

# UK Interface Requirement 2013

## Public Access Mobile Radio Services

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## References

MPT 1318	Department of Trade and Industry Performance Specification- Engineering Memorandum on trunked systems in the Land Mobile Radio Service
MPT 1327	Department of Trade and Industry Performance Specification – A signalling standard for Trunked Private Land Mobile
MPT 1343	Department of Trade and Industry Performance Specification – System Interface Specification for radio units to be used with commercial trunked networks operating in Band III.
MPT 1347	Department of Trade and Industry Performance Specification- Radio Interface Specification for commercial trunked networks operating in Band III, sub-bands 1&2
MPT 1352	Department of Trade and Industry Performance Specification- Test Schedule for approval of radio units to be used with commercial trunked networks operating in Band III,
Band III	
ETS 300 086, ETS 300113	
TETRA	
ETS 300 392-1, ETS 300 392-2, ETS 300 392- 10 (sub parts 1- 24),	
ETS 300 393 parts 1 and 2, ETS 300 394-1	

## 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 document contains the requirements for the licensing and use of public paging radio systems in the specified frequency bands.
- 1.2 Nothing in this UK Interface Requirement shall preclude the need for equipment to comply with the requirements of Directive 99/5/EC.
- 1.3 It is required by the Wireless Telegraphy Act 1949 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 document for the stated equipment types and for the stated frequency bands.
- 1.4 The criteria given in the main body of this UK Interface Requirement will apply in the licensing of Public Mobile Access Radio (PAMR) services in the UK.
- 1.5 This UK Interface Requirement will be revised as necessary 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 Public Access Mobile Radio (PAMR) systems.
- 1.6 All UK Interface Requirements notified under Directive 98/34/EC will be published and will be made available free of charge from the Ofcom website. The address for the website is given on the back cover of this document.
- 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. Minimum Equipment Requirements for Operation within the UK**

- 1.5 The minimum radio requirements in this document are made for reasons related to the effective and appropriate use of the radio spectrum, in particular maximising spectrum utilisation.
- 1.6 This UK Interface Requirement gives a high level description of how the spectrum in the UK is used for PAMR systems. It does not prescribe a technical interpretation of the 'essential requirements' of Directive 1999/5/EC.
- 1.7 This UK Interface Requirement therefore stipulates the necessary equipment parameters for the licensing or licence exemption of PAMR equipment in the UK. Tables 2.1 and 2.2 contain the relevant equipment parameters. These together with the 'essential requirement' detailed in Article 3.2 of Directive 1999/5/EC constitute the minimum equipment requirements for public paging radio equipment within the UK.
- 1.8 Network user equipment, meeting the minimum requirements outlined in this interface requirement, is exempt from licensing provided that it meets the requirements of the relevant exemption regulations. Details of the relevant exemption regulations are available from Ofcom on request.

**Table 2.1: Minimum Equipment Requirements for Analogue PAMR Equipment**

Service Type. (indicative)	Frequency Range (MHz)	Utilisation	Licensing Requirement	Channel Spacing	Modulation	Access Technique	Emission Designation	Output Power	Additional Technical Requirements
Band III (Sub band 1)	Base 191.4875 to 185.2125 MHz	Base Transmit	WT Act Licence. T Act Licence	12.5 kHz	Frequency	None	125KW	14 dBW (ERP)	<ol style="list-style-type: none"> <li>Not all frequencies within these ranges are available for licensing.</li> <li>The RA may impose additional restrictions on the maximum power used for specific frequencies and locations.</li> </ol>
	Mobile 183.4875 to 177.2125 MHz	Mobile Transmit  (Network user equipment)	Network user equipment meeting the minimum requirements outlined in this interface requirement, is exempt from licensing provided that it meets the requirements of the relevant exemption regulations.	12.5 kHz	Frequency	None	12k5DG W	14 dBW (ERP)	
Band III (Sub band 2)	Base 199.4875 to 193.2125 MHz	Base Transmit	WT Act Licence. T Act Licence	12.5 kHz	Frequency	None	125KW	14 dBW (ERP)	

	Mobile 207.4875 to 202.2125 MHz	Mobile Transmit (Network user equipment)	Network user equipment meeting the minimum requirements outlined in this interface requirement, is exempt from licensing provided that it meets the requirements of the relevant exemption regulations.	12.5 kHz	Frequenc y	None	12k5DG W	14 dBW (ERP)	
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**Table 2.2: Minimum Equipment Requirements for Digital PAMR Equipment.**

Service Type. (indicative)	Frequency Range (MHz)	Utilisation	Licensing Requirement	Channel Spacing	Modulation	Access Technique	Emission Designation	Output Power	Additional Technical Requirements
TETRA	420.0000 to 430.0000	Base Transmitter	WT Act Licence. T Act Licence	25 kHz	$\pi/4$ QPSK	Time Division Multiple Access (TDMA)	18KG7W DT	16.15 dBW (EIRP Max)	1. Not all frequencies within these ranges are available for licensing.  2. Ofcom may impose additional restrictions on the maximum power used for specific frequencies and locations.
	410.0000 to 420.0000	Mobile Transmitter (Network user equipment)	Network user equipment meeting the minimum requirements outlined in this interface requirement, is exempt from licensing provided that it meets the requirements of the relevant exemption regulations.	25 kHz	$\pi/4$ QPSK	Time Division Multiple Access (TDMA)	18KG7W DT	16.15 dBW (EIRP Max)	
TETRA	460.0000 to 470.0000	Base Transmitter	WT Act Licence. T Act Licence	25 kHz	$\pi/4$ QPSK	Time Division Multiple Access (TDMA)	18KG7W DT	16.15 dBW (EIRP Max)	

	450.0000 to 460.0000	Mobile Transmit (Network user equipment)	Network user equipment meeting the minimum requirements outlined in this interface requirement, is exempt from licensing provided that it meets the requirements of the relevant exemption regulations.	25 kHz	$\pi/4$ QPS K	Time Division Multiple Access (TDMA)	18KG7W DT	16.15 dBW (EIRP Max)	
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**Table 2.3: Minimum Equipment Requirements for Digital PAMR Equipment.**

Service Type. (indicative)	Frequency Range (MHz)	Utilisation	Licensing Requirement	Channel Spacing	Modulation	Access Technique	Emission Designation	Output Power	Additional Technical Requirements
Possible Future band for TETRA	390.000 to 400.000 MHz	Base Transmitter	WT Act Licence. T Act Licence	25 kHz	$\pi/4$ QPSK	Time Division Multiple Access (TDMA)	18KG7W DT	16.15 dBW (EIRP Max)	1. Not all frequencies within these ranges are available for licensing.  2. Ofcom may impose additional restrictions on the maximum power used for specific frequencies and locations.
	380.000 to 390.000 MHz	Mobile Transmitter (Network user equipment)	Network user equipment meeting the minimum requirements outlined in this interface requirement, is exempt from licensing provided that it meets the requirements of the relevant exemption regulations.	25 kHz	$\pi/4$ QPSK	Time Division Multiple Access (TDMA)	18KG7W DT	16.15 dBW (EIRP Max)	
Future bands for TETRA	915.000 to 921.000 MHz	Base Transmitter	WT Act Licence. T Act Licence	25 kHz	$\pi/4$ QPSK	Time Division Multiple Access (TDMA)	18KG7W DT	16.15 dBW (EIRP Max)	

A	870.0000 to 876.000 MHz	Mobile Transmit (Network user equipment)	Network user equipment meeting the minimum requirements outlined in this interface requirement, is exempt from licensing provided that it meets the requirements of the relevant exemption regulations.	25 kHz	$\pi/4$ QPS K	Time Division Multiple Access (TDMA)	18KG7W DT	16.15 dBW (EIRP Max)	
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## Annex A. Additional Performance Parameters (Informative)

The following are included for information only and have no regulatory status:

- A.1 Table A.1 details the Reference specifications which contain additional performance parameters and limits that Ofcom assumes are fulfilled by PAMR when planning and managing the radio spectrum in the UK.

### Table A.1 Reference Specifications for PAMR.

Equipment Type	Frequency Ranges	Reference Specification
PAMR Band III (analogue) 174-225MHz	Sub band 1 Base 191.4875 to 185.2125MHz Mobile 183.4875 to 177.2125 MHz  Sub band 2 Base 199.4875 to 193.2125MHz Mobile 207.4875 to 202.2125 MHz  Sub band 3 208-225MHz (reserved) (No analogue PAMR)	MPT1317, MPT1318 ,MPT1343, MPT1327,MPT1331 MPT1352,MPT1347  ETS 300 086, ETS 300113
TETRA 450-470MHz (digital)	Base 460 to 450 MHz Mobile 470 to 460MHz	ETS 300 392-1 ETS 300 392-2 ETS 300 392-10(sub parts 1-24) ETS 300 393 parts 1 and 2 ETS 300 394-1
TETRA 410-420MHz (digital)	Base 430 to 420 MHz Mobile 420 to 410 MHz	ETS 300 392-1 ETS 300 392-2 ETS 300 392-10(sub parts 1-24) ETS 300 393 parts 1 and 2 ETS 300 394-1
TETRA 900 (digital)	Base 915 to 921 MHz Mobile 870 to 876 MHz	ETS 300 392-1 ETS 300 392-2 ETS 300 392-10(sub parts 1-24) ETS 300 393 parts 1 and 2 ETS 300 394-1

## Document history

Draft	Date	Changes
1.1	28-3-00	First Draft of consolidated PAMR IR
1.2	28-10-00	second Draft of consolidated PAMR IR
1.3	Nov 2004	Updated for Ofcom



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