RTCA
1828 L Street, NW, Suite 805
Washington, DC 20036-5133 USA

Minimum Performance Standards-Airborne Radio Marker Receiving Equipment Operating on 75 MHz

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Prepared by: SC-115

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RTCA, Inc.

Telephone: 202-833-9339
Facsimile: 202-833-9434
Internet: www.rtca.org

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FOREWORD

This Paper was prepared by Special Committee 115, International Coordination Group 7 (ICG-7), of the Radio Technical Commission for Aeronautics (RTCA). It was approved by RTCA on January 8, 1970 and supersedes RTCA Paper 87-54/DO-57A, dated March 8, 1962.

RTCA is an association of aeronautical organizations of the United States from both government and industry. Dedicated to the advancement of aeronautics, RTCA seeks sound technical solutions to problems involving the application of electronics and telecommunications to aeronautical operations. Its objective is the resolution of such problems by mutual agreement of its member organizations.

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The European Organization for Civil Aviation Electronics (EUROCAE) concurs with RTCA on the Minimum Performance Standards set forth herein, except for the performance standards under the humidity environmental test condition specified in Paragraph 3.2. Coordination of these standards was accomplished by RTCA SC-115's International Coordination Group 7 (ICG-7) and EUROCAE Working Group 7 (WG-7).

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INTRODUCTION

This Paper sets forth minimum performance standards for airborne radio marker receiving equipment operating on 75 MHz.

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

In any application of these minimum performance standards, due allowance should be made, where necessary, for equipments in current use which do not fully meet the standards contained herein.

It is recognized that any regulatory application of these standards is the responsibility of governmental agencies.

Inasmuch as the measured values of radio equipment performance characteristics may be a function of the method of measurement, standard test conditions and methods of test are also recommended in this Paper.

The word "equipment" as used herein includes all of the components or units necessary (as determined by the equipment manufacturer) for the equipment to properly perform its intended function. For example, an airborne radio marker receiving "equipment" may include an antenna, a control box, an indicator, a power supply, a shock mount, etc. In the case of this example, all of the foregoing components or units comprise the "equipment." It should not be inferred from this example, however, that every "equipment" will necessarily include all of the foregoing components. This will depend on the design used by the "equipment" manufacturer.

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1.0 GENERAL STANDARDS

NOTE: Two categories of equipment are specified for some of the standards contained in this Paper. These categories are identified as Category A and Category B. Definitions of the categories are stated below. If a particular standard is not categorized, it applies as written to both Categories A and B types of equipment.

Category A. Equipment intended for use in the European-Mediterranean area and wherever marker beacon signals are required for both enroute and approach operations.

Category B. Equipment intended for use in the United States of America and wherever marker beacon signals are required only for approach operations.

1.1 Operation of Controls

The operation of controls intended for use during flight, in all possible combinations and sequences, shall not result in a condition whose presence or continuation would be detrimental to the continued performance of the equipment.

1.2 Accessibility of Controls

Controls which are not normally adjusted in flight shall not be readily accessible to flight personnel.

1.3 Effects of Tests

Unless otherwise provided, the application of the specified tests shall produce no subsequently discernible condition which would be detrimental to the continued performance of the equipment.

1.4 Receiver Threshold Adjustment Range

Category A

At least two preset levels of Receiver Threshold shall be provided, selectable by the pilot. Means shall be provided for adjusting each level so that the Receiver Threshold can be set to any value between 200 and 4000 microvolts.