



UNITED REPUBLIC OF TANZANIA
TANZANIA CIVIL AVIATION AUTHORITY
AERONAUTICAL INFORMATION SERVICES

AERONAUTICAL INFORMATION CIRCULAR

P.O. Box 2819, DAR ES SALAAM.
FAX: 255-22-2118905
PHONE: 255- 22- 2115079/80, 2111951.
COMM: DIRAIR
AFTN: HTDQYOYO
Email: tcaa@tcaa.go.tz
Website: <http://www.tcaa.go.tz>

AIC
7 /2003
(White 13)
23 January 2003

The following circular is promulgated for information, guidance and necessary action.

M. Munyagi
Director General

IFR APPROVAL TO USE RNAV (GNSS) PROCEDURES IN TANZANIA

1. Introduction

This aeronautical information circular (AIC) specifies the terms and conditions associated with the approval to use the global positioning system (GPS) for RNAV (GNSS) procedures for instrument flight rules (IFR) operations in Tanzania. The applicable airports and procedures are listed in paragraph 3 to this AIC.

RNAV (GNSS) Standard Arrival Procedures (STAR), Standard Departure Procedures (SID) and Instrument Approach Procedures are identified by having RNAV (GNSS) in the procedure name. (e.g., RNAV (GNSS) RWY 23).

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. All terminal and approach procedures authorized by this AIC meet these ICAO standards.

Specific Tanzanian GNSS Regulations are currently being developed and model legislation is promulgated by AIC 3/2001.

Applicants are requested to contact the Tanzania Civil Aviation Authority for further information on IFR Approval to use the GNSS in Tanzanian airspace.

2. Terms and Conditions

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 KV 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 09 approach").

3. Airports and Procedures

(a) Dar es Salaam International Airport

- (i) SID/STAR runway 23
- (ii) RNAV (GNSS) runway 23
- (iii) SID/STAR runway 05
- (iv) RNAV (GNSS) runway 05

(b) Kilimanjaro International Airport

- (v) SID/STAR runway 09
- (vi) RNAV (GNSS) runway 09
- (vii) SID/STAR runway 27
- (viii) RNAV (GNSS) runway 27

The GNSS procedures have been flight-tested.
