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**Minimum Operational Performance Standards
(MOPS) For Geosynchronous Orbit Aeronautical
Mobile Satellite Services (AMSS) Avionics**

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1.0 **PURPOSE AND SCOPE**

1.1 **Introduction**

This document contains minimum operational performance standards (MOPS) for Aeronautical Mobile Satellite Services (AMSS) operating in the frequency bands 1.5 and 1.6 GHz. These standards specify system characteristics that should be useful to designers, manufacturers, installers and users of the AMSS system and equipment.

Compliance with these standards is recommended as one means of assuring that the AMSS will perform its intended function(s) satisfactorily under all conditions normally encountered in routine aeronautical operations. Any regulatory application of this document is the sole responsibility of appropriate governmental agencies.

This document encompasses standards and descriptions of a system configuration including Ground Subnetworks; AMSS Satellite Subnetworks, of which the Aircraft Earth Station (AES) is one part; and Aircraft Subnetworks. However, the specified Minimum Operational Performance Standards in this document address only the AES portion of the Satellite Subnetwork.

The MOPS covers typical AMSS avionics requirements and tests for the AES. It includes the purpose, scope and equipment performance requirements; recommended bench tests and other performance verification procedures; and installed-equipment tests and operational performance characteristics. A companion document, RTCA DO-215A, *Guidance on AMSS End-to-End System Performance and Verification Requirements*, covers transmission characteristics for end-to-end AMSS service criteria of the network(s), including the remaining portions of the satellite subnetwork (the Ground Earth Stations (GES) and the satellite transponders), the Avionics Subnetworks interfacing with the AES and Ground Subnetworks that interface with the GES (see [Figure 1-1](#)).

[Section 1.0](#) of this document provides information needed to understand the rationale for AMSS equipment and system characteristics and requirements stated in the remaining sections. It describes typical applications and operational goals as envisioned by the members of Special Committee 165 and establishes the basis for the standards stated in Sections 2.0 through 3.0. Definitions and assumptions essential to proper understanding of this document are also provided in this section, while a more extensive glossary appears as [Appendix A](#).

[Section 2.0](#) contains the minimum performance standards for the AES. These standards specify the required performance under standard and environmental conditions. Also included are recommended bench test procedures necessary to demonstrate equipment and network compliance with the stated minimum requirements.