

2G ORANGE UK PUBLIC INTERFACE SPECIFICATION



Doc No: Spec1663	Date Issued: 22/2/2005	Copy No:
Version: 1	Version Status: Current	
Category: Specification	Sub-Category: Interface	

Comments:

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AMENDMENT HISTORY

<u>Version</u>	<u>Date Issued</u>	<u>Originator/ Modified by</u>	<u>Reason(s) For Issue/ Re-issue</u>
1A	28/01/05	Chris Vernon	First draft, Pre-Approval Review
1	22/02/05	Chris Vernon	Feedback comments included. First Issue

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1 INTRODUCTION

1.1 Purpose

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 details the public interface of Orange UK's 2nd Generation Cellular Network.

This document has been written to satisfy the R&TTE Directive to publish the public interface on the Orange Personal Communications Ltd network, and is based on the UK interface requirements published by OFCOM.

The document is primarily aimed at providing technical information to equipment manufacturers in order to allow them to design equipment that is compatible with Orange's network and services.

1.2 Scope

The public interface is considered to be the interface between the mobile station and the base station equipment. This document specifies the standard GSM interfaces.

1.3 Responsibilities

Orange UK Radio Engineering will be responsible for updating this interface document, as and when the need arises.

1.4 Disclaimer

This document is published only for the purpose of compliance with the Radio and Telecommunications Terminal Equipment Directive (1999/5/EC) and the instruments implementing it into UK law and Orange's licence. Orange shall not be liable for any form of direct or indirect consequential or special loss of profit or business opportunity howsoever occurring from the issue or use of this document save that Orange does not restrict its liability for death or injury caused by the negligence of Orange. Nothing in this document shall preclude or impair any third party's intellectual property rights. The recipient of this document shall be responsible for ensuring that any work arising from its use shall not infringe the rights of any third party.

1.5 Intellectual Property Rights

For the avoidance of doubt, publication of this specification does not constitute a licence to use Orange's intellectual property rights.

1.6 Contact Information

Any queries arising from the use of this Interface Publication should be addressed to:

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1.7 Reference / Related Documentation

[1] Ofcom UK Interface Requirement 2014 - Second Generation Public Cellular Radiotelephone Services.

- [2] EN 301 502 v8.1.2 - Harmonized EN for Global System for Mobile communications (GSM); Base Station and Repeater equipment covering essential requirements under article 3.2 of the R&TTE directive.
- [3] EN 301 511 v9.0.2 - Global System for Mobile communications (GSM); Harmonized standard for mobile stations in the GSM 900 and DCS 1800 bands covering essential requirements under article 3.2 of the R&TTE directive (1999/5/EC).
- [4] GSM 05.05 - Digital cellular telecommunications system (GSM); Radio transmission and reception.

1.8 Definition of Terms

8PSK	8 Phase Shift Keying
EIRP	Effective Isotropic Radiated Power
FDD	Frequency Division Duplex
GMSK	Gaussian Minimum Shift Keying

2 MINIMUM EQUIPMENT REQUIREMENTS FOR MOBILE STATIONS AND REPEATERS OPERATING IN THE 1751.7 TO 1781.7 MHz BAND

1	Frequency band (or bands)	1751.7 – 1781.7 MHz
2	Radio service	Mobile service
3	Application	Second generation public cellular radiotelephone service
4	Channelling modulation	GMSK or 8PSK 200 kHz channel raster
5	Transmit power limit	36 dBm Power class 3 30 dBm Power class 1 24 dBm Power class 2
6	Channel occupation rules	Time division multiple access (TDMA)
7	Duplex type/separation	FDD, Mobile stations/repeaters(uplink) transmit 95MHz below BTS transmit band.
8	Licensing Regime	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 WT Act Public Mobile Operator licence required for repeaters.
9	Additional essential requirements	None
10	Frequency planning assumptions	GSM 05.05
11	Reference	EN 301 511
12	Remarks	None
13	Notification number	N/A

3 MINIMUM EQUIPMENT REQUIREMENTS FOR BASE STATIONS AND REPEATERS OPERATING IN THE 1846.7 TO 1876.7 MHZ BAND

1	Frequency band (or bands)	1846.7 to 1876.7 MHz
2	Radio service	Mobile service
3	Application	Second generation public cellular radiotelephone service.
4	Channelling modulation	GMSK or 8-PSK 200 kHz channel raster
5	Transmit power limit	62 dBm EIRP per carrier
6	Channel occupation rules	Time division multiple access (TDMA)
7	Duplex type/separation	Base station transmit Repeater transmit/receive Paired uplink carriers 95 MHz below downlink
8	Licensing Regime	WT Act Public Mobile Operator licence
9	Additional essential requirements	None
10	Frequency planning assumptions	GSM 05.05
11	Reference	EN 301 502
12	Remarks	None
13	Notification number	N/A