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**PERFORMANCE SPECIFICATION  
OF RADIO EQUIPMENT FOR USE IN  
THE TRUNKED MOBILE RADIO SYSTEM  
EMPLOYING TERRESTRIAL TRUNKED RADIO  
(TETRA) TECHNOLOGY**



**TELECOMMUNICATIONS AUTHORITY  
HONG KONG**

## FOREWORD

1. This specification is prescribed under section 32D of the Telecommunications Ordinance (Cap 106) (“the Ordinance”) to set out the technical and evaluation requirements for base, repeater and mobile stations operating at radio frequencies of 300 MHz to 1 GHz for use in the trunked mobile radio system employing Terrestrial Trunked Radio (TETRA) technology. Radiocommunications apparatus falling into the scope of this specification shall meet the stipulated requirements.
2. Under the Ordinance, the possession or use of any radiocommunications apparatus or any apparatus emitting radio frequency energy must be covered by an appropriate licence issued by the Telecommunications Authority (TA) with the exception of those specifically exempted from licensing under the Ordinance, such as those covered by the Telecommunications (Telecommunications Apparatus)(Exemption from Licensing) Order.
3. At present, the Office of the Telecommunications Authority (OFTA) operates a Hong Kong Telecommunications Equipment Evaluation and Certification (HKTEC) Scheme. Details of the HKTEC Scheme can be found in the information note OFTA I 421. Under the Scheme, suppliers or manufacturers of the radiocommunications apparatus shall apply to OFTA for certification of their apparatus against this specification. The application procedures for certification of radiocommunications apparatus can be found in the information note OFTA I 401.
4. The TA reserves the right to give separate certification to models he considers to be technical variants and the performance of which may differ between models.
5. The TA may amend any part of this specification as and when he deems necessary.
6. In case of doubt about the interpretation of this specification, the methods of carrying out the test and the validity of statements made by the equipment manufacturers or suppliers about the equipment, the decision of the TA shall be final.
7. The HKTA specifications and information notes are issued by the TA. The documents can be obtained through one of the following methods —
  - download direct from the OFTA’s Internet homepage at <http://www.ofta.gov.hk>;
  - hard copies will be available upon request to :  
Radio Laboratory, Standards Section  
Office of the Telecommunications Authority,  
29/F Wu Chung House,  
213 Queen’s Road East, Wanchai, Hong Kong.  
  
Fax : +852 2343 5824  
Email : [certification@ofta.gov.hk](mailto:certification@ofta.gov.hk)

8. Enquiries about this specification may be directed to —

Radio Laboratory, Standards Section,  
Office of the Telecommunications Authority,  
29/F Wu Chung House,  
213 Queen's Road East, Wanchai, Hong Kong.

Fax : +852 2343 5824

Email: [certification@ofta.gov.hk](mailto:certification@ofta.gov.hk)

## AMENDMENT TABLE

Item	Issue No.	Paragraph	Description
1.	Issue 1 February 2003	All	First Release
2.	Issue 2 January 2008	Clauses 1 and 3	The scope of the specification is extended to cover repeater equipment.

## **CONTENTS**

- 1. Scope of specification**
- 2. Operating frequencies**
- 3. Technical requirements**
- 4. Evaluation requirements**

## 1. SCOPE OF SPECIFICATION

This specification sets out the minimum technical and evaluation requirements for base, repeater and mobile stations operating at radio frequencies of 300 MHz to 1 GHz for use in the trunked mobile radio system employing Terrestrial Trunked Radio (TETRA) technology.

## 2. OPERATING FREQUENCIES

The equipment shall operate in the following frequency bands with a carrier spacing of 25 kHz, unless otherwise approved by the TA:

<i>Mobile Transmit / Base Receive</i>	<i>Mobile Receive / Base Transmit</i>
380 - 390 MHz	390 - 400 MHz
406.1 – 410 MHz ( <i>for Direct Mode Operation only</i> )	
410 – 420 MHz	420 – 430 MHz
806 – 818 MHz	851 – 863 MHz
818 – 819.1 MHz	863 – 864.1 MHz

## 3. TECHNICAL REQUIREMENTS

The equipment shall meet the technical requirements as defined in the following standards:

- EN 300 394-1 - “Terrestrial Trunked Radio (TETRA); Conformance Testing Specification; Part 1: Radio”, issued by the ETSI
- TS 101 789-1 - “Terrestrial Trunked Radio (TETRA); TMO Repeaters; Part 1: Requirements, Methods and Limits”, issued by the ETSI

The technical requirements for the supplementary services laid down in the above standards under reference are applicable only when the equipment supports the relevant supplementary services.

#### 4. EVALUATION REQUIREMENTS

For type-approval evaluation by the TA, the equipment shall comply with the operating frequencies and technical requirements in clauses 2 and 3 and satisfy the following conditions for type approval evaluation by the TA:

- (a) The equipment shall have been certified or successfully tested to demonstrate compliance with applicable parts of the following specification:

EN 303 035	“Terrestrial Trunked Radio (TETRA); Harmonized EN for TETRA equipment covering essential requirements under article 3.2 of the R&TTE Directive”, issued by the ETSI
- 1	Part 1: Voice plus Data (V+D)
- 2	Part 2: Direct Mode Operation (DMO)

The certification or test report shall be issued by a body:

- (i) subject to the conformity assessment procedures described in Annex 4 or Annex 5 of the Radio Equipment and Telecommunications Terminal Equipment Directive (1999/5/EC); or
- (ii) recognised under the HKTEC Scheme, and
- (b) A declaration of compliance with the applicable technical requirements in clause 3 of this specification is made by the equipment manufacturer.

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