



APPLICATION FOR PBN RNAV 1/2 / Basic-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 the subject area navigation operational 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 RNAV and RNP Operational Approval is based on ICAO Doc 9613 Performance-based Navigation Manual Volume II Part B/C Chapter 3. Applicants are strongly advised to read this Chapter and 'Notes for Completion' before completing the form.

For those operators who have already obtained the P-RNAV/RNP 1 approval based on JAA Temporary Guidance Leaflet (TGL) No. 10, only Section I and IV are required to be completed.

SECTION I		OPERATOR/AIRFRAME DETAILS	
This application is for the Navigation Operations on: <input type="checkbox"/> RNAV1, <input type="checkbox"/> RNAV2, <input type="checkbox"/> Basic-RNP 1			
APPLICANT DETAILS			
1. Operator's name			
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 V, if necessary.)			



香港特別行政區政府

民航處

Civil Aviation Department

The Government of the Hong Kong Special Administrative Region

SECTION II OPERATIONAL APPROVAL

3. Operations Manuals must include normal procedures, contingency procedures, incident reporting and flight crew training – give reference(s) of details pertinent to PBN Navigation Specification operations. **Include with submission copies of relevant sections from Ops and Training Manuals.**

4. Minimum Equipment List – reference of MEL where the Navigation Specification 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 Navigation Specification 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 Navigation Specification 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/ED-76. **The methodology to be employed for additional independent operator database checks will need to be outlined.**

SECTION III SIGNATURE BLOCK

Name :

Signature :

Position : Tel:

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

SECTION II – 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):

- Flight crews must be familiar with operating procedures in accordance with PBN Manual, Volume II, Part B/C, Paragraph 3.3.4.
- Training of flight crews must be accomplished in accordance with PBN Manual, Volume II, Part B/C, Paragraph 3.3.5.

Paragraph 4 – MEL entries where 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.

- Aircraft eligibility must be determined through demonstration of compliance against the relevant airworthiness criteria and the requirements in accordance with PBN Manual, Volume II, Part B/C Paragraph 3.3.3.



Paragraph 7 – Navigation Database and supplier requirements are stated in the PBN Manual, Volume II, Part B/C, Paragraph 3.3.6.

Note:

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.

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:

Tel : (852) 2769 7641
Fax : (852) 2362 4250



SECTION IV Operator who has already obtained P-RNAV/RNP-1

HKCAD has previously issued P-RNAV/RNP-1 approval to operators based on JAA TGL-10. For those operators who have already obtained such approval and request migration from P-RNAV1/RNP-1 to PBN RNAV 1/2 approval, must demonstrated the compliance against the deltas from TGL-10 to RNAV 1/2 navigation specification per PBN Manual, Volume II, Part B, Paragraph 3.3.2.7.4 Table II-B-3-1.

Operator has TGL-10	Needs to confirm these performance capabilities to ICAO RNAV 1 and RNAV 2	Compliance
If approval includes use of DME/VOR (DME/VOR may only be used as the only positioning input where this is explicitly allowed.)	RNAV 1 does not accommodate any routes based on DME/VOR RNAV	
If approval includes use of DME/DME	No action required if RNAV system performance meets specific navigation service criteria in this Chapter, 3.3.3.3.2 (DME/DME only) or 3.3.3.3.3 (DME/DME/IRU)	
RNAV SID Specific Requirement with DME/DME Aircraft	RNAV guidance available no later than 500ft above field elevation (AFE) on AC 90-100 Type B procedure	
If approval includes use of GNSS	No action required	



SECTION VI FOR CAD USE ONLY	
Approval Assessment	
<p>1. The application process in Section I, II and III of this form have been carried out and all relevant documents/manual and compliance statement provided by the applicant were assessed as per recommendation in ICAO Performance-based Navigation Manual, Vol. II Doc 9613, and found to be satisfactory on the following applications:</p> <p><input type="checkbox"/> PRNAV/RNP-1 (TGL-10 Basis) <input type="checkbox"/> RNAV 1, <input type="checkbox"/> RNAV 2, <input type="checkbox"/> Basic-RNP1</p>	<p>Airworthiness</p> <p>..... Signature</p> <p>..... Name</p> <p>..... Date</p>
<p>2. The process in Section II paragraph 3 and/or Section IV of this form have been carried out and all relevant documents/manual/procedures and compliance statement provided by the applicant for the purpose of this application, were assessed as per recommendation in ICAO Performance-based Navigation Manual, Vol. II Doc 9613, and found to be satisfactory and approval is issued on the following applications:</p> <p><input type="checkbox"/> PRNAV/RNP-1 (TGL-10 Basis) <input type="checkbox"/> RNAV 1, <input type="checkbox"/> RNAV 2, <input type="checkbox"/> Basic-RNP 1</p>	<p>Flight Operations</p> <p>..... Signature</p> <p>..... Name</p> <p>..... Date</p>