



Office of the Director of
**Telecommunications
Regulation**

Licensing Requirements for Radio Services

A summary

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Licensing Requirements for Radio Services

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Licensing Requirements for Radio Services

Introduction

This document summarises the ODTR's licensing requirements for radio services operating in Ireland. It is divided into five parts as detailed below:

- Part I: Licensing Requirements for the Mobile Services
- Part II: Licensing Requirements for the Fixed Services
- Part III: Licensing Requirements for the Broadcasting Services
- Part IV: Permitted Short Range Devices In Ireland
- Part V: Licensing Requirements for Other Radio Services

This is not a legal document and does not constitute legal, commercial or technical advice. It is for guidance purposes only. Operators are at all times responsible for ensuring that they comply with all licensing, and other legal requirements currently in force under Irish and EC law.

More detailed information on licensing requirements for radio services in Ireland can be obtained directly from the ODTR.

Additional information on the use of the frequency bands in Ireland is available from The Table of Allocations - Ireland (document ODTR 01/23).

Wherever possible, CEPT/ERC Decisions and Recommendations are followed. A list of these documents, and the current status of Irelands implementation of the CEPT/ERC Decisions is available from the ERO website: <http://www.ero.dk>

Note 1: The reference standards referred to in the Tables in Parts I to V are ETSI standards which predated the R&TTE Directive. In general, some of the requirements of these standards go beyond the essential requirements of the R&TTE Directive. On foot of a mandate from the European Commission, ETSI will be revising these standards to adapt them to the R&TTE Directive.

Note2: As well as the standards listed, other relevant equipment standards may be deemed suitable by the ODTR.

Note 3: All equipment must comply with the essential requirements of the R&TTE Directive.

Note 3: Licence conditions attached to telecommunications operators WT licences, Broadcast licences and fixed service licences require adherence to the ICNIRP Guidelines on non-ionising radiation emissions from base/broadcast stations.

Part 1

Licensing Requirements for the Mobile Services.

Part 1 Licensing Requirements for the Mobile Services.

Introduction:

This section summarises the licensing requirements for the Private or Professional Mobile Radio (PMR), Public Access Mobile Radio (PAMR - Community Repeaters, TETRA) paging services and VHF maritime mobile services.

General Information:

- A Licence is required to operate all mobile services except PMR 446¹.
- The standard channel spacing is 12.5 kHz except maritime mobile, TETRA and on-site paging, telemetry and telecommand systems in the band 458.5-459.5MHz.
- A user is normally required to share a frequency channel with other users.
- In Ireland there are 5 main bands available for mobile PMR/PAMR.
 - **VHF Low Band (68-87.5MHz):** This band is used for PMR and PAMR (community repeaters) applications.
 - **VHF High Band (156-174MHz):** This band is used for PMR, maritime mobile and inland waterway applications.
 - **UHF Band (450-470MHz):** This band is used for PMR and PAMR (community repeaters). Fixed links in support of PMR systems also operate in this band.
 - **UHF Band (410-430MHz):** PAMR. Analogue trunked radio systems are licensed in this band. TETRA is also planned for this band.
 - **VHF Midband (138-156MHz):** This band has only been recently planned for use in Ireland. It is intended that it will be used for both PMR and PAMR (community repeaters).

Licensing requirement for PMR/PAMR systems are summarised in Table 1. Table 2 summarises the requirements for Paging services.

¹ The use of hand portables which operate between 446 and 446.1 MHz with 12.5 kHz channel spacing, meet ETSI 300 296, use tone control and have a maximum power output of 0.5 W does not require a licence from the ODTR.

Sources of Additional Information:

National Legislation

Wireless Telegraphy Acts (1926-1988)

Wireless Telegraphy (Business Radio Licence) Regulations, 1949-1992

S.I. 83 of 1988: Wireless Telegraphy (Community Repeater Licence) Regulations, 1988

S.I. 28/1995 European Communities (Pan-European Land Based Public Radio Paging Service – ERMES) Regulations, 1995

S.I. 93 of 1998: Wireless Telegraphy Act 1926, (Section 3) (Exemption of Short Range Business Radios) Order, 1998

ODTR documentation

CR1: Business Radio: Community Repeater Systems Explanatory Note

Wireless Telegraphy Acts 1926-1988: Application for a Paging Permit (on – site)

Wireless Telegraphy Acts 1926-1988: Application for a Paging Permit (local)

Wireless Telegraphy Acts 1926-1988: Application for a Paging Permit (wide area)

ODTR 00/07: Business Radio Licence application Form and Explanatory Notes

ETSI Documentation

ETR 053 Radio Equipment and Systems (RES); Radio site engineering for radio equipment and systems in the mobile service

Table 1 Licensing Requirements for the Mobile Services

Frequency Band (MHz)	National Usage	Licensing Regime	Reference Standards	Channel Spacing	Maximum transmit Power	Duplex Separation	Notes
68–87.5MHz	Land Mobile: PMR, PAMR(i.e. community repeaters)	User requires a licence and frequency assignment from the ODTR	Applicable relevant ETSI standards apply. The most common are: ETS 300 086, ETS 300 113, ETS 300 219, ETS 300 296, ETS 300 220.	12.5 kHz	20W erp Base Stations, 10 W erp Mobile Stations, 5W erp Handportables, 0.5W erp on-site systems	Mainly semi Duplex operation with some single frequency channels. Maximum Duplex Separations: 10.225 MHz	VHF Low Band, PMR and PAMR Licences - mainly commercial users and County Councils CEPT/ERC/DEC/(95)02, CEPT/ERC/DEC/(96)07, 10, 11,12, 14 refer to equipment specifications. (Channel spacing 12.5 kHz) Wherever possible, all relevant CEPT/ERC Decisions and Recommendations will be followed
138 - 156MHz	Land Mobile: PMR, PAMR	User requires a licence and frequency assignment from the ODTR	Applicable relevant ETSI standards apply the most common are: ETS 300 086, ETS 300 113, ETS 300 219, ETS 300 296, ETS 300 341, ETS 300 390, ETS 300 220	12.5 kHz	20W erp Base Stations, 10 W erp Mobile Stations, 5W erp Handportables, 0.5W erp on-site systems	Mainly semi Duplex operation with some single frequency channels. Maximum Duplex Separations: 10MHz	VHF mid- Band, PMR and PAMR Licences CEPT/ERC/DEC/(95)02, CEPT/ERC/DEC/(96)07, 10, 11,12, 14 refer to equipment specifications. (Channel spacing 12.5 kHz) Wherever possible, all relevant CEPT/ERC Decisions and Recommendations will be followed
156-174MHz	Land Mobile: PMR Maritime Mobile	User requires a licence and frequency assignment from the ODTR The operator requires a Radio Operator Qualification	Applicable relevant ETSI standards apply the most common are: ETS 300 086, ETS 300 113, ETS 300 219, ETS 300 296, ETS 300 341, ETS 300 390, ETS 300 220 ETS 300 162, ETS 300 338, ETS 300 225, EN 300 828, EN 60945	12.5 kHz 25kHz	20W erp Base Stations, 10 W erp Mobile Stations, 5W erp Handportables, 0.5W erp on-site systems 25W erp Ship Station	Mainly semi Duplex operation with some single frequency channels. Maximum Duplex Separations: 10MHz	PMR VHF high Band, mainly commercial users and County Councils CEPT/ERC/DEC/(95)02, CEPT/ERC/DEC/(95)02, CEPT/ERC/DEC/(96)07, 10, 11,12, 14, 19 refer to equipment specifications. (Channel spacing 12.5 kHz) Wherever possible, all relevant CEPT/ERC Decisions and Recommendations will be followed Appendix 18 Radio Regulations
380-400MHz	TETRA (Emergency)	Licence Will be required (Regime not yet decided)	Applicable relevant ETSI TETRA standards apply e.g. ETS 300 392, ETS 300 393, ETS 300	25 kHz		Full or semi-duplex (10 MHz spacing) with some single frequency working (direct mode)	CEPT ERC/DEC(96)01 Wherever possible, all relevant CEPT/ERC Decisions and Recommendations will be

Frequency Band (MHz)	National Usage	Licensing Regime	Reference Standards	Channel Spacing	Maximum transmit Power	Duplex Separation	Notes
			394, ETS 300 395, ETS 300 396				followed
410 - 430	TETRA (Civil) (410MHz - 415.7625MHz) and (420MHz - 425.7625MHz) PAMR & PMR PMR Trunked (analogue) (415.775MHz - 418.9875MHz) and (425.775MHz - 428.9875MHz)	Licence Will be required (Regime not yet decided) User requires a licence and frequency assignment from the ODTR	Applicable relevant ETSI TETRA standards apply e.g. ETS 300 392, ETS 300 393, ETS 300 394, ETS 300 395, ETS 300 396 ETS 300 086 ETS 300 113 ETS 300 219		25kHz 12.5 kHz	Full or semi duplex (10 MHz spacing)	CEPT ERC/DEC(96)04 Wherever possible, all relevant CEPT/ERC Decisions and Recommendations will be followed
446 - 446.1	Land Mobile: Short Range Business Radio (PMR 446) (446- 446.1MHz): 8 channels 446.00625MHz, 446.01875MHz, 446.03125MHz, 446.04375MHz, 446.05625MHz, 446.06875MHz, 446.08125MHz, 446.09375 MHz	Licence Exempt (S.I. 93(98)) if equipment meets ETS 300 296, Bandwidth 12.5 kHz, 500mW max erp, and uses Tone control (CTCSS or DCS)	ETS 300 296		0.5 Watt erp		CEPT Rec. T/R 20-04 Wherever possible, all relevant CEPT/ERC Decisions and Recommendations will be followed
450 - 470	Land mobile: PMR, PAMR	User requires a licence and frequency assignment from the ODTR	Applicable relevant ETSI standards apply e.g. ETS 300 086, ETS 300 113, ETS 300 219, ETS 300 296, ETS 300 341, ETS 300 390,		20W erp Base Stations, 10 W erp Mobile Stations, 5W erp Handportables, 0.5W erp on-site systems: Paging, telemetry and telecommand	Mainly semi Duplex operation with some single frequency channels. Maximum Duplex Separations: 14 MHz Subject to long term review to align with CEPT channel plan	PMR UHF Band CEPT/ERC/DEC/(95)02, CEPT/ERC/DEC/(95)02, CEPT/ERC/DEC/(96)07, 10, 11,12, 14, 19 refer to equipment specifications. (Channel spacing 12.5 kHz) TETRA Civil, CEPT ERC/DEC(96)04 (not planned at present)
458.5-459.5MHz	on-site paging, telemetry and telecommand	User requires a licence and frequency assignment from the ODTR			0.5W erp on-site systems, telemetry and telecommand		Wherever possible, all relevant CEPT/ERC Decisions and Recommendations will be followed

Table 2: Paging Services

Frequency Band	National Usage	* Licensing Regime	Reference Standards	Channel Spacing	Maximum Power erp	Notes
86 - 90 kHz	Paging (Commercial Firms)	User requires a licence and frequency assignment from the ODTR		N/A	5W	
26.175 - 27.5 MHz	Paging (private, on-site)	User requires a licence and frequency assignment from the ODTR		N/A	0.5W	
27.5 - 28 MHz	Paging (private, on-site)	User requires a licence and frequency assignment from the ODTR		N/A	0.5W	
30.01 - 37.5 MHz	Paging (Hospitals)	User requires a licence and frequency assignment from the ODTR	ETS 300 224	25kHz	5W	CEPT/ERC/DEC/(96)19
153-154 MHz	Paging and alarm systems (National, wide area, local and on-site)	User requires a licence and frequency assignment from the ODTR	Relevant ETSI PMR Standards ETS 300 224 where appropriate	12.5 kHz	10W	
169.4 - 169.8 MHz	ERMES Subject to review in light of market developments	No Licensing Regime currently operational.	ERMES specifications (subject to review)	25kHz		E.C Directive 90/543 EEC, S.I. No. 28 of 1995
458.5-459.5 MHz	On-site paging	User requires a licence and frequency assignment from the ODTR	Relevant ETSI PMR Standards	25 kHz	0.5 W	

Part II:
Licensing Requirements for the Fixed Services

Part II: Licensing Requirements for the Fixed Services

Introduction

Licensing requirements for the fixed services are summarised in Table 3 and in the document ODTR 98/14 “Guidelines for Applicants for Point to Point Radio Links in Spectrum above 1 GHz”.

Fixed Services in frequency bands below 1 GHz

Analogue, 12.5kHz links, are licensed in the bands 410 – 440 MHz and 450-470MHz. These links operate in support of PMR systems. In the long term it is intended that fixed services will not operate in these bands and existing links will be relocated to bands > 1 GHz.

Fixed Services in frequency bands above 1 GHz.

The bands above 1 GHz are mainly used by digital systems in support of telecommunications, broadcasting and State services or to provide customer access.

In licensing links, the ODTR seeks to optimise spectrum reuse. A link length policy is applied i.e. shorter links are required to use higher frequency bands. The licence also sets a limit on the link availability (which determines the required power margin to overcome short term fading) and encourages the use of spectrum efficient equipment.

The main frequency bands used for high capacity Backbone networks are:

4 GHz (3600 – 4200 MHz), L6 GHz (5925 – 6426 MHz), U6 GHz (6425 – 7125 MHz), 7.5 GHz (7425 – 7725 MHz), L8 GHz (7725 – 88325 MHz), 11 GHz (10.7-11.7 GHz), 18 GHz (17.7-19.7 GHz) and 23 GHz (22.3-23.6 GHz).

The main frequency bands used for access networks are:

15 GHz (14.5 – 15.35 GHz), 23 GHz (22.3 – 23.6 GHz) and 38 GHz (37.0 – 39.5 GHz).

Sources of Additional Information:

National Legislation:

The Wireless Telegraphy Acts 1926-1988

S.I. 319/92: Wireless Telegraphy (radio link licence) Regulations 1992

ODTR Documentation:

ODTR 98/03: Table of Frequency Allocations Ireland

ODTR 98/14: Guidelines for applicants for point to point licences in spectrum above 1 GHz.

ODTR 98/15: Application form for Point to Point link licences above 1 GHz
RL.1 (rev 1): Wireless Telegraphy Acts 1926-1988, Application form for a radio link licence (Point to point links in spectrum below 1 GHz)

Please note all documentation is subject to updates and revision changes

Table 3: Licensing Requirements for the Fixed Services

Service	frequency Band	Band Plan	Licensing Regime (see note 1)	ETSI Reference Standard	Comment on reference standard	Channel spacing	Maximum transmit Power	Minimum Capacity	Remarks
Fixed	450-470 MHz		A licence is required, See ODTR RL.1(Rev. 1)"Application form for radio link licence (point to point radio links in spectrum of 1 GHz or less)" .	300 086 300 113		12.5 kHz	Minimum required to obtain adequate receiver input signal		The band 450-470 MHz is predominantly used for mobile radio and only a small proportion is used for fixed links. It is intended that fixed links other than for SCADA applications will be phased out.
Fixed	1.3 GHz	CEPT/ERC/REC 13-01 E, Annex A	A licence is required, See ODTR 98/14" Guidelines for applicants for Point to Point Link Licences in Spectrum Above 1 GHz"	300 630 300 631	Classes 1, 2, 3 applicable Class 3	<= 1 MHz	Minimum required to obtain required availability level	-	
Fixed	1.4 GHz	CEPT/ERC/REC 13-01 E, Annex B	A licence is required, See ODTR 98/14" Guidelines for applicants for Point to Point Link Licences in Spectrum Above 1 GHz"	300 630	Classes 1, 2, 3 applicable	<= 1 MHz	Minimum required to obtain required availability level	-	
Fixed	2 GHz	CEPT/ERC/REC 13-01 E, Annex C	A licence is required, See ODTR 98/14" Guidelines for applicants for Point to Point Link Licences in Spectrum Above 1 GHz"	300 633 300 631	Classes 2, 3 applicable Class 3	500 KHz, 1.75 MHz, 3.5 MHz, 7 MHz, 14 MHz	Minimum required to obtain required availability level	1 MBit/s	
Fixed	4 GHz	TBA	A licence is required, See ODTR 98/14" Guidelines for applicants for Point to Point Link Licences in Spectrum Above 1 GHz"	Appropriate ETSI Standard, when developed. In Interim Consult with ODTR required		TBA	Minimum required to obtain required availability level	TBA	
Fixed	L6 GHz	CEPT/ERC/REC 14-01 E, Annex 1	A licence is required, See ODTR 98/14" Guidelines for applicants for Point to Point Link Licences in Spectrum Above 1 GHz"	300 234		29.65 MHz	Minimum required to obtain required availability level	140 MBit/s	
Fixed	U6 GHz	CEPT/ERC/REC 14-02 E, Annex 1	A licence is required, See ODTR 98/14" Guidelines for applicants for Point to Point Link Licences in Spectrum Above 1 GHz"	Appropriate ETSI Standard, If developed. In Interim, consult with ODTR required		40 MHz	Minimum required to obtain required availability level	140 MBit/s	
Fixed	7 GHz	ITU-R F.385-6, Annex 1	A licence is required, See ODTR 98/14" Guidelines for applicants for Point to Point Link Licences in Spectrum Above 1 GHz"	300 234		28 MHz	Minimum required to obtain required availability level	140 MBit/s	
Fixed	L8 GHz	ITU-R F. 386-4, Annex 1	A licence is required, See ODTR 98/14" Guidelines for applicants for Point to Point Link Licences in Spectrum Above 1 GHz"	300 234		29.65 MHz	Minimum required to obtain required availability level	140 MBit/s	

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Service	frequency Band	Band Plan	Licensing Regime (see note 1)	ETSI Reference Standard	Comment on reference standard	Channel spacing	Maximum transmit Power	Minimum Capacity	Remarks
Fixed	U8 GHz	ITU-R F. 386-4, Annex 3	A licence is required, See ODTR 98/14" Guidelines for applicants for Point to Point Link Licences in Spectrum Above 1 GHz"	Appropriate ETSI Standard, If Developed. In Interim, Consult with ODTR required		7 MHz, 14 MHz	Minimum required to obtain required availability level	8 MBit/s	
Fixed	11 GHz	ITU-R F. 387-6, Annex 2	A licence is required, See ODTR 98/14" Guidelines for applicants for Point to Point Link Licences in Spectrum Above 1 GHz"	Appropriate ETSI Standard, If Developed. In Interim, Consult with ODTR required		40 MHz	Minimum required to obtain required availability level	140 MBit/s	
Fixed	15 GHz	ITU-R F. 636-3	A licence is required, See ODTR 98/14" Guidelines for applicants for Point to Point Link Licences in Spectrum Above 1 GHz"	301 128	Classes 1, 2 applicable	3.5 MHz, 7 MHz, 14 MHz	Minimum required to obtain required availability level	2 MBit/s	
Fixed	18 GHz	CEPT/ERC/REC 12-03 E, Annex A	A licence is required, See ODTR 98/14" Guidelines for applicants for Point to Point Link Licences in Spectrum Above 1 GHz"	300 430, 300 639, 301 128	STM-1 with 55 MHz channel spacing only. Sub STM-1 SDH with 27.5 MHz channel spacing. PDH; Classes 1, 2 applicable	55 MHz, 27.5 MHz	Minimum required to obtain required availability level	34Mbit/s	
Fixed	23 GHz	CEPT/ERC/REC 13-02 E, Annex A	A licence is required, See ODTR 98/14" Guidelines for applicants for Point to Point Link Licences in Spectrum Above 1 GHz"	300 198	Class 2 applicable to PDH. Class 3 applicable to SDH.	3.5 MHz, 7 MHz, 14 MHz, 28 MHz, 56 MHz	Minimum required to obtain required availability level	2 MBit/s	
Fixed	26 GHz	CEPT/ERC/REC 13-02 E, Annex B	A licence is required, See ODTR 98/14" Guidelines for applicants for Point to Point Link Licences in Spectrum Above 1 GHz"	300 431, 300 632	Grade B equipment applicable, (PDH and SDH) Analogue point to point applicable	3.5 MHz, 7 MHz, 14 MHz, 28 MHz, 56 MHz	Minimum required to obtain required availability level	2 MBit/s	
Fixed	38 GHz	CEPT/ERC/REC 12-01 E, Annex A	A licence is required, See ODTR 98/14" Guidelines for applicants for Point to Point Link Licences in Spectrum Above 1 GHz"	300 197	Class 2 applicable to PDH. Class 3 applicable to SDH.	3.5 MHz, 7 MHz, 14 MHz, 28 MHz	Minimum required to obtain required availability level	2 MBit/s	
Fixed	58 GHz	ETS 300 408 (Awaiting Development of Bandplan)	A licence is required, See ODTR 98/14" Guidelines for applicants for Point to Point Link Licences in Spectrum Above 1 GHz"	300 408		100 MHz	Minimum required to obtain required availability level	-	

Part III

Licensing Requirements for the Broadcasting Services

Part III Licensing Requirements for the Broadcasting Services

Introduction:

Licensing requirements for broadcasting and broadcasting ancillary services are described in Table 4.

Sources of Additional Information

National Primary Legislation:

Wireless Telegraphy Acts, 1926 - 1988, Broadcasting Authority Act, 1960 as amended, Radio and Television Act, 1988.

Table 4: Licensing Requirements for Broadcasting Services

Frequency Band	National Usage for Broadcast and Broadcast Ancillary	Licensing Regime (Note 1)	Reference Standards (see note 2)	Channel Spacing	Maximum Power erp/eirp	Notes
148.5 - 255 kHz	Broadcasting (AM Sound)	Govt. Approval to state broadcaster/ IRTC regulates independent sector	Specs. To match ITU Radio Regs and requirements of GE75 Agreement	9kHz	No rule (500kW carrier power)	ITU Geneva 1975 Plan (long wave)
255 - 283.5kHz	Broadcasting (AM Sound)	Govt. Approval to state broadcaster/ IRTC regulates independent sector	Specs. To match ITU Radio Regs and requirements of GE75 Agreement	9kHz	No Rule	ITU Geneva 1975 Plan (long wave)
526.5 - 1606.5 kHz	Broadcasting (AM Sound)	Govt. Approval to state broadcaster/ IRTC regulates independent sector	Specs. To match ITU Radio Regs and requirements of GE75 Agreement	9kHz	No rule (500kW carrier power)	ITU Geneva 1975 Plan (medium wave)
5900 - 5950 kHz						Shortwave Reception only No transmitting stations licensed in Ireland
5950 - 6200 kHz						
7100 - 7300 kHz						
7300 - 7350 kHz						
9400 - 9500 kHz						
9500 - 9900 kHz						
11600 - 11650 kHz						
11650 - 12050 kHz						
12050 - 12100 kHz						
13570 - 13600 kHz						
13600 - 13800 kHz						
15100 - 15600 kHz						
15600 - 15800 kHz						
17480 - 17550kHz						
17550 - 17900 kHz						
18900 - 19020 kHz	Broadcasting (FM Sound)		Specs. To match ITU Radio Regs and requirements of GE84 Agreement ETS 300 384 recommended Legbac MoU.		No Rule	ITU Geneva 1984 Plan CEPT/ERC/DEC/(96)13 (VHF)
21450 - 21850 kHz						
25670 - 26100 kHz						
87.5 - 100 MHz						

Frequency Band	National Usage for Broadcast and Broadcast Ancillary	Licensing Regime (Note 1)	Reference Standards (see note 2)	Channel Spacing	Maximum Power erp/eirp	Notes
			ETS 300 751 ETS 300 447 ETR 132			
100 - 108 MHz	Broadcasting (FM Sound)		Specs. To match ITU Radio Regs and requirements of GE84 Agreement ETS 300 384 recommended Legbac MoU.		No Rule	ITU Geneva 1984 Plan CEPT/ERC/DEC/(96)13
174 - 223 MHz	Broadcasting (Television)		Specs. To match ITU Radio Regs and requirements of ST61 Agreement, System PAL I, Chester 97 Agreement, EN 300 744, ETS 300 743, EN 301 192, TS 101 192 TR101 200 EN 300 468, ETR 211, EN300 472, TR 101 190 TR 101 191 ETS 300 801, EN 301 193 EN 301 195, ETS 300 802 TR 101 194, ETR 154 ETR 289, TS 101 197, TS 103 197 EN 301 192, TR101 202 EN 50221 R 206 001 EN 50201 and Wiesbaden 95 Special Arrangement (Amended Bonn 96) ETS 300 401 (T DAB) EN 300 797, EN 300 798 ETS 300 799, EN 301 234 EN 50248, EN 50255	8MHz channel spacing for TV, DAB blocks As per Wiesbaden 95	No Rule	ITU Stockholm 1961 Plan (Channel J Television to be phased out) T-DAB In the UK (217.2-230 MHz) (CEPT 1995 Wiesbaden Arrangement, CEPT Bonn Meeting 1996)
223 - 230 MHz	Broadcasting		Specs. To match ITU Radio Regs TR101 200, EN 300 468 ETR 211, EN300 472 TR 101 190, TR 101 191 ETS 300 801, EN 301 193 EN 301 195, ETS 300 802	DAB blocks as per Wiesbaden 95	No Rule	T-DAB in UK (217.2-230 MHz), Introduction in Ireland (223-230MHz) (CEPT 1995 Wiesbaden Arrangement, CEPT Bonn Meeting 1996)

Frequency Band	National Usage for Broadcast and Broadcast Ancillary	Licensing Regime (Note 1)	Reference Standards (see note 2)	Channel Spacing	Maximum Power erp/eirp	Notes
			TR 101 194, ETR 154 ETR 289, TS 101 197 TS 103 197, EN 301 192 TR101 202, EN 50221 R 206 001, EN 50201 and Wiesbaden 95 Special Arrangement (Amended Bonn 96) ETS 300 401 (T DAB) EN 300 797, EN 300 798 ETS 300 799, EN 301 234 EN 50248, EN 50255			
470 - 790 MHz	Broadcasting (Television)		Specs. To match ITU Radio Regs and requirements of ST61 Agreement, System PAL I and Chester 97 Agreement, EN 300 744, ETS 300 743, EN 301 192, TS 101 192, TR101 200 EN 300 468, ETR 211 EN300 472, TR 101 190 TR 101 191, ETS 300 801 EN 301 193, EN 301 195 ETS 300 802, TR 101 194 ETR 154, ETR 289 TS 101 197, TS 103 197 EN 301 192, TR101 202 EN 50221, R 206 001 EN 50201,	8 MHz channels for TV	No Rule	ITU Stockholm 1961 Plan Mobile (services ancillary to broadcasting under consideration) Digital Broadcasting (DTV), CEPT Chester Agreement (1997)
790 - 862 MHz	Broadcasting (Television) Ancillary (OB Links)		Specs. To match ITU Radio Regs and requirements of ST61 Agreement, System PAL I and Chester 97 Agreement, EN 300 744, ETS 300 743, EN 301 192, TS 101 192, TR101 200 EN 300 468, ETR 211 EN300 472, TR 101 190 TR 101 191, ETS 300 801 EN 301 193, EN 301 195 ETS 300 802, TR 101 194 ETR 154, ETR 289	8 MHz channels for TV	No Rule	ITU Stockholm 1961 Plan Digital Broadcasting (DTV), CEPT Chester Agreement (1997)

Frequency Band	National Usage for Broadcast and Broadcast Ancillary	Licensing Regime (Note 1)	Reference Standards (see note 2)	Channel Spacing	Maximum Power erp/eirp	Notes
			TS 101 197, TS 103 197 EN 301 192, TR101 202 EN 50221, R 206 001 EN 50201			
1452 - 1492 MHz	Broadcasting (DAB)	Govt. Approval to state broadcaster/ IRTC regulates independent sector No licensing regime yet in place	Specs. To match ITU Radio Regs and Wiesbaden 95 Special Arrangement (Amended Bonn 96) ETS 300 401 (T DAB) EN 300 797, EN 300 798 ETS 300 799, EN 301 234 EN 50248, EN 50255		No Rule	DIGITAL AUDIO BROADCASTING Resolution 528 (WARC-92) (CEPT 1995 Wiesbaden Arrangement, CEPT 1996 Bonn meeting (T-DAB in France))
2500.00 - 2520.00 MHz	Programme Retransmission Systems (2500 - 2686 MHz)	Licences were awarded to operators, following a competition.	doc. ODTR 98/65 doc. ODTR 98/68 doc. ODTR 98/67 doc. ODTR 99/44 TR 101 200, EN 300 468 ETR 211, ETR 162 EN 300 472, ETS 300 743 EN 300 744, TR 101 190 TS 101 191, EN 300 749 ETS 300 801, EN 301 193 EN 301 199, TR 101 205 EN 301 195, ETS 300 802 TR 101 194, ETR 154 ETR 289, TS 101 197 TS 103 197, EN 301 192 TR 101 202, EN 50221 R 206 001, EN 50201 TS 102 201			S.I. 39 (1989), S.I. 252 (1991) SI 73 of 1999
2520 - 2655 MHz	Programme Retransmission Systems (2500 - 2686 MHz)	Licences were awarded to operators, following a competition.	doc. ODTR 98/65 doc. ODTR 98/68 doc. ODTR 98/67 doc. ODTR 99/44 TR 101 200, EN 300 468 ETR 211, ETR 162 EN 300 472, ETS 300 743			S.I. 39 (1989), S.I. 252 (1991) SI 73 of 1999 Channel plan for the fixed service in CEPT/ERC/REC 13 - 01 E, Annex D will not be implemented as the band is used by Programme Retransmission Systems.

Frequency Band	National Usage for Broadcast and Broadcast Ancillary	Licensing Regime (Note 1)	Reference Standards (see note 2)	Channel Spacing	Maximum Power erp/eirp	Notes
			EN 300 744, TR 101 190 TS 101 191, EN 300 749 ETS 300 801, EN 301 193 EN 301 199, TR 101 205 EN 301 195, ETS 300 802 TR 101 194, ETR 154 ETR 289, TS 101 197 TS 103 197, EN 301 192 TR 101 202, EN 50221 R 206 001, EN 50201 TS 102 201			
2655 - 2670 MHz	Programme Retransmission Systems (2500 - 2686 MHz)	Licences were awarded to operators, following a competition.	doc. ODTR 98/65 doc. ODTR 98/68 doc. ODTR 98/97 doc. ODTR 99/44 TR 101 200, EN 300 468 ETR 211, ETR 162 EN 300 472, ETS 300 743 EN 300 744, TR 101 190 TS 101 191, EN 300 749 ETS 300 801, EN 301 193 EN 301 199, TR 101 205 EN 301 195, ETS 300 802 TR 101 194, ETR 154 ETR 289, TS 101 197 TS 103 197, EN 301 192 TR 101 202, EN 50221 R 206 001, EN 50201 TS 102 201,			S.I. 39 (1989), S.I. 252 (1991) SI 73 of 1999 Channel plan for the fixed service in CEPT/ERC/REC 13 - 01 E, Annex D will not be implemented as the band is used by Programme Retransmission Systems.
2670 - 2690 MHz	Programme Retransmission Systems (2500 - 2686 MHz)	Licences were awarded to operators, following a competition.	doc. ODTR 98/65 doc. ODTR 98/68 doc. ODTR 98/67 doc. ODTR 99/44 TR 101 200, EN 300 468 ETR 211, ETR 162 EN 300 472, ETS 300 743 EN 300 744, TR 101 190 TS 101 191, EN 300 749 ETS 300 801, EN 301 193			S.I. 39 (1989), S.I. 252 (1991) SI 73 of 1999

Frequency Band	National Usage for Broadcast and Broadcast Ancillary	Licensing Regime (Note 1)	Reference Standards (see note 2)	Channel Spacing	Maximum Power erp/eirp	Notes
			EN 301 199, TR 101 205 EN 301 195, ETS 300 802 TR 101 194, ETR 154 ETR 289, TS 101 197 TS 103 197, EN 301 192 TR 101 202, EN 50221 R 206 001, EN 50201 TS 102 201,			

The following apply to cable systems:

Wireless Telegraphy (Wired Broadcast Relay Licence) Regulations, No.67 of 1974

Wireless Telegraphy Act 1926 (Section 3) (Exemption of Certain Wired Broadcast Relay Stations) Regulations, order of 1974

Wireless Telegraphy (Programme Services Distribution) Regulations, No.73 of 1999

Standards that apply are:

TR101 200, EN 300 468, ETR 211, EN300 472, TR 101 190, TR 101 191, ETS 300 802, TR 101 194, ETR 154, ETR 289,

TS 101 197, TS 103 197, EN 301 192, TR101 202, EN 50221, R 206 001, EN 50201, EN 300 429, TR 101 196.

The radio emission requirements for xDSL systems are under consideration.

Part IV

Permitted Short Range Devices In Ireland

Part IV Permitted Short Range Devices In Ireland

Introduction:

The term "Short Range Device" (SRD) is intended to cover the radio transmitters which provide either uni-directional or bi-directional communication and which have low capability of causing interference to other radio equipment. SRDs use either integral, dedicated or external antennas and all modes of modulation can be permitted subject to relevant standards.

Within Ireland, short range devices may be operated, within the confines of the technical parameters in Table 5, without the requirement of an individual user license.

The terms of use, beyond those stipulated in Table 5 are that:

- SRDs in general operate in shared bands and are not permitted to cause harmful interference to other radio services
- in general SRDs cannot claim protection from other radio services
- due to the increasing interest in the use of SRDs for a growing number of applications it is necessary to harmonise frequencies and regulations for these devices
- there is a need to distinguish between different applications
- additional applications and associated annexes will be added as necessary

Table 5 indicates the short ranges devices (SRD) which are permitted in Ireland. Where possible CEPT/ERC/REC 70-03 has been followed. In addition, other bands such as the band 173.2-173.3MHz are also permitted for low power devices.

Table 5: Permitted Short Range Devices in Ireland

Frequency Bands K=kHz M=MHz G=GHz	Type of Device	Max Radiated Power or Field Strength Limits & Channel spacing*	Relevant ETSI Standard	Additional Requirements
9 – 59.75K	Inductive Loop System	72 dBµA/m @ 10 m	300 330	CEPT/ERC/REC 70-03
59.75-60.25K	Inductive Loop System	42 dBµA/m @ 10 m	300 330	CEPT/ERC/REC 70-03
60.25-70K	Inductive Loop System	72 dBµA/m @ 10 m	300 330	CEPT/ERC/REC 70-03
70-119K	Inductive Loop System	42 dBµA/m @ 10 m	300 330	CEPT/ERC/REC 70-03
119-135K	Inductive Loop System	72 dBµA/m @ 10 m	300 330	CEPT/ERC/REC 70-03
285 – 400 K	Inductive Loop System	38 dBµA/m @ 10 m	300 330	
1650 – 1950 K	Inductive Loop System	8 dBµA/m @ 10 m	300 330	
1800 – 2200 K	Inductive Loop System	-8 dBµA/m @ 10 m	300 330	
2540 – 3560 K	Inductive Loop System	-8 dBµA/m @ 10 m	300 330	
6.765 – 6.795 M	Inductive Loop System	42 dBµA/m @ 10 m	300 330	CEPT/ERC/REC 70-03
7400 – 8900 K	Inductive Loop System	9 dBµA/m @ 10 m	300 330	CEPT/ERC/REC 70-03
13.553 – 13.567 M	Inductive Loop System	42 dBµA/m @ 10 m	300 330	CEPT/ERC/REC 70-03
26.957 – 27.283 M	Inductive Loop System	42 dBµA/m @ 10 m	300 330	CEPT/ERC/REC 70-03
26.957 – 27.283 M	Non-specific SRD	10 mW erp	300 220	CEPT/ERC/REC 70-03
26.957 – 27.283 M	Low Power Radio Transmitters	10 mW erp	300 220	CEPT/ERC/REC 70-03
26.99 – 27.20 M	Surface Model Control	100 mW erp	300 220	CEPT/ERC/REC 70-03
31.025 – 31.325 M	Analogue cordless phones	10 mW erp	-	Radio info in National Std TTE 9
34.99 – 35.25 M	Aircraft Model Control Only	100 mW erp	300 220	CEPT/ERC/REC 70-03
39.925 – 40.225 M	Analogue cordless phones	10 mW erp	-	Radio info in National Std TTE 9
40.66 – 40.7 M	Surface Model Control	100 mW erp	300 220	CEPT/ERC/REC 70-03
40.66 – 40.7 M	Non-specific SRD	10 mW erp	300 220	CEPT/ERC/REC 70-03
49.82 – 49.98 ² M	Baby Monitors	10 mW erp	300 220	CEPT/ERC/REC 70-03
49.82 – 49.98 M	Low Power Radio transmitters	10 mW erp	300 220	CEPT/ERC/REC 70-03
173.2125 – 173.2375M	Non-specific SRD - telecommand only	10 mW erp : 25 kHz	300 220	
173.2375 – 173.275M	Non-specific SRD	100 mW erp : 25 kHz	300 220	
173.7 – 175.1 M	Wireless Microphones	10 mW erp	300 422	CEPT/ERC/REC 70-03 CEPT/ERC/DEC (96)15
402 – 405 M	Medical Implants	25 µW erp	300 220	CEPT/ERC/REC 70-03
433.05 – 434.79 M	Non-specific SRD	10 mW erp	300 220	CEPT/ERC/REC 70-03
863 – 865 M	Wireless Audio Systems	10 mW erp	301 357	CEPT/ERC/REC 70-03
863 – 865 M	Wireless Microphones	10 mW erp	300 422	CEPT/ERC/REC 70-03 CEPT/ERC/DEC (96)15
864.1 – 868.1M	CT2 cordless phones	10 mW erp	300 131	Subject to review

² When operating short range devices on these frequencies in close proximity to domestic television receivers care must be taken as the domestic television receivers may suffer interference

Frequency Bands K=kHz M=MHz G=GHz	Type of Device	Max Radiated Power or Field Strength Limits & Channel spacing*	Relevant ETSI Standard	Additional Requirements
868 – 868.6 M	Non-specific SRD	25 mW erp	300 220	CEPT/ERC/REC 70-03
868.6 – 868.7 M	Alarms	10 mW erp : 25 kHz	300 220	CEPT/ERC/REC 70-03
868.7 – 869.2 M	Non-specific SRD	25 mW erp	300 220	CEPT/ERC/REC 70-03
869.2 – 869.25 M	Social Alarms	10 mW erp : 25 kHz	300 220	CEPT/ERC/REC 70-03 CEPT/ERC/DEC (97)06
869.25 – 869.3 M	Alarms	10 mW erp : 25 kHz	300 220	CEPT/ERC/REC 70-03
869.4 – 869.65 M	Non-specific SRD	500 mW erp : 25 kHz	300 220	CEPT/ERC/REC 70-03
869.65 – 869.7 M	Alarms	25 mW erp : 25 kHz	300 220	CEPT/ERC/REC 70-03
869.7 – 870.0 M	Non-specific SRD	5 mW erp	300 220	CEPT/ERC/REC 70-03
1880 – 1900 M	DECT cordless phones	250 mW erp (peak)		DIR 91/287/EEC, S.I 168, 1994
2400 – 2483.5 M	Non-specific SRD	10 mW eirp	300 440	CEPT/ERC/REC 70-03 CEPT/ERC/DEC (99)07
2400 – 2483.5 M	Wideband Wireless Systems	100 mW eirp	300 328	CEPT/ERC/REC 70-03
2400 – 2483.5 M	FDDA	25 mW eirp	300 440	CEPT/ERC/REC 70-03 CEPT/ERC/DEC (99)07
2400 – 2483.5 M	Video Surveillance	25 mW eirp	300 440	CEPT/ERC/REC 70-03 CEPT/ERC/DEC (99)07
2446 – 2454 M	AVI for railways	500 mW eirp	300 761	CEPT/ERC/REC 70-03 CEPT/ERC/DEC (98)30
5150 – 5350M	Hiperlan: indoor use only	200 mW eirp	300 836	CEPT/ERC/REC 70-03 CEPT/ERC/DEC (99)23
5470 – 5725M	Hiperlan: indoor and outdoor use	1 W eirp	300 836	CEPT/ERC/DEC (99)23
5725 – 5875 M	Non-specific SRD	25 mW eirp	300 440	CEPT/ERC/REC 70-03 CEPT/ERC/DEC (99)07
5795 – 5805 M	RTTT data	2 W eirp	300 674 201 674	CEPT/ERC/REC 70-03
5805 – 5815 M	RTTT data	2 W eirp	300 674 201 674	CEPT/ERC/REC 70-03
9200 – 9500 M	FDDA	25 mW eirp	300 440	CEPT/ERC/REC 70-03 CEPT/ERC/DEC (99)07
9500 – 9975 M	FDDA	25 mW eirp	300 440	CEPT/ERC/REC 70-03 CEPT/ERC/DEC (99)07
10.5 – 10.6 G	FDDA	500 mW eirp	300 440	CEPT/ERC/REC 70-03 CEPT/ERC/DEC (99)07
13.4 – 14 G	FDDA	25 mW eirp	300 440	CEPT/ERC/REC 70-03 CEPT/ERC/DEC (99)07
17.1 – 17.3 G	Hiperlan	100 mW eirp		CEPT/ERC/REC 70-03
24.00 – 24.25 G	Non-specific SRD	100 mW eirp	300 440	CEPT/ERC/REC 70-03 CEPT/ERC/DEC (99)07
24.05 – 24.25 G	FDDA	100 mW eirp	300 440	CEPT/ERC/REC 70-03
76 – 77 G	RTTT radar	55dBm peak eirp	301 091	CEPT/ERC/REC 70-03

* Maximum Permitted Channel Spacing

NOTE: When selecting parameters for new SRDs, which may have inherent safety of human life implications, manufacturers and users should pay particular attention to the potential for interference from other systems operating in the same or adjacent bands. Manufacturers should advise users on the risks of potential interference and its consequences

Short Range Device Glossary of terms:

Inductive Loop Systems are systems which operate by producing a controlled magnetic field within which a predetermined recognisable signal is formed. Examples include shop anti-theft tagging systems, car immobiliser keys and door access tokens.

Non specific SRDs are used for general **telemetry, telecommand, alarms and data** with a low duty cycle. Telemetry means the transmission of remotely measured data. Telecommand means remote control. Video applications only above 2.4 GHz.

Low Power Radio Transmitters are used for short range two-way voice communications e.g. toy walkie talkies.

Model Control apparatus is used to control the movement of the model in the air, on land or over or under the water surface.

Baby Monitors are used to transmit sound to a remote receiver. This device is commonly used to monitor the sound or movement of infants.

Wireless Microphones transmit speech or music over short distances to a remote receiver in studios, theatres etc.

Wireless Audio Systems are typically used to replace the wired headphones or speakers in domestic hi-fi systems.

Wideband Wireless Systems are general purpose high bit rate spread spectrum radio systems.

FDDA means Field Disturbance and Doppler Apparatus. This is apparatus which operates by producing a radiated field and responding to any disturbance of that field caused by an intrusion or movement within the field by other devices, objects or persons. In this way it can detect or monitor the movement of objects or persons. Alarm systems sometimes use this type of equipment for intruder detection.

Video Surveillance Equipment is typically used for security camera purposes to replace the cable between a camera and a monitor.

AVI for Railways means Automatic Vehicle Identification for railways and is used to track and identify railway rolling stock.

RTTT means Road Transport and Traffic Telematics. This is apparatus used for traffic management. Applications include automatic road toll collection, route guidance systems, vehicle or container identification, instant traffic information, parking management, advance incident warning and on-vehicle anti-collision radar.

Hiperlan means a high performance radio local area network intended for indoor use, utilising spread-spectrum modulation techniques, to link computer nodes within a network.

Part V

Licensing Requirements for Other Radio Services

Part V Licensing Requirements for Other Radio Services

Introduction:

Information on the licensing requirements for other radio services are described in Table 6.

Table 6
Licensing Requirements for Services in Frequency Bands Dedicated to Mobile Telephony, UMTS, Fixed Wireless Point To Multipoint Access, Maritime, Radio Determination, Radio Location, Radio Navigation, Meteorological Aids, HF Fixed, Amateur and other Miscellaneous Radio Services.

Frequency Band	Radio Service**	Licensing Regime	Reference Standards	Notes
*	TACS (i.e. analogue mobile telephony system)	one licensed operator		TACS is being phased out in favour of GSM
*	GSM 900	three licensed operators	GSM standards	Regulations under Statutory Instrument (S.I.) S.I. 416/1994 S.I. 123/1996 S.I. 409/1997 S.I. 468/1997 S.I. 442/1999
*	GSM1800 (a.k.a. DCS 1800)	three licensed operators	DCS 1800 standards	Regulations under Statutory Instrument (S.I.) S.I. 107/1999 S.I. 442/1999
*	3G Mobile	under consideration		
*	Maritime MF and HF Maritime Mobile VHF Maritime Mobile Maritime Mobile Satellite (mss) Aeronautical VHF for use by mss on 121.5 & 123.5MHz 406MHz EPIRB 1.6GHz EPIRB Marine Radar	See Note 1 See Part 1 Table 1	EN 60945 ETS 300 338, ETS 300 373, ETS 300 067, EN 60945 See Part 1 Table 1 ETS 300 460, EN 300 829,, IEC 61097, IEC 60945, TS 101 089 ETS 300 066 ETS 300 372 EN 60936, EN 61152, EN 60872, EN 61097	ERC/DEC/(99)01 ERC/REC T/R 31-05
*	radio determination, radio location, radio navigation,	See Note 2		
*	Meteorological aids	See Note 3		
*	HF Fixed	See note 4		

Frequency Band	Radio Service**	Licensing Regime	Reference Standards	Notes
	Fixed Wireless Point to Multipoint Access (FWPMA)	Beauty contest for licences to operate nationally. 4 Broadband Licences (2 x 56 MHz in the 26 GHz band/ licence) and 3 Narrowband Licences 2 each in the 2GHz and 3.5 GHz bands and 1 in the 2.4 GHz band.		Regulations under Statutory Instrument (S.I.) S.I. 96/1998 S.I. 180/1998 S.I. 287/1999 Information on contest and frequency bands in document ODTR 99/07
*	Amateur Radio Service			Regulations under Statutory Instrument (S.I.) S.I. 330 of 1937: S.I. 232 of 1951: S.I. 194 of 1980: S.I. 115 of 1981: S.I. 74 of 1982: S.I. 87 of 1983: S.I. 85 of 1985: S.I. 74 of 1986: S.I. 132 of 1992: ERC/REC T/R 61-01 E: ERC/REC T/R 61-02: Licence Application documentation.
*	Fixed and Mobile Satellite Earth Stations	Licence Regime Being developed	Standards will depend on licensing regime Certain satellite terminals qualify for licence exemption if in compliance with ETS 300 254 or TBR 026 as applicable ETS 300 255 or TBR 027 as applicable ETS 300 423 or TBR 044 as applicable TBR 041	Licence exemptions exist for certain satellite terminals (see Attachment) S.I. 372 of 1997 S.I. 179 of 1998

- * Information on the frequency bands can be found in document ODTR 98/03: “Table of Frequency Allocations Ireland”.
- ** Under Irish national legislation (the Wireless telegraphy Acts (1926-1988), all apparatus for wireless telegraphy requires a licence unless that apparatus has been licence exempted under legislation. (see Annex 1 for a list of existing exemption orders).

Note: All radio equipment is subject to Directives 73/23/EEC (Low Voltage) and 89/336/EEC (EMC).

NOTE 1:

Individual licences are required. Day to day frequency assignments and equipment requirements are specified by the Department of the Marine and Natural Resources, on behalf of the ODTR. The ODTR has the licensing responsibility.

As well as the requirements specified by the Department of the Marine and Natural Resources on behalf of the ODTR, The ODTR may, from time to time, introduce additional requirements, where necessary.

The ODTR requires that all equipment which operates in dedicated frequency bands for these services optimises the effective and appropriate use of the radio spectrum and does not cause harmful interference to other authorised radio services.

The ODTR consults with the Department of the Marine before licensing specific assignments in these frequency bands.

NOTE 2:

Individual licences are required. Day to day frequency assignments and equipment requirements are specified, on behalf of the ODTR, by the relevant bodies who regulate day to day operations of the sectors using these services. The ODTR has the licensing responsibility.

As well as the requirements highlighted above, the ODTR may, from time to time, introduce additional requirements, where necessary.

The ODTR requires that all equipment which operates in dedicated frequency bands for these services optimises the effective and appropriate use of the radio spectrum does not cause harmful interference to other authorised radio services. Where appropriate, the ODTR consults with the relevant regulatory bodies for the different sectors (e.g. Department of the Marine and Natural Resources on Maritime issues and the Irish Aviation Authority on Aeronautical issues) before licensing frequency assignments in these frequency bands.

NOTE 3:

Individual licences are required. Day to day frequency assignments and equipment requirements are specified by Met Eireann, (Ireland's Meteorological Office) on behalf of the ODTR.

The ODTR has the licensing responsibility.

As well as the requirements highlighted above, the ODTR may, from time to time, introduce additional requirements, where necessary.

The ODTR requires that all equipment which operates in dedicated frequency bands for these services optimises the effective and appropriate use of the radio spectrum does not cause harmful interference to other authorised radio services. The ODTR consults with Met Eireann before licensing frequency assignments in these frequency bands.

NOTE 4:

User requires a licence and frequency assignment from the ODTR.

The ODTR requires that all equipment which operates in dedicated frequency bands for these services optimises the effective and appropriate use of the radio spectrum. Before issuing a licence the ODTR may wish to consult other organisations for their views on the affects of issuing a licence. The ODTR may, from time to time, introduce additional requirements, where necessary.

Annex 1:
**List of Exemption Orders for Certain Types of Apparatus for
Wireless Telegraphy.**

Annex 1: List of Exemption Orders for Certain Types of Apparatus for Wireless Telegraphy.

Those marked with an asterisk are under revision.

S.I. 211/1972: Wireless Telegraphy Act, 1926 (section 3) (Exemption of Sound Broadcasting Receivers) Order, 1972

S.I. 200/1976: Wireless Telegraphy Act, 1926 (section 3) (Exemption of Certain Wired Broadcast relay Stations) Order, 1976

S.I. 409/1997: Wireless Telegraphy (Mobile Telephones) Exemption Order, 1997

S.I. 410/1997: Wireless Telegraphy (Cordless Telephones) Exemption Order, 1997

S.I. 93/1998: Wireless Telegraphy Act, 1926 (section 3) (Exemption of Short Range Business Radios) Order, 1998

S.I. 214/1998: Wireless Telegraphy Act, 1926 (Section 3) (Exemption of Satellite Earth Stations for Satellite Personal Communication Services (S-PCS)) Order, 1998

S.I. 436/1998: Wireless Telegraphy Act, 1926 (section 3) Exemption of Citizen's Band (CB Radios) Order, 1998

S.I. 100/1999: Wireless Telegraphy Act, 1926 (section 3) (Exemption of Inmarsat -D Terminals for Land Mobile Applications) Order, 1999*

S.I. 101/1999: Wireless Telegraphy Act, 1926 (section 3) (Exemption of Inmarsat -C Terminals for Land Mobile Applications) Order, 1999*

S.I. 102/1999: Wireless Telegraphy Act, 1926 (section 3) (Exemption of Inmarsat -M Terminals for Land Mobile Applications) Order, 1999*

S.I. 103/1999: Wireless Telegraphy Act, 1926 (section 3) (Exemption of Omnitrac's Terminals for the Euteltrac's system) Order, 1999*

S.I. 104/1999: Wireless Telegraphy Act, 1926 (section 3) (Exemption of (I) ARCANET Suitcase Terminals) Order, 1999*

S.I. 105/1999: Wireless Telegraphy Act, 1926 (section 3) (Exemption of EMS - PRODAT Terminals for Land Mobile Applications) Order, 1999*

S.I. 106/1999: Wireless Telegraphy Act, 1926 (section 3) (Exemption of EMS - MSSAT Terminals for Land Mobile Applications) Order, 1999*

S.I. 107/1999: Wireless Telegraphy Act, 1999 (section 3) (Exemption of DCS1800 Mobile Terminals) Order, 1999

S.I. 108/1999: Wireless Telegraphy Act, 1999 (section 3) (Exemption of ERMES Paging Receivers) Order, 1999

S.I. 109/1999: Wireless Telegraphy Act, 1926 (section 3) (Exemption of Inmarsat Mini -M Terminals for Land Mobile Applications) Order, 1999*.

S.I. 110/1999: Wireless Telegraphy Act, 1926 (section 3) (Exemption of (ii) ARCANET Suitcase Terminals) Order, 1999*.

S.I. 173/2000: Wireless Telegraphy Act, 1926 (section 3) (Exemption of Mobile Earth Stations for Satellite Personal Communication Systems operating in bands below 1 GHz (S-PCS<1GHz)) Order, 2000.

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National legislation:

Primary Legislation -Acts:

Wireless Telegraphy Acts (1926-1988)

Wireless Telegraphy (Business Radio Licence) Regulations, 1949-1992

Broadcasting Authority Act, 1960 as amended

Radio and Television Act, 1988

Secondary Legislation - Statutory Instruments (S. I.):

Mobile Services (PMR, PAMR):

S.I. 83 of 1988: Wireless Telegraphy (Community Repeater Licence) Regulations, 1988

S.I. 319/92: Wireless telegraphy (radio Link licence) Regulations, 1992

S.I. 28/1995 European Communities (Pan-European Land Based Public Radio Paging Service – ERMES) Regulations, 1995

S.I. 93 of 1998: Wireless Telegraphy Act 1926, (Section 3) (Exemption of Short Range Business Radios) Order, 1998.

Mobile Telephony:

S.I. 416/1994: European Communities (Co-ordinated Introduction of Public Pan-European Land Based Mobile Communications - GSM) Regulations, 1994

S.I. 123/1996: European Communities (Mobile and Personal Communications) Regulations, 1996

S.I. 409/1997: Wireless Telegraphy (Mobile Telephones)Exemption Order, 1997

S.I. 468/1997: Wireless Telegraphy (GSM&TACS Mobile Telephony Licence)Regulations, 1997

S.I. 96/1998: European Communities (Telecommunications Licences) Regulations, 1998

&

S.I. 180/1998: European Communities (Full Competition in Telecommunications) Regulations, 1998 (revoked S.I. 123/1996)

S.I. 107/1999: Wireless Telegraphy Act, 1999 (Section 3) (Exemption of DCS1800 Mobile Terminals) Order, 1999.

S.I. 442/1999: Wireless Telegraphy (GSM&TACS Mobile Telephony Licence) Regulations, 1999

Amateurs/Experimenters:

S.I. 330 of 1937: Wireless Telegraphy (Experimenter's Licence) Regulations, 1937

S.I. 232 of 1951: Wireless Telegraphy (Experimenter's Licence) (Amendment) (No. 1) Regulations, 1951

S.I. 194 of 1980: Wireless Telegraphy (Experimenter's Licence) (Amendment) Regulations, 1980

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S.I. 74 of 1982: Wireless Telegraphy (Experimenter's Licence) (Amendment) Regulations, 1982

S.I. 87 of 1983: Wireless Telegraphy (Experimenter's Licence) (Amendment) Regulations, 1983

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S.I. 74 of 1986: Wireless Telegraphy (Experimenter's Licence) (Amendment) Regulations, 1986

S.I. 132 of 1992: Wireless Telegraphy (Experimenter's Licence) (Amendment) Regulations, 1992

Satellite Services:

S.I. 372/1997: European Communities (Satellite Telecommunications Services) Regulations, 1997

S.I. 179/1998: European Communities (Satellite Earth Station Equipment) Regulations, 1998.

Broadcasting:

S.I. 39 (1989): "Wireless Telegraphy (Television Programme Retransmission) Regulations, 1989."

S.I. 252 (1991): "Wireless Telegraphy(TV Programme Retransmission and Relay) Regulations, 1991."

S.I. 67 (1974): Wireless Telegraphy (Wired Broadcast Relay Licence) Regulations, 1974

S.I. 200 (1976): Wireless Telegraphy Act 1926 (Section 3) (Exemption of Certain Wired Broadcast Relay Stations) Regulations, order

S.I. 73 of (1999): Wireless Telegraphy (Programme Services Distribution) Regulations,

S.I. 173/2000: Wireless Telegraphy Act, 1926 (section 3) (Exemption of Mobile Earth Stations for Satellite Personal Communication Systems operating in bands below 1 GHz (S-PCS<1GHz)) Order, 2000.

FWPMA/FWA/WLL:

S.I. 287/1999: Wireless Telegraphy (Fixed Wireless Point to Multipoint Access Licence) Regulations, 1999.

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S.I. 200/1976: Wireless Telegraphy Act, 1926 (section 3) (Exemption of Certain Wired Broadcast relay Stations) Order, 1976

S.I. 410/1997: Wireless Telegraphy (Cordless Telephones) Exemption Order, 1997

S.I. 93/1998: Wireless Telegraphy Act, 1926 (section 3) (Exemption of Short Range Business Radios) Order, 1998

S.I. 214/1998: Wireless Telegraphy Act, 1926 (Section 3) (Exemption of Satellite Earth Stations for Satellite Personal Communication Services (S-PCS)) Order, 1998

S.I. 436/1998: Wireless Telegraphy Act, 1926 (section 3) Exemption of Citizen's Band (CB Radios) Order, 1998

S.I. 100/1999: Wireless Telegraphy Act, 1926 (section 3) (Exemption of Inmarsat -D Terminals for Land Mobile Applications) Order, 1999

S.I. 101/1999: Wireless Telegraphy Act, 1926 (section 3) (Exemption of Inmarsat -C Terminals for Land Mobile Applications) Order, 1999

S.I. 102/1999: Wireless Telegraphy Act, 1926 (section 3) (Exemption of Inmarsat -M Terminals for Land Mobile Applications) Order, 1999

S.I. 103/1999: Wireless Telegraphy Act, 1926 (section 3) (Exemption of Omnitrac's Terminals for the Euteltrac's system) Order, 1999

S.I. 104/1999: Wireless Telegraphy Act, 1926 (section 3) (Exemption of (I) ARCANET Suitcase Terminals) Order, 1999

S.I. 105/1999: Wireless Telegraphy Act, 1926 (section 3) (Exemption of EMS - PRODAT Terminals for Land Mobile Applications) Order, 1999

S.I. 106/1999: Wireless Telegraphy Act, 1926 (section 3) (Exemption of EMS - MSSAT Terminals for Land Mobile Applications) Order, 1999

S.I. 107/1999: Wireless Telegraphy Act, 1999 (section 3) (Exemption of DCS1800 Mobile Terminals) Order, 1999

S.I. 108/1999: Wireless Telegraphy Act, 1999 (section 3) (Exemption of ERMES Paging Receivers) Order, 1999

S.I. 109/1999: Wireless Telegraphy Act, 1926 (section 3) (Exemption of Inmarsat Mini -M Terminals for Land Mobile Applications) Order, 1999

S.I. 110/1999: Wireless Telegraphy Act, 1926 (section 3) (Exemption of (ii) ARCANET Suitcase Terminals) Order, 1999

S.I. 173/2000: Wireless Telegraphy Act, 1926 (section 3) (Exemption of Mobile Earth Stations for Satellite Personal Communication Systems operating in bands below 1 GHz (S-PCS<1GHz)) Order, 2000.

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ODTR 98/03 "Table of Frequency Allocations, Ireland"

Mobile Services (PMR/PAMR):

ODTR 00/07: Business Radio Licence Application Form and Explanatory Notes

CR 14: Wireless Telegraphy Act 1926, Wireless Telegraphy (Community Repeater Licence) Regulations, 1988 Community Repeater Licence Conditions.

CR1: Business Radio: Community Repeater Systems Explanatory Note

Form CR2: Office of the Director of Telecommunications Regulation, Wireless Telegraphy (Community Repeater Licence) regulations, 1988, Application for a Community Repeater Licence.

Wireless Telegraphy Acts 1926-1988: Application for a Paging Permit (on – site)

Wireless Telegraphy Acts 1926-1988: Application for a Paging Permit (Local)

Wireless Telegraphy Acts 1926-1988: Application for a Paging Permit (wide area)

Fixed Services:

ODTR 98/14: Guidelines for applicants for point to point link licences in spectrum above 1 GHz

ODTR 98/15: Application form for point to point link licences above 1 GHz

RL.1 (rev 1): Wireless Telegraphy Acts 1926-1988, Application Form for a Radio Link Licence (Point to Point Links in Spectrum of 1 GHz or less)

ODTR 99/07: Information Memorandum, Competition For Award of Licences to Provide Fixed Wireless Point to Multipoint Access.

Marine:

‘Application for a Licence to Establish a Radio Station on board Ship.’

Amateurs/Experimenters:

‘Notes for the guidance of intending applicants for Radio Experimenters Licences.’

‘Application for a licence to use wireless sending and receiving apparatus for experimental purposes’

‘Application for extension of radio experimenter’s licence to permit maritime mobile operation’

‘Maritime Mobile Conditions’

‘Fast Scan Conditions- Portable Operation’

‘Fast Scan Conditions- operation at Station Address’

‘Slow Scan Television Specification’

Broadcasting:

ODTR 98/65: “Technical Conditions for the operation of Analogue Programme Services Distribution Systems in the frequency band 2500 – 2686 MHz”.

ODTR 98/67: “Technical Conditions for the operation of Digital Programme Services Distribution Systems”.

ODTR 98/68: “Technical Conditions for the Operation of Conditional Access Systems”.

ODTR 99/44: “MMDS TV Licence (effective 19/4/1999)”

LEGBAC MoU: “Limited Exploratory Group on Broadcasting to Aeronautical Compatibility.”
MOU

EC Directives

Directive 90/543/EEC

On the co-ordinated introduction of pan-European land based public radio paging in the Community

ETSI Documents

Mobile Services (PMR/PAMR):

ETS 300 086 Radio Equipment and Systems (RES); Land mobile group; Technical characteristics and test conditions for radio equipment with an internal or external RF connector intended primarily for analogue speech.

ETS 300 113 Radio Equipment and Systems (RES); Land mobile service; Technical characteristics and test conditions for radio equipment intended for the transmission of data (and speech) and having an antenna connector

ETS 300 219 Radio Equipment and Systems (RES); Land mobile service; Technical characteristics and test conditions for radio equipment transmitting signals to initiate a specific response in the receiver.

ETS 300 220 Electromagnetic compatibility and Radio spectrum Matters (ERM); Short range devices; Technical characteristics and test methods for radio equipment to be used in the 25 MHz to 1 000 MHz frequency range with power levels ranging up to 500 mW.

ETS 300 224 Electromagnetic compatibility and Radio spectrum Matters (ERM); On-site paging service; Technical and functional characteristics for on-site paging systems, including test methods.

ETS 300 296 Radio Equipment and Systems (RES); Land mobile service; Technical characteristics and test conditions for radio equipment using integral antennas intended primarily for analogue speech.

ETS 300 341 Radio Equipment and Systems (RES); Land mobile service; Technical characteristics and test conditions for radio equipment using an integral antenna transmitting signals to initiate a specific response in the receiver.

ETS 300 390 Radio Equipment and Systems (RES); Land mobile service; Technical characteristics and test conditions for radio equipment intended for the transmission of data (and speech) and using an integral antenna.

ETS 300 392 Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D).

ETS 300 393 Radio Equipment and Systems (RES); Trans-European Trunked Radio (TETRA); Packet Data Optimized (PDO).

ETS 300 394 Terrestrial Trunked Radio (TETRA); Conformance testing specification; Part 2: Protocol testing specification for Voice plus Data (V+D).

ETS 300 395 Terrestrial Trunked Radio (TETRA); Speech codec for full-rate traffic channel.

ETS 300 396 Terrestrial Trunked Radio (TETRA); Technical requirements for Direct Mode Operation (DMO).

ETR 053 Radio Equipment and Systems (RES); Radio site engineering for radio equipment and systems in the mobile service

Maritime Mobile Services:

ETS 300 066

Radio Equipment and Systems (RES); Float-free maritime satellite Emergency Position Indicating Radio Beacons (EPIRBs) operating on 406,025 MHz; Technical characteristics and methods of measurement

ETS 300 067

Radio Equipment and Systems (RES); Radiotelex equipment operating in the maritime MF/HF service; Technical characteristics and methods of measurement

ETS 300 338

Radio Equipment and Systems (RES); Technical characteristics and methods of measurement for equipment for generation, transmission and reception of Digital Selective Calling (DSC) in the maritime MF, MF/HF and/or VHF mobile service

ETS 300 372

Radio Equipment and Systems (RES); Technical characteristics and methods of measurement for maritime float-free satellite Emergency Position Indicating Radio Beacon (EPIRB) operating in the 1,6 GHz band through geostationary satellites

ETS 300 373

Radio Equipment and Systems (RES); Technical characteristics and methods of measurement for maritime mobile transmitters and receivers for use in the MF and HF bands

ETS 300 460

Satellite Earth Stations and Systems (SES); Maritime Mobile Earth Stations (MMES) operating in the 1,5/1,6 GHz bands providing Low Bit Rate Data Communications (LBRDC) for the Global Maritime Distress and Safety System (GMDSS); Technical characteristics and methods of measurement

EN 300 829

Electromagnetic compatibility and Radio spectrum Matters (ERM); ElectroMagnetic Compatibility (EMC) for Maritime Mobile Earth Stations (MMES) operating in the 1,5/1,6 GHz bands providing Low Bit Rate Data Communications (LBRDC) for the Global Maritime Distress and Safety System (GMDSS)

TS 101 089

Electromagnetic compatibility and Radio spectrum Matters (ERM); Maritime Very High Frequency (VHF) distress radio equipment operating on aeronautical frequencies

Fixed Services:

ETS 300 086 Radio Equipment and Systems (RES); Land mobile group; Technical characteristics and test conditions for radio equipment with an internal or external RF connector intended primarily for analogue speech.

ETS 300 113 Radio Equipment and Systems (RES); Land mobile service; Technical characteristics and test conditions for radio equipment intended for the transmission of data (and speech) and having an antenna connector

ETS 300 197

Transmission and Multiplexing (TM); Parameters for Radio Relay Systems for the Transmission of Digital Signals and Analogue Video Signals Operating at 38 GHz.

ETS 300 198

Transmission and Multiplexing (TM); Parameters for Radio Relay Systems for the Transmission of Digital Signals and Analogue Video Signals Operating at 23 GHz.

ETS 300 234

Transmission and Multiplexing (TM); High capacity digital radio relay systems carrying 1 x synchronous transport module-level (1xSTM-1) signals operating in frequency bands with about 30 MHz channel spacing and alternated arrangements.

ETS 300 408

Transmission and Multiplexing (TM); Parameters for Radio-Relay Systems for the Transmission of Digital Signals and Analogue Video Signals operating at around 58 GHz, which do not require Co-ordinated Frequency Planning.

ETS 300 430

Transmission and Multiplexing (TM); High capacity digital radio relay systems carrying 1 x synchronous transport module-level (1xSTM-1) signals operating in the 18GHz frequency band with channel spacing of 55MHz.

ETS 300 431

Transmission and Multiplexing (TM); Digital fixed point to point radio link equipment operating in the frequency range 24.25 to 29.5 GHz.

ETS 300 630

Transmission and Multiplexing (TM); Low Capacity Point to Point Digital Radio Relay Systems (DRRS) operating in the 1.4GHz frequency band.

EN 300 631

Transmission and Multiplexing (TM); Digital Radio Relay Systems (DRRS); Antenna for point to point radio links in bands from 1 to 3 GHz.

ETS 300 632

Transmission and Multiplexing (TM); Fixed radio link equipment for the transmission of analogue video signals operating in the frequency range 24.25 to 29.5 GHz.

ETS 300 633

Transmission and Multiplexing (TM); Digital Radio Relay Systems (DRRS); Low and Medium Capacity Point to Point DRRS operating in the frequency range 2.1 to 2.6 GHz.

ETS 300 639

Transmission and Multiplexing (TM); Sub-STM1 Digital Radio Relay Systems (DRRS) operating in the 13GHz, 15GHz and 18GHz frequency bands with about 29 MHz co-polar and 14 MHz cross polar channel spacing.

Draft EN 301 128

Transmission and Multiplexing (TM); Digital Radio Relay Systems (DRRS); Plesiochronous Digital Hierarchy (PDH); Low and Medium Capacity DRRS operating in the 13 GHz, 15 GHz and 18 GHz frequency bands

Short Range Devices**ETS 300 220**

Radio Equipment and Systems (RES); Short Range Devices - Technical Characteristics and Test Methods for Radio Equipment to be used in the 25 MHz to 1000 MHz Range with Power Levels Ranging up to 500 mW.

EN 300 330

Electromagnetic compatibility and Radio spectrum Matters (ERM); Short range devices; Technical characteristics and test methods for radio equipment in the frequency range 9 kHz to 25 MHz and inductive loop systems in the frequency range 9 kHz to 30 MHz

ETS 300 328

Wideband Data Transmission Systems; Technical Characteristics and Test Conditions for Data Transmission Equipment operating in the 2.4 GHz ISM band and using Spread Spectrum Modulation Techniques.

EN 300 422

Electromagnetic compatibility and Radio spectrum Matters (ERM); Technical characteristics and test methods for wireless microphones in the 25 MHz to 3 GHz frequency range

I-ETS 300 440

Radio Equipment and Systems (RES); Short Range Devices (SRDs); Technical characteristics and test methods for radio equipment to be used in the 1 GHz to 25 GHz frequency range

EN 300 674

Electromagnetic compatibility and Radio spectrum Matters (ERM); Road Transport and Traffic Telematics (RTTT); Technical characteristics and test methods for data transmission equipment operating in the 5,8 GHz Industrial, Scientific and Medical (ISM) band

ETS 300 761

Electromagnetic compatibility and Radio spectrum Matters (ERM); Automatic Vehicle Identification (AVI) for railways

ETS 300 836

Broadband Radio Access Networks (BRAN); High Performance Radio Local Area Network (HIPERLAN) Type 1; Conformance testing specification.

EN 301 091

Electromagnetic compatibility and Radio spectrum Matters (ERM); Road Transport and Traffic Telematics (RTTT); Technical characteristics and test methods for radar equipment operating in the 76 GHz to 77 GHz band.

EN 301 357

Electromagnetic compatibility and Radio spectrum Matters (ERM); Technical characteristics and test methods for analogue cordless wideband audio devices using integral antennas operating in the CEPT recommended 863 MHz to 865 MHz frequency range.

ES 200 674

Electromagnetic compatibility and Radio spectrum Matters (ERM); Road Transport and Traffic Telematics (RTTT); Part 1: Technical characteristics and test methods for High Data Rate (HDR) data transmission equipment operating in the 5,8 GHz Industrial, Scientific and Medical (ISM) band.

Broadcasting:

ETS 300 384

Radio broadcasting systems; Very High Frequency (VHF), frequency modulated, sound broadcasting transmitters.

ETS 300 401

Radio broadcasting systems; Digital Audio Broadcasting (DAB) to mobile, portable and fixed receivers.

EN 300 421

Framing structure, channel coding and modulation for 11/12 GHz satellite services

EN 300 429

Framing structure, channel coding and modulation for cable systems

EN 300 468

Specification for Service Information (SI) in DVB systems

EN 300 472

Specification for conveying ITU-R System B Teletext in DVB bitstreams

EN 300 473

DVB Satellite Master Antenna Television (SMATV) distribution

EN 300 743

Digital Video Broadcasting (DVB); Subtitling systems.

EN 300 744

Digital Video Broadcasting (DVB); Framing structure, channel coding and modulation for digital terrestrial television.

EN 300 748

Multipoint Video Distribution Systems (MVDS) at 10 GHz and above

EN 300 749

Framing structure, channel coding and modulation for MMDS systems below 10 GHz

ETS 300 801

Interaction channel through PSTN/ISDN

ETS 300 802

Network-independent protocols for DVB interactive services

ETS 300 813

DVB interfaces to PDH networks

ETS 300 814

DVB interfaces to SDH networks

EN 301 192

Digital Video Broadcasting (DVB); DVB specification for data broadcasting.

EN 301 193

Interaction channel through DECT

EN 301 195

Interaction channel through GSM

EN 301 199

Interaction channel for Local Multipoint Distribution System (LMDS) distribution systems

EN 301 210

Framing structure, channel coding and modulation for Digital Satellite News Gathering (DSNG) and other contribution applications by satellite

EN 301 222

Co-ordination channels associated with DSNG

TS 101 191

Mega-frame for Single Frequency Network (SFN) synchronization

TS 101 192

Digital Video Broadcasting (DVB); DVB specification for data broadcasting.

TS 101 197-1

DVB SimulCrypt; Part 1: Head-end architecture and synchronization

TS 101 224

Home Access Network (HAN) with an active Network Termination (NT)

TS 101 225

In-Home Digital Network (IHDN) Home Local Network (HLN)

TS 102 201

Interfaces for DVB Integrated Receiver Decoder (DBV-IRD)

TS 103 197

DVB Headend implementation of DVB SimulCrypt

TR 100 815

Guidelines for the handling of ATM signals of DVB systems

TR 101 190

Implementation guidelines for DVB terrestrial services; Transmission aspect

TR 101 194

Guidelines for implementation and usage of the specification of network independent protocols for DVB interactive services

TR 101 196

Interaction channel for Cable TV distribution systems (CATV); Guidelines for the use of ETS 300 800

TR 101 198

Implementation of BPSK modulation in DVB satellite transmission systems

TR 101 200

Guideline for the use of DVB specifications and standards

TR 101 201

Interaction channel for SMATV distribution systems; Guidelines for versions based on satellite and coaxial sections

TR 101 202

Implementation Guidelines for Data Broadcasting

TR 101 205

Guidelines for implementation and usage of DVB interaction channel for LMDS distribution systems

TR 101 221

User guideline for Digital Satellite News Gathering (DSNG) and other contribution applications by satellite

TR 101 226

In-Home Digital Network (IHDN) Guidelines

TR 101 291

Usage of the DVB test and measurement signalling channel (PID 0x001d) embedded in an MPEG-2 Transport Stream (TS)

TR 102 154

Implementation guidelines for the use of MPEG-2 Systems, Video and Audio in satellite, cable and terrestrial CONTRIBUTION broadcasting applications

ETR 154

Implementation guidelines for the use of MPEG-2 Systems, Video and Audio in satellite, cable and terrestrial broadcasting applications

ETR 162

Allocation of Service Information (SI)

ETR 211

Guidelines on implementation and usage of Service Information (SI)

ETR 289

Support for use of scrambling and Conditional Access (CA) within digital broadcasting systems

ETR 290

Measurement guidelines for DVB systems

EN 50221

Common Interface Specification for Conditional Access and other DVB Decoder Applications

EN 500839

Cabled distribution systems for television, sound and interactive multimedia signals – Part 9: Interfaces for CATV/SMATV headends and similar professional equipment for DVB/MPEG-2 transport streams

R 206 001

Guidelines for implementation and use of the Common Interface for DVB Decoder Applications

CEPT Decisions**CEPT/ERC/DEC(95)02**

ERC Decision of 1st December 1995 on the adoption of national type approval regulations for equipment to be used in the land mobile service using angle modulation based on the European Telecommunications Standard (ETS) 300 086

CEPT/ERC/DEC(96)01

ERC Decision of 7 March 1996 on the harmonised frequency band to be designated for the introduction of the Digital Land Mobile System for the Emergency Services.

CEPT/ERC/DEC(96)04

ERC Decision of 7 March 1996 on the frequency bands for the introduction of the Trans European Trunked Radio System (TETRA).

CEPT/ERC/DEC(96)07

ERC Decision of 1 November 1996 on the adoption of approval regulations for radio equipment to be used in the land mobile service intended for the transmission of data (and speech) and having an antenna connector, based on the European Telecommunications Standard (ETS) 300 113.

CEPT/ERC/DEC(96)10

ERC Decision of 1 November 1996 on the adoption of approval regulations for radio equipment to be used in the land mobile service for transmitting signals to initiate a specific response in the receiver based on the Interim European Telecommunications Standard (I-ETS) 300 219.

CEPT/ERC/DEC(96)11

ERC Decision of 1 November 1996 on the adoption of approval regulations for radio equipment to be used in the land mobile service using an integral antenna intended primarily for analogue speech based on the European Telecommunications Standard (ETS) 300 296

CEPT/ERC/DEC(96)12

ERC Decision of 1 November 1996 on the adoption of approval regulations for radio equipment to be used in the land mobile service using an integral antenna transmitting signals to initiate a specific response in the receiver based on the European Telecommunications Standard (ETS) 300 341 .

CEPT/ERC/DEC(96)14

ERC Decision of 1 November 1996 on the adoption of approval regulations for radio equipment to be used in the land mobile service for the transmission of data (and speech) and using an integral antenna based on the European Telecommunications Standard (ETS) 300 390.

CEPT/ERC/DEC(96)19

ERC Decision of 1 November 1996 on the adoption of approval regulations for radio equipment to be used for on-site paging systems, based on the European Telecommunications Standard (ETS) 300 224.

CEPT/ERC/DEC(96)08

ERC Decision of 1 November 1996 on the adoption of approval regulations for equipment to be used for radio relay systems operating in the fixed service for the transmission of digital signals and analogue video signals operating between 37 GHz and 39.5 GHz, based on the European Telecommunications Standard (ETS) 300 197.

CEPT/ERC/DEC(96)09

ERC Decision of 1 November 1996 on the adoption of approval regulations for equipment to be used for radio relay systems operating in the fixed service for the transmission of digital signals and analogue video signals operating between 27.2 GHz and 23.6 GHz based on the European Telecommunications Standard (ETS) 300 198.

CEPT/ERC/DEC(96)17

ERC Decision of 1 November 1996 on the adoption of approval regulations for radio equipment to be used for wide band data transmission operating in the frequency range 2.4 GHz to 2.4835 GHz and using spread spectrum modulation techniques based on the European Telecommunications Standard (ETS) 300 328.

ERC/DEC/(99)01:

Harmonised examination syllabii for the General Operator's Certificate (GOC) and the Restricted Operator's Certificate (ROC).

ERC/DEC/(96)13)

ERC Decision of 1 November 1996 on the adoption of approval regulations for very high frequency (VHF), frequency modulated, sound broadcasting transmitters based on the European Telecommunications Standard (ETS) 300 384

CEPT Recommendations:

T/R 20-04 E

Low-power Narrow-Band Telecommand and Telemetry equipment for use outside the ISM frequency bands.

CEPT/ERC/REC 12-01 E

Harmonised radio frequency channel arrangements for analogue and digital terrestrial fixed systems operating in the band 37-39.5 GHz .

CEPT/ERC/REC 12-03 E

Harmonised radio frequency channel arrangements for digital terrestrial fixed systems operating in the band 17.7 GHz to 19.7 GHz.

CEPT/ERC/REC 13-01 E

Preferred channel arrangements for fixed services in the range 1-3 GHz.

CEPT/ERC/REC 13-02 E

Preferred channel arrangements for fixed services in the range 22.0-29.5 GHz.

CEPT/ERC/REC 14-01 E

Radio-frequency channel arrangements for high capacity analogue and digital radio-relay systems operating in the band 5925 MHz - 6425 MHz.

CEPT/ERC/REC 14-02 E

Radio-frequency channel arrangements for medium and high capacity analogue or high capacity digital radio-relay systems operating in the band 6425 MHz - 7125 MHz.

CEPT/ERC/REC 70-03 E

relating to the use of short range devices (SRD), including Appendixes and Annexes

ERC/REC T/R 61-01 E:

CEPT Radio Amateur Licence

ERC/REC T/R 61-02:

Harmonised amateur radio examination certificates

ERC/REC T/R 31-05:

Harmonised examination procedures for maritime radio operators' certificates

ITU-R Recommendations:**Rec.ITU-R F 386, Annex 1,3**

Radio-frequency channel arrangements for radio-relay systems operating in the 8 GHz band.(Annex 1: 7725-8275 MHz (L 8 GHz Band), Annex 3: 8275-8500 MHz (U8 GHz Band))

Rec.ITU-R F 387, Annex 2

Radio-frequency channel arrangements for radio-relay systems operating in the 11 GHz band.

Rec. ITU-R F 635

Radio-frequency channel arrangements for radio-relay systems operating in the 4 GHz band.

Rec. ITU-R F 636

Radio-frequency channel arrangements for radio-relay systems operating in the 15 GHz band.

Rec ITU-R P. 525, Annex 1

Calculation of free space attenuation

Rec ITU-R P. 676

Attenuation by atmospheric gases

Rec ITU-R P. 530, Annex 1

Propagation data and prediction methods required for the design of terrestrial line-of-sight systems

Rec ITU-R P. 838,

Specific attenuation model for rain for use in prediction methods

Rec ITU-R P. 837

Characteristics of precipitation for propagation modelling

Rec ITU-R P. 841, Annex 1

Conversion of annual statistics to worst-months statistics

Rec ITU-R P. 453, Annex 1

The radio refractive index: its formula and refractivity

Other documentation:**ITU documents**

“ITU Radio Regulations”

“Regional agreement for the European broadcasting area concerning the use of frequencies by the Broadcasting Service in the VHF and UHF bands Stockholm 1961.”

“Final Acts of the Regional Administrative LF/MF Broadcasting Conference (Regions 1 and 3) Geneva, 1975.”

“Final Acts of the Regional Administrative Conference for the planning of VHF Sound Broadcasting, Geneva, 1984.”

CEPT Agreements

“The Chester 1997 Multilateral Coordination Agreement relating to Technical Criteria, Coordination Principles and Procedures for the introduction of Terrestrial Digital Video Broadcasting (DVB-T) Chester, 25 July 1997.”

“Final Acts of the CEPT T-DAB Planning Meeting Wiesbaden, 1995”

“Final Acts of the CEPT T-DAB Planning Meeting (2) Bonn, 1996.”

All documentation is subject to updates and revision changes.

Sources of Information relating to the Licensing of Radio systems in Ireland

Sources of Information relating to the Licensing of Radio systems in Ireland

General queries regarding radio or licensing matters can be directed to:

The Office of the Director of Telecommunications Regulation (ODTR),
Abbey Court,
Irish Life Centre,
Lower Abbey Street,
Dublin 1.
Tel: 01 804 9600
Fax: 01 804 9680

Irish Government Publications, including Statutory Instruments, can be purchased from:

The Government Publications Office,
4/5 Harcourt Road, Dublin 2.
Tel: 01 661 3111
Fax: 01 475 2760

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

The European Radiocommunications Office,
Midtermolen 1, DK 2100 Copenhagen,
Denmark.
Tel: +45 35 25 03 00
Fax: +45 35 25 03 30
E-mail: ero@ero.dk
Web Site: <http://www.ero.dk>

Publications of the European Telecommunications Standards Institute (ETSI) can be purchased from:

The Sales Office, ETSI, Sofia Antipolis, Nice, France
Tel: +33 92 94 42 41
Fax: +33 93 95 81 33
Email: secretariat@etsi.fr
Web Site: <http://www.etsi.fr/>

Irish Equipment Standards (Including ETSI transposed standards) can be purchased from the National Standards Authority of Ireland at the address below:

Sales Office,
NSAI, Glasnevin,
Dublin 9,
Tel: 01 807 3877 / 3878
Fax: 01 807 3841

EC directives can be obtained from:

The European Commission Representation in Ireland,
European Union House,
18 Dawson Street, Dublin 2.
Tel: 01 662 5113

Fax: 01 662 5118

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

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

Tel: +41 22 730 61 41

Fax: +41 22 730 51 94

Email: sales@itu.ch

Glossary of Useful Terms and Definitions

Glossary of Useful Terms and Definitions

Key to Abbreviations

Appendix 16	Appendix 16 of the Radio Regulations: Channelling of the maritime mobile radiotelephone bands between 4000 kHz and 23000 kHz.
Appendix 18	Appendix 18 of the Radio Regulations: Table of Transmitting frequencies in the band 156-174 MHz for stations in the maritime mobile service.
Appendix 27 aer2	Appendix 27 aer2 of the Radio Regulations: Frequency allotment plan for the aeronautical mobile (R) service and related information between 2850 kHz and 22 000kHz.
Appendix 30	Appendix 30 of the Radio Regulations: Provisions for all services and associated plans for the broadcast-satellite service in frequency bands 11.7-12.2 GHz (in Region 3), 11.7-12.5 GHz (in Region 1), and 12.2-12.7 GHz (in Region 2)
.Appendix 30A	Appendix 30A of the Radio Regulations: Provisions and associated plans for feeder links for the broadcasting-satellite services.
ATM	Asynchronous Transfer Mode
AVI	Automatic Vehicle Identification
CB	Citizens Band
CEPT	European Conference of Postal and Telecommunications Administrations
CTR	Common Technical Regulation. A CTR is produced under the TTE Directives.
CT2	European Analogue cordless telephone system (second generation) (I-ETS 300 131)
DAB	Digital Audio Broadcasting
DCS1800	Digital Communications System, 1800 MHz band aka GSM1800
DDI	Direct Dial In
DECCA	A Radionavigation system (of the DECCA company)
DECT	Digital Enhanced Cordless Telecommunications a pan-European standard for short-range cordless telephones

DGPS	Differential Global Positioning System
DMO	Direct Mode Operation (relates to TETRA)
DTV	Digital Television
Earth - space	Earth to space direction of transmission
EC	The European Community
ECI	Equipment Class Identifier
EESS	Earth Exploration Satellite Service
EGSM	Extended Global System for Mobile Communications (see GSM)
EMC	Electromagnetic Compatibility
EMC Directive	Directive 89/336/EEC,
ENG/OB	Electronic News Gathering/Outside Broadcast
EPIRB	Emergency Position-Indicating RadioBeacon
ERC	European Radiocommunications Committee - A committee of CEPT responsible for radio matters
ERC/DEC/	ERC Decision
ERC/REC/	ERC Recommendation
ERO	European Radiocommunications Office - A permanent office within CEPT dealing with radio matters
ERMES	Enhanced Radio MESSage Service
e.r.p.	Equivalent radiated power
e.i.r.p.	Equivalent isotropically radiated power
ETACS	Extended Total Access Communications System
ETS	European Telecommunication Standard
ETSI	European Telecommunication Standards Institute
EUTELSAT	European Telecommunications Satellite Organisation
FDDA	Field Disturbance and Doppler Apparatus (Motion Detectors)

FSS	Fixed Satellite Service
FWA	Fixed Wireless Access
FWPMA	Fixed Wireless Point to Multipoint Access. A Point to multipoint radio access system (aka WLL or FWA)
GHz	Gigahertz - 1,000,000,000 Hertz
GLONASS	Global Satellite Navigation System (Russian Federation)
GMDSS	Global Maritime Distress and Safety System
GPS	Global Positioning System
GSM	Global System for Mobile Communications (Public mobile cellular system in the 900 MHz band.)
GSO	Geostationary Orbit.
HDTV	High Definition Television
Hz	Hertz, The unit of frequency measurement, (1 kHz = 1000 Hz, 1 MHz = 1000,000 Hz, 1GHz = 1000,000,000 Hertz)
HIPERLAN	High Performance Radio Local Area Network
INTELSAT	International Telecommunications Satellite Organisation
INMARSAT	International Maritime Satellite Organisation
IRTC	Independent Radio and Television Commission (Ireland)
ISDN	Integrated Services Digital Network
ITU	International Telecommunications Union
ITU-R	Radiocommunication Sector of the ITU
ITU Geneva 75 Plan	Plan for the assignment of frequencies to broadcasting stations in the medium frequency bands in Regions 1 and 3 and in the low frequency bands in Region 1.
ITU Geneva 84 Plan	Frequency assignment plan for FM sound broadcasting stations in Region 1 and part of Region 3 in the band 87.5-108 Mhz
ITU Geneva 85 Plan	Frequency assignment plan (Region 1) for stations of the maritime mobile service in the bands 85 415-495 kHz 505-kHz

1606.5-1625 kHz 1635-1800 kHz 2045- 2160 kHz.Frequency assignment plan (Region 1) for stations of the aeronautical radionavigation service (radiobeacons) in the band 415-435 kHz and 510-526.5kHz Frequency assignment plan for stations of the radionavigation service (radiobeacons) for the European Maritime Area in the band 283.5-315 kHz.

**ITU Stockholm
61 Plan**

Plans annexed to the Regional agreement for the European Broadcasting Area concerning the use of frequencies by the broadcasting services in the VHF and UHF bands.

kHz	Kilohertz - 1000 Hertz
LAN	Local Area Network
LORAN C	A Radionavigation System
Legbac	Limited Exploratory Group for Broadcasting to Aeronautical Compatibility
LPD	Low Power Device (Low power radio transmitters used for general data telemetry and telecommand)
LVD	Low Voltage Directive (Directive 73/23/EEC)
MHz	Megahertz - 1,000,000 Hertz
MLS	Microwave Landing System
MOU	Memorandum of Understanding
MSS	Mobile Satellite Service
MVDS	Microwave Video Distribution System
N-GSO	Non-Geostationary Orbit
ODTR	Office of the Director of Telecommunications Regulation
PAL I	Phase Alternating Line Category I
PAMR	Public Access Mobile Radio
PMR Band	Private/Professional Mobile Radio Band (Frequency band mainly used for business radio purposes)
PSTN	Public Switched Telephone Network
RACON	Radar Beacon

R&TTE Directive	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
RLAN	Radio Local Area Network
RTTS	Road Transport Telematics Systems
SAR	Search and Rescue
S-DAB	Satellite Digital Audio Broadcasting
SDH	Synchronous Digital Hierarchy
Sat. ENG	Satellite Electronic News Gathering
S-PCS	Satellite Personal Communications System
space - Earth	space to Earth direction of transmission
S.I.	Statutory Instrument (National Legislation)
STL	Studio to Transmitter Link
SYLEDIS	A Position Fixing System
TACS	Total Access Communications System (Analogue)
TBR	Technical Basis for Regulation - the Technical part of a CTR
TCAM	Telecommunication Conformity Assessment and Market Surveillance Committee. A Committee set up under the R&TTE Directive to oversee its implementation and operation.
TCF	Technical Construction File
TCP/IP	Transmission Control Protocol/Internet Protocol
T-DAB	Terrestrial - Digital Audio Broadcasting
TETRA	Trans-European Trunked Radio (Digital)
TFTS	Terrestrial Flight Telephone System
TTE	Telecommunications Terminal Equipment
TTE Directive	(Directive 98/13/EC) Council Directive of 12 February 1998 relating to telecommunications terminal equipment and satellite

earth station equipment, including the mutual recognition of their conformity.

UIC	Union International Chemin de Fer (International railways) a.k.a. GSM-R.
VSAT	Very Small Aperture Terminal
WARC	World Administrative Radio Conference
WLL	Wireless in the Local loop a.k.a FWPMA, FWA
WRC	World Radiocommunication Conference
3G Mobile	Third Generation Mobile Telephony.