



Commission for
Communications Regulation

Radio Experimenters Licence

Part IV: Particulars of Experimenters Station

Document No:	ComReg 02/77R7
Date:	March 29th 2009

Document Revision History

Document Version	Date	Nature of Revision
ComReg 02/77 R7	March 2009	Update to 7 MHz and 10 MHz Bands
ComReg 02/77 R6	July 2008	Update to 70 MHz Frequency permissions
ComReg 02/77 R5		Original Document

Contents

1	<i>Licence Type and Authorised Frequencies</i>	3
2	<i>Licence Authorised Frequencies</i>	4
3	<i>Extra Authorisation Required</i>	5
4	Mobile Operations	7
4.1	Power Limitations and Other Conditions.....	7
5	Designation of Emissions.....	8
5.1	Necessary Bandwidth	8
5.2	Class of Emission.....	9
5.3	Optional Characteristics for the Classification of Emissions.....	11

1 Licence Type and Authorised Frequencies

There is only one type of licence issued in Ireland under the Wireless Telegraphy (Experimenter's Licence) Regulations 2002. However, to ensure international reciprocity there are two CEPT (European Conference of Postal and Telecommunications) classes, CEPT Class 1 and CEPT Class 2, differentiated by the issue of a different call-sign.

The assessment of whether an applicant is suitably qualified to hold a CEPT Class 2 Licence is generally carried out by a means of an examination to the Commission's satisfaction under Regulation 7 (1), (2) and (3).

The CEPT Class 1 Licence requires the applicant to satisfy the Commission that they are suitably qualified under Regulation 7 (1), (2) and (3) and have the ability to send and receive Morse at the speed detailed in the technical conditions under Part VI of the Licence.

2 Licence Authorised Frequencies

Frequency MHz	Status of Allocation	Maximum Peak Envelope Power	Emission Classifications	Notes
1.810-1.850	Primary	26 dBW	A1A, A2A, A3E, R3E, H3E, J3E, F1B, F2B, F3E, G1B	
1.850-2.000	Primary	10 dBW	A1A, A2A, A3E, R3E, H3E, J3E, F1B, F2B, F3E, G1B	
3.500-3.800	Primary	26 dBW	A1A, A2A, A3E, R3E, H3E, J2B, J3E, J2F F1B, F2B, F3E, G1B	
7.000-7.100	Primary	26 dBW	A1A, A2A, A3E, R3E, H3E, J2B, J3E, J2F F1B, F2B, F3E, G1B	
7.100-7.200	Primary	26 dBW	A1A, A2A, A3E, R3E, H3E, J2B, J3E, J2F F1B, F2B, F3E, G1B	
10.100-10.140	Secondary	20 dBW	A1A	Morse Only
10.140-10.150	Secondary	20 dBW	A2A, J2B, J2F, F1B, F2B, G1B	See Notes (Page 6)
14.000-14.350	Primary	26 dBW	A1A, A2A, A3E, R3E, H3E, J2B, J3E, J2F F1B, F2B, F3E, G1B	
18.068-18.168	Primary	26 dBW	A1A, A2A, A3E, R3E, H3E, J2B, J3E, J2F F1B, F2B, F3E, G1B	
21.000-21.450	Primary	26 dBW	A1A, A2A, A3E, R3E, H3E, J2B, J3E, J2F F1B, F2B, F3E, G1B	
24.890-24.990	Primary	26 dBW	A1A, A2A, A3E, R3E, H3E, J2B, J3E, J2F F1B, F2B, F3E, G1B	
28.000-29.700	Primary	26 dBW	A1A, A2A, A3E, R3E, H3E, J2B, J3E, J2F F1B, F2B, F3E, G1B	
50.000-52.000	Secondary	20 dBW	A1A, A2A, A3E, R3E, H3E, J2B, J3E, J2F F1B, F2B, F3E, G1B	
70.125-70.450	Secondary	17 dBW Fixed Operation Only	A1A, A2A, A3E, R3E, H3E, J2B, J3E, J2F F1B, F2B, F3E, G1B	For Mobile Operation Max Power is 14 dBW
144.000-146.000	Primary	26 dBW	A1A, A2A, A3E, R3E, H3E, J2B, J3E, J2F F1B, F2B, F3E, G1B	
430.000-432.000	Primary	17 dBW	A1A, A2A, A3E, R3E, H3E, J2B, J3E, J2F F1B, F2B, F3E, G1B	
432.000-440.000	Primary	26 dBW	A1A, A2A, A3E, R3E, H3E, J2B, J3E, J2F F1B, F2B, F3E, G1B	
1240.00-1300.00	Secondary	22 dBW	A1A, A2A, A3E, R3E, H3E, J2B, J3E, J2F F1B, F2B, F3E, G1B	
24000-24050	Primary	17 dBW	A1A, A2A, A3E, R3E, H3E, J3E, F1B, F2B, F3E, G1B	
47000-47200	Primary	17 dBW	A1A, A2A, A3E, R3E, H3E, J3E, F1B, F2B, F3E, G1B	

Note With the exception of the band 7.10-7.20 MHz the Maximum Peak Envelope Power is the power measured at the output of the transmitter or amplifier.

3 Extra Authorisation Required

An individual application must be submitted to use any of the bands below

Frequency MHz	Status of Allocation	Maximum Peak Envelope Power	Emission Classifications	Notes
0.1357-0.1378	Secondary	0 dBW ERP	A1A, J3E, G1B	
5.000 – 5.500	Secondary	23 dBW	A1A, J3E, G1B	Spot Frequencies within this range
1300.00-1304.00	Secondary	0 dBW	A1A, A2A, A3E, R3E, H3E, J2B, J3E, J2F F1B, F2B, F3E, G1B	RESTRICTED TO REPEATER OPERATION ONLY
2300.00-2400.00	Secondary	22 dBW	A1A, A2A, A3E, R3E, H3E, J2B, J3E, J2F F1B, F2B, F3E, G1B	
2400.00-2450.00	Secondary	14 dBW	A1A, A2A, A3E, R3E, H3E, J2B, J3E, J2F F1B, F2B, F3E, G1B	
5650.00-5850.00	Secondary	22 dBW	A1A, A2A, A3E, R3E, H3E, J2B, J3E, J2F F1B, F2B, F3E, G1B	
10000-10500	Secondary	22 dBW	A1A, A2A, A3E, R3E, H3E, J2B, J3E, J2F F1B, F2B, F3E, G1B	

Note With the exception of the bands 0.1357-0.1378 MHz the Maximum Peak Envelope Power is the power measured at the output of the transmitter or amplifier

Notes Applying to Section 2 and Section 3

- The use of bands where the Amateur Service has a Secondary allocation is on a non-interference non-protected basis.
- Slow Scan Television (SSTV) is **not permitted** on the following bands;
 - 1.810-2.000 MHz
 - 10.100-10.150 MHz
 - 18.068-18.168 MHz
 - 24.890-24.990 MHz
- RTTY (Radio-Teletype) is **not permitted** on the following bands;
 - 1.810-2.000 MHz
 - 10.100-10.150 MHz
- In the Band 10.000-10.500 GHz the Primary allocation is to the Fixed Service and as such Experimenters may not use the portion of the band between 10.270-10.300 GHz.
- In the band 10.140-10.150 MHz all narrowband digimodes within the bandwidth limit of 500Hz are permitted.
- Irish Licensed Stations may apply for frequencies and powers above those listed for particular occasions. The following details are required in such cases
 - Location
 - Frequency & Power
 - Equipment:
 - Make
 - Model
 - Antenna Type
 - Desired Duration
 - Why Required

4 Mobile Operations

Special authorisation shall be obtained for mobile operation where indicated in 1.1. Proposed mobile equipment details must be supplied.

4.1 Power Limitations and Other Conditions

- The Maximum Power at the output of the transmitter or amplifier shall be 17 dBW, or if a lower figure is specified in Part IV of the Licence (Sections 2 & 3 of this document) then that figure should be used, with the exceptions of 70.125-70.450 MHz where the Maximum Power shall be 14 dBW and Maritime Mobile where the Maximum Power shall be 10 dBW.
- For land based mobile operation the call sign should be suffixed with /**M**.
- For maritime mobile operation the call sign should be suffixed with /**MM**
- Mobile stations may not be established or used on the sea or within any estuary, dock, harbour or in the vicinity of an airport or any radio navigation installation.
- Notwithstanding the condition above Maritime Mobile operation is allowed subject to special authorisation from the Commission.
- Operation of Maritime Mobile is restricted to the following frequency bands:
 - HF - 3.5 MHz, 7 MHz, 14 MHz, 21 MHz, 28 MHz
 - VHF – 144~146 MHz

Please be advised that any and all waters within Irish Jurisdiction would be considered as included in the requirement for Maritime Mobile in respect of an Experimenter Licence Further details and the necessary conditions are available upon request.

- The particulars of a mobile station's location shall be sent at the beginning and end of the establishment of communications with each separate station of the Amateur Service or at intervals of every thirty minutes, whichever is the more frequent.

5 Designation of Emissions

The Radio Regulations of the International Telecommunications Union detail the international standard for Emission Designations and these are based on the signal's necessary bandwidth and modulation type. Emission Designations are coded using seven characters for their basic parameters and two optional characters for further details of the signal.

Modulation types used only for short periods and for incidental purposes (such as for identification or calling) may be ignored.

5.1 Necessary Bandwidth

The necessary bandwidth is expressed by three numerals and one letter. The letter occupies the position of the decimal point and represents the unit of bandwidth, e.g. Hz, kHz, and MHz.

For example, the necessary bandwidth codes use the following letters:

From 1.00 Hz to 999 Hz = H

From 1.00 kHz to 999 kHz = K

From 1.00 MHz to 999 MHz = M

From 1.00 GHz to 999 GHz = G

Note: The first character shall not be zero nor K, M or G.

<i>1</i>	<i>Hz = 1H00</i>	<i>180.5</i>	<i>kHz = 181K</i>
<i>25.33</i>	<i>Hz = 25H3</i>	<i>180.7</i>	<i>kHz = 181K</i>
<i>400</i>	<i>Hz = 400H</i>	<i>1.25</i>	<i>MHz = 1M25</i>
<i>2.4</i>	<i>kHz = 2K40</i>	<i>2</i>	<i>MHz = 2M00</i>
<i>6</i>	<i>kHz = 6K00</i>	<i>10</i>	<i>MHz = 10M0</i>
<i>12.5</i>	<i>kHz = 12K5</i>	<i>202</i>	<i>MHz = 202M</i>
<i>180.4</i>	<i>kHz = 180K</i>	<i>5.65</i>	<i>GHz = 5G65</i>

Note: Carrier only is expressed as 1H00

5.2 Class of Emission

The basic characteristics are;

- First symbol** : type of modulation of the main carrier
Second symbol : nature of signal(s) modulating the main carrier
Third symbol : type of information to be transmitted

Please use the following symbols to identify type of modulation.

First Symbol

Symbol	Emission Type
N	Unmodulated Carrier
	Amplitude Modulated Main Carrier (including angle modulated sub carriers)
A	Double sideband
H	Single sideband, full carrier
R	Single sideband, reduced or variable level carrier
J	Single sideband, suppressed carrier
B	Independent sidebands
C	Vestigial sideband.
	Angle Modulated Main Carrier
F	Frequency modulation
G	Phase modulation
D	Emission in which the main carrier is amplitude and angle modulated either simultaneously or in a pre-established sequence
	Emission of pulses.
P	A sequence of unmodulated pulses.
K	A sequence of pulses modulated in amplitude
L	A sequence of pulses modulated in width/duration
M	A sequence of pulses modulated in position/phase
Q	A sequence of pulses in which the carrier is angle modulated during the period of the pulse
V	A sequence of pulses which is a combination of the foregoing or is produced by other means.
W	Cases not covered above, in which an emission consists of the main carrier modulated, either simultaneously or in a pre-established sequence, in a combination of two or more of the following modes: amplitude, angle, pulse.
X	Cases not otherwise covered.

Second Symbol

Symbol	Modulating Signal
0	No modulating signal
1	A single channel containing quantized or digital information without the use of a modulating sub-carrier. This excludes time-division multiplex.
2	A single channel containing quantized or digital information with the use of a modulating sub-carrier. This excludes time division multiplex.
3	A single channel containing analogue information.
7	Two or more channels containing quantized or digital information.
8	Two or more channels containing analogue information
9	Composite system with one or more channels containing analogue quantized or digital information, together with one or more channels containing analogue information.
X	Cases not otherwise covered.

Third Symbol

Symbol	Type of Information to be transmitted
N	No information transmitted
A	Telegraphy for aural reception
B	Telegraphy for automatic reception
C	Facsimile
D	Data transmission, telemetry, telecommand
E	Telephony (including sound broadcasting)
F	Television (video)
W	Combination of the above
X	Cases not otherwise covered

5.3 Optional Characteristics for the Classification of Emissions

Fourth Symbol : Details of Signal(s)
Fifth Symbol : Nature of multiplexing

Fourth Symbol

Symbol	Details of Signal(s)
A	Two-condition code with elements of differing numbers and/or durations
B	Two-condition code without elements of the same number and duration with error-correction
C	Two-condition code with elements of the same number and duration with error-correction
D	Four-condition code in which each condition represents a signal element (of one or more bits)
E	Multi-condition code in which each condition represents a signal element (of one or more bits)
F	Multi-condition code in which each condition or combination of conditions represents a character
G	Sound of broadcasting quality (monophonic)
H	Sound of broadcasting quality (stereophonic or quadraphonic)
J	Sound of commercial quality (excluding categories given in K and L below)
K	Sound of commercial quality with the use of frequency inversion or band splitting
L	Sound of commercial quality with separate frequency modulated signals to control the level of demodulated signal
M	Monochrome
N	Colour
W	Combination of the above
X	Cases not otherwise covered

Fifth Symbol

Symbol	Nature of Multiplexing
N	No multiplexing employed
C	Code division multiplex including bandwidth expansion techniques
F	Frequency-division multiplex
T	Time-division multiplex
W	Combination of frequency-division multiplex and time-division multiplex
X	Other types of multiplexing