



APPLICATION FOR PRECISION RNAV /RNP-1 OPERATIONAL APPROVAL

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 RNAV / Required Navigation Performance 1(RNP-1) approval. Completed form should be submitted to the Civil Aviation Department, Flight Standards and Airworthiness Division, 10 Floor, Commercial Building, Airport Freight Forwarding Centre, 2 Chun Wan Road, Lantau, Hong Kong.

The assessment to the application of PRNAV/RNP-1 Operational Approval is based on JAA Temporary Guidance Leaflet (TGL) No. 10. The subject TGL and other PRNAV information are available in Document Library of Eurocontrol website <http://www.ecacnav.com/prnav>. Applicants are strongly advised to read the TGL and 'Notes for Completion' before completing the form.

SECTION I OPERATOR/AIRFRAME DETAILS			
APPLICANT DETAILS			
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.)			
2. Aeroplane type, series, manufacturer's serial number and registration mark:			
Aeroplane Type	Aeroplane Series	Manufacturer's Serial Number	Registration Mark
(Use continuation sheet provided on Section IV, if necessary.)			



SECTION II PRNAV/RNP-1 OPERATIONAL APPROVAL	
3.	Operations Manuals, to include normal procedures, contingency procedures, incident reporting and flight crew training – give reference(s) of details pertinent to operations on routes and on the approach operations. Include with submission copies of relevant sections from Ops and Training Manuals.
4.	Minimum Equipment List – reference of MEL where PRNAV/RNP-1 operations 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 PRNAV/RNP-1 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 PRNAV/RNP-1 operations Airworthiness Compliance Statement(s). Include with submission copies of relevant section from Aircraft Flight Manual or other applicable approvals and supporting certification data.



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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:

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.



NOTES FOR COMPLETION

SECTION I – OPERATOR/AIRFRAME DETAILS

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

Paragraph 2 – This information is required for the Approval database and by the verification and monitoring programme.

SECTION II – PRNAV/RNP-1 OPERATIONAL APPROVAL

Paragraph 3 – Details in this paragraph are required so that the CAD is able to confirm compliance with all relevant references.

Operational Criteria and details the subject areas to be covered in Ops Manuals. The criteria include (but are not necessarily limited to):

Pre-flight Planning : Availability of navigation infrastructure, validity of database, requirement for Dual PRNAV Systems, RAIM checks if required.

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 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.

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 and concerns over a procedure's suitability, so that it can be removed from fleet service until problem is resolved.

Flight Crew Training: Details required for ground school syllabus, simulator training requirements and any recurrent training requirements.

Paragraph 4 – MEL entries where PRNAV/RNP-1 operations are addressed. It includes: 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 compliance, or compliance statement from aircraft manufacturer/installer.



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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 has awarded a Type 2 LoA to Honeywell for RTCA DO-200A compliance.

Note: The above list is not exhaustive. In addition to evidence that your data is from an approved source, CAD requires 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:

Civil Aviation Department,
Flight Standards and Airworthiness Division,
10 Floor, Commercial Building, Airport Freight
Forwarding Centre,
2 Chun Wan Road,
Lantau,
Hong Kong.

Contact details for enquiries:

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