

UK Interface Requirement 2036

for Mobile Data Asset tracking services

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Section 1

References

- 1.1 **MPT 1325** – “Performance Specifications for VHF and UHF radio transmitters for use in base stations in the wide area paging service”
- 1.2 **EN 300 113-2** – Electromagnetic compatibility and Radio spectrum Matters (ERM); Land mobile service Radio equipment intended for the transmission of data (and/or speech) using constant or non-constant envelope modulation and having an antenna connector; Part 2: Harmonised EN covering essential requirements under article 3.2 of the R&TTE Directive
- 1.3 **EN 301 055 V1.1.1 (1998-02)** – Transmission and Multiplexing (TM); Digital Radio Relay Systems (DRRS); Direct Sequence Code Division Multiple Access (DS-CDMA); Point-to-multipoint DRRS in frequency bands in the range 1 to 3 GHz
- 1.4 **EN 300 339** – “Electromagnetic compatibility and Radio spectrum Matters (ERM); General Electro Magnetic Compatibility (EMC) for radio communications equipment”

Section 2

Foreword

- 2.1 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 mobile data asset tracking radio systems in the specified frequency bands.
- 2.2 Nothing in this UK Radio Interface Requirement shall preclude the need for equipment to comply with Directive 1999/5/EC.
- 2.3 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.
- 2.4 The requirements given in the main body of this UK Radio Interface Requirement will apply to the mobile data asset tracking services in the UK.
- 2.5 This UK Radio 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 mobile data asset tracking radio systems.
- 2.6 All UK Radio Interface Requirements notified under Directive 1998/34/EC will be published and will be made available free of charge from the Ofcom web-site at http://www.ofcom.org.uk/radiocomms/ifi/tech/interface_req/.
- 2.7 Further information on this UK Radio Interface Requirement can be obtained from the technical enquiry contact given at the back of this document.

Section 3

Minimum equipment requirements for operation within the UK

- 3.1 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.
- 3.2 This UK Radio Interface Requirement gives a high level description of how the spectrum in the UK is used for mobile data asset tracking systems. It does not prescribe technical interpretation of the 'essential requirements' of Directive 1999/5/EC.
- 3.3 This UK Radio Interface Requirement therefore stipulates the necessary equipment parameters for the licensing of mobile data asset tracking radio equipment in the UK. Tables 3.1 and 3.2 contain the relevant equipment parameters. These together with the 'essential requirements' detailed in Article 3.2 of Directive 1999/5/EC constitute the minimum equipment requirements for mobile data asset tracking equipment within the UK.
- 3.4 The technical parameters specified in the UK Radio Interface Requirement are applied to achieve the desired level of compatibility within the mobile data asset tracking service and with other radiocommunications services, whilst promoting enterprise, innovation and competition.
- 3.5 This UK Radio Interface requirement provides the necessary technical information which facilitates access to the mobile data asset tracking service spectrum by making clear the assumptions that are made in planning the use of the mobile data asset tracking service spectrum in the UK. It is not the intention of this UK Radio 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.

Table 3.1: Minimum equipment requirements for mobile data asset tracking services polling channels (BTx)

1	Frequency band (or bands)	130 to 150 kHz 169.4 to 169.9 MHz
2	Radio service	Mobile data asset tracking
3	Application	Mobile Data Asset Tracking licences may not be issued for apparatus using certain frequencies.
4	Channelling modulation	8K0F1DJN or 8K0F1DBT for VHF and UHF Bands
5	Transmit power limit	25 Watts maximum ERP for VHF and UHF Bands. Site Clearance considerations may impose additional restrictions on maximum power used on certain channels.
6	Channel occupation rules	Necessary bandwidths less than that shown are permitted
7	Duplex type/separation	Single channel simplex
8	Licensing Regime	Individual Licence
9	Additional essential requirements	Operator to provide Base station details to the Licensing Authority
10	Frequency planning assumptions	-
11	Reference	-
12	Remarks	-
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Table 3.2: Minimum equipment requirements for mobile stations

1	Frequency band (or bands)	865-868 MHz
2	Radio service	Mobile data asset tracking
3	Application	Mobile Data Asset Tracking licences may not be issued for apparatus using certain frequencies.
4	Channelling modulation	2M00G1DXC
5	Transmit power limit	500 mW maximum ERP.
6	Channel occupation rules	Necessary bandwidths less than shown are permitted
7	Duplex type/separation	Direct Sequence Spread Spectrum Carrier nominally centred on 866.5 MHz
8	Licensing Regime	Individual Licence
9	Additional essential requirements	-
10	Frequency planning assumptions	N/A
11	Reference	-
12	Remarks	-
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Section 4

Additional performance parameters

(informative)

- A.1 Standard MPT 1325 covers the minimum performance requirements for VHF non-speech and VHF combined speech/non-speech radio equipment using angle or frequency shift modulation for use in the wide-area paging service. For equipment covered by this specification the normal separation between adjacent carrier frequencies may be 12.5 kHz or 25 kHz for equipment operating in the VHF or UHF bands.
- A.2 For paging protocols and equipment other than those listed in A.1 above, the additional performance parameters and limits that Ofcom assumes are met by the radio equipment when planning and managing the radio spectrum in the UK are contained in ETSI standard EN 300 113-2 V1.3.1 (2003-12).
- A.3 EN 300 339 V1.1.1 (1998-06) "Electromagnetic compatibility and Radio spectrum Matters (ERM); General Electro Magnetic Compatibility (EMC) for radio communications equipment" contains performance parameters and limits that Ofcom assumes are met by mobile data asset tracking radio equipment when planning and managing the radio spectrum in the UK.
- A.4 Equipment that does not fulfil these additional performance parameters and limits will not be guaranteed protection in the case of interference.
- A.5 Where equivalent performance parameters and limits are defined in relevant harmonised standards under Directive 99/5/EC, those limits shall take precedence.
- A.6 Until a specification is developed for this particular application the tracking User Stations shall meet the spectrum mask and spurious emission requirements specified in EN 301 055 V1.4.1 (2001-02) as applicable for a carrier spacing of 2 MHz.

Section 5

Contact details

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Section 6

Document history

Version	Date	Changes
1.0	15 Dec 2000	Published
	27 Oct 2004	Rebranded to Ofcom format
2.0	31 Aug 2005	Published as V 2.0