

UK Interface Requirement 2008

Private Business Radio
Channel Access Procedures

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1. Foreword

- 1.1 The Radio Equipment and Telecommunications Terminal Equipment Directive 99/5/EC (R&TTE Directive) was implemented in the United Kingdom (UK) on the 8 April 2000 by The Radio Equipment and Telecommunications Terminal Equipment Regulations 2000, Statutory Instrument 2000 No. 730. In accordance with Articles 4.1 and 7.2 of Directive 1999/5/EC, this UK Interface Requirement contains the requirements for the licensing and use of private business mobile radio systems in the specified frequency bands.
- 1.2 Nothing in this UK Interface Requirement shall preclude the need for equipment to comply with Directive 1999/5/EC.
- 1.3 It is required by the Wireless Telegraphy Act 2006 that no radio equipment is installed or used in the UK except under the authority of a licence granted by or otherwise exempted by regulations made by Ofcom. It is a condition of such a licence or exemption regulations as appropriate that the equipment must meet the minimum requirements specified in this UK Interface Requirement for the stated equipment types and for the stated frequency bands.
- 1.4 The requirements given in the main body of this UK Interface Requirement will apply to the licensing of radio channels for private business mobile radio in the UK. All frequency bands administered by Ofcom are covered.
- 1.5 This UK Interface Requirement will be revised as necessary, for example to follow:
 - i) current technology developments for reasons related to the effective and appropriate use of the spectrum in particular maximising spectrum utilisation; and
 - ii) changes to the available spectrum allocated for private business mobile radio systems.
- 1.6 All UK Interface Requirements notified under Directive 1998/34/EC will be published and will be made available free of charge from the Ofcom website at www.ofcom.org.uk .
- 1.7 Further information on this UK Interface Requirement can be obtained from the technical enquiry contact given on the back of this document.

2. Radio channel access requirements for operation within the UK

- 2.1 The minimum requirements in this document are made for reasons related to the effective and appropriate use of the radio spectrum, in particular maximising spectrum utilisation.
- 2.2 This UK Interface Requirement gives a high level description of how the spectrum in the UK is used for private business mobile radio systems. It does not prescribe technical interpretation of the 'essential requirements' of Directive 1999/5/EC.
- 2.3 This UK Interface Requirement therefore stipulates the necessary channel access requirements for the operation of private business mobile radio systems in the UK. Table 2.1 contains the relevant access requirements. These together with the 'essential requirements' detailed in Article 3.2 of Directive 1999/5/EC constitute the minimum equipment requirements for private business mobile radio systems within the UK.
- 2.4 The technical parameters specified in the UK Interface Requirement are applied to achieve the desired level of compatibility within the private business mobile radio systems and with other radiocommunications services, whilst promoting enterprise, innovation and competition.
- 2.5 This UK Interface Requirement provides the necessary technical information which facilitates access to the private business mobile radio systems spectrum by making clear the assumptions that are made in planning the use of spectrum in the UK. It is not the intention of this UK Interface Requirement to duplicate or impose any additional 'essential requirements' of the Directive 1999/5/EC on products. Any specified parameters within this document are for the purpose of identifying product options and not as a national de facto product requirement.
- 2.6 Annexes A and B to this document constitute separate channel access procedures for different types of service:
 - Annex A - 250ms Time Division Multiple Access (TDMA) channel access procedure for data only shared wide-area private business radio channels
 - Annex B - 500ms Time Division Multiple Access (TDMA) channel access procedure for data only shared wide-area private business radio channels

Table 2.1: minimum equipment requirements for private business radio channel access procedures

Licence type	Maximum Transmit power ERP (dBW)	Channelling Modulation	Channel occupation rules	Licensing Regime	Frequency Planning Assumptions
IR 2008	14	F1W, F3W, F7W, F8W, F9W G1W, G3W, G7W, G8W, G9W	Exclusive within a logical channel, shared physical channel	Individual Licence	Ofcom technical frequency Assignment Criteria Of164

Frequency band (or bands)				Duplex type & separation (MHz)	Channel Spacing (kHz)	Application/ Licence Type	Radio service
Band		Base Tx (MHz)	Mobile Tx (MHz)				
Low	Start	81.58125	68.08125	13.5	12.5	IR 2008	Exclusive use on the logical channel(s). Shared use on the physical channel, with other IR2008 licensees.
	End	82.04375	68.54375				
	Start	82.05625	68.55625				
	End	82.65625	69.15625				
Mid	Start	163.19375	158.69375	4.5			
	End	164.00625	159.50625				
	Start	164.08125	159.58125				
	End	164.13125	159.63125				

Annex A:

250ms Time Division Multiple Access (TDMA) channel access procedure for data only shared wide-area public business radio channels

Operational requirements

These licensing requirements are mandatory for operators wishing to operate these services.

TDMA frame raster

The frame duration is two seconds and consists of eight 250ms slots. See figure 1.

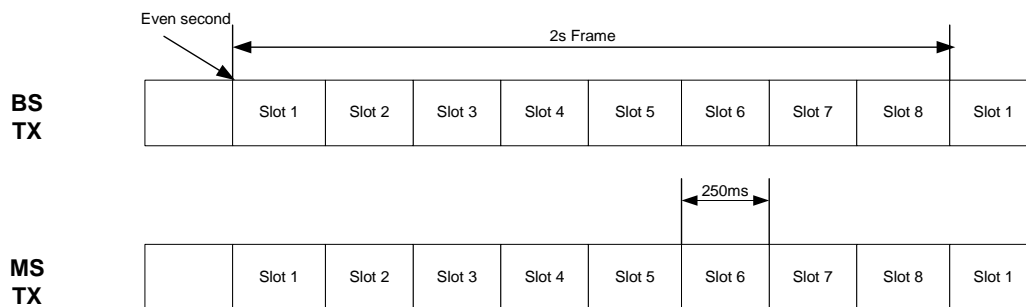


Figure 1.

Synchronisation and timing

The timing reference shall be derived from Co-ordinated Universal Time (UTC) to an accuracy of ± 1 ms.

Within a Base Station (BS) frame the first 250ms slot will commence on an even second (e.g. 11hr 35min 22.000 seconds or 11hr 35min 24.000 seconds).

Within a Mobile Station (MS) frame the first 250ms slot will commence on an even second (e.g. 11hr 35min 22.000 seconds or 11hr 35min 24.000 seconds).

Transmission initiation

Base Station or Mobile Station transmissions may be initiated either manually or automatically.

Annex B:

500ms Time Division Multiple Access (TDMA) channel access procedure for data only shared wide-area public business radio channels

Operational requirements

These licensing requirements are mandatory for operators wishing to operate these services.

TDMA frame raster

The frame duration is four seconds and consists of eight 500ms slots. See figure 1.

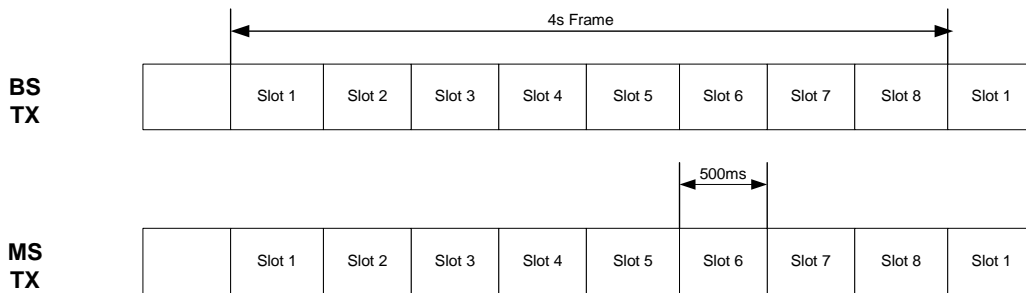


Figure 1.

Synchronisation and timing

The timing reference shall be derived from Co-ordinated Universal Time (UTC) to an accuracy of ± 1 ms.

Within a Base Station (BS) frame the first 500ms slot will commence on a multiple of four seconds (e.g. 11hr 35min 0.000 seconds or 11hr 35min 4.000 seconds).

Within a Mobile Station (MS) frame the first 500ms slot will commence on a multiple of four seconds (e.g. 11hr 35min 0.000 seconds or 11hr 35min 4.000 seconds).

Transmission initiation

Base Station or Mobile Station transmissions may be initiated either manually or automatically.

Document History

Version	Date	Changes
1.2	April 2003	Amendment to timing diagrams
2.0	October 2004	Amended to Ofcom format

Ofcom

OFFICE OF COMMUNICATIONS

Technical enquiries to: Business Radio team

Tel: 020 7981 3000

Fax: 020 7981 3333

Email: BRenquiries@ofcom.org.uk

Website: <http://www.ofcom.org.uk>