

REPUBLIC OF MAURITIUS DEPARTMENT OF CIVIL AVIATION Aeronautical Information Service Sir Seewoosagur Ramgoolam International Airport Plaine Magnien	
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IFR APPROVAL TO USE RNAV (GNSS) APPROACH PROCEDURES IN THE REPUBLIC OF MAURITIUS

1. Introduction

- 1.1 This Aeronautical Information Circular (AIC) specifies the terms and conditions associated with the approval to use the Global Positioning System (GPS) for RNAV (GNSS) approach procedures for Instrument Flight Rules (IFR) operations in Mauritius.
- 1.2 RNAV (GNSS) Procedures are identified by having RNAV (GNSS) in the procedure name. (e.g., RNAV (GNSS) RWY 14).

The applicable airports and procedures within the Mauritius FIR (see Mauritius AIP Supplement 1/14) are as follows:

- a) Sir Seewoosagur Ramgoolam International Airport
 - I. RNAV(GNSS) Runway 14
 - II. RNAV(GNSS) Runway 32
- b) Sir Gaëtan Duval Airport
 - I. RNAV(GNSS) Runway 12
 - II. RNAV(GNSS) Runway 30

Note: The presently published conventional/RNAV SIDS and STARS will remain in use within Mauritius TMA until further notice.

- 1.3 International standards for the use of GPS for the above IFR operations are published in ICAO Annex 10 and in the ICAO PANS-OPS Volume II. The approach procedures published by the Mauritius Department of Civil Aviation meet these ICAO standards. Specific Mauritian GNSS Regulations (**Civil Aviation GNSS Regulations 2014**) can be viewed at the Mauritius DCA Website (<http://civil-aviation.gov.mu>).

2. Terms and Conditions

2.1 En route Operations

- 2.1.1 GPS may be used for IFR flight guidance for en route operations subject to the following provisions and limitations:

- a) GPS avionics shall meet FAA TSO C129 or C129a (Class A1, B1, B3, C1, or C3) or C145/C146 requirements or equivalent criteria and shall be installed and approved in accordance with accepted standards and regulations.
- b) The GPS avionics shall be operated in accordance with the aircraft flight manual or applicable flight manual supplement, both of which take precedence over the terms and conditions specified in this AIC.
- c) Aircraft using GPS equipment under IFR shall be equipped with another approved and operational means of navigation. Should GPS navigation capability be lost, this equipment shall allow navigation along the planned route or a suitable alternate route.
- d) For Flight Plan Purposes, the COM/NAV equipment suffix "G" shall be used to indicate area navigation (RNAV) Capability.

2.2 RNAV (GNSS) Terminal and Approach Operations

2.2.1 Terms and conditions for use of GPS for IFR Flight Guidance:

GPS shall be used for IFR flight guidance during RNAV (GNSS) Procedures subject to the following terms and conditions:

- (a) All aircraft operators shall be authorized by the State of Registry to conduct terminal and approach procedures using GPS.
- (b) GPS avionics shall meet FAA TSO C129 or C129a (Class A1, B1, B3, C1, or C3) or C145/C146 requirements or equivalent criteria and shall be installed and approved in accordance with accepted standards and regulations. The GPS avionics shall be operated in accordance with the aircraft flight manual or applicable flight manual supplement, both of which take precedence over the terms and conditions specified in this AIC.
- (c) The avionics navigation database shall be current. All RNAV (GNSS) Procedures shall be retrieved from the avionics navigation database, which shall store the location of all waypoints required to define the procedure and present them in the order depicted on the published procedure chart. Pilots shall verify procedure waypoints either by verifying coordinates or by ensuring that bearings and distances between waypoints are consistent with charted data. Only GNSS approaches that are notified and retrievable from a navigation database will be authorized. GNSS NPA procedures manually entered into the GPS equipment are not authorized.
- (d) Receiver autonomous integrity monitoring (RAIM) shall be available upon commencement of an RNAV (GNSS) Procedure and throughout the Procedure to provide integrity for the navigation guidance. If a RAIM warning is displayed when the aircraft is established on the final approach course, the pilot shall not continue the approach using GPS guidance. Aircraft with integrated GPS/IRS systems may meet this requirement by alternate means if such means are authorized by the State of Registry. In the case of an instrument approach procedure, if an avionics RAIM prediction indicates that

RAIM will not be available at the expected approach time, the pilot shall advise ATC of his/her intentions as soon as possible.

- (e) Aircraft using GPS equipment under IFR shall be equipped with another approved and operational means of navigation. Should GPS navigation capability be lost, this equipment shall allow navigation along the planned route or a suitable alternate route.
- (f) GPS may be used to identify all DME and ADF fixes, including fixes that are part of any instrument approach procedure, when the applicable named and charted DME or ADF fix is selected as a GPS waypoint. Where ATC requests a position based on a distance from a DME facility for separation purposes, the pilot may report GPS distance from that DME facility, stating the DME facility name, but omitting the term "DME" (e.g., "30 miles from "PLS" VOR).
- (g) When determining weather minima requirements at an alternate aerodrome, the pilot shall not take credit for RNAV (GNSS) approaches at that aerodrome.
- (h) When communicating with ATC, pilots shall identify and request a procedure by its published name, omitting the (GNSS) part of the name: (e.g., "cleared for an RNAV RWY 14 approach").

3. Additional requirements/procedures

- 3.1 Any operator intending to make use of Global Positioning System for RNAV (GNSS) procedures for instrument flight rules operations within the Mauritius FIR must:
 - a. have a means of predicting the availability and integrity of GPS satellites; and
 - b. make the relevant information available to the flight crews before the flight.
- 3.2 The operator must maintain and validate the FMS Navigational Database in accordance with the manufacturer's procedures.
- 3.3 RNAV (GNSS) **must not be used** as navigation reference for flight below the MSA except in accordance with an RNAV (GNSS) approach.
- 3.4 The pilot in command must ensure that the vertical path remains above the vertical limitations published in the approach chart.
- 3.5 The pilot in command must discontinue an RNAV (GNSS) approach if an RNP of 0.3 or less cannot be maintained from the FAF or if the vertical path cannot be maintained above the vertical limitations published in the approach chart.

4. Application for approval to use RNAV (GNSS)

- 4.1 Applications from operators to use RNAV (GNSS) for Terminal and Approach operations should be made to:

The Director of Civil Aviation
Department of Civil Aviation
Sir Seewoosagur Ramgoolam International Airport
Plaine Magnien
Republic of Mauritius
Fax: (230) 637 3164
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(This AIC is issued for information, guidance and necessary action)

R. D. Servansingh
for Director of Civil Aviation