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**Audio Systems Characteristics and
Minimum Operational Performance Standards
(MOPS) for Aircraft Audio Systems and
Equipment**

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FOREWORD

This document was prepared by RTCA Special Committee 164 (SC-164). It was approved by the RTCA Technical Management Committee on March 2, 1993 and supersedes RTCA/DO-170, *Audio System Characteristics and Minimum Performance Standards, Aircraft Microphones (Except Carbon), Aircraft Headsets and Speakers, Aircraft Audio Selector Panels and Amplifiers.*

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1.0 PURPOSE AND SCOPE

1.1 Introduction

This document contains audio systems characteristics and minimum operational performance standards for aircraft microphones (except carbon), headsets, handsets, speakers, audio selector panels (ASP) and amplifiers. These standards specify system characteristics that should be useful to designers, manufacturers, installers and users of the equipment.

Compliance with these standards is recommended as one means of assuring that the equipment 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.

Section 1.0 of this document provides information needed to understand the rationale for equipment characteristics and requirements stated in the remaining sections. It describes typical equipment applications and operational goals and establishes the basis for standards stated in Section 2.0 through 4.0. Definitions and assumptions essential to the proper understanding of this document are also provided in this section.

Section 2.0 contains the minimum performance standards for the equipment. These standards specify the required performance under standard, operational, and environmental conditions. Also included are recommended bench test procedures necessary to demonstrate equipment compliance with the stated minimum requirements.

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 performance characteristics for equipment installations and defines conditions that will assure the equipment user that operations can be conducted safely and reliably in the expected operational environment.

The word "equipment" as used in this document includes all components or units necessary to properly perform the intended function(s). Since the measured values of equipment performance may be a function of the measurement method, standard test conditions and methods of test are recommended.

Consideration was given to the overall system characteristics that affect the intelligibility of air-ground speech communication. This included, to the extent