SEYCHELLES CIVIL AVIATION AUTHORITY

AREA NAVIGATION APPROVALS including P-RNAV, RNAV APPROACH and GNSS APPROACH OPERATIONS

APPLICATION FOR AN RNAV OPERATIONAL APPROVAL or RENEWAL

Please complete the form in BLOCK CAPITALS using black or dark blue ink after reading the attached guidance.

This form is designed to elicit all the required information from those operators requiring Precision Area Navigation (P-RNAV), RNAV Approach or GNSS Approach operations approvals. Sections I and III should be completed in all cases. Completed forms should be submitted to the Flight Operations Inspectorate of Safety Regulation at the address listed in the 'Notes for Completion'.

Applicants are strongly advised to read the 'Notes for Completion' before completing the form.

Section I	**Page 1**	**Operator/Airframe Details**	**Completion mandatory**
Section II	**Page 2**	**RNAV Operational Approvals**	☐
Section III	**Pages 3-5**	**Signature Block/Notes**	**Completion mandatory**
Section IV	**Page 6**	**Fleet Details Continuation Sheet**	☐

SECTION I   OPERATOR/AIRFRAME DETAILS

APPLICANT DETAILS – required for all Approval requests

1. Please give the official name and business or trading name(s), address, mailing address, e-mail address and contact telephone/fax numbers of the applicant. (See Notes.)

AIRCRAFT DETAILS – required for all Approval requests

2. Aeroplane type(s), series, manufacturer(s) serial number(s), registration mark(s), mode "S" address code(s).

Aeroplane Type	Aeroplane Series	Manufacturer's Serial Number	Registration	Mode "S" Code (hex)

(Use continuation sheet provided on page 6, if necessary.)

SECTION II   P-RNAV, RNAV APPROACH and GNSS APPROACH

Please refer to the accompanying notes and to "JAA Administrative & Guidance Material, Section 1 – General Guidance & Reference Material, Temporary Guidance Leaflet No. 10" (see **http://www.ecacnav.com/prnav**).

3. Operations Manuals, to include normal procedures, contingency procedures, incident reporting and flight crew training – give reference(s) of details pertinent to operations on P-RNAV routes and on the approach operations. **Include with submission copies of relevant sections from Operations Manuals.** [Note: An Operations Manual is not required for non-AOC operators. Such operators should provide similar details in the application.]

4. Minimum Equipment List – reference of MEL where P-RNAV or the approach operation(s) are addressed. **Include with this submission a copy of the relevant page or pages of the proposed or actual MEL where the operation is addressed.**

5. Give details of the navigation system that supports the P-RNAV or approach operations for which approval is being requested. Include the type and number of Flight Management Systems, and the type and number of positioning sensors.

6. Give reference of the P-RNAV and/or approach operations Airworthiness Compliance Statement(s). **Include with submission copies of relevant section from Aircraft Flight Manual or other applicable approvals and supporting certification data.**

7. Provide evidence that your navigation database has been obtained from an approved supplier of aeronautical and navigation data (Type 1 LoA) and that your packed data is from an approved FMS manufacturer (Type 2 LoA) in accordance with EUROCAE/RTCA document ED-76/DO-200A. **The methodology to be employed for additional independent operator database checks will need to be outlined.**

SECTION III SIGNATURE BLOCK

Signature: ....

Name (BLOCK LETTERS): ....

Appointment: ....

Date: ....

Please note that a **minimum** of 30 working days will normally be required to check and confirm the information given above - if data is missing or omitted the process may take **considerably** longer.

FORM SR/CA4045 – NOTES FOR COMPLETION

SECTION I – COMPLETION OF SECTION I IS MANDATORY FOR ALL APPLICATIONS

Paragraph 1 – For AOC holders - company name, AOC number and e-mail address will suffice.

Paragraph 2 – This information is required both by the State of Registry for the Approvals database and by the verification and monitoring programme office(s) of the appropriate ICAO Region(s). Enter Mode 'S' code in hexadecimal format. (All "G" registered aircraft codes start with "4".)

SECTION II – RNAV AND APPROACH OPERATIONS APPROVALS

Paragraph 3 – Details in this paragraph are required so that the appropriate SR specialists (flight operations inspectors, navigation policy desk, etc.) are able to confirm compliance with all relevant references (see also FODCOM 04/2008).

Section 10 of TGL 10 covers Operational Criteria and details the subject areas to be covered in Ops Manuals for P-RNAV. Approach Operations are not dissimilar. The criteria include (but are not necessarily limited to):

Pre-flight Planning: Availability of navigation infrastructure, validity of database, requirement for Dual P-RNAV Systems, RAIM checks.

Departure Verification of database and aircraft position, confirmation of waypoint sequence, no manual inputting, need for cross checking.

Arrival Verify correct procedure loaded and Actual Navigation Performance (ANP/EPE) sufficient; preparation for reversion to conventional procedure, need for navigation reasonableness checks, detailed guidance for crews on autopilot flight modes is required (i.e. LNAV/VNAV).

Flying the Procedure/Approach Use of autopilot, auto-throttle and flight director; AFDS mode behaviour; lateral and vertical path management; adherence to speed and/or altitude constraints; the use of other aircraft equipment to support track monitoring; weather and obstacle avoidance; the effect of temperature deviation and its compensation; missed approach procedures.

Contingency Procedures Failure of RNAV system components and sensors, loss of adequate Actual Navigation Performance (ANP).

Incident Reporting Aircraft systems malfunctions, navigation errors attributed to database error, discrepancy between chart and database, misleading information without failure warning. Robust procedures to relay any concerns over a procedure's suitability, so that it can be removed from fleet service until problem is resolved.

Flight Crew Training TGL 10, Section 10.5, Table 3 covers RNAV training items.

Paragraph 4 – MEL entries where P-RNAV and approach operations are addressed. Include: Autopilot, Flight Director, TO/GA Switches, DME (if GPS u/s – except for GPS Approach!!), and FMC/FMS Navigation Database.

Paragraph 5 – Details of Flight Management Systems should include software update standard. Positioning sensors include DME/DME, DME/VOR, GNSS and INS/IRS.

Paragraph 6 – The Airworthiness Compliance statement may be found in the Aircraft Flight Manual, manufacturer customer service letter confirming aircraft type with delivered navigation systems is compliant, or compliance statement from aircraft manufacturer/installer. A Flight Manual Change Sheet Template is provided at Annex E to TGL 10 for P-RNAV.

Paragraph 7 – The three main European database suppliers (Jeppesen (Germany), EAG (UK) and Lufthansa FlightNav (Switzerland)) have all been audited by EASA and have received their Letters of Acceptance (LoA) (Type 1). The FAA carry out parallel processes and have issued a Type 1 LoA to Jeppesen (US). Operators also have to demonstrate that they are receiving their packed data from an approved FMS manufacturer (Honeywell, Rockwell Collins, Smiths, etc.) who will require a Type 2 LoA. The FAA have awarded a Type 2 LoA to Honeywell for RTCA DO 200A compliance. The number of FAA LoAs will increase as further audits are completed.

Note: In addition to evidence that your data is from an approved source, the Authority require operators to have a database check system of their own in place, particularly for approach operations to terrain rich locations.

SUBMISSIONS AND ENQUIRIES

Address for submissions:

Contact details for enquiries:

Seychelles Civil Aviation Authority
Safety Regulation
Flight Operations Inspectorate
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Mahe
Seychelles

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SECTION IV FLEET DETAILS – CONTINUATION SHEET

Operator/AOC Number ....

Aeroplane Type	Aeroplane Series	Manufacturer's Serial Number	Registration	Mode "S" Code (hex)