



ICAO

Doc 8071

Manual on Testing of Radio Navigation Aids

Volume I — Testing of Ground-based Radio Navigation Systems
Fifth Edition, 2018



Approved by and published under the authority of the Secretary General

INTERNATIONAL CIVIL AVIATION ORGANIZATION

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AMENDMENTS

Amendments are announced in the supplements to the *Products and Services Catalogue*; the Catalogue and its supplements are available on the ICAO website at <http://www.icao.int>. The space below is provided to keep a record of such amendments.

RECORD OF AMENDMENTS AND CORRIGENDA

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FOREWORD

The need for uniform navigational guidance signals and consistent system performance for radio navigation aids used in the international aeronautical services has been recognized as an important adjunct to safety and regularity in civil aviation. ICAO continuing air navigation policies, and associated practices of the Organization in their part concerning ground and flight testing of radio navigation aids, call attention to this need and encourage improvements in radio navigation ground equipment, including associated testing and monitoring facilities, with the view to minimizing, to the extent practicable, the more demanding requirements of flight testing. Annex 10 — *Aeronautical Telecommunications*, Volume I — *Radio Navigation Aids*, 2.2, provides an international Standard on the ground and flight testing of radio navigation aids.

This new edition of the *Manual on Testing of Radio Navigation Aids* (Doc 8071) comprises three volumes, as follows:

Volume I (fifth edition) — *Testing of Ground-based Radio Navigation Systems*

Volume II (fifth edition) — *Testing of Satellite-based Radio Navigation Systems* (update ongoing)

Volume III (first edition) — *Testing of Surveillance Radar Systems* (see Note)

The purpose of this document is to provide general guidance on the extent of testing and inspection normally carried out to ensure that radio navigation systems meet the Standards and Recommended Practices (SARPs) in Annex 10. The guidance is representative of practices existing in a number of States with considerable experience in the operation and maintenance of these systems.

This document describes the ground and flight testing to be accomplished for a specific radio navigation aid, and provides relevant information about special equipment required to carry out certain major tests. It is not intended to recommend certain models of equipment, but rather to provide general details relative to the systems under consideration.

Guidance on ground and flight validation of instrument flight procedures is published in the *Quality Assurance Manual for Flight Procedure Design* (Doc 9906), Volume 5 — *Validation of Instrument Flight Procedures*.

Throughout this document, measurements have been given in SI units and non-SI approximate equivalents; the accuracy of conversion depends upon the general requirements of each specific stage.

Comments on this volume would be appreciated from States and other parties outside ICAO concerned with radio navigation systems development and provision of services. Comments, if any, should be addressed to:

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999 Robert-Bourassa Boulevard
Montréal, Quebec
Canada H3C 5H7

Note.— A minor update of Volume III to remove some obsolete material is ongoing; however it will remain applicable mainly to older radar systems. For testing of modern surveillance systems, see the Aeronautical Surveillance Manual (Doc 9924).

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