



Commission for
Communications Regulation

Guidelines

Guidelines for Applicants Wireless Public Address System (WPAS)

Document No:	ComReg 06/26
Date:	22 June 2006

An Coimisiún um Rialáil Cumarsáide

Commission for Communications Regulation

Abbey Court Irish Life Centre Lower Abbey Street Dublin 1 Ireland

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

Contents

1	Introduction	3
1.1	BACKGROUND ON WPAS	3
1.2	STATUTORY REGULATIONS	3
2	WPAS Licensing Information	4
2.1	WPAS DEFINITION	4
2.2	FREQUENCY SPECTRUM	4
2.3	EQUIPMENT COMPLIANCE	5
2.4	HOW TO APPLY FOR A WPAS LICENCE	5
2.5	PUBLICATION OF WPAS LICENSEES DETAILS	5
3	WPAS Licence Information	6
3.1	WPAS LICENSEE	6
3.2	LICENCE FREQUENCY SPECTRUM	6
3.3	LICENCE DURATION AND RENEWAL	6
3.4	AMENDMENTS TO LICENCES	6
3.5	CANCELLATION OF A LICENCE	7
3.6	TRANSFER OF A LICENCE	7
3.7	REVOCAION OF A LICENCE	7
3.8	LICENCE FEES	7
3.9	NON-IONISING RADIATION	7
3.10	HARMFUL INTERFERENCE TO OTHER LICENSED USERS	7
3.11	TECHNICAL CONDITIONS	8
3.12	TECHNICAL RECOMMENDATIONS	8
3.13	COMMISSIONING/SITE INSPECTIONS	8
	Appendix 1 – List of WPAS channels.....	9
	Appendix 2 – Glossary of Terms	10

1 Introduction

The Commission for Communications Regulation (ComReg) operates a licensing scheme for Wireless Public Address Systems (WPAS). This document provides information on the WPAS licensing scheme as well as providing guidance on the principal terms and conditions that are attached to a WPAS licence.

1.1 Background on WPAS

ComReg's consultation¹ on the strategy for the management of the radio spectrum proposed that ComReg permit WPAS in the 27.6 to 27.99 MHz band to meet the needs of religious and other community organisations. This is intended to provide a public address system to facilitate the social inclusion of, and meet the needs of the people who are housebound be they sick, disabled and/or elderly, using wireless technology.

ComReg has now introduced legislation to facilitate the introduction to this scheme.

1.2 Statutory regulations

Unless licence exempted, a Wireless Telegraphy (WT) Licence is required under Section 3 of the Wireless Telegraphy Act 1926 to keep and operate apparatus for wireless telegraphy. The specific regulations governing the issue of WPAS licences are the Wireless Telegraphy (Wireless Public Address System Licence) Regulations, 2006 (S.I. 304 of 2006).

¹ See ComReg Documents 05/01, 05/36 and 05/72

2 WPAS Licensing Information

The WPAS licensing scheme is an initiative by ComReg to enable licence holders to provide a wireless retransmission of audio from their public address system. The following is general information on the WPAS licensing scheme.

2.1 WPAS Definition

During ComReg's consultation on the management of the radio spectrum², ComReg consulted with the Broadcasting Commission of Ireland (BCI) and established that the WPAS service is not a broadcasting service and does not therefore fall under the BCI regulatory regime. This is reflected in four key characteristics which define WPAS and place it outside the broadcasting space. These characteristics are:

- Spectrum will be allocated on a non-exclusive and non-interference basis in a frequency band not used by BCI Sound Broadcasting Contractors.
- The system is to be used for unabridged³ wireless retransmission of audio from a public address system that is associated with a public event.
- The service will only be available on a non commercial basis (for local community users).
- The service will not be available for reception on standard domestic broadcast receivers.

Only WPAS applications that meet these characteristics can be considered for the WPAS licensing scheme.

2.2 Frequency Spectrum

ComReg has made frequency spectrum available for WPAS which is above the CB⁴ band.

The following band is available for WPAS licensing:

- HF (27.60-27.99MHz)

In this band, two banks of 40 channels of bandwidth 10 kHz are available. Each channel comprises of a single frequency. The two banks of 40 channels start on different channel offset frequencies. Appendix 1 lists the WPAS frequency channels available.

Changes in the frequency spectrum available to WPAS services may arise for a number of reasons, including:

- Changes in spectrum allocations in accordance with the requirements of international treaties or regionally negotiated agreements;
- Changes necessitated by EU legislation;

² See ComReg Documents 05/01, 05/36 and 05/72

³ i.e. real-time retransmission

⁴ CB – Citizens' Band (CB) radios are used solely for the purposes of transmitting and receiving spoken messages as opposed to WPAS which is retransmission system.

- Changes in order to meet national requirements;

In the interests of the efficient use of the radio spectrum it is the policy of ComReg to review the use of the spectrum on an ongoing basis in order to reflect the changes outlined above and changes in the market place. ComReg would endeavour to provide as much notice as possible in the event that any such changes were required.

2.3 Equipment Compliance

In common with other licensed radio services, all radio equipment used to deliver WPAS services must comply with the Radio and Telecommunications Terminal Equipment Directive 1999/5/EC (the R&TTE Directive)⁵ which was enacted into Irish law on 5 June 2001 by Statutory Instrument 240 of 2001. Harmonised standards under the R&TTE Directive, published by the European Telecommunications Standards Institute (ETSI) and CENELEC, can be used to demonstrate compliance to the essential requirements of the R&TTE Directive⁶. Information on the R&TTE Directive may be found in ComReg documents 00/61 and 00/62R – please note that these documents are subject to revision and updates⁷.

For information purposes, a list of the most common standards for radio systems that comply with R&TTE directive is detailed below. Equipment using standards other than those listed below is also acceptable once this equipment is compliant with the R&TTE directive:

- EN 300 113⁸ (Radio equipment intended for the transmission of data (and/or speech) using constant or non-constant envelope modulation and having an antenna connector)
- EN 300 135⁸ (Angle modulated CB radio equipment {CEPT PR 27 Radio Equipment})
- EN 300 433⁸ (Double Side Band {DSB} and /or Single Side Band {SSB} amplitude modulated CB radio equipment)

It is the responsibility of the WPAS Licensee to ensure that all equipment used is R&TTE compliant.

2.4 How to apply for a WPAS Licence

All applications for a WPAS licence must be made on the appropriate application form (ComReg 06/26a). Only applications which fulfil the minimum requirements as set out in application form shall be considered for a WPAS licence:

2.5 Publication of WPAS Licensees details

ComReg reserves the right to announce the names and details of WPAS Licensees. In this regard, ComReg is considering developing a webpage which will incorporate contact details for the Licensees and their licence details.

⁵ OJEC reference L 91, 7.4.1999, p.10 (available from http://europa.eu.int/eur-lex/en/search/search_oj.html)

⁶ A list of the harmonised standards under the R&TTE Directive is maintained at

<http://europa.eu.int/comm/enterprise/newapproach/standardization/harmstds/reflist/radiotte.html>

⁷ Further information on the R&TTE Directive can be found at <http://europa.eu.int/comm/enterprise/rtte/>

⁸ Carrier frequencies and channels numbers are different to the standard

3 WPAS Licence Information

A WPAS licence granted under the Wireless Telegraphy (Wireless Public Address System Licence) Regulations, 2006 (S.I. 304 of 2006) allows the Licensee to keep and operate radio apparatus in accordance with these regulations. The following provides guidance on these licence conditions. ComReg reserves the right not to award licences.

3.1 WPAS Licensee

The WPAS Licensee must be a legal entity (e.g. individual, company etc.). One entity may apply for multiple licences. It is the responsibility of the WPAS Licensee to ensure compliance with the WPAS licence conditions.

It is also the responsibility of the Licensee to ensure that their licence details remain valid and inform ComReg of any licence amendments (e.g. change of address) as soon as they occur.

3.2 Licence Frequency Spectrum

A WPAS licence allows the Licensee to operate a WPAS transmitter at a single location on one 10 kHz simplex channel. Licensees, or suppliers applying on behalf of the Licensee, will be responsible for choosing the channel that they wish to operate on from either bank of channels (UW or LW) as listed in Appendix 1.

A licence does not confer any right of ownership of the frequency spectrum. It allows the assigned frequency channel to be used during the term of the licence in accordance with the conditions of the licence.

3.3 Licence Duration and Renewal

The duration of the WPAS licence is 5 years.

When a licence expires, the Licensee may apply for renewal of the licence.

3.4 Amendments to Licences

It is the responsibility of the Licensee to inform ComReg of any licence amendments as soon as they occur.

A licence amendment occurs when the details on the licence are no longer valid and correct, e.g.

- The address of the Licensee has changed;
- The WPAS site location or base station equipment type has changed.

In circumstances where ComReg has to re-issue an amended licence, this is subject to a fee of €30.

Note, changes to contact details (e.g. updating telephone numbers) which do not require an amended licence to be issued are not subject to a fee of €30.

In exceptional circumstances and where appropriate, ComReg may need to make modifications to existing licences. Where this is required, ComReg would endeavour to provide as much notice as possible.

3.5 Cancellation of a Licence

A licence may be cancelled at the written request of the Licensee. There shall be no entitlement to any refund of licence fees in the event of such cancellation.

3.6 Transfer of a Licence

A Licensee may request that a WPAS licence be transferred to another party. The process for this is that:

- a) the request from the Licensee must be made in writing to ComReg,
- b) the acceptance of the licence from the other party must be made in writing to ComReg.

The transfer of a WPAS licence is subject to a fee of €30.

3.7 Revocation of a Licence

ComReg may suspend or revoke a licence where there is serious or repeated non-compliance by the Licensee with the conditions of the licence. There shall be no entitlement to any refund of licence fees in the event of such revocation.

3.8 Licence Fees

A fee of €100 is applicable to all WPAS licence applications. This fee is payable in full on application.

A €30 fee is applicable to all requests to transfer a WPAS licence between parties and to licence amendments. This fee is payable in full on submission of this request to ComReg.

3.9 Non-Ionising Radiation

The Licensee shall ensure that non-ionising radiation emissions from the WPAS apparatus operated by the Licensee and from any structure occupied by the WPAS apparatus are within the limits specified in the guidelines published by the International Commission for Non-Ionising Radiation Protection (“*ICNIRP*”) and that these comply with any radiation emission standards adopted and published by ICNIRP or its successors from time to time, any radiation emission standards of the European Committee for Electrotechnical Standards and any other radiation emission standards specified by law.

3.10 Harmful Interference to other licensed users

Licensees are required to adhere to the guidelines in ETSI Technical Report ETR 053, "Radio Site Engineering for Radio Equipment and Systems in the Mobile Service", to minimise the risk of interference between co-sited/adjacent radio systems.

3.11 Technical Conditions

ComReg's intention is that frequencies identified for WPAS services are available for local use, subject to the technical conditions outlined below.

The following maximum effective Radiated Power (ERP) limits will apply to WPAS systems:

- Base Station equipment using Amplitude Modulation (AM): 1 watt (0dBW)
- Base Station equipment using Frequency Modulation (FM): 4 watts (6dBW)

No ancillary RF equipment can be connected to the transmitter, such as linear power amplifiers.

3.12 Technical Recommendations

Additionally to minimise potential interference, Licensees should adhere the following best practice technical guidelines:

- Antenna polarisation should be vertical;
- Antenna mounting height should not exceed 2 metres above the highest point of the building on which the antenna is mounted;
- Antennas should be non directional;
- Antennas with a low angle of radiation (gain) are favourable.

3.13 Commissioning/Site Inspections

ComReg reserves the right to inspect a WPAS station at any reasonable time to ensure that the system is configured and operating in accordance with the licence conditions. In addition, ComReg may attend the commissioning of base stations and may carry out measurements on the system at that time.

Appendix 1 – List of WPAS channels

Channel Bank LW		Channel Bank UW	
Channel	Frequency	Channel	Frequency
LW01	27.60125	UW01	27.60500
LW02	27.61125	UW02	27.61500
LW03	27.62125	UW03	27.62500
LW04	27.63125	UW04	27.63500
LW05	27.64125	UW05	27.64500
LW06	27.65125	UW06	27.65500
LW07	27.66125	UW07	27.66500
LW08	27.67125	UW08	27.67500
LW09	27.68125	UW09	27.68500
LW10	27.69125	UW10	27.69500
LW11	27.70125	UW11	27.70500
LW12	27.71125	UW12	27.71500
LW13	27.72125	UW13	27.72500
LW14	27.73125	UW14	27.73500
LW15	27.74125	UW15	27.74500
LW16	27.75125	UW16	27.75500
LW17	27.76125	UW17	27.76500
LW18	27.77125	UW18	27.77500
LW19	27.78125	UW19	27.78500
LW20	27.79125	UW20	27.79500
LW21	27.80125	UW21	27.80500
LW22	27.81125	UW22	27.81500
LW23	27.82125	UW23	27.82500
LW24	27.83125	UW24	27.83500
LW25	27.84125	UW25	27.84500
LW26	27.85125	UW26	27.85500
LW27	27.86125	UW27	27.86500
LW28	27.87125	UW28	27.87500
LW29	27.88125	UW29	27.88500
LW30	27.89125	UW30	27.89500
LW31	27.90125	UW31	27.90500
LW32	27.91125	UW32	27.91500
LW33	27.92125	UW33	27.92500
LW34	27.93125	UW34	27.93500
LW35	27.94125	UW35	27.94500
LW36	27.95125	UW36	27.95500
LW37	27.96125	UW37	27.96500
LW38	27.97125	UW38	27.97500
LW39	27.98125	UW39	27.98500
LW40	27.99125	UW40	27.99500

Appendix 2 – Glossary of Terms

AM	Amplitude Modulation – A method for carrying voice on a radio signal
CB	Citizen’s Band – A radio system that allows public users to use two way communications
DSB	Double Side Band – A method for carrying voice on a radio signal
ERP	Effective Radiated Power – The power of a radio signal emitted from an antenna
ETSI	European Telecommunications Standards Institute
FM	Frequency Modulation – A method for carrying voice on a radio signal
HF	High Frequency (Radio spectrum between 3 and 30 MHz)
kHz	A measurement of frequency
MHz	A measurement of frequency
SSB	Single Side Band – A method for carrying voice on a radio signal
WPAS	Wireless Public Address System