



UK Radio Licence Interface Requirement 2013
Public Access Mobile Radio Services
Operating in all frequency bands
Administered
By the Radiocommunications Agency
(Version 1.0)

98/34/EC Notification Number: 2000/387/UK

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References

UK

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,

ETSI Technical Standards

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 Radio 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 the Secretary of State. 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 Radio Interface Requirement will apply in the licensing of Public Mobile Access Radio (PAMR) services in the UK.
- 1.5 This UK Radio 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 Radio Interface Requirements notified under Directive 98/34/EC will be published and will be made available free of charge from the RA Information and Library Service and/or the RA web-site. The addresses for both the Library and the web-site are given on the back cover of this document.
- 1.7 Further information on this UK Radio 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

- 2.1 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.
- 2.2 This UK Radio 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.
- 2.3 This UK Radio 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.
- 2.4 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 the RA 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"> Not all frequencies within these ranges are available for licensing. The RA may impose additional restrictions on the maximum power used for specific frequencies and locations. |
| | 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 | 12k5DGW | 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 | Frequency | None | 12k5DGW | 14 dBW (ERP) | |

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 Transmit | WT Act Licence. T Act Licence | 25 kHz | $\pi/4$ OQPSK | Time Division Multiple Access (TDMA) | 18KG7WDT | 16.15 dBW (EIRPMax) | <ol style="list-style-type: none"> 1. Not all frequencies within these ranges are available for licensing. 2. The RA may impose additional restrictions on the maximum power used for specific frequencies and locations. |
| | 410.0000 to 420.0000 | 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 | $\pi/4$ OQPSK | Time Division Multiple Access (TDMA) | 18KG7WDT | 16.15 dBW (EIRP Max) | |
| | | | | | | | | | |
| TETRA | 460.0000 to 470.0000 | Base Transmit | WT Act Licence. T Act Licence | 25 kHz | $\pi/4$ OQPSK | Time Division Multiple Access (TDMA) | 18KG7WDT | 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 | $\pi/4$ OQPSK | Time Division Multiple Access (TDMA) | 18KG7WDT | 16.15 dBW (EIRPMax) | |

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 |
|--------------------------------|-------------------------|--|---|-----------------|---------------|--------------------------------------|----------------------|----------------------|---|
| Possible Future band for TETRA | 390.000 to 400.000 MHz | Base Transmit | WT Act Licence. T Act Licence | 25 kHz | $\pi/4$ OQPSK | Time Division Multiple Access (TDMA) | 18KG7WDT | 16.15 dBW (EIRPMax) | 1. Not all frequencies within these ranges are available for licensing. 2. The RA may impose additional restrictions on the maximum power used for specific frequencies and locations. |
| | 380.0000 to 390.000 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 | $\pi/4$ OQPSK | Time Division Multiple Access (TDMA) | 18KG7WDT | 16.15 dBW (EIRP Max) | |
| | | | | | | | | | |
| Future bands for TETRA | 915.000 to 921.000 MHz | Base Transmit | WT Act Licence. T Act Licence | 25 kHz | $\pi/4$ OQPSK | Time Division Multiple Access (TDMA) | 18KG7WDT | 16.15 dBW (EIRP Max) | |
| | 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 | $\pi/4$ OQPSK | Time Division Multiple Access (TDMA) | 18KG7WDT | 16.15 dBW (EIRPMax) | |

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 the Radiocommunications Agency assume 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 | <p>Sub band 1 Base 191.4875 to 185.2125MHz Mobile 183.4875 to 177.2125 MHz</p> <p>Sub band 2 Base 199.4875 to 193.2125MHz Mobile 207.4875 to 202.2125 MHz</p> <p>Sub band 3 208-225MHz (reserved) (No analogue PAMR)</p> | <p>MPT1317, MPT1318 ,MPT1343, MPT1327,MPT1331 MPT1352,MPT1347</p> <p>ETS 300 086, ETS 300113</p> |
| TETRA 450-470MHz (digital) | <p>Base 460 to 450 MHz Mobile 470 to 460MHz</p> | <p>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</p> |
| TETRA 410-420MHz (digital) | <p>Base 430 to 420 MHz Mobile 420 to 410 MHz</p> | <p>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</p> |
| TETRA 900 (digital) | <p>Base 915 to 921 MHz Mobile 870 to 876 MHz</p> | <p>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</p> |

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 |
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