92.7	10W0003	51N3822	460	15	M	3,020	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CLERMONT CARN	102.7	6W1919	54N0443	510	30	M	39,811	10	10	10	10	10	10	10	10	7	7	7	5	5	3	3	3	3	0	0	0	0	0	0	0	0	0	3	3	3	3	5	5	7	7	7	7
CLIFDEN	93.9	9W5618	53N3024	270	40	M	3,020	0	0	0	0	6	6	6	6	6	6	6	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CLONMEL	92.7	7W4135	52N2025	215	30	M	1,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
COLLINS BARRACKS	94.1	8W2759	51N5508	67	30	M	50	12	12	12	12	12	10	10	8	6	4	4	2	0	0	0	0	0	0	0	0	0	0	0	2	4	4	6	8	10	10	12	12	12	12	12	12
CROSSHAVEN	92.6	8W1739	51N4728	91	30	M	3,020	1.5	1	0.5	0.1	0	0.1	0.5	1	1.5	4	5.9	7.6	9	9.6	9.8	9.8	9.8	9.6	9	7.6	5.9	4	1.5	1	0.5	0.1	0	0.1	0.5	1	1.5	1.9	1.1	2.2	2.1	1.9
DUNGARVAN	92.9	7W4404	52N0414	255	35	M	3,020	0	0	0	0	0	0	0	1	1	2	3	4	6	7	7	6	6	6	5	5	5	6	6	6	7	7	6	4	3	2	1	1	0	0	0	0
FANAD	94.2	7W3949	55N1338	220	10	M	3,981	10	10	10	10	10	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	10
FERMOY	93.8	8W1649	52N0836	50	20	M	50	0.6	1.4	2.6	4.1	6	7.8	9.4	10	10	10	10	10	9.4	7.7	6	4	2.4	1.4	0.6	0.1	0	0.3	0.7	1.2	1.7	2.2	2.5	2.7	2.5	2.2	1.8	1.2	0.7	0.2	0	0.1
GREYSTONES - BELLEVUE	93.9	6W06	53N0856	220	40	V	1,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HOLYWELL HILL	93.6	7W2405	54N5956	260	30	M	6,026	3	3	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	3	3	3	3	3	0	0	0	0	0	0	0	0	0	0	3
KILDUFF	99.8	7W5437	52N5007	443	30	V	2,951	19.1	18	14.2	11	8.9	7	5	3	2	1	1	1	0.4	0	0.1	1	1.1	1	1.1	1.5	2.4	4	6	9	12	15	19	22	21	20	18.2	16	15.4	16	17.5	18
KILKEAVERAGH	93.9	10W2	51N5202	360	15	M	3,020	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	0	0	0	0
KINSALE	93.4	8W2951	51N4152	30	7	M	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
KIPPURE	93.5	6W1955	53N1038	750	60	M	50,119	6	6	6	6	10	10	6	6	6	6	2	2	2	2	2	2	2	2	2	2	6	6	6	6	6	6	0	0	0	0	0	0	0	0	0	6
KNOCKANORE	93.6	9W3626	52N3131	267	30	M	1,000	0	0	0.5	1	1.5	2	2	2	2	2	1.5	1	0.5	0	0	0	0.5	1	2.5	4	5.5	7	8	9	9	9	9	8	7	5.5	4	2.5	1	0.5	0	0
KNOCKMOYLE	92.8	9W4242	52N1238	375	40	M	1,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
LEHINCH	94.1	9W2223	52N5932	207	30	M	100	5	4	3	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	3	4	5	6	8	8	9	9	9	9	9	8	6
MAAMCLASSACH	93.1	10W2535	52N0832	200	30	M	50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MAGHERA	93.2	8W4308	52N5803	400	102	M	158,489	0	0	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	4	4	4	4	4	4	4	4	4	0	0	0	0	0	0	0	0
MAGHEROARTY	93.2	8W1032	55N0806	110	30	M	151	9	9	9	8	8	6	5	4	3	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	3	4	5	6	8	8	9	9	9
MALIN	93.3	7W1733	55N1931	163	35	M	1,995	7	7	7	7	7	7	7	7	7	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	7	7
MITCHELSTOWN	93	8W1823	52N1642	335	25	M	100	12	12	12	12	12	10	10	8	6	4	4	2	0	0	0	0	0	0	0	0	0	0	0	2	4	4	6	8	10	10	12	12	12	12	12	12
MONAGHAN / LUGAD	93.3	7W0143	54N1106	200	31	M	2,512	1.3	2.5	4	5.9	7.6	9	9.6	9.8	9.8	9.8	9.6	9	7.6	5.9	4	2.5	1.3	0.5	0.1	0	0.1	0.5	1	1.5	1.9	1.1	2.2	2.1	1.9	1.5	1	0.5	0.1	0	0.1	0.5
MOUNT LEINSTER	94	6W4643	52N3706	796	60	M	199,526	4	4	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	4
MOVILLE	92.7	7W0104	55N1315	320	20	M	1,000	13	13	13	13	13	13	11	8	6	4	3	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	3	4	6	8	11	13
MULLAGHANISH	94.4	9W0844	51N5854	650	105	M	158,489	3	3	3	3	3	3	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	0	0	0	0	0	0	0	0	3	3	3	3
SPUR HILL	93.6	8W31	51N5121	137	35	M	5,012	1.3	2.5	4	5.9	7.6	9	9.6	9.8	9.8	9.8	9.6	9	7.6	5.9	4	2.5	1.3	0.5	0.1	0	0.1	0.5	1	1.5	1.9	1.1	2.2	2.1	1.9	1.5	1	0.5	0.1	0	0.1	0.5
SUIR VALLEY	93.4	7W1546	52N2224	280	30	M	3,020	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	6	6	6
THREE ROCK	92.9	6W1411	53N1449	448	40	M	5,012	1	2	3	3	4	5	7	6	6	8	7	7	7	8	8	6	5	5	6	8	8	7	7	8	8	6	6	7	5	4	3	3	2	1	0	0
TRUSKMORE	92.6	8W2259	54N2225	640	39	M	125,893	0	0	0	0	0	3	3	5	6	6	3	3	3	3	3	3	3	3	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WATERFORD	92.7	7W0752	52N1543	74	20	M	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WOODCOCK HILL	93.8	8W4122	52N4311	244	30	M	2,512	0	0	6	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Commission for
Communications Regulation

Licence for RDS.

Station Name	Franchise Area
RTÉ R1	National

Programme Identification Code					
Code	Hexidecimal	Binary			
2 N 1	2 2 0 1	0010	0010	0000	0001

Authorised RDS Features

Group Types 0A/0B,15B,14A/14B,1A/1B and 4A

Including:

Traffic Programme,	Traffic Announcement,
Programme Type,	Music/Speech,
Alternative Frequencies,	Programme Item Number,
Clock Time,	Decoder Information,
Enhanced Other Networks.	

Additional Features

Radio Text	*	Group Type 2A/2B
Transparent Data Channel	Yes	Group Type 5A/5B
In-house Information	Yes	Group Type 6A/6B
Radio Paging	Yes	Group Type 7A
Traffic Message Channel	Yes	Group Type 8A

*** = Dynamic Programme Related Text**

	Alternative Frequencies	
	Transmitter Site	Freq. [MHz]
1	ACHILL	89.9
2	ARANMORE	89.6
3	ATHLONE	89.3
4	BALLYBOFEY	89.7
5	BALLYDAVID	89.1
6	BANTRY	88.7
7	CAIRN HILL	89.8
8	CASLA	88.4
9	CASTLEBAR	89.3
10	CASTLETOWNBERE	88.3
11	CLERMONT CARN	95.2
12	CLIFDEN	89.5
13	CLONMEL	88.3
14	COLLINS BARRACKS	89.7
15	CROSSHAVEN	88.2
16	DUNGARVAN	88.5
17	FANAD	89.8
18	FERMOY	89.4
19	GREYSTONES - BELLEVUE	89.5
20	HOLYWELL HILL	89.2
21	KILDUFF	90.2
22	KILKEAVERAGH	89.5
23	KINSALE	89
24	KIPPURE	89.1
25	KNOCKANORE	89.2
26	KNOCKMOYLE	88.4
27	LEHINCH	89.7
28	MAAMCLASSACH	88.7
29	MAGHERA	88.8
30	MAGHEROARTY	88.8
31	MALIN	88.9
32	MITCHELSTOWN	88.6
33	MONAGHAN / LUGAD	88.9
34	MOUNT LEINSTER	89.6
35	MOVILLE	88.3
36	MULLAGHANISH	90
37	SPUR HILL	89.2
38	SUIR VALLEY	89
39	THREE ROCK	88.5
40	TRUSKMORE	88.2
41	WATERFORD	88.3
42	WOODCOCK HILL	89.4

Commission for
Communications Regulation

Licence for RDS.

Station Name	Franchise Area
RTÉ 2FM	National

Programme Identification Code					
Code	Hexidecimal	Binary			
2 N 2	2 2 0 2	0010	0010	0000	0010

Authorised RDS Features

Group Types 0A/0B,15B,14A/14B,1A/1B and 4A

Including:

Traffic Programme,	Traffic Announcement,
Programme Type,	Music/Speech,
Alternative Frequencies,	Programme Item Number,
Clock Time,	Decoder Information,
Enhanced Other Networks.	

Additional Features

Radio Text	*	Group Type 2A/2B
Transparent Data Channel	Yes	Group Type 5A/5B
In-house Information	Yes	Group Type 6A/6B
Radio Paging	Yes	Group Type 7A
Traffic Message Channel	Yes	Group Type 8A

*** = Dynamic Programme Related Text**

	Alternative Frequencies	
	Transmitter Site	Freq. [MHz]
1	ACHILL	92.1
2	ARANMORE	91.8
3	ATHLONE	91.5
4	BALLYBOFEY	91.9
5	BALLYDAVID	91.3
6	BANTRY	90.9
7	CASLA	90.6
8	CASTLEBAR	91.5
9	CASTLETOWNBERE	90.5
10	CLERMONT CARN	97
11	CLIFDEN	91.7
12	CLONMEL	90.5
13	COLLINS BARRACKS	92
14	CROSSHAVEN	90.4
15	DUNGARVAN	90.7
16	FANAD	92
17	FERMOY	91.6
18	GREYSTONES - BELLEVUE	91.7
19	HOLYWELL HILL	91.4
20	KILDUFF	92.4
21	KILKEAVERAGH	91.7
22	KINSALE	91.2
23	KIPPURE	91.3
24	KNOCKANORE	91.4
25	KNOCKMOYLE	90.6
26	LEHINCH	91.9
27	MAAMCLASSACH	90.9
28	MAGHERA	91
29	MAGHEROARTY	91
30	MALIN	91.1
31	MITCHELSTOWN	90.8
32	MONAGHAN / LUGAD	91.1
33	MOUNT LEINSTER	91.8
34	MOVILLE	90.5
35	MULLAGHANISH	92.2
36	SPUR HILL	91.4
37	SUIR VALLEY	91.2
38	THREE ROCK	90.7
39	TRUSKMORE	90.4
40	WATERFORD	90.5
41	WOODCOCK HILL	91.6

Commission for
Communications Regulation

Licence for RDS.

Station Name	Franchise Area
Lyric FM	National

Programme Identification Code					
Code	Hexidecimal	Binary			
2 N 4	2 2 0 4	0010	0010	0000	0100

Authorised RDS Features

Group Types 0A/0B,15B,14A/14B,1A/1B and 4A

Including:

Traffic Programme,	Traffic Announcement,
Programme Type,	Music/Speech,
Alternative Frequencies,	Programme Item Number,
Clock Time,	Decoder Information,
Enhanced Other Networks.	

Additional Features

Radio Text	*	Group Type 2A/2B
Transparent Data Channel	Yes	Group Type 5A/5B
In-house Information	Yes	Group Type 6A/6B
Radio Paging	Yes	Group Type 7A
Traffic Message Channel	Yes	Group Type 8A

*** = Dynamic Programme Related Text**

	Alternative Frequencies	
	Transmitter Site	Freq. [MHz]
1	ACHILL	94.3
2	ARANMORE	99.2
3	ATHLONE	98.9
4	BALLYBOFEY	99.3
5	BALLYDAVID	98.8
6	BANTRY	98.3
7	CASLA	98
8	CASTLEBAR	93.7
9	CASTLETOWNBERE	97.9
10	CLERMONT CARN	87.8
11	CLIFDEN	99.1
12	CLONMEL	97.9
13	COLLINS BARRACKS	99.3
14	CROSSHAVEN	97.8
15	DUNGARVAN	98.1
16	FANAD	99.4
17	FERMOY	99
18	GREYSTONES - BELLEVUE	99.1
19	HOLYWELL HILL	98.8
20	KILKEAVERAGH	99.1
21	KINSALE	98.6
22	KIPPURE	98.7
23	KNOCKANORE	98.7
24	KNOCKMOYLE	98
25	LEHINCH	99.3
26	MAAMCLASSACH	98.3
27	MAGHERA	98.4
28	MAGHEROARTY	93.2
29	MALIN	98.5
30	MITCHELSTOWN	98.2
31	MONAGHAN / LUGAD	98.5
32	MOUNT LEINSTER	99.2
33	MOVILLE	97.9
34	MULLAGHANISH	99.6
35	SPUR HILL	98.8
36	SUIR VALLEY	98.6
37	THREE ROCK	96.7
38	TRUSKMORE	97.8
39	WATERFORD	97.9
40	WOODCOCK HILL	99

Commission for
Communications Regulation

Licence for RDS

Station Name	Franchise Area
RTÉ RnaG	National

Programme Identification Code					
Code	Hexidecimal	Binary			
2 N 3	2 2 0 3	0010	0010	0000	0011

Authorised RDS Features

Group Types 0A/0B,15B,14A/14B,1A/1B and 4A

Including:

Traffic Programme,	Traffic Announcement,
Programme Type,	Music/Speech,
Alternative Frequencies,	Programme Item Number,
Clock Time,	Decoder Information,
Enhanced Other Networks.	

Additional Features

Radio Text	*	Group Type 2A/2B
Transparent Data Channel	Yes	Group Type 5A/5B
In-house Information	Yes	Group Type 6A/6B
Radio Paging	Yes	Group Type 7A
Traffic Message Channel	Yes	Group Type 8A

*** = Dynamic Programme Related Text**

	Alternative Frequencies	
	Transmitter Site	Freq. [MHz]
1	ACHILL	99.5
2	ARANMORE	94
3	ATHLONE	93.7
4	BALLYBOFEY	94.1
5	BALLYDAVID	93.5
6	BANTRY	93.1
7	CASLA	92.8
8	CASTLEBAR	98.9
9	CASTLETOWNBERE	92.7
10	CLERMONT CARN	102.7
11	CLIFDEN	93.9
12	CLONMEL	92.7
13	COLLINS BARRACKS	94.1
14	CROSSHAVEN	92.6
15	DUNGARVAN	92.9
16	FANAD	94.2
17	FERMOY	93.8
18	GREYSTONES - BELLEVUE	93.9
19	HOLYWELL HILL	93.6
20	KILDUFF	99.8
21	KILKEAVERAGH	93.9
22	KINSALE	93.4
23	KIPPURE	93.5
24	KNOCKANORE	93.6
25	KNOCKMOYLE	92.8
26	LEHINCH	94.1
27	MAAMCLASSACH	93.1
28	MAGHERA	93.2
29	MAGHEROARTY	93.2
30	MALIN	93.3
31	MITCHELSTOWN	93
32	MONAGHAN / LUGAD	93.3
33	MOUNT LEINSTER	94
34	MOVILLE	92.7
35	MULLAGHANISH	94.4
36	SPUR HILL	93.6
37	SUIR VALLEY	93.4
38	THREE ROCK	92.9
39	TRUSKMORE	92.6
40	WATERFORD	92.7
41	WOODCOCK HILL	93.8

Section 9 - Long Wave Radio

Transmission Station Name	Service Name	Frequency (MHz)	Longitude	Latitude	Site Ht. (m)	Ant. Ht. (m)	Pol	Dir	Max. ERP (Watts)	Antenna Gain (dB)	Hours of Operation
SUMMERHILL	RTÉ Radio 1	0.252	6W4045	53N2743	106	295	V	N	100,000	0.4	1800 - 0600 hours Daily
SUMMERHILL	RTÉ Radio 1	0.252	6W4045	53N2743	106	295	V	N	501,187	0.4	0600-1800 hours Daily