

## **Regulation**

### **ON CONFORMITY OF RADIO EQUIPMENT USED IN AERONAUTICAL RADIOCOMMUNICATION**

Issued in Helsinki on 18 July 2007

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The Finnish Communications Regulatory Authority has, under section 24 (2) of the Act on Radio Frequencies and Telecommunications Equipment of 16 November 2001 (1015/2001), as laid down in the Act of 23 May 2003 on the Amendment of the Radio Act (399/2003), prescribed as follows:

#### Section 1

##### **Scope of application**

This regulation applies to radio equipment used for aeronautical communications service, as specified in section 24 (1) (4) of the Act on Radio Frequencies and Telecommunications Equipment, intended for use on board an aircraft and to whose conformity assessment sections 20-22 of the Act on Radio Frequencies and Telecommunications Equipment do not apply.

In order to promote efficient use of radio frequencies and avoid harmful interference, this regulation lays down provisions for the radio equipment referred to in section 1 on:

- 1) conformity assessment procedures;
- 2) essential requirements for characteristics and technical construction; and
- 3) markings.

#### Section 2

##### **Conformity assessment**

The conformity of radio equipment intended for aeronautical communications service on board an aircraft must be ensured based on:

- 1) ETSO approval (European Technical Standard Orders)
- 2) type approval; or

3) specific recognition of an individual item of radio equipment.

### Section 3

#### **ETSO approval**

The conformity of radio equipment to be used for aeronautical communications service on board an aircraft can be assessed according to Commission Regulation (EC) No 1702/2003 on laying down implementing rules for the airworthiness and environmental certification of aircraft and the related products, parts and appliances, as well as for the certification of design and production organisations (ETSO approval).

ETSO approval is granted by the European Aviation Safety Agency, EASA. Sections 4 - 7 of this Regulation do not apply to radio equipment that already has a valid ETSO approval.

### Section 4

#### **Type approval and specific recognition**

The conformity of radio equipment to be used for aeronautical communications service on board an aircraft can be ensured based on type approval or through the specific recognition of an individual item of radio equipment.

Type approval and specific recognition must be applied for in writing from the Finnish Communications Regulatory Authority, and the application must present all information required by the Finnish Communications Regulatory Authority.

The Finnish Communications Regulatory Authority grants approval based on the inspection of the radio equipment, or based on documentation pertaining to the equipment.

### Section 5

#### **Type approval requirements**

The characteristics and technical construction of the radio equipment for which type approval or specific recognition is sought must fulfil the essential type approval requirements set out in the Annex to this Regulation.

Instead of the type approval requirements defined in subsection 1, the following type approval requirements can be applied:

- 1) Requirements in the regulations on telecommunications (Code for Federal Regulations, Title 47), part 87 (Aviation Services) of the Federal Communications Commission of the United States; or
- 2) comparable requirements from another country that are applicable to individual cases.

The requirements in paragraphs 1 and 2 are applied to the extent that they pertain to the radio technical characteristics of radio equipment.

#### Section 6

##### **Type marking**

Radio equipment with type approval or specific recognition must bear a marking, placed in a single location as a continuous character string (type marking), which clearly identifies the type of equipment.

#### Section 7

##### **Validity and withdrawal of type approval**

Type approval and specific recognition are valid until further notice.

The Finnish Communications Regulatory Authority can withdraw a type approval or a specific recognition if:

- 1) radio equipment placed on the market is not in conformity with the type-approved radio equipment;
- 2) there are grounds for withdrawal based on preventing or removing interference in radio communication; or
- 3) the withdrawal is unavoidable due to changes in radio frequency plans, frequency regulations or international treaty obligations.

Unless otherwise decided by the Finnish Communications Regulatory Authority, type approval withdrawal will not affect the right to use equipment that is already in use.

#### Section 8

##### **Entry into force and transitional provision**

This Regulation will enter into force on 1 May 2007 and will remain in force until 30 April 2012.

This Regulation repeals the Finnish Communication Regulatory Authority's Regulation of 29 August 2003 bearing the same title (FICORA 10/2003M).

## Section 9

### **Information and publication**

This Regulation is included in the Series of Regulations issued by the Finnish Communications Regulatory Authority and it can be obtained from the Customer Service Office of FICORA:

Office address	Itämerenkatu 3 A, HELSINKI
Postal address	PO Box 313 FI-00181 HELSINKI
Tel. national	09 69661
Tel. international	+358 9 69661
Fax national	09 6966 410
Fax international	+358 9 6966 410
Website	<a href="http://www.ficora.fi/">http://www.ficora.fi/</a>
Business ID	0709019-2

Helsinki 18 July 2007

Director-General Rauni Hagman

Director Kirsi Karlamaa

## ANNEX

**TYPE APPROVAL REQUIREMENTS OF RADIO EQUIPMENT USED IN AERONAUTICAL RADIOCOMMUNICATION**

The type approval requirements contain the following abbreviations:

EASA = European Aviation Safety Agency

ETSO = European Technical Standard Orders

EUROCAE = The European Organisation for Civil Aviation Equipment

FCC= Federal Communications Commission

RTCA= Radio Technical Committee of Aeronautics

Insofar as they apply to the interference-free and efficient use of the radio spectrum and other radio technical characteristics of radio equipment, the EUROCAE and RTCA standards and requirements listed in the table below shall apply as type approval requirements. Integrated radio systems fall under the type approval requirements of the radio equipment included in the system. Measurements related to type approval are conducted in environmental conditions complying with the Eurocae ED-14E standard (Environmental Conditions and Test Procedures for Airborne Equipment).

	<b>Device group</b>	<b>Type approval requirements</b> (standard or requirement)
1	Automatic Direction Finding (ADF)	Eurocae ED-51: Minimum Performance Specification for Airborne ADF equipment
2	Distance measuring equipment (DME)	Eurocae ED-54: Minimum Performance Specification for Airborne DME/N, DME/P equipment
3	Emergency Locator Transmitter (ELT)	Eurocae ED-62: Minimum Operation Performance Specification for Emergency locator transmitters, 121.5/ 243 MHz & 406 MHz
4	HF radio communications transceiver	RTCA DO-163: Minimum Performance Standards- Airborne HF Radio Communications Transmitting and Receiving Equipment Operating within the radio frequency range of 1.5 to 30 MHz
5	Radio altimeter	Eurocae ED-30: Minimum Performance Specification for low range radio altimeter equipment
6	Secondary Surveillance Radar Transponder (SSR)	Eurocae ED-73B: Minimum Operational Performance Specification for Secondary Surveillance Radar Mode S Transponders. b) Eurocae ED-115: Minimum Operational Performance Specification for Light Aviation Secondary Surveillance Radar Transponders.

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7	VHF radiocommunication transceiver	Eurocae ED-23B: Minimum Performance Specification for Airborne Receiver – Transmitter operating in the radio frequency range 117.975...136.975 MHz
8	VHF Omnidirectional Range (VOR)	Eurocae ED-22B: Minimum Performance Specification for Airborne VOR Receiving Equipment
9	Instrument Landing System (ILS)	
9a	Glide slope receiver (ILS Localizer)	Eurocae ED-46B: Minimum Operational Performance Specification for Airborne ILS Localizer Receiving Equipment
9b	Glide path receiver (ILS GP)	Eurocae ED-47B: Minimum Operational Performance Specification for Airborne ILS glide path receiving equipment
9c	Marker receiver	Eurocae 1/WG7/70: Minimum Operational Performance for 75 MHz marker beacon receiving equipment
10	Area Navigation system (RNAV)	Eurocae ED-58: Minimum Operational Performance Specification for RNAV system using multisensor inputs Eurocae ED-75B: Minimum Aviation System Performance Standard for Area Navigation
11	Weather radar	Eurocae ED-38: Minimum Performance Specification for airborne weather and assisted approach radar
12	GPS receiver	Eurocae ED-72A: Minimum Operational Performance Specification for Airborne GPS Receiving Equipment for Supplemental Means of Navigation
13	ILS/GPS multimode receivers	Eurocae ED-88: Minimum Operational Performance Specification for Multi-Mode Airborne Receiver (MMR) including ILS, MLS and GPS used for Supplemental Means of Navigation
14	Collision avoidance system (ACAS/TCAS)	RTCA DO-185A: Minimum Operational Performance Standards for Traffic Alert and Collision Avoidance System II, Airborne Equipment
15	VHF data radio equipment	
15 a	VHF Digital Link (VDL) Mode 2 Transceiver	Eurocae ED-92A: Minimum Operational Performance Specification for Airborne VDL Mode 2 transceivers operating in the frequency range 118...136.975 MHz.
15 b	VHF Digital Link (VDL) Mode 4 Transceiver	Eurocae ED-108A: Minimum Operational Performance Specification for VDL Mode 4 Aircraft Transceiver