

CITC Technical Specification

Specification for Air Navigation Equipment

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Contents

- Scope 3
- Enforcement 3
- General Requirements 4
- Limits and conditions 4
- Licensing Requirements 8
- Additional Requirements 8
- References 9
- History 10

Scope

This specification applies to air navigation equipment.

Enforcement

This specification shall enter into force on 20/07/2021.

Any previous version of this technical specification is withdrawn.

General Requirements

- All equipment must comply with the requirement of CITC specification GEN001, be safe and must not adversely affect other electrical equipment.
- All telecommunications and radio terminal equipment must comply with the relevant technical specifications established by CITC. In addition, such equipment may be subject to regulations for Declaration of Conformity or registration. Please visit www.citc.gov.sa for details.
- If more than one interface type is offered by a piece of equipment, each interface must meet the applicable technical specifications.
- 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.

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. ICAO , Doc 8071.	Localizer course
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	Glide path transmitter

			<p>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.</p>	
960 – 1215 MHz	Subject to licensing	Air navigation	<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 57</p>	Distance Measurement Equipment (DME)
1030 MHz	90 dBm	Air navigation	<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.</p>	Secondary-radar equipment
1.25 – 1.35 GHz	Subject to licensing	Air navigation	<p>ITU Radio Regulations edition 2008 ITU-R SM.329-10 ITU-R M.1177-3</p>	Ground-radar equipment

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

			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	
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Licensing Requirements

A spectrum license is required.

Additional Requirements

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

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.

History

For reference, the latest versions of the technical specifications are published on the CITC website www.citc.gov.sa.

Description	Status	Date
	Issue 1	10/01/2010
	Issue 2	10/07/2021