

## CST Technical Specification

# Specification for Wireless Audio, Radio Microphones, In-Ear Monitoring and Ancillary Equipment

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This technical specification is issued by The Communications, Space and Technology Commission in the Kingdom of Saudi Arabia in accordance with the provisions of the Communications and Information Technology Act issued by Royal Decree No. (M/106) dated 02/11/1443 AH and its bylaw, and the Commission's regulation.

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**Document History Table**

Version	Issue Date	Description
Issue 1	March 2006	
Issue 2	January 2010	
Issue 3	July 2021	Merge of RI044 “Specification for Radio Microphones/In-Ear Monitoring and Ancillary Equipment” with RI053 “Specification for Wireless Audio Applications Equipment” into one technical specification.
Issue 4	October 2023	

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## 1- Scope

- 1-1 This specification applies to wireless audio, radio microphones, in-ear monitoring and ancillary Equipment.

## 2- Enforcement

- 2-1 This specification shall enter into force from issue date.
- 2-2 Any previous version of this technical specification is withdrawn.

### 3- General Requirements

- 3-1 All equipment must comply with the requirement of CST specification GEN001, be safe and must not adversely affect other electrical equipment.
- 3-2 All telecommunications and radio terminal equipment must comply with the relevant technical specifications established by CST. In addition, such equipment may be subject to regulations for Declaration of Conformity or registration. Please visit CST website for details.
- 3-3 If more than one interface type is offered by a piece of equipment, each interface must meet the applicable technical specifications.
- 3-4 Further information on the characteristics and presentation of network interfaces can be obtained by coordinating with the mobile network operators.
- 3-5 It is mandatory that test reports are obtained from a laboratory that has been accredited by a body that is a member of the ILAC Mutual Recognition Arrangement.

## 4- Limits and conditions

Testing should be carried out to ensure compliance with the listed specifications.

Frequency band	Max Output Power or Magnetic Field	Usage	Standard	Comments
29.7 – 47.0 MHz	10mW ERP	Audio microphones	EN 300 422-1 EN 300 422-2 EN 300 422-3 EN 300 422-4 EN 301 489-9	Professional equipment only
173.965 – 174.015 MHz	2mW ERP	Audio microphones	EN 300 422-1 EN 300 422-2 EN 300 422-3 EN 300 422-4 EN 301 489-9	Professional equipment only
174 – 216 MHz	50mW ERP	Audio microphones	EN 300 422-1 EN 300 422-2 EN 300 422-3 EN 300 422-4 EN 301 489-9	Professional equipment only
470 – 862 MHz	50mW ERP	Audio microphones	EN 300 422-1 EN 300 422-2 EN 300 422-3 EN 300 422-4 EN 301 489-9	Professional equipment only
863 – 865 MHz	10mW ERP	Audio microphones	EN 300 422-1 EN 300 422-2 EN 300 422-3 EN 300 422-4 EN 301 489-9	Professional equipment only
864.8 – 865.0 MHz	10mW ERP	In-ear monitoring	EN 300 220-1 EN 300 220-2 EN 301 489-9	Consumer equipment

863 – 865 MHz	10mW ERP	Wireless Audio	EN 301 357-2 EN 301 489-9	Consumer equipment
1785 – 1795 MHz	20mW EIRP	Audio microphones	EN 300 422-1 EN 300 422-2 EN 300 422-3 EN 300 422-4 EN 301 489-9	Professional equipment only
1785 – 1795 MHz	50mW EIRP	Audio microphones	EN 300 422-1 EN 300 422-2 EN 300 422-3 EN 300 422-4 EN 301 489-9	Digital operating mode only
1795 – 1800 MHz	20mW EIRP	Wireless Audio	EN 301 357-2 EN 301 489-9	Consumer equipment
1795 – 1800 MHz	20mW EIRP	Audio microphones	EN 300 422-1 EN 300 422-2 EN 300 422-3 EN 300 422-4 EN 301 489-9	Professional equipment only
1795 – 1800 MHz	50mW EIRP	Audio microphones	EN 300 422-1 EN 300 422-2 EN 300 422-3 EN 300 422-4 EN 301 489-9	Digital operating mode only

## 5- Licensing Requirements

Spectrum licensing requirements apply to professional equipment only.

## 6- Additional Requirements

Usage is restricted to indoor only except for applications intended to hearing impaired people.

## 7- References

The following referenced documents are indispensable for the application of this document. If no issue or revision number is quoted along with the title of a technical specification or standard, the latest published version should be used.

### **EN 300 220-1**

Short Range Devices (SRD) operating in the frequency range 25 MHz to 1 000 MHz; Part 1: Technical characteristics and methods of measurement

### **EN 300 220-2**

Short Range Devices (SRD) operating in the frequency range 25 MHz to 1 000 MHz; Part 2: Harmonised Standard for access to radio spectrum for non-specific radio equipment

### **EN 300 422-1**

Audio PMSE up to 3 GHz; Part 1: Class A Receivers; Audio PMSE up to 3 GHz; Part 1: Class A Receivers; Harmonised Standard covering the essential requirements of article 3.2 of Directive 2014/53/EU

### **EN 300 422-2**

Wireless Microphones; Audio PMSE up to 3 GHz; Part 2: Class B Receivers; Harmonised Standard covering the essential requirements of article 3.2 of Directive 2014/53/EU

### **EN 300 422-3**

Wireless Microphones; Audio PMSE up to 3 GHz; Part 3: Class C Receivers; Harmonised Standard covering the essential requirements of article 3.2 of Directive 2014/53/EU



#### **EN 300 422-4**

Wireless Microphones; Audio PMSE up to 3 GHz; Part 4: Assistive Listening Devices including personal sound amplifiers and inductive systems up to 3 GHz; Harmonised Standard covering the essential requirements of article 3.2 of Directive 2014/53/EU

#### **EN 301 357-2**

Electromagnetic compatibility and Radio spectrum Matters (ERM); Cordless audio devices in the range 25 MHz to 2 000 MHz; Consumer radio microphones and in-ear monitoring systems operating in the CEPT harmonised band 863 MHz to 865 MHz; Part 2: Harmonised EN covering essential requirements under the R&TTE directive.

#### **EN 301 489-1**

Electromagnetic compatibility and Radio spectrum Matters (ERM); Electromagnetic Compatibility (EMC) standard for radio equipment and services; Part 1: Common technical requirements.

#### **EN 301 489-9**

Electromagnetic compatibility and Radio spectrum Matters (ERM); Electromagnetic Compatibility (EMC) standard for radio equipment and services; Part 9 Specific conditions for wireless microphones, similar Radio Frequency (RF) audio link equipment, cordless audio and in-ear monitoring devices.