

**RADIO SPECTRUM AND TECHNICAL STANDARDS ADVISORY COMMITTEE**

**Revision to HKCA 1008 Performance Specification  
For Low Power Radio Microphones, Including Associated  
Receiving Equipment**

**Introduction**

This paper gives an overview of wireless microphones using digital modulation which operate in the UHF band and proposes the adoption of the following revised HKCA specification:

HKCA 1008 Issue 4	Performance Specification for Low Power Radio Microphones, Including Associated Receiving Equipment
----------------------	---

**Background**

2. Wireless microphones generally operate in the VHF or UHF frequency bands using analogue modulations including frequency modulation and amplitude modulation. In recent years, with the advancement of digital signal processing, wireless microphones employing digital modulation in the UHF band are available in the equipment market. Digital wireless microphones offer better audio quality without increase in the occupied bandwidth. Coupled with the advantages of improved noise immunity and secure transmission, it is envisaged that the demand for such apparatus will grow over time.

**Current Situation**

3. In Hong Kong, the frequency ranges 174 – 175 MHz and 184 – 185.4 MHz in the VHF band and 479 – 565 MHz in the UHF band are assigned for wireless microphone applications. Compared with the VHF band, due to larger RF bandwidth available, the UHF band provides more frequency channels and larger channel bandwidths for better audio quality. In Hong Kong, professional wireless microphones used in broadcasting studios and live performance events are operated in the UHF band.

4. At present, wireless microphones using analogue modulation are type-approved against HKCA 1008<sup>1</sup>. This specification covers different channel bandwidths in the VHF and UHF band. However, it can not be applied for type approval testing of wireless microphones employing digital modulation.

### **International Standards**

5. The European Telecommunications Standards Institute (ETSI) has issued a harmonized standard covering conformance test specification for wireless microphones operating in the 25 MHz to 3 GHz frequency range, namely -

ETSI EN 300 422-2

Electromagnetic compatibility and Radio spectrum Matters (ERM);

Wireless microphones in the 25 MHz to 3 GHz frequency range;

Part 2 : Harmonized EN covering the essential requirements of article 3.2 of the R&TTE Directive

It is noted that the standard cover the technical requirements and conformance testing of wireless microphones using analogue and digital modulation.

### **Proposed Revision to HKCA 1008**

6. Wireless microphones employing digital modulation are now available in the market and OFCA has received several enquiries from manufacturers on the type-approval requirement. In order to satisfy the market demand, it is proposed that the conformance test aspects of ETSI EN 300 422-2 be included in HKCA 1008 specification. Test reports evaluated against ETSI EN 300 422-2 can then be accepted for certification of wireless microphones deploying either analogue modulation or digital modulation.

### **WTO Notification**

7. As the proposed Issue 4 of HKCA 1008 is based on open standard, notification to the World Trade Organisation (WTO) is not necessary.

---

<sup>1</sup> [HKCA 1008 Issue 3](#) – Performance Specification for Low Power Radio Microphones Including Associated Receiving Equipment.

## **Recommendation**

8. It is recommended that Issue 4 of HKCA 1008 in the Annex be adopted by the CA.

## **Advice Sought**

9. Members are invited to give their comments on the recommendation above.

**Office of the Communications Authority**  
**May 2013**