RTCA
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Calibration Procedures
Test Standard Omni-Bearing Selectors
and
Omni-Bearing Selector Test Sets

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FOREWORD

This report, prepared by RTCA Special Committee 61, was accepted by the Executive Committee of the Radio Technical Commission for Aeronautics under date of October 12, 1954. It thereby becomes an official Paper of RTCA and is distributed as such.

The RTCA is a cooperative association of all United States Government-Industry aeronautical telecommunication agencies. It conducts studies of aeronautical telecommunication problems and related matters. Its objective is the resolution of such problems by mutual agreement of its member agencies. Its findings are in the nature of recommendations to all United States organizations concerned.

The RTCA is not an official agency of the United States Government. Its recommendations, therefore, may not be regarded as statements of official government policy unless so enunciated by the government agency, or agencies, having statutory jurisdiction in the matters to which the recommendations relate.

INTRODUCTION

The procedures set forth herein were developed to aid the operators of aircraft radio service stations in the calibration of Test Standard Omni-Bearing Selectors and of Omni-Bearing Selector Test Sets which are used in the testing and adjusting of VOR Receivers and of their associated Omni-Bearing Selectors, respectively. This report supplements RTCA Paper 208-53/DO-52 - Calibration Procedures for Signal Generators Used in the Testing of VOR and ILS Receivers.

The need for these procedures was evidenced by the results of a survey which showed the average variation between various combinations of Bendix and Collins VOR Receivers and Omni-Bearing Selectors to be 1.8°. When VOR Receivers are adjusted to the Test Standard Omni-Bearing Selectors described herein and when service Omni-Bearing Selectors are adjusted with the Omni-Bearing Selector Test Sets described herein, the average error is reduced to approximately .3°.

The procedures were prepared principally for the following types of VOR Receivers and Omni-Bearing Selectors:

VOR Receivers

Bendix Radio MN-85 series
Collins Radio Company Types 51R-2 and 51R-3

Omni-Bearing Selectors Having the Following Types of Resolvers

Eclipse-Pioneer Types AY-2215-5 and AY-2415-5
Kearfott Type R235-3A