

**PERFORMANCE SPECIFICATION**  
**FOR GROUND-BASED VHF RADIO EQUIPMENT**  
**FOR THE VHF AERONAUTICAL MOBILE SERVICE**



## FOREWORD

1. This specification is prescribed under section 32D of the Telecommunications Ordinance (Cap 106) (“the Ordinance”) to set out the minimum performance requirements for Ground-based VHF equipment for the aeronautical mobile service. Radiocommunications apparatus falling into the scope of this specification, unless covered by other specification with more specific scope, 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 Communications Authority (CA) 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 Communications Authority (OFCA) operates a Hong Kong Telecommunications Equipment Evaluation and Certification (HKTEC) Scheme. Details of the HKTEC Scheme can be found in the information note OFCA I 421. Under the Scheme, suppliers or manufacturers of the radiocommunications apparatus shall apply for certification of their apparatus against this specification. The application procedures for certification of radiocommunications apparatus can be found in the information note OFCA I 401.
4. The CA may amend any part of this specification as and when it deems necessary.
5. 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 CA shall be final.
6. The HKCA specifications and information notes issued by the CA can be downloaded from OFCA’s website at <http://www.ofca.gov.hk>. Enquiries about this specification may be directed to –

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## AMENDMENT TABLE

Item	Issue No.	Paragraph	Description
1.	Issue 1 [September] 2013	All	First Release

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## 1. SCOPE

This specification sets out the minimum performance requirements for ground-based VHF radio equipment (hereafter referred to as “the equipment”) for the VHF aeronautical mobile service.

## 2. OPERATING FREQUENCIES

The operating frequency range for the equipment is from 117.975MHz to 137.000MHz with channel spacing of 25kHz.

## 3. TECHNICAL REQUIREMENTS

The equipment shall comply with the operating frequencies in paragraph 2 and shall meet the technical requirements as defined in one of the following standards:

- (a) ICAO Standards and Recommended Practice, Annex 10 to the Convention on International Civil Aviation - Aeronautical Telecommunications, Volume III – Communications Systems, Part II- Voice Communication System, Chapter 2 – Aeronautical Mobile Service” published by the ICAO; OR
- (b) ETSI EN 300 676-2 “Ground-based VHF hand-held, mobile and fixed radio transmitters, receivers and transceivers for the VHF aeronautical mobile service using amplitude modulation; Part 2: Harmonized EN covering essential requirements of article 3.2 of the R&TTE Directive” published by the European Telecommunications Standards Institute (ETSI); OR
- (c) Code of Federal Regulations (USA), Title 47 Telecommunication, Chapter 1 Federal Communications Commission, Part 87 Aviation Services, Subpart D – Technical Requirements on the following sections –

i.	87.131	Power and emissions
ii.	87.133	Frequency stability
iii.	87.135	Bandwidth of emission
iv.	87.137	Types of emission
v.	87.139	Emission limitations
vi.	87.141	Modulation requirements

#### 4. EVALUATION REQUIREMENTS

The equipment shall comply with the operating frequencies and technical requirements prescribed in paragraphs 2 and 3 respectively. The equipment shall be evaluated in accordance with the technical requirements as specified in any of the following standards –

- (a) ETSI EN 300 676-2 “Ground-based VHF hand-held, mobile and fixed radio transmitters, receivers and transceivers for the VHF aeronautical mobile service using amplitude modulation; Part 2: Harmonized EN covering essential requirements of article 3.2 of the R&TTE Directive” published by the European Telecommunications Standards Institute (ETSI); OR
- (b) Code of Federal Regulations (USA), Title 47 Telecommunication, Chapter 1 Federal Communications Commission, Part 87 Aviation Services, Subpart D – Technical Requirements on the following sections –

i. 87.131	Power and emissions
ii. 87.133	Frequency stability
iii. 87.135	Bandwidth of emission
iv. 87.137	Types of emission
v. 87.139	Emission limitations (Conducted and Radiated)
vi. 87.141	Modulation requirements

#### 5. REFERENCE

- (a) ICAO Standards and Recommended Practice, “Annex 10 to the Convention on International Civil Aviation - Aeronautical Telecommunications, Volume III – Communications Systems, Part II- Voice Communication System, Chapter 2 – Aeronautical Mobile Service” published by the ICAO
- (b) ICAO Standards and Recommended Practice, “Annex 10 to the Convention on International Civil Aviation - Aeronautical Telecommunications, Volume V – Aeronautical Radio Frequency Spectrum Utilization” published by ICAO
- (c) ETSI EN 300 676-2 “Ground-based VHF hand-held, mobile and fixed radio transmitters, receivers and transceivers for the VHF aeronautical mobile service using amplitude modulation; Part 2: Harmonized EN covering essential requirements of article 3.2 of the R&TTE Directive” published by the ETSI;
- (d) Code of Federal Regulations (USA); Title 47 Telecommunication; Chapter 1 Federal Communications Commission, Part 87 Aviation Services; Subpart D – Technical Requirements.

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