

European Aviation Safety Agency

European Technical Standard Order (ETSO)

Subject: Geosynchronous Orbit Aeronautical Mobile Satellite Services Aircraft Earth Station Equipment

1 - **Applicability**

This ETSO gives the requirements which Geosynchronous Orbit Aeronautical Mobile Satellite Services (AMSS) aircraft earth station equipment that is designed and manufactured on or after the date of this ETSO, must meet in order to be identified with the applicable ETSO marking.

2 - **Procedures**

2.1 - General

Applicable procedures are detailed in CS-ETSO Subpart A.

2.2 - Specific

None.

3 - **Technical Conditions**

3.1 - Basic

3.1.1 - Minimum Performance Standard

Standards set forth in the Federal Aviation Administration standard "Geosynchronous Orbit Aeronautical Mobile Satellite Services Aircraft Earth Station Equipment".

This standard is based on RTCA document DO 210D 'MOPS for Geosynchronous Orbit Aeronautical Mobile Satellite Services (AMSS) avionics' Section 2.0 dated April 19, 2000 including Change 1, dated December 14, 2000, Change 2, dated November 28, 2001, Change 3, dated September 19, 2006; and Change 4, dated March 24, 2015.

Functionality. This ETSO's standards apply to AMSS AES equipment that provides direct worldwide communications between aircraft subnetworks and ground subnetworks using aeronautical mobile satellites in geosynchronous orbit and their ground earth stations. AMSS will support both data and voice communications between aircraft users and ground-based users, such as air route traffic control centers (ARTCC) and aircraft operators. Communication services with AMSS functions include four categories: air traffic services (ATS), aircraft operational control (AOC), aeronautical administrative communications (AAC), and aeronautical passenger communications (APC).

3.1.2 - Environmental Standard

See CS-ETSO Subpart A paragraph 2.1.

3.1.3 - Computer Software

See CS-ETSO Subpart A paragraph 2.2.

3.2 - Specific

3.2.1 Failure Condition Classification

See CS-ETSO Subpart A paragraph 2.4.

- (1) Failure of the function defined in paragraph 3.1.1 is a minor failure condition.
- (2) Loss of the function defined in paragraph 3.1.1 of this ETSO is a minor failure condition. Satellite communication is a supplemental service operation, with high frequency (HF) radio required for primary communication. The loss of satellite communication is mitigated by availability of HF communications.
- (3) AMSS equipment is intended for procedural airspace area operations. FAA determined the failure condition specified in paragraph 3.2.1 of this ETSO based on AMSS equipment operating as an approved long-range communication system (LRCS) in oceanic airspace area environments. Use of AMSS equipment in other operating environments (for example, high-density terminal/en route domestic airspace) may impact equipment performance and safety considerations.

4 - Marking

4.1 - General

Marking is detailed in CS-ETSO Subpart A paragraph 1.2.

4.2 - Specific

None.

5 - Availability of Referenced Document

See CS-ETSO Subpart A paragraph 3.