

RTCA, Inc.
1140 Connecticut Avenue, NW, Suite 1020
Washington, DC 20036-4001 USA

**Minimum Operational Performance Standards
for Global Navigation Satellite System (GNSS)
Airborne Antenna Equipment**

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Prepared by: SC-159
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RTCA, Inc.

Telephone: 202-833-9439

Facsimile: 202-833-4434

Internet: www.rtca.org

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Foreword

This document was prepared by RTCA Special Committee 159 (SC-159) and approved by the RTCA Technical Management Committee on October 20, 1995.

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- developing consensus on the application of pertinent technology to fulfill user and provider requirements, including development of minimum operational performance standards for electronic systems and equipment that support aviation; and
- assisting in developing the appropriate technical material upon which positions for the International Civil Aviation Organization and the International Telecommunication Union and other appropriate international organizations can be based.

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1.0 PURPOSE AND SCOPE

1.1 Introduction

This document contains minimum operational performance standards (MOPS) for GNSS airborne antenna equipment designed to use GPS or GLONASS augmented by other systems/equipment/techniques as appropriate to meet the performance requirements for primary means of navigation for en route, terminal, non-precision, and precision approach phases of flight.

The airborne navigation system can be used as a primary means navigation system in an aircraft when approved and an operational GNSS navigation satellite system is available. Incorporated within these standards are equipment characteristics that should be useful to users, designers, manufacturers, and installers of the equipment. This document defines the antenna performance for antennas that will be used with GNSS receiver equipment.

Section 1.0 of this document provides information and assumptions needed to understand the rationale for equipment characteristics and requirements stated in the remaining sections. It describes typical equipment applications and operational goals, and forms the basis for the standards stated in Sections 2.0 through 4.0.

Section 2.0 contains the minimum performance standards for the equipment. These standards define required performance under standard operating conditions and stressed physical environmental conditions. It also details the recommended bench test procedures necessary to demonstrate compliance.

Section 3.0 describes the performance required of the installed equipment. Tests for the installed equipment are included when performance cannot be adequately determined through bench testing.

Section 4.0 describes the operational characteristics for equipment installations, and defines conditions that will assure the operator that operations can be conducted safely and reliably in the expected operational environment.

Compliance with these standards by manufacturers, installers, and users is recommended as one means of assuring that the equipment will satisfactorily perform its intended function(s) under conditions normally encountered in routine aeronautical operations.