

CST Technical Specification

Specification for Air Navigation 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	January 2010	
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1- Scope

1-1 This specification applies to air navigation equipment.

2- Enforcement

2-1 This specification shall enter into force on 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2-2 Any previous version of this technical specification is withdrawn.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
255 – 526.5 kHz	Subject to licensing	Air navigation	ITU Radio Regulations edition 2008 ITU-R SM.329-10 ITU-R M.1177-3 ICAO Annex 10 Volume IV ICAO Annex 10 Volume I und V. ICAO , Doc 8071.	Non-directional beacon (NDB)
75 MHz	Subject to licensing	Air navigation	ITU Radio Regulations edition 2008 ITU-R SM.329-10 ITU-R M.1177-3 ICAO Annex 10 Volume IV ICAO Annex 10 Volume I und V. ICAO , Doc 8071.	Marker Beacon
108 – 111.975 MHz	Subject to licensing	Air navigation	ITU Radio Regulations edition 2008 ITU-R SM.329-10 ITU-R M.1177-3 ICAO Annex 10 IV ICAO Annex 10 Volume I und V.	Localizer course

			ICAO , Doc 8071.	
108 – 117.975 MHz	Subject to licensing	Air navigation	ITU Radio Regulations edition 2008 ITU-R SM.329-10 ITU-R M.1177-3 ICAO Annex 10 Volume IV: ICAO Annex 10 Volume I und V. ICAO , Doc 8071. EUROCAE ED-114	Rotating beacon and Ground Based Augmentation System (GBAS)
328.6 – 335.4 MHz	Subject to licensing	Air navigation	ITU Radio Regulations edition 2008 ITU-R SM.329-10 ITU-R M.1177-3 ICAO Annex 10 Volume IV: ICAO Annex 10 Volume I und V. ICAO , Doc 8071.	Glide path transmitter
960 – 1215 MHz	Subject to licensing	Air navigation	ITU Radio Regulations edition 2008 ITU-R SM.329-10 ITU-R M.1177-3 ICAO Annex 10 Volume IV ICAO Annex 10 Volume I und V. ICAO , Doc 8071. EUROCAE ED 57	Distance Measurement Equipment (DME)

1030 MHz	90 dBm	Air navigation	ITU Radio Regulations edition 2008 ITU-R SM.329-10 ITU-R M.1177-3 ICAO Annex 10 Volume IV: ICAO Annex 10 Volume I und V. ICAO , Doc 8071.	Secondary-radar equipment
1.25 – 1.35 GHz	Subject to licensing	Air navigation	ITU Radio Regulations edition 2008 ITU-R SM.329-10 ITU-R M.1177-3 ICAO Annex 10 Volume IV: ICAO Annex 10 Volume I und V. ICAO , Doc 8071. EUROCAE ED 52	Ground-radar equipment
2.7 – 2.9 GHz	Subject to licensing	Air navigation	ITU Radio Regulations edition 2008 ITU-R SM.329-10 ITU-R M.1177-3 ICAO Annex 10 Volume IV: ICAO Annex 10 Volume I und V. ICAO , Doc 8071. EUROCAE ED 52	Ground-radar equipment

<p>5.031 – 5.0907 GHz</p>	<p>Subject to licensing</p>	<p>Air navigation</p>	<p>ITU Radio Regulations edition 2008 ITU-R SM.329-10 ITU-R M.1177-3 ICAO Annex 10 Volume IV: ICAO Annex 10 Volume I und V. ICAO , Doc 8071. EUROCAE ED 53A</p>	<p>Microwave Landing System</p>
<p>9.0 – 9.2 GHz</p>	<p>Subject to licensing</p>	<p>Air navigation</p>	<p>ITU Radio Regulations edition 2008 ITU-R SM.329-10 ITU-R M.1177-3 ICAO Annex 10 Volume IV: ICAO Annex 10 Volume I und V. ICAO , Doc 8071. EUROCAE ED 52</p>	<p>Ground-radar equipment</p>

5- Licensing Requirements

A spectrum license is required.

6- Additional Requirements

This kind of devices might be subject to additional requirements from other entities.

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.

ITU Radio Regulations edition 2008

The Radio Regulations, Edition of 2008, contains the complete texts of the Radio Regulations as adopted by the World Radiocommunication Conference (Geneva, 1995) (WRC-95) and subsequently revised and adopted by the World Radiocommunication Conference (Geneva, 1997) (WRC-97), the World Radiocommunication Conference (Istanbul, 2000) (WRC-2000), the World Radiocommunication Conference (Geneva, 2003) (WRC-03), and the World Radiocommunication Conference (Geneva, 2007) (WRC-07), including all Appendices, Resolutions, Recommendations and ITU-R Recommendations incorporated by reference.

Recommendation ITU-R SM.329-10

Spurious Emissions.

Recommendation ITU-R M.1177-3

Techniques for measurement of spurious emissions of radar systems.

ICAO

Annex 10 to the Convention on International Civil Aviation, Volume IV: Surveillance Radar and Collision Avoidance Systems.

ICAO

Annex 10 to the Convention on International Civil Aviation, Volume I und V.

ICAO

Manual on Testing of Radio Navigation Aids, Doc 8071.

EUROCAE ED 52

MPS for conventional and Doppler VHF omni-range (C VOR and D VOR) (ground equipment).

EUROCAE ED 53A

MOPS for microwave landing system (MLS) (ground equipment).

EUROCAE ED 57

MOPS for Distance Measuring Equipment (DME/N and DME/P) (ground equipment)".

EUROCAE ED-114

MOPS for a Ground Based Augmentation System (GBAS) ground facility to support CAT I approach and landing.